



# **BoonDocker**

**PERFORMANCE**

**Ski-Doo XM Turbo  
Installation Instructions**



# **BoonDocker XM Turbo**



1. Remove the instrument, side panels & Hood/head light/air box module. Remove the Air box at throttle bodies, seat, tank & body panels.



2. Carefully remove temp sensor for later use in turbo install.



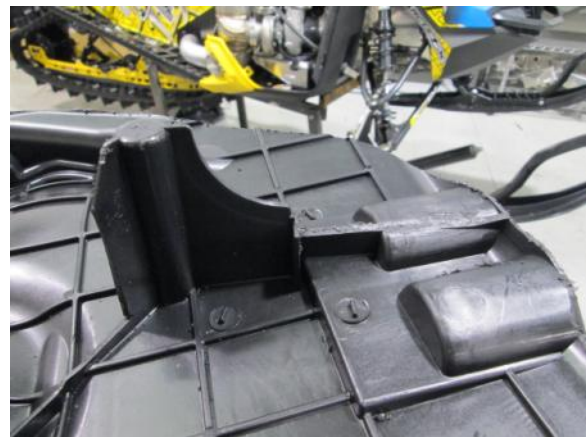
3. Remove the stock muffer/can & EGT. Remove the stock rubber muffer/can isolators from the bottom of the muffer/can.



4. Remove hood from headlight assembly & flip upside down. Break off the weld dots on the air box assembly. Pull apart the air box assembly. Discard the lower air box & white air box tube.

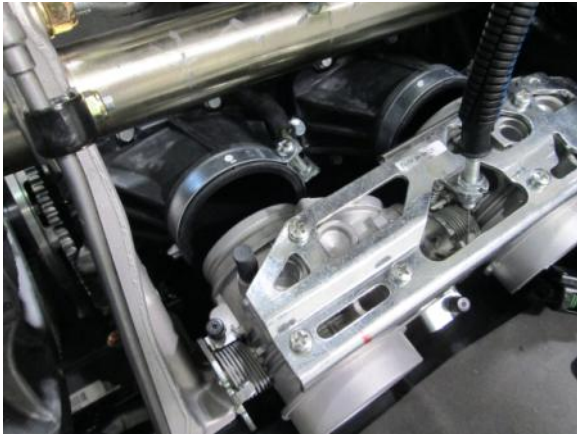


5. Cut the upper air box matching both sides on the cut (as seen in picture).



6. Cut the upper hood/air box assembly as seen in picture for clearance purposes. Cut remaining weld dots off of the upper air box.

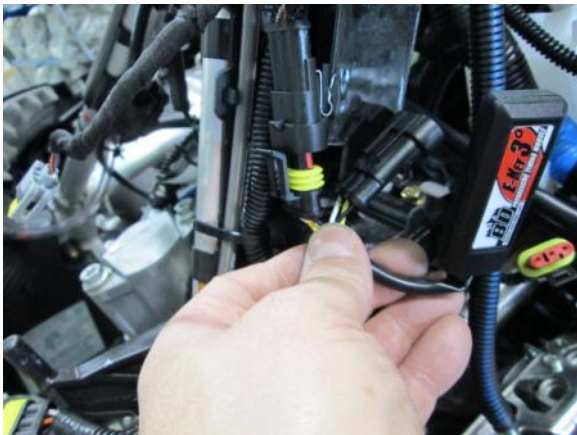
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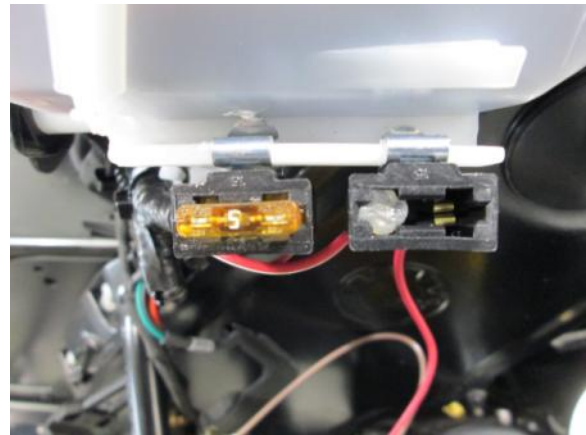
7.Remove the throttle bodies & reed cages from the machine.



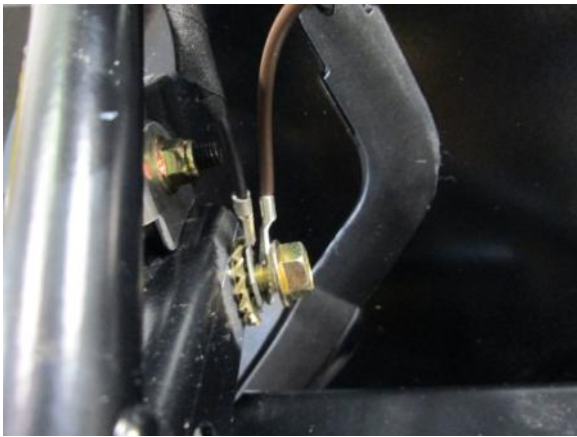
8.Remove & replace the reed pedals. DO NOT mix them up. The new reeds are turbo reeds & there are inner & outer reeds. Reinstall back in engine & install the throttle bodies.



9.Unhook the PTO side coil wire & plug in the green wired plug on the E-Key into the coil (PTO side). Plug in the yellow wired plug of the E-Key to MAG side connector.



10.Install the power adapter cable into the open fuse holder. Install supplied fuse.



11.Hook up the ground right below the fuse holder on the foot rest with the stock bolt. Tighten the bolt so wires are pointed to the top of the chain case.



12.Remove fuse holders from the stock oil tank & install the power harness on the end of the power adapter cable (as seen in picture). NOTE make sure red wire goes to red wire.

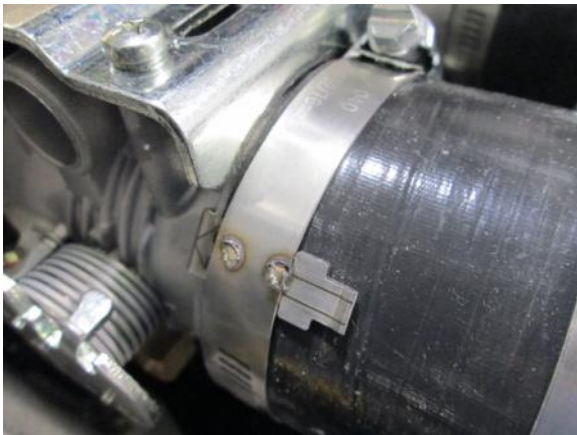
# **BoonDocker XM Turbo**



13. Hook up BoonDocker box throttle position harness to throttle body & to stock harness. Note zip tie off all wires so they don't chaff thru & short to ground.



14. Route wiring through the side below the handle bars as seen in picture down the stock harness to the power adapter harness & throttle position hook ups (as seen in step 13).



15. Install the throttle body tab clamp on the throttle body with the tightening screw at the top of the assembly. Then install the silicone hose & twist clamp in to position & tighten clamp.



16. Install silicone on the left side of the Y tighten the hose clamp. Leave all the other clamps loose for proper alignment & fitting.



17. Install the rest of the air box & Y. NOTE make sure you index the hose clamps so you can access them for tightening after you install the tank. Still leaving the hose clamps slightly loose.



18. Install the injectors in the injector rails. Use assembly lube so you don't tear an o-ring. Route the fuel line as seen in picture. Install the injector & rail assemblies. Don't over tighten bolts.

# **BoonDocker XM Turbo**



19. Zip tie fuel lines so they do not kink & zip tie the wire harnesses securely.



20. Cut and splice into the return fuel line, install T into fuel and tighten clamps. Position for clearance, zip tie & secure.



21. Install the tank & Aluminum tank support member. Make sure you are fitting the Y & air box into position. NOTE this is a tight fit.



22. Remove the clear line on rave valve solenoid & Install check valve. Turn the blow off to down position. Zip tie the hoses on.



23. Cut hose between rave valve & solenoid. Install the check valve inline Turn the check valve down & zip tie lines on. Make sure routing of hoses have good clearance.



24. Install intercooler using 2- hose clamps on cross bar, do not tighten, install fan route power to adapter harness , install 90 degree boost fitting in to inner cooler tank

# **BoonDocker XM Turbo**



25. Install the 3" charge tube. Do not tighten the hose clamps. Try to slide the charge tube closer to the Y end for proper fit & for clearance. Hook up the air temp sensor to the control box. Zip tie.



26. Turn the Y on the PTO side up ward until the clutch cover fits properly. Be sure to test fit the head light assembly for clearing the charge tube setting on the intercooler mount.



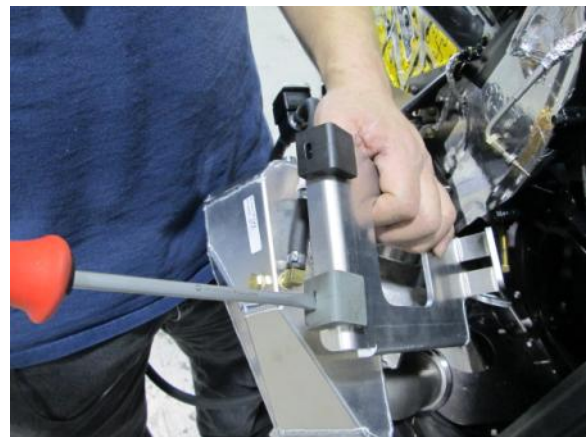
27. Install stock temp sensor & zip tie to wiring as seen in picture. Hook up the boost reference line to the push to connect on the intercooler. Route so it does not chaff.



28. Install heat tape on the Chain case, hoses, the stock EGT cable, oil tank & on the ECM Bracket.



29. Drill the hole for the spring tab with a 3/16" drill bit. NOTE the hole is already in the bulk head you only drill the plastic in the bell pan on the right side.



30. Install the stock can rubber bumpers on the turbo bracket using a flat blade screw driver.

# **BoonDocker XM Turbo**



31. Install the turbo assembly as seen in the picture. Install the spring supplied for turbo bracket tab to bulk head spring tab.



32. Route the inside coolant line under the bulk head bracket as seen. Route up to the back side of coolant bottle.



33. Remove the small coolant line from the back of the coolant bottle. Then route to the coolant hose you just removed. Make sure you secure hose so it won't chaff wires or hose.



34. Route the outside turbo coolant hose under the bulk head cross member to coolant bottle. Clean the belly pan & attach oil pump Velcro. Heat the glue on the Velcro for best adhesion.

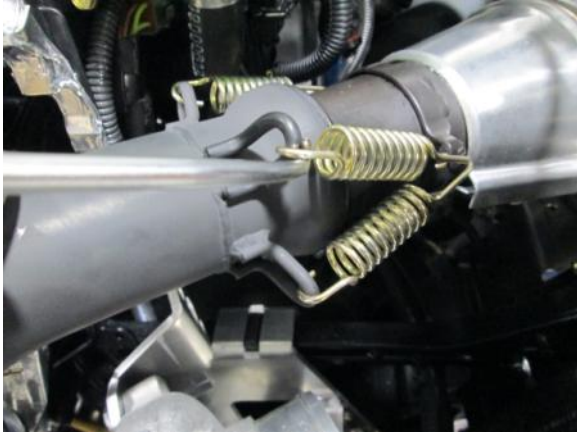


35. Route & hook up power for oil pump to power harness. Route coolant hose to coolant bottle. Zip tie the hose & power harness away from any hazard. Tighten coolant hose clamps.



36. Remove the pipe off of the doughnut apply high temp silicone on both sides of the doughnut & reinstall pipe. Triple up the springs on the pipe as seen in the picture.

# **BoonDocker XM Turbo**



37. Install the inlet apply high temp silicone on both sides of the doughnut. If you have a non-Tial exhaust install the bolts now. If you have a Tial exhaust then install the inlet clamp.



38. Install the waste gate solenoid & plug in. Use the Velcro supplied to mount the solenoid. Use a heat gun to activate the glue on the Velcro. The hose that is headed upward goes to waste gate.



39. TIAL ONLY. Install the waste gate on the inlet. Plug the remaining holes in the Tial waste gate. You will not use the coolant fitting option on this waste gate. As seen in picture.



40. Drill the lower side panel as seen in picture. If you have a Tial the hole will be a 3-1/2" hole saw. If you have a non-Tial drill hole to 2-1/2" hole saw.



41. Install heat tape to the lower inside side panel. Install the 2-1/2" charge tube do not tighten the hose clamps yet.



42. Test fit the head light assembly to the inter-cooler mount bracket. Tighten all the hose clamps into position making sure the head light assembly & charge tubes fit correctly (no rub).



# **BoonDocker XM Turbo**



43. Check for clearance on the clutch cover & on the head light to 3" charge tube. Tighten all air box & charge tube hose clamps.



44. Install Tial muffler. NOTE when installing the muffler rotate the top of the can to the inside of the snow machine for a equal clearance to both the side panel, chain case & stock oil tank.



45. Cut & remove the stock heat tape/insulation from the side panel & install the heat tape as seen in the picture.



46. Cut the shroud just enough to run control box wiring & boost reference line through this area. Zip tie wires as needed to hold wires & boost line.



47. Turn handle bars all the way to the left & install the cold air intake as seen in picture to fit.



48. Install the hose from boost solenoid headed forward to the intercooler.

# **BoonDocker XM Turbo**



49. Install the hose from ECM on to cold air intake box. Install the hose clamp on the cold air bracket & tube. Test fit the head light & tighten the hose clamp. As seen in picture.



50. Install the silicone hose on the cold air intake box tube then install the tube with no hose clamps. Install the hose & clamps between the cold air intake tube & turbo. As seen in picture.



51. Install the head light assembly. Route the control box as seen in picture. Clean the console & install Velcro. Heat the glue on the Velcro to activate.



52. Remove primary clutch. Remove the old ramps. Install roll pins in ramps, index roll pins as seen in picture. (perform clutch adjustments to Ski-Doo specifications)



53. Install the pins in the clutch. At the top of the page is low elevation to 5,000ft clutching. At the bottom is 5000 ft up clutching. Tighten the set screws to cotter pins in both cases.



54. Fill the turbo oil tank with 12oz of TC2 Turbo oil. Remove the oil feed line off of the turbo start the snow machine verify oil flow. Install the oil line & tighten.