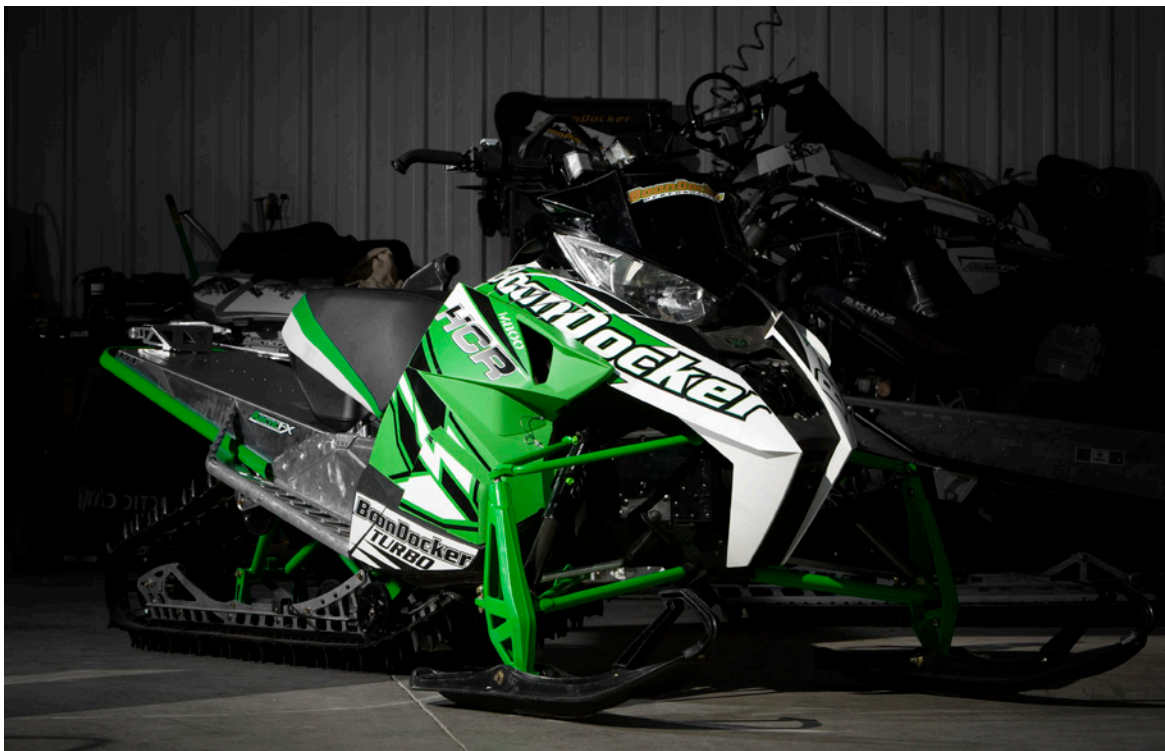




**2012 Arctic Cat M800 ProClimb  
INTERCOOLED  
Turbo Kit Installation Instructions**

To ensure proper break-in of the turbocharger it is required for the first two tanks of fuel to mix 91 octane premium fuel with 110 octane race fuel at a ratio not exceeding 30% race fuel. The 10% Ethanol plug on the machine should also be installed. It is not recommended to run premium pump fuel containing ethanol but if ethanol fuel cannot be avoided a higher ratio of race fuel should be used.



**Tools Required for install**

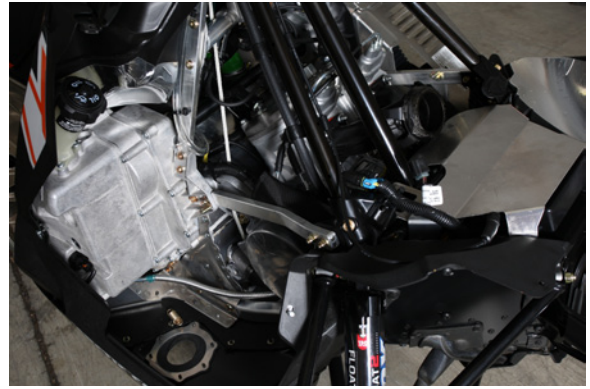
- Spring puller
- 3/16" drill bit and drill
- Philips head screwdriver
- Flat head screwdriver
- 8mm wrench and 8mm socket
- locking hose clamp
- Reciprocating saw
- 5-3/4" hole saw

**Additional information and updates on BoonDocker products may be available on the following sites.**

- [www.boondockers.com](http://www.boondockers.com)
- [www.youtube.com/boondockerusa](http://www.youtube.com/boondockerusa)
- [www.facebook.com/boondockerperformance](http://www.facebook.com/boondockerperformance)



1. Remove the side panels. Remove the six torx bolts holding the hood. Two bolts are located underneath the nose cone, two bolts in the shock tower and two bolts holding the hood to the tank cowl. Un-hook the instrument/headlight harness then remove the hood.



2. Remove the springs holding the expansion chamber to the Y-pipe. Remove the spring holding the expansion chamber to the chassis. Remove the springs holding the silencer to the Y-pipe and chassis. Remove the temperature sensor from the expansion chamber. Remove the expansion chamber and silencer from the machine.



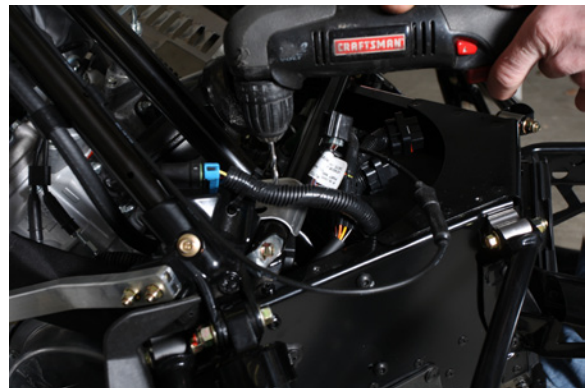
3. Remove the three rubber bumpers from the silencer. These bumpers will be re-used later in the turbo installation.



4. Remove the ECU heatshield by removing the two screws holding it to the chassis.



5. Un-hook the two connectors from the ECU and remove the ECU and cowl as an assembly.



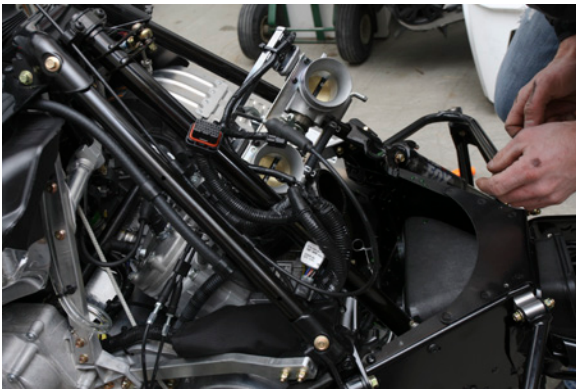
6. Using a 3/16" drill bit drill out the three rivets holding the power valve servo motor to the chassis.



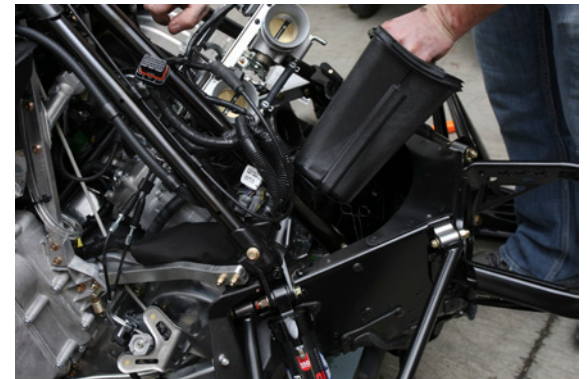
7. Remove the front chassis crossbar by removing the nut and bolt on each end of the crossbar.



8. Loosen the hose clamps on the intake and engine side of the throttle bodies.



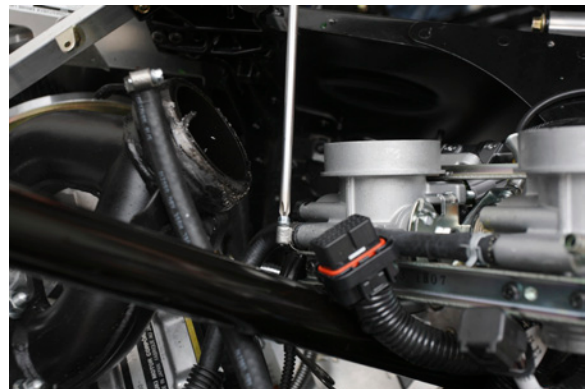
9. Remove the throttle bodies from the boots. Remove the coolant line from the PTO side of the throttle bodies. Detach oil linkage ball fitting and lift the throttle bodies out of place.



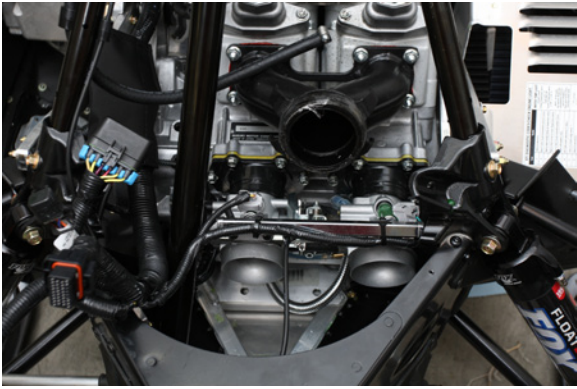
10. Remove the intake from the machine by pulling it through the engine side of the chassis.



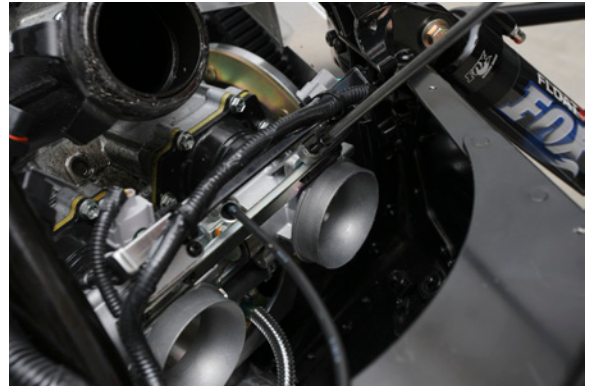
11. Re-route the PTO side throttle body coolant line under the engine on the MAG side of the chassis.



12. Remove the coolant line from the MAG side of the throttle bodies and re-route it under the engine so that it exits in a similar location to the other coolant line. These coolant lines will be re-used to cool the turbocharger later in the installation. No coolant will be ran through the throttle bodies using the turbo kit. The charged air will heat the throttle bodies.



13. Re-attach the oil linkage, install the throttle bodies back on to the engine boots and tighten the clamps.



14. Remove the four screws holding the fuel rail to the throttle bodies. These screws are often tough to remove so be careful to not strip them.



15. Remove the upper side panels from the hood center section by removing the four screws.



16. Remove the four screws on the top side of the center hood section.



17. Flip over the hood and remove the inner nosecone.



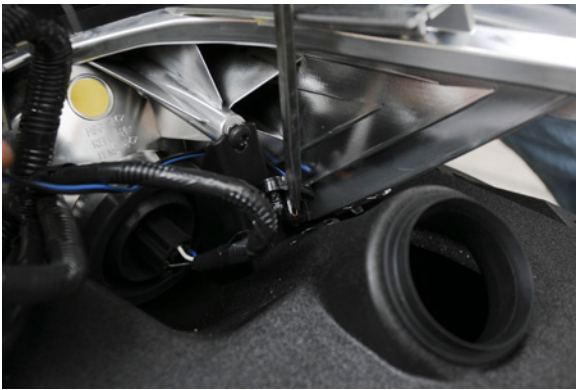
18. Remove the screws holding the metal gauge bracket from the headlight cowl.



19. Slide the headlight cowl forward out of the tabs on the headlight.



20. Un-plug the gauge, key, 12v outlet and remove the cowl from the hood.



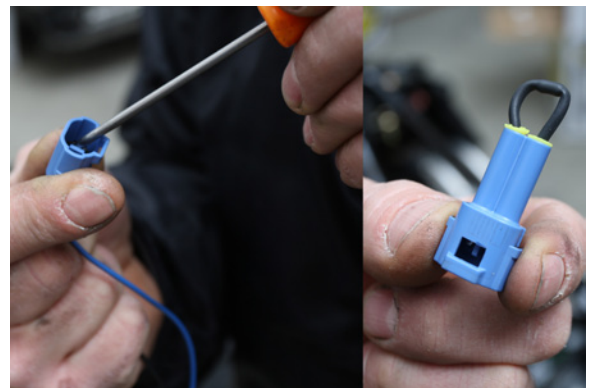
21. Using a flat headed screwdriver pry the factory air temp sensor out of the intake behind the headlight. This sensor will be re-used in the turbo kit so be careful not to damage it during removal.



22. Remove the headlight by removing the four screws holding it to the hood.



23. Remove the two remaining screws on the topside of the hood that hold the airbox together. Flip over the hood and remove the airbox.



24. Remove the connector from stock temp sensor. Install the supplied resistor wire into the stock connector. Plug the connector back into the harness where the stock temp sensor previously plugged in.



25. Install the supplied connector onto the temp sensor.



26. Seal the temp sensor with silicone and attach the temp sensor to the torque tubes using the supplied screws.



27. Install either the 90 push to connect or transducer into the torque tubes. Kits equipped with an EBC come with push to connect and without an EBC a pressure transducer.



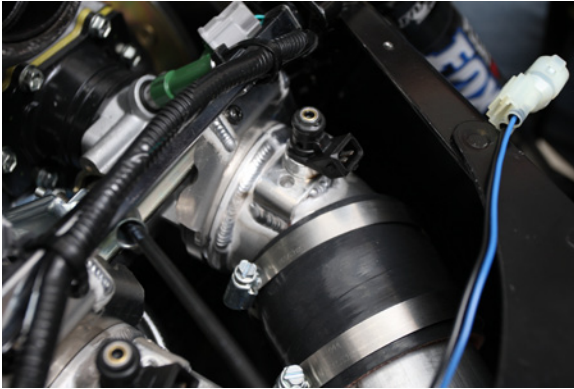
28. Install the torque tube elbow onto the PTO side throttle body.



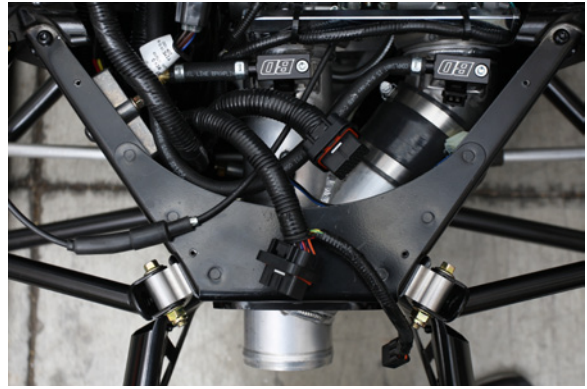
29. Install the keeper flange onto the torque tube and secure it with the stock fasteners to the fuel rail.



30. Move the MAG side torque tube into position and attach it to the PTO side torque tube using the 3"x3" silicone tube. Attach the torque tube to the throttle body and secure using the keeper flange.



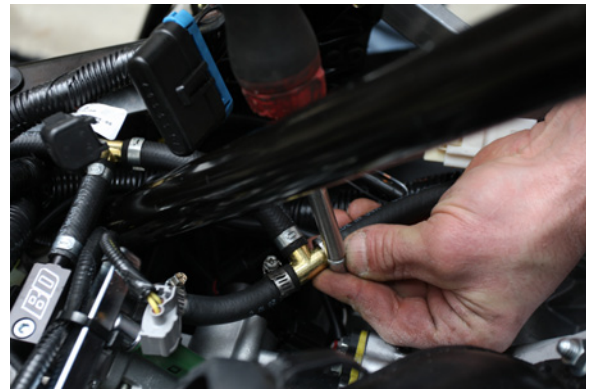
31. Lubricate the upper and lower injector o-rings with assembly lubricant and install the auxillary injectors into the fittings on the torque tubes.



32. Install the fuel rails on to the auxilliary injectors with the fuel line "T" on the mag side of the machine.



33. Locate the stock fuel line feeding the stock fuel rail. Measure approximately 1-1/2" back from the fuel rail and cut the fuel line.



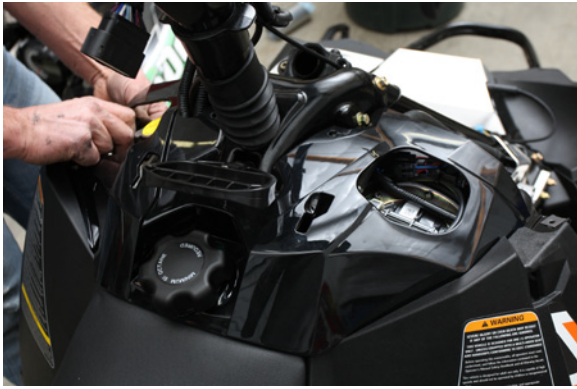
34. Install the barbed "T" fitting from the auxilliary injector fuel lines into the stock fuel line and secure using the supplied hose clamps.



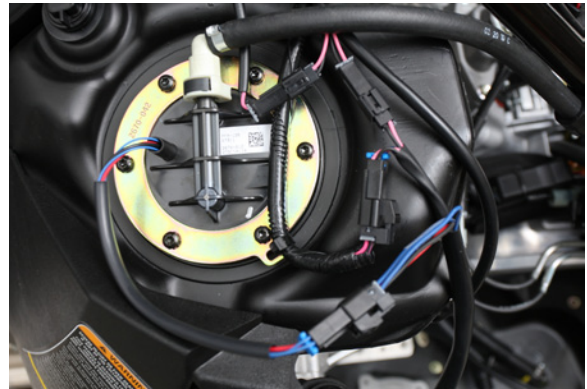
35. Plug the Control Box injector harness into auxillary injectors. Unplug the stock injector connectors and plug the matching CB injector harness connections inline with these connectors. Unplug the Throttle Position Sensor on the MAG end of the throttle-bodies and plug the matching CB injector harness connectors inline.



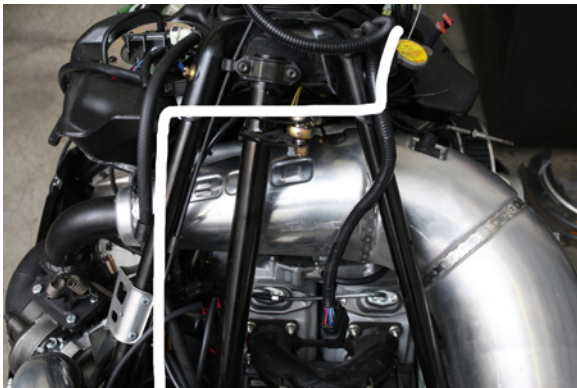
36. Unbolt the stock ground wire next to the chaincase and add the Control Box injector harness ground connector.



37. Remove the upper tank shroud



38. On kits with a fuel booster board, plug the two pin rubber molded connector into the accessory plug located next to the chaincase. Plug the matching connectors on the booster board inline with the fuel pump connector.



39. Route the Control Box Injector and ADA harness along the stock harness on the MAG side of the chassis, underneath and behind the jackshaft, up the frame upright behind the clutch and out of the upper tank cowl. Refer to the wiring diagram included in these instructions to see the connections between the BoonDocker electronics.



40. Locate the stock wiring harness that runs down the inside of the MAG side frame rail. Remove the zip-tie and unplug the three pin molded connector. Plug the supplied power adaptor inline with the connector. Later in the installation the two molded connectors will be used to power the oil pump and on intercooled kits the fan intercooler fan.

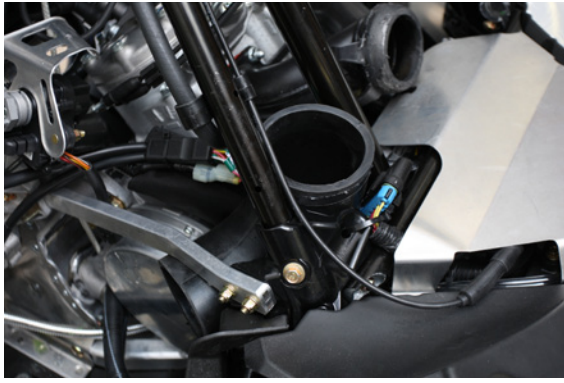


41. If using a BoonDocker E-Key Timing Module plug it inline with the matching stock connectors. The "IN" connectors will be towards the front of the machine and "OUT" towards the rear. Wrap the velcro jacket around the harness connections and secure the E-Key on the outside of the jacket using zip-ties.



42. Grind the upwards edges on the power valve servo motor bracket flat. The bracket will be relocated to the MAG side chassis diagonal, the removal of the upward edges is to prevent rubbing on the throttle cable.





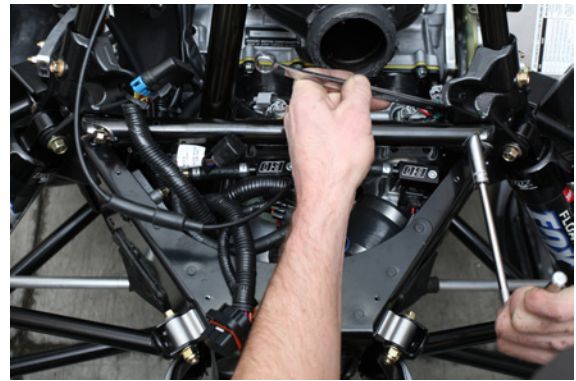
43. To check fitment before relocating the bracket install the 90° rubber elbow.



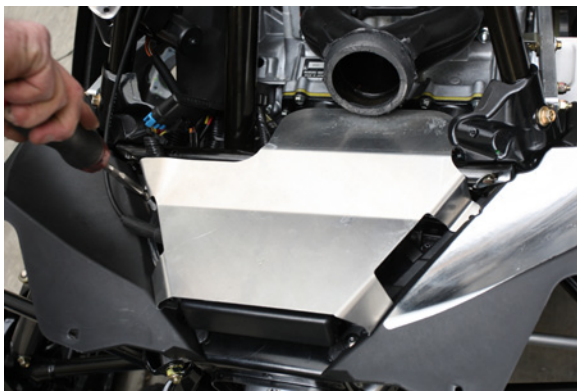
44. With 90° rubber elbow and intake pipe relocate the bracket. Drill three 3/16" holes in the chassis diagonal and secure using the supplied rivets.



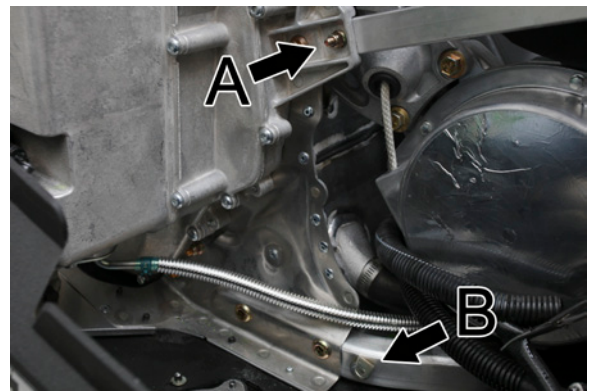
45. Replace the ECU cowl assembly and connect the two harnesses to the ECU.



46. Replace the front chassis crossbar and secure using the stock nuts and bolts.



47. Replace the ECU heatshield and securing using the stock fasteners



48. Unbolt the spring tab from location A. Drill a 3/16" hole in that chassis at location B. Use a washer on the rivet and rivet in place.



49. Install the three rubber bumpers that were previously used on the stock silencer and install them onto the turbo assembly.



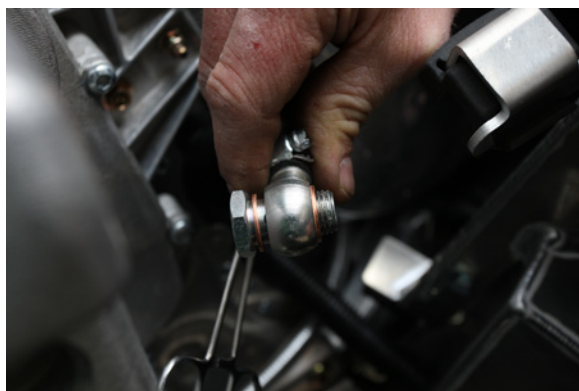
50. Hang the turbo assembly onto the chassis.



51. With the turbo in position cut the longer of the two coolant lines the correct length to connect to the inside turbo coolant fitting and install the supplied fitting.



52. Connect the barbed fitting on the outside turbo coolant line to the other stock coolant line.



53. Install the copper washers on either side of the banjo bolt and bolt to the inside coolant fitting on the turbo.



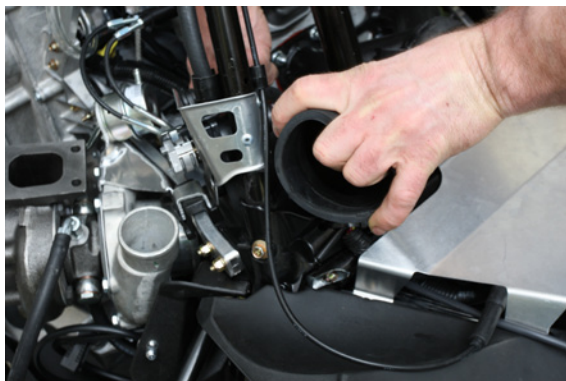
54. Secure the turbo to the chassis using the supplied short exhaust spring hooked to the spring tab on the chassis.



55. Attach the oil pump to the belly pan in front of the turbo using the the attached velcro.



56. Connect the oil pump to the previously installed power adaptor. Remove the intercooler fan extension from the fan and install into the same adaptor.



57. Install the 90 rubber boot underneath the chassis diagonal and onto the turbo inlet. The boot does not need to be clamped to the turbo. The fit is tight so this step will require patience.



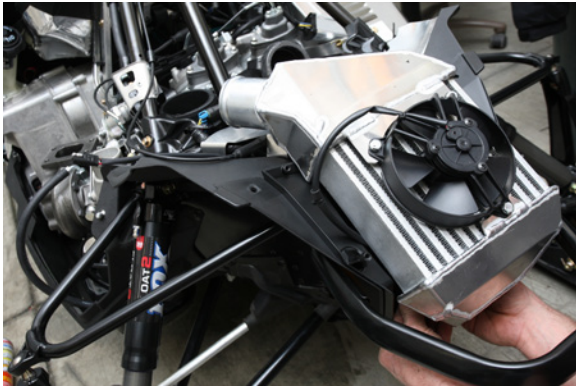
58. Route the boost line from the push to connect fitting on the intercooler underneath the ECU and heat-shield.



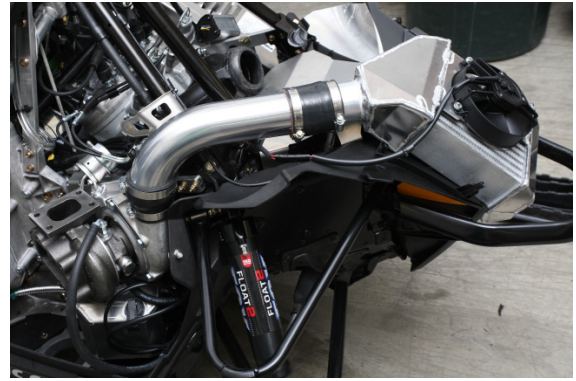
59. Install the 3"x4" silicone tube and clamps onto the torque tubes.



60. Cut the inner airbox so that the torque tubes will clear.



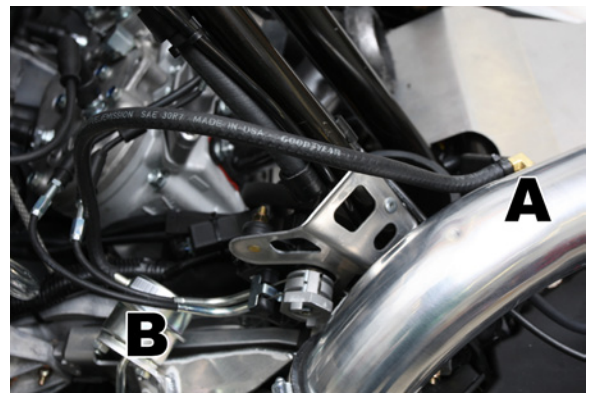
61. Install the inner airbox onto the machine and push the intercooler into the silicone connector. Push the assembly backwards until the holes on the inner airbox line up.



62. Install the silicone reducer onto the turbo charger. Install the silicone connector onto the charge tube and connect to the intercooler. Secure using the supplied clamps.



63. With BoonDocker EBC: Mount the EBC boost solenoid using velcro to the chassis next to the chaincase. Connect the 3/8 rubber hose from the charge tube pito tube (location A) to the top top of the solenoid (B). Connect the second rubber hose from the turbo actuator (C) to the bottom of the solenoid (D). One fitting on the solenoid is a vent and will be left open. Connect the EBC harness to the solenoid. Secure the clear chaincase vent tube with a zip-tie to ensure it is routed away from the pipe.



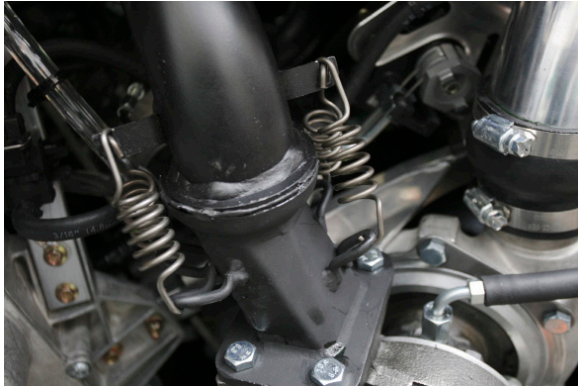
64. Without EBC: Connect the 3/8 rubber hose from the charge tube pito tube (location A) to the turbo actuator (B). Secure the clear chaincase vent tube with a zip-tie to ensure it is routed away from the pipe.



65. Install the supplied gasket and secure the turbo exhaust inlet to the turbocharger using the supplied four nuts and bolts.



66. Install the stock expansion chamber to the Y-pipe and secure using the four supplied high tension springs.



67. Attach the expansion chamber to the turbo exhaust inlet and secure using the stock springs that were previously used to hold the Y-pipe to the expansion chamber.



68. Install the muffer through the stock bellypan hole and add a bead of high temp silicone on the muffer ball connection.



69. Using the five supplied allen head bolts secure the exhaust outlet to the turbo. Secure the exhaust outlet to the muffer using the three supplied short spring.

70. **NOTE:** Due to the complexity and time involved in re-assembling the hood it is recommended to skip to step 83, temporarily attach the stock gauge and start the machine to make sure the turbo ki is installed correctly.



71. Measure 5-1/2" back from the front of edge of the hood and drill a 5-3/4" hole in the hood so that the intercooler fan will clear.



72. Measure 9" back from the front of the stock inner airbox and mark a straight line.



73. Cut the stock airbox in two pieces. The front section of the airbox will be discarded to leave room for the intercooler to clear.



74. Install the turbo air-intake inlet onto the rubber boot. Attach the airbox to the hood and place the hood on the machine and mark where the inner airbox contacts the air inlet.



75. Remove the airbox from the hood and cut a hole in the inner airbox for the turbo air inlet.



76. Attach the airbox to the hood. Check the height of the aluminium air intake tube by looking down the air intake. The turbo intake tube should sit about 1/4" inside the airbox it is important that the tube doesn't touch the hood or intake air will be restricted.



77. Use the supplied heat tape seal the opening on the front side of the airbox.



78. Attach the headlight to the hood using the stock screws.



79. Cut the stock upper tank cowl so that the Boon-docker harnesses can clear. Replace this cowl on the machine.  
80. Finish assembling the hood in the reverse order of how it was disassembled.



81. Install BoonDocker hood scoop by compressing the hood scoop and slotting it underneath the stock painted hood panels.



82. Using the included velcro attach the Control Box and EBC to the metal plate between the stock gauge and steering post.



83. Fill turbo oil tank with included T2C Turbo Oil. BoonDocker recommends T2C Injector Oil for turbo and high performance machines.



84. Remove upper oil line to verify oil is flowing to the turbo. Re-install line and tighten with 9/16" wrench.



85. Install included primary clutch spring and weights



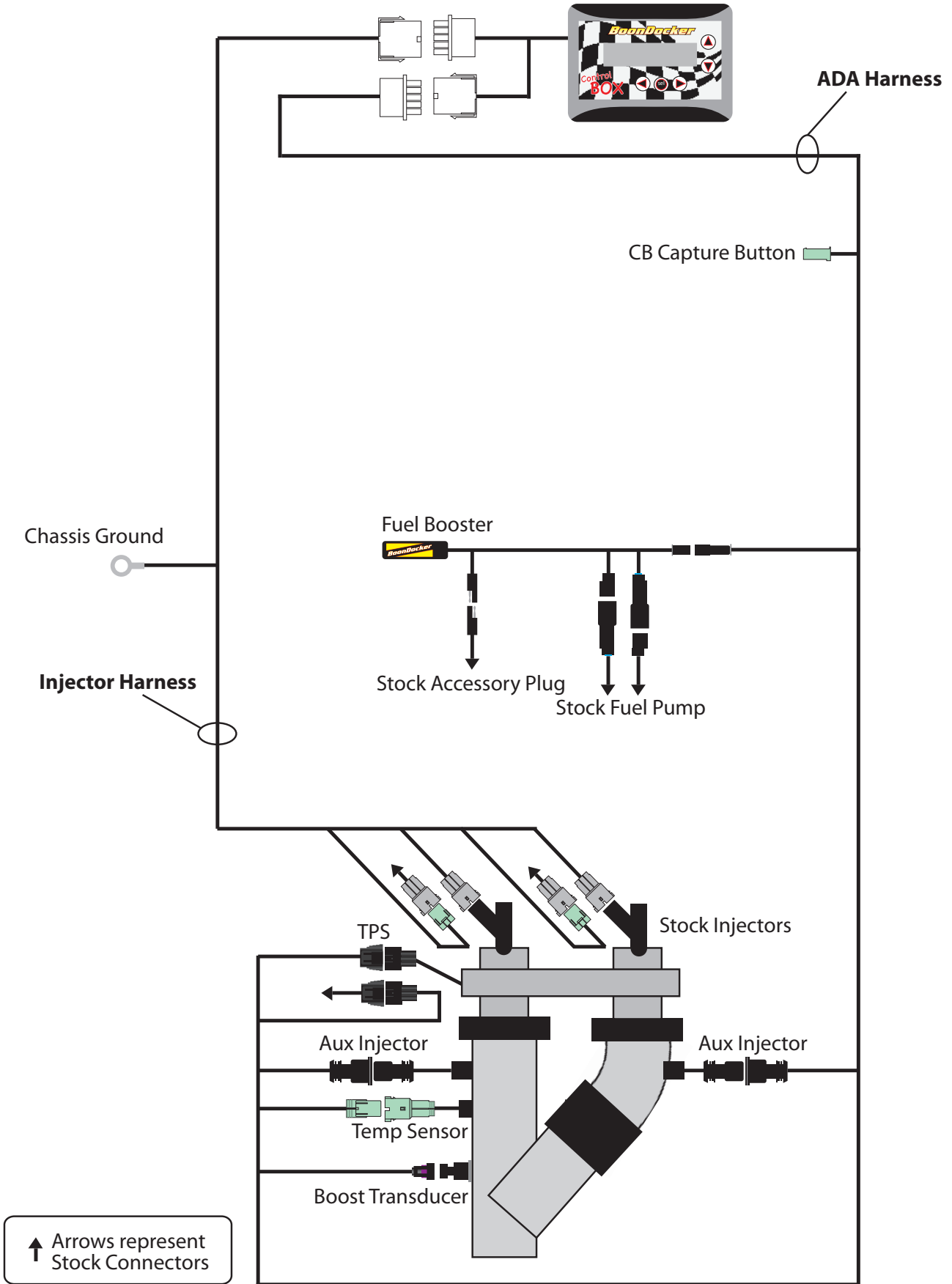
86. It is recommended to change the turbo oil and filter every 300 miles or when the oil becomes discolored. BoonDocker offers a Turbo Oil Service Kit that includes new oil, filter and clamps.

**Control Box Starting Numbers**

Before riding it is recommended to verify that the numbers in the Control Box match these starting numbers.

4300	00	00	00	A=-05	Extra	-02	-05	-0
5100	00	00	05	B=70				
5900	11	13	15	C=05				
6700	12	16	19	D=09				
7500	16	17	20	E=02				
8200	10	22	26	OS=40				
8500	00	23	31	CR=21				

WIRING DIAGRAM - Control Box with Fuel Booster Board





WIRING DIAGRAM - Control Box with EBC and Fuel Booster Board

