ADC100
Electric Actuators

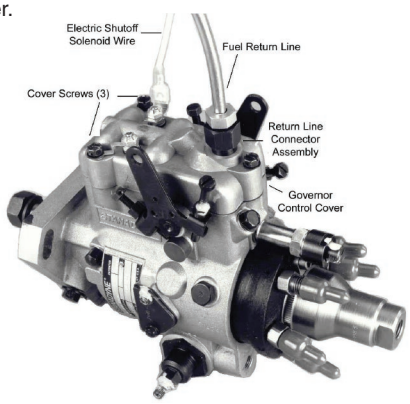
1 SPECIFICATIONS

POWER INPUT	
Operating Voltage (Dedicated Coil)	12 or 24 VDC Available
Normal Operating Current	1.9 A at 12 VDC 1.5 A at 24 VDC
Maximum Current (Continuous)	2.7 A at 12 VDC 1.9 A at 24 VDC
Coil Resistance	3.3 Ohms at 12 VDC 7.8 Ohms at 24 VDC
Direction of Travel	Increasing current causes increased fuel (pushes coupler forward)
ENVIRONMENT	
Operating Temperature Range	-40°F to +180°F (-40°C to +83°C)
Relative Humidity	up to 100%
All Surface Finishes	Fungus Proof and Corrosion Resistant
Agency	RoHS Compliant / CE
PHYSICAL	
Dimensions	See Section 2 OUTLINE DIAGRAM
Weight	2.2 lb (1.0 kg)
Mounting	Directly on STANADYNE DB, JDB, DC, DB2, DB4, DM2, and DM4 Series Pumps
MATING HARDWARE	
Wiring Harness	CH1215
Mating Connector	EC1300
REQUIRED TOOLS	
5-Star Torx Bit - GAC Part# HW13-001	

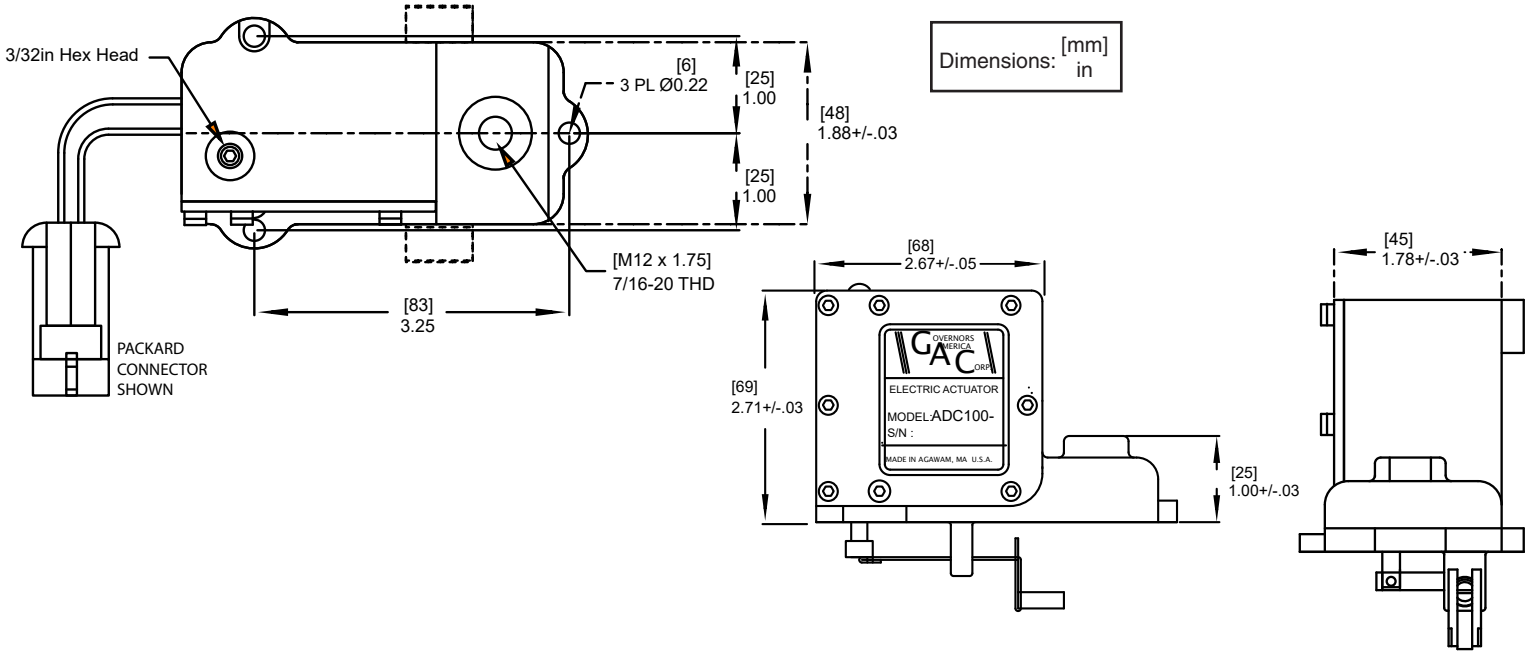
3 PREPARING THE FUEL PUMP

Before the fuel injection pump's Governor Cover can be removed and replaced by the ADC100 Series electric actuator, it is important for the outside of the pump to be clean. If necessary, remove any dirt with a solvent. This will prevent contaminates from entering the pump. The cleaning solvent as well as fuel oil can be collected by placing a suitable container underneath the pump.

1. Remove the fuel return line from the pump's return line connector assembly. Use two wrenches to loosen.
2. Remove the return line connector assembly from the governor control cover using care not to allow dirt to enter the injection pump. Remove and discard the return line connector O-ring. Set aside the return line connector for later installation on the new actuator cover assembly.
3. Disconnect the pump's electric shutoff solenoid wire from its connection point on the pump governor cover. This wire is no longer necessary and can be eliminated at its source.
4. Remove the three (3) governor cover screws. They will be replaced by mounting screws provided with the ADC100 Series actuator.
5. Remove the governor cover assembly with care to ensure that no dirt or debris is allowed to enter the fuel injection pump.
6. Remove the return fuel fitting (housing pressure regulator assembly) from the governor cover.



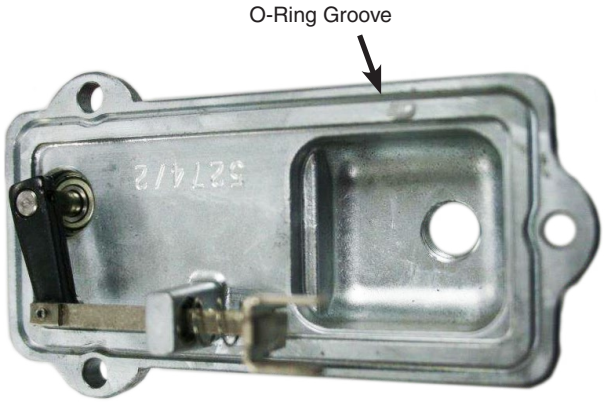
2 OUTLINE DIAGRAM



4 INSTALLING THE ACTUATOR

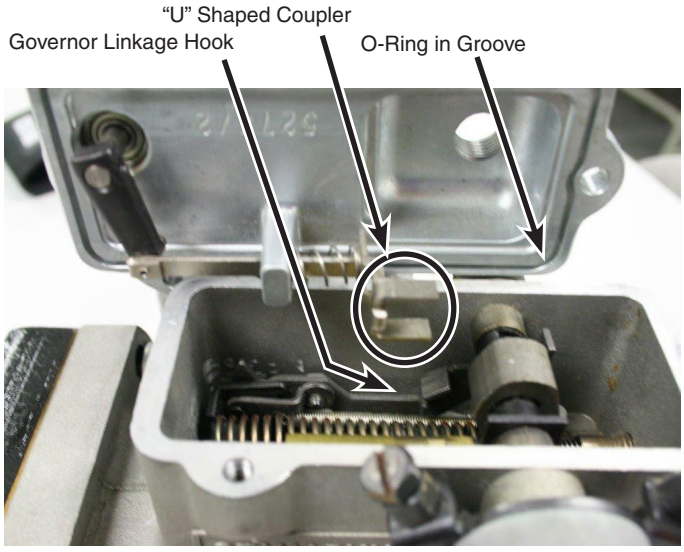
1. Install the return fuel fitting into the ADC100 actuator.
2. Install actuator gasket, GAC part number GA102, into the O-ring groove.

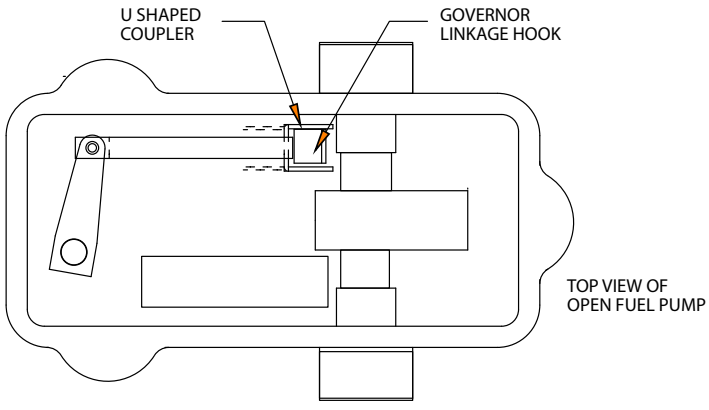
IMPORTANT Discard the metal formed gasket used with the original governor cover assembly. It must not to be used with an ADC100 Series actuator.

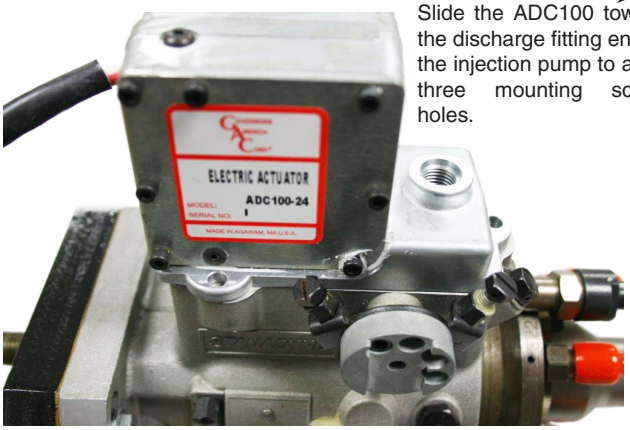


3. Slide the ADC100 electric actuator toward the end of the fuel injection pump until the actuator's "U" shaped coupler engages the pump's Governor Linkage Hook. After engagement has been made, align the mounting holes between the electric actuator and the fuel injection pump.

CAUTION Improper engagement of the actuator to the governor linkage hook could cause an engine over-speed condition.







4. Securely fasten the ADC100 electric actuator to the fuel injection pump, using the (3) screws provided with the actuator. Torque the screws to 21 in-lbs.

5 FUEL INJECTION PUMP SET-UP

NOTE Prior to starting the engine, the pump's shut off lever, throttle lever and mechanical governor must be set, to insure compatibility with the electronic governor.

1. Secure the shut-off lever in the "Run" position, if the Stanadyne pump is equipped with one
2. Lock the throttle lever in the "Full Fuel" position. This setting should be 10 – 12% above the desired governed speed.
3. Adjust the pump's mechanical governor Droop by turning the droop adjusting screw counterclockwise (CCW) until it stops. Then turn it clockwise (CW) two turns. This adjustment will provide compatibility between the mechanical governor and the electronic actuator.
4. Purge the air from the injection pump by removing the 3/32" hex head plug located on top of the actuator. See section 2 Outline Diagrams for hex head location.

6 WIRING

The ADC100 Series is designed to have a dedicated coil for use in the 12 VDC operation and another dedicated coil for 24 VDC operation. These actuators are respectively identified as ADC100-12 and ADC100-24.

The output from the selected GAC speed control unit is connected to the ADC100 Series actuator using the GAC cable harness CH1215 or mating connector kit EC1300. See the specific speed control unit literature for wiring information.

CH1215 includes the pre-wired actuator mating half connector for the ADC100 Series actuator. The actuator connector offers a vibration resistant and environmentally sealed electrical connection.

7 TROUBLESHOOTING

If the governor system fails to operate and the actuator is suspected to be the problem, make the following tests.

Measure Coil Resistance Across Connector	Measure Coil Isolation Terminal to Actuator Housing
3.3 ohms 12 VDC 7.8 ohms 24 VDC	No Continuity

1. Remove the ADC100 from the pump.
2. Move the U-shaped coupler arm back and forth to see if it moves and returns freely without binding. Make sure it is not bent or deformed.
3. Energize the actuator referencing the speed control manual or momentarily connect the actuator to the battery to see if it moves and returns.
4. Following the steps in section 4 INSTALLING THE ACTUATOR, reconnect the ADC100 to the pump.

IMPORTANT If the actuator passes these tests, the problem is elsewhere in the governing system. Refer to the speed control unit troubleshooting publication.