



# Beta Kickstart Kit

## Part# AB-21192 (2-stroke)

Fits: Beta 2018+ RR 2-stroke

**Installation Instructions, read entire instruction page before beginning:**

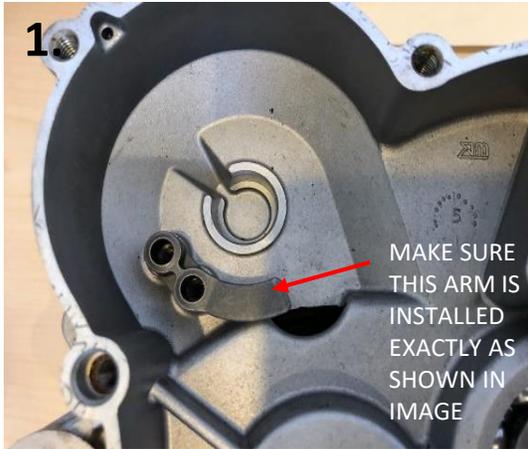
**Tools needed:** 27, 13, 10, & 8mm sockets, clutch holding tool, circlip pliers, channel locks, hammer, chisel, torque wrench, drain pan, Motul gear oil, radiator coolant or a clean container for reusing old coolant.

**Beta Kickstart Kit includes:**

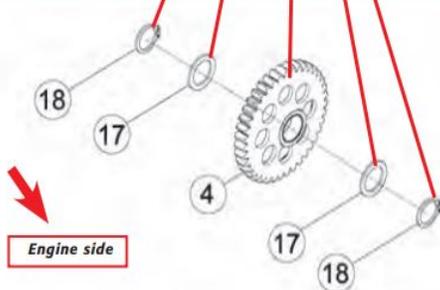
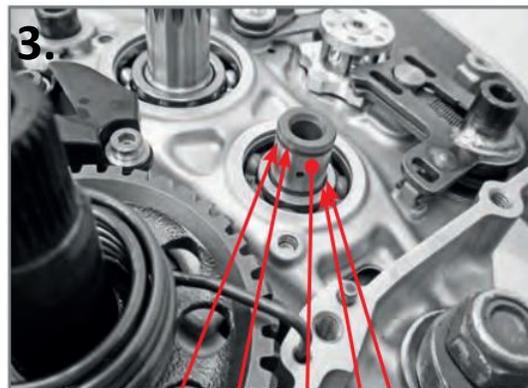
- 1 - Kickstarter Gear mechanism, Ramp, Idler gear, & mounting hardware
- 1 - Inner Clutch Cover Gasket: Part# 029-010310-000 (4-stroke)
- 1 - Clutch tab washer: Part# 029-03004-800 ('18+)

**Note:** Refer to 2017+ RR/RR-S 4-stroke service manual at [www.betausa.com/content/support](http://www.betausa.com/content/support).

1. Use a 13mm wrench to drain transmission oil. Drain coolant by removing the lower water pump cover drain bolt & washer. Drain into a clean container. Remove the other 3 water pump cover bolts.
2. To lower the rear brake pedal, disconnect pedal return spring & press rear caliper into rear brake disc to compress brake fluid.
3. Remove all 9 inner clutch cover bolts & move water pump cover aside.
4. Remove the 3 bolts of the Powervalve actuator cover & the cover. Remove (by pulling left then downwards) the small retaining ring clip that holds the actuator arm in place.
5. Disconnect the actuator arm by pulling it outwards, then remove the actuator cover gasket.
6. Remove the inner clutch cover & gasket, noting the two gasket locating pins & position.
7. Remove the six, 5mm allen bolts ('18+) to remove the clutch cap from the inner hub, along with their washers & springs. Remove the clutch rod's outer thrust bearing.
8. Use a chisel to flatten the 27mm clutch nut washer tabs, Fig 3.
9. With gearbox in neutral, use a clutch holding tool & 27mm wrench to remove the clutch nut. You can also use a rag to hold the clutch pack & an impact wrench to remove the nut.
10. Remove the clutch pack as one unit with inner basket & washer, then remove outer clutch basket.
11. Note: Use gear oil on all rotating parts & component mating surfaces during reassembly.
12. Fig. 1, install inner ramp **B** with its two screws (torque to 10 nm) & its tang pointed in a counter-clockwise direction, so it will mate correctly with the kickstart shaft ramp.
13. Fig. 1, install the pre-assembled kickstart shaft (splined end facing outward) into its housing, inserting & turning its ramp **A** clockwise so it fits under the tang of ramp **B**.
14. Fig. 2, wind kickstart return spring clockwise until its outer arm fits into crankcase hole **C**.
15. Fig. 3, install circlip **18**, then washer **17** onto the Idler shaft, then idler gear **4** with its dished side facing outward & meshed with the kickstart gear, then washer **17**, then circlip **18**.
16. Use kickstart lever to rotate gears & ensure proper meshing & fitment. Remove lever.
17. Re-install outer clutch basket, the washer, then the inner clutch basket with clutch pack.
18. Install 27 mm clutch nut's new tab washer, apply blue Loctite to the output shaft threads.
19. Using a clutch holding tool on the inner basket, install the clutch nut & torque to 120 nm. Use channel lock pliers to bend & flatten the 2 washer tabs onto the clutch nut's sides.
20. Insert clutch rod thrust bearing into clutch nut hole & onto clutch rod, install outer clutch pressure cap, springs, spring retainers & screws. Tighten screws in a cross pattern to 10 nm.
21. Install new inner clutch cover gasket, using the 2 locating pins to position & hold it in place.
22. Remove the kickstart cover plug by first removing its circlip & push it outwards from the cover. Install new kickstart shaft bushing into the hole.
23. Re-install inner clutch cover, turning the water pump impeller to help insert the pump shaft into the impeller.
24. Re-install powervalve cover gasket, re-attach actuator arm, its retaining clip, & the cover.
25. Re-install & lightly tighten the 9 cover mounting screws, install the water pump cover, including copper drain bolt washer.
26. Tighten all mounting screws in a cross pattern to 10nm.
27. Install kickstart lever with its upper lever arm aligned horizontally, install the aluminum bushing & tighten screw. Medium blue Loctite can be used on the screw threads.
28. Re-install gear oil drain plug, refill gear oil to specified level & check per owners manual.
29. Refill engine coolant, start the engine & bleed cooling system per owners manual specs.
30. Restart the warm engine with the kickstarter, ensuring it functions & returns to position.



Insertion of kickstart return spring.



Kickstart device unit coupled to the crankcase.