



BoonDocker

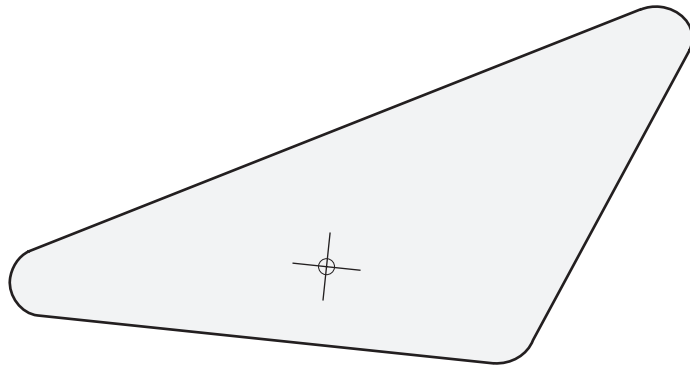
P E R F O R M A N C E

2011-13 Polaris RMK Turbo
Installation Instructions



DEEPS SNOW EXHAUST TUNNEL HOLE TEMPLATE

Cut out and use to find hole center



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1. Remove side panels, hood, seat, fuel tank, and muffler. Save exhaust springs and rubber muffler mounts for turbo install.



2. Remove stock air box, remove fuel filter and fuel line bracket. Sand back surface flat for mounting.



3. Remove factory TBAP sensor from stock air box and tip tie to the over structure.



4. Remove the stock oil tank.

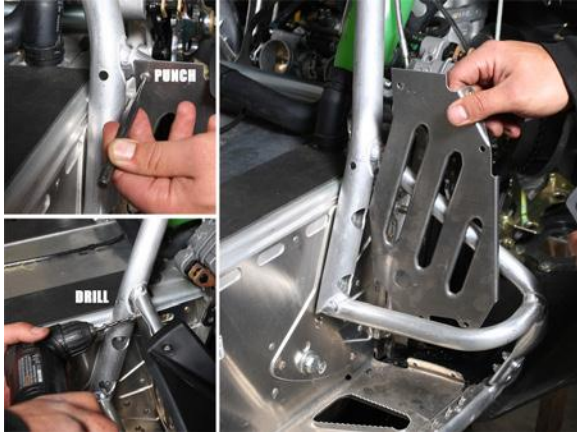


5. With ECU in place, hold the sanded fuel filter bracket in place on the back side of clutch cover to ensure proper fit. Drill a 1/4ö hole in the clutch cover tab for fuel filter bracket mounting.



6. Snap the fuel filter and fuel line into the mounting bracket and secure to clutch cover using the 1/4ö bolt and lock nut. Reinstall the oil tank.

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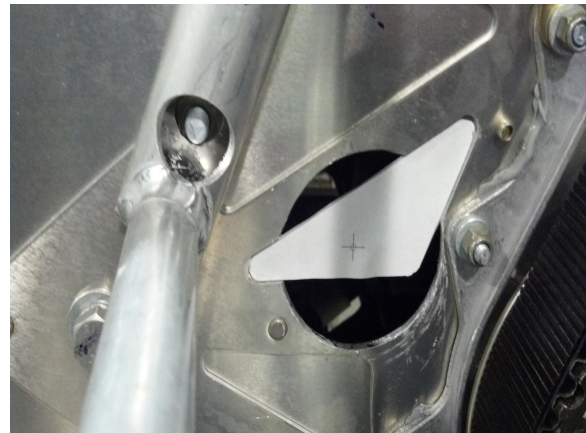
7. Use a punch to remove the steel center of each rivet then drill out the factory rivets and remove stock kick plate



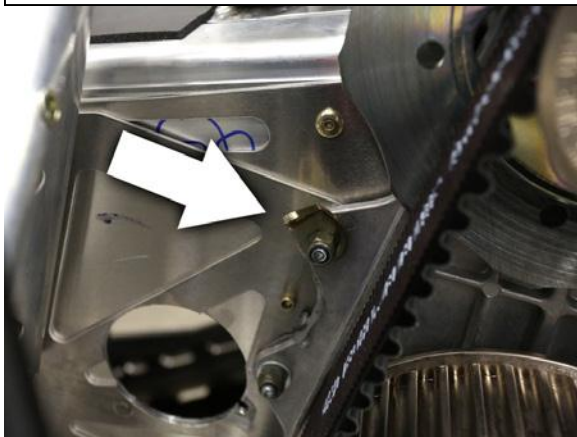
8. Remove the factory exhaust deflector and rubber exhaust seal.



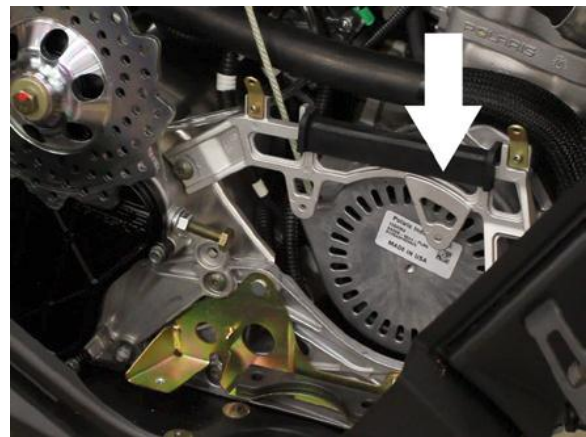
9. Install the aluminum exhaust hole block off plate using 3 large head steel rivets, **Note:** install rivets facing down as shown



10. Use attached template to locate muffler hole. If installing standard internal waste gate muffler drill 2 1/4" hole. If installing **TIAL external** waste gate stainless steel upgraded muffler **DRILL** 2 1/2" hole.



11. Install spring tab using factory bolt as shown.

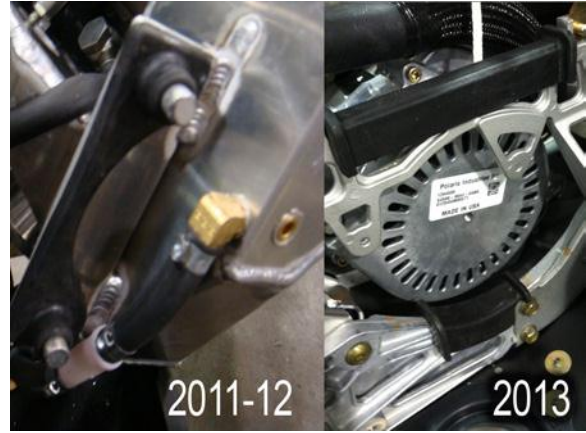


12. Using a pair of pliers break off chassis tab in the image and grind to match the stock contoured surface.

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13. Remove the Velcro from the turbo oil pump, clean and warm the bulkhead surface and attach Velcro as shown.



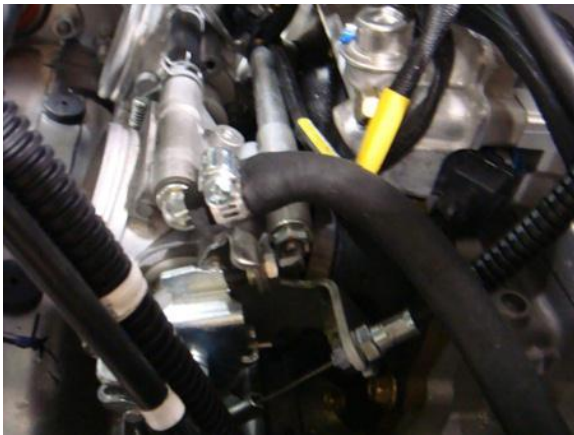
14. Attach the rubber exhaust mounts to turbo oil tank as shown . **Note:** 2011-12ø are different than 2013ø



15. Hang the turbo assembly in place using the stock muffler mounting locations, make sure turbo sits down on rubber mounts and secure oil pump to Velcro. Check oil line routing.



16. Lower coolant level in bottle, remove throttle body coolant line. Route inside turbo coolant line to coolant bottle. Proper routing will avoid pull rope, and sharp edges



17. Route outside coolant line to throttle bodies and secure using supplied hose clamps.
(Stainless TIAL Performance exhaust install proceed to step #25 Kick plate installation)



18. Install exhaust outlet to turbo using 5 black socket head bolts. Run a bead of silicone around muffler flange to ensure seal , Install muffler using supplied springs.

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19. Remove pipe and exhaust donut. Silicone both sides of donut to ensure proper seal to Y-pipe and Pipe.



20. Spring pipe to Y-pipe using stock and supplied springs, double up springs on all spring tabs, this will prevent a boost leak. (Note: if sled is not building proper boost check donuts for seal)



21. Remove small exhaust donut and run a bead of silicone on inside and seal to the end of the pipe.



22. Run a bead of silicone on the bell of the turbo inlet pipe.



23. Install turbo flange gasket between turbo and inlet and bolt in place using the 4 supplied bolts and top lock nuts.



24. Spring inlet into place using the 4 long exhaust springs. Install springs long side towards pipe so springs do not touch.

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25. Install foot rest kick plate. (Tial install starts here, non Tial skip to step 38). (Note: install kick plate on Tial performance upgrade at THIS time BEFORE installing muffler, only install the Two bottom rivets on running board at this time)



26. Remove the stock pipe and exhaust donut, run a bead of silicone around inside and reinstall on Y-pipe, Note: make sure to align notches on Y-pipe to donut



27. Run a bead of silicone on the inside of the flange on the exhaust pipe.



28. Install springs from pipe to Y-pipe 2-springs on side spring tabs and 3-springs on top spring tab.

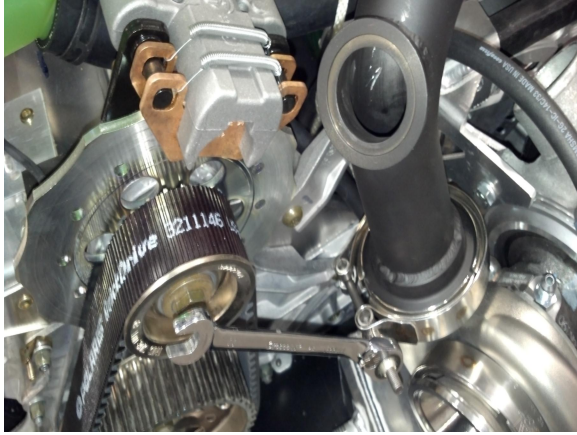


29. Run a bead of silicone on inside of the small exhaust donut and install on pipe



30. Run a bead of silicone on inside bell of turbo inlet pipe.

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31. Install turbo inlet and v-band clamp do not tighten all the way, make sure it is properly aligned, seated and snug v-band clamp.



32. Install stainless muffer into tunnel and attach to turbo using v-band clamp make sure to properly align, seat, snug v-band do not tighten all the way.



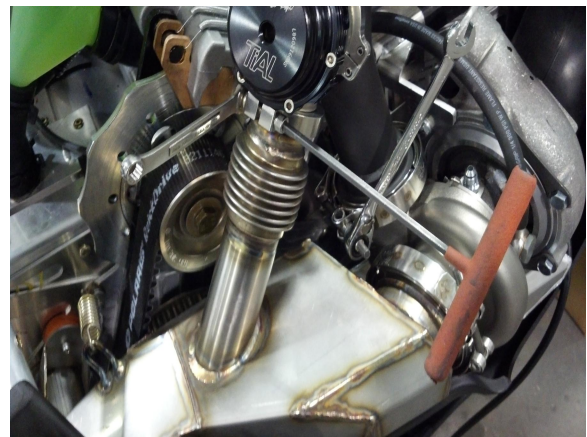
33. Install Tial external waste gate, rotate turbo inlet and muffer for proper alignment using supplied clamps snug waste gate into place do not tighten yet.



34. Spring turbo inlet into place using the 4 long gold exhaust springs.

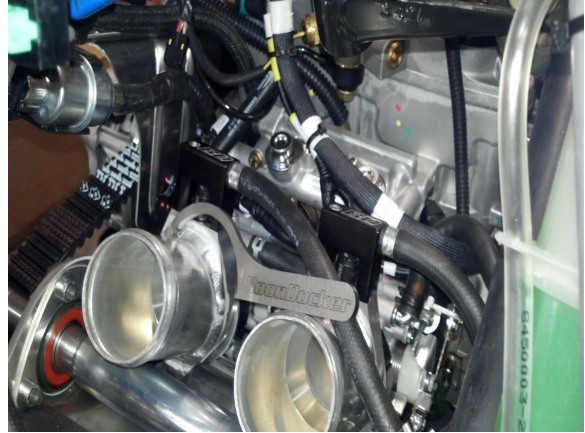


35. Spring muffer into place using short exhaust spring. (At this time finish riveting the kick plat in place, use inside rivet to adjust distance between muffer and kick plate)



36. Make sure there is no binding in exhaust connections and the are no gaps between V-band connections (NOTE: gaps will not close by tightening.) Tighten all V-band and waste gate clamps

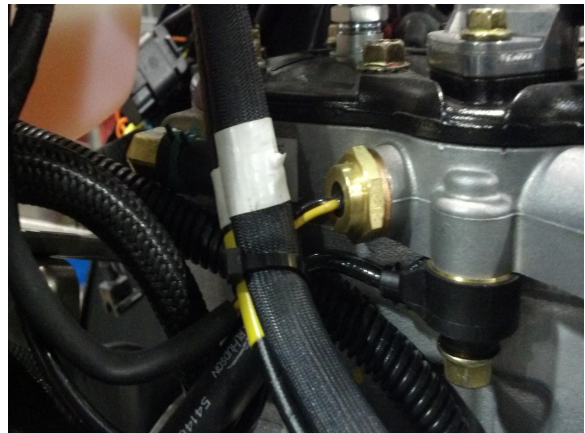
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38. Install throttle body adapters, make sure o-ring is in throttle body groves tighten using supplied spanner wrench (NOTE: tighten until compression rings bottom ,do not over tighten)



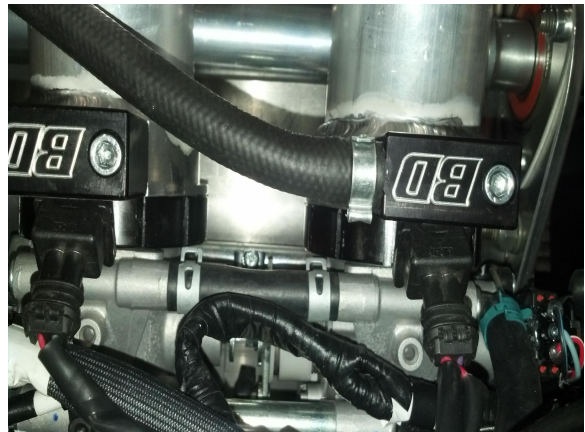
39.Route fuel line from auxiliary injectors over to fuel line bracket. Cut and splice into the stock return fuel line behind the bracket, (NOTE: splice into the line that does NOT have the inline fuel filter.)



40. loosen DET sensor bolt to rotate the DET sensor as shown. Retighten DET sensor bolt, torque to 11-12 ft lbs. Route wiring and zip tie to throttle body coolant line.

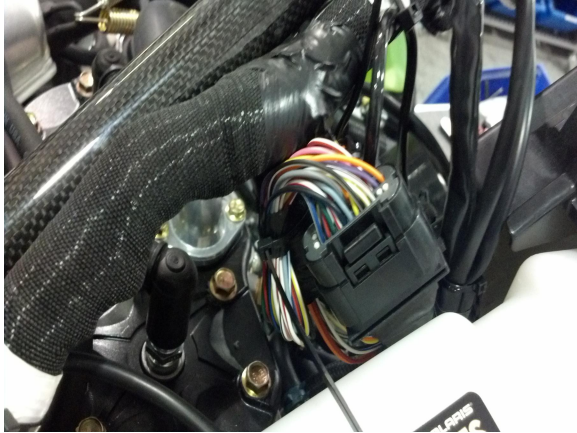


41. Unplug the lower multi-pin connector from the ECU, (located on backside of oil tank) Plug the Boondocker control box in to ECU and stock ECU harness.

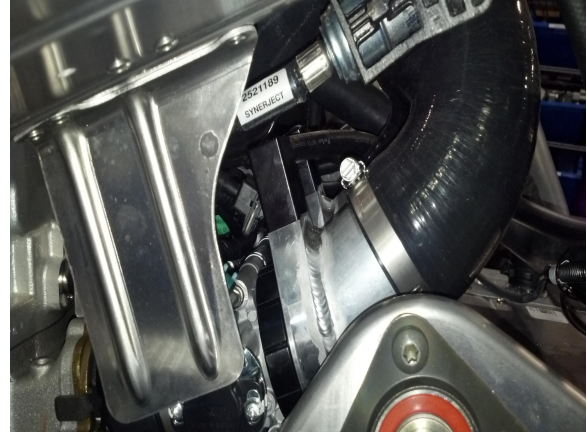


42. Route the Auxiliary injector connectors to throttle body adapters and plug into Boondocker injectors on fuel rails. Secure with zip ties

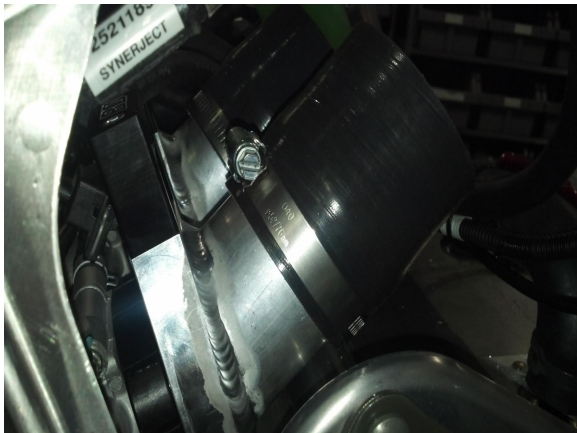
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43. Zip tie factory ECU plug so there is proper clearance with out wire chaffing or rubbing.



44. Install Torque building silicone air box, make sure not to slide on to far for proper jackshaft clearance. Tighten hose clamps.
NOTE: if installing inner-cooler see next step.

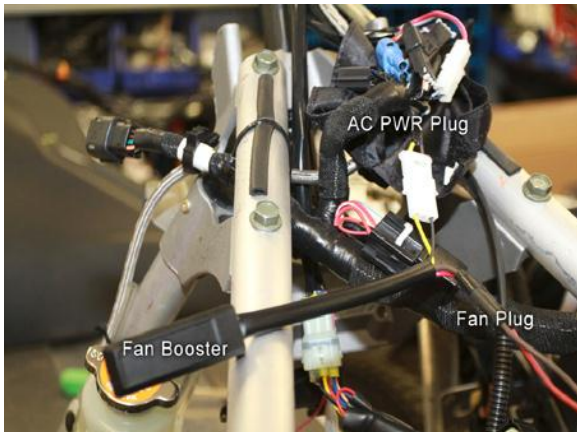


45. Install silicone hose onto throttle body adapters make sure to have proper jackshaft clearance

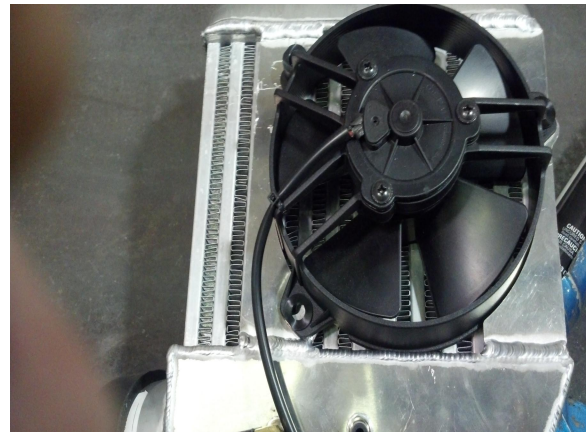
IF NOT installing inner-cooler go to step#49



46. Install Torque building inner-cooler, (Tech tip, moving steering post may make install easier.) Adjust for clearance from cylinder head, electrical wiring, fuel filter, fan, and chassis before tightening.



47. Locate the A/C PWR plug, (A/C plug is located in Velcro pouch above the fan near steering post. Plug the fan booster into the factory A/C plug, and rubber connector into fan.

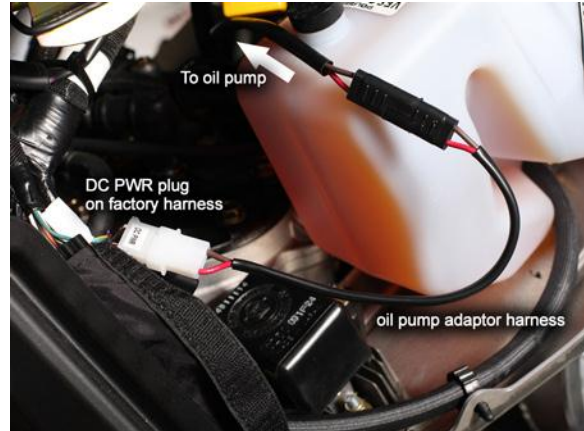


48. Install the fan onto the inner-cooler using the supplied 1/4" bolts and lock washers. Route the fan wire harness to fan booster and secure w/ zip ties.

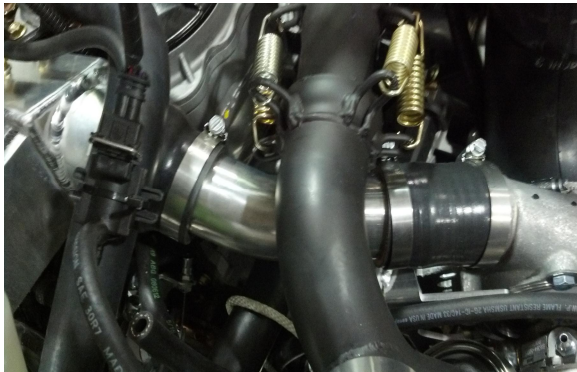
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49. Locate the temp sensor wiring (located in rear of inner-cooler or in silicone air box) route and plug into control box harness secure with zip ties.



50. Locate the factory D/C power plug (located in Velcro pouch on the front of the clutch cover. **NOTE: Only plug oil pump adapter into the D/C power connector.** Route oil pump power to PWR



51. Install charge tube, (Inner-cooler and Air Box) Adjust for maximum clearance and tighten clamps



52. Install electronic boost solenoid using Velcro and zip tie to secure to coolant hose. Route 3/16" line from brass fitting to top of solenoid .



53. Locate solenoid power connector from the control box, follow stock wire harness over steering linkage over to boost solenoid and plug in secure with zip ties.



54. Route 3/16" line from 90 fitting on boost solenoid to the boost actuator on turbo bracket. **NOTE: make sure to use small zip ties on ALL 3/16" hose connections to prevent blow off..**

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55. Install fittings on the waste gate as shown, Top cap 1-vent and 1-plug . Below Diaphragm 1-pressure Fitting, and 2øplugs, and leave the n2o ports empty.



56. Route 3/16ø line from the 90 fitting on boost solenoid to air fitting on external waste gate on lower diaphragm .



57. Install BoonDocker air intake, If Installing optional cold air intake See steps #59-#62



58. At this time check routing of all fuel lines, all wiring routing. And all hose routing, zip tie and secure all to prevent rubbing and chaffing.



59. Measure 2ø down from the top of the elbow, use the hose clamp as a guide. Use a sharp razor blade or saw and cut along the bottom of the clamp.



60. Measure 1/2ø back from the top vent as shown and drill a pilot hole.

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61. Using a 3ø hole saw drill a 3ø hole in the hood.



62. Install the aluminum pipe on the intake elbow, secure with a hose clamp. Install air filter on the pipe outside the hood and secure with supplied hose clamps



63. Using the supplied Turbo oil fill the oil level to the top of line of (F) witch represents full . **Note : do not over fill, as it will push out of the oil tank vent. Oil tank hold aprox 12oz.**



64. Reinstall-Fuel Tank, seat and Hood . Attach the control box using supplied Velcro Route the Boost pressure line from the control box to the push to connect fitting on the Air box or Cooler.



65. Install the Clutch Kit , Primary spring, and clutch weights, Install Secondary spring and Helix. Recommended helix start: 40-46-36, if less RPM desired 42-48-36 Faster up shift.



66. Start the Snowmobile to verify that the oil pump has power and the oil pump is pumping oil, when verified install the oil fitting on the turbo and tighten down.