Colonne de recharge rapide flexible

Guide de diagnostic
Édition 06.2023

Guide de diagnostic

Édition 06.2023

Les consignes relatives à la réparation et à l'application de la documentation doivent impérativement être respectées : Les informations liées à un modèle ne reflètent pas l'état actuel des données liées aux bornes de recharge. Les travaux de réparation sur des bornes de recharge doivent uniquement être effectués par du personnel spécialisé ayant reçu une formation préalable. Lors de chaque réparation, les consignes de sécurité et de réparation du Manuel de Réparation doivent être respectées. Les Manuels de Réparation dépendent les uns des autres. Seul le contexte global permet de garantie l'exhaustivité des informations. Il convient de suivre les liens vers d'autres Manuels de Réparation. Lors de chaque réparation, les outils spéciaux indiqués et approuvés doivent être utilisés.

Printed in Germany

Sommaire

01 - Service d’inspection, autodiagnostic

1 Historique des modifications

V1.3_20230718_FR_FR

1.1 Historique des modifications

Édition/date	Modifications/compléments
Version originale 10/2021	
05/2022	ajouté ⇒« L’autodiagnostic » page 14
05/2022	ajouté ⇒« Déroulement de l’autodiagnostic » page 14
05/2022	ajouté ⇒« Évaluation des fichiers d’autodiagnostic » page 15
05/2022	ajouté ⇒« Soutien au diagnostic » page 15
05/2022	ajouté ⇒« Le diagnostic sur place » page 15
08/2022	ajouté ⇒« Guide rapide de mise à jour » page 17
08/2022	ajouté ⇒« Index » page 18
08/2022	ajouté ⇒« Calibrer le capteur de position de l’appareil de commande destiné à la télécommunication, TBOX1 » page 19
08/2022	ajouté ⇒« Mettre à jour le MPU de l’appareil de commande 1 destiné à la télécommunication, TBOX1 » page 20
08/2022	ajouté ⇒« Appareil de commande du système de gestion de l’énergie, mettre à jour l’EMS via l’OBD-Box » page 20
08/2022	ajouté ⇒« Attribuer les adresses des modules de puissance, ECU » page 21
08/2022	ajouté ⇒« Mettre à jour les appareils de commande BMU, SECC, TBOX, CCU, HCU, et les modules de puissance (CA/CC, CC/CC) via l’OBD-Box » page 23
08/2022	ajouté ⇒« Mettre à jour l’unité de gestion des cellules de la batterie, CMU via l’OBD-Box » page 23
08/2022	ajouté ⇒« Régler le compteur électrique 1 pour l’énergie reçue, WH3 » page 24
08/2022	ajouté ⇒« Configurer l’IP des compteurs électriques pour l’énergie distribuée WH1 et WH2 (LEM) » page 24
12/2022	ajouté ⇒« CCU System Performance » page 166
12/2022	ajouté ⇒« HCU Internal Code » page 206
12/2022	ajouté ⇒« ECU Internal Code » page 211
02/2023	ajouté ⇒« EMS System Performance » page 133

Édition/date	Modifications/compléments
02/2023	ajouté ⇒« BMS System Performance » page 194
02/2023	ajouté ⇒« Modifier les réglages de l'heure du bloc d'affichage et de commande supplémentaire HMI » page 29
02/2023	ajouté ⇒« Mise à jour du contenu publicitaire pour l'écran d'affichage, AD-HMI » page 30
02/2023	ajouté ⇒« Contrôler les composants » page 219
02/2023	ajouté ⇒« Contrôler et réinitialiser le compteur de cycles de connexion » page 220
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02/2023	ajouté ⇒« Description Code DTC, porte ouverte » page 222
02/2023	ajouté ⇒« Effacer le code DTC » page 224
03/2023	ajouté ⇒« Initialiser un terminal de paiement après un changement de site » page 32
04/2023	ajouté ⇒« Description des fonctions de sécurité » page 8

Historique des modifications, Code DTC

Version	Date	Modifications
V0.0.1	1 avril 2021	Creation out of EMS_AFC-200-LH(Double Pack)-EUDiagnosticSpecification_V1.71 BMS_AFC-200-LH-EU DiagnosticSpecification_V1.4_20201029 CCUDiagnosticSpecification_AFC-200-LH-EU_V1.5_20201216
V1.0	25 octobre 2021	Initial Version DTC
V1.1	28 octobre 2021	Delete the DTC:P070800,P070900,P071000, P071100
V1.2	9 novembre 2021	Change the DTC description:P083800,P083900
V1.3	21 mars 2022	Divide Message on Backend into two columns, "side A" and "side B" Translate the Chinese part to English of the file
V1.4	15 avril 2022	Change Repair Action and Failure Criteria: P0936,P0937
V1.5	13 mai 2022	Change the repair action of A10, A11
V1.6	23 mai 2022	1. Add CCV DTC 2. Change Fault level and DTC description:0x0249F0

Version	Date	Modifications
V1.7	26 mai 2022	1. Change the range of Cell voltage: 0x0E00F2 2. Add 0x0E00F1 line
V1.8	27 mai 2022	Modify repair action of P0936,P0937, 0x0249F0
V1.9	30 mai 2022	Modify Failure Criteria: 0x0134F0, 0x0135F0, 0x0136F0
V2.0	28 juin 2022	Add DTC: 0x066600, 0xC14587
V2.1	5 juillet 2022	Add DTC: 0x0828F0
V2.2	19 juillet 2022	1. Modify Monitor Enable Conditions: 0x010900, 0x011000 2. Modify Failure Criteria: 0x010900, 0x011000, 0x011100, 0x011200 3. Modify Repair Action: 0x010900, 0x011000, 0x011100 4. Modify Fault Level: 0x010900, 0x011000,0x011100 5. Add DTC:0x094300,0x094400,0x094500,0x094600,0x094700,0x094800,0x094900
V2.3	27 juillet 2022	1. Modify Message on CAN: 0x0AA400 2. Modify Failure Criteria: 0x0313F0, 0x0314F1, 0x0315F2, 0xc31587 3. Add the corresponding names of the relays and fuses to DTC Descriptons
V2.4	2 août 2022	1. Modify DTC Description: 0x060700 2. Modify Failure Criteria: 0x060600, 0x060700, 0x063100, 0x063200, 0x063900, 0x064200, 0x064300, 0x064400, 0x064700 3. Modify Repair Action: 0x060600, 0x060700, 0x063100, 0x063200, 0x063900, 0x064200, 0x064300, 0x064400, 0x064700
V2.5	8 août 2022	1. Modify Failure Criteria: 0x0A7DF2, 0x0A7DF3 2. Add column V: Corresponding Message Name & Signal Name
V2.6		

Historique des modifications DTC-Support Information

Version	Date	Statut	Comment
V0.1	19 septembre 2022	Draft	Initial Version (Based on DTC V2.7)
V0.2	21 septembre 2022	Draft	Add sheet "Power Module internal failure"
V0.3	25 octobre 2022	Draft	1. Update column "Possible Reason" & "Investigation Direction" based on VW request 2. Add sheet "Components Check Manual"
V0.4	26 octobre 2022	Draft	"Updated the BMS DTC issues Delete Chinese words in sheet "HCU internal failure"

2 Description du diagnostic

2.1 Avant-propos

La borne de recharge rapide offre différentes possibilités d'aide au diagnostic, à l'installation et au paramétrage du système.

En font, par exemple, partie :

- Interface Web pour la configuration des paramètres lors de la mise en service
- Message d'erreur sous forme de fichier journal via le back-end de l'exploitant par analyse des fichiers journaux
- Diagnostic sur place avec ordinateur portable, matériel et logiciels de diagnostic spéciaux
- Assistance via des fonctions de diagnostic spéciales dans un back-end de fabricant et DTC/messages d'erreur dans l'interface Web

Conseil

Certaines fonctions du diagnostic ne peuvent être exécutées que par du personnel spécialement formé et disposant du logiciel sous licence payante correspondant !

2.2 Diagnostic et connexions de service

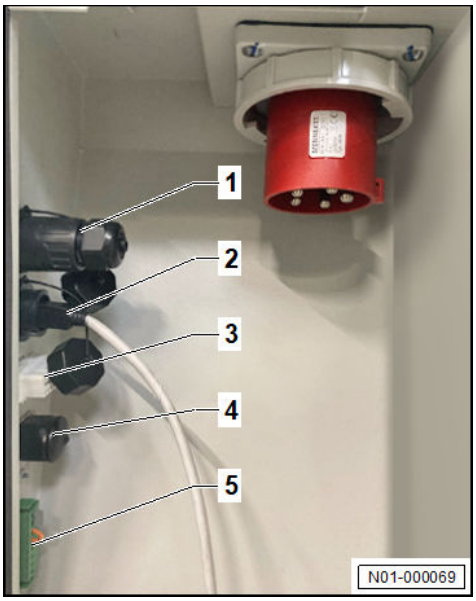
1 - LAN-Port - BD pour la communication avec l'interface Web

2 - LAN-Port - Configuration du répartiteur réseau BD2

3 - OBD-Port - pour le raccordement de l'OBD-Box

4 - Anschluss-Safety Line - Voir ⇒ la notice d'utilisation

5 - Anschluss Remote-Emergency-Stop - uniquement en cas de passage des câbles par le volet de maintenance



2.3 Arrêter la borne de recharge rapide flexible

Quels sont les éléments nécessaires ?

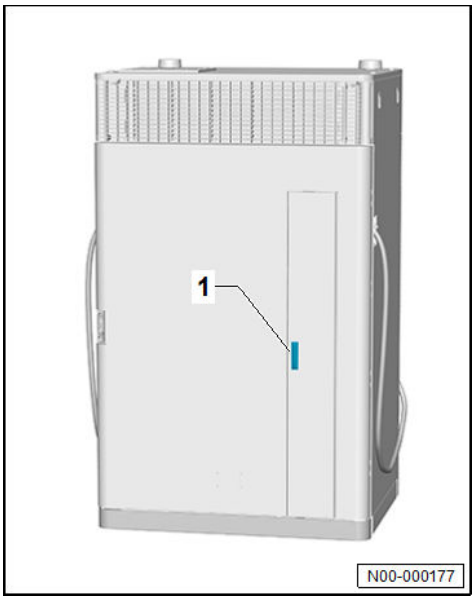
Matériel
Ordinateur portable avec Windows 10 ou similaire (7/11)
Câble LAN

Déroulement

– Régler l'adresse IP pour le port LAN de l'ordinateur/de l'ordinateur portable

- Adresse IP : 192.168.1.101
- Gateway : 255.255.255.0

– Ouvrez le volet de maintenance -1- des portes arrière.



– Raccordez l'ordinateur portable au port LAN -Flèche- de la borne de recharge rapide flexible à l'aide d'un câble.
– Saisir les données d'accès à l'interface de configuration Web conformément au tableau.

Conseil

Les données de connexion actuelles servent ici d'exemple et peuvent être modifiées via l'interface Web, voir ⇒ « Description des fonctions de sécurité » page 8.

Version	URL	Utilisateur	Mot de passe
Jusqu'à FW 1.1.3.1	http://192.168.1.1	dupower	Sur demande
à partir de FW 2.0.x.x	https://192.168.1.1	default_admin	Sur demande

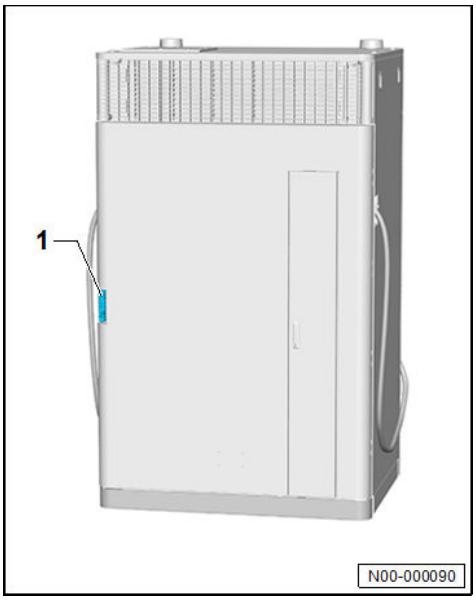
– Ouvrir la configuration du système.
– Sélectionner System Shut down et cliquer sur Save.

La borne de recharge coupe alors le système haute tension.

Conseil

Après l'arrêt, selon son état, le système a besoin, de plus ou moins de temps pour terminer toutes les opérations.

– Ouvrez la porte arrière à l'aide de la poignée de porte -1-.

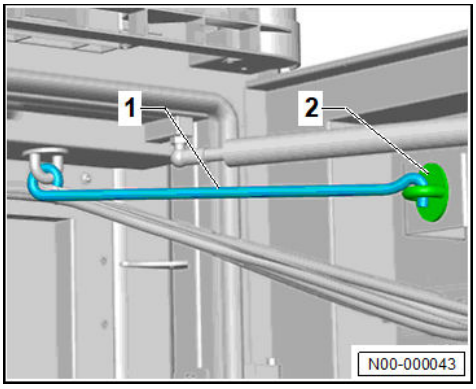


ATTENTION

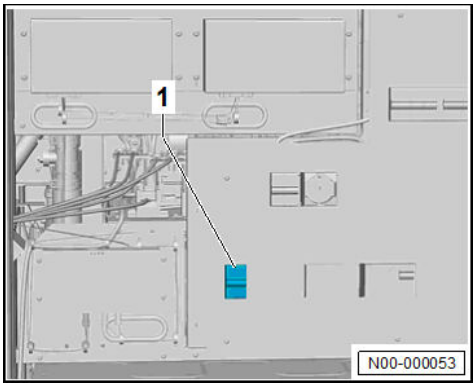
Risque de blessures lié à des portes non sécurisées

- **En cas de vent, ouvrez les portes du système avec précaution.**
- **Empêchez toute fermeture involontaire des portes.**

– Ouvrir la porte arrière et accrocher le crochet anti-tempête -1- dans l'œillet de la porte -2-.



– Désactiver le disjoncteur de la batterie auxiliaire 12 V, l'interrupteur principal CB2 -1-.



2.4 Lecture du logiciel

1. Régler l'adresse IP de l'ordinateur.

- Adresse IP : 192.168.1.9

2. Relier l'ordinateur au port LAN -2- de la borne de recharge au moyen d'un câble réseau.

3. Ouvrir une fenêtre de navigateur sur l'ordinateur et saisir l'IP suivante dans le champ d'adresse.

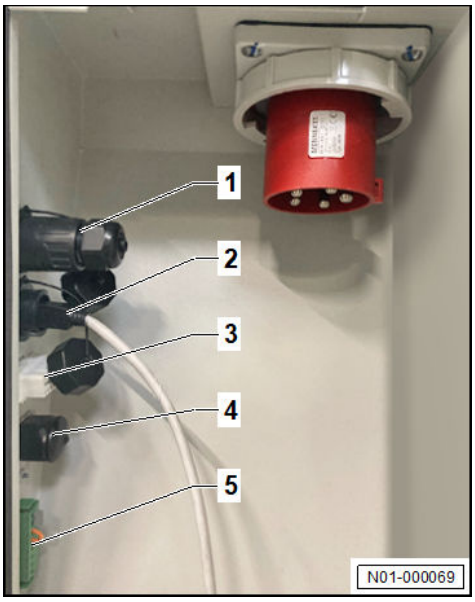
- 192.168.1.1

4. Entrer les données d'inscription.

- Saisie du mot de passe propre au client

5. Exécuter le fichier « Softwareversions.bat ».

6. Ouvrir le fichier « versions.txt ».



2.5 Lecture des DTC

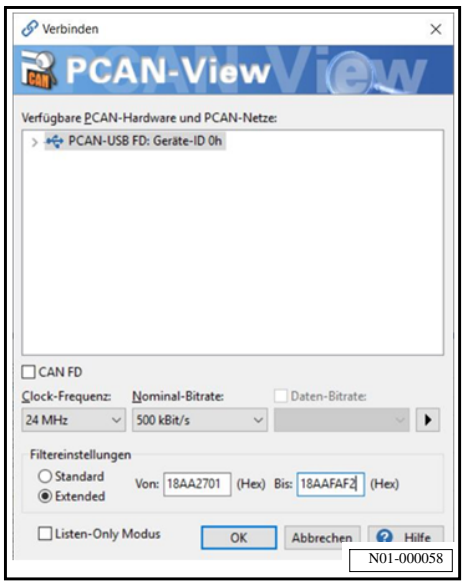
1. Ouvrir PCAN-View avec les paramètres suivants.

2. Relier à CAN1 (BMS1) ou CAN3 (BMS2).

3. Les codes d'erreur sont affichés sur les CAN ID suivants, et ceux-ci peuvent être interprétés à l'aide des tableaux DTC.

- CAN-ID:18AA2701 -> BMS1/2, CAN1=BMS1, CAN3=BMS2
- CAN-ID:18AAFAF1 -> EMS, CAN1 et CAN3 identiques
- CAN-ID:18AAFAF2 -> CCU1/2, CAN1=CCU1, CAN3=CCU2

S'il n'y a pas de DTC, il devrait y avoir 00 00 00 FF FF FF FF FF !



2.6 Description des fonctions de sécurité

User-Management (Gestion des utilisateurs)

Dans la version 1.1.x du logiciel et avant :

- Connexion à l'interface de configuration Web via un nom d'utilisateur et un mot de passe partagés
- Réglable via les paramètres Username et Password dans la section Config Interface
- Paramètres au sein du Config File (fichier de configuration) : cfg_interface_user_name et cfg_interface_password

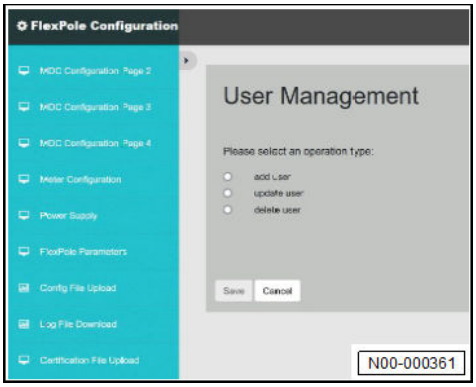
À partir de la version logicielle 2.0.x :

À partir de la version 2.0.x, le logiciel est doté d'une gestion des utilisateurs qui remplace les données de connexion partagées précédentes.

- On compte en outre l'identification via nom d'utilisateur et mot de passe, et ceux-ci sont personnalisés, c'est-à-dire qu'il est possible d'enregistrer jusqu'à 20 utilisateurs au sein de la configuration.
- Pour chaque utilisateur, il convient de définir un ID utilisateur, un mot de passe et un ID carte RFID (Maintenance Card IDs).

Pour les Maintenance Card IDs et l'activation/désactivation du port LAN de maintenance qu'elles permettent, voir la section « Activation/désactivation du port LAN de maintenance ».

Dans l'interface de configuration Web, il existe une nouvelle section dédiée à la gestion des utilisateurs (User Management).



Les fonctions suivantes y sont disponibles :

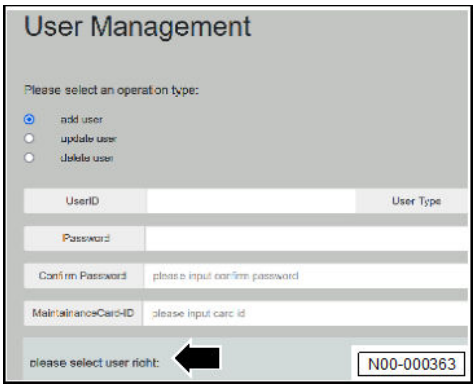
- Créer un nouvel utilisateur
- Modifier un utilisateur
- Supprimer un utilisateur

À la livraison, l'utilisateur suivant, qui possède des droits d'écriture pour toutes les sections, est défini par défaut :

- Nom d'utilisateur : default_admin
- Mot de passe : *Sur demande*
- Maintenance Card ID: vide
- Il est vivement recommandé au client de modifier le compte par défaut lors de la mise en service de la borne de recharge !

Créer un utilisateur

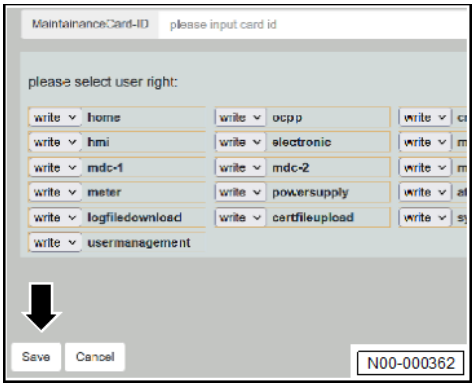
- Saisie de l'ID utilisateur, du mot de passe et de l'ID de la carte de maintenance
- Sélection des droits pour le nouvel utilisateur (voir Gestion des autorisations)



Enregistrer un nouvel utilisateur.

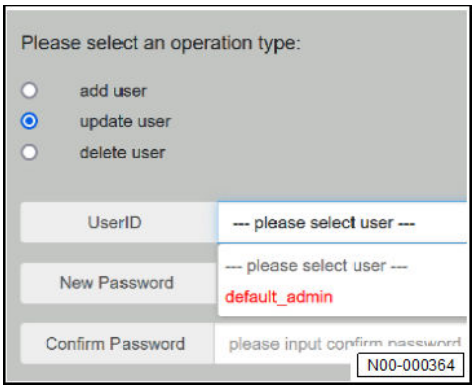
Condition

- Pour des raisons de sécurité, le mot de passe doit comporter au moins 12 caractères !

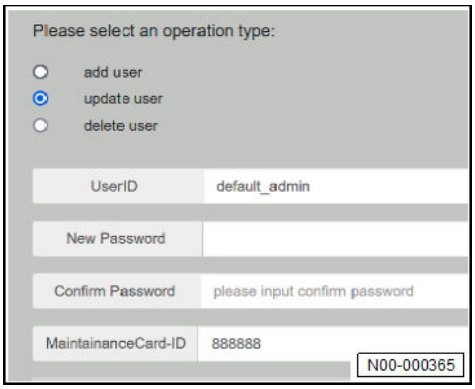


Modifier un utilisateur (modifier un utilisateur existant)

- Sélection de l'utilisateur à modifier via « User ID » dans le menu déroulant



- Ensuite, les droits de l'utilisateur, le mot de passe et l'ID de la carte de maintenance peuvent être modifiés
- Enregistrer

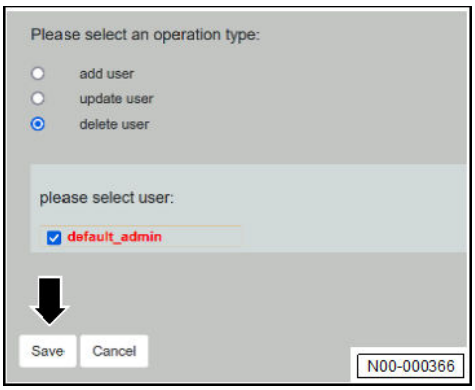


Supprimer un utilisateur

- Sélection de l'utilisateur à supprimer via « User ID » dans le menu déroulant
- Enregistrer (l'utilisateur est supprimé)

Condition

- Il n'est pas possible de supprimer le dernier utilisateur possédant des droits d'écriture pour la gestion des utilisateurs. Il est ainsi certain qu'il y a toujours au moins un utilisateur en mesure de modifier la gestion des utilisateurs.



Gestion des droits relatifs à l'interface de configuration Web

À partir de la version logicielle 2.0.x, une gestion des droits des utilisateurs est introduite aux côtés de la gestion des utilisateurs.

Elle permet de définir, pour chaque utilisateur de chaque section de l'interface de configuration Web, si l'utilisateur a des droits de lecture (read) ou d'écriture (write), ou s'il ne possède aucun droit du tout.

Droits de lecture

- Après s'être connecté, l'utilisateur peut ouvrir la section et consulter les paramètres qui y sont enregistrés, mais il ne peut pas les modifier.

Droits d'écriture

- Après s'être connecté, l'utilisateur peut ouvrir une section et modifier les paramètres qui y sont définis

Avertissement 1 : si l'utilisateur possède des droits d'écriture pour la gestion des utilisateurs, il peut aussi se donner des droits d'écriture pour toutes les autres sections.

Avertissement 2 : si un utilisateur a des droits d'écriture pour le téléchargement et le téléversement de fichiers de configuration, il peut également se donner un accès complet à toutes les sections lorsqu'il téléverse une configuration correspondante.

Aucun droit

- L'utilisateur ne peut pas ouvrir ni consulter la section après s'être connecté.

Suivi des modifications de l'interface de configuration Web

À partir de la version logicielle 2.0.x, toutes les modifications effectuées au sein de l'interface de configuration Web sont documentées.

Par conséquent, un fichier journal est créé en fonction du compte d'utilisateur connecté. Il contient les modifications effectuées, l'heure et la date de la modification, ainsi que l'ID d'utilisateur concerné.

Ce fichier journal est transmis au back-end par « OCPP Datatransfer Message » dès qu'un bouton d'enregistrement est actionné dans une section de l'interface de configuration Web.

- VendorID: VWGC
- MessageID: ConfigurationAuditEvent

Activation/désactivation du port LAN de maintenance

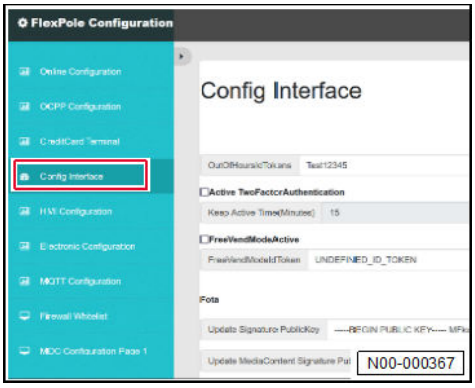
Envoi d'un message d'état du port LAN de maintenance au back-end de l'exploitant

Statut provisoire de la fonction permettant d'informer l'exploitant à propos du port LAN de maintenance actif.

La notification peut être ignorée pour les versions de micrologiciel inférieures à 2.x.x. et les systèmes sans switch Ethernet administré, car le port LAN de maintenance est toujours activé et le système envoie la notification en cas de contrôle du port.

Une mise à jour du micrologiciel à partir de la version 2.x.x et l'intégration d'un switch Ethernet administré permettent d'étendre cette fonction.

À partir de la version logicielle 2.0.x, le port LAN de maintenance peut être désactivé s'il n'est pas utilisé, de sorte que l'interface LAN ne soit disponible que suite à une authentification correcte.



Condition

- La condition est que les bornes de recharge soient équipées de série d'un commutateur administrable (index EB, DB, DC, EA) ou qu'elles en soient équipées ultérieurement (index E et DA).
- Il convient de s'assurer qu'un ID de carte de maintenance est défini dans la gestion des utilisateurs !

Le paramètre "twoFactorAuthenticationActive" = true doit être défini pour activer la fonction.

À la livraison, la fonction est désactivée et peut être activée via la configuration, l'interface de configuration Web ou en actionnant un ID de carte de maintenance enregistré.

Le port LAN de maintenance est désactivé si cette fonction est active. Pour l'activer, il convient de suivre les étapes suivantes :

- Effleurer 6 fois le logo dans l'HMI afin d'activer le lecteur de cartes
- Actionner un ID de carte de maintenance enregistré dans la gestion des utilisateurs
- Le port LAN de maintenance est activé

- Ce n'est qu'alors qu'une connexion à l'interface de configuration Web peut être établie avec le PC. Si les données de connexion utilisées n'appartiennent pas au même utilisateur que celles de l'ID de la carte de maintenance utilisée, la tentative de connexion est annulée et le port LAN de maintenance est à nouveau désactivé.

Le port LAN de maintenance est automatiquement désactivé lorsque la fonction est active (twoFactorAuthenticationActive = true) et qu'il n'y a pas d'activité sur le port LAN de maintenance pendant 15 min. Pour ce faire, la Flexpole envoie régulièrement un ping au PC connecté.

Le port LAN est désactivé si aucune réponse n'est reçue dans les 15 min (le PC n'est plus connecté).

Le statut du port LAN de maintenance est signalé au back-end via OCPP Status Notification en cas de modification (désactivé -> activé ; activé -> désactivé).

En cas d'activation du port LAN	
Field	Value
connectorId	0
errorCode	ChargePointErrorCode.NoError

info	"Maintenance LAN-port activated."
status	Transmit current ChargePointStatus of connector 0. ChargePointStatus SHALL not be changed.
timestamp	Event time stamp of port activation resp. deactivation.
vendorId	VWGC

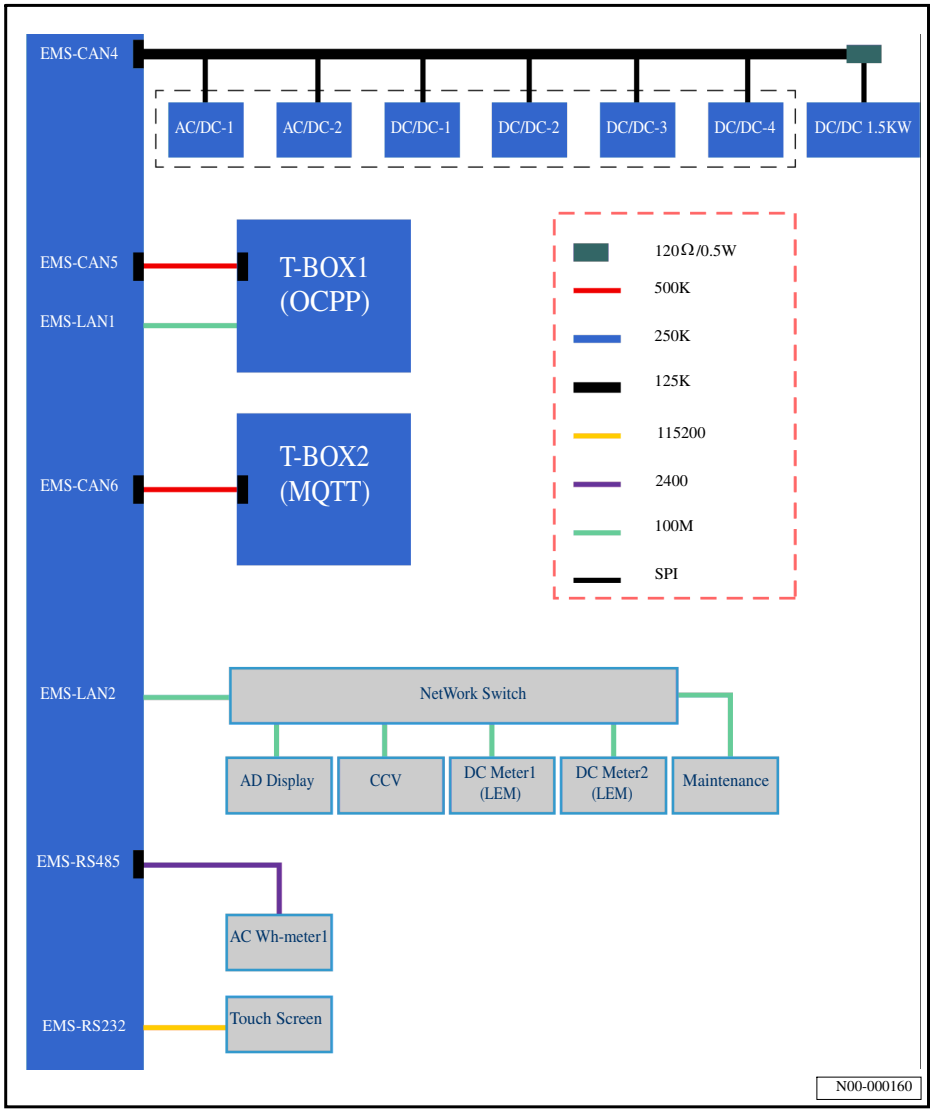
En cas de désactivation du port LAN	
Field	Value
connectorId	0
errorCode	ChargePointErrorCode.NoError
info	"Maintenance LAN-port deactivated."
status	Transmit current ChargePointStatus of connector 0. ChargePointStatus SHALL not be changed.
timestamp	event time stamp of port activation resp. deactivation.
vendorId	VWGC

2.7 Niveau de diagnostic 1

2.7.1 L'autodiagnostic

L'illustration ne montre que des extraits de CANS et d'appareils de commande.

- **Les données destinées à l'autodiagnostic sont évaluées et enregistrées en continu par l'appareil de commande central « EMS ». En cas d'anomalies identifiées, un fichier est transmis par protocole CAN à l'appareil de commande T-Box 1, où il est enregistré « localement ». Les fichiers ainsi créés sont enregistrés dans le T-Box 1 pendant 7 jours. Ensuite, les données sont écrasées et ne peuvent plus être transmises à un serveur back-end.**



  - ❑ Remarque : les 7 derniers jours sont toutefois toujours enregistrés, de sorte qu'une consultation devrait avoir lieu au sein des cycles correspondants. Pour pouvoir évaluer les données d'autodiagnostic enregistrées, une requête doit être émise par le serveur back-end (CPO back-end). Ce n'est qu'ensuite que les paquets de données sont transmis au back-end de l'exploitant.
  - ❑ Remarque : la configuration nécessaire du back-end de l'exploitant ne figure pas dans la présente documentation. Les réglages nécessaires à la consultation doivent être effectués par l'exploitant responsable du back-end.

2.7.2 Déroulement de l'autodiagnostic

Conformément à la programmation au sein du back-end de l'exploitant, les données du T-Box 1 sont envoyées au back-end. Les données du T-Box 1 sont transmises au format « .json » et doivent donc y être enregistrées puis analysées.

Conseil

Une connexion au réseau téléphonique de qualité suffisante est nécessaire pour la transmission des données. Une qualité de

transmission trop faible peut entraîner un retard dans la transmission des données. Cependant, étant donné que les données sont stockées pendant 7 jours, il devrait toujours y avoir un fichier à évaluer.

2.7.3 Évaluation des fichiers d'autodiagnostic

– Évaluation des données à l'aide du bloc-notes :

Ouvrir le fichier avec un éditeur, par exemple Notepad++, et noter les codes d'erreur correspondants, puis consulter le tableau des erreurs pour voir quelle Repair Action (action de réparation) est nécessaire pour le code DTC.

– Analyse des données à l'aide d'un outil de diagnostic :

◆ Par ex. Diagra x Viewer

Conseil

Certains outils de diagnostic sont soumis à une licence payante, par exemple Diagra !

Dans ce cas, le fichier doit être reformaté. Pour ce faire, utiliser un logiciel permettant de reformater le fichier en un fichier MDF. Le fichier ainsi créé peut ensuite être évalué en toute facilité.

2.8 Niveau de diagnostic 2

2.8.1 Soutien au diagnostic

Les données du niveau de diagnostic 2 se trouvent dans le T-Box 2 et sont transmises au back-end du fabricant.

Les personnes autorisées du niveau de service 3 ont accès à ce back-end et peuvent, sur demande, aider l'exploitant (CPO) dans son diagnostic.

Seules des données de mesure supplémentaires y sont saisies et enregistrées, afin de soutenir un diagnostic préalable de l'exploitant.

Conseil

Pour des raisons de confidentialité, aucune donnée relative au client ou à la facturation n'y est enregistrée.

2.9 Niveau de diagnostic 3

2.9.1 Le diagnostic sur place

Le diagnostic de niveau 3 est destiné au diagnostic « sur place » et aux opérations d'entretien. Il s'effectue localement au niveau de la borne de recharge et n'est disponible que pour le personnel autorisé et formé à cet effet.

Conseil

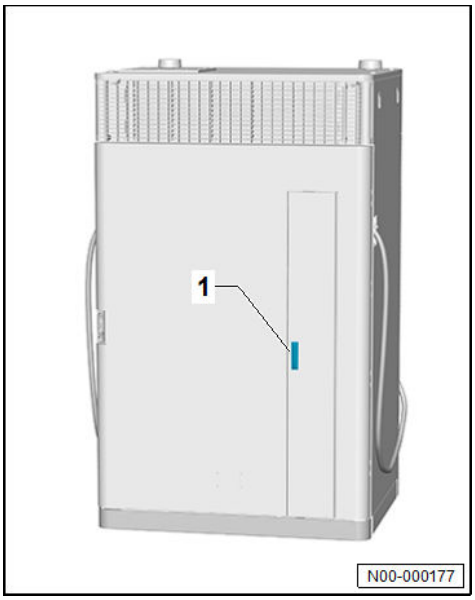
Le diagnostic de niveau 3 nécessite du matériel supplémentaire et un logiciel sous licence appropriés. Ces derniers sont disponibles à l'achat après inscription à une formation.

Quels sont les éléments nécessaires ?

Matériel nécessaire
Ordinateur portable avec Windows 10 ou similaire (7/11)
Un adaptateur de diagnostic supplémentaire de la société KVaser
Un câble adaptateur pour la connexion de l'adaptateur de diagnostic à la prise de diagnostic de la borne de recharge

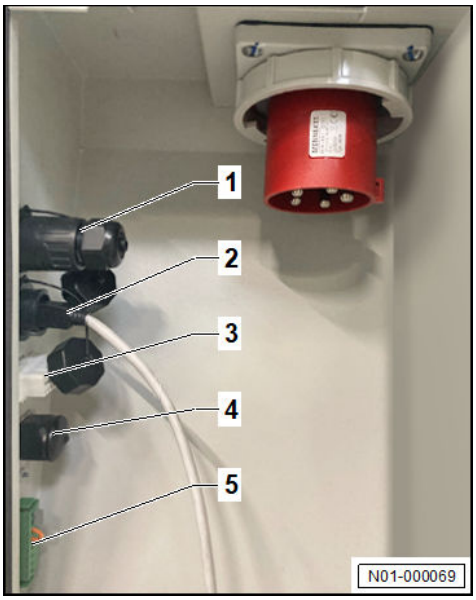
Connexion à la borne de recharge

– Ouvrez le volet de maintenance -1- des portes arrière.



– Connecter l'adaptateur de diagnostic KVaser à un port USB libre de l'ordinateur portable.

– Brancher le câble adaptateur entre la prise de diagnostic de la borne de recharge -3- et l'adaptateur de diagnostic de l'ordinateur portable.



Démarrer le logiciel

– Démarrer le logiciel de diagnostic après avoir établi la connexion avec la borne de recharge.

Après avoir ouvert le logiciel « Diagra X », il convient de configurer le diagnostic pour pouvoir lire les données de diagnostic.

Conseil

Des « expériences de mesure » préparées sont mises à disposition à des fins d'utilisation confortable du diagnostic.

Téléverser une configuration de diagnostic « Expériences »

– Charger le fichier dans Diagra X Viewer en utilisant la fonction XXX dans l'application.

Conseil

Cette fonction n'est disponible que pour le personnel spécialement formé à cet effet !

Plus de détails à venir.

3 Mise à jour et configuration des appareils de commande

3.1 Vue d'ensemble

3.1.1 Guide rapide de mise à jour

Condition

- Des ordinateurs/portables avec des droits d'administration complets sont nécessaires !
- Du matériel supplémentaire et un logiciel sous licence appropriés sont nécessaires. Uniquement disponibles pour le personnel autorisé et ayant suivi une formation supplémentaire.

Préparation/conditions	Remarques
1. État de charge de la batterie haute tension (SoC) > 20 % / batterie 12 V > 80 %	
2. Alimentation externe disponible	
3. Télécharger et enregistrer la configuration actuelle de la borne de recharge	Voir : ⇒ « Lecture du logiciel » page 8
4.Lire et enregistrer la version logicielle actuelle	Voir : ⇒ « Lecture du logiciel » page 8
5. Contrôler l'ensemble du système via Diagra et documenter (captures d'écran) la présence de DTC actifs	Voir : ⇒ « Le diagnostic sur place » page 15

Mise à jour	Remarques
1. Mettre à jour les convertisseurs CA/CC + CC/CC.	Voir ⇒ « Mettre à jour les appareils de commande BMU, SECC, TBOX, CCU, HCU, et les modules de puissance (CA/CC, CC/CC) via l'OBD-Box » page 23 Il n'est pas nécessaire de définir les adresses des convertisseurs. Elles sont disponibles !
2. Mettre à jour EMS + TBOX1, « partie 1 ».	Voir : ⇒ « Mettre à jour les appareils de commande BMU, SECC, TBOX, CCU, HCU, et les modules de puissance (CA/CC, CC/CC) via l'OBD-Box » page 23
3. Mettre à jour TBOX1, « partie 2 ».	Voir : ⇒ « Mettre à jour le MPU de l'appareil de commande 1 destiné à la télécommunication, TBOX1 » page 20
4. Mettre à jour les appareils de commande BMU, SECC, CCU.	Voir : ⇒ « Mettre à jour les appareils de commande BMU, SECC, TBOX, CCU, HCU, et les modules de puissance (CA/CC, CC/CC) via l'OBD-Box » page 23
5. Mettre à jour l'HMI.	(Le fichier propre au client doit être disponible) Exécuter la procédure de mise à jour via mini-USB et fichier batch
6. Téléverser le fichier de configuration avec DuPower.	
7. Contrôle des mises à jour à l'aide des numéros de version du micrologiciel.	Voir : ⇒ « Lecture du logiciel » page 8

3.1.2 Index

Les programmes de mise à jour se trouvent sous forme de raccourci vers le bureau dans le dossier « Flash_Programme ».

- Le logiciel actuel se trouve sous forme de raccourci vers le bureau dans le dossier « Software_AFC ».
- Les tableaux DTC se trouvent sur le lecteur D:, dans le dossier « AFC ».
- Les programmes nécessaires et le logiciel se trouvent sur le lecteur D:, dans le dossier « AFC ».

3.2 Calibrage

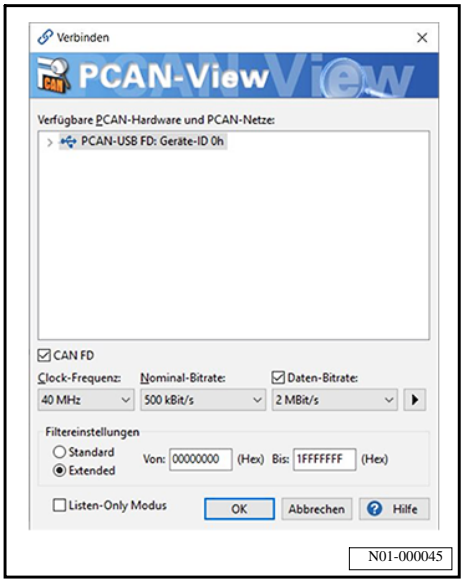
3.2.1 Calibrer le capteur de position de l'appareil de commande destiné à la télécommunication, TBOX1

Condition

- En cas d'intégration d'un nouvel appareil de commande

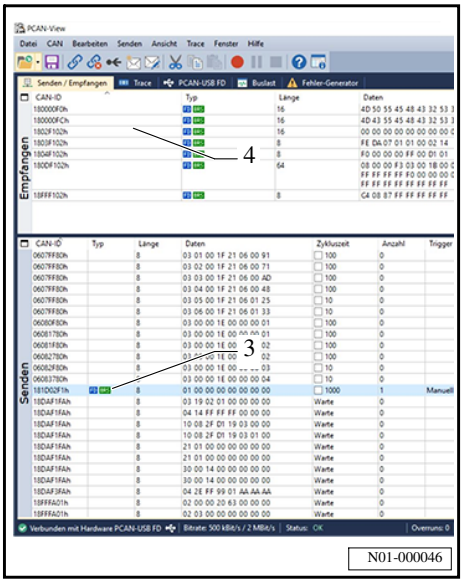
1. Connexion du T-Box via l'adaptateur externe et l'adaptateur PEAK.

2. Ouvrir PCAN-View sur l'ordinateur portable et appliquer les paramètres de connexion suivants.



3. Envoyer le message T-Box Calibration au T-Box en double-cliquant sur le CAN-ID (CAN-ID : 181D02F1h).

4. Le trigger doit ensuite être sur manuel et le nombre sur 1, la borne doit répondre au CAN-ID : 1802F102h par le message suivant : 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00



3.3 Mise à jour

3.3.1 Mettre à jour le MPU de l'appareil de commande 1 destiné à la télécommunication, TBOX1

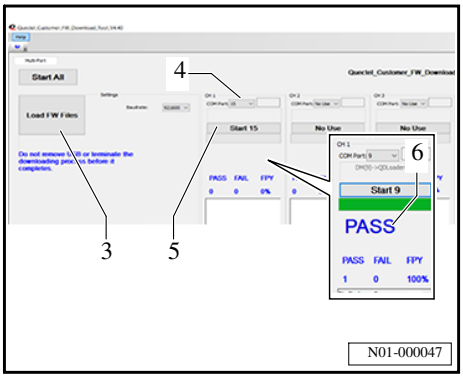
1. Connecter le TBOX1 à l'ordinateur portable via micro-USB.

2. Ouvrir l'outil de téléchargement Quectel_Customer sur l'ordinateur portable.

3. Charger le logiciel mis à jour pour le MPU du TBOX1.

Exemple de chemin d'accès au fichier du logiciel :

- (D):\AFC_SW\ X.X.X \T-Box \MPU0E001R450_20210812\Firmware\ AG35EVAR08A06T4G\update\firehose\ partition_complete_p2K_b128K.mbn X.X.X = version actuelle du logiciel, par ex. 4.5.0



4. Le port COM doit être appliqué depuis le gestionnaire de périphériques à l'aide du Quectel USB DM Port.

- Ouvrir le gestionnaire de périphériques
- Ports (COM & LTP)
- Quectel USB DM PORT (COM...)

5. Démarrer le processus de mise à jour.

6. Le processus dure environ 100 secondes. Ensuite, la mention PASS devrait s'afficher.

3.3.2 Appareil de commande du système de gestion de l'énergie, mettre à jour l'EMS via l'OBD-Box

Condition

- Contrôler la présence d'erreurs au sein du système et les éliminer s'il y en a.
- Déterminer la version actuelle du micrologiciel.

1. Relier l'OBD-Box à l'ordinateur au moyen d'un câble USB.

2. Copier le progiciel créé pour l'EMS sur l'OBD-Box ⇒ « Créer un progiciel pour l'OBD-Box » page 25.

3. Mettre en marche la borne de recharge rapide.

4. Brancher l'OBD-Box à la prise OBD de la borne. La DEL doit ensuite clignoter en vert. Appuyer sur le bouton du boîtier, suite à quoi la DEL doit clignoter en vert avec une fréquence double. Dès que le processus est terminé, l'OBD-Box émet un signal sonore et s'allume en bleu et en vert en continu.

(Le processus de mise à jour devrait durer environ 10 min)

Un fichier journal pouvant peut être lu sur l'ordinateur est créé sur l'OBD-Box. Il permet de vérifier si le processus s'est déroulé avec succès.

Une opération réussie est confirmée par le message « success ».

- La borne de recharge rapide démarre toute seule !

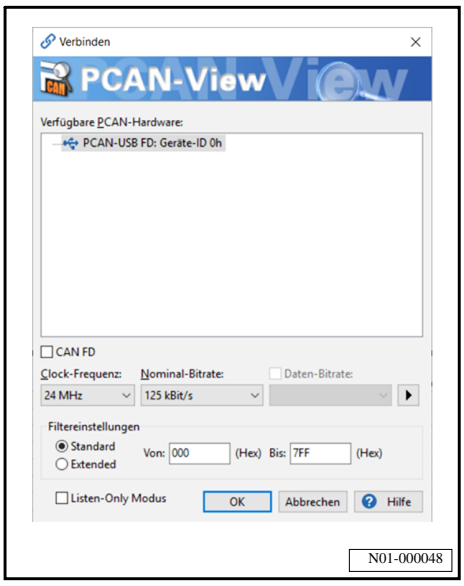
3.3.3 Attribuer les adresses des modules de puissance, ECU

1. Tous les modules de puissance doivent être enfichés (câble CAN).

2. Les raccordements HT et CA doivent être disponibles.

3. Connecter les adaptateurs PCAN aux modules de puissance.

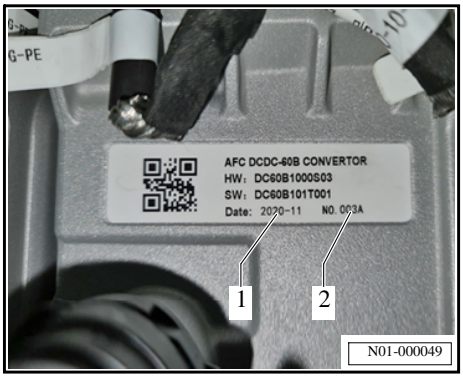
4. Ouvrir PCAN-View et appliquer les paramètres de connexion suivants.



5. Pour l'adressage, les 4 derniers chiffres de la date -1- ainsi que les chiffres et lettres du NO. -2- sont nécessaires.

Condition

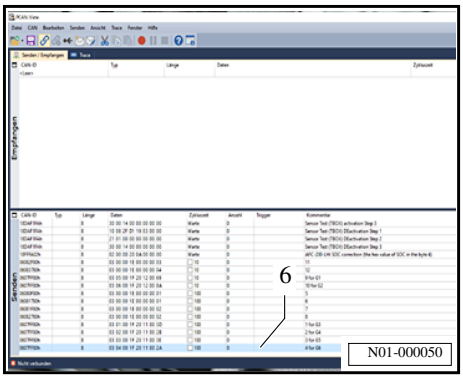
- Respecter l'ordre des modules de puissance de gauche à droite (G4, G3, G6, G5, G2, G1).



6. Ouvrir le message du module de puissance correspondant avec le clic droit de la souris.

7. Cliquer sur Modifier le message.

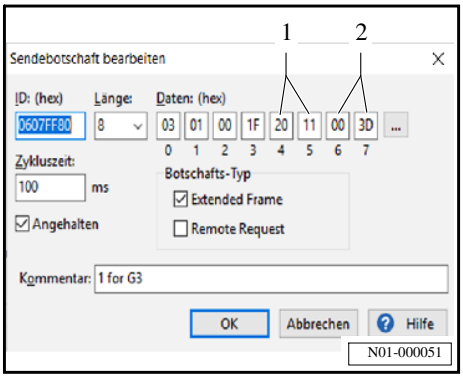
- Seuls les messages avec les mentions G1 à G6 en fin de désignation doivent être traités.



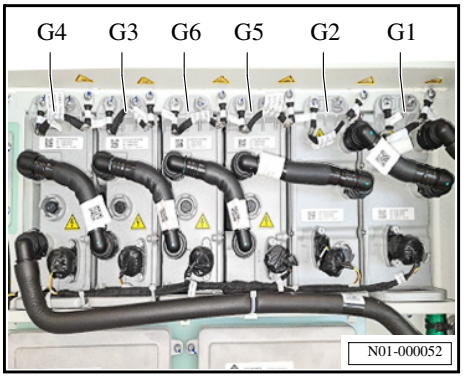
8. Saisir les 4 derniers bits en fonction des données des modules de puissance. (Date -1- et NO. -2-)

- Pour le commentaire, veiller à ce que le bon message ait été sélectionné.

9. Confirmer avec « OK ».

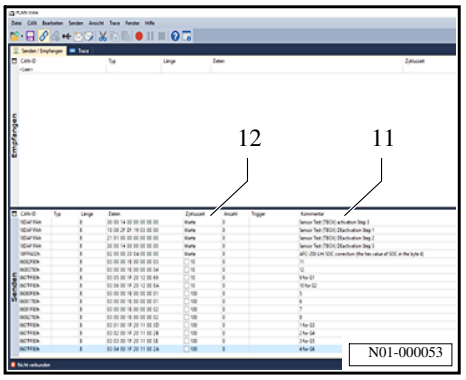


10. Configurer l'adressage de cette manière pour tous les modules de puissance -G1- à -G6- (répéter les étapes 6. à 9.).



11. Une fois les adresses attribuées, envoyer le message dans l'ordre 1 - 12 (tenir compte du commentaire).

12. Pour envoyer, cliquer sur le carré de la durée du cycle et le laisser actif pendant environ 10 secondes (nombre 200 ou 2000), cliquer à nouveau pour le désactiver.



3.3.4 Mettre à jour les appareils de commande BMU, SECC, TBOX, CCU, HCU, et les modules de puissance (CA/CC, CC/CC) via l'OBD-Box

1. Relier l'OBD-Box à l'ordinateur au moyen d'un câble USB.

2. Copier le progiciel créé pour les appareils de commande sur l'OBD-Box ⇒ « Créer un progiciel pour l'OBD-Box » page 25.

3. Démarrer la borne, le raccordement CA doit être activé.

4. Brancher l'OBD-Box à la prise OBD de la borne, attendre quelques instants et appuyer sur le bouton du boîtier, la DEL doit ensuite clignoter rapidement en vert. Dès que le processus est terminé, l'OBD-Box émet un signal sonore et s'allume en bleu. Le processus peut durer jusqu'à 45 min, selon le nombre d'appareils de commande ajoutés.

Un fichier journal pouvant peut être lu sur l'ordinateur est créé sur l'OBD-Box. Il permet de vérifier si le processus s'est déroulé avec succès.

3.3.5 Mettre à jour l'unité de gestion des cellules de la batterie, CMU via l'OBD-Box

1. Relier l'OBD-Box à l'ordinateur/ordinateur portable au moyen d'un câble USB.

2. Copier le progiciel créé pour les CMU sur l'OBD-Box.

3. Mettre en marche la borne de recharge rapide (sans raccordement CA).

4. Brancher l'OBD-Box à la prise OBD de la borne de recharge rapide, attendre quelques instants et appuyer sur le bouton du boîtier, la DEL doit ensuite clignoter rapidement en vert. Dès que le processus est terminé, l'OBD-Box émet un signal sonore et s'allume en bleu. Le processus de mise à jour devrait durer environ 20 min.

Un fichier journal pouvant peut être lu sur l'ordinateur/ordinateur portable est créé sur l'OBD-Box. Il permet de vérifier si le processus s'est déroulé avec succès.

3.3.6 Régler le compteur électrique 1 pour l'énergie reçue, WH3

1. Maintenir la touche « E » enfoncée jusqu'à ce que PASS s'affiche.

2. Régler la valeur 1000 avec les touches fléchées « M » et « P ».

3. Maintenir la touche « E » enfoncée pour confirmer.

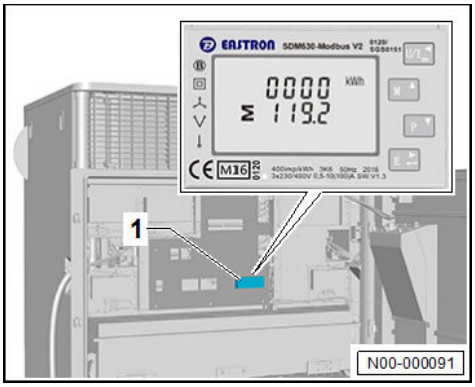
4. Aller jusqu'à Sys (affichage de 3P4) avec la touche « P ».

5. Maintenir la touche « E » enfoncée jusqu'à ce que 3P4 clignote.

6. Régler 3P3 avec les touches « M » ou « P ».

7. Maintenir la touche « E » enfoncée pour confirmer.

8. Appuyer sur la touche « U/I » pour quitter le menu.

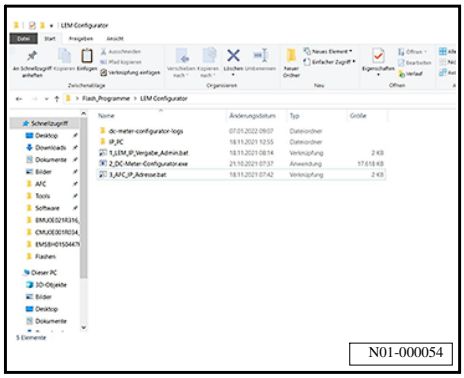


3.3.7 Configurer l'IP des compteurs électriques pour l'énergie distribuée WH1 et WH2 (LEM)

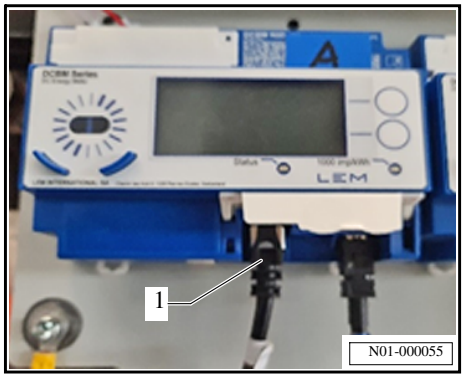
1. Ouvrir le dossier LEM Configurator.

2. Exécuter le fichier 1_LEM_IP_attribution.bat (mot de passe = W!llkommen).

3. Exécuter 2_DC-Meter-Configurator.exe.

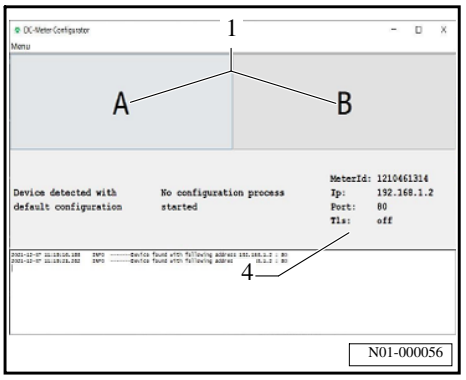


4. Brancher l'affichage LEM à l'ordinateur par le câble réseau -1-.



Le LEM connecté devrait s'afficher après un court laps de temps -4-.

5. Dans le programme, cliquer sur le bouton A pour LEM A ou le bouton B pour LEM B

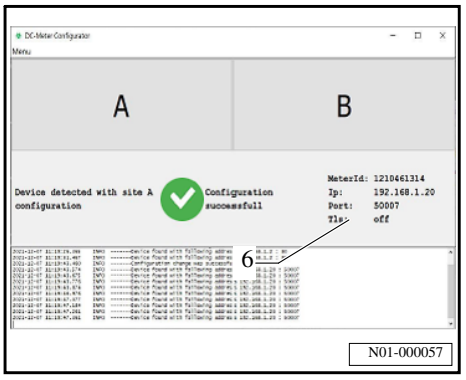


6. Attendre que la modification soit confirmée.

7. Répéter les étapes 4 à 6 pour le 2e LEM.

8. Rebrancher le câble réseau de la borne dans les LEM.

9. Exécuter 3_AFC_IP_Adresse.bat (mot de passe = W!llkommen).



3.4 Configurer, mettre à jour et calibrer chaque appareil de commande

3.4.1 Créer un progiciel pour l'OBD-Box

EMS, CCU, BMU, SECC, MCU du T-Box 1, CA/CC, CC/CC, CMU

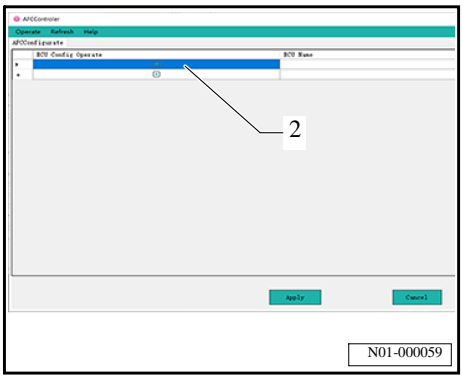
Condition

- Les progiciels doivent être créés séparément pour les appareils de commande suivants

- EMS
- BMU, SECC, T-Box, CCU, HCU, Power Module (CA/CC, CC/CC)
- CMU (batteries)

1. Ouvrir AFCController_V.1.1.4.

2. Ouvrir AFCCOnfig via le symbole +.



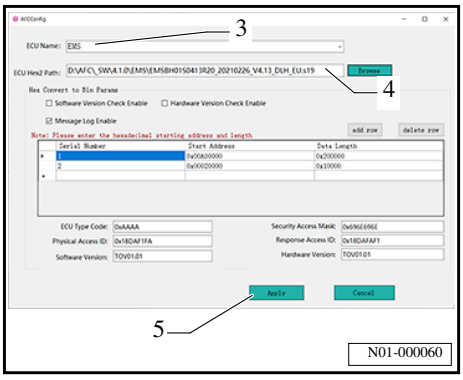
3. Sélection de l’appareil de commande.

4. Sélection du logiciel actuel associé à l’appareil de commande sélectionné.

5. Confirmer la sélection et l’appliquer.

- Conversion succeeded -> OK

Le logiciel de chaque appareil de commande à mettre à jour doit être ajouté de cette manière via le symbole + (répéter les étapes 2 à 5) !



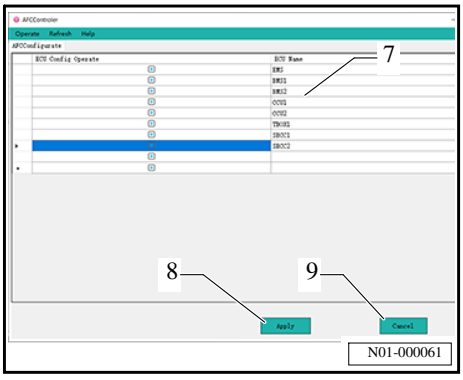
7. Tous les appareils de commande à mettre à jour ont été ajoutés.

8. Confirmer la sélection via Apply.

- Execution succeed -> OK

9. Fermer le programme via Cancel.

10. Les fichiers du répertoire « Lecteur D: -> AFC -> SGM -> AFCController_V.1.1.4 -> output » sont recréés après chaque démarrage du programme. Il est recommandé de copier les fichiers qu’il contient dans un autre dossier après leur création, afin de ne devoir effectuer qu’une seule fois les étapes susmentionnées.



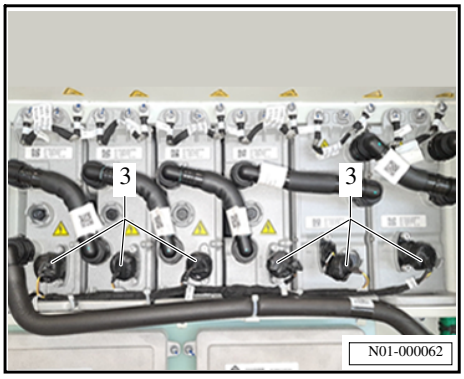
3.4.2 Mettre à jour les modules de puissance, ECU

1. La HT est nécessaire pour mettre à jour les modules de puissance CC/CC, au même titre qu’un raccordement au réseau électrique pour celle des modules de puissance CA/CC.

2. Débrancher tous les connecteurs CAN des modules de puissance.

3. Connecter directement au module de puissance à mettre à jour via le PCAN et le connecteur adaptateur.

4. Démarrer UBoot V1.3.4.



5. Charger le logiciel actuel des modules de puissance CA/CC, CC/CC.

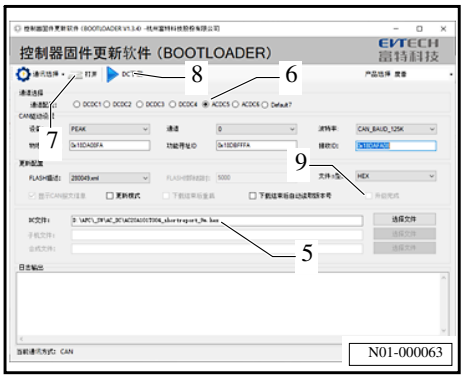
6. Sélectionner le module de puissance à mettre à jour (de gauche à droite)

7. Valider la sélection.

8. Lancer le processus.

9. L'opération a réussi si la mention apparaît sur fond vert.

10. Relier l'adaptateur PCAN au module de puissance suivant et répéter les étapes -5- à -8-.



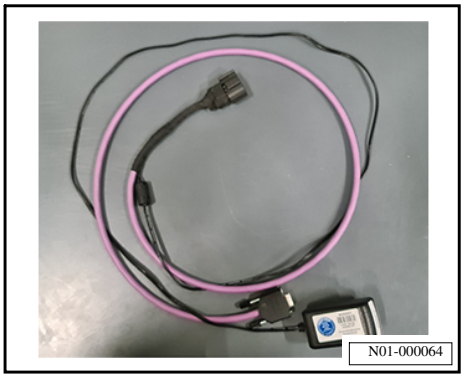
3.4.3 Mettre à jour l'unité de gestion des cellules de batterie, CMU

1. La borne doit être éteinte.

2. Retirer les connecteurs CAN des différentes batteries.

3. Relier la batterie à mettre à jour à l'ordinateur portable à l'aide de l'adaptateur externe et de l'adaptateur PEAK.

4. Ouvrir CMU_4_1Bootloader_V1.1.6.



5. Si nécessaire, activer APP & Calibration.

6. Sélectionner le logiciel actuel pour la CMU.

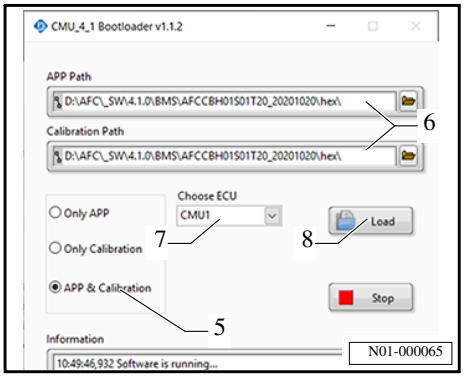
Condition

- APP Path = fichier .hex
- Calibration Path = fichier ...Data... .hex

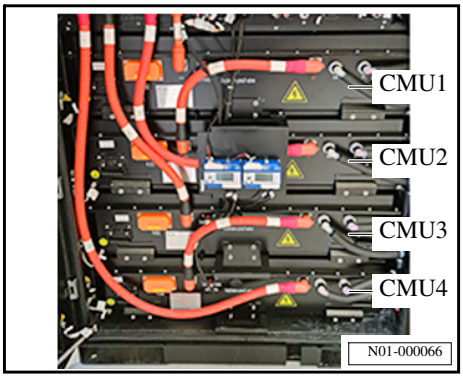
7. Sélectionner la CMU de la batterie connectée

- commencement par le haut CMU1, CMU2, CMU1, CMU2

8. Lancer l'opération (Load)



9. Répéter l'opération pour chaque batterie, en veillant à ce que la CMU soit correctement réglée.



3.4.4 Configurer l'IP des compteurs électriques pour l'énergie distribuée WH1/WH2

1. La borne de recharge rapide doit être activée (présence de HT).

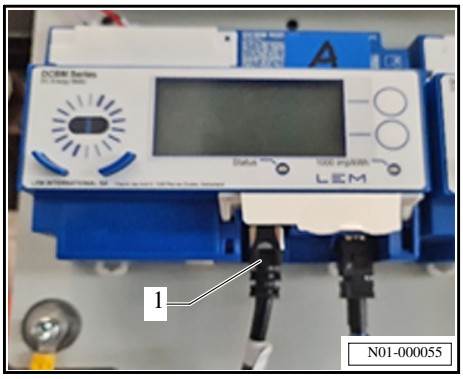
2. Régler l'adresse IP de l'ordinateur portable sur 192.168.1.101

3. Relier l'ordinateur portable au compteur électrique correspondant dédié à l'énergie distribuée au moyen d'un câble réseau.

Condition

- Retirer au préalable le câble réseau enfiché

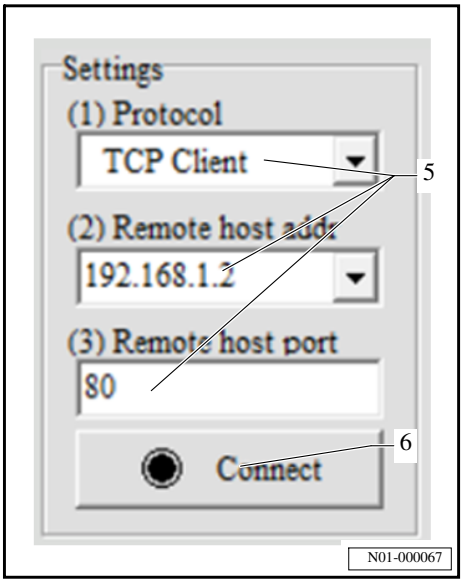
4. Ouvrir NetAssist sur l'ordinateur portable.



5. Appliquer les paramètres suivants :

- Client TCP
- 192.168.1.2 (IP actuelle du compteur électrique)
- 80

6. Cliquer sur Connect (la connexion est établie).

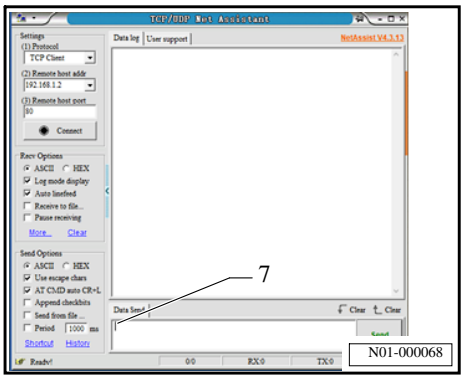


7. Copier le texte suivant dans le champ de texte du programme et envoyer.

Condition

- Veiller à ce que le compteur électrique soit relié par un câble réseau

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !



Pour le compteur électrique 2 dédié à l'énergie distribuée A, WH1
PUT /v1/settings HTTP/1.1 Content-Type: application/json Content-Length: 74 {"ipAddress": " 192.168.1.20 ", "http": {"tls_on": false,"httpPort": 50007}}

Pour le compteur électrique 3 dédié à l'énergie distribuée B, WH2
PUT /v1/settings HTTP/1.1 Content-Type: application/json Content-Length: 74 {"ipAddress": " 192.168.1.40 ", "http": {"tls_on": false,"httpPort": 50008}}

3.4.5 Modifier les réglages de l'heure du bloc d'affichage et de commande supplémentaire HMI

Remarque : ces réglages sont intégrés dans l'interface de configuration Web à partir de la version logicielle 2.X.X !

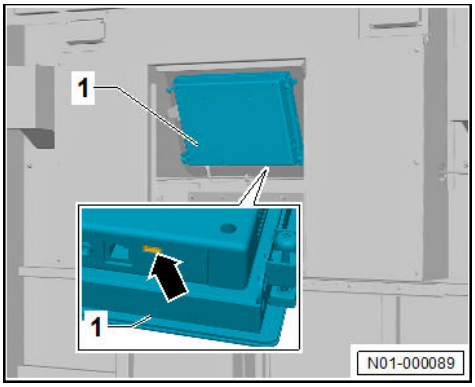
Matériel
Ordinateur portable avec Windows 10 ou similaire (7/11)
Câble mini USB

Logiciel
ADB Tool Chain (SDK)[1)] Link: https://developer.android.com/studio/releases/platform-tools

1) Android Debug Bridge, issu de SDK Android, est une interface logicielle permettant de gérer des appareils Android, d'installer des applications ou d'échanger des données depuis un ordinateur.

Déroulement

⇒ « Arrêter la borne de recharge rapide flexible » page 5.



Étape 1

Ouvrir la porte avant de la borne de recharge rapide.

Connectez votre ordinateur portable à l'aide du câble mini USB au port USB OTG -flèche- du bloc d'affichage et de commande supplémentaire HMI -1-.

Étape 2

Allumer la borne de recharge rapide et attendre qu'elle ait complètement démarré.

Étape 3

Ouvrir Command Terminal sur votre ordinateur portable.

La commande suivante permet de récupérer le fichier de configuration de l'HMI.

- adb pull /storage/emulated/0/MobCharge/hmi_config.json hmi_config.json

Le contenu du fichier se présente comme suit :

{

"port": 4002,

"timeOffsetMinutes": 60, <- décalage horaire en minutes (par ex. au Royaume-Uni, la valeur devrait être « 0 »)

"hasDST": true, <- il s'agit de la valeur pour l'heure d'été, "true" signifie que le changement aura lieu

"screensaverEnabled": true,

"screensaverDelay": 300

}

Étape 5

Modifiez le fichier de configuration et enregistrez-le.

Étape 6

La commande suivante permet d'envoyer le fichier de configuration adapté à l'HMI.

- adb push hmi_config.json /storage/emulated/0/MobCharge/hmi_config.json

Condition

- Effectuez un redémarrage via le back-end !

3.4.6 Mise à jour du contenu publicitaire pour l'écran d'affichage, AD-HMI

Exigences

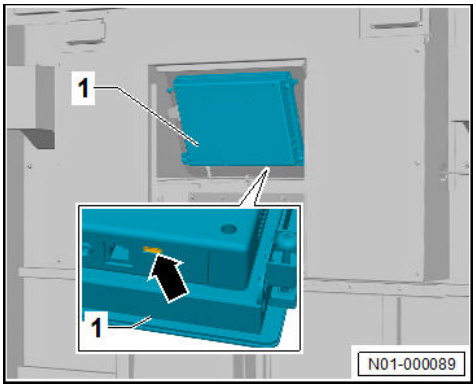
Matériel
Ordinateur portable avec Windows 10 ou similaire (7/11)
Câble mini USB

Logiciel
ADB Tool Chain (SDK)[1)] Link: https://developer.android.com/studio/releases/platform-tools
Informations supplémentaires sur le contenu vidéo Le nom du fichier doit présenter le format suivant : Condition ● [num]-t[i|v]-d[secs]-v[0-100]-name.xyz ● Exemple : 01-tv-d0-v50-EonVideo01.mp4 ◆ num : Ordre dans la liste de lecture ◆ ti/tv : type de fichier (image ou vidéo) ◆ d[secs] : durée de l'affichage (facultatif) ◆ v[0-100] : volume de la vidéo (facultatif)

1) Android Debug Bridge, issu de SDK Android, est une interface logicielle permettant de gérer des appareils Android, d'installer des applications ou d'échanger des données depuis un ordinateur.

Déroulement

⇒ « Arrêter la borne de recharge rapide flexible » page 5.



Étape 1

Ouvrir la porte avant de la borne de recharge rapide.

Connectez votre ordinateur portable à l'aide du câble mini USB au port USB OTG -flèche- du bloc d'affichage et de commande supplémentaire HMI -1-.

Étape 2

Allumer la borne de recharge rapide et attendre qu'elle ait complètement démarré.

Étape 3

Ouvrir Command Terminal sur votre ordinateur portable.

La commande suivante permet de transférer le fichier vidéo sur l'AD-HMI (Adscreen).

- adb push 01-tv-d30-v10-bp_ad_content_A.mp4 /storage/emulated/0/MobCharge/Präsentation/01-tv-d30-v10-bp_ad_content_A.mp4

Le fichier vidéo doit se trouver dans le même dossier que les fichiers SDK Tool.

La commande suivante permet d'afficher les fichiers qui se trouvent sur l'HMI.

- Adb shell ls -l /storage/emulated/0/mobcharge/presentation

La commande suivante permet de supprimer un fichier vidéo sélectionné.

- adb shell rm -i /storage/emulated/0/MobCharge/Präsentation/Nom du fichier.mp4

3.4.7 Initialiser un terminal de paiement après un changement de site

Dans la suite de cette description, l'appareil de commande pour lecteur de carte à puce est appelé « terminal CCV ».

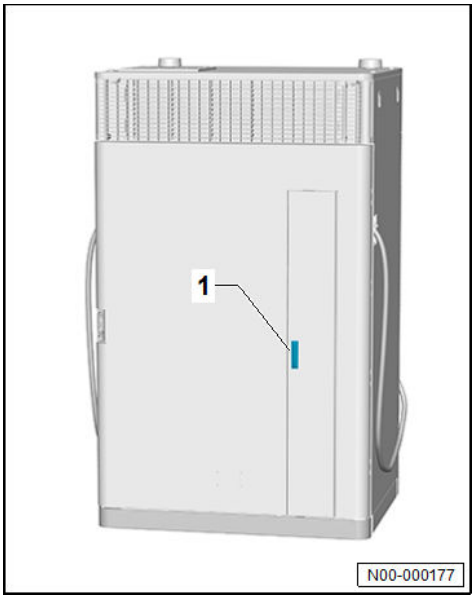
Quels sont les éléments nécessaires ?

Matériel
Ordinateur portable avec Windows 10 ou similaire (7/11)
Câble mini USB
Câble LAN

Logiciel
CCV TS3 (programme de surveillance de terminaux 3) (outil d'administration à utiliser par l'intégrateur ou l'entreprise de services)
Pilote USB pour le terminal CCV OPP-60
Licence pour les terminaux Pay One
Régler l'adresse IP statique pour le port LAN : 192.168.1.101 ; sous-masque 255.255.255.0

Préparation

– Ouvrez le volet de maintenance -1- des portes arrière.



– Raccordez l’ordinateur portable au port LAN -Flèche- de la borne de recharge rapide flexible à l’aide d’un câble.

Étapes

– Ouvrez l’URL suivante dans le navigateur :

◆ http://192.168.1.1

– Saisir les données d’accès à l’interface de configuration Web conformément au tableau.

Version	URL	Utilisateur	Mot de passe
Jusqu'à FW 1.1.3.1	http://192.168.1.1	dupower	Sur demande
à partir de FW 2.0.x.x	https://192.168.1.1	default_admin	Sur demande

– Saisir ou vérifier le Terminal ID du site dans l’option de menu CreditCard Terminal.

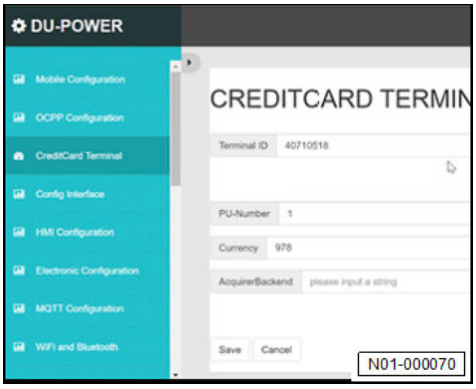
La valeur de la devise peut également être définie ici.

– Pour GBP, saisir « 826 ».

Le numéro PU doit être réglé sur « 1 » pour le terminal live.

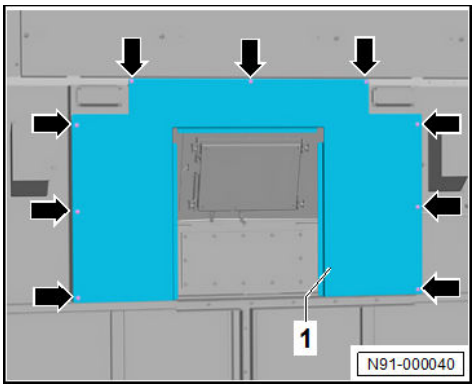
– Confirmer avec « Enregistrer ».

– Désactiver la borne de recharge via l’option de menu Panneau de configuration.



Étapes CCV - Préparation

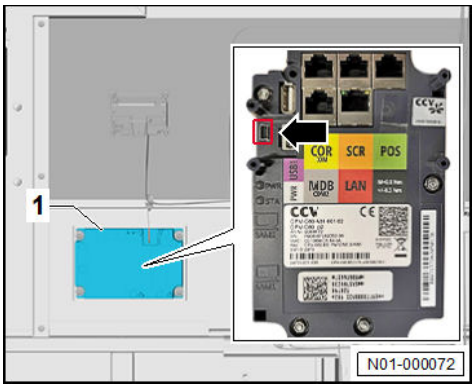
– Dévisser les vis du cache -1- -flèches-.
– Retirer le cache -1-.



Condition

- Le terminal CCV -1- ne peut pas être déconnecté du réseau électrique pendant l'activation du logiciel. Il peut arriver que la mise à jour soit incomplète.

– Brancher le câble mini USB sur le raccord -flèche- du terminal CCV-1-.



Étapes CCV avec TS3

Étape 1

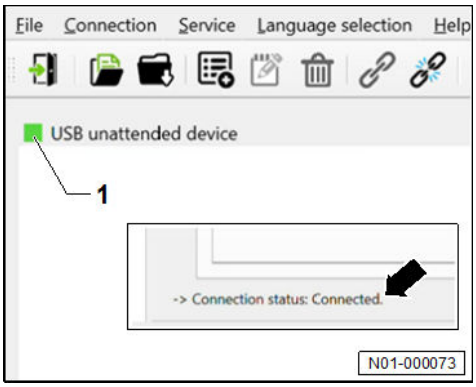
– Ouvrez le programme TS3 (Terminal Supervisor 3)
– Sélectionnez la licence « Payone_T-ID_000[...] »

Si elle n'apparaît pas, assurez-vous que le fichier se trouve dans le dossier du TS3.

Étape 2

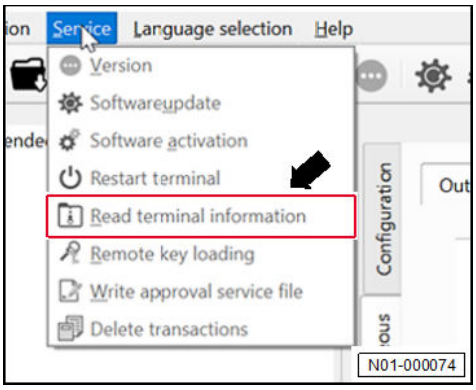
– Établir la connexion avec le terminal CCV en double-cliquant sur « USB unattended device ».

La connexion est confirmée par le carré vert -1- et le texte « Connected » -flèche- en bas à droite.



Étape 3

– Via l'option de menu « Service », exécuter l'option « Lire les informations du terminal » -flèche- pour lire la configuration actuelle.



Étape 4

– Ouvrir le dossier ZIP téléchargé.

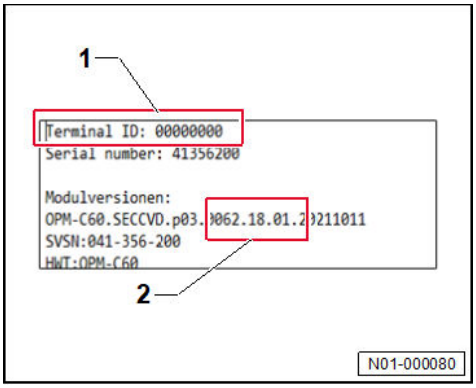
Conseil

Celui-ci ne doit pas être décompressé !

– Ouvrir le fichier « Version.txt ».

Vous trouverez dans ce fichier le Terminal ID -1- (si disponible) et la version logicielle -2-.

Dans cet exemple, la version logicielle affichée est : 62.18.01 (08/2022)

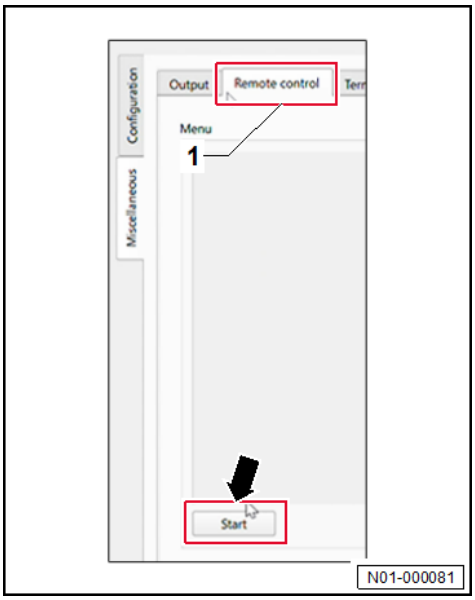


Conseil

La mise à jour d'une version actuelle du logiciel peut être effectuée ultérieurement.

Étape 5

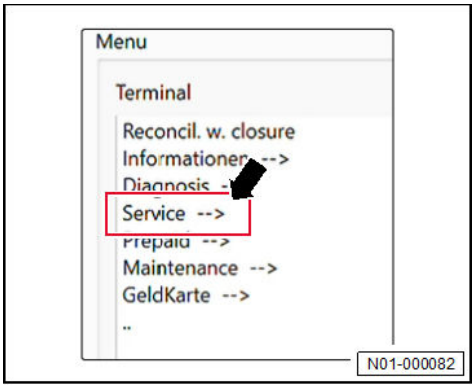
– Exécuter l’option de menu « Commande à distance » -1- et appuyer en bas sur « Démarrer » -flèche-.



Étape 6

– Sélectionnez l’option de menu suivante.

« Service »



– Sélectionnez l’option de menu suivante.

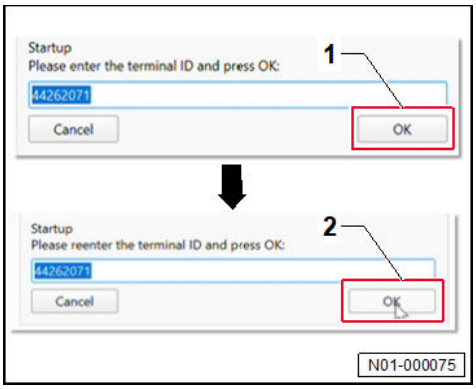
« Initiation »

– Sélectionnez l’option de menu suivante.

« English »

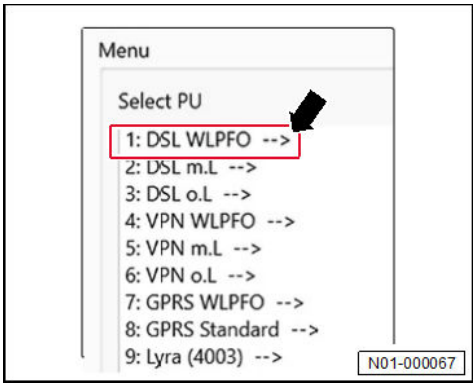
– Saisir le Terminal ID et confirmer avec « OK » -1-.

– Confirmer avec « OK » -2-.



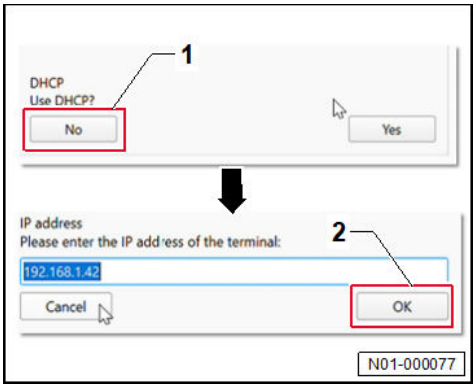
– Sélectionner une option de menu.

« 1 : DSL WLPFO --> »

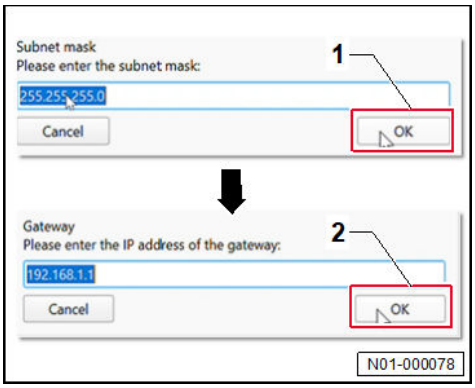


– Sélectionner « NO » -1-.

– Confirmer avec « OK » -2-.



– Confirmer avec « OK » -1-.
– Confirmer avec « OK » -2-.



Une fois la passerelle confirmée, le terminal CCV tente d'entrer en contact avec le portail TMS. Si le message d'erreur « L'hôte LAN ne peut pas être contacté » s'affiche, il convient de vérifier les points suivants :	
1. Les DEL du port LAN du terminal CCV clignotent-elles ?	Si oui, il convient de vérifier la connexion Internet de la borne de recharge (tous les paramètres sont-ils corrects ?).
2. Les DEL du port LAN du terminal CCV ne clignotent pas !	Il y a un problème avec le commutateur ou le câble LAN. Dans ce cas, veuillez contacter le service d'assistance ELLI.

Étape 7

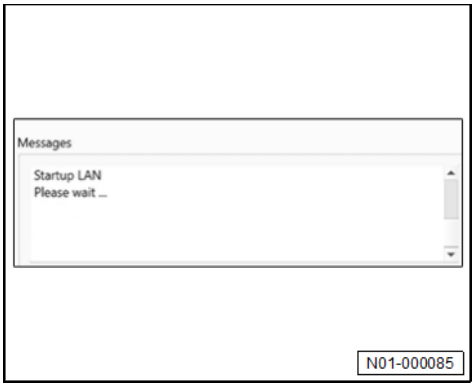
Si une mise à jour est disponible pour le terminal CCV, elle sera téléchargée une fois la passerelle confirmée (étape précédente). Les messages de -TS3- suivants l'indiquent.

Le terminal CCV est maintenant indisponible pendant 30 à 60 min, redémarre 2 ou 3 fois et émet des bips.

Condition

- Ne touchez à rien pendant ce temps.

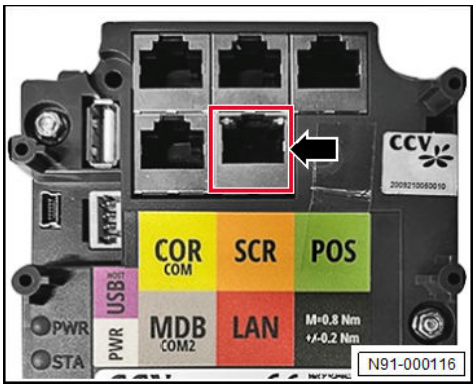
– Vous pouvez ensuite vérifier si la mise à jour et l'initiation ont réussi via les étapes 1-4 (étapes CCV avec TS3).



Comment puis-je savoir si la mise à jour est terminée ?

- Les DEL du port LAN du terminal CCV -flèche- ne clignotent plus à une fréquence élevée.

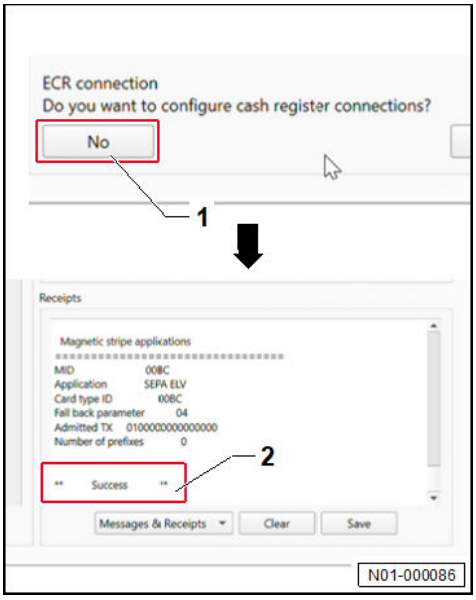
– Vous pouvez à nouveau démarrer la « commande à distance » dans TS3 en suivant les étapes 1 à 4 (étapes CCV avec TS3).



Étape 8

Si aucune mise à jour n'est disponible, passez à l'étape suivante.

– Cliquez sur « NO » -1- et attendez quelques minutes jusqu'à ce que vous voyiez le message -2- suivant.



L'initiation est ainsi terminée.

– Redémarrez la borne de recharge via le back-end et lancez une recharge.

Conseil

Veuillez noter que lors du redémarrage de la borne de recharge, le terminal CCV a besoin d'environ 5 à 10 minutes pour démarrer complètement.

4 Système de gestion de l’énergie, EMS DTC Matrix

4.1 EMS DTC Code Table

Les numéros de poste attribués du code EMS-DTC sont les mêmes dans tous les documents et servent à simplifier la recherche !

- Les codes DTC doivent être traités les uns après les autres conformément à la liste ci-dessous.
- Tenez compte des indications relatives à la puissance du système ⇒ « EMS System Performance » page 133.
- Respectez les indications concernant le statut des indicateurs d’état de la borne de recharge ⇒ « EMS Reaction Table » page 115.

1.	– Recherchez le code EMS-DTC dans le tableau ci-dessous. Notez le numéro du poste.
2.	– Recherchez le numéro de poste correspondant pour obtenir des informations et des conseils supplémentaires. ⇒ « EMS Failure Criteria / Repair Notes and Action » page 55
3.	– Recherchez le numéro de poste correspondant pour obtenir une cause possible et des informations sur la réparation. ⇒ « EMS Support Information » page 92

Remarque : les paramètres ci-dessous ne sont présentés qu’en anglais !

Position	DTC code	DTC Description	Component
1	0101F0	12V over-voltage failure	Backup Battery
2	0101F1	12V high-voltage failure	Backup Battery
3	0102F0	12V under-voltage failure	Backup Battery
4	0102F1	12V low-voltage failure	Backup Battery
5	010300	24V over-voltage failure	EMS-LVS1
6	010400	24V under-voltage failure	EMS-LVS1
7	010500	Battery circuit breaker open failure	CB2/FU7
8	010600	Accessory load relay open failure	KA4
9	010700	Accessory load relay adhesion failure	KA4
10	010800	Advertising screen relay failure (open/adhesion)	KA3
11	0108F1	Advertising screen relay failure (open/adhesion)	KA3
12	010900	FVC1(SPD) open failure	FVC1
13	011000	CB1 open failure	CB1
14	011100	Three-phase switch contactor KM1 open failure	KM1(KA2)
15	011200	Three-phase switch contactor KM1 adhesion failure	KM1(KA2)
16	011300	Three-phase switch contactor KM1 Lifetime failure	KM1(KA2)

Position	DTC code	DTC Description	Component
17	011400	Pack A Recharge positive relay K9 open failure	K9
18	011500	Pack A Recharge positive relay K9 adhesion failure	K9
19	011600	Pack A Recharge positive relay K9 Lifetime failure	K9
20	0117F0	Insulation level 1 failure detection	
21	0117F1	Insulation level 2 failure detection	
22	0117F2	Insulation level 3 failure detection	
23	C10187	TBOX1 CAN communication timeout failure	EMS-T-BOX1
24	C10287	BMS1 CAN communication timeout failure	EMS-BMS1
25	C10387	Touch screen communication timeout failure (RS232)	EMS-HMI
26	C10487	Card Reader communication timeout failure	EMS-POS
27	C10587	A gun dc electric meter communication timeout failure	EMS-DCWh meter1
28	C10687	B gun dc electric meter communication timeout failure	EMS-DCWh meter2
29	C10787	CCU1 CAN communication timeout failure	EMS-CCU1
30	C10887	CCU1 CAN communication timeout failure	EMS-CCU2
31	C10987	Three-phase ac electric meter communication timeout failure	EMS-ACWh meter
32	C11087	ACDC_1 communication timeout failure	EMS-ACDC1
33	0118F0	ACDC_1 internal Level 1 failure (Snapshot record detail information)	G1
34	0118F1	ACDC_1 internal Level 2 failure (Snapshot record detail information)	G1
35	0118F2	ACDC_1 internal Level 3 failure (Snapshot record detail information)	G1
36	C11187	ACDC_2 communication timeout failure	G2
37	0119F0	ACDC_2 internal Level 1 failure (Snapshot record detail information)	G2
38	0119F1	ACDC_2 internal Level 2 failure (Snapshot record detail information)	G2
39	0119F2	ACDC_2 internal Level 3 failure (Snapshot record detail information)	G2
40	C11287	DCDC_1 communication timeout failure	EMS-DCDC1
41	0120F0	DCDC_1 internal Level 1 failure (Snapshot record detail information)	G3
42	0120F1	DCDC_1 internal Level 2 failure (Snapshot record detail information)	G3
43	0120F2	DCDC_1 internal Level 3 failure (Snapshot record detail information)	G3
44	C11387	DCDC_2 communication timeout failure	EMS-DCDC2

Position	DTC code	DTC Description	Component
45	0121F0	DCDC_2 internal Level 1 failure (Snapshot record detail information)	G4
46	0121F1	DCDC_2 internal Level 2 failure (Snapshot record detail information)	G4
47	0121F2	DCDC_2 internal Level 3 failure (Snapshot record detail information)	G4
48	C11487	DCDC_3 communication timeout failure	EMS-DCDC3
49	0122F0	DCDC_3 internal Level 1 failure (Snapshot record detail information)	G5
50	0122F1	DCDC_3 internal Level 2 failure (Snapshot record detail information)	G5
51	0122F2	DCDC_3 internal Level 3 failure (Snapshot record detail information)	G5
52	C11587	DCDC_4 communication timeout failure	EMS-DCDC4
53	0123F0	DCDC_4 internal Level 1 failure (Snapshot record detail information)	G6
54	0123F1	DCDC_4 internal Level 2 failure (Snapshot record detail information)	G6
55	0123F2	DCDC_4 internal Level 3 failure (Snapshot record detail information)	G6
56	C11687	Thermal management unit communication failure	EMS-TMS
57	012400	Fuse of ACDC1 output over current failure	FU1
58	012500	24V DCDC front-end fuse10 voltage rationality check out of range	EMS-HVS2+
59	012600	24 VDCDC output voltage rationality check out of range	EMS-LVS1
60	012700	ACDC output fuse Open failure	
61	C11788	CAN1 Busoff failure	EMS-BMS1-CCU1-HCU
62	C11888	CAN4 Busoff failure	EMS-Power Module
63	C11988	CAN3 Busoff failure	EMS-BMS2-CCU2
64	012800	EMS Hardware Watchdog failure (judge by reading the reset source)	EMS
65	012900	EMS_Abnormal shut down failure	EMS
66	0130F1	Water Immersion level 1 failure	Water sensor
67	0130F2	Water Immersion level 2 failure	Water sensor
68	013100	Door Open failure	Door
69	013200	A gun current rationality out of range	Gun A current
70	013300	B gun current rationality out of range	Gun B current
71	0134F0	BMS1 level 1 failure	BMS1
72	0134F1	BMS1 level 2 failure	BMS1
73	0134F2	BMS1 level 3 failure	BMS1
74	0135F0	CCU1 level 1 failure	CCU1

Position	DTC code	DTC Description	Component
75	0135F1	CCU1 level 2 failure	CCU1
76	0135F2	CCU1 level 3 failure	CCU1
77	0136F0	CCU2 level 1 failure	CCU2
78	0136F1	CCU2 level 2 failure	CCU2
79	0136F2	CCU2 level 3 failure	CCU2
80	0137F0	HCU level 1 failure	TMS
81	0137F1	HCU level 2 failure	TMS
82	0137F2	HCU level 3 failure	TMS
83	013800	ACDC1 output over current	G1
84	013900	ACDC1 output short circuit	G1
85	014000	ACDC1 input under voltage	G1
86	014100	ACDC1 input over voltage	G1
87	014200	ACDC1 input phase loss	G1
88	014300	ACDC1 self-test failure	G1
89	014400	ACDC2 output over current	G2
90	014500	ACDC2 output short circuit	G2
91	014600	ACDC2 input under voltage	G2
92	014700	ACDC2 input over voltage	G2
93	014800	ACDC2 input phase loss	G2
94	014900	ACDC2 self-test failure	G2
95	015000	DCDC1 output short circuit	G3
96	015100	DCDC1 self-test failure	G3
97	015200	DCDC1 hardware output over-voltage	G3
98	015300	DCDC1 output over current	G3
99	015400	DCDC2 output short circuit	G4
100	015500	DCDC2 self-test failure	G4
101	015600	DCDC2 hardware output over-voltage	G4
102	015700	DCDC2 output over current	G4
103	015800	DCDC3 output short circuit	G5
104	015900	DCDC3 self-test failure	G5
105	016000	DCDC3 hardware output over-voltage	G5
106	016100	DCDC3 output over current	G5
107	016200	DCDC4 output short circuit	G6
108	016300	DCDC4 self-test failure	G6
109	016400	DCDC4 hardware output over-voltage	G6
110	016500	DCDC4 output over current	G6
111	016600	Pack A Recharge negative relay K10 open failure	K10

Position	DTC code	DTC Description	Component
112	016700	Pack A Recharge negative relay K10 adhesion failure	K10
113	016800	Pack A Recharge negative relay K10 Lifetime failure	K10
114	016900	Fuse1 behind of ACDC1 open fault	
115	017000	Fuse2 behind of ACDC2 open fault	
116	017100	DCDC input negative relay Open failure	
117	017200	DCDC input negative relay Lifetime failure	
118	017300	Cross A positive relay K5 open failure	K5
119	017400	Cross A positive relay K5 adhesion failure	K5
120	017500	Cross A positive relay K5 Lifetime failure	K5
121	017600	Cross A negative relay K6 open failure	K6
122	017700	Cross A negative relay K6 adhesion failure	K6
123	017800	Cross A negative relay K6 Lifetime failure	K6
124	017900	Thermal management unit power fuse 9 Open failure	FU9
125	018000	AFC initialization failure	AFC
126	018100	EMS initialization failure	EMS
127	018200	EMS System Basic Chip failure	EMS
128	018300	EMS Memory access failure	EMS
129	018400	BMS/T-Box wakeup output pin short circuit to ground	EMS
130	018500	BMS/T-Box wakeup output pin short circuit to battery	EMS
131	018600	BMS/T-Box wakeup output pin open circuit	EMS
132	018700	Three phase power supply control relay drive short circuit to ground(low side)	EMS
133	018800	Three phase power supply control relay drive short circuit to battery(low side)	EMS
134	018900	Three phase power supply control relay drive short circuit to ground(high side)	EMS
135	019000	Three phase power supply control relay drive short circuit to battery(high side)	EMS
136	019100	Three phase power supply control relay drive open circuit	EMS
137	019200	Three phase power supply control relay drive over-current failure	EMS
138	019300	Three-phase switch contactor drive short circuit to ground(low side)	EMS
139	019400	Three-phase switch contactor drive short circuit to battery (low side)	EMS
140	019500	Three-phase switch contactor drive short circuit to ground(high side)	EMS

Position	DTC code	DTC Description	Component
141	019600	Three-phase switch contactor drive short circuit to battery (high side)	EMS
142	019700	Three-phase switch contactor drive open circuit	EMS
143	019800	Three-phase switch contactor drive over-current failure	EMS
144	019900	Cross A positive relay drive short circuit to ground(low side)	EMS
145	020000	Cross A positive relay drive short circuit to battery(low side)	EMS
146	020100	Cross A positive relay drive short circuit to ground(high side)	EMS
147	020200	Cross A positive relay drive short circuit to battery(high side)	EMS
148	020300	Cross A positive relay drive open circuit	EMS
149	020400	Cross A positive relay drive over current failure	EMS
150	020500	Cross A negative relay drive short circuit to ground(low side)	EMS
151	020600	Cross A negative relay drive short circuit to battery(low side)	EMS
152	020700	Cross A negative relay drive short circuit to ground(high side)	EMS
153	020800	Cross A negative relay drive short circuit to battery(high side)	EMS
154	020900	Cross A negative relay drive open circuit	EMS
155	021000	Cross A negative relay drive over current failure	EMS
156	021100	TMS power supply1 positive relay drive short circuit to ground (low side)	EMS
157	021200	TMS power supply1 positive relay drive short circuit to battery(low side)	EMS
158	021300	TMS power supply1 positive relay drive short circuit to ground (high side)	EMS
159	021400	TMS power supply1 positive relay drive short circuit to battery(high side)	EMS
160	021500	TMS power supply1 positive relay drive open circuit	EMS
161	021600	TMS power supply1 positive relay drive over-current failure	EMS
162	021700	TMS power supply1 negative relay drive short circuit to ground (low side)	EMS
163	021800	TMS power supply1 negative relay drive short circuit to battery(low side)	EMS
164	021900	TMS power supply1 negative relay drive short circuit to ground (high side)	EMS
165	022000	TMS power supply1 negative relay drive short circuit to battery(high side)	EMS

Position	DTC code	DTC Description	Component
166	022100	TMS power supply1 negative relay drive open circuit	EMS
167	022200	TMS power supply1 negative relay drive over-current failure	EMS
168	022300	AD screen FAN power supply relay drive short circuit to ground (low side)	EMS
169	022400	AD screen FAN power supply relay drive short circuit to battery(low side)	EMS
170	022500	AD screen FAN power supply relay drive short circuit to ground (high side)	EMS
171	022600	AD screen FAN power supply relay drive short circuit to battery(high side)	EMS
172	022700	AD screen FAN power supply relay drive open circuit	EMS
173	022800	AD screen FAN power supply relay drive over current failure	EMS
174	022900	AD screen power supply relay drive short circuit to ground (low side)	EMS
175	023000	AD screen power supply relay drive short circuit to battery(low side)	EMS
176	023100	AD screen power supply relay drive short circuit to ground (high side)	EMS
177	023200	AD screen power supply relay drive short circuit to battery(high side)	EMS
178	023300	AD screen power supply relay drive open circuit	EMS
179	023400	AD screen power supply relay drive over current failure	EMS
180	023500	Accessory load relay drive short circuit to ground (low side)	EMS
181	023600	Accessory load relay drive short circuit to battery (low side)	EMS
182	023700	Accessory load relay relay drive short circuit to ground (high side)	EMS
183	023800	Accessory load relay drive short circuit to battery (high side)	EMS
184	023900	Accessory load relay driver open circuit	EMS
185	024000	Accessory load relay drive over-current failure	EMS
186	0241F0	12V over-voltage failure for T-Box power supply	
187	0242F1	12V high-voltage failure for T-Box power supply	
188	0243F0	12V under-voltage failure for T-Box power supply	
189	C12087	Timeout failure between EMS and T-Box communication(CANFD)	T-BOX1
190	C12187	Timeout failure between EMS and T-Box communication (Ethernet)	T-BOX1
191	C12288	Busoff failure between EMS and T-Box	T-BOX1

Position	DTC code	DTC Description	Component
192	024400	Storage failure T-Box T-Box internal	T-BOX1
193	024500	Wifi failure in T-Box	T-BOX1
194	024600	Bluetooth failure in T-Box	T-BOX1
195	024700	4G model failure in T-Box	T-BOX1
196	024800	GPS failure in T-Box	T-BOX1
197	0249F0	Self-test failure	T-BOX1
198	0249F1	level 2 Collision Event	
199	0249F2	level 3 Collision Event	
200	025000	Falling Event	T-BOX1
201	025100	Time deviation error	T-BOX1
202	025200	Fuse 2 of ACDC2 output over current failure	FU2
203	025300	Fuse 5 of DCDC1 input over current failure	FU5
204	025400	Fuse 5 of DCDC2 input over current failure	FU5
205	025500	Fuse 6 of DCDC3 input over current failure	FU6
206	025600	Fuse 6 of DCDC4 input over current failure	FU6
207	C12387	BMS1 CAN communication timeout high level failure	EMS-BMS1
208	025700	Advertising screen FAN relay KA1 failure (open/ adhesion)	KA1
209	C12487	TBOX2 CAN communication timeout failure	EMS-T-BOX2
210	C12587	BMS2 CAN communication timeout failure	EMS-BMS2
211	C12687	BMS2 CAN communication timeout high level failure	EMS-BMS2
212	025800	24V DCDC front-front fuse 10 voltage rationality check out of range	EMS-HVS1+
213	025900	TMS front-end fuse 9 voltage rationality check out of range	EMS-HVS3+
214	026000	12 VDCDC output voltage rationality check out of range	EMS-LVS2
215	026100	Backup Battery output voltage rationality check out of range	EMS-LVS3
216	026200	Both cross positive relay K17 open failure	K17
217	026300	Both cross positive relay K17 adhesion failure	K17
218	026400	Both cross positive relay K17 Lifetime failure	K17
219	026500	Both cross negative relay K18 open failure	K18
220	026600	Both cross negative relay K18 adhesion failure	K18
221	026700	Both cross negative relay K18 Lifetime failure	K18
222	026800	Cross B positive relay K7 open failure	K7
223	026900	Cross B positive relay K7 adhesion failure	K7
224	027000	Cross B positive relay K7 Lifetime failure	K7
225	027100	Cross B negative relay K8 open failure	K8

Position	DTC code	DTC Description	Component
226	027200	Cross B negative relay K8 adhesion failure	K8
227	027300	Cross B negative relay K8 Lifetime failure	K8
228	027400	Pack B Recharge positive relayK11 open failure	K11
229	027500	Pack B Recharge positive relay K11 adhesion failure	K11
230	027600	Pack B Recharge positive relay K11 Lifetime failure	K11
231	027700	Pack B Recharge negative relay K12 open failure	K12
232	027800	Pack B Recharge negative relay K12 adhesion failure	K12
233	027900	Pack B Recharge negative relay K12 Lifetime failure	K12
234	028000	TMS power supply1 positive relay K21 open failure	K21
235	028100	TMS power supply1 positive relay K21 adhesion failure	K21
236	028200	TMS power supply1 positive relay K21 Lifetime failure	K21
237	028300	TMS power supply1 negative relay K22 open failure	K22
238	028400	TMS power supply1 negative relay K22 adhesion failure	K22
239	028500	TMS power supply1 negative relay K22 Lifetime failure	K22
240	028600	TMS power supply2 positive relay K23 open failure	K23
241	028700	TMS power supply2 positive relay K23 adhesion failure	K23
242	028800	TMS power supply2 positive relay K23 Lifetime failure	K23
243	028900	TMS power supply2 negative relayK24 open failure	K24
244	029000	TMS power supply2 negative relay K24 adhesion failure	K24
245	029100	TMS power supply2 negative relay K24 Lifetime failure	K24
246	029200	Cross B positive relay drive short circuit to ground(low side)	EMS
247	029300	Cross B positive relay drive short circuit to battery(low side)	EMS
248	029400	Cross B positive relay drive short circuit to ground(high side)	EMS
249	029500	Cross B positive relay drive short circuit to battery(high side)	EMS

Position	DTC code	DTC Description	Component
250	029600	Cross B positive relay drive open circuit	EMS
251	029700	Cross B positive relay drive over current failure	EMS
252	029800	Cross B negative relay drive short circuit to ground(low side)	EMS
253	029900	Cross B negative relay drive short circuit to battery(low side)	EMS
254	080000	Cross B negative relay drive short circuit to ground(high side)	EMS
255	080100	Cross B negative relay drive short circuit to battery(high side)	EMS
256	080200	Cross B negative relay drive open circuit	EMS
257	080300	Cross B negative relay drive over current failure	EMS
258	080400	Both cross positive relay drive short circuit to ground(low side)	EMS
259	080500	Both cross positive relay drive short circuit to battery(low side)	EMS
260	080600	Both cross positive relay drive short circuit to ground(high side)	EMS
261	080700	Both cross positive relay drive short circuit to battery(high side)	EMS
262	080800	Both cross positive relay drive open circuit	EMS
263	080900	Both cross positive relay drive over current failure	EMS
264	081000	Both cross negative relay drive short circuit to ground(low side)	EMS
265	081100	Both cross negative relay drive short circuit to battery(low side)	EMS
266	081200	Both cross negative relay drive short circuit to ground(high side)	EMS
267	081300	Both cross negative relay drive short circuit to battery(high side)	EMS
268	081400	the cross negative relay drive open circuit	EMS
269	081500	Both cross negative relay drive over current failure	EMS
270	081600	TMS power supply2 positive relay drive short circuit to ground (low side)	EMS
271	081700	TMS power supply2 positive relay drive short circuit to battery(low side)	EMS
272	081800	TMS power supply2 positive relay drive short circuit to ground (high side)	EMS
273	081900	TMS power supply2 positive relay drive short circuit to battery(high side)	EMS
274	082000	TMS power supply2 positive relay drive open circuit	EMS

Position	DTC code	DTC Description	Component
275	082100	TMS power supply2 positive relay drive over-current failure	EMS
276	082200	TMS power supply2 negative relay drive short circuit to ground (low side)	EMS
277	082300	TMS power supply2 negative relay drive short circuit to battery(low side)	EMS
278	082400	TMS power supply2 negative relay drive short circuit to ground (high side)	EMS
279	082500	TMS power supply2 negative relay drive short circuit to battery(high side)	EMS
280	082600	TMS power supply2 negative relay drive open circuit	EMS
281	082700	TMS power supply2 negative relay drive over-current failure	EMS
282	0828F0	BMS2 level 1 failure	BMS2
283	0828F1	BMS2 level 2 failure	BMS2
284	0828F2	BMS2 level 3 failure	BMS2
285	082900	Emergency Stop	
286	0830F0	12V over-voltage failure for T-Box2 power supply	
287	0831F1	12V high-voltage failure for T-Box2 power supply	
288	0832F0	12V under-voltage failure for T-Box2 power supply	
289	C12787	Timeout failure between EMS and T-Box2 communication(CANFD)	EMS-T-BOX2
290	C12887	Timeout failure between EMS and T-Box2 communication(Ethernet)	EMS-T-BOX2
291	C12988	Busoff failure between EMS and T-Box2	EMS-T-BOX2
292	083300	Storage failure T-Box2 T-Box2 internal	T-BOX2
293	083400	Wifi failure in T-Box2	T-BOX2
294	083500	Bluetooth failure in T-Box2	T-BOX2
295	083600	4G model failure in T-Box2	T-BOX2
296	083700	GPS failure in T-Box2	T-BOX2
297	083800	Pack A HV shutdown	T-BOX2
298	083900	Pack B HV shutdown	T-BOX2
299	084000	Time deviation error	T-BOX2
300	086800	24 VDCDC front-end fuse 10 open failure	FU10
301	086900	Three-phase feed-in relay KA5 always open failure	KA5
302	087000	Three-phase feed-in relay KA5 always adhesion failure	KA5
303	087100	24V DCDC failure	P1
304	087200	The fuse 8 of TMS fan power supply open failure	FU8

Position	DTC code	DTC Description	Component
305	087300	24V transfer 12V DCDC failure	P2
306	087400	15W DCDC failure	P3
307	087500	The relay K1/K2 of GUN A adhesion failure	CCU1
308	087600	The relay K3/K4 of GUN B adhesion failure	CCU2
309	087700	GUN A over temperature	CCU1
310	087800	GUN B over temperature	CCU2
311	C13087	Lost the communication between cloud and T-Box1	T-BOX1
312	C13187	Lost the communication between cloud and T-Box2	T-BOX2
313	C13287	HMI websocket protocol layer data length error	
314	C13387	Tbox check the HMI websocket protocol layer data length error	
315	087900	Payment terminal registration failed	
316	088000	Payment terminal is not activated	
317	088100	Card reader is inactivated	
318	088283	Configuration failure for function not possible	
319	08826C	Configuration failure for abort via timeout or abort key	
320	08827D	Configuration failure for communication error	
321	08829 A	Configuration failure for ZVT protocol error	
322	0882A1	Configuration failure for remote station doesnot respondConfiguration failure for remote station doesnot respond	
323	0882A3	Configuration failure for no connection	
324	0882DF	Configuration failure for out of order	
325	0882FF	Configuration failure for System error	
326	088383	Initialization failure for function not possible	
327	08836C	Initialization failure for abort via timeout or abort key	
328	08837D	Initialization failure for communication error	
329	08839 A	Initialization failure for ZVT protocol error	
330	0883A1	Initialization failure for remote station does not respond	
331	0883A3	Initialization failure for no connection	
332	0883DF	Initialization failure for out of order	
333	0883FF	Initialization failure for system error	
334	088483	Extended Diagnosis failure for function not possible	
335	08846C	Extended Diagnosis failure for abort via timeout or abort key	

Position	DTC code	DTC Description	Component
336	08847D	Extended Diagnosis failure for communication error	
337	08849 A	Extended Diagnosis failure for ZVT protocol error	
338	0884A1	Extended Diagnosis failure for remote station does not respond	
339	0884A3	Extended Diagnosis failure for no connection	
340	0884DF	Extended Diagnosis failure for out of order	
341	0884FF	Extended Diagnosis failure for system error	
342	088583	Configuration Diagnosis failure for function not possible	
343	08856C	Configuration Diagnosis failure for abort via timeout or abort key	
344	08857D	Configuration Diagnosis failure for communication error	
345	08859 A	Configuration Diagnosis failure for ZVT protocol error	
346	0885A1	Configuration Diagnosis failure for remote station does not respond	
347	0885A3	Configuration Diagnosis failure for no connection	
348	0885DF	Configuration Diagnosis failure for out of order	
349	0885FF	Configuration Diagnosis failure for system error	
350	088683	EMV Diagnosis failure for function not possible	
351	08866C	EMV Diagnosis failure for abort via timeout or abort key	
352	08867D	EMV Diagnosis failure for communication error	
353	08869 A	EMV Diagnosis failure for ZVT protocol error	
354	0886A1	EMV Diagnosis failure for remote station does not respond	
355	0886A3	EMV Diagnosis failure for no connection	
356	0886DF	EMV Diagnosis failure for out of order	
357	0886FF	EMV Diagnosis failure for system error	
358	08877D	Status Enquiry unhandled Error(error code 0x7D)	
359	08879 A	Status Enquiry unhandled Error(error code 0x9A)	
360	0887DF	Status Enquiry unhandled Error(error code 0xDF)	
361	0887FF	Status Enquiry unhandled Error(error code 0xFF)	
362	088800	no appropriate ZVT status code matches the status	
363	088900	Other Error	
364	089000	errorcodes from network-operator system/authorisation-system	

Position	DTC code	DTC Description	Component
365	089100	card not readable(LRC-/parity-error)	
366	089200	card-data not present (neither track-data nor chip found)	
367	089300	processing-error (also for problems with card-reader mechanism)	
368	089400	function not permitted for ec- and Maestro-cards	
369	089500	function not permitted for credit- and tank-cards	
370	089600	turnover-file full	
371	089700	function deactivated (PT not registered)	
372	089800	abort via timeout or abort-key	
373	089900	card in blocked-list (response to command 06 E4)	
374	090000	wrong currency	
375	090100	credit not sufficient (chip-card)	
376	090200	chip error	
377	090300	card-data incorrect (e.g. country-key check)	
378	090400	end-of-day batch not possible	
379	090500	card expired	
380	090600	card not yet valid	
381	090700	card unknown	
382	090800	communication error (communication module does not answer or is not present)	
383	090900	function not possible	
384	091000	ZVT protocol error. e. g. parsing error	
385	091100	error from dial-up/communication fault	
386	091200	receiver not ready	
387	091300	remote station does not respond	
388	091400	no connection	
389	091500	function not allowed due to PCI-DSS/P2PE rules	
390	091600	memory full	
391	091700	merchant-journal full	
392	091800	already reversed	
393	091900	reversal not possible	
394	092000	pre-authorisation incorrect (amount too high) or amount wrong	
395	092100	error pre-authorisation	
396	092200	voltage supply to low (external power supply)	
397	092300	diagnosis required	
398	092400	card-profile invalid. New card-profiles must be loaded.	
399	092500	currency not applicable	

Position	DTC code	DTC Description	Component
400	092600	amount too small	
401	092700	card-reader does not answer / card-reader defective	
402	092800	Terminal activation required	
403	092900	ec-cash/Maestro offline error	
404	093000	necessary device not present or defective	
405	093100	baudrate not supported	
406	093200	register unknown	
407	093300	system error (= other/unknown error) (See TLV tags 1F16 and 1F17)	
408	093400	the A gun HTTP Status is forbidden	
409	093500	the B gun HTTP Status is forbidden	
410	093600	the meter A error	
411	093700	the meter B error	
412	093800	maximum amount exceeded	
413	093900	payment method not supported	
414	094000	open end-of-day batch present	
415	C13487	EMS do not received the response from HMI	
416	C13587	HMI detect the communication error	
417	C13687	HMI detect the touch error	
418	C13787	HMI detect the display error	
419	C13887	HMI detect the AdScreen error	
420	C13987	HMI detect the Mplayer error	
421	C14087	HMI detect the Screensafer error	
422	C14187	Timeout between MCU and MPU in T-Box1	
423	C14287	Timeout between MCU and MPU in T-Box2	
424	C14387	High level Timeout between MCU and MPU in T-Box1	
425	C14487	High level Timeout between MCU and MPU in T-Box2	
426	C14587	Communication timeout between HMI and T-Box1 failure LV1	
427	094100	Level 3 insulation failure of PackA	
428	094200	Level 3 insulation failure of PackB	
429	094300	QF1 open failure	
430	094400	RCD open failure	
431	094500	AC input under voltage	
432	094600	AC input over voltage	
433	094700	AC input phase loss	
434	094800	AC input abnormal failure	

Position	DTC code	DTC Description	Component
435	094900	AC unavailable failure	
436	095000	The failure of get public key from DC meter1	
437	095100	The failure of get public key from DC meter2	
438	095200	TBOX2 Ethernet communication timeout failure	

4.2 EMS Failure Criteria / Repair Notes and Action

- ⇒« EMS DTC Code Table » page 40.

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
1	0101F0	EMS-LV-SP3>14V,last 5s	EMS-LV-SP3≤13.5V,last 3s
2	0101F1	EMS-LV-SP3>18V,last 10s	1.Reset and EMS-LV-SP3≤17.5V,last 3s 2.Manually clear the error code
3	0102F0	EMS-LV-SP3≤10V,last 5s	EMS-LV-SP3>10.5V,last 3s
4	0102F1	EMS-LV-SP3≤8V,last 10s	1.Reset and EMS-LV-SP3>8.5V,last 3s 2.Manually clear the error code
5	010300	EMS-LV-SP1 >28V,last 5s	EMS-LV-SP1 ≤ 27V,last 3s
6	010400	EMS-LV-SP1 ≤20V,last 5s	EMS-LV-SP1 > 21V,last 3s
7	010500	The voltage difference between EMS-LV-SP3 and EMS-LV-SP2 big than 3V,last 1s	The voltage difference between EMS-LV-SP3 and EMS-LV-SP2 less than 2.5V,last 1s
8	010600	1.Loss of CCU1 communication without busoff & 2.Loss of CCU2 communication without busoff & 3.KA4 is closed 4.last 2s	1.KA4 is closed 2.CCU1 communication is normal || 3.CCU1 communication is normal 4.last 5s 500ms 5.Reset 6.Manually clear the error code
9	010700	1.KA4 is open 2.CCU1 communication is normal || 3.CCU1 communication is normal 4.last 2s	1.KA4 is open 2.Loss of CCU1 communication without busoff & 3.Loss of CCU2 communication without busoff & 4.last 500ms
10	010800	EMS detect the corresponding dry contact is abnormal,last 5s	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 1s
11	0108F1	EMS detect the corresponding dry contact is abnormal,last 5s	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 1s

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
12	010900	EMS detect the corresponding dry contact is low voltage,last 1s	1.Check or exchange SPD,and then reset 2.EMS detect the corresponding dry contact is high voltage,last 1s 3.Manually clear the error code
13	011000	EMS detect the corresponding dry contact is low voltage,last 1s	1.Check or exchange breaker,and then reset 2.EMS detect the corresponding dry contact is high voltage,last 1s 3.Manually clear the error code
14	011100	1.Enable KM1 close 2.U: The voltage difference between ACWH Sampling and ACDC Sampling big than 100V || V:The voltage difference between ACWH Sampling and ACDC Sampling big than 100V || W:The voltage difference between ACWH Sampling and ACDC Sampling big than 100V 3. last 5s 2.EMS detect the corresponding dry contact is low voltage,last 1s	1.Enable KM1 close 2.U: The voltage difference between ACWH Sampling and ACDC Sampling less than 50V & V:The voltage difference between ACWH Sampling and ACDC Sampling less than 50V & W:The voltage difference between ACWH Sampling and ACDC Sampling less than 50V 3. last 5s 2.EMS detect the corresponding dry contact is low high voltage,last 1s
15	011200	1.Enable KM1 open 2.U: The voltage difference between ACWH Sampling and ACDC Sampling less than 50V || V:The voltage difference between ACWH Sampling and ACDC Sampling less than 50V || W:The voltage difference between ACWH Sampling and ACDC Sampling less than 50V 3. last 5s 2.EMS detect the corresponding dry contact is high voltage,last 1s	1. Enable KM1 open 2. U: The voltage difference between ACWH Sampling and ACDC Sampling big than 100V & V:The voltage difference between ACWH Sampling and ACDC Sampling big than 100V & W:The voltage difference between ACWH Sampling and ACDC Sampling big than 100V 3. last 5s 2.EMS detect the corresponding dry contact is low voltage,last 1s
16	011300	Three-phase switch cut with load>3000 times	Suggesting exchange relay
17	011400	EMS detect the corresponding dry contact feedback from BMS1 is abnormal,last 300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s300ms
18	011500	EMS detect the corresponding dry contact feedback from BMS1 is abnormal,last 300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s300ms
19	011600	Pack A Recharge positive relay cut with load>3000 times	Suggesting exchange relay
20	0117F0		
21	0117F1		

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
22	0117F2		
23	C10187	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
24	C10287	1.BMS status message timeout 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
25	C10387	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
26	C10487	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
27	C10587	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
28	C10687	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
29	C10787	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
30	C10887	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
31	C10987	1.Key message defined by SW 2.last 30s	Automatic recovery when failure doesn't meet the failure criteria
32	C11087	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
33	0118F0	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
34	0118F1	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
35	0118F2	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
36	C11187	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
37	0119F0	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
38	0119F1	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
39	0119F2	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
40	C11287	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
41	0120F0	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
42	0120F1	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
43	0120F2	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
44	C11387	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
45	0121F0	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
46	0121F1	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
47	0121F2	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
48	C11487	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
49	0122F0	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
50	0122F1	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
51	0122F2	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
52	C11587	1.Heartbeat message timeout 2.last 20s	Automatic recovery when failure doesn't meet the failure criteria
53	0123F0	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
54	0123F1	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Automatic recovery when failure doesn't meet the failure criteria
55	0123F2	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
56	C11687	1.Mode feedback message timeout 2.last 20s	1.Reset 2.All message is normal 3.Manually clear the error code

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
57	012400	EMS detect the current ACDC1 output big than 60A,last 10s.	Reset and the fault flag is erased
58	012500	Voltage sampling <300V,last 5s	Automatic recovery when failure doesn't meet the failure criteria
59	012600	Voltage sampling <16V,last 5s	Voltage sampling <16V,last 5s
60	012700		
61	C11788	EMS detect fault internal ,last 2s	Automatic recovery when failure doesn't meet the failure criteria
62	C11888	EMS detect fault internal ,last 2s	1.Reset 2.All message is normal
63	C11988	EMS detect fault internal ,last 2s	Automatic recovery when failure doesn't meet the failure criteria
64	012800	Confirming through read reset source (Defined by SW)	Reset and the fault flag is erased
65	012900	Triggered through EMS SBC corresponding flag	Reset and the fault flag is erased
66	0130F1	Water Immersion fault last 10 s	Reset and the fault flag is erased
67	0130F2		
68	013100	Door Open fault last 2s	1.Reset and the fault flag is erased 2.Manually clear the error code
69	013200	DCDC output current sum up with ACDC current (if have) differ from DCDC meter with 10 A, last 5 s.	Automatic recovery when failure doesn't meet the failure criteria
70	013300	DCDC output current sum up with ACDC current (if have) differ from DCDC meter with 10 A, last 5 s.	Automatic recovery when failure doesn't meet the failure criteria
71	0134F0	Triggered through BMS1 level 1 failure,which is level 1 failure in BMS internal. Triggered through BMS1 level 1 failure,which is level 1 failure in BMS internal or BMS insulation level 2 fault.	Automatic recovery when failure doesn't meet the failure criteria
72	0134F1	Triggered through BMS1 level 2 failure,which is level 4 failure in BMS internal	Automatic recovery when failure doesn't meet the failure criteria
73	0134F2	Triggered through BMS1 level 3 failure,which is level 7 and level 10 failure in BMS internal	the fault flag is erased
74	0135F0	Triggered through CCU1 level 1 failure,which is level 1 failure in CCU1 internal. Triggered through CCU1 level 1 failure,which is level 1 failure in CCU1 internal or CCU1 insulation level 2 fault.	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
75	0135F1	Triggered through CCU1 level 2 failure,which is level 4 failure in CCU1 internal	Automatic recovery when failure doesn't meet the failure criteria
76	0135F2	Triggered through CCU1 level 3 failure,which is level 7 and level 10 failure in CCU1 internal	the fault flag is erased
77	0136F0	Triggered through CCU2 level 1 failure,which is level 1 failure in CCU2 internal. Triggered through CCU2 level 1 failure,which is level 1 failure in CCU2 internal or CCU2 insulation level 2 fault.	Automatic recovery when failure doesn't meet the failure criteria
78	0136F1	Triggered through CCU2 level 2 failure,which is level 4 failure in CCU2 internal	Automatic recovery when failure doesn't meet the failure criteria
79	0136F2	Triggered through CCU2 level 3 failure,which is level 7 and level 10 failure in CCU2 internal	the fault flag is erased
80	0137F0	Triggered through HCU level 1 failure	Automatic recovery when failure doesn't meet the failure criteria
81	0137F1	Triggered through HCU level 2 failure	Automatic recovery when failure doesn't meet the failure criteria
82	0137F2	Triggered through HCU level 3 failure	1.Reset and the fault flag is erased 2.Manually clear the error code
83	013800	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
84	013900	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
85	014000	Detect the AC meter input voltage <380 V*0.85, lasts 10 s	Detect 380 V*0.85<AC meter input voltage <380 V*1.15
86	014100	Detect the AC meter input voltage>380 V*1.15, lasts 10 s	Detect 380 V*0.85<AC meter input voltage <380 V*1.15
87	014200	Detect the AC meter Lack of phase fault	Detect the AC meter three phase is normal
88	014300	Detect the fault flag in ACDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
89	014400	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
90	014500	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
91	014600	Detect the AC meter input voltage <380 V*0.85, lasts 10 s	Detect 380 V*0.85<AC meter input voltage <380 V*1.15
92	014700	Detect the AC meter input voltage>380 V*1.15, lasts 10 s	Detect 380 V*0.85<AC meter input voltage <380 V*1.15
93	014800	Detect the AC meter Lack of phase fault	Detect the AC meter three phase is normal
94	014900	Detect the fault flag in ACDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
95	015000	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
96	015100	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
97	015200	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
98	015300	Detect the fault flag in DCDC1 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
99	015400	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
100	015500	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
101	015600	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
102	015700	Detect the fault flag in DCDC2 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
103	015800	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
104	015900	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
105	016000	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
106	016100	Detect the fault flag in DCDC3 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
107	016200	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
108	016300	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
109	016400	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
110	016500	Detect the fault flag in DCDC4 Reference:Summary of early AFC project docking situation and issues to be confirmed (Information supplement)-20190207(decryption version)	Reset and the fault flag is erased
111	016600	EMS detect the corresponding dry contact feedback from BMS1 is abnormal,last 300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
112	016700	EMS detect the corresponding dry contact feedback from BMS1 is abnormal,last 300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
113	016800	Pack A Recharge negative relay cut with load>3000 times	Suggesting exchange relay
114	016900	ACDC 1 output less than 0.5A,last 10s	Inspection and maintenance
115	017000	ACDC 2 output less than 0.5A,last 10s	Inspection and maintenance
116	017100		
117	017200		
118	017300	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 300ms
119	017400	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 300ms
120	017500	Cross A positive relay cut with load>3000 times	Suggesting exchange relay

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
121	017600	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 300ms
122	017700	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact is normal,last 5s 300ms
123	017800	Cross A negative relay cut with load>3000 times	Suggesting exchange relay
124	017900	The voltage difference between fuse both sides is bigger than 20V,last 200ms	1.Exchange thermal management unit power fuse,and the reset 2.Manually clear the error code
125	018000	AFC initialization failed or not finished within 2min	AFC Inspection and maintenance
126	018100	EMS initialization failed or not finished within 3s	EMS Inspection and maintenance
127	018200	EMS detect the SBC fault,last 200ms	EMS Inspection and maintenance
128	018300	Read or write EEPROM failed 3 times	EMS Inspection and maintenance
129	018400	Detect the voltage less than 1V while configure the output pin is high voltage,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
130	018500	Detect the voltage bigger than 10V while configure the output pin is low voltage,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
131	018600	Detect the voltage is 0V and not changed by configure,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
132	018700	No fault of high side short to ground, low side AD voltage less than Kpower*coefficient,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
133	018800	Detect the status of low side is low when configure high side and low side enable is ture,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
134	018900	Configure high side is true and low side is false, high side CS voltage big than 4.0V,and low side AD voltage less than Kpower*coefficient,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
135	019000	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
136	019100	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false,. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
137	019200	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
138	019300	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
139	019400	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
140	019500	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
141	019600	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
142	019700	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms.	EMS Inspection and maintenance
143	019800	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
144	019900	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
145	020000	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
146	020100	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
147	020200	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
148	020300	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
149	020400	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
150	020500	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
151	020600	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
152	020700	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
153	020800	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
154	020900	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
155	021000	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
156	021100	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
157	021200	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
158	021300	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
159	021400	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
160	021500	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false,. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
161	021600	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
162	021700	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
163	021800	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
164	021900	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
165	022000	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
166	022100	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
167	022200	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
168	022300	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
169	022400	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
170	022500	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
171	022600	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
172	022700	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
173	022800	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
174	022900	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
175	023000	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
176	023100	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
177	023200	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
178	023300	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
179	023400	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
180	023500	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
181	023600	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
182	023700	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
183	023800	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
184	023900	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
185	024000	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
186	0241F0		
187	0242F1		
188	0243F0		

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
189	C12087	1.Key message defined by SW	1.Automatic recovery when failure doesn't meet the failure criteria 2.Manually clear the error code
190	C12187	1.Key message defined by SW	Automatic recovery when failure doesn't meet the failure criteria
191	C12288	EMS detect fault internal ,last 2s	Automatic recovery when failure doesn't meet the failure criteria
192	024400	Receive error code P0411 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
193	024500	Receive error code P0412 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
194	024600	Receive error code P0413 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
195	024700	Receive error code P0414 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
196	024800	Receive error code P0415 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
197	0249F0	Receive error code 0x0419F0 from T-Box,last 30ms	Recovery when failure doesn't meet the failure criteria after restart the system
198	0249F1	Receive error code 0x0419F1 from T-Box,last 30ms	Automatic recovery when failure doesn't meet the failure criteria
199	0249F2	Receive error code 0x0419F2 from T-Box,last 30ms	1.Reset and the fault flag is erased 2.Manually clear the error code
200	025000	Receive error code P0420 from T-Box,last 30ms	1.Reset and the fault flag is erased 2.Manually clear the error code
201	025100	Receive error code P0421 from T-Box,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
202	025200	EMS detect the current ACDC2 output big than 60A,last 10s.	Reset and the fault flag is erased
203	025300	EMS detect the current for DCDC1 input big than 130A,last 10s	Reset and the fault flag is erased
204	025400	EMS detect the current for DCDC2 input big than 130A,last 10s	Reset and the fault flag is erased
205	025500	EMS detect the current for DCDC3 input big than 130A,last 10s	Reset and the fault flag is erased
206	025600	EMS detect the current for DCDC4 input big than 130A,last 10s	Reset and the fault flag is erased
207	C12387	Receive error code U0102 from BMS1,last 30min	1.Reset 2.CAN message is normal
208	025700	EMS detect the corresponding dry contact is abnormal,last 5s	Exchange advertising screen FAN relay,and the reset
209	C12487	1.Key message defined by SW 2.last 10 cycle	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
210	C12587	1.BMS status message timeout 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
211	C12687	Receive error code U0125 from BMS2,last 30min	Automatic recovery when failure doesn't meet the failure criteria
212	025800	The voltage difference between Pack1 or Pack2(depends on power supply pack) big than 15V,last 5s	Automatic recovery when failure doesn't meet the failure criteria
213	025900	The voltage difference between HV sampling and DCDC24V input big than 15V,last 5s	Automatic recovery when failure doesn't meet the failure criteria
214	026000	The voltage difference between HV sampling and DCDC12V output big than 2V,last 5s	Automatic recovery when failure doesn't meet the failure criteria
215	026100	Out of range 6-16V	Automatic recovery when failure doesn't meet the failure criteria
216	026200	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
217	026300	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
218	026400	Both cross positive relay cut with load>3000 times	Suggesting exchange relay
219	026500	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
220	026600	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
221	026700	Both cross negative relay cut with load>3000 times	Suggesting exchange relay
222	026800	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
223	026900	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
224	027000	Cross B positive relay cut with load>3000 times	Suggesting exchange relay

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
225	027100	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
226	027200	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
227	027300	Cross B negative relay cut with load>3000 times	Suggesting exchange relay
228	027400	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
229	027500	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
230	027600	Pack B Recharge positive relay cut with load>3000 times	Suggesting exchange relay
231	027700	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
232	027800	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
233	027900	Pack A Recharge negative relay cut with load>3000 times	Suggesting exchange relay
234	028000	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
235	028100	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
236	028200	TMS power supply1 positive relay cut with load>3000 times	Suggesting exchange relay
237	028300	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
238	028400	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
239	028500	TMS power supply1 negative relay cut with load>3000 times	Suggesting exchange relay
240	028600	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
241	028700	EMS detect the corresponding dry contact is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
242	028800	TMS power supply2 positive relay cut with load>3000 times	Suggesting exchange relay
243	028900	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
244	029000	EMS detect the corresponding dry contact feedback from BMS2 is abnormal,last 5s300ms	1.Exchange Relay,and then reset 2.EMS detect the corresponding dry contact feedback from BMS1 is normal,last 5s 300ms
245	029100	TMS power supply2 negative relay cut with load>3000 times	Suggesting exchange relay
246	029200	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
247	029300	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
248	029400	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
249	029500	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
250	029600	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
251	029700	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
252	029800	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
253	029900	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
254	080000	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
255	080100	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
256	080200	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
257	080300	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
258	080400	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
259	080500	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
260	080600	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
261	080700	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
262	080800	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
263	080900	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
264	081000	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
265	081100	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
266	081200	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
267	081300	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
268	081400	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
269	081500	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
270	081600	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
271	081700	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
272	081800	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
273	081900	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
274	082000	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms. Reference: EMS HIS	EMS Inspection and maintenance
275	082100	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
276	082200	No fault for high-side short-circuit to ground , low-side AD voltage less than KPower * coefficient (calibrated),last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
277	082300	Configure the corresponding high-side enable to true, low-side is set to true,detected Low-side status is L,last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
278	082400	Configure the corresponding high edge enable to true, low edge to false, Voltage & gt;4.0V(Calibration at High Side CS & Corresponding to Voltage & lt;KPower * Coefficient at Low Side AD for 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
279	082500	Configure the corresponding high-side enable to false, the corresponding 4 low-side set to false, if any low-side voltage converted kpower >kpower *0.8(calibrated) and CS voltage less than calibration value (check table 0.5A corresponding voltage), last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
280	082600	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to false. collecting voltage less than KPower * coefficient (calibrated) at any low-side, last 200ms 500ms Reference: EMS HIS	EMS Inspection and maintenance
281	082700	Configure the corresponding high-side enable to true, the corresponding 4 low-side set to true. detected high-side CS voltage big than 0.87V, last 200ms 500ms. Reference: EMS HIS	Automatic recovery when failure doesn't meet the failure criteria
282	0828F0	Triggered through BMS2 level 1 failure,which is level 1 failure in BMS internal Triggered through BMS2 level 1 failure,which is level 1 failure in BMS internal or BMS insulation level 2 fault.	Automatic recovery when failure doesn't meet the failure criteria
283	0828F1	Triggered through BMS2 level 2 failure,which is level 4 failure in BMS internal	Automatic recovery when failure doesn't meet the failure criteria
284	0828F2	Triggered through BMS2 level 3 failure,which is level 7 and level 10 failure in BMS2 internal	the fault flag is erased
285	082900		
286	0830F0		
287	0831F1		
288	0832F0		
289	C12787	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
290	C12887	1.Key message defined by SW 2.last 500ms	Automatic recovery when failure doesn't meet the failure criteria
291	C12988	EMS detect fault internal ,last 2s	Automatic recovery when failure doesn't meet the failure criteria
292	083300	Receive error code P0411 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
293	083400		

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
294	083500		
295	083600	Receive error code P0414 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
296	083700		
297	083800	Receive HV shutdown req from BMS1,last 60ms	1.Automatic recovery when failure doesn't meet the failure criteria 2.Manually clear the error code
298	083900	Receive HV shutdown req from BMS2,last 60ms	1.Automatic recovery when failure doesn't meet the failure criteria 2.Manually clear the error code
299	084000	Receive error code P0421 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
300	086800	The voltage difference between fuse both sides is big than 100V,last 2s	1.The voltage difference between EMS-HVS1+ and EMS-HVS2+ less than 50V,last 2s 2.Manually clear the error code
301	086900	EMS detect the corresponding dry contact is low voltage,last 5s	Reset and the fault flag is erased
302	087000	EMS detect the corresponding dry contact is high voltage,last 5s	Automatic recovery when failure doesn't meet the failure criteria
303	087100	EMS-LVS1 less than 1V,and DC meter 1 and DC meter 2 no communication with EMS	EMS-LVS1 is 24V±3Vor DC meter 1 communication with EMS orDC meter 2 communication with EMS
304	087200	Voltage difference between EMS-LVS1 and EMS-LVS4 is more than 5 V, last 1s	Voltage difference between EMS-LVS1 and EMS-LVS4 is more than 2V
305	087300	EMS-LVS2 less than 11V or big than 15V,last 1s	EMS-LVS2 range is 11V-15V
306	087400	1.HMI isn't work & 2.Stop button light power is not work	1.HMI ist working or 2.Stop button light power is normal
307	087500	EMS received the message from CCU1: CCU_K1K3_STATE=2 or CCU-K2K4_STATE=2	EMS received the message from CCU1: CCU_K1K3_STATE is not 2 and CCU-K2K4_STATE is not 2
308	087600	EMS received the message from CCU2: CCU_K1K3_STATE=2 or CCU-K2K4_STATE=2	EMS received the message from CCU2: CCU_K1K3_STATE is not 2 and CCU-K2K4_STATE is not 2
309	087700		
310	087800		
311	C13087	Receive error code U0422 from T-Box1,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
312	C13187	Receive error code U0422 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
313	C13287	Receive the length of payload is less than the length field displayed in the HMI Websocket header.Within one reset time, a total of 30 frames are received.	If the mature conditions are not met, the counter will be reset after EMS reset.
314	C13387	Receive the length of payload is less than the length field displayed in the HMI Websocket header.Within one reset time, a total of 30 frames are received.	If the mature conditions are not met, the counter will be reset after T-Box2 reset.
315	087900	The message payment terminal respond is 84 1E after EMS send registration command 06 00.	Automatic recovery when failure doesn't meet the failure criteria
316	088000	Error is reported if no any response within 30 minutes after EMS send registration command 06 00.	Automatic recovery when failure doesn't meet the failure criteria
317	088100	The card reader type in message 06 0F EMS received during status enquiry is not “COR-A10" or "COR-A20"	Automatic recovery when failure doesn't meet the failure criteria
318	088283	The message payment terminal responsed is 06 1E and the result code is 0x83 at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
319	08826C	The message payment terminal responsed is 06 1E and the result code is 0x6C at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
320	08827D	The message payment terminal responsed is 06 1E and the result code is 0x7D at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
321	08829 A	The message payment terminal responsed is 06 1E and the result code is 0x9A at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
322	0882A1	The message payment terminal responsed is 06 1E and the result code is 0xA1 at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
323	0882A3	The message payment terminal responsed is 06 1E and the result code is 0xA3 at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
324	0882DF	The message payment terminal responsed is 06 1E and the result code is 0xDF at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
325	0882FF	The message payment terminal responsed is 06 1E and the result code is 0xFF at the end of configuration process.	Automatic recovery when failure doesn't meet the failure criteria
326	088383	The message payment terminal responsed is 06 1E and the result code is 0x83 at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
327	08836C	The message payment terminal responsed is 06 1E and the result code is 0x6C at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
328	08837D	The message payment terminal responsed is 06 1E and the result code is 0x7D at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
329	08839 A	The message payment terminal responsed is 06 1E and the result code is 0x9A at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
330	0883A1	The message payment terminal responsed is 06 1E and the result code is 0xA1 at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
331	0883A3	The message payment terminal responsed is 06 1E and the result code is 0xA3 at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
332	0883DF	The message payment terminal responsed is 06 1E and the result code is 0xDF at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
333	0883FF	The message payment terminal responsed is 06 1E and the result code is 0xFF at the end of initialization process	Automatic recovery when failure doesn't meet the failure criteria
334	088483	The message payment terminal responsed is 06 1E and the result code is 0x83 at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
335	08846C	The message payment terminal responsed is 06 1E and the result code is 0x6C at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
336	08847D	The message payment terminal responsed is 06 1E and the result code is 0x7D at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
337	08849 A	The message payment terminal responsed is 06 1E and the result code is 0x9A at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
338	0884A1	The message payment terminal responsed is 06 1E and the result code is 0xA1 at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
339	0884A3	The message payment terminal responsed is 06 1E and the result code is 0xA3 at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
340	0884DF	The message payment terminal responsed is 06 1E and the result code is 0xDF at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
341	0884FF	The message payment terminal responsed is 06 1E and the result code is 0xFF at the end of Extended Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
342	088583	The message payment terminal responsed is 06 1E and the result code is 0x83 at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
343	08856C	The message payment terminal responsed is 06 1E and the result code is 0x6C at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
344	08857D	The message payment terminal responsed is 06 1E and the result code is 0x7D at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
345	08859 A	The message payment terminal responsed is 06 1E and the result code is 0x9A at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
346	0885A1	The message payment terminal responsed is 06 1E and the result code is 0xA1 at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
347	0885A3	The message payment terminal responsed is 06 1E and the result code is 0xA3 at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
348	0885DF	The message payment terminal responsed is 06 1E and the result code is 0xDF at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
349	0885FF	The message payment terminal responsed is 06 1E and the result code is 0xFF at the end of Configuration Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
350	088683	The message payment terminal responsed is 06 1E and the result code is 0x83 at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
351	08866C	The message payment terminal responsed is 06 1E and the result code is 0x6C at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
352	08867D	The message payment terminal responsed is 06 1E and the result code is 0x7D at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
353	08869 A	The message payment terminal responsed is 06 1E and the result code is 0x9A at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
354	0886A1	The message payment terminal responsed is 06 1E and the result code is 0xA1 at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
355	0886A3	The message payment terminal responsed is 06 1E and the result code is 0xA3 at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
356	0886DF	The message payment terminal responsed is 06 1E and the result code is 0xDF at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
357	0886FF	The message payment terminal responsed is 06 1E and the result code is 0xFF at the end of EMV Diagnosis process	Automatic recovery when failure doesn't meet the failure criteria
358	08877D	The result code in message 04 0F during status enquiry is 0x7D	Automatic recovery when failure doesn't meet the failure criteria
359	08879 A	The result code in message 04 0F during status enquiry is 0x9A	Automatic recovery when failure doesn't meet the failure criteria
360	0887DF	The result code in message 04 0F during status enquiry is 0xDF	Automatic recovery when failure doesn't meet the failure criteria
361	0887FF	The result code in message 04 0F during status enquiry is 0xFF	Automatic recovery when failure doesn't meet the failure criteria
362	088800	EMS has received the 04 FF message that the intermediate-status code is FF from CCV.	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
363	088900	EMS has received the 04 FF message that the intermediate-status code is not specific from CCV.	Automatic recovery when failure doesn't meet the failure criteria
364	089000	EMS has received the 04 0F message that the error code is 0x01-0x63 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
365	089100	EMS has received the 04 0F message that the error code is 0x64 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
366	089200	EMS has received the 04 0F message that the error code is 0x65 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
367	089300	EMS has received the 04 0F message that the error code is 0x66 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
368	089400	EMS has received the 04 0F message that the error code is 0x67 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
369	089500	EMS has received the 04 0F message that the error code is 0x68 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
370	089600	EMS has received the 04 0F message that the error code is 0x6A from CCV.	Automatic recovery when failure doesn't meet the failure criteria
371	089700	EMS has received the 04 0F message that the error code is 0x6B from CCV.	Automatic recovery when failure doesn't meet the failure criteria
372	089800	EMS has received the 04 0F message that the error code is 0x6C from CCV.	Automatic recovery when failure doesn't meet the failure criteria
373	089900	EMS has received the 04 0F message that the error code is 0x6E from CCV.	Automatic recovery when failure doesn't meet the failure criteria
374	090000	EMS has received the 04 0F message that the error code is 0x6F from CCV.	Automatic recovery when failure doesn't meet the failure criteria
375	090100	EMS has received the 04 0F message that the error code is 0x71 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
376	090200	EMS has received the 04 0F message that the error code is 0x72 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
377	090300	EMS has received the 04 0F message that the error code is 0x73 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
378	090400	EMS has received the 04 0F message that the error code is 0x77 from CCV.	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
379	090500	EMS has received the 04 0F message that the error code is 0x78 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
380	090600	EMS has received the 04 0F message that the error code is 0x79 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
381	090700	EMS has received the 04 0F message that the error code is 0x7A from CCV.	Automatic recovery when failure doesn't meet the failure criteria
382	090800	EMS has received the 04 0F message that the error code is 0x7D from CCV.	Automatic recovery when failure doesn't meet the failure criteria
383	090900	EMS has received the 04 0F message that the error code is 0x83 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
384	091000	EMS has received the 04 0F message that the error code is 0x9A from CCV.	Automatic recovery when failure doesn't meet the failure criteria
385	091100	EMS has received the 04 0F message that the error code is 0x9B from CCV.	Automatic recovery when failure doesn't meet the failure criteria
386	091200	EMS has received the 04 0F message that the error code is 0xA0 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
387	091300	EMS has received the 04 0F message that the error code is 0xA1 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
388	091400	EMS has received the 04 0F message that the error code is 0xA3 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
389	091500	EMS has received the 04 0F message that the error code is 0xA5 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
390	091600	EMS has received the 04 0F message that the error code is 0xB1 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
391	091700	EMS has received the 04 0F message that the error code is 0xB2 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
392	091800	EMS has received the 04 0F message that the error code is 0xB4 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
393	091900	EMS has received the 04 0F message that the error code is 0xB5 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
394	092000	EMS has received the 04 0F message that the error code is 0xB7 from CCV.	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
395	092100	EMS has received the 04 0F message that the error code is 0xB8 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
396	092200	EMS has received the 04 0F message that the error code is 0xBF from CCV.	Automatic recovery when failure doesn't meet the failure criteria
397	092300	EMS has received the 04 0F message that the error code is 0xC2 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
398	092400	EMS has received the 04 0F message that the error code is 0xC4 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
399	092500	EMS has received the 04 0F message that the error code is 0xC6 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
400	092600	EMS has received the 04 0F message that the error code is 0xC8 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
401	092700	EMS has received the 04 0F message that the error code is 0xE2 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
402	092800	EMS has received the 04 0F message that the error code is 0xE4 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
403	092900	EMS has received the 04 0F message that the error code is 0xF1 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
404	093000	EMS has received the 04 0F message that the error code is 0xFC from CCV.	Automatic recovery when failure doesn't meet the failure criteria
405	093100	EMS has received the 04 0F message that the error code is 0xFD from CCV.	Automatic recovery when failure doesn't meet the failure criteria
406	093200	EMS has received the 04 0F message that the error code is 0xFE from CCV.	Automatic recovery when failure doesn't meet the failure criteria
407	093300	EMS has received the 04 0F message that the error code is 0xFF from CCV.	Automatic recovery when failure doesn't meet the failure criteria
408	093400	EMS has received the HTTP message that the HTTP Status is forbidden from LEM.	Automatic recovery when failure doesn't meet the failure criteria
409	093500	EMS has received the HTTP message that the HTTP Status is forbidden from LEM.	Automatic recovery when failure doesn't meet the failure criteria
410	093600	EMS has received the abnormal HTTP status code or status value of the DC-meter	

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
411	093700	EMS has received the abnormal HTTP status code or status value of the DC-meter	
412	093800	EMS has received the 04 0F message that the error code is 0xC3 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
413	093900	EMS has received the 04 0F message that the error code is 0xC5 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
414	094000	EMS has received the 04 0F message that the error code is 0xF0 from CCV.	Automatic recovery when failure doesn't meet the failure criteria
415	C13487	The following conditions are also met: 1.EMS did not receive the response from HMI within 500ms; 2.EMS repeatedly sends for 5 times, but still no response is received after timeout.	Automatic recovery when failure doesn't meet the failure criteria
416	C13587	The following conditions are also met: 1.EMS has received the DiagnosticInformation signal which the value equal to 0001 communication error by HMI	Automatic recovery when failure doesn't meet the failure criteria
417	C13687	The following conditions are also met: 1.EMS has received the DiagnosticInformation signal which the value equal to 0002 touch error by HMI	Automatic recovery when failure doesn't meet the failure criteria
418	C13787	The following conditions are also met: 1.EMS has received the DiagnosticInformation signal which the value equal to 0003 display error by HMI	Automatic recovery when failure doesn't meet the failure criteria
419	C13887	The following conditions are also met: 1.EMS has received the DiagnosticInformation signal which the value equal to 0004 AdScreen error by HMI	Automatic recovery when failure doesn't meet the failure criteria
420	C13987	The following conditions are also met: 1.EMS has received the DiagnosticInformation signal which the value equal to 0005 Mplayer error by HMI	Automatic recovery when failure doesn't meet the failure criteria

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
421	C14087	The following conditions are also met: 1.EMS has received the DiagnostiCInformation signal which the value equal to 0006 Screensafer error by HMI	Automatic recovery when failure doesn't meet the failure criteria
422	C14187	Receive error code 0xC42387 from T-Box1,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
423	C14287	Receive error code 0xC42387 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
424	C14387	Receive error code 0xC42487 from T-Box1,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
425	C14487	Receive error code C42487 from T-Box2,last 500ms	Automatic recovery when failure doesn't meet the failure criteria
426	C14587	EMS received the DTC code from T-Box1: 0xC42587	EMS don't receive the DTC code from T-Box1 last 0s: 0xC42587
427	094100	EMS received the DTC code from BMS1: 0x0AA6F2	EMS don't received the DTC code from BMS1 last 30s: 0x0AA6F2
428	094200	EMS received the DTC code from BMS2: 0x0AA6F2	EMS don't received the DTC code from BMS1 last 30s: 0x0AA6F2
429	094300	EMS detect the corresponding dry contact is low voltage,last 1s	1.Check or exchange QF1,and then reset 2.EMS detect the corresponding dry contact is high voltage,last 1s
430	094400	EMS detect the corresponding dry contact is low voltage,last 1s	1.Check or exchange RCD,and then reset 2.EMS detect the corresponding dry contact is high voltage,last 1s
431	094500	Detect the AC meter input voltage <400 V*0.85, lasts 10 s	Detect 400 V*0.85<AC meter input voltage <400 V*1.15
432	094600	Detect the AC meter input voltage>400V*1.15, lasts 10 s	Detect 400 V*0.85<AC meter input voltage < 400 V*1.15
433	094700	Detect the AC meter lack of phase fault	Detect the AC meter three phase is normal
434	094800	1.Key message defined by SW 2.last 30s (follow 0xC10987 Three-phase ac meter communication timeout failure)	Automatic recovery when failure doesn't meet the failure criteria
435	094900	EMS detected any one or more of the following DTC code: 0x010900,0x011000,0x011100,0xC10987,0x094300,0x094400,0x094800	EMS don't detect any one of the following DTC code: 0x010900,0x011000,0x011100,0xC10987,0x094300,0x094400,0x094800

Position	DTC code	Failure Criteria (Test Result NOK)	Repair Notes / Action
436	095000		⇒« EMS Support Information » page 92
437	095100		⇒« EMS Support Information » page 92
438	095200		⇒« EMS Support Information » page 92

4.3 EMS Support Information

- ⇒« EMS DTC Code Table » page 40

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code	Possible Reason	Investigation Direction
1	0101F0	[A] 12V backup battery voltage is higher than 14V [B] 300W DCDC power module failure	
2	0101F1	[A] 12V backup battery voltage is higher than 18V [B] 300W DCDC power module failure	
3	0102F0	[A] 12V backup battery voltage is lower than 10V [B] The harness between 12V backup battery and 300W DCDC power module is loose or damaged [C] 300W DCDC power module failure	[A1] Recharging 12V backup battery [B1] Confirm whether the harness between 12V backup battery and 300W DCDC power module is loose or damaged
4	0102F1	[A] 12V backup battery voltage is lower than 8V [B] The harness between 12V backup battery and 300W DCDC power module is loose or damaged [C] 300W DCDC power module failure	[A1] Recharging 12V backup battery [B1] Confirm whether the harness between 12V backup battery and 300W DCDC power module is loose or damaged
5	010300	[A] 1.5kW DCDC power module failure	
6	010400	[A] 1.5kW DCDC power module failure	
7	010500	[A] The CB2 is not closed [B] The CB2 is damaged [C] The harness at both sides of the CB2 is loose or damaged [D] EMS failure	[A1] Close CB2 [B1] Check CB2 status [C1] Check whether the harness at both sides of the CB2 is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
8	010600	[A] KA4 failure [B] The harness at both sides of the KA4 is loose or damaged [C] EMS failure	[A1] Check KA4 status [B1] Check whether the harness at both sides of the KA4 is loose or damaged
9	010700	[A] KA4 failure [B] The harness at both sides of the KA4 is short circuited [C] EMS failure	[A1] Check KA4 status [B1] Check whether the harness at both sides of the KA4 is short circuited
10	010800	[A] KA3 failure [B] The harness at both sides of the KA3 is short circuited [C] EMS failure	[A1] Check KA3 status [B1] Check whether the harness at both sides of the KA3 is short circuited
11	0108F1	[A] KA3 failure [B] The harness at both sides of the KA3 is loose or damaged [C] EMS failure	[A1] Check KA3 status [B1] Check whether the harness at both sides of the KA3 is loose or damaged
12	010900	[A] FVC1 is damaged [B] The harness at both sides of the FVC1 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the FVC1 is loose or damaged
13	011000	[A] The CB1 is not closed [B] The CB1 is damaged [C] The harness at both sides of the CB1 is loose or damaged [D] EMS failure	[A1] Close CB1 [B1] Check CB1 status[C1] Check whether the harness at both sides of the CB1 is loose or damaged
14	011100	[A] KM1 failure [B] The harness at both sides of the KM1 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the KM1 is loose or damaged
15	011200	[A] KM1 failure [B] The harness at both sides of the KM1 is short circuited [C] EMS failure	[B1] Check whether the harness at both sides of the KM1 is short circuited
16	011300	[A] Not used	[A] Not used
17	011400	[A] Relay K9 failure [B] The harness at both sides of the relay K9 is loose or damaged [C] EMS failure	[A1] Check relay K9 status [B1] Check whether the harness at both sides of the relay K9 is loose or damaged
18	011500	[A] Relay K9 failure [B] The harness at both sides of the relay K9 is short circuited [C] EMS failure	[A1] Check relay K9 status [B1] Check whether the harness at both sides of the relay K9 is short circuited
19	011600	[A] Not used	[A] Not used
20	0117F0	[A] Not used	[A] Not used
21	0117F1	[A] Not used	[A] Not used
22	0117F2	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
23	C10187	[A] The communication harness between TBOX1 and EMS is loose or damaged [B] TBOX1 failure [C] EMS failure	[A1] Check whether the communication harness between TBOX1 and EMS is loose or damaged
24	C10287	[A] The communication harness between BMS1 and EMS is loose or damaged [B] BMS1 failure [C] EMS failure	[A1] Check whether the communication harness between BMS1 and EMS is loose or damaged
25	C10387	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
26	C10487	[A] The communication harness between Card Reader and EMS is loose or damaged [B] Card Reader failure [C] EMS failure	[A1] Check whether the communication harness between Card Reader and EMS is loose or damaged
27	C10587	[A] The communication harness between A gun dc meter and EMS is loose or damaged [B] A gun dc meter failure [C] EMS failure	[A1] Check whether the communication harness between A gun dc meter and EMS is loose or damaged
28	C10687	[A] The communication harness between B gun dc meter and EMS is loose or damaged [B] B gun dc meter failure [C] EMS failure	[A1] Check whether the communication harness between B gun dc meter and EMS is loose or damaged
29	C10787	[A] The communication harness between CCU1 and EMS is loose or damaged [B] CCU1 failure [C] EMS failure	[A1] Check whether the communication harness between CCU1 and EMS is loose or damaged
30	C10887	[A] The communication harness between CCU2 and EMS is loose or damaged [B] CCU2 failure [C] EMS failure	[A1] Check whether the communication harness between CCU2 and EMS is loose or damaged
31	C10987	[A] The communication harness between AC meter and EMS is loose or damaged [B] AC meter failure [C] EMS failure	[A1] Check whether the communication harness between AC meter and EMS is loose or damaged
32	C11087	[A] The communication harness between ACDC1 and EMS is loose or damaged [B] ACDC1 failure [C] EMS failure	[A1] Check whether the communication harness between ACDC1 and EMS is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
33	0118F0	[A] Follow ACDC1 internal failure	[A] Follow ACDC1 internal failure
34	0118F1	[A] Follow ACDC1 internal failure	[A] Follow ACDC1 internal failure
35	0118F2	[A] Follow ACDC1 internal failure	[A] Follow ACDC1 internal failure
36	C11187	[A] The communication harness between ACDC2 and EMS is loose or damaged [B] ACDC2 failure [C] EMS failure	[A1] Check whether the communication harness between ACDC2 and EMS is loose or damaged
37	0119F0	[A] Follow ACDC2 internal failure	[A] Follow ACDC2 internal failure
38	0119F1	[A] Follow ACDC2 internal failure	[A] Follow ACDC2 internal failure
39	0119F2	[A] Follow ACDC2 internal failure	[A] Follow ACDC2 internal failure
40	C11287	[A] The communication harness between DCDC1 and EMS is loose or damaged [B] DCDC1 failure [C] EMS failure	[A1] Check whether the communication harness between DCDC1 and EMS is loose or damaged
41	0120F0	[A] Follow DCDC1 internal failure	[A] Follow DCDC1 internal failure
42	0120F1	[A] Follow DCDC1 internal failure	[A] Follow DCDC1 internal failure
43	0120F2	[A] Follow DCDC1 internal failure	[A] Follow DCDC1 internal failure
44	C11387	[A] The communication harness between DCDC2 and EMS is loose or damaged [B] DCDC2 failure [C] EMS failure	[A1] Check whether the communication harness between DCDC2 and EMS is loose or damaged
45	0121F0	[A] Follow DCDC2 internal failure	[A] Follow DCDC2 internal failure
46	0121F1	[A] Follow DCDC2 internal failure	[A] Follow DCDC2 internal failure
47	0121F2	[A] Follow DCDC2 internal failure	[A] Follow DCDC2 internal failure
48	C11487	[A] The communication harness between DCDC3 and EMS is loose or damaged [B] DCDC3 failure [C] EMS failure	[A1] Check whether the communication harness between DCDC3 and EMS is loose or damaged
49	0122F0	[A] Follow DCDC3 internal failure	[A] Follow DCDC3 internal failure
50	0122F1	[A] Follow DCDC3 internal failure	[A] Follow DCDC3 internal failure

Position	DTC code	Possible Reason	Investigation Direction
51	0122F2	[A] Follow DCDC3 internal failure	[A] Follow DCDC3 internal failure
52	C11587	[A] The communication harness between DCDC4 and EMS is loose or damaged [B] DCDC4 failure [C] EMS failure	[A1] Check whether the communication harness between DCDC4 and EMS is loose or damaged
53	0123F0	[A] Follow DCDC4 internal failure	[A] Follow DCDC4 internal failure
54	0123F1	[A] Follow DCDC4 internal failure	[A] Follow DCDC4 internal failure
55	0123F2	[A] Follow DCDC4 internal failure	[A] Follow DCDC4 internal failure
56	C11687	[A] The communication harness between HCU and EMS is loose or damaged [B] HCU failure [C] EMS failure	[A1] Check whether the communication harness between HCU and EMS is loose or damaged
57	012400	[A] Not used	[A1] Not used
58	012500	[A] Fuse10 failure [B] The harness at both sides of the fuse10 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse10 is loose or damaged
59	012600	[A] 1.5kW DCDC power module failure	
60	012700	[A] Not used	[A1] Not used
61	C11788	[A] CAN1 wiring error [B] EMS failure	[A1] Check whether the communication harness between EMS & BMS1 & CCU1 & HCU is loose or damaged
62	C11888	[A] CAN4 wiring error [B] EMS failure	[A1] Check whether the communication harness between EMS & Power Module is loose or damaged
63	C11988	[A] CAN3 wiring error [B] EMS failure	[A1] Check whether the communication harness between EMS & BMS2 & CCU2 & HCU is loose or damaged
64	012800	[A] EMS failure	[A1] Restart AFC(remotely or manually)
65	012900	[A] EMS failure	[A1] Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
66	0130F1	[A] Water sensor is immersed in water(AFC is flooded) [B] The harness at both sides of the water sensor is short circuited [C] Water sensor SJ failure [D] EMS failure	[A1] Confirm whether water enters AFC [B1] Check whether the harness at both sides of the water sensor is short circuited
67	0130F2	[A] Not used	[A] Not used
68	013100	[A] The door is opened [B] The harness at both sides of the door position switch is short circuited [C] Door position switch S1/S2 failure [D] EMS failure	[A1] Check whether door is opened [B1] Check whether the harness at both sides of the door position switch is short circuited
69	013200	[A] DC meter1 failure	
70	013300	[A] DC meter2 failure	
71	0134F0	[A] Follow BMS1 internal failure	[A] Follow BMS1 internal failure
72	0134F1	[A] Follow BMS1 internal failure	[A] Follow BMS1 internal failure
73	0134F2	[A] Follow BMS1 internal failure	[A] Follow BMS1 internal failure
74	0135F0	[A] Follow CCU1 internal failure	[A] Follow CCU1 internal failure
75	0135F1	[A] Follow CCU1 internal failure	[A] Follow CCU1 internal failure
76	0135F2	[A] Follow CCU1 internal failure	[A] Follow CCU1 internal failure
77	0136F0	[A] Follow CCU2 internal failure	[A] Follow CCU2 internal failure
78	0136F1	[A] Follow CCU2 internal failure	[A] Follow CCU2 internal failure
79	0136F2	[A] Follow CCU2 internal failure	[A] Follow CCU2 internal failure
80	0137F0	[A] Follow HCU internal failure	[A] Follow HCU internal failure
81	0137F1	[A] Follow HCU internal failure	[A] Follow HCU internal failure
82	0137F2	[A] Follow HCU internal failure	[A] Follow HCU internal failure
83	013800	[A] Not used	[A] Not used
84	013900	[A] Not used	[A] Not used
85	014000	[A] AC grid input is abnormal [B] The harness between AC input side and ACDC1 is loose or damaged [C] ACDC1 failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input side and ACDC1 is loose or damaged
86	014100	[A] AC grid input is abnormal [B] ACDC1 failure	[A1] Check AC grid input status
87	014200	[A] AC grid input is abnormal [B] The harness between AC input side and ACDC1 is loose or damaged [C] ACDC1 failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input side and ACDC1 is loose or damaged
88	014300	[A] Not used	[A] Not used
89	014400	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
90	014500	[A] Not used	[A] Not used
91	014600	[A] AC grid input is abnormal [B] The harness between AC input side and ACDC2 is loose or damaged [C] ACDC2 failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input side and ACDC2 is loose or damaged
92	014700	[A] AC grid input is abnormal [B] ACDC2 failure	[A1] Check AC grid input status
93	014800	[A] AC grid input is abnormal [B] The harness between AC input side and ACDC2 is loose or damaged [C] ACDC2 failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input side and ACDC2 is loose or damaged
94	014900	[A] Not used	[A] Not used
95	015000	[A] Not used	[A] Not used
96	015100	[A] Not used	[A] Not used
97	015200	[A] Not used	[A] Not used
98	015300	[A] Not used	[A] Not used
99	015400	[A] Not used	[A] Not used
100	015500	[A] Not used	[A] Not used
101	015600	[A] Not used	[A] Not used
102	015700	[A] Not used	[A] Not used
103	015800	[A] Not used	[A] Not used
104	015900	[A] Not used	[A] Not used
105	016000	[A] Not used	[A] Not used
106	016100	[A] Not used	[A] Not used
107	016200	[A] Not used	[A] Not used
108	016300	[A] Not used	[A] Not used
109	016400	[A] Not used	[A] Not used
110	016500	[A] Not used	[A] Not used
111	016600	[A] Relay K10 failure [B] The harness at both sides of the relay K10 is loose or damaged [C] EMS failure	[A1] Check relay K10 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K10 is loose or damaged
112	016700	[A] Relay K10 failure [B] The harness at both sides of the relay K10 is short circuited [C] EMS failure	[A1] Check relay K10 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K10 is short circuited
113	016800	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
114	016900	[A] Fuse1 is damaged [B] The harness at both sides of the fuse1 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse1 is loose or damaged
115	017000	[A] Fuse2 is damaged [B] The harness at both sides of the fuse2 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse2 is loose or damaged
116	017100	[A] Not used	[A] Not used
117	017200	[A] Not used	[A] Not used
118	017300	[A] Relay K5 failure [B] The harness at both sides of the relay K5 is loose or damaged [C] EMS failure	[A1] Check relay K5 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K5 is loose or damaged
119	017400	[A] Relay K5 failure [B] The harness at both sides of the relay K5 is short circuited [C] EMS failure	[A1] Check relay K5 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K5 is loose or damaged
120	017500	[A] Not used	[A] Not used
121	017600	[A] Relay K6 failure [B] The harness at both sides of the relay K6 is loose or damaged [C] EMS failure	[A1] Check relay K6 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K6 is loose or damaged
122	017700	[A] Relay K6 failure [B] The harness at both sides of the relay K6 is short circuited [C] EMS failure	[A1] Check relay K6 status and replace it if it fails [B1] Check whether the harness at both sides of the relay K6 is short circuited
123	017800	[A] Not used	[A] Not used
124	017900	[A] Fuse9 failure [B] The harness at both sides of the fuse9 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse9 is loose or damaged
125	018000	[A] Door is opened [B] AFC is flooded [C] AFC is impacted [D] Other reasons	[A1] Check whether the door is opened [B1] Check whether AFC is flooded [C1] Check whether AFC is impacted [D1] Contact Technician
126	018100	[A] The harness or connector of EMS is loose or damaged [B] EMS failure	[A1] Check whether the harness or connector of EMS is loose or damaged
127	018200	[A] EMS failure	

Position	DTC code	Possible Reason	Investigation Direction
128	018300	[A] EMS failure	
129	018400	[A] Not used	[A] Not used
130	018500	[A] Not used	[A] Not used
131	018600	[A] Not used	[A] Not used
132	018700	[A] Not used	[A] Not used
133	018800	[A] Not used	[A] Not used
134	018900	[A] Not used	[A] Not used
135	019000	[A] Not used	[A] Not used
136	019100	[A] Not used	[A] Not used
137	019200	[A] Not used	[A] Not used
138	019300	[A] Not used	[A] Not used
139	019400	[A] Not used	[A] Not used
140	019500	[A] Not used	[A] Not used
141	019600	[A] Not used	[A] Not used
142	019700	[A] Not used	[A] Not used
143	019800	[A] Not used	[A] Not used
144	019900	[A] Not used	[A] Not used
145	020000	[A] Not used	[A] Not used
146	020100	[A] Not used	[A] Not used
147	020200	[A] Not used	[A] Not used
148	020300	[A] Not used	[A] Not used
149	020400	[A] Not used	[A] Not used
150	020500	[A] Not used	[A] Not used
151	020600	[A] Not used	[A] Not used
152	020700	[A] Not used	[A] Not used
153	020800	[A] Not used	[A] Not used
154	020900	[A] Not used	[A] Not used
155	021000	[A] Not used	[A] Not used
156	021100	[A] Not used	[A] Not used
157	021200	[A] Not used	[A] Not used
158	021300	[A] Not used	[A] Not used
159	021400	[A] Not used	[A] Not used
160	021500	[A] Not used	[A] Not used
161	021600	[A] Not used	[A] Not used
162	021700	[A] Not used	[A] Not used
163	021800	[A] Not used	[A] Not used
164	021900	[A] Not used	[A] Not used
165	022000	[A] Not used	[A] Not used
166	022100	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
167	022200	[A] Not used	[A] Not used
168	022300	[A] Not used	[A] Not used
169	022400	[A] Not used	[A] Not used
170	022500	[A] Not used	[A] Not used
171	022600	[A] Not used	[A] Not used
172	022700	[A] Not used	[A] Not used
173	022800	[A] Not used	[A] Not used
174	022900	[A] Not used	[A] Not used
175	023000	[A] Not used	[A] Not used
176	023100	[A] Not used	[A] Not used
177	023200	[A] Not used	[A] Not used
178	023300	[A] Not used	[A] Not used
179	023400	[A] Not used	[A] Not used
180	023500	[A] Not used	[A] Not used
181	023600	[A] Not used	[A] Not used
182	023700	[A] Not used	[A] Not used
183	023800	[A] Not used	[A] Not used
184	023900	[A] Not used	[A] Not used
185	024000	[A] Not used	[A] Not used
186	0241F0	[A] Not used	[A] Not used
187	0242F1	[A] Not used	[A] Not used
188	0243F0	[A] Not used	[A] Not used
189	C12087	[A] The communication harness between TBOX1 and EMS is loose or damaged [B] TBOX1 failure [C] EMS failure	[A1] Check whether the communication harness(CANFD) between TBOX1 and EMS is loose or damaged
190	C12187	[A] The communication harness between TBOX1 and EMS is loose or damaged [B] TBOX1 failure [C] EMS failure	[A1] Check whether the communication harness(Ethernet) between TBOX1 and EMS is loose or damaged
191	C12288	[A] The communication harness between TBOX1 and EMS is loose or damaged [B] TBOX1 failure [C] EMS failure	[A1] Check whether the communication harness between TBOX1 and EMS is loose or damaged
192	024400	[A] TBOX1 failure	
193	024500	[A] TBOX1 failure	
194	024600	[A] TBOX1 failure	
195	024700	[A] TBOX1 failure	
196	024800	[A] TBOX1 failure	

Position	DTC code	Possible Reason	Investigation Direction
197	0249F0	[A] TBOX1 failure	
198	0249F1	[A] TBOX1 failure	
199	0249F2	[A] TBOX1 failure	
200	025000	[A] TBOX1 failure	
201	025100	[A] TBOX1 failure	
202	025200	[A] Not used	[A] Not used
203	025300	[A] Not used	[A] Not used
204	025400	[A] Not used	[A] Not used
205	025500	[A] Not used	[A] Not used
206	025600	[A] Not used	[A] Not used
207	C12387	[A] The communication harness between BMS1 and EMS is loose or damaged [B] BMS1 failure [C] EMS failure	[A1] Check whether the communication harness between BMS1 and EMS is loose or damaged
208	025700	[A] KA1 failure [B] The harness at both sides of the KA1 is loose or damaged [C] EMS failure	[A1] Check KA1 status and replace it if it fails [B1] Check whether the harness at both sides of the KA1 is loose or damaged
209	C12487	[A] The communication harness between TBOX2 and EMS is loose or damaged [B] TBOX2 failure [C] EMS failure	[A1] Check whether the communication harness between TBOX2 and EMS is loose or damaged
210	C12587	[A] The communication harness between BMS2 and EMS is loose or damaged [B] BMS2 failure [C] EMS failure	[A1] Check whether the communication harness between BMS2 and EMS is loose or damaged
211	C12687	[A] The communication harness between BMS2 and EMS is loose or damaged [B] BMS2 failure [C] EMS failure	[A1] Check whether the communication harness between BMS2 and EMS is loose or damaged
212	025800	[A] Fuse10 failure [B] The harness at both sides of the fuse10 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse10 is loose or damaged
213	025900	[A] Fuse9 failure [B] The harness at both sides of the fuse9 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse9 is loose or damaged
214	026000	[A] 300W DCDC power module failure	

Position	DTC code	Possible Reason	Investigation Direction
215	026100	[A] The harness between 12V backup battery and 300W DCDC power module is loose or damaged [B] 12V backup battery failure [C] 300W DCDC power module failure	[A1] Confirm whether the harness between 12V backup battery and 300W DCDC power module is loose or damaged
216	026200	[A] Relay K17 failure [B] The harness at both sides of the relay K17 is loose or damaged [C] EMS failure	[A1] Check relay K17 status [B1] Check whether the harness at both sides of the relay K17 is loose or damaged
217	026300	[A] Relay K17 failure [B] The harness at both sides of the relay K17 is short circuited [C] EMS failure	[A1] Check relay K17 status [B1] Check whether the harness at both sides of the relay K17 is short circuited
218	026400	[A] Not used	[A] Not used
219	026500	[A] Relay K18 failure [B] The harness at both sides of the relay K18 is loose or damaged [C] EMS failure	[A1] Check relay K18 status [B1] Check whether the harness at both sides of the relay K18 is loose or damaged
220	026600	[A] Relay K18 failure [B] The harness at both sides of the relay K18 is short circuited [C] EMS failure	[A1] Check relay K18 status [B1] Check whether the harness at both sides of the relay K18 is short circuited
221	026700	[A] Not used	[A] Not used
222	026800	[A] Relay K7 failure [B] The harness at both sides of the relay K7 is loose or damaged [C] EMS failure	[A1] Check relay K7 status [B1] Check whether the harness at both sides of the relay K7 is loose or damaged
223	026900	[A] Relay K7 failure [B] The harness at both sides of the relay K7 is short circuited [C] EMS failure	[A1] Check relay K7 status [B1] Check whether the harness at both sides of the relay K7 is short circuited
224	027000	[A] Not used	[A] Not used
225	027100	[A] Relay K8 failure [B] The harness at both sides of the relay K8 is loose or damaged [C] EMS failure	[A1] Check relay K8 status [B1] Check whether the harness at both sides of the relay K8 is loose or damaged
226	027200	[A] Relay K8 failure [B] The harness at both sides of the relay K8 is short circuited [C] EMS failure	[A1] Check relay K8 status [B1] Check whether the harness at both sides of the relay K8 is short circuited
227	027300	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
228	027400	[A] Relay K11 failure [B] The harness at both sides of the relay K11 is loose or damaged [C] EMS failure	[A1] Check relay K11 status [B1] Check whether the harness at both sides of the relay K11 is loose or damaged
229	027500	[A] Relay K11 failure [B] The harness at both sides of the relay K11 is short circuited [C] EMS failure	[A1] Check relay K11 status [B1] Check whether the harness at both sides of the relay K11 is short circuited
230	027600	[A] Not used	[A] Not used
231	027700	[A] Relay K12 failure [B] The harness at both sides of the relay K12 is loose or damaged [C] EMS failure	[A1] Check relay K12 status [B1] Check whether the harness at both sides of the relay K12 is loose or damaged
232	027800	[A] Relay K12 failure [B] The harness at both sides of the relay K12 is short circuited [C] EMS failure	[A1] Check relay K12 status [B1] Check whether the harness at both sides of the relay K12 is short circuited
233	027900	[A] Not used	[A] Not used
234	028000	[A] Relay K21 failure [B] The harness at both sides of the relay K21 is loose or damaged [C] EMS failure	[A1] Check relay K21 status [B1] Check whether the harness at both sides of the relay K21 is loose or damaged
235	028100	[A] Relay K21 failure [B] The harness at both sides of the relay K21 is short circuited [C] EMS failure	[A1] Check relay K21 status [B1] Check whether the harness at both sides of the relay K21 is short circuited
236	028200	[A] Not used	[A] Not used
237	028300	[A] Relay K22 failure [B] The harness at both sides of the relay K22 is loose or damaged [C] EMS failure	[A1] Check relay K22 status [B1] Check whether the harness at both sides of the relay K22 is loose or damaged
238	028400	[A] Relay K22 failure [B] The harness at both sides of the relay K22 is short circuited [C] EMS failure	[A1] Check relay K22 status [B1] Check whether the harness at both sides of the relay K22 is short circuited
239	028500	[A] Not used	[A] Not used
240	028600	[A] Relay K23 failure [B] The harness at both sides of the relay K23 is loose or damaged [C] EMS failure	[A1] Check relay K23 status [B1] Check whether the harness at both sides of the relay K23 is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
241	028700	[A] Relay K23 failure [B] The harness at both sides of the relay K23 is short circuited [C] EMS failure	[A1] Check relay K23 status [B1] Check whether the harness at both sides of the relay K23 is short circuited
242	028800	[A] Not used	[A] Not used
243	028900	[A] Relay K24 failure [B] The harness at both sides of the relay K24 is loose or damaged [C] EMS failure	[A1] Check relay K24 status [B1] Check whether the harness at both sides of the relay K24 is loose or damaged
244	029000	[A] Relay K24 failure [B] The harness at both sides of the relay K24 is short circuited [C] EMS failure	[A1] Check relay K24 status [B1] Check whether the harness at both sides of the relay K24 is short circuited
245	029100	[A] Not used	[A] Not used
246	029200	[A] Not used	[A] Not used
247	029300	[A] Not used	[A] Not used
248	029400	[A] Not used	[A] Not used
249	029500	[A] Not used	[A] Not used
250	029600	[A] Not used	[A] Not used
251	029700	[A] Not used	[A] Not used
252	029800	[A] Not used	[A] Not used
253	029900	[A] Not used	[A] Not used
254	080000	[A] Not used	[A] Not used
255	080100	[A] Not used	[A] Not used
256	080200	[A] Not used	[A] Not used
257	080300	[A] Not used	[A] Not used
258	080400	[A] Not used	[A] Not used
259	080500	[A] Not used	[A] Not used
260	080600	[A] Not used	[A] Not used
261	080700	[A] Not used	[A] Not used
262	080800	[A] Not used	[A] Not used
263	080900	[A] Not used	[A] Not used
264	081000	[A] Not used	[A] Not used
265	081100	[A] Not used	[A] Not used
266	081200	[A] Not used	[A] Not used
267	081300	[A] Not used	[A] Not used
268	081400	[A] Not used	[A] Not used
269	081500	[A] Not used	[A] Not used
270	081600	[A] Not used	[A] Not used

Position	DTC code	Possible Reason	Investigation Direction
271	081700	[A] Not used	[A] Not used
272	081800	[A] Not used	[A] Not used
273	081900	[A] Not used	[A] Not used
274	082000	[A] Not used	[A] Not used
275	082100	[A] Not used	[A] Not used
276	082200	[A] Not used	[A] Not used
277	082300	[A] Not used	[A] Not used
278	082400	[A] Not used	[A] Not used
279	082500	[A] Not used	[A] Not used
280	082600	[A] Not used	[A] Not used
281	082700	[A] Not used	[A] Not used
282	0828F0	[A] Follow BMS2 internal failure	[A] Follow BMS2 internal failure
283	0828F1	[A] Follow BMS2 internal failure	[A] Follow BMS2 internal failure
284	0828F2	[A] Follow BMS2 internal failure	[A] Follow BMS2 internal failure
285	082900	[A] Not used	[A] Not used
286	0830F0	[A] Not used	[A] Not used
287	0831F1	[A] Not used	[A] Not used
288	0832F0	[A] Not used	[A] Not used
289	C12787	[A] Not used	[A] Not used
290	C12887	[A] The communication harness between TBOX2 and EMS is loose or damaged [B] TBOX2 failure [C] EMS failure	[A1] Check whether the communication harness between TBOX2 and EMS is loose or damaged
291	C12988	[A] Not used	[A] Not used
292	083300	[A] TBOX2 failure	
293	083400	[A] Not used	[A] Not used
294	083500	[A] Not used	[A] Not used
295	083600	[A] TBOX2 failure	
296	083700	[A] Not used	[A] Not used
297	083800	[A] BMS1 internal Level 10 failure	[A] BMS1 internal Level 10 failure
298	083900	[A] BMS1 internal Level 10 failure	[A] BMS1 internal Level 10 failure
299	084000	[A] TBOX2 failure	
300	086800	[A] Fuse10 failure [B] The harness at both sides of the fuse10 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse10 is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
301	086900	[A] KA5 failure [B] The harness at both sides of the KA5 is loose or damaged [C] EMS failure	[A1] Check KA5 status [B1] Check whether the harness at both sides of the KA5 is loose or damaged
302	087000	[A] KA5 failure [B] The harness at both sides of the KA5 is short circuited [C] EMS failure	[A1] Check KA5 status [B1] Check whether the harness at both sides of the KA5 is short circuited
303	087100	[A] 1.5kW DCDC power module failure	
304	087200	[A] Fuse8 failure [B] The harness at both sides of the fuse8 is loose or damaged [C] EMS failure	[B1] Check whether the harness at both sides of the fuse8 is loose or damaged
305	087300	[A] 300W DCDC power module failure	
306	087400	[A] Not used	[A] Not used
307	087500	[A] Relay K1/K2 failure [B] The harness at both sides of the relay K1/K2 is short circuited [C] EMS failure	[A1] Check relay K1/K2 status [B1] Check whether the harness at both sides of the relay K1/K2 is short circuited
308	087600	[A] Relay K3/K4 failure [B] The harness at both sides of the relay K3/K4 is short circuited [C] EMS failure	[A1] Check relay K3/K4 status [B1] Check whether the harness at both sides of the relay K3/K4 is short circuited
309	087700	[A] Not used	[A] Not used
310	087800	[A] Not used	[A] Not used
311	C13087	[A] SIM card expired or damaged [B] TBOX1 failure	
312	C13187	[A] SIM card expired or damaged [B] TBOX2 failure	
313	C13287	[A] HMI failure	
314	C13387	[A] HMI failure	
315	087900	[A] The communication harness between CCV and EMS is loose or damaged [B] CCV failure	[A1] Check whether the communication harness between CCV and EMS is loose or damaged
316	088000	[A] CCV failure	
317	088100	[A] Card reader type is not COR-A10 or COR-A20 [B] CCV failure [C] AFC has no Card reader	[A1] Check CCV type, and replace if necessary [B1] Replace CCV [C1] Check whether AFC have Card reader

Position	DTC code	Possible Reason	Investigation Direction
318	088283	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
319	08826C	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
320	08827D	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
321	08829 A	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
322	0882A1	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
323	0882A3	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
324	0882DF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
325	0882FF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
326	088383	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
327	08836C	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
328	08837D	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
329	08839 A	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
330	0883A1	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
331	0883A3	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
332	0883DF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
333	0883FF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent

Position	DTC code	Possible Reason	Investigation Direction
334	088483	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
335	08846C	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
336	08847D	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
337	08849 A	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
338	0884A1	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
339	0884A3	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
340	0884DF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
341	0884FF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
342	088583	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
343	08856C	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
344	08857D	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
345	08859 A	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
346	0885A1	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
347	0885A3	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
348	0885DF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
349	0885FF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent

Position	DTC code	Possible Reason	Investigation Direction
350	088683	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
351	08866C	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
352	08867D	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
353	08869 A	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
354	0886A1	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
355	0886A3	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
356	0886DF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
357	0886FF	[A] CCV backend is not available [B] CCV failure	[A1] Consult CCV assistent
358	08877D	[A] CCV failure	
359	08879 A	[A] CCV failure	
360	0887DF	[A] CCV failure	
361	0887FF	[A] CCV failure	
362	088800	[A] CCV failure	
363	088900	[A] CCV failure	
364	089000	[A] The network between CCV and CCV backend failure	[A1] Check network status
365	089100	[A] Customer card failure	
366	089200	[A] Customer card failure	
367	089300	[A] Card reader failure	
368	089400	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
369	089500	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
370	089600	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
371	089700	[A] CCV is not registered	[A1] Check CCV register information

Position	DTC code	Possible Reason	Investigation Direction
372	089800	[A] CCV backend is not available	[A1] Consult CCV assistant
373	089900	[A] Customer card failure	
374	090000	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
375	090100	[A] Customer card failure	
376	090200	[A] Customer card failure	
377	090300	[A] Customer card failure [B] CCV configuration failure	[B1] Check CCV configuration(consult CCV assistant)
378	090400	[A] CCV backend is not available	[A1] Consult CCV assistant
379	090500	[A] Customer card failure	
380	090600	[A] Customer card failure	
381	090700	[A] Customer card failure	
382	090800	[A] CCV backend is not available [B] CCV configuration failure [C] CCV failure	[A1] Consult CCV assistant [B1] Check CCV configuration(consult CCV assistant)
383	090900	[A] CCV backend is not available [B] CCV configuration failure [C] CCV failure	[A1] Consult CCV assistant [B1] Check CCV configuration(consult CCV assistant)
384	091000	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
385	091100	[A] CCV failure	
386	091200	[A] CCV backend is not available	[A1] Consult CCV assistant
387	091300	[A] CCV backend is not available	[A1] Consult CCV assistant
388	091400	[A] The network between CCV and CCV backend failure	[A1] Check network status
389	091500	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
390	091600	[A] CCV failure	
391	091700	[A] CCV failure	
392	091800	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
393	091900	[A] CCV backend is not available [B] The network between CCV and CCV backend failure	[A1] Consult CCV assistant [B1] Check network status

Position	DTC code	Possible Reason	Investigation Direction
394	092000	[A] Amount configuration failure	[A1] Check CIMS configuration or WEB configuration
395	092100	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
396	092200	[A] The power supply harness of CCV is loose or damaged [B] 1.5kW DCDC power module failure	[A1] Check whether the power supply harness of CCV is loose or damaged
397	092300	[A] The network between CCV and CCV backend failure	[A1] Check network status
398	092400	[A] Customer card failure	
399	092500	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
400	092600	[A] Amount configuration failure	[A1] Check CIMS configuration or WEB configuration
401	092700	[A] Card reader failure	
402	092800	[A] CCV is not activated	[A1] Activate CCV
403	092900	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
404	093000	[A] CCV failure [B] Card reader failure	
405	093100	[A] CCV configuration failure	[A1] Check CCV configuration(consult CCV assistant)
406	093200	[A] CCV configuration failure [B] CCV backend is not available	[A1] Check CCV configuration(consult CCV assistant) [B1] Consult CCV assistant
407	093300	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
408	093400	[A] The communication harness between DC meter1 and EMS is loose or damaged [B] DC meter1 failure [C] EMS failure	[A1] Check whether the communication harness between DC meter1 and EMS is loose or damaged
409	093500	[A] The communication harness between DC meter2 and EMS is loose or damaged [B] DC meter2 failure [C] EMS failure	[A1] Check whether the communication harness between DC meter2 and EMS is loose or damaged
410	093600	[A] The communication harness between DC meter1 and EMS is loose or damaged [B] DC meter1 failure [C] EMS failure	[A1] Check whether the communication harness between DC meter1 and EMS is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
411	093700	[A] The communication harness between DC meter2 and EMS is loose or damaged [B] DC meter2 failure [C] EMS failure	[A1] Check whether the communication harness between DC meter2 and EMS is loose or damaged
412	093800	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
413	093900	[A] Customer card failure	
414	094000	[A] It has never appeared and ICS does not know about it. Please consult the CCV supplier	[A1] It has never appeared and ICS does not know about it. Please consult the CCV supplier
415	C13487	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
416	C13587	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
417	C13687	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
418	C13787	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
419	C13887	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
420	C13987	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
421	C14087	[A] The communication harness between HMI and EMS is loose or damaged [B] HMI failure [C] EMS failure	[A1] Check whether the communication harness between HMI and EMS is loose or damaged
422	C14187	[A] TBOX1 failure	

Position	DTC code	Possible Reason	Investigation Direction
423	C14287	[A] TBOX2 failure	
424	C14387	[A] TBOX1 failure	
425	C14487	[A] TBOX2 failure	
426	C14587	[A] HMI failure [B] TBOX1 failure	
427	094100	[A] Follow BMS1 internal failure	[A] Follow BMS1 internal failure
428	094200	[A] Follow BMS2 internal failure	[A] Follow BMS2 internal failure
429	094300	[A] The QF1 is not closed [B] The QF1 is damaged [C] The harness at both sides of the QF1 is loose or damaged [D] EMS failure	[A1] Close QF1 [B1] Check QF1 status [C1] Check whether the harness at both sides of the QF1 is loose or damaged
430	094400	[A] The RCD is not closed [B] The RCD is damaged [C] The harness at both sides of the RCD is loose or damaged [D] EMS failure	[A1] Close RCD [B1] Check RCD status [C1] Check whether the harness at both sides of the RCD is loose or damaged
431	094500	[A] AC grid input is abnormal [B] The harness between AC input end and AC meter is loose or damaged [C] AC meter failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input end and AC meter is loose or damaged
432	094600	[A] AC grid input is abnormal [B] AC meter failure	[A1] Check AC grid input status
433	094700	[A] AC grid input is abnormal [B] The harness between AC input end and AC meter is loose or damaged [C] AC meter failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input end and AC meter is loose or damaged
434	094800	[A] AC grid input is abnormal [B] The harness between AC input end and AC meter is loose or damaged [C] AC meter failure	[A1] Check AC grid input status [B1] Check whether the harness between AC input end and AC meter is loose or damaged
435	094900	[A] EMS detected any one or more of the following DTC code: 0x010900,0x011000,0x011100, 0xC10987,0x094300,0x094400 ,0x094800	[A1] Follow corresponding DTC
436	095000	[A] DC meter1 failure [B] The communication harness between DC meter1 and EMS is loose or damaged [C] EMS failure	[A1] Restart AFC(remotely or manually) [B1] Check whether the communication harness between DC meter1 and EMS is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
437	095100	[A] DC meter2 failure [B] The communication harness between DC meter2 and EMS is loose or damaged [C] EMS failure	[A1] Restart AFC(remotely or manually) [B1] Check whether the communication harness between DC meter2 and EMS is loose or damaged
438	095200	[A] The communication harness between TBOX2 and EMS is loose or damaged [B] TBOX2 failure [C] EMS failure	[A1] Check whether the communication harness(Ethernet) between TBOX2 and EMS is loose or damaged

4.4 EMS Reaction Table

◆ ⇒« EMS DTC Code Table » page 40

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
1	0101F0		A1	A1
2	0101F1	Light up two-guns red lights	A10	A11
3	0102F0		A1	A1
4	0102F1	Light up two-guns red lights	A10	A11
5	010300		A1	A1
6	010400		A1	A0
7	010500		A1	A1
8	010600	Light up two-guns red lights	A10	A11
9	010700		A1	A1
10	010800		A1	A1
11	0108F1		A1	A1
12	010900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
			A5	A9
13	011000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
			A5	A9
14	011100		A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
15	011200		A1	A1
16	011300		A1	A1
17	011400		A5	A1
18	011500		A2	A1
			A3	A1
19	011600		A1	A1
20	0117F0		#NV	#NV
21	0117F1		#NV	#NV
22	0117F2		#NV	#NV
23	C10187		A1	A0
24	C10287		A1	A1
25	C10387		A1	A1
26	C10487		A1	A1
27	C10587	Light up gun-A red lights	A2	A1
			A3	A1
			A4	A1
28	C10687	Light up gun-B red lights	A1	A6
			A1	A7
			A1	A8
29	C10787	Light up gun-A red lights	A2	A1
			A3	A1
			A4	A1
30	C10887	Light up gun-B red lights	A1	A6
			A1	A7
			A1	A8
31	C10987		A1	A1
32	C11087		A2	A6
			A3	A6
			A5	A6
33	0118F0		A1	A1
34	0118F1		A2	A6
			A3	A6
			A5	A6
35	0118F2		A2	A6
			A3	A6
			A5	A6

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
36	011187		A2	A6
			A2	A7
			A2	A9
37	0119F0		A1	A1
38	0119F1		A2	A6
			A2	A7
			A2	A9
39	0119F2		A2	A6
			A2	A7
			A2	A9
40	C11287		A4	A1
41	0120F0		A1	A1
42	0120F1		A4	A1
43	0120F2		A4	A1
44	C11387		A4	A1
45	0121F0		A1	A1
46	0121F1		A4	A1
47	0121F2		A4	A1
48	C11487		A4	A1
49	0122F0		A1	A1
50	0122F1		A1	A8
51	0122F2		A1	A8
52	C11587		A1	A8
53	0123F0		A1	A1
54	0123F1		A1	A8
55	0123F2		A1	A8
56	C11687	Light up two-guns red lights	A10	A11
57	012400		A2	A6
			A3	A6
			A5	A6
58	012500		A1	A1
59	012600		A1	A1
60	012700		#NV	#NV
61	011788	Light up gun-A red lights	A10	A1
62	011888	Light up two-guns red lights	A10	A11

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
63	011988	Light up gun-B red lights	A1	A11
64	012800		A1	A1
65	012900		A1	A1
66	0130F1	Light up two-guns red lights	A10	A11
67	0130F2		A10	A11
68	013100	Light up two-guns red lights	A10	A11
69	013200		A1	A1
70	013300		A1	A1
71	0134F0		A1	A1
72	0134F1		A1	A1
73	0134F2		A1	A1
74	0135F0		A1	A1
75	0135F1		A1	A1
76	0135F2	Light up gun-A red lights	A1	A1
			A3	A1
			A4	A1
77	0136F0		A1	A1
78	0136F1		A1	A1
79	0136F2	Light up gun-B red lights	A1	A6
			A1	A7
			A1	A8
80	0137F0		A1	A1
81	0137F1		A1	A1
82	0137F2	Light up two-guns red lights	A10	A11
83	013800		A1	A1
84	013900		A1	A1
85	014000		A2	A6
			A3	A6
			A5	A6
86	014100		A2	A6
			A3	A6
			A5	A6
87	014200		A2	A6
			A3	A6
			A5	A6

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
88	014300		A1	A1
89	014400		A1	A1
90	014500		A1	A1
91	014600		A2	A6
			A2	A7
			A2	A9
92	014700		A2	A6
			A2	A7
			A2	A9
93	014800		A2	A6
			A2	A7
			A2	A9
94	014900		A1	A1
95	015000		A1	A1
96	015100		A1	A1
97	015200		A1	A1
98	015300		A1	A1
99	015400		A1	A1
100	015500		A1	A1
101	015600		A1	A1
102	015700		A1	A1
103	015800		A1	A1
104	015900		A1	A1
105	016000		A1	A1
106	016100		A1	A1
107	016200		A1	A1
108	016300		A1	A1
109	016400		A1	A1
110	016500		A1	A1
111	016600		A5	A1
112	016700		A2	A1
			A3	A1
113	016800		A1	A1
114	016900		A2	A6
			A3	
			A5	

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
115	017000		A2	A6
				A7
				A9
116	017100			
117	017200			
118	017300		A2	A1
			A3	A1
119	017400		A5	A6
120	017500		A1	A1
121	017600		A2	A1
			A3	A1
122	017700		A1	A6
123	017800		A1	A1
124	017900	Light up two-guns red lights	A10	A11
125	018000		A1	A1
126	018100		A1	A1
127	018200		A1	A1
128	018300		A1	A1
129	018400		A1	A1
130	018500		A1	A1
131	018600		A1	A1
132	018700		A1	A1
133	018800		A1	A1
			A1	A1
			A1	A1
134	018900		A1	A1
			A1	A1
			A1	A1
135	019000		A1	A1
136	019100		A1	A1
			A1	A1
			A1	A1
137	019200		A1	A1
138	019300		A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
139	019400		A1	A1
			A1	A1
			A1	A1
140	019500		A1	A1
			A1	A1
			A1	A1
141	019600		A1	A1
142	019700		A1	A1
			A1	A1
			A1	A1
143	019800		A1	A1
144	019900		A1	A1
145	020000		A1	A1
			A1	A1
146	020100		A1	A1
			A1	A1
147	020200		A1	A1
148	020300		A1	A1
			A1	A1
149	020400		A1	A1
150	020500		A1	A1
151	020600		A1	A1
			A1	A1
152	020700		A1	A1
			A1	A1
153	020800		A1	A1
154	020900		A1	A1
			A1	A1
155	021000		A1	A1
156	021100		A1	A1
157	021200		A1	A1
158	021300		A1	A1
159	021400		A1	A1
160	021500		A1	A1
161	021600		A1	A1
162	021700		A1	A1
163	021800		A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
164	021900		A1	A1
165	022000		A1	A1
166	022100		A1	A1
167	022200		A1	A1
168	022300		A1	A1
169	022400		A1	A1
170	022500		A1	A1
171	022600		A1	A1
172	022700		A1	A1
173	022800		A1	A1
174	022900		A1	A1
175	023000		A1	A1
176	023100		A1	A1
177	023200		A1	A1
178	023300		A1	A1
179	023400		A1	A1
180	023500		A1	A1
181	023600		A1	A1
182	023700		A1	A1
183	023800		A1	A1
184	023900		A1	A1
185	024000		A1	A1
186	0241F0			
187	0242F1			
188	0243F0			
189	C12087		A10	A11
190	C12187		A1	A1
191	C12288		A1	A1
192	024400		A1	A1
193	024500		A1	A1
194	024600		A1	A1
195	024700		A1	A1
196	024800		A1	A1
197	0249F0	Light up two-guns red lights	A10	A11
198	0249F1		A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
199	0249F2	Light up two-guns red lights	A10	A11
200	025000	Light up two-guns red lights	A10	A11
201	025100		A1	A1
202	025200		A2	A6
			A2	A7
			A2	A9
203	025300		A4	A1
204	025400		A4	A1
205	025500		A1	A8
206	025600		A1	A8
207	C12387	Light up gun-A red lights	A10	A1
208	025700		A1	A1
209	C12487		A1	A1
210	C12587		A1	A1
211	C12687	Light up gun-B red lights	A1	A11
212	025800		A1	A1
213	025900		A1	A1
214	026000		A1	A1
215	026100		A1	A1
216	026200		A2	A6
217	026300		A2	A6
			A3	A7
			A5	A9
218	026400		A1	A1
219	026500		A2	A2
220	026600		A2	A6
			A3	A7
			A5	A9
221	026700		A1	A1
222	026800		A1	A6
			A1	A7
223	026900		A2	A9
224	027000		A1	A1
225	027100		A1	A6
			A1	A7

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
226	027200		A2	A9
227	027300		A1	A1
228	027400		A1	A9
229	027500		A1	A6
			A1	A7
230	027600		A1	A1
231	027700		A1	A9
232	027800		A1	A6
			A1	A7
233	027900		A1	A1
234	028000		A1	A1
235	028100		A1	A1
236	028200		A1	A1
237	028300		A1	A1
238	028400		A1	A1
239	028500		A1	A1
240	028600		A1	A1
241	028700		A1	A1
242	028800		A1	A1
243	028900		A1	A1
244	029000		A1	A1
245	029100		A1	A1
246	029200		A1	A1
247	029300		A1	A1
248	029400		A1	
249	029500		A1	A1
250	029600		A1	A1
251	029700		A1	A1
252	029800		A1	A1
253	029900		A1	A1
254	080000		A1	A1
255	080100		A1	A1
256	080200		A1	A1
257	080300		A1	A1
258	080400		A1	A1
259	080500		A1	A1
260	080600		A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
261	080700		A1	A1
262	080800		A1	A1
263	080900		A1	A1
264	081000		A1	A1
265	081100		A1	A1
266	081200		A1	A1
267	081300		A1	A1
268	081400		A1	A1
269	081500		A1	A1
270	081600		A1	A1
271	081700		A1	A1
272	081800		A1	A1
273	081900		A1	A1
274	082000		A1	A1
275	082100		A1	A1
276	082200		A1	A1
277	082300		A1	A1
278	082400		A1	A1
279	082500		A1	A1
280	082600		A1	A1
281	082700		A1	A1
282	0828F0		A1	A1
283	0828F1		A1	A1
284	0828F2		A1	A1
285	082900			
286	0830F0			
287	0831F1			
288	0832F0			
289	C12787		A1	A1
290	C12887		A1	A1
291	C12988		A1	A1
292	083300		A1	A1
293	083400			
294	083500			
295	083600		A1	A1
296	083700			
297	083800		A4	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
298	083900		A1	A8
299	084000		A1	A1
300	086800	Light up two-guns red lights	A10	A11
301	086900		A2	A6
			A3	A7
			A5	A9
302	087000		A1	A1
303	087100		A1	A1
304	087200		A1	A1
305	087300		A1	A1
306	087400		A1	A1
307	087500	Light up gun A red lights	A10	A1
308	087600	Light up gun B red lights	A1	A11
309	087700			
310	087800			
311	C13087		A1	A1
312	C13187		A1	A1
313	C13287		A1	A1
314	C13387		A1	A1
315	087900	No light status changes	A1	A1
316	088000	No light status changes	A1	A1
317	088100	No light status changes	A1	A1
318	088283	No light status changes	A1	A1
319	08826C	No light status changes	A1	A1
320	08827D	No light status changes	A1	A1
321	08829 A	No light status changes	A1	A1
322	0882A1	No light status changes	A1	A1
323	0882A3	No light status changes	A1	A1
324	0882DF	No light status changes	A1	A1
325	0882FF	No light status changes	A1	A1
326	088383	No light status changes	A1	A1
327	08836C	No light status changes	A1	A1
328	08837D	No light status changes	A1	A1
329	08839 A	No light status changes	A1	A1
330	0883A1	No light status changes	A1	A1
331	0883A3	No light status changes	A1	A1

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
332	0883DF	No light status changes	A1	A1
333	0883FF	No light status changes	A1	A1
334	088483	No light status changes	A1	A1
335	08846C	No light status changes	A1	A1
336	08847D	No light status changes	A1	A1
337	08849 A	No light status changes	A1	A1
338	0884A1	No light status changes	A1	A1
339	0884A3	No light status changes	A1	A1
340	0884DF	No light status changes	A1	A1
341	0884FF	No light status changes	A1	A1
342	088583	No light status changes	A1	A1
343	08856C	No light status changes	A1	A1
344	08857D	No light status changes	A1	A1
345	08859 A	No light status changes	A1	A1
346	0885A1	No light status changes	A1	A1
347	0885A3	No light status changes	A1	A1
348	0885DF	No light status changes	A1	A1
349	0885FF	No light status changes	A1	A1
350	088683	No light status changes	A1	A1
351	08866C	No light status changes	A1	A1
352	08867D	No light status changes	A1	A1
353	08869 A	No light status changes	A1	A1
354	0886A1	No light status changes	A1	A1
355	0886A3	No light status changes	A1	A1
356	0886DF	No light status changes	A1	A1
357	0886FF	No light status changes	A1	A1
358	08877D	No light status changes	A1	A1
359	08879 A	No light status changes	A1	A1
360	0887DF	No light status changes	A1	A1
361	0887FF	No light status changes	A1	A1
362	088800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
363	088900		A1	A1
364	089000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
365	089100	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
366	089200	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
367	089300	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
368	089400	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
369	089500	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
370	089600	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
371	089700	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
372	089800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
373	089900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
374	090000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
375	090100	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
376	090200	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
377	090300	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
378	090400	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
379	090500	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
380	090600	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
381	090700	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
382	090800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
383	090900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
384	091000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
385	091100	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
386	091200	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
387	091300	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
388	091400	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
389	091500	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
390	091600	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
391	091700	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
392	091800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
393	091900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
394	092000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
395	092100	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
396	092200	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
397	092300	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
398	092400	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
399	092500	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
400	092600	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
401	092700	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
402	092800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
403	092900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
404	093000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
405	093100	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
406	093200	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
407	093300	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
408	093400	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
409	093500	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
410	093600	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
411	093700	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
412	093800	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8

Position	DTC code	Red Lights	System A ⇒« EMS System Performance » page 133	System B ⇒« EMS System Performance » page 133
413	093900	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
414	094000	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
415	C13487		A1	A1
416	C13587		A1	A1
417	C13687		A1	A1
418	C13787		A1	A1
419	C13887		A1	A1
420	C13987		A1	A1
421	C14087		A1	A1
422	C14187		A1	A1
423	C14287		A1	A1
424	C14387	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
425	C14487	Light up two-guns red lights	A2	A6
			A3	A7
			A4	A8
426	C14587		A1	A1
427	094100	Light up gun A red lights	A10	A1
428	094200	Light up gun B red lights	A1	A11
429	094300		A1	A1
430	094400		A1	A1
430	094400		A2	A6
			A3	A7
			A5	A9
431	094500		A1	A1
432	094600		A1	A1
433	094700		A1	A1
434	094800		A1	A1
435	094900		A1	A1
436	095000			
437	095100			
438	095200			

4.5 EMS System Performance

◆ ⇒« EMS DTC Code Table » page 40

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	Fault Performance	System Action
A0	Normal	NA
A1	Storage error code	Storage error code
A2	Disable Gun-A both cross discharge	◆ 1.While K5/K6 enable,disable K17/K18,even CCUB power request more than 120KW ◆ 2.While K5/K6 disable,enable K17/K18 if CCUB power request more than 120KW, and keep K5/K6 disable before K17/K18 disable
A3	Disable Gun-A cross discharge	1.Disable K5/K6(EMS)
A4	Disable Gun-A DC/DC discharge	1.Configuring DC/DC of Gun-A offline(EMS)
A5	Disable Pack A recharge	1.Disable K9/K10(EMS→BMS1)
A6	Disable Gun-B both cross discharge	◆ 1.While K7/K8 enable,disable K17/K18,even CCUA power request more than 120KW ◆ 2.While K5/K6 disable,enable K17/K18 if CCUB power request more than 120KW, and keep K5/K6 disable before K17/K18 disable
A7	Disable Gun-B cross discharge	1.Disable K7/K8(EMS)
A8	Disable Gun-B DC/DC discharge	1.Configuring DC/DC of Gun-B offline(EMS)
A9	Disable Pack B recharge	1.Disable K11/K12(EMS→BMS2)
A10	High voltage power down of system A,Gun-A red light	◆ 1.Disable K5/K6(EMS) ◆ 2.Disable K21/K22(EMS) ◆ 3.Disable K1/K2(EMS→CCU1) ◆ 4.Disable K9/K10(EMS→BMS1) ◆ 5.Disable K13/K14(EMS→BMS1)

Position	Fault Performance	System Action
A11	High voltage power down of system B,Gun-B red light	◆ 1.Disable K7/K8(EMS) ◆ 2.Disable K23/K24(EMS) ◆ 3.Disable K3/K4(EMS→CCU2) ◆ 4.Disable K11/K12(EMS→BMS2) ◆ 5.Disable K15/K16(EMS→BMS2)
A12	When A10 and A11 are detected last 5min,The whole machine high voltage and low voltage power down, two guns do not light	◆ 1.Disable KA5 if fault detected,including Collision and Falling ◆ 2.Disable KA2 ◆ 3.Disable K1/K2,K3/K4(EMS→CCU1,2) ◆ 4.Disable K5/K6,K7/K8(EMS) ◆ 5.Disable K9/K10,K11/K12(EMS→BMS1,2) ◆ 6.Disable KA1,KA3,KA4 ◆ 7.Disable K21/K22,K23/K24(EMS) ◆ 8.Disable K13/K14,K15/K16(EMS→BMS1,2) ◆ 9.BMS1,BMS2 Sleep(EMS→BMS1,2) ◆ 10.EMS Sleep

5 Appareil de commande de l'unité de recharge, CCU DTC Matrix

5.1 CCU DTC Code Table

Les numéros de poste attribués du code CCU-DTC sont les mêmes dans tous les documents et servent à simplifier la recherche !

- Les codes DTC doivent être traités les uns après les autres conformément à la liste ci-dessous.
- Tenez compte des indications relatives à la puissance du système ⇒ « CCU System Performance » page 166.

1.	– Recherchez le code CCU-DTC dans le tableau ci-dessous. Notez le numéro du poste.
2.	– Recherchez le numéro de poste correspondant pour obtenir des informations et instructions supplémentaires. ⇒ « CCU Failure Criteria / Repair Notes and Action » page 138
3.	– Recherchez le numéro de poste correspondant pour obtenir une cause possible et des informations sur la réparation. ⇒ « CCU DTC Support Information » page 149

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
1	030100	130100	CCU_Over-current protection failure
2	030200	130200	DCDC output over-voltage Alarm
3	030300	130300	CCU_current rationality out of range
4	C30487	D30487	CCU and EMS CAN communication timeout
5	C30588	D30588	EMS CAN Busoff
6	C30687	D30687	CCU and SECC communication timeout
7	C30788	D30788	SECC CAN Busoff
8	030887	030887	CCU and SECC communication interruption
9	030900	130900	The gun positive temperature sensor short circuit to battery or open circuit
10	031000	131000	The gun positive temperature sensor short circuit to ground
11	031100	131100	The gun negative temperature sensor short circuit to battery or open circuit
12	031200	131200	The gun negative temperature sensor short circuit to ground
13	0313F0	1313F0	Gun over-temperature level 1 failure
14	0314F1	1314F1	Gun over-temperature level 2 failure
15	0315F2	1315F2	Gun over-temperature level 3 failure
16	0315F3	1315F3	Gun over-temperature too many times
17	031600	131600	DC positive relay lifetime failure side A (relay K1) side B (relay K3)
18	031800	131800	DC positive relay drive short circuit to ground side A (relay K1) side B (relay K3)
19	031900	131900	DC positive relay drive open circuit side A (relay K1) side B (relay K3)
20	032200	132200	DC negative relay drive short circuit to ground side A (relay K2) side B (relay K4)
21	032300	132300	DC negative relay drive open circuit side A (relay K2) side B (relay K4)
22	032500	132500	DC positive relay open failure side A (relay K1) side B (relay K3)
23	032600	132600	DC positive relay adhesion failure side A (relay K1) side B (relay K3)
24	032700	132700	DC negative relay open failure side A (relay K2) side B (relay K4)

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
25	032800	132800	DC negative relay adhesion failure side A (relay K2) side B (relay K4)
26	032900	132900	Fuse failure side A (Fuse3) side A (Fuse4)
27	0330F1	1330F1	Insulation level 1 failure detection
28	0331F2	1331F2	Insulation level 2 failure detection
29	0332F3	1332F3	Insulation level 3 failure detection
30	033300	133300	Isolation detect timeout
31	035900	135900	DC output voltage exceeds BCL requirement voltage
32	036000	136000	DC output current exceeds BCL requirement current
33	038300	138300	Battery maximum allowable voltage less than AFC minimum output voltage
34	038500	138500	DC positive relay contact detected abnormal side A (relay K1) side B (relay K3)
35	038600	138600	DC negative relay contact detected abnormal side A (relay K2) side B (relay K4)
36	038800	138800	PreCableCheck failure
37	060100	160100	DB_INIT_ERROR_GENERAL
38	060200	160200	DB_INIT_ERROR_IFADDR In case of the backend DTC
39	060300	160300	DB_INIT_ERROR_THREAD
40	060400	160400	DB_INIT_ERROR_OPENCHANNEL
41	060500	160500	DB_INIT_ERROR_KEY
42	060600	160600	DB_SLAC_ERROR_GENERAL
43	060700	160700	DB_UNEXCEPTED_CP_STATE
44	060800	160800	DB_SLAC_ERROR_TIMER_TIMEOUT
45	060900	160900	DB_SLAC_ERROR_TIMER_MISC
46	061000	161000	DB_SLAC_ERROR_PARAM_TIMEOUT
47	061100	161100	DB_SLAC_ERROR_PARAM_SOCKET
48	061200	161200	DB_SLAC_ERROR_START_ATTEN_CHAR_TI-MEOUT
49	061300	161300	DB_SLAC_ERROR_MNBC_SOUND_TIMEOUT
50	061400	161400	DB_SLAC_ERROR_ATTEN_CHAR_TIMEOUT
51	061500	161500	DB_SLAC_ERROR_ATTEN_CHAR_SOCKET
52	061600	161600	DB_SLAC_ERROR_VALIDATE_1_TIMEOUT
53	061700	161700	DB_SLAC_ERROR_VALIDATE_1_SOCKET
54	061800	161800	DB_SLAC_ERROR_VALIDATE_2_TIMEOUT

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
55	061900	161900	DB_SLAC_ERROR_VALIDATE_2_SOCKET
56	062000	162000	DB_SLAC_ERROR_BCB_TOGGLE_TIMEOUT
57	062100	162100	DB_SLAC_ERROR_MATCH_TIMEOUT
58	062200	162200	DB_SLAC_ERROR_MATCH_SOCKET
59	062300	162300	DB_SLAC_ERROR_READ_SOCKET
60	062400	162400	DB_SDP_ERROR_GENERAL
61	062500	162500	DB_SDP_ERROR_INIT_SOCKET
62	062600	162600	DB_SDP_ERROR_INIT_SOCKOPT1
63	062700	162700	DB_SDP_ERROR_INIT_SOCKOPT2
64	062800	162800	DB_SDP_ERROR_INIT_BIND
65	062900	162900	DB_SDP_ERROR_THREAD_SOCKET1
66	063000	163000	DB_SDP_ERROR_THREAD_SOCKET2
67	063100	163100	DB_SDP_ERROR_TIMEOUT
68	063200	163200	DB_DIN_ERROR_GENERAL
69	063300	163300	DB_DIN_ERROR_INIT_SOCKET
70	063400	163400	DB_DIN_ERROR_INIT_SOCKOPT
71	063500	163500	DB_DIN_ERROR_INIT_BIND
72	063600	163600	DB_DIN_ERROR_INIT_LISTEN
73	063700	163700	DB_DIN_ERROR_INIT_SELECT
74	063800	163800	DB_DIN_ERROR_INIT_ACCEPT
75	063900	163900	DB_DIN_ERROR_TIMEOUT
76	064000	164000	DB_DIN_ERROR_V2GTP_HEADER
77	064100	164100	DB_DIN_ERROR_V2GTP_HEADER_LEN
78	064200	164200	DB_DIN_ERROR_DECODE_EXI
79	064300	164300	DB_DIN_ERROR_CREATE_RESPONSE
80	064400	164400	DB_DIN_ERROR_ENCODE_EXI
81	064500	164500	DB_DIN_ERROR_V2GTP_HEADER_WRITE
82	064600	164600	DB_DIN_ERROR_SOCKET_EXCEPTION
83	064700	164700	DB_DIN_ERROR_SOCKET_SEND
84	064800	164800	DB_DIN_ERROR_NO_PROTOCOL
85	064900	164900	DB_ISO15118_ERROR_GENERAL
86	065000	165000	DB_ISO15118_ERROR_INIT_SOCKET
87	065100	165100	DB_ISO15118_ERROR_INIT_SOCKOPT
88	065200	165200	DB_ISO15118_ERROR_INIT_BIND
89	065300	165300	DB_ISO15118_ERROR_INIT_LISTEN
90	065400	165400	DB_ISO15118_ERROR_INIT_SELECT
91	065500	165500	DB_ISO15118_ERROR_INIT_ACCEPT

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
92	065600	165600	DB_ISO15118_ERROR_TIMEOUT
93	065700	165700	DB_ISO15118_ERROR_V2GTP_HEADER
94	065800	165800	DB_ISO15118_ERROR_V2GTP_HEADER_LEN
95	065900	165900	DB_ISO15118_ERROR_DECODE_EXI
96	066000	166000	DB_ISO15118_ERROR_CREATE_RESPONSE
97	066100	166100	DB_ISO15118_ERROR_ENCODE_EXI
98	066200	166200	DB_ISO15118_ERROR_V2GTP_HEADER_WRITE
99	066300	166300	DB_ISO15118_ERROR_SOCKET_EXCEPTION
100	066400	166400	DB_ISO15118_ERROR_SOCKET_SEND
101	066500	166500	DB_ISO15118_ERROR_NO_PROTOCOL
102	066600	166600	DB_CP_STATE_E
103	037600	137600	DCDC output out of range
104	c31587	d31587	CCU and SECC communication timeout
105	037000	137000	Precharge timeout
106	034100	134100	Vehicle Voltage out of CML
107	051000	151000	precablecheck temp fault
108	051100	151100	In case of the backend DTC
109	036300	136300	CP off line

5.2 CCU Failure Criteria / Repair Notes and Action

◆ ⇒« CCU DTC Code Table » page 134

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
1	030100	130100	Dc output current > (CML maxCurre * 1.3), for 3 s (debounce) (The threshold can be calibrated)	Recover after pulling the gun
2	030200	130200	Dc output voltage > (CML maxvoltage * 1.05), for 3s, (debounce) (The threshold can be calibrated)	Recover after pulling the gun

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
3	030300	130300	Plugin and Not in-charging state ,meet the following conditions, for 1.5 s The difference between dc output current and zero current ≥ 2A	Recover after pulling the gun
4	C30487	D30487	1. No EMS message received && 2 .For 50 monitor cycles	Receive the EMS status message
5	C30588	D30588	CCU self-check to failure for 10S (The threshold can be calibrated)	Detection of maintenance
6	C30687	D30687		
7	030788	D30788	CCU self-check to failure for 10S (The threshold can be calibrated)	Detection of maintenance
8	030887	030887		
9	030900	130900	The gun positive temperature sensor detect the input voltage ≥ 4.5V for 4s (The threshold can be calibrated)	The gun positive temperature sensor detect the input voltage < 4.5V for 4s
10	031000	131000	The gun positive temperature sensor detect the input voltage ≤ 0.2 V for 10s (The threshold can be calibrated)	The gun positive temperature sensor detect the input voltage > 0.5 V for 10s
11	031100	131100	The gun negative temperature sensor detect the input voltage ≥ 4.5V for 4s (The threshold can be calibrated)	The gun negative temperature sensor detect the input voltage < 4.5V for 4s
12	031200	131200	The gun negative temperature sensor detect the input voltage ≤ 0.2 V for 10s (The threshold can be calibrated)	The gun negative temperature sensor detect the input voltage > 0.5 V for 10s

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
13	0313F0	1313F0	1. Gun temperature ≥ 70 °C for 10000ms(The threshold can be calibrated) && 2. P0309 and P0311 DTC are not recorded	Gun temperature < 66 °C for 10000ms
14	0314F1	1314F1	1. Gun temperature ≥ 80 °C for 7000ms(The threshold can be calibrated) && 2. P0309 and P0311 DTC are not recorded	Gun temperature < 76 °C for 1-000ms
15	0315F2	1315F2	1. Gun temperature ≥ 90 °C for 7000ms (The threshold can be calibrated) && 2. P0309 and P0311 DTC are not recorded	Gun temperature < 86 °C for 7000ms
16	0315F3	1315F3	Gun over-temperature level 3 failure counter ≥ 3	CCU power on again
17	031600	131600	The counter that DC positive relay cut off with load >3000 times (The threshold can be calibrated)	erease the counter by UDS
18	031800	131800	CCU read the feedback voltage (DC positive relay drive)< 0.2 V for 500 ms (The threshold can be calibrated)	Detection of maintenance
19	031900	131900	CCU read the feedback voltage(DC positive relay drive) > 5.5 V, for 500 ms (The threshold can be calibrated)	Detection of maintenance
20	032200	132200	CCU read the feedback voltage (DC negative relay drive)< 0.2 V for 500 ms (The threshold can be calibrated)	Detection of maintenance

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
21	032300	132300	CCU read the feedback voltage(DC negative relay drive) > 5.5 V, for 500 ms (The threshold can be calibrated)	Detection of maintenance
22	032500	132500	K1/K3 feedback signal voltage>4.5V for 200 ms(When DC positive relay on) (The threshold can be calibrated)	Maintenance to replace
23	032600	132600	K1/K3 feedback signal voltage<0.2V for 200 ms(When DC positive relay off) (The threshold can be calibrated)	Maintenance to replace
24	032700	132700	K2/K4 feedback signal voltage>4.5V for 200 ms(When DC negative relay on) (The threshold can be calibrated)	Maintenance to replace
25	032800	132800	K2/K4 feedback signal voltage<0.2V for 200 ms(When DC negative relay off) (The threshold can be calibrated)	Maintenance to replace
26	032900	132900	After the DC positive relay was closed and no open failure and DCDC output voltage higher than 200V The difference between Fuse input voltage and the Fuse output voltage >50V for 1s(debounce) (The threshold can be calibrated)	Maintenance to replace

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
27	0330F1	1330F1	1. Insulation resistance less then 1000Ω/V (fix 920V)&& 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	1. Insulation resistance greater then 1200Ω/V && 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s
28	0331F2	1331F2	1. Insulation resistance less then 1000Ω/V (fix 920V)&& 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	1. Insulation resistance greater then 5.500Ω/V && 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s
29	0332F3	1332F3	1. Insulation resistance less then 1000Ω/V (fix 920V)&& 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	1. Insulation resistance greater then 300Ω/V && 2. For 2 insulation detection cycles && 3. Each insulation detection cycle is 5.5s
30	033300	133300	Isolation detect not finish within 30s	Recovery after drawing the gun
31	035900	135900	DC output voltage>BCL voltage(BCL_Votg*1.05) for 1S (The threshold can be calibrated)	Recovery after drawing the gun

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
32	036000	136000	DC output current > BCL current+35A for 5S (The threshold can be calibrated)	Recovery after drawing the gun
33	038300	138300	Battery maximum allowable voltage less than AFC minimum output voltage for 1S (debounce) (The threshold can be calibrated)	Recovery after drawing the gun
34	038500	138500	4V>K1/K3 feedback signal voltage>0.2V for 200 ms (The threshold can be calibrated)	Maintenance to replace
35	038600	138600	4V>K2/K4 feedback signal voltage>0.2V for 200 ms (The threshold can be calibrated)	Maintenance to replace
36	038800	138800	Insulation resistance less then 92KΩ ,last 50ms or Insulation detection not finish within 30s or DCDC output voltage is out of 50±10V,last 15s	Recover after pulling the gun
37	060100	160100	General error, just some function input parameters are not expected	Automatic recovery
38	060200	160200	System initialization network failed	Restart SECC
39	060300	160300	System failed to create a thread, the system resources	Restart SECC
40	060400	160400	Unable to connect PLC chip	Restart SECC
41	060500	160500	String to use PLC chip encryption with failure	Automatic recovery
42	060600	160600	After activating 5% PWM, SECC cannot build PLC network	Recovery after drawing the gun

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
43	060700	160700	SECC detected S2 is switched open as unexpected during charging procedure	Recovery after drawing the gun
44	060800	160800	The timer timeout error	Restart SECC
45	060900	160900	The timer other errors	Restart SECC
46	061000	161000	EV is not timely send connection request packet (PARM. The REQ)	No operation
47	061100	161100	EV request packet read error	No operation
48	061200	161200	EV start measuring of the request timeout	No operation
49	061300	161300	EV send measurement signal package (SOUND. IND) overtime	No operation
50	061400	161400	EV send measurements reply packet (ATTEN_CHAR. RSP) overtime	No operation
51	061500	161500	Measured value response (ATTEN_CHAR. RSP) read error	No operation
52	061600	161600	EV send validation step 1 package (VALIDATE the REQ step 1) overtime	No operation
53	061700	161700	EV validation step 1 package (VALIDATE the REQ step 1) read error	No operation
54	061800	161800	EV send validation step 2 packages (VALIDATE the REQ step 2) overtime	No operation
55	061900	161900	EV validation step 2 packages (VALIDATE the REQ step 2) read error	No operation
56	062000	162000	EV sent BCB toggle timeout	No operation

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
57	062100	162100	MATCH the reply sent car side package (MATCH. CNF) overtime	No operation
58	062200	162200	Read the matching response package (MATCH. CNF) error	No operation
59	062300	162300	Read other with EV packet error in the process of communication	No operation
60	062400	162400	General error, just some functions of the input parameter is expected	Automatic recovery
61	062500	162500	Failed to initialize the socket	Restart SECC
62	062600	162600	Set the socket option 1 failure	Restart SECC
63	062700	162700	Set the socket option 2 failure	Restart SECC
64	062800	162800	Port binding failure	Restart SECC
65	062900	162900	Thread 1 socke operation failure	Restart SECC
66	063000	163000	Thread 2 socke operation failure	Restart SECC
67	063100	163100	After the PLC network is built, SECC does not get the SDP request from EVCC	Recovery after drawing the gun
68	063200	163200	In case of session ID error, sequence error, request parameter error, etc.	Recovery after drawing the gun
69	063300	163300	Failed to initialize the socket	Restart SECC
70	063400	163400	Failed to set a socket option	Restart SECC
71	063500	163500	Port binding failure	Restart SECC
72	063600	163600	The socket listening failure	Restart SECC
73	063700	163700	A socket operation failed	No operation
74	063800	163800	A socket operation failed	No operation

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
75	063900	163900	SECC detected timeout of sequence message (60s)	Recovery after drawing the gun
76	064000	164000	EV sent V2GTP (Vehicle - to - the Grid Transfer Protocol) head there is an error	No operation
77	064100	164100	EV sent V2GTP header in the length field errors	No operation
78	064200	164200	Secc failed to decode EV request message	Recovery after drawing the gun
79	064300	164300	SECC failed to create response message	Recovery after drawing the gun
80	064400	164400	SECC failed to encode response message	Recovery after drawing the gun
81	064500	164500	SECC filling V2GTP error in baotou	No operation
82	064600	164600	A socket operation failed	No operation
83	064700	164700	SECC failed to send message via socket	Recovery after drawing the gun
84	064800	164800	EV SECC does not support the requested protocol	No operation
85	064900	164900	General error, just some functions of the input parameter is expected	Automatic recovery
86	065000	165000	Failed to initialize the socket	Restart SECC
87	065100	165100	Failed to set a socket option	Restart SECC
88	065200	165200	Port binding failure	Restart SECC
89	065300	165300	The socket listening failure	Restart SECC
90	065400	165400	With EV errors in the process of communication	No operation
91	065500	165500	With EV errors in the process of communication	No operation
92	065600	165600	EV contract awarding timeout	No operation

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
93	065700	165700	EV sent V2GTP (Vehicle - to - the Grid Transfer Protocol) head there is an error	No operation
94	065800	165800	EV sent V2GTP header in the length field errors	No operation
95	065900	165900	Error reading data decoding EV sent EXI	No operation
96	066000	166000	SECC create a reply packet error	No operation
97	066100	166100	SECC create a reply packet EXI coding error	No operation
98	066200	166200	SECC filling V2GTP error in baotou	No operation
99	066300	166300	Socket operation failed	No operation
100	066400	166400	Socket operation failed	No operation
101	066500	166500	EV requested an agreement that the SECC did not support	No operation
102	066600	166600	SECC detected CP_STATE_E	Reset SECC
103	037600	137600	CCU is in the charging state DCDC output voltage out of the range (150~1100V),last 3s	Recovery after drawing the gun

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
104	c31587	d31587	1.No SECC BHM message received ,last 10 message cycles,or 2.No SECC BRM message received ,last 10 message cycles,or 3.No SECC BRO message received ,last 10 message cycles,or 4.No SECC BCL message received ,last 10 message cycles,or 5.No SECC BCS message received ,last 10 message cycles,or 6.No SECC BCP message received ,last 10 message cycles,or 7.No SECC BSD message received ,last 10 message cycles	Receive the SECC message
105	037000	137000	DCDC output voltage out of the BCP voltage ±10V,last 20s or DCDC output voltage out of the BCL voltage ±20V,last 8s	Recovery after drawing the gun
106	034100	134100	outside of Posrelay voltage out of the CML voltage (200~920V),last 2s	Recovery after drawing the gun
107	051000	151000	AuxPwr_Ctrl≠1,and: 1. Gun temperature >90 ℃ for 10000ms(The threshold can be calibrated) || 2. The gun negative temperature sensor short circuit to battery or open circuit	AuxPwr_Ctrl≠1,and: Gun temperature < 86 ℃ for 1-000ms

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
108	051100	151100	1.insulation resistance>1M 2.during the charging process,take a negative terminal voltage U1 after the negative terminal switch is disconnected for 200ms, and compare it with the average negative terminal voltage U2 , (U1 / U2)>0.9 3.detect one time per charging cycle	Recovery after drawing the gun
109	036300	136300	1.CCU is in charging state 2.The Plc_CpStatus≠2,last 0ms open the K1K2/K3/K4 immediately when the CP off line	Recovery after Plc_CpStatus≠0

5.3 CCU DTC Support Information

- ⇒« CCU DTC Code Table » page 134

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code	Possible Reason	Investigation Direction
1	030100	[A]A gun external short circuit [B]CCU1 failure [C]DCDC1 failure	[A1]Plug out A gun [A2]Check A gun external short circuit or not [B1]Restart AFC(remotely or manually)
	130100	[A]B gun external short circuit [B]CCU2 overvoltage failure [C]DCDC2 failure	[A1]Plug out B gun [A2]Check B gun external short circuit or not [B1]Restart AFC(remotely or manually)
2	030200	[A]CCU1 failure [B]DCDC1 failure	[A1]Plug out A gun [A2]Restart AFC(remotely or manually)
	130200	[A]CCU2 failure [B]DCDC2 failure	[A1]Plug out B gun [A2]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
3	030300	[A]EMS failure [B]CCU1 failure [C]DCDC1 failure	[A1]Plug out A gun [A2]Restart AFC(remotely or manually)
	130300	[A]EMS failure [B]CCU2 failure [C]DCDC2 failure	[A1]Plug out B gun [A2]Restart AFC(remotely or manually)
4	C30487	[A]The communication harness between EMS and CCU1 is loose or damaged [B]EMS failure [C]CCU1 failure	[A1]Check whether the communication harness between EMS and CCU1 is loose or damaged
	D30487	[A]The communication harness between EMS and CCU2 is loose or damaged [B]EMS failure [C]CCU2 failure	[A1]Check whether the communication harness between EMS and CCU2 is loose or damaged
5	C30588	[A]The communication harness between EMS and CCU1 is loose or damaged [B]EMS failure [C]CCU1 failure	[A1]Check whether the communication harness between EMS and CCU1 is loose or damaged
	D30588	[A]The communication harness between EMS and CCU2 is loose or damaged [B]EMS failure [C]CCU2 failure	[A1]Check whether the communication harness between EMS and CCU2 is loose or damaged
6	C30687		
	D30687		
7	C30788	[A]The communication harness between SECC1 and CCU1 is loose or damaged [B]SECC1 failure [C]CCU1 failure	[A1]Check whether the communication harness between SECC1 and CCU1 is loose or damaged
	D30788	[A]The communication harness between SECC1 and CCU1 is loose or damaged [B]SECC1 failure [C]CCU1 failure	[A1]Check whether the communication harness between SECC2 and CCU2 is loose or damaged
8	030887		
	130887		

Position	DTC code	Possible Reason	Investigation Direction
9	030900	[A]CCU1 detect voltage failure [B]The harness at the both sides of A gun positive temperature sensor is loose or damaged/short circuited [C]A gun positive temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of A gun positive temperature sensor is loose or damaged/short circuited
	130900	[A]CCU2 detect voltage failure [B]The harness at the both sides of B gun positive temperature sensor is loose or damaged/short circuited [C]B gun positive temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of B gun positive temperature sensor is loose or damaged/short circuited
10	031000	[A]CCU1 detect voltage failure [B]The harness at the both sides of A gun positive temperature sensor is loose or damaged/short circuited [C]A gun positive temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of A gun positive temperature sensor is loose or damaged/short circuited
	131000	[A]CCU2 detect voltage failure [B]The harness at the both sides of B gun positive temperature sensor is loose or damaged/short circuited [C]B gun positive temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of B gun positive temperature sensor is loose or damaged/short circuited
11	031100	[A]CCU1 detect voltage failure [B]The harness at the both sides of A gun negative temperature sensor is loose or damaged/short circuited [C]A gun negative temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of A gun negative temperature sensor is loose or damaged/short circuited
	131100	[A]CCU2 detect voltage failure [B]The harness at the both sides of B gun negative temperature sensor is loose or damaged/short circuited [C]B gun negative temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of B gun negative temperature sensor is loose or damaged/short circuited

Position	DTC code	Possible Reason	Investigation Direction
12	031200	[A]CCU1 detect voltage failure [B]The harness at the both sides of A gun negative temperature sensor is loose or damaged/short circuited [C]A gun negative temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of A gun negative temperature sensor is loose or damaged/short circuited
	131200	[A]CCU2 detect voltage failure [B]The harness at the both sides of B gun negative temperature sensor is loose or damaged/short circuited [C]B gun negative temperature sensor failure	[A1]Restart AFC(remotely or manually) [B1]Check whether the harness at the both sides of B gun negative temperature sensor is loose or damaged/short circuited
13	0313F0	[A]A gun temperature is >70°C for 10s [B]A gun connector is broken [C]CCU1 failure	[A1]let A gun temperature <66°C for 10s [B1]Check whether A gun connector is intact [C1]Restart AFC(remotely or manually)
	1313F0	[A]B gun temperature is >70°C for 10s [B]B gun connector is broken [C]CCU2 failure	[A1]let B gun temperature <66°C for 10s [B1]Check whether B gun connector is intact [C1]Restart AFC(remotely or manually)
14	0314F1	[A]A gun terperature ≥ 80°C for 7s [B]A gun connector is broken [C]CCU1 failure	[A1]let A gun temperature <66°C for 10s [B1]Check whether A gun connector is intact [C1]Restart AFC(remotely or manually)
	1314F1	[A]B gun terperature ≥ 80°C for 7s [B]B gun connector is broken [C]CCU2 failure	[A1]let B gun temperature <66°C for 10s [B1]Check whether B gun connector is intact [C1]Restart AFC(remotely or manually)
15	0315F2	[A]A gun terperature ≥ 90°C for 7s [B]A gun connector is broken [C]CCU1 failure	[A1]let A gun temperature <66°C for 10s [B1]Check whether A gun connector is intact [C1]Restart AFC(remotely or manually)
	1315F2	[A]B gun terperature ≥ 90°C for 7s [B]B gun connector is broken [C]CCU2 failure	[A1]let B gun temperature <66°C for 10s [B1]Check whether B gun connector is intact [C1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
16	0315F3	[A]CCU1 detect Gun over-temperature level 3 failure counter ≥ 3 before CCU restart [B]A gun connector is broken [C]CCU1 failure	[A1]Restart AFC(remotely or manually) [B1]Check whether A gun connector is intact
	1315F3	[A]CCU2 detect Gun over-temperature level 3 failure counter ≥ 3 before CCU restart [B]B gun connector is broken [C]CCU2 failure	[A1]Restart AFC(remotely or manually) [B1]Check whether B gun connector is intact
17	031600	[A]counter that DC positive K1 relay cut off with load >3000 times [B]CCU1 counter wrong	[A1]Replace DC positive relay(Relay K1) and erease counter [B1]Restart AFC(remotely or manually)
	131600	[A]counter that DC positive K3 relay cut off with load >3000 times [B]CCU2 counter wrong	[A1]Replace DC positive relay(Relay K3) and erease counter [B1]Restart AFC(remotely or manually)
18	031800	[A]K1 relay failure [B]The harness at the both sides of relay K1 is short circuited [C]CCU1 failure	[A1]Check relay K1 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K1 is short circuited
	131800	[A]K3 relay failure [B]The harness at the both sides of relay K3 is short circuited [C]CCU2 failure	[A1]Check relay K3 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K3 is short circuited
19	031900	[A]K1 relay failure [B]The harness at the both sides of relay K1 is loose or damaged [C]CCU1 failure	[A1]Check relay K1 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K1 is loose or damaged
	131900	[A]K3 relay failure [B]The harness at the both sides of relay K3 is loose or damaged [C]CCU2 failure	[A1]Check relay K3 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K3 is loose or damaged
20	032200	[A]K2 relay failure [B]The harness at the both sides of relay K2 is short circuited [C]CCU1 failure	[A1]Check relay K2 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K2 is short circuited
	132200	[A]K4 relay failure [B]The harness at the both sides of relay K4 is short circuited [C]CCU2 failure	[A1]Check relay K4 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K4 is short circuited

Position	DTC code	Possible Reason	Investigation Direction
21	032300	[A]K2 relay failure [B]The harness at the both sides of relay K2 is loose or damaged [C]CCU1 failure	[A1]Check relay K2 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K2 is loose or damaged
	132300	[A]K4 relay failure [B]The harness at the both sides of relay K4 is loose or damaged [C]CCU2 failure	[A1]Check relay K4 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K4 is loose or damaged
22	032500	[A]K1 relay failure [B]The harness at the both sides of relay K1 is loose or damaged [C]CCU1 failure	[A1]Check relay K1 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K1 is loose or damaged
	132500	[A]K3 relay failure [B]The harness at the both sides of relay K3 is loose or damaged [C]CCU2 failure	[A1]Check relay K3 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K3 is loose or damaged
23	032600	[A]K1 relay failure [B]The harness at the both sides of relay K1 is short circuited [C]CCU1 failure	[A1]Check relay K1 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K1 is short circuited
	132600	[A]K3 relay failure [B]The harness at the both sides of relay K3 is short circuited [C]CCU2 failure	[A1]Check relay K3 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K3 is short circuited
24	032700	[A]K2 relay failure [B]The harness at the both sides of relay K2 is loose or damaged [C]CCU1 failure	[A1]Check relay K2 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K2 is loose or damaged
	132700	[A]K4 relay failure [B]The harness at the both sides of relay K4 is loose or damaged [C]CCU2 failure	[A1]Check relay K4 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K4 is loose or damaged
25	032800	[A]K2 relay failure [B]The harness at the both sides of relay K2 is short circuited [C]CCU1 failure	[A1]Check relay K2 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K2 is short circuited
	132800	[A]K4 relay failure [B]The harness at the both sides of relay K4 is short circuited [C]CCU2 failure	[A1]Check relay K4 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K4 is short circuited

Position	DTC code	Possible Reason	Investigation Direction
26	032900	[A]Fuse3 blown [B]The harness at the both sides of Fuse3 is loose or damaged [C]CCU1 failure	[A1]Replace Fuse3 [B1]Check whether the harness at the both sides of Fuse3 is loose or damaged
	132900	[A]Fuse4 blown [B]The harness at the both sides of Fuse4 is loose or damaged [C]CCU2 failure	[A1]Replace Fuse4 [B1]Check whether the harness at the both sides of Fuse4 is loose or damaged
27	0330F1	[A]Gun insulation resistance is reducedd [B]CCU1 failure [C]A gun connector is failure	[A1]Plug out A gun [A2]Check A gun connector and clear [B1]Restart AFC(remotely or manually)
	1330F1	[A]Gun insulation resistance is reducedd [B]CCU1 failure [C]A gun connector is failure	[A1]Plug out B gun [A2]Check B gun connector and clear [B1]Restart AFC(remotely or manually)
28	0331F2	[A]Gun insulation resistance is reduced [B]CCU1 failure [C]A gun connector is failure	[A1]Plug out A gun [A2]Check A gun connector and clear [B1]Restart AFC(remotely or manually) [B2]Replace CCU1
	1331F2	[A]Gun insulation resistance is reduced [B]CCU2 failure [C]B gun connector is failure	[A1]Plug out B gun [A2]Check B gun connector and clear [B1]Restart AFC(remotely or manually)
29	0332F3	[A]Gun insulation resistance is reduced [B]CCU1 failure [C]A gun connector is failure	[A1]Plug out A gun [A2]Check A gun connector and clear [B1]Restart AFC(remotely or manually)
	1332F3	[A]Gun insulation resistance is reduced [B]CCU2 failure [C]B gun connector is failure	[A1]Plug out B gun [A2]Check B gun connector and clear [B1]Restart AFC(remotely or manually)
30	033300	[A]AFC internal fault until 30s [B]EMS send a fault order to terminate insulation test [C]CCU1 is failure [D]A gun connector is failure	[A1]Restart AFC(remotely or manually) [A2]Reference to other DTC code
	133300	[A]AFC internal fault until 30s [B]EMS send a fault order to terminate insulation test [C]CCU2 is failure [D]B gun connector is failure	[A1]Restart AFC(remotely or manually) [A2]Reference to other DTC code

Position	DTC code	Possible Reason	Investigation Direction
31	035900	[A]EV request voltage sharply reduced [B]EMS send wrong message to DCDC1 [C]CCU1 failure [D]DCDC1 failure	[A1]Plug out A gun [B1]RestartAFC(remotely or manually)
	135900	[A]EV request voltage sharply reduced [B]EMS send wrong message to DCDC2 [C]CCU2 failure [D]DCDC2 failure	[A1]Plug out B gun [B1]RestartAFC(remotely or manually)
32	036000	[A]EV request current sharply reduced [B]A gun external short circuit [C]EMS send wrong message to DCDC2 [D]DCDC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually) [B2]Check A gun external short circuit or not
	136000	[A]EV request current sharply reduced [B]B gun external short circuit [C]EMS send wrong message to DCDC1 [D]DCDC2 failure	[A1]Plug out B gun [B1]RestartAFC(remotely or manually) [B2]Check B gun external short circuit or not
33	038300	[A]EV fault: EV battery maximum allowable voltage less than AFC [B]CCU1 failure [C]DCDC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	138300	[A]EV fault: EV battery maximum allowable voltage less than AFC [B]CCU2 failure [C]DCDC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
34	038500	[A]K1 relay failure [B]The harness at the both sides of relayK1 is loose or damaged [C]CCU1 failure	[A1]Check relay K1 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K1 is loose or damaged
	138500	[A]K3 relay failure [B]The harness at the both sides of relay K3 is loose or damaged [C]CCU2 failure	[A1]Check relay K3 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K3 is loose or damaged

Position	DTC code	Possible Reason	Investigation Direction
35	038600	[A]K2 relay failure [B]The harness at the both sides of relay K2 is loose or damaged [C]CCU1 failure	[A1]Check relay K2 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K2 is loose or damaged
	138600	[A]K4 relay failure [B]The harness at the both sides of relay K4 is loose or damaged [C]CCU2 failure	[A1]Check relay K4 status and replace it if it fails [B1]Check whether the harness at the both sides of relay K4 is loose or damaged
36	038800	[A]Gun insulation resistance is reduced [B]A gun connector is failure [C]AFC can't get HV voltage until 30s [D]CCU1 failure [E]EMS send an order to terminate insulation test	[A1]Plug out A gun [A2]Check A gun connector and clear [B1]Check whether A gun connector is intact [C1]Other DTC code exsist and clear DTC code [D1]Restart AFC(remotely or manually)
	138800	[A]Gun insulation resistance is reduced [B]B gun connector is failure [C]AFC can't get HV voltage until 30s [D]CCU2 failure [E]EMS send an order to terminate insulation test	[A1]Plug out B gun [A2]Check B gun connector and clear [B1]Check whether B gun connector is intact [C1]Other DTC code exsist and clear DTC code [D1]Restart AFC(remotely or manually)
37	060100	[A]EV fault	[A1]Automatic recovery [A2]Plug out A gun
	160100	[A]EV fault	[A1]Automatic recovery [A2]Plug out B gun
38	060200	[A]The harness between SECC1 and netword switch is loose or damaged [B]SECC1 is failure	[A1]Check the harness between SECC1 and netword switch [B1]Restart AFC(remotely or manually)
	160200	[A]The harness between SECC2 and netword switch is loose or damaged [B]SECC2 failure	[A1]Check the harness between SECC2 and netword switch [B1]Restart AFC(remotely or manually)
39	060300	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	160300	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
40	060400	[A]The harness between SECC1 and CCU1 is loose or damaged [B]SECC1 is failure [C]CCU1 is failure	[A1]Restart AFC(remotely or manually)
	160400	[A]The harness cable between SECC2 and CCU2 is loose or broken [B]SECC2 is failure [C]CCU2 is failure	[A1]Restart AFC(remotely or manually)
41	060500	[A]SECC1 is failure	[A1]Recovery after Plug out A gun [A2]Restart AFC(remotely or manually)
	160500	[A]SECC2 is failure	[A1]Recovery after Plug out B gun [A2]Restart AFC(remotely or manually)
42	060600	[A]SECC1 is failure	[A1]Recovery after Plug out A gun [A2]Restart AFC(remotely or manually)
	160600	[A]SECC2 is failure	[A1]Recovery after Plug out B gun [A2]Restart AFC(remotely or manually)
43	060700	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	160700	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
44	060800	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	160800	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
45	060900	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	160900	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
46	061000	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161000	[A]EV fault	[A1]No operation [A2]Plug out B gun

Position	DTC code	Possible Reason	Investigation Direction
47	061100	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161100	[A]EV fault	[A1]No operation [A2]Plug out B gun
48	061200	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161200	[A]EV fault	[A1]No operation [A2]Plug out B gun
49	061300	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161300	[A]EV fault	[A1]No operation [A2]Plug out B gun
50	061400	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161400	[A]EV fault	[A1]No operation [A2]Plug out B gun
51	061500	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161500	[A]EV fault	[A1]No operation [A2]Plug out B gun
52	061600	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161600	[A]EV fault	[A1]No operation [A2]Plug out B gun
53	061700	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161700	[A]EV fault	[A1]No operation [A2]Plug out B gun
54	061800	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161800	[A]EV fault	[A1]No operation [A2]Plug out B gun
55	061900	[A]EV fault	[A1]No operation [A2]Plug out A gun
	161900	[A]EV fault	[A1]No operation [A2]Plug out B gun
56	062000	[A]EV fault	[A1]No operation [A2]Plug out A gun
	162000	[A]EV fault	[A1]No operation [A2]Plug out B gun
57	062100	[A]EV fault	[A1]No operation [A2]Plug out A gun
	162100	[A]EV fault	[A1]No operation [A2]Plug out B gun

Position	DTC code	Possible Reason	Investigation Direction
58	062200	[A]EV fault	[A1]No operation [A2]Plug out A gun
	162200	[A]EV fault	[A1]No operation [A2]Plug out B gun
59	062300	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162300	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
60	062400	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162400	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
61	062500	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162500	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
62	062600	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162600	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
63	062700	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162700	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
64	062800	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162800	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
65	062900	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	162900	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
66	063000	[A]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	163000	[A]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
67	063100	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	163100	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
68	063200	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	163200	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
69	063300	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163300	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
70	063400	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163400	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
71	063500	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163500	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
72	063600	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163600	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
73	063700	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163700	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
74	063800	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	163800	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
75	063900	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	163900	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
76	064000	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	164000	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
77	064100	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	164100	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
78	064200	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	164200	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
79	064300	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	164300	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
80	064400	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	164400	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
81	064500	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	164500	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
82	064600	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	164600	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
83	064700	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	164700	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
84	064800	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	164800	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
85	064900	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	164900	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
86	065000	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	165000	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
87	065100	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	165100	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
88	065200	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	165200	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
89	065300	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	165300	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
90	065400	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	165400	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
91	065500	[A]EV fault	[A1]Plug out A gun
	165500	[A]EV fault	[A1]Plug out B gun
92	065600	[A]EV fault	[A1]Plug out A gun
	165600	[A]EV fault	[A1]Plug out B gun
93	065700	[A]EV fault	[A1]Plug out A gun
	165700	[A]EV fault	[A1]Plug out B gun
94	065800	[A]EV fault	[A1]Plug out A gun
	165800	[A]EV fault	[A1]Plug out B gun

Position	DTC code	Possible Reason	Investigation Direction
95	065900	[A]EV fault [B]SECC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	165900	[A]EV fault [B]SECC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
96	066000	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166000	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
97	066100	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166100	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
98	066200	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166200	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
99	066300	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166300	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
100	066400	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166400	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
101	066500	[A]SECC1 failure	[A1]Restart AFC(remotely or manually)
	166500	[A]SECC2 failure	[A1]Restart AFC(remotely or manually)
102	066600	[A]A gun CP/PE harness is broken [B]SECC1 failure [C]CCU1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	166600	[A]B gun CP/PE harness is broken [B]SECC1 failure [C]CCU2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
103	037600	[A]CCU1 failure [B]DCDC1 failure	[A1]Restart AFC(remotely or manually)
	137600	[A]CCU2 failure [B]DCDC2 failure	[A1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
104	c31587	[A]The communication harness between SECC1 and CCU1 is loose or damaged [B]SECC1 failure [C]CCU1 failure	[A1]Restart AFC(remotely or manually)
	d31587	[A]The communication harness between SECC2 and CCU2 is loose or damaged [B]SECC2 failure [C]CCU2 failure	[A1]Restart AFC(remotely or manually)
105	037000	[A]EV battery voltage sharply reduce [B]CCU1 failure [C]EMS failure [D]DCDC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	137000	[A]EV battery voltage sharply reduce [B]CCU2 failure [C]EMS failure [D]DCDC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
106	034100	[A]EV request voltage is sharply increase [B]CCU1 failure [C]EMS failure [D]DCDC1 failure	[A1]Plug out A gun [B1]Restart AFC(remotely or manually)
	134100	[A]EV request voltage is sharply increase [B]CCU2 failure [C]EMS failure [D]DCDC2 failure	[A1]Plug out B gun [B1]Restart AFC(remotely or manually)
107	051000	[A]A Gun temperature >90°C [B]CCU1 failure	[A1]Let A gun temperature <66°C for 10s [B1]Restart AFC(remotely or manually)
	151000	[A]B Gun temperature >90°C [B]CCU2 failure	[A1]Let B gun temperature <66°C for 10s [B1]Restart AFC(remotely or manually)
108	051100	[A]A gun connector is failure [B]CCU1 failure	[A1]Check whether A gun connector is intact [B1]Restart AFC(remotely or manually)
	151100	[A]B gun connector is failure [B]CCU2 failure	[A1]Check whether B gun connector is intact [B1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
109	036300	[A]A gun connector failure [B]SECC1 failure [C]CCU1 failure	[A1]Plug out A gun [A2]Check whether A gun connector is intact
	136300	[A]B gun connector failure [B]SECC1 failure [C]CCU2 failure	[A1]Plug out B gun [A2]Check whether B gun connector is intact

5.4 CCU System Performance

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Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
1	030100	130100	NA	10	Directly cut off the relay, end of charge.
2	030200	130200	NA	10	Directly cut off the relay, end of charge.
3	030300	130300	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.
4	C30487	D30487	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
5	C30588	D30588	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
6	C30687	D30687	NA	1	Waring alarm, no operation;
7	C30788	D30788	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
8	030887	030887	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
9	030900	130900	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
10	031000	131000	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.
11	031100	131100	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.
12	031200	131200	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.
13	0313F0	1313F0	NA	1	Waring alarm, no operation;
14	0314F1	1314F1	NA	4	Derate power CCU reported failure rating (request EMS dreating power 50%. Don't cut off the relay. Fault can be recovery.
15	0315F2	1315F2	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
16	0315F3	1315F3	NA	10	Directly cut off the relay, end of charge.
17	031600	131600	NA	1	Waring alarm, no operation;
18	031800	131800	NA	1	Waring alarm, no operation;
19	031900	131900	NA	1	Waring alarm, no operation;
20	032200	132200	NA	1	Waring alarm, no operation;
21	032300	132300	NA	1	Waring alarm, no operation;
22	032500	132500	NA	10	Directly cut off the relay, end of charge.
23	032600	132600	NA	10	Directly cut off the relay, end of charge.
24	032700	132700	NA	10	Directly cut off the relay, end of charge.
25	032800	132800	NA	10	Directly cut off the relay, end of charge.
26	032900	132900	NA	10	Directly cut off the relay, end of charge.
27	0330F1	1330F1	NA	1	Waring alarm, no operation;
28	0331F2	1331F2	NA	1	Waring alarm, no operation;
29	0332F3	1332F3	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
30	033300	133300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
31	035900	135900	NA	10	Directly cut off the relay, end of charge.
32	036000	136000	NA	10	Directly cut off the relay, end of charge.
33	038300	138300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
34	038500	138500	NA	10	Directly cut off the relay, end of charge.
35	038600	138600	NA	10	Directly cut off the relay, end of charge.
36	038800	138800	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
37	060100	160100	NA	1	Waring alarm, no operation;
38	060200	160200	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
39	060300	160300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
40	060400	160400	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
41	060500	160500	NA	1	Waring alarm, no operation;
42	060600	160600	NA	1	Waring alarm, no operation;
43	060700	160700	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
44	060800	160800	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
45	060900	160900	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
46	061000	161000	NA	1	Waring alarm, no operation;
47	061100	161100	NA	1	Waring alarm, no operation;
48	061200	161200	NA	1	Waring alarm, no operation;
49	061300	161300	NA	1	Waring alarm, no operation;
50	061400	161400	NA	1	Waring alarm, no operation;
51	061500	161500	NA	1	Waring alarm, no operation;
52	061600	161600	NA	1	Waring alarm, no operation;
53	061700	161700	NA	1	Waring alarm, no operation;
54	061800	161800	NA	1	Waring alarm, no operation;
55	061900	161900	NA	1	Waring alarm, no operation;
56	062000	162000	NA	1	Waring alarm, no operation;
57	062100	162100	NA	1	Waring alarm, no operation;
58	062200	162200	NA	1	Waring alarm, no operation;
59	062300	162300	NA	1	Waring alarm, no operation;
60	062400	162400	NA	1	Waring alarm, no operation;
61	062500	162500	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
62	062600	162600	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
63	062700	162700	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
64	062800	162800	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
65	062900	162900	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
66	063000	163000	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
67	063100	163100	NA	1	Waring alarm, no operation;
68	063200	163200	NA	1	Waring alarm, no operation;
69	063300	163300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
70	063400	163400	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
71	063500	163500	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
72	063600	163600	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
73	063700	163700	NA	1	Waring alarm, no operation;
74	063800	163800	NA	1	Waring alarm, no operation;
75	063900	163900	NA	1	Waring alarm, no operation;
76	064000	164000	NA	1	Waring alarm, no operation;
77	064100	164100	NA	1	Waring alarm, no operation;
78	064200	164200	NA	1	Waring alarm, no operation;
79	064300	164300	NA	1	Waring alarm, no operation;
80	064400	164400	NA	1	Waring alarm, no operation;
81	064500	164500	NA	1	Waring alarm, no operation;
82	064600	164600	NA	1	Waring alarm, no operation;
83	064700	164700	NA	1	Waring alarm, no operation;
84	064800	164800	NA	1	Waring alarm, no operation;
85	064900	164900	NA	1	Waring alarm, no operation;
86	065000	165000	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
87	065100	165100	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
88	065200	165200	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
89	065300	165300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
90	065400	165400	NA	1	Waring alarm, no operation;
91	065500	165500	NA	1	Waring alarm, no operation;
92	065600	165600	NA	1	Waring alarm, no operation;
93	065700	165700	NA	1	Waring alarm, no operation;
94	065800	165800	NA	1	Waring alarm, no operation;
95	065900	165900	NA	1	Waring alarm, no operation;
96	066000	166000	NA	1	Waring alarm, no operation;
97	066100	166100	NA	1	Waring alarm, no operation;
98	066200	166200	NA	1	Waring alarm, no operation;
99	066300	166300	NA	1	Waring alarm, no operation;
100	066400	166400	NA	1	Waring alarm, no operation;
101	066500	166500	NA	1	Waring alarm, no operation;
102	066600	166600	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
103	037600	137600	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
104	c31587	d31587	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
105	037000	137000	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
106	034100	134100	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.
107	051000	151000	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Fault Level Charging	Fault Level Discharging	CCU
108	051100	151100	NA	10	Directly cut off the relay, end of charge.
109	036300	136300	NA	7	According to the charging end process (send CST message to EMS and car controller), stop charging or prohibit to start charging.

6 Système de gestion de la batterie, BMS DTC Matrix

6.1 BMS DTC Code Table

Les numéros de poste attribués du code BMS-DTC sont les mêmes dans tous les documents et servent à simplifier la recherche !

- Les codes DTC doivent être traités les uns après les autres conformément à la liste ci-dessous.
- Tenez compte des indications relatives à la puissance du système ⇒ « BMS System Performance » page 194.

1.	– Recherchez le code BMS-DTC dans le tableau ci-dessous. Notez le numéro du poste.
2.	– Recherchez le numéro de poste correspondant pour obtenir des informations et des conseils supplémentaires. ⇒ « BMS Failure Criteria / Repair Notes and Action » page 176
3.	– Recherchez le numéro de poste correspondant pour obtenir une cause possible et des informations sur la réparation. ⇒ « BMS Support Information » page 184

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
1	0563F0	1563F0	Power supply overvoltage level1
2	0562F0	1562F0	Power supply undervoltage level1
3	0B0100	1B0100	Power supply open circuit
4	0B3C00	1B3C00	Power supply circuit fault
5	0E03F0	1E03F0	Cell temperature diff is too big level 1 failure
6	064100	164100	Pack current sensor power supply fault

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
7	0B3BF3	1B3BF3	MSD FAULT
8	002000	102000	HWInitFlt
9	002100	102100	SysInitFlt
10	0B0200	1B0200	watchdog reset
11	C07388	D07388	PT CAN Busoff
12	C70000	D70000	PT CAN EMS timeout
13	C701F2	D701F2	PT CAN HALL timeout
14	0A7DF2	1A7DF2	Low SOC level 1 fault
15	0A7DF3	1A7DF3	Low SOC level 2 fault
16	0DF6F0	1DF6F0	Low SOH level 1 fault
17	0DF6F1	1DF6F1	Low SOH level 2 fault
18	0DF6F2	1DF6F2	Low SOH level 3 fault
19	0DF7F0	1DF7F0	Over discharging power level 1 fault
20	0DF7F1	1DF7F1	Over discharging power level 2 fault
21	0DF7F2	1DF7F2	Over discharging power level 3 fault
22	0DF8F0	1DF8F0	Over charging power level 1 fault
23	0DF8F1	1DF8F1	Over charging power level 2 fault
24	0DF8F2	1DF8F2	Over charging power level 3 fault
25	0DE7F0	1DE7F0	Cell overvoltage level 1 failure
26	0DE7F1	1DE7F1	Cell overvoltage level 2 failure
27	0DE7F2	1DE7F2	Cell overvoltage level 3 failure
28	0DFEF3	1DFEF3	Cell overcharging faiure
29	0DE6F0	1DE6F0	Cell undervoltage level 1 failure
30	0DE6F1	1DE6F1	Cell undervoltage level 2 failure
31	0DE6F2	1DE6F2	Cell undervoltage level 3 failure
32	0DFFF3	DFFF3	Cell undercharging faiure
33	072429	172429	Cell voltage rationality failure
34	0E00F1	1E00F1	Cell voltage diff is too big level 2 failure

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
35	0E00F2	1E00F2	Cell voltage diff is too big level 3 failure
36	0E01F0	1E01F0	Cell overtemperature level 1 failure
37	0E01F1	1E01F1	Cell overtemperature level 2 failure
38	0E01F2	1E01F2	Cell overtemperature level 3 failure
39	0E01F3	1E01F3	Cell overtemperature failure
40	0E03F0	1E03F0	Cell temperature diff is too big level 1 failure
41	072529	172529	Cell temperature rationality failure
42	0AFBF1	1AFBF1	Pack overvoltage level 1 failure
43	0AFBF2	1AFBF2	Pack overvoltage level 2 failure
44	0AFAF1	1AFAF1	Pack undervoltage level 1 failure
45	0AFAF2	1AFAF2	Pack undervoltage level 2 failure
46	0DF7F3	1DF7F3	Pack overcurrent failure
47	0DEA00	1DEA00	Current rationality failure
48	0AF800	1AF800	Pack voltage rationality failure
49	0B5000	1B5000	Precharge voltage rationality failure
50	0ADC00	1ADC00	The driver of positive relay short to power supply
51	0ADBF3	1ADBF3	The driver of positive relay short to ground
52	0AD900	1AD900	The driver of positive relay open circuit
53	0AE000	1AE000	The driver of negative relay short to power supply
54	0ADFF3	1ADFF3	The driver of negative relay short to ground
55	0ADD00	1ADD00	The driver of negative relay open circuit
56	0AE700	1AE700	The driver of precharge relay short to power supply

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
57	0AE6F3	1AE6F3	The driver of precharge relay short to ground or open circuit
58	070000	170000	The driver of pack1 relay short to power supply
59	0701F3	1701F3	The driver of pack1relay short to ground
60	070200	170200	The driver of pack2 relay short to power supply
61	0703F3	1703F3	The driver of pack2 relay short to ground
62	0AA2F3	1AA2F3	Open failure for positive relay
63	0AA1F1	1AA1F1	Adhesion failure for positive relay
64	0AA5F3	1AA5F3	Open failure for negative relay
65	0AA400	1AA400	Adhesion failure for negative relay
66	0AE3F3	1AE3F3	Open failure for pre-charge relay
67	0AE2F3	1AE2F3	Adhesion failure for precharge relay
68	0714F0	1714F0	Adhesion failure of Pack1 relay
69	0715F0	1715F0	Adhesion failure of Pack2 relay
70	073100	173100	Open failure of pack1 relay
71	073200	173200	Open failure of pack2 relay
72	0718F3	1718F3	Open failure of fuse
73	0B0300	1B0300	Cut off with load
74	0B09F3	1B09F3	Precharging failure
75	0B0AF3	1B0AF3	Short circuit of pre-charge load
76	0AA6F0	1AA6F0	Insulation level 1 failure detection
77	0AA6F1	1AA6F1	Insulation level 2 failure detection
78	0AA6F2	1AA6F2	Insulation level 3 failure detection
79	0A0A00	1A0A00	Open failure of HVIL

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	DTC Description
80	0A0D00	1A0D00	Short to power supply of HVIL
81	0A0C00	1A0C00	Short to ground of HVIL
82	0B4400	1B4400	Balance resistence over-temperature
83	0B4500	1B4500	Balance circuit running without command
84	0B4600	1B4600	Balance circuit not running without command
85	0B5A00	1B5A00	Internal NVM failure
86	0B39F0	1B39F0	The driver of CMU power supply short to power supply
87	0B3AF3	1B3AF3	The driver of CMU power supply short to ground or open circuit
88	0DD900	1DD900	Internal failure of CMU1
89	0DDB00	1DDB00	Internal failure of CMU2
90	C00987	D00987	Communication failure of CMU1
91	C00A87	D00A87	Communication failure of CMU2
92	0DE900	1DE900	Internal failure of SBC
93	C01287	D01287	SBC CAN failure
94	070800	170800	Inlet temperature rationality failure of pack1
95	070900	170900	Outlet temperature rationality failure of pack1
96	071000	171000	Inlet temperature rationality failure of pack2
97	071100	171100	Outlet temperature rationality failure of pack2
98	073500	173500	

6.2 BMS Failure Criteria / Repair Notes and Action

- ⇒« BMS DTC Code Table » page 172.

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
1	0563F0	1563F0	KL30 voltage>16V,last 1s	KL30 voltage<15V,last 1s
2	0562F0	1562F0	KL30 voltage<9V,last 1s	KL30 voltage>10V,last 1s
3	0B0100	1B0100		
4	0B3C00	1B3C00		
5	0E03F0	1E03F0		
6	064100	164100		
7	0B3BF3	1B3BF3		
8	002000	102000		
9	002100	102100	system initialize failure	Reset
10	0B0200	1B0200		Reset
11	C07388	D07388	Busoff failure	Holds the previous status and Automatically recovers after receiving the messages
12	C70000	D70000	EMS messages are not received,more than 1s	Holds the previous status and Automatically recovers after receiving the messages
13	C701F2	D701F2	Hall messages are not received,more than 30s	Holds the previous status and Automatically recovers after receiving the messages
14	0A7DF2	1A7DF2	SOC less than 10%,last 3s	SOC bigger than 17%
15	0A7DF3	1A7DF3	SOC less than 7%,last 3s	SOC bigger than 12%
16	0DF6F0	1DF6F0	SOH less than 80%,last 3s	SOH bigger than 82%
17	0DF6F1	1DF6F1	SOH less than 70%,last 3s	SOH bigger than 72%
18	0DF6F2	1DF6F2	SOH less than 60%,last 3s	SOH bigger than 62%
19	0DF7F0	1DF7F0	Actual power bigger than 1.1*power table+5KW,last 20s	Actual power less than power table +1KW,last 10s
20	0DF7F1	1DF7F1	Actual power bigger than 1.2*power table+5KW,last 20s	Actual power less than 1.1*power table+1KW,last 10s

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
21	0DF7F2	1DF7F2	Actual power bigger than 1.3*power table+5KW,last 20s	Actual power less than 1.2*power table+1KW,last 10s
22	0DF8F0	1DF8F0	Actual power bigger than 1.1*power table,last 20s	Actual power less than power table,last 10s
23	0DF8F1	1DF8F1	Actual power bigger than 1.2*power table,last 20s	Actual power less than 1.1*power table,last 10s
24	0DF8F2	1DF8F2	Actual power bigger than 1.3*power table,last 20s	Actual power less than 1.2*power table,last 10s
25	0DE7F0	1DE7F0	Max cell voltage bigger than 3.67V,last 2s	Cell voltage less than 3.65V,last 2s
26	0DE7F1	1DE7F1	Max cell voltage bigger than 3.7V,last 2s	Cell voltage less than 3.68V,last 2s
27	0DE7F2	1DE7F2	Max cell voltage bigger than 3.75V,last 2s	Cell voltage less than 3.73V,last 2s
28	0DFEF3	1DFEF3	Max cell voltage bigger than 3.8V,last 2s	Reset and cell voltage less than 3.75V,last 2s
29	0DE6F0	1DE6F0	Min cell voltage less than 2.8V,last 2s	Cell voltage bigger than 2.85V,last 2s
30	0DE6F1	1DE6F1	Min cell voltage less than 2.5V,last 2s	Cell voltage bigger than 2.55V,last 2s
31	0DE6F2	1DE6F2	Min cell voltage less than 2.2V,last 2s	Cell voltage bigger than 2.25V,last 2s
32	0DFFF3	DFFF3	Min cell voltage less than 2V,last 2s	charge mode: cell voltage bigger than 2.2V,last 2s discharge mode: Reset
33	072429	172429	Max cell voltage bigger than 4.3V,last 2s or Min cell voltage less than 2V,last 2s	Recovery after shutdown
34	0E00F1	1E00F1	Cell voltage diff bigger than 200mV,last 2s	Cell voltage diff less than 185mV,last 2s

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
35	0E00F2	1E00F2	Cell voltage diff bigger than 350mV,last 2s	Cell voltage diff less than 335mV,last 2s
36	0E01F0	1E01F0	Cell max temp bigger than 55°C,last 2s	Cell temperature less than 53°C,last 2s
37	0E01F1	1E01F1	Cell max temp bigger than 60°C,last 2s	Cell temperature less than 58°C,last 2s
38	0E01F2	1E01F2	Cell max temp bigger than 62°C,last 2s	Cell temperature less than 60°C,last 2s
39	0E01F3	1E01F3	Max cell temperature bigger than 64°C,last 2s	Reset and cell temperature less than 62°C,last 2s
40	0E03F0	1E03F0	Cell temperature diff bigger than 20°C,last 20s	Cell temperature diff less than 15°C,last 20s
41	072529	172529	Max cell temperature bigger than 85°C,last 5s or Min cell temperature less than -35°C,last 5s	Max cell temperature less than 83°C or Min cell temperature more than -28°C
42	0AFBF1	1AFBF1	Pack voltage bigger than 3.7*144,last 2s	Pack voltage less than 3.68*144,last 2s
43	0AFBF2	1AFBF2	Pack voltage bigger than 3.75*144,last 2s	Pack voltage less than 3.73*144,last 2s
44	0AFAF1	1AFAF1	Pack voltage less than 2.5*144,last 2s	Pack voltage bigger than 2.6*144,last 2s
45	0AFAF2	1AFAF2	Pack voltage less than 2.2*144,last 2s	Pack voltage bigger than 2.4*144,last 2s
46	0DF7F3	1DF7F3	Discharging current bigger than 300A,last 2s; Charging current bigger than 100A,last 2s	Reset and the current less than threshold

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
47	0DEA00	1DEA00	1.Pack current and zero current difference >2 A last 1 s 2.|pack current| >500A,last 1s 3.recieve current sensor error indicate flag	1.Pack current and zero current difference less than 1A , last 1s and 2.|pack current| <500A,last 1s 3.not recieve current sensor error indicate flag
48	0AF800	1AF800	Pack total voltage and all cell voltage accumulation diff bigger than 20 V, last 200 ms	Pack total voltage and all cell voltage accumulation diff less than 18V, last 200 ms ◆ System A Pack « Ursache noch in Analyse »
49	0B5000	1B5000	After precharging done,precharge voltage and all cell voltage accumulation diff bigger than 20 V, last 50 ms	After precharging done,precharge voltage and all cell voltage accumulation diff less than 18V, last 50 ms
50	0ADC00	1ADC00		
51	0ADBF3	1ADBF3		
52	0AD900	1AD900		
53	0AE000	1AE000		
54	0ADFF3	1ADFF3		
55	0ADD00	1ADD00		
56	0AE700	1AE700		
57	0AE6F3	1AE6F3		
58	070000	170000		
59	0701F3	1701F3		
60	070200	170200		
61	0703F3	1703F3		
62	0AA2F3	1AA2F3	After BMS control positive relay close,BMS detect the corresponding dry contact is abnormal,last 300ms	Inspection and maintenance

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
63	0AA1F1	1AA1F1	After BMS control positive relay open,BMS detect the corresponding dry contact is abnormal,last 300ms	Inspection and maintenance
64	0AA5F3	1AA5F3	After BMS control negative relay close,BMS detect the corresponding dry contact is abnormal,last 300ms	Inspection and maintenance
65	0AA400	1AA400	After BMS control negative relay open,BMS detect the corresponding dry contact is abnormal,last 300ms	Inspection and maintenance
66	0AE3F3	1AE3F3	After EMS request BMS HV contactor close,precharge relay driver no fault, precharge voltage less than 100 V last 300ms(ensure the Open failur check finished before prechage exits)	Inspection and maintenance
67	0AE2F3	1AE2F3	BMS initialized, the dry contact of Positive relay is normal open,precharge voltage and Pack voltage diff less than 200V, last 300 ms (Before EMS request BMS HV contactor close)	Inspection and maintenance
68	0714F0	1714F0		
69	0715F0	1715F0		
70	073100	173100		
71	073200	173200		
72	0718F3	1718F3		
73	0B0300	1B0300	The current bigger than 5A while cut off load and More than 3000 times	clear by diagnose tool

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
74	0B09F3	1B09F3	Precharging failure 3 times consecutively	Reset
75	0B0AF3	1B0AF3	In precharging,the current bigger than Voltage/Resitance *0.8,precharge voltage<pack voltage,last 100ms	Reset
76	0AA6F0	1AA6F0	Insulation resitance less than 1000Ω/V,last 50s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	Insulation resitance big than 1200Ω/V,last 50s
77	0AA6F1	1AA6F1	Insulation resitance less than 500Ω/V,last 50s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	Insulation resitance big than 500Ω/V,last 50s
78	0AA6F2	1AA6F2	Insulation resitance less than 100Ω/V,last 50s Hint: In a normal insulation cycle,if a unnormal resistance is injected to the AFC,this resitance will be detected whithin 3 insulation detection cycles	reset

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
79	0A0A00	1A0A00	The high voltage interlocking frequency and duty cycle are outside the ±10 interval of the normal value (normal frequency :88 Hz; normal duty cycle :50%),last 300 ms.	Criteria reference: BMS HIS ◆ Die Ursache liegt evtl. an Kontakten der HV Leitungen wenn diese zuvor getrennt oder neu gesteckt wurden. Ein Kontaktierungsfehler ist zuerst auszuschließen. ◆ Beim Stecken der HV Leitungen ist darauf zu achten das die Leitungen wieder richtig eingerastet sind. Zusätzlich die internen Kontakte auf Beschädigung prüfen ◆ Leitung demontieren, prüfen, neu stecken und prüfen ob der Fehler dadurch beseitigt werden konnte.
80	0A0D00	1A0D00		
81	0A0C00	1A0C00		
82	0B4400	1B4400	max temperature>90°C,last 5s	max temperature<85°C,last 5s
83	0B4500	1B4500	Balance circuit unexpected opening	Balanec circuit is normal
84	0B4600	1B4600	Balance circuit unexpected close	Balanec circuit is normal
85	0B5A00	1B5A00		
86	0B39F0	1B39F0		
87	0B3AF3	1B3AF3		

Position	DTC code Message on Backend Side A	DTC code Message on Backend Side B	Failure Criteria (Test Result NOK)	Repair Notes / Action
88	0DD900	1DD900	Internal failure of CMU1	Holds the previous status and Automatically recovers after receiving the messages
89	0DDB00	1DDB00	Internal failure of CMU2	Holds the previous status and Automatically recovers after receiving the messages
90	C00987	D00987	Communication failure of CMU1,OR HCU messages are not received,more than 2s	Holds the previous status and Automatically recovers after receiving the messages
91	C00A87	D00A87	Communication failure of CMU1,OR HCU messages are not received,more than 2s	Holds the previous status and Automatically recovers after receiving the messages
92	0DE900	1DE900		
93	C01287	D01287		
94	070800	170800		
95	070900	170900		
96	071000	171000		
97	071100	171100		
98	073500	173500	1.insulation resistance>1M 2.during the charging process,take a negative terminal voltage U1 after the negative terminal switch is disconnected for 200ms, and compare it with the average negative terminal voltage U2, (U1 / U2)>0.9 3.detect one time per power on cycle	

6.3 BMS Support Information

- ⇒« BMS DTC Code Table » page 172.

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code	Possible Reason	Investigation Direction
1	0563F0	[A]12V back up battery package overvoltage [B] BMU1 failure	[B1] Restart AFC (remotely or manually)
	1563F0	[A]12V back up battery package overvoltage [B] BMU2 failure	[B1] Restart AFC (remotely or manually)
2	0562F0	[A]12V battery package undervoltage [B]harness to 12V battery package failure [C]BMU1 controller failure	[A1]Recharging for the 12V battery [C1]Restart AFC(remotely or manually)
	1562F0	[A]12V battery package undervoltage [B]harness to 12V battery package failure [C]BMU2 controller failure	[A1]Recharging for the 12V battery [C1]Restart AFC(remotely or manually)
3	0B0100	[A] Not used	[A1] Not used
	1B0100	[A] Not used	[A1] Not used
4	0B3C00	[A] Not used	[A1] Not used
	1B3C00	[A] Not used	[A1] Not used
5	0E03F0	[A] Not used	[A1] Not used
	1E03F0	[A] Not used	[A1] Not used
6	064100	[A] Not used	[A1] Not used
	164100	[A] Not used	[A1] Not used
7	0B3BF3	[A] Not used	[A1] Not used
	1B3BF3	[A] Not used	[A1] Not used
8	002000	[A] Not used	[A1] Not used
	102000	[A] Not used	[A1] Not used
9	002100	[A]BMU1 or CMU1 failure	
	102100	[A]BMU2 or CMU2 failure	
10	0B0200	[A]BMU1 or CMU1 failure	[A1]Restart AFC(remotely or manually)
	1B0200	[A]BMU2 or CMU2 failure	[A1]Restart AFC(remotely or manually)
11	C07388	[A]CAN Bus harness cut off	[A1]Reconnect CAN harness between EMS and BMU1.
	D07388	[A]CAN Bus harness cut off	[A1]Reconnect CAN harness between EMS and BMU2.
12	C70000	[A]CAN Bus harness cut off	[A1]Reconnect CAN harness between EMS and BMU1.
	D70000	[A]CAN Bus harness cut off	[A1]Reconnect CAN harness between EMS and BMU2.

Position	DTC code	Possible Reason	Investigation Direction
13	C701F2	[A]Hall sensor failure [B]CAN Bus harness cut off	[B1]Reconnect CAN harness between BMU1 and Hall sensor1.
	D701F2	[A]Hall sensor failure [B]CAN Bus harness cut off	[B1]Reconnect CAN harness between BMU2 and Hall sensor2.
14	0A7DF2	[A]AC power supply failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1A7DF2	[A]AC power supply failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
15	0A7DF3	[A]AC power supply failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1A7DF3	[A]AC power supply failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
16	0DF6F0	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF6F0	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
17	0DF6F1	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF6F1	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
18	0DF6F2	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF6F2	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
19	0DF7F0	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF7F0	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
20	0DF7F1	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF7F1	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
21	0DF7F2	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF7F2	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
22	0DF8F0	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF8F0	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
23	0DF8F1	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF8F1	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
24	0DF8F2	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF8F2	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
25	0DE7F0	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE7F0	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
26	0DE7F1	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE7F1	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
27	0DE7F2	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE7F2	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
28	0DFEF3	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DFEF3	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
29	0DE6F0	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE6F0	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
30	0DE6F1	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE6F1	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
31	0DE6F2	[A] Side A battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DE6F2	[A] Side B battery pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
32	0DFFF3	[A] AC power supply. [B] Side A battery pack.	[A1] Check AC power supply. [B1] Clear DTC [B2] restart AFC(remotely or manually)
	1DFFF3	[A] AC power supply. [B] Side B battery pack.	[A1] Check AC power supply. [B1] Clear DTC [B2] restart AFC(remotely or manually)
33	072429	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	172429	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)
34	0E00F1	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E00F1	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)
35	0E00F2	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E00F2	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
36	0E01F0	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E01F0	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)
37	0E01F1	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E01F1	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)
38	0E01F2	[A] Side A battery pack.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E01F2	[A] Side B battery pack	[A1] Clear DTC [A2] restart AFC(remotely or manually)
39	0E01F3	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E01F3	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
40	0E03F0	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1E03F0	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
41	072529	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	172529	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
42	0AFBF1	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
43	1AFBF2	[A] Battery Pack failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
44	0AFAF1	[A] Side A battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
45	1AFAF2	[A] Side B battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
46	0DF7F3	[A] Side A battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DF7F3	[A] Side B battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
47	0DEA00	[A] Side A battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1DEA00	[A] Side B battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
48	0AF800	[A] Side A battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1AF800	[A] Side B battery pack failure.	[A1] Clear DTC [A2] restart AFC(remotely or manually)
49	0B5000	[A] BMS software failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1B5000	[A] BMS software failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
50	0ADC00	[A] Not used	[A1] Not used
	1ADC00	[A] Not used	[A1] Not used
51	0ADBF3	[A] Not used	[A1] Not used
	1ADBF3	[A] Not used	[A1] Not used
52	0AD900	[A] Not used	[A1] Not used
	1AD900	[A] Not used	[A1] Not used
53	0AE000	[A] Not used	[A1] Not used
	1AE000	[A] Not used	[A1] Not used
54	0ADFF3	[A] Not used	[A1] Not used
	1ADFF3	[A] Not used	[A1] Not used
55	0ADD00	[A] Not used	[A1] Not used
	1ADD00	[A] Not used	[A1] Not used
56	0AE700	[A] Not used	[A1] Not used
	1AE700	[A] Not used	[A1] Not used
57	0AE6F3	[A] Not used	[A1] Not used
	1AE6F3	[A] Not used	[A1] Not used
58	070000	[A] Not used	[A1] Not used
	170000	[A] Not used	[A1] Not used
59	0701F3	[A] Not used	[A1] Not used
	1701F3	[A] Not used	[A1] Not used

Position	DTC code	Possible Reason	Investigation Direction
60	070200	[A] Not used	[A1] Not used
	170200	[A] Not used	[A1] Not used
61	0703F3	[A] Not used	[A1] Not used
	1703F3	[A] Not used	[A1] Not used
62	0AA2F3	[A] The harness at the both sides of relay K13 is loose. [B] relay K13 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K13 is loose. [B1] Check relay K13 status.
	1AA2F3	[A] The harness at the both sides of relay K15 is loose [B] relay K15 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K15 is loose. [B1] Check relay K15 status.
63	0AA1F1	[A] Harness at both sides of relay K13 is short circuited [B] relay K13 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K13 is short circuited [B1] Check relay K13 status
	1AA1F1	[A] Harness at both sides of relay K15 is short circuited [B] relay K15 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K15 is short circuited [B1] Check relay K15 status.
64	0AA5F3	[A] Harness at both sides of relay K14 is loose [B] relay K14 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K14 is loose [B1] Check relay K14 status.
	1AA5F3	[A] Harness at both sides of relay K16 is loose [B] relay K16 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K16 is loose [B1] Check relay K16 status.
65	0AA400	[A] Harness at both sides of relay K14 is short circuited [B] relay K14 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K14 is short circuited [B1] Check relay K14 status.
	1AA400	[A] Harness at both sides of relay K16 is short circuited [B] relay K16 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K16 is short circuited [B1] Check relay K16 status.
66	0AE3F3	[A] Harness at both sides of system A pre-charge relay K19 is loose [B] relay K19 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of system A pre-charge relay K19 is loose [B1] Check Pre-charge relay K19 status.
	1AE3F3	[A] Harness at both sides of system B pre-charge relay K20 is loose [B] relay K20 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of relay K20 is loose [B1] Check relay K20 status.

Position	DTC code	Possible Reason	Investigation Direction
67	0AE2F3	[A] Harness at both sides of system A pre-charge relay K19 is short circuited [B] relay K19 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of system A pre-charge relay K19 is short circuited [B1] Check Pre-charge relay K19 status.
	1AE2F3	[A] Harness at both sides of system B pre-charge relay K20 is short circuited [B] relay K20 failure. [C]BMU failure	[A1] Check whether the harness at the both sides of system B pre-charge relay K20 is short circuited [B1] Check Pre-charge relay K20 status.
68	0714F0	[A] Not used	[A1] Not used
	1714F0	[A] Not used	[A1] Not used
69	0715F0	[A] Not used	[A1] Not used
	1715F0	[A] Not used	[A1] Not used
70	073100	[A] Not used	[A1] Not used
	173100	[A] Not used	[A1] Not used
71	073200	[A] Not used	[A1] Not used
	173200	[A] Not used	[A1] Not used
72	0718F3	[A] Not used	[A1] Not used
	1718F3	[A] Not used	[A1] Not used
73	0B0300	[A]Circuit current decrease too slow	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1B0300	[A]Circuit current decrease too slow	[A1] Clear DTC [A2] restart AFC(remotely or manually)
74	0B09F3	[A] Precharge resistor failure [B] Precharge relay failure	[A1] Check precharge resistor status [B1] Check precharge relay status
	1B09F3	[A] Precharge resistor failure [B] Precharge relay failure	[A1] Check precharge resistor status [B1] Check precharge relay status
75	0B0AF3	[A] Precharge resistor failure	[A1] Check precharge capacitor status
	1B0AF3	[A] Precharge resistor failure	[A1] Check precharge resistor status
76	0AA6F0	[A] Insulation fault existing	[A1]Restart AFC(remotely or manually)
	1AA6F0	[A] Insulation fault existing	[A1]Restart AFC(remotely or manually)

Position	DTC code	Possible Reason	Investigation Direction
77	0AA6F1	[A] Insulation fault existing	[A1]Restart AFC(remotely or manually)
	1AA6F1	[A] Insulation fault existing	[A1]Restart AFC(remotely or manually)
78	0AA6F2	[A] Insulation fault existing	[A1] Check AFC inside have some water or coolant leakage. [A2]Reconnect AC/DC, DC/DC haness.
	1AA6F2	[A] Insulation fault existing	[A1] Check AFC inside have some water or coolant leakage. [A2]Reconnect AC/DC, DC/DC haness.
79	0A0A00	[A]HVIL connector failure	[A1] Reconnect HVIL connector
	1A0A00	[A]HVIL connector failure	[A1] Reconnect HVIL connector
80	0A0D00	[A] Not used	[A1] Not used
	1A0D00	[A] Not used	[A1] Not used
81	0A0C00	[A] Not used	[A1] Not used
	1A0C00	[A] Not used	[A1] Not used
82	0B4400	[A] Balance resistence failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1B4400	[A] Balance resistence failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
83	0B4500	[A] BMU1 and CMU1 controller failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1B4500	[A] BMU2 and CMU2 controller failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
84	0B4600	[A] BMU1 and CMU1 controller failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
	1B4600	[A] BMU2 and CMU2 controller failure	[A1] Clear DTC [A2] restart AFC(remotely or manually)
85	0B5A00	[A] Not used	[A1] Not used
	1B5A00	[A] Not used	[A1] Not used
86	0B39F0	[A] Not used	[A1] Not used
	1B39F0	[A] Not used	[A1] Not used
87	0B3AF3	[A] Not used	[A1] Not used
	1B3AF3	[A] Not used	[A1] Not used
88	0DD900	[A] CMU 1 failure	
	1DD900	[A] CMU 2 failure	

Position	DTC code	Possible Reason	Investigation Direction
89	0DDB00	[A] CMU 1 failure	
	1DDB00	[A] CMU 2 failure	
90	C00987	[A] harness between BMU1 and CMU1 failure [B] CMU1 failure	[A1] Reconnect harness between BMU1 and CMU1
	D00987	[A] harness between BMU2 and CMU2 failure [B] CMU2 failure	[A1] Reconnect harness between BMU2 and CMU2
91	C00A87	[A] harness between BMU1 and CMU1 failure [B] CMU1 failure	[A1] Reconnect harness between BMU1 and CMU1
	D00A87	[A] harness between BMU2 and CMU2 failure [B] CMU2 failure	[A1] Reconnect harness between BMU2 and CMU2
92	0DE900	[A] Not used	[A1] Not used
	1DE900	[A] Not used	[A1] Not used
93	C01287	[A] Not used	[A1] Not used
	D01287	[A] Not used	[A1] Not used
94	070800	[A] Not used	[A1] Not used
	170800	[A] Not used	[A1] Not used
95	070900	[A] Not used	[A1] Not used
	170900	[A] Not used	[A1] Not used
96	071000	[A] Not used	[A1] Not used
	171000	[A] Not used	[A1] Not used
97	071100	[A] Not used	[A1] Not used
	171100	[A] Not used	[A1] Not used
98	073500	[A] PE line disconnection	[A1]Reconnect PE line
	173500	[A] PE line disconnection	[A1]Reconnect PE line

6.4 BMS System Performance

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Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
1	0563F0 / 1563F0	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
2	0562F0 / 1562F0	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
3	0B0100 / 1B0100	1	Warning	1	Warning
4	0B3C00 / 1B3C00	1	Warning	1	Warning
5	0E03F0 / 1E03F0	0	Normal	0	Normal
6	064100 / 164100	1	Warning	1	Warning
7	0B3BF3 / 1B3BF3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
8	002000 / 102000	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
9	002100 / 102100	1	Warning	1	Warning

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
10	0B0200 / 1B0200	1	Warning	1	Warning
11	C07388 / D07388	1	Warning	1	Warning
12	C70000 / D70000	1	Warning	1	Warning
13	C701F2 / D701F2	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
14	0A7DF2 / 1A7DF2	0	Normal	1	Warning
15	0A7DF3 / 1A7DF3	0	Normal	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
16	0DF6F0 / 1DF6F0	1	Warning	1	Warning
17	0DF6F1 / 1DF6F1	1	Warning	1	Warning
18	0DF6F2 / 1DF6F2	1	Warning	1	Warning
19	0DF7F0 / 1DF7F0	0	Normal	1	Warning
20	0DF7F1 / 1DF7F1	0	Normal	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
21	0DF7F2 / 1DF7F2	0	Normal	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
22	0DF8F0 / 1DF8F0	1	Warning	0	Normal
23	0DF8F1 / 1DF8F1	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal
24	0DF8F2 / 1DF8F2	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal
25	0DE7F0 / 1DE7F0	1	Warning	0	Normal
26	0DE7F1 / 1DE7F1	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal
27	0DE7F2 / 1DE7F2	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
28	0DFEF3 / 1DFEF3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	0	Normal
29	0DE6F0 / 1DE6F0	0	Normal	1	Warning
30	0DE6F1 / 1DE6F1	0	Normal	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
31	0DE6F2 / 1DE6F2	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
32	0DFFF3 / DFFF3	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
33	072429 / 172429	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
34	0E00F1 / 1E00F1				
35	0E00F2 / 1E00F2	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
36	0E01F0 / 1E01F0	1	Warning	1	Warning
37	0E01F1 / 1E01F1	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
38	0E01F2 / 1E01F2	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
39	0E01F3 / 1E01F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
40	0E03F0 / 1E03F0	1	Warning	1	Warning

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
41	072529 / 172529	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
42	0AFBF1 / 1AFBF1	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal
43	0AFBF2 / 1AFBF2	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	0	Normal
44	0AFAF1 / 1AFAF1	0	Normal	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
45	0AFAF2 / 1AFAF2	0	Normal	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
46	0DF7F3 / 1DF7F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
47	0DEA00 / 1DEA00	1	Warning	1	Warning
48	0AF800 / 1AF800	1	Warning	1	Warning
49	0B5000 / 1B5000	1	Warning	1	Warning
50	0ADC00 / 1ADC00	1	Warning	1	Warning
51	0ADBF3 / 1ADBF3	1	Warning	1	Warning
52	0AD900 / 1AD900	1	Warning	1	Warning
53	0AE000 / 1AE000	1	Warning	1	Warning
54	0ADFF3 / 1ADFF3	1	Warning	1	Warning
55	0ADD00 / 1ADD00	1	Warning	1	Warning
56	0AE700 / 1AE700	1	Warning	1	Warning
57	0AE6F3 / 1AE6F3	1	Warning	1	Warning
58	070000 / 170000	1	Warning	1	Warning
59	0701F3 / 1701F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
60	070200 / 170200	1	Warning	1	Warning

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
61	0703F3 / 1703F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
62	0AA2F3 / 1AA2F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
63	0AA1F1 / 1AA1F1	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
64	0AA5F3 / 1AA5F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
65	0AA400 / 1AA400	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
66	0AE3F3 / 1AE3F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
67	0AE2F3 / 1AE2F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
68	0714F0 / 1714F0	1	Warning	1	Warning
69	0715F0 / 1715F0	1	Warning	1	Warning
70	073100 / 173100	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
71	073200 / 173200	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
72	0718F3 / 1718F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
73	0B0300 / 1B0300	1	Warning	1	Warning
74	0B09F3 / 1B09F3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
75	0B0AF3 / 1B0AF3	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
76	0AA6F0 / 1AA6F0	1	Warning	1	Warning
77	0AA6F1 / 1AA6F1	4	Derate power1 In charging: Derating the charge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	4	Derate power1 In discharging: Derating the discharge power to 50% within 10s, (K18/K19/K20) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
78	0AA6F2 / 1AA6F2	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.
79	0A0A00 / 1A0A00	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
80	0A0D00 / 1A0D00	1	Warning	1	Warning
81	0A0C00 / 1A0C00	1	Warning	1	Warning
82	0B4400 / 1B4400	1	Warning	1	Warning
83	0B4500 / 1B4500	1	Warning	1	Warning
84	0B4600 / 1B4600	1	Warning	1	Warning
85	0B5A00 / 1B5A00	1	Warning	1	Warning
86	0B39F0 / 1B39F0	1	Warning	1	Warning
87	0B3AF3 / 1B3AF3	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
88	0DD900 / 1DD900	1	Warning	1	Warning
89	0DDB00 / 1DDB00	1	Warning	1	Warning
90	C00987 / D00987	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.
91	C00A87 / D00A87	7	Derate power2 In charging: Derating the charge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the charging power returned to normal.	7	Derate power2 In discharging: Derating the discharge power to 0% within 10s, (K13/K14/K19) / (K15/K16/K20) are not opened; After the fault recovery,the discharging power returned to normal.

Position	DTC code Message on Backend Side A / B	Charge Fault Level	System Action	DisCharge Fault Level	System Action
92	0DE900 / 1DE900	1	Warning	1	Warning
93	C01287 / D01287	1	Warning	1	Warning
94	070800 / 170800	1	Warning	1	Warning
95	070900 / 170900	1	Warning	1	Warning
96	071000 / 171000	1	Warning	1	Warning
97	071100 / 171100	1	Warning	1	Warning
98	073500 / 173500	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.	10	Dereating the charging or discharging power to 0% within 10s, open (K13/K14/K19) / (K15/K16/K20) and the relay are not allowed to be closed this time. If no current fault after next power on, fault cleared.

7 Unité de thermogestion, HCU Internal Code

7.1 HCU Internal Code

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
0	-	No Fault	-	1
1	Thermal manager system inlet temperature sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	1
2	Thermal manager system inlet temperature sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	1
3	Ambient temperature sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	1

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
4	Ambient temperature sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	1
5	CAN Signal "MinBatTmp" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
6	CAN Signal "MaxBatTmp" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
7	CAN Signal "MinBatWaterTmpInt" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
8	CAN Signal "MaxBatWaterTmpOut" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
9	CAN Signal "MinPowerModelWaterTmpIn" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
10	CAN Signal "MaxPowerModelWaterTmpOut" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
11	CAN Signal "HeatSetTmp" is invalid.	[A]Invalid signal value	[A1]check out the EMS or CAN line	1
12	CAN Message "0x1801FAF1" is loss.	[A]EMS CAN message loss	[A1]check out the EMS or CAN line	1
13	Compressor outlet pressure sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	2
14	Compressor outlet pressure sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	2
15	Compressor outlet pressure sensor open circuit or short circuit to power.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	2
16	Compressor outlet temperature sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	2
17	Compressor inlet pressure sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	2

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
18	Compressor inlet pressure sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	2
19	Compressor inlet temperature sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	2
20	Compressor inlet temperature sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	2
21	Thermal manager system outlet temperature sensor short circuit to ground.	[A]sensor short circuit to ground	[A1]check out the line or change the sensor if necessary.	2
22	Thermal manager system outlet temperature sensor open circuit or short circuit to power.	[A]sensor open circuit or short circuit to power	[A1]check out the line or change the sensor if necessary.	2
23	Compressor status is Over Current.	[A]Over Current	[A1]make sure the refrigerant charge is appropriate. [A2]check out whether it is filth blockage. [A3]check out whether lubricating oil is shortage. [A4]check out whethwe compressor power is short circuit.	2
24	Compressor status is Over Voltage.	[A]Over Voltage	[A1]check out the compressor power and line.	2
25	Compressor status is Under Voltage.	[A]Under Voltage	[A1]check out the compressor power and line.	2
26	Compressor status is Standby Over Voltage.	[A]Standby over voltage	[A1]check out the compressor power and line.	2
27	Compressor status is Standby Under Voltage.	[A]Standby under voltage	[A1]check out the compressor power and line.	2

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
28	Compressor status is Communication Error.	[A]Communication Error	[A1]check out the BUS line and compressor driver status.	2
29	Compressor status is Drop Frequency.	[A]Drop Frequency	[A1]make sure the refrigerant charge is appropriate. [A2]check out whether it is filth blockage. [A3]check out whether lubricating oil is shortage. [A4]check out whether compressor power is short circuit.	2
30	Compressor status is Over Peak Current.	[A]Over Peak Current	[A1]make sure the refrigerant charge is appropriate. [A2]check out whether it is filth blockage. [A3]check out whether lubricating oil is shortage. [A4]check out whether compressor power is short circuit.	2
31	EXV1 fault status is Communication Error Active.	[A]Error Active	[A1]check out the EXV power and line.	2
32	EXV1 fault status is Coil Short Circuit.	[A]coil short circuit	[A1]check out the EXV power and line.	2
33	EXV1 fault status is Coil Open Circuit.	[A]coil open circuit	[A1]check out the EXV power and line.	2
34	EXV1 fault status is Over Temperature Shutdown.	[A]over temperature shutdown	[A1]check out the refrigerant temperature near by the EXV.	2
35	EXV1 fault status is Over Voltage.	[A]Over Voltage	[A1]check out the EXV power and line.	2
36	EXV1 fault status is Under Voltage.	[A]Under Voltage	[A1]check out the EXV power and line.	2

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
37	EXV1 fault status is Temperature Warning.	[A]temperature warning	[A1]check out the refrigerant temperature near by the EXV.	2
38	EXV2 fault status is Communication Error Active.	[A]Error Active	[A1]check out the EXV power and line.	2
39	EXV2 fault status is Coil Short Circuit.	[A]coil short circuit	[A1]check out the EXV power and line.	2
40	EXV2 fault status is Coil Open Circuit.	[A]coil open circuit	[A1]check out the EXV power and line.	2
41	EXV2 fault status is Over Temperature Shutdown.	[A]over temperature shutdown	[A1]check out the refrigerant temperature near by the EXV.	2
42	EXV2 fault status is Over Voltage.	[A]Over Voltage	[A1]check out the EXV power and line.	2
43	EXV2 fault status is Under Voltage.	[A]Under Voltage	[A1]check out the EXV power and line.	2
44	EXV2 fault status is Temperature Warning.	[A]temperature warning	[A1]check out the refrigerant temperature near by the EXV.	2
45	PTC status is IGBT Fault.	[A]IGBT fault	[A1]check out PTC driver status.	2
46	PTC status is Over Voltage.	[A]Over Voltage	[A1]check out the PTC power and line.	2
47	PTC status is Under Voltage.	[A]Under Voltage	[A1]check out the PTC power and line.	2
48	PTC status is NTC Broken.	[A]NTC broken	[A1]check out the NTC status.	2
49	PTC status is Dry Heating.	[A]dry heating	[A1]check out the water pump, three-way valve and PTC status.	2
50	PTC status is Over Current.	[A]Over Current	[A1]check out the PTC power and line.	2
51	Refrigerant is shortage.	[A]Cooling system lacks refrigerant.	[A1]Check for leaks [A2]Refill refrigerant	2

HCU internal code	Description	Possible Reason	Investigation Direction	HCU Fault Level
52	Cooling System status is Fault.	[A]The condition of heat transfer is worse, or the high pressure is abnormally high.	[A1]check out the heat-dissipating condition of condenser.	2
53	CAN Message "0x1814FAF1" is loss.	[A]EMS CAN message loss	[A1]check out the EMS or CAN line	2
54	Water pump status is Fault.	[A]water pumb fault	[A1] Check the water pump harness [A2]The water pump is damaged, replace it	3
55	Three-Way Valve1 status is Fault.	[A]three way water valve 1 fault	[A1]Check the connector status of three-way water valve 1 [A2]Replace three-way water valve 1	3
56	Three-Way Valve2 status is Fault.	[A]three way water valve 2 fault	[A1]Check the connector status of three-way water valve 1 [A2] Replace three-way water valve 1	3
57	Lack of coolant fault.	[A] Lack of coolant. [B] HCU fault	[A1]Check the liquid level of the kettle and add coolant [B1] HCU false alarm, replace HCU controller	3

8 Modules de puissance, ECU Internal Code

8.1 ECU Internal Code

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
ACDC20	0x40 Bit6 VinAcFrqErr	Discharge: Input AC frequence out of range [45, 65]Hz for 160ms V2G Input AC frequence out of range [44, 66]Hz for 160ms	[A] Input voltage is abnormal [B] ACDC damaged	[A1] Check input voltage and KM1 state	L2
DCDC60	0x40 Bit7 DCDC VinOvp	Input voltage higher than 910V for 160ms	[A] Input relay error [B] DCDC damaged	[A1] Check input voltage and relay state	L2
ACDC20	0x40 Bit8 UnBalance_3ph	The difference between the three phase AC voltage larger than 15% for 160ms	[A] Input voltage is abnormal [B] ACDC damaged	[A1] Check input voltage and KM1 state	L2
ACDC20	0x40 Bit9 VinOvp	1. for ACDC three phase AC input input voltage higher than 495Vrms for 160ms 2. for ACDC single phase AC input input voltage higher than 285Vrms for 160ms	[A] Input voltage is abnormal [B] ACDC damaged	[A1] Check input voltage and KM1 state	L2
ACDC20	0x40 Bit10 VoutOvp	The output voltage higher than 950V for 500ms	[A] Output voltage is abnormal [B] ACDC damaged	[A1] Check output voltage and KM1 state	L2
DCDC60	0x40 Bit11 21520_Uvp	27524 input drive abnormal or 21520 UVP self-check fail	[A] DCDC damaged		L3
ACDC20	0x40 Bit12 IDCoutOcp	1. for three phase AC input the output current larger than 55A for 40ms 2. for single phase AC input the output current larger than 20A for 40ms	[A] Output current is abnormal [B] ACDC damaged	[A1] Check Ouput current	L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
ACDC20	0x40 Bit13 DCoutShort	The output current larger than 15A and the output voltage lower than 50V for 40us, detected by software in ISR.	[A] Output current is abnormal [B] ACDC damaged	[A1] Check Ouput current	L3
ACDC20	0x40 Bit15 DCoutHardErr	Detect the hardware protect signal(OVOC). Condition 1 OV 960V, detected by hardware comparator Condition 2 OC 60A, detected by hardware comparator.	[A] Output current or voltage is abnormal [B] ACDC damaged	[A1] Check Ouput current and voltage	L2
ACDC20	0x40 Bit16 CANOvertime	No ON/OFF requeset (CAN message) received for 10s	[A] CAN Message is abnormal	[A1] Check CAN4 Message	L2
DCDC60	0x40 Bit16 CANOvertime	No ON/OFF requeset (CAN message) received for 10s	[A] CAN Message is abnormal	[A1] Check CAN4 Message	L2
DCDC60	0x40 Bit17 DCDC multiple circuit failed	At least one multiple circuit of Boost/Buck Stage don't work normal. Condition 1 At least one multiple circuit of Boost Don’t triggerTZ flag 50mS Condition 2 At least one multiple circuit of Buck Don’t triggerTZ flag 50mS Note If current of conductor can't match the peak current reference, the TZ flag will not be triggered.	[A] DCDC damaged		L3

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
ACDC20	0x40 Bit18 LCOcpHard	Detect the hardware protect signal(LC MOS OCP)Inductor current larger than 72.5A.	[A] DCoutShort and Output current is abnormal [B] ACDC damaged	[A1] Check whether an output short circuit fault occurs	L2
ACDC20	0x40 Bit19 AMB_Otp	The inner ambient temperature higher than 110°Cfor 2s	[A] The charging pile is not cooled [B] NTC damaged(Open)	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x40 Bit19 AMB_Otp	The inner ambient temperature higher than 110°C for 2s	[A] The charging pile is not cooled [B] NTC damaged(Open)	[A1] Check the charging pile refrigeration system	L2
ACDC20	0x40 Bit20 PFCOtp	The temperature of PFCmodule higher than 62° for 2s	[A] The charging pile is not cooled [B] NTC in SiC Module damaged	[A1] Check the charging pile refrigeration system	L2
ACDC20	0x40 Bit21 LCOt	The temperature of LCmodule higher than 62° for 2s	[A] The charging pile is not cooled [B] NTC in SiC Module damaged	[A1] Check the charging pile refrigeration system	L2
ACDC20	0x40 Bit26 CoolantOTP	The Coolant temperature is higher than 50℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged(Open)	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x40 Bit26 CoolantOTP	The Coolant temperature is higher than 50℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged(Open)	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x40 Bit28 DCDCoutShort	The output current larger than 151A, and trigger the hardware protection circuit.	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L3
ACDC20	0x40 Bit29 Self-check failed	self-check action lasted 5S but failed	[A] Power Module damaged		L2
DCDC60	0x40 Bit29 Self-check failed	self-check action lasted 5S but failed	[A] Power Module damaged		L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
ACDC20	0x40 Bit30 HV output drain failed	Condition 1 The power on the bleeder resistor exceeds the limit. Condition 2 Time interval for active discharge is too short: for AC20: minimum time interval is 13S. Condition 3 After 1S of discharge , the output voltage still higher than 60V.	[A] The Autoleak Request is too frequent [B] Output Relay is abnormal [C] Power Module damaged	[A1] Check the Autoleak Request message [B1] Check the Output Relay is open before autoleak	L0
DCDC60	0x40 Bit30 HV output drain failed	Condition 1 The power on the bleeder resistor exceeds the limit. Condition 2 Time interval for active discharge is too short: for AC20: minimun time interval is 13S. Condition 3 After 1S of discharge , the output voltage still higher than 60V.	[A] The Autoleak Request is too frequent [B] Output Relay is abnormal [C] Power Module damaged	[A1] Check the Autoleak Request message [B1] Check the Output Relay is open before autoleak	L0
DCDC60	0x40 Bit31 DCDCVoutOVP	Output voltage higher than 950V for 500ms	[A] Output voltage is abnormal [B] DCDC damaged	[A1] Check Ouput voltage	L2
ACDC20	0x41 Bit0 VbulkOvp	for ACDC bulk voltage higher than 950V for 20ms	[A] Input voltage is abnormal [B] Power Module damaged	[A1] Check input voltage and input port resistance	L2
DCDC60	0x41 Bit0 VbulkOvp	for DC6 bulk voltage higher than 1000V for 500ms	[A] Input voltage is abnormal [B] Power Module damaged	[A1] Check input voltage and input port resistance	L2
ACDC20	0x41 Bit1 VbulkUvp	bulk voltage lower than protect value	[A] Input voltage is abnormal [B] Power Module damaged	[A1] Check input voltage and input port resistance	L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
DCDC60	0x41 Bit1 VbulkUvp	bulk voltage lower than protect value	[A] Input voltage is abnormal [B] Power Module damaged	[A1] Check input voltage and input port resistance	L2
DCDC60	0x41 Bit3 Boost1LOtp	the boost1 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit4 Boost2LOtp	the boost2 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit5 Boost3LOtp	the boost3 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit6 Boost4LOtp	the boost4 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit7 Buck1LOtp	the Buck1 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit8 Buck2LOtp	the Buck2 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit9 Buck3LOtp	the Buck3 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
DCDC60	0x41 Bit10 Buck4LOtp	the Buck4 Inductance temperature higher than 130℃ for 2s	[A] The charging pile is not cooled [B] NTC damaged	[A1] Check the charging pile refrigeration system	L2
ACDC20	0x41 Bit12 PVCCOvp	The voltage of aux power higher than 15V for 200us	[A] Power Module damaged		L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
DCDC60	0x41 Bit12 PVCCOvp	The voltage of aux power higher than 15V for 200us	[A] Power Module damaged		L2
ACDC20	0x41 Bit13 PVCCUvp	The voltage of aux power lower than 9V for 200us	[A] Power Module damaged		L2
DCDC60	0x41 Bit13 PVCCUvp	The voltage of aux power lower than 9V for 200us	[A] Power Module damaged		L2
DCDC60	0x41 Bit14 DCOutputOvpHard	Detect the hardware protect signal(output voltage higher than 980V)	[A] Input voltage is abnormal [B] DCDC damaged	[A1] Check Ouput voltage	L2
DCDC60	0x41 Bit15 DCVinDcUvp	Input voltage lower than 240V for 500ms	[A] Input voltage is abnormal [B] DCDC damaged	[A1] Check Input voltage	L2
DCDC60	0x41 Bit16 DCVbulkOVP_Fast	Bulk voltage higher than 1060V, detected by CMPSS block in DSP.	[A] Input voltage is abnormal [B] DCDC damaged	[A1] Check Input voltage	L2
ACDC20	0x41 Bit17 Program check failed	The identifying information (from the EEPROM and the AD port) don't match the Program.	[A] Program upgrade error	[A1] Re-upgrade the program	L3
DCDC60	0x41 Bit17 Program check failed	The identifying information (from the EEPROM and the AD port) don't match the Program.	[A] Program upgrade error	[A1] Re-upgrade the program	L3
DCDC60	0x41 Bit20 DC_InputOvpHard	for DC60 Detect the hardware protect signal(input voltage higher than 980V)	[A] Input voltage is abnormal [B] DCDC damaged	[A1] Check Input voltage	L2
DCDC60	0x41 Bit21 BulkOvpHard	Detect the hardware protection signal(Bulk voltage higher than 1040V)	[A] Input voltage is abnormal [B] DCDC damaged	[A1] Check Input voltage	L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
DCDC60	0x41 Bit22 Buck1OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit23 Buck2OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit24 Buck3OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit25 Buck4OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit26 Boost1OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit27 Boost2OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit28 Boost3OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2
DCDC60	0x41 Bit29 Boost4OCP	Detect the hardware protect signal(90A)	[A] DCoutShort and Output current is abnormal [B] DCDC damaged	[A1] Check whether an output short circuit fault occurs	L2

ECU	Code DTC	Description	Possible Reason	Investigation Direction	Failure level
ACDC20	0x41 Bit30 Precharge failed	AC voltage is normal, and the closing condition of main relay cannot be reached after 15 seconds of bulk precharge (the bus voltage is less than the peak value of input voltage minus 60V)	[A] Input voltage is abnormal [B] ACDC damaged	[A1] Check input voltage and KM1 state or check the temperature(for PTC)	L2
ACDC20	0x41 Bit31 StartFail	The power module can't match the power request, but no other fault occurred.	[A] Power Module damaged		L2
DCDC60	0x41 Bit31 StartFail	The power module can't match the power request, but no other fault occurred.	[A] Power Module damaged		L2

9 Contrôler les composants

9.1 Contrôler les composants

Components	Failure Type	Failure Criteria
Relay K1 - K24	Adhesion failure	The main contact of the component is always closed or The Aux contact of the component is always closed
	Open failure	Supply 12V power for the component The main contact of the component is always opened or The Aux contact of the component is always opened

Components	Failure Type	Failure Criteria
KA1 - KA5	Adhesion failure	The status between PIN3 and PIN5 of the component is always closed or The status between PIN4 and PIN9 of the component is always closed
	Open failure	Supply 12V power for the component The status between PIN3 and PIN5 of the component is always opened or The status between PIN4 and PIN9 of the component is always opened
CB1/CB2/QF1/RCD	Open failure	Manually switch the component on, the Aux contact is always opened

9.2 Contrôler et réinitialiser le compteur de cycles de connexion

Compteur de cycles de connexion servant d'indicateur pour le remplacement des contacts des câbles de recharge

La borne de recharge rapide dispose d'une fonction de surveillance des cycles de connexion de chaque côté qui permet d'obtenir une indication sur le remplacement des contacts de connexion en fonction de la limite de cycle recommandée.

La recommandation actuelle pour le remplacement est de 10 000 cycles de connexion. La surveillance peut passer directement par l'interface de configuration Web de la borne de recharge rapide, ou via une requête de configuration au sein du back-end de l'exploitant sous WGC.ChargeGunPlugCycleCounters.

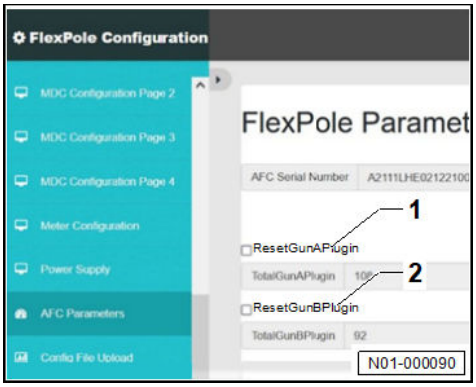
Une liste séparée par des virgules (CSL) avec le nombre de connexions effectuées via les pistolets de recharge constitue le retour envoyé au back-end de l'opérateur.

Ouvrir l'interface de configuration Web ⇒ « Le diagnostic sur place » page 15.

- -Pos. 1- valeur du compteur de cycles pour le pistolet A
- -Pos. 2- valeur du compteur de cycles pour le pistolet B

Les compteurs peuvent être remis à zéro dans l'interface de configuration Web en cas de remplacement des contacts enfichables ou de l'ensemble du pistolet.

Voir ⇒ Manuel de réparation si un remplacement des contacts enfichables ou du câble de recharge s'avère nécessaire.



10 Liste des erreurs statiques DTC

10.1 Liste d'erreur statique DTC

- Si l'une de ces erreurs se manifeste, elle doit être réinitialisée manuellement via la fonction de suppression DTC !

Voir : ⇒ « Effacer le code DTC » page 224.

Erreurs détectées par l'EMS

Remarque : les paramètres ci-dessous ne sont présentés qu'en anglais !

DTC code	DTC description	Fault type	Save in the EEPROM or not	High voltage power on or not
0x0101F1	Serious over voltage fault of battery	Non-recoverable fault	Saved	No
0x0102F1	Serious under voltage fault of battery	Non-recoverable fault	Saved	Yes
0x010600	Low voltage unnecessary load relay normally open fault	Non-recoverable fault	Saved	Yes
0x010900	Lightning arrester failure	Non-recoverable fault	Saved	Yes
0x011000	Normally open fault of lightning breaker	Non-recoverable fault	Saved	Yes
0xC11687	Communication failure of thermal management module of the whole machine	Non-recoverable fault	Saved	Yes
0x0130F1	first level fault of Water in	Non-recoverable fault	Saved	No
0x013100	Door open detection function abnormal	Non-recoverable fault	Saved	No
0x0137F2	Third level fault of the HCU	Non-recoverable fault	Saved	Yes

DTC code	DTC description	Fault type	Save in the EEPROM or not	High voltage power on or not
0x017900	Normally open fault of power supply fuse of thermal management unit	Non-recoverable fault	Saved	Yes
0xC12087	Ems-t-box communication timeout fault (canfd)	Non-recoverable fault	Saved	Yes
0x0249F2	Third level fault of the impact	Non-recoverable fault	Saved	No
0x025000	Fault of rollover	Non-recoverable fault	Saved	No
0x086800	24V DCDC fuse normally open fault	Non-recoverable fault	Saved	Yes
0x083800	Pack A HV shutdown	Non-recoverable fault	Saved	No
0x083900	Pack B HV shutdown	Non-recoverable fault	Saved	No

11 Code DTC porte ouverte

11.1 Description Code DTC, porte ouverte

Contexte de la notification

	Condition de la borne de recharge	Fonctionnement	Réaction	REMARQUE
1	1. Borne de recharge HT off 2. Borne de recharge BT off	1. Ouvrez la porte de la borne de recharge 2. Fermer CB2	1. L'EMS ne signale aucun DTC (0x013100) 2. Erreur d'initialisation de la borne de recharge	
2	1. Borne de recharge off 2. Ouvrez la porte de la borne de recharge 3. Fermer CB2	1. Fermez la porte dans les 15 minutes (@ version 1.1.1.3)	1. L'EMS ne signale aucun DTC (0x013100)	Après 15 minutes, la borne de recharge passe en mode veille @ version 1.1.1.3.
3	1. Borne de recharge en fonctionnement normal (p. ex. veille/ recharge/décharge)	Ouvrir la porte de la borne de recharge pendant 4 s	1. L'EMS signale un DTC (0x013100) 2. Le back-end signale un DTC (0x013100)	

	Condition de la borne de recharge	Fonctionnement	Réaction	REMARQUE
4	1. Borne de recharge en mode FOTA	Ouvrir la porte de la borne de recharge pendant 2 s	1. L'EMS ne signale aucun DTC (0x013100) 2. Actuellement, aucune réaction de la borne de recharge	À l'avenir, la borne de recharge s'éteindra si la porte reste ouverte plus longtemps pendant le mode FOTA.
5	1. Borne de recharge HT off (p. ex. dysfonctionnement) 2. Borne de recharge BT on	Ouvrir la porte de la borne de recharge pendant 4 s	1. L'EMS signale un DTC (0x013100)	

Réaction

Les bornes de recharge dotées d'une date de construction/d'un VIN allant jusqu'à XXXX ne redémarrent pas après une mise à jour du logiciel à la version 1.0 ou plus.

- Si le DTC 0x013100 est signalé, la borne de recharge rapide coupe la haute tension et ne peut pas se décharger ou recharger.
- La zone HT est désactivée tant que l'erreur est présente
- Les voyants d'état « point de recharge A » sont allumés en rouge en continu.
- Statusleuchten « Ladepunkt B » leuchten dauerhaft rot.

Une porte a été ouverte alors que la borne de recharge était allumée et opérationnelle. Le « contacteur de porte S1 ou S2 » s'est déclenché.

L'erreur « Porte ouverte » est une erreur statique et ne peut pas être corrigée par REDÉMARRAGE du système.

Comment supprimer le DTC 0x013100 existant ?

- Le DTC 0x013100 n'est pas automatiquement supprimé après un redémarrage de la borne de recharge.
- Si celui-ci n'est pas manuellement supprimé, le DTC 0x013100 reste toujours présent.

Procédure de suppression de DTC 0x013100

1. Suppression du DTC via l'adaptateur PCAN (dans tous les AFC)

2. Suppression du DTC via le Web (sauf version 1.1.3.1)

Condition

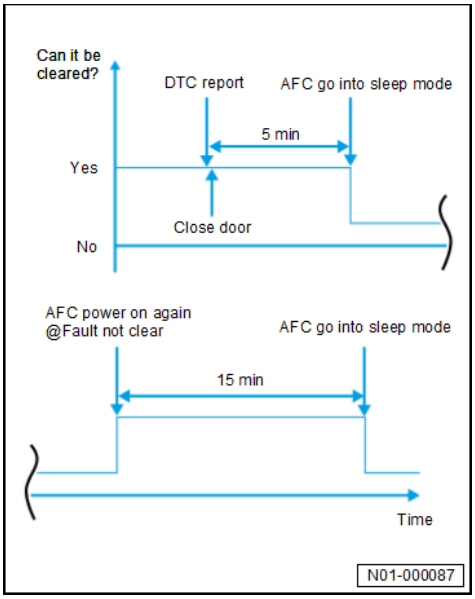
- Voir BOM 3.1.1

Remarque : voir les instructions ⇒ « Effacer le code DTC » page 224.

Quand le DTC 0x013100 peut-il être supprimé ?

1. Dans les 5 minutes suivant le message DTC 0x013100 (un redémarrage est nécessaire pour que la borne de recharge fonctionne correctement).

2. Dans les 15 minutes suivant la remise en marche de la borne de recharge.



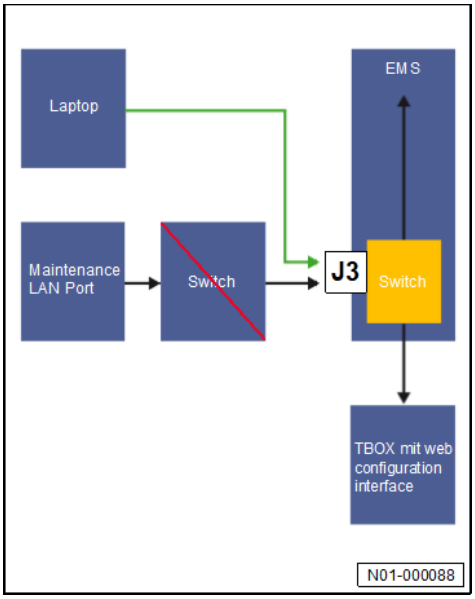
11.2 Effacer le code DTC

À partir de la version logicielle 1.0, certains codes d'erreur sont présents à l'ouverture des portes et doivent être effacés sur place via la commande « clear DTC List ».

Mesure

Dans cet état et en cas de configuration sans commutateur et avec alimentation électrique supplémentaire (« managed switch »), aucune connexion n'est plus possible via l'interface Maintenance Ethernet dans la porte arrière.

Il faut donc une communication via une liaison entre ordinateur portable et la port J3 de l'appareil de commande du système de gestion de l'énergie, EMS.



Quels sont les éléments nécessaires ?

Matériel
Ordinateur portable avec Windows 10 ou similaire (7/11) ◆ pour accéder à l'interface Web
Câble LAN (RJ45)

Procédure/déroulement de la suppression DTC

Condition

- Une porte est/a été déverrouillée en cours de fonctionnement et le contact de porte s'est ouvert. Par conséquent, une entrée d'erreur « DTC Error Code » a été activement enregistrée.

– Débrancher le câble LAN (port J3) -1- de l'appareil de commande EMS -2-.

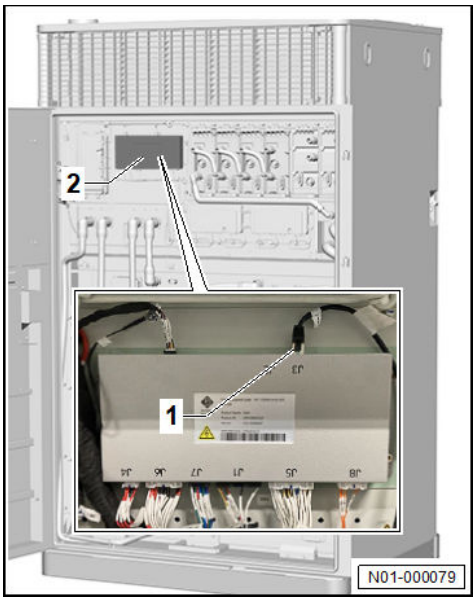
– Relier l'ordinateur/l'ordinateur portable au port J3 -1- de l'appareil de commande EMS -2- via le câble LAN (RJ45).

– Sur l'ordinateur/l'ordinateur portable, ouvrir le site Web avec l'IP LAN « 192.168.1.1/home.index ».

– Aller dans l'onglet « System Control » et appuyer sur le bouton « Clear Non recoverable DTCs ».

– Débrancher le câble LAN (RJ45) de l'ordinateur/de l'ordinateur portable au niveau du port J3 -1- de l'appareil de commande EMS -2-.

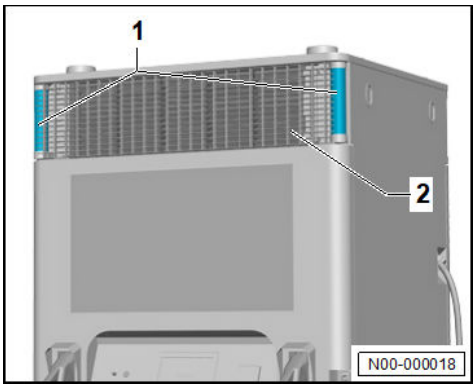
– Brancher le câble LAN interne au port J3 -1- de l'appareil de commande EMS -2-.



– Contrôler à nouveau les « contacteurs de porte S1 ou S2 » et fermer les portes.

Conseil

La borne de recharge rapide -2- redémarre. Dans cet état, les « Indicateurs d'état de la borne de recharge » -1- s'allument « en bleu ». S'il n'y a pas d'entrée portant sur une erreur, la couleur des « Indicateurs d'état de la borne de recharge » -1- passe au « vert ». La borne de recharge rapide -2- est prête à l'emploi et l'accès au back-end devrait fonctionner !



12 Versions logicielles

12.1 Versions logicielles des appareils de commande

- Cette version n'est donnée qu'à titre d'exemple. Les versions actuelles du matériel et des logiciels sont soumises à des mises à jour permanentes, il convient donc de se renseigner sur les dernières versions disponibles.

Component	SW-Version	SW-Version 1.1.1.2	SW-Version 2.0	HW-Version	Param-Version	Remarks
EMS	EMS0E001R450	EMS0AC0R1111				previous version: EMS0E001R432
BMU1	BMU0E021R316	BMUAB0R1002				previous version: 17.06.2021: BMU0E001R310
BMU2	BMU0E021R316	BMUAB0R1002				previous version: 17.06.2021: BMU0E001R310
CCU1	CCU0E001R313	CCU0AA0R1005				previous version: 17.06.2021: CCU0E001R310
CCU2	CCU0E001R313	CCU0AA0R1005				previous version: 17.06.2021: CCU0E001R310
SECC1	SECCA100R031	SECCA100R039				
SECC2	SECCA100R031	SECCA100R039				
CMU1 - A	CMU0E001R034	CMU0E001R034				previous version: 17.06.2021: CMU0E001R032_20210517 CMU0E001R031
CMU2 - A	CMU0E001R034	CMU0E001R034				previous version: 17.06.2021: CMU0E001R032_20210517 CMU0E001R031

Component	SW-Version	SW-Version 1.1.1.2	SW-Version 2.0	HW-Version	Param-Version	Remarks
CMU1 - B	CMU0E001R034	CMU0E001R034				previous version: 17.06.2021: CMU0E001R032_20210517 CMU0E001R031
CMU2 - B	CMU0E001R034	CMU0E001R034				previous version: 17.06.2021: CMU0E001R032_20210517 CMU0E001R031
HCU (TMS)	TMS0D101T323	TMS0D101T327				
TBOX1 (MCU)	MCU0E001R450	MCU1AC0R1002				previous version: 17.06.2021: MCUEHC2S0447R21_20210526
TBOX1 (MPU)	MCU0E001R450	MCU1AB0R1112			MAC address	previous version: 17.06.2021: MPUEHC2S0431R21_20210531
TBOX2 (MCU)	TBO-XE001T037					
TBOX2 (MPU)					MAC address	
Compteur AC	SDM630-Modbus V2				630Mod-Bus_app_aligned210305	Exchanged with new version and flashed
Compteur DC						

Component	SW-Version	SW-Version 1.1.1.2	SW-Version 2.0	HW-Version	Param-Version	Remarks
AC/DC G1	AC20A101R008 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	AC20A101R021				addresses configured previous version: AC20A101R004 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)
AC/DC G2	AC20A101R008 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	AC20A101R021				addresses configured previous version: AC20A101R004 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)
DC/DC G3	DC60A101R009 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	DC60A101R020				addresses configured
DC/DC G3	DC60A101R009 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	DC60A101R020				addresses configured

Component	SW-Version	SW-Version 1.1.1.2	SW-Version 2.0	HW-Version	Param-Version	Remarks
DC/DC G5	DC60A101R009 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	DC60A101R020				addresses configured
DC/DC G6	DC60A101R009 I1E2d0_UpdateBL_ICS_A1d0 (specific APP) J1E3d0_BL_DuPower_A1d2 (BL)	DC60A101R020				addresses configured
CCV	62.13.01					TID: 44262044
HMI	HMI 2.2.8-eon Kiosk-2.7.0	HMI 2.5.8 Kiosk-2.9.1				
Ad					01-tv-d30-v30-eon_global_drive_30Hero.mp4	
DC/DC (HV to LV)						