Instruction 510-0977
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Installation Instructions: S&S® Kawasaki® KRX4® 1000 Turbocharger and Exhaust Kit for 2023-up KRX4 1000 Models (560-0340)

DISCLAIMER:

Many S&S parts are designed for high performance, closed course, racing applications and are intended for the very experienced rider only. The installation of S&S parts may void or adversely affect your factory warranty. In addition such installation and use may violate certain federal, state, and local laws, rules and ordinances as well as other laws when used on motor vehicles used on public highways. Always check federal, state, and local laws before modifying your vehicle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties, and risks associated therewith.

FOR CLOSED COURSE COMPETITION USE ONLY. LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES IN CLOSED COURSE COMPETITION USE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT.

SAFE INSTALLATION AND OPERATION RULES:

Before installing your new S&S part, it is your responsibility to read and follow the installation and maintenance procedures in these instructions and follow the basic rules below for your personal safety.

- Gasoline is extremely flammable and explosive under certain conditions and toxic when breathed. Do not smoke. Perform installation in a well ventilated area away from open flames or sparks.
- If vehicle has been running, wait until engine and exhaust pipes have cooled down to avoid getting burned before performing any installation steps.
- Before performing any installation steps, disconnect battery to eliminate potential sparks and inadvertent engagement of starter while working on electrical components.
- Read instructions thoroughly and carefully so all procedures are completely understood before performing any installation steps. Contact S&S with any questions you may have if any steps are unclear or any abnormalities occur during installation or operation of motorcycle with an S&S part on it.
- Consult an appropriate service manual for your vehicle for correct disassembly and reassembly procedures for any parts that need to be removed to facilitate installation.
- Use good judgment when performing installation and operating the vehicle. Good judgment begins with a clear head. Don't let alcohol, drugs or fatigue impair your judgment. Start installation when you are fresh.
- Be sure all federal, state and local laws are obeyed with the installation.
- For optimum performance and safety and to minimize potential damage to carb or other components, use all mounting hardware that is provided and follow all installation instructions.
- Exhaust fumes are toxic and poisonous and must not be breathed. Run vehicle in a well ventilated area where fumes can dissipate.

IMPORTANT NOTICE:

Statements in this instruction sheet preceded by the following words are of special significance.

WARNING

Means there is the possibility of injury to yourself or others.

CAUTION

Means there is the possibility of damage to the part or vehicle.

NOTE

Other information of particular importance has been placed in italic type.
S&S recommends you take special notice of these items.

WARRANTY:

All S&S parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of six (6) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at S&S's option if the parts are returned to us by the purchaser within the 6 month warranty period or within 10 days thereafter. In the event warranty service is required, the original purchaser must call or write S&S immediately with the problem. Some problems can be rectified by a telephone call and need no further course of action. A part that is suspect of being defective must not be replaced by a Dealer without prior authorization from S&S. If it is deemed necessary for S&S to make an evaluation to determine whether the part was defective, a return authorization number must be obtained from S&S.

The parts must be packaged properly so as to not cause further damage and be returned prepaid to S&S with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. If after an evaluation has been made by S&S and the part was found to be defective, repair, replacement or refund will be granted.

ADDITIONAL WARRANTY PROVISIONS:

(1) S&S shall have no obligation in the event an S&S part is modified by any other person or organization.
(2) S&S shall have no obligation if an S&S part becomes defective in whole or in part as a result of improper installation, improper maintenance, improper use, abnormal operation, or any other misuse or mistreatment of the S&S part.
(3) S&S shall not be liable for any consequential or incidental damages resulting from the failure of an S&S part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of contract or duty between S&S and a customer.
(4) High performance engines are highly sensitive to tune (timing, air-fuel ratios, etc.). The S&S Turbo Kit for the KRX is factory tuned for optimal results. Any unauthorized changes to the S&S tune invalidates the warranty.

⚠ CAUTION ⚠

Before installing your new S&S parts:

- *All torque specifications and assembly procedures are critical. Failure to follow the instructions may result in catastrophic failure of the engine or other components*
- *Some factory hardware and components will be reused. Retain all hardware until installation is complete and proper operation has been verified.*
- *Foreign debris such as dust and dirt can cause excessive wear and possible failure of engine components. Thoroughly clean the vehicle before beginning installation.*
- *Running the vehicle on low fuel can cause air to be pumped through the fuel system and result in engine damage. Ensure there is sufficient fuel in the tank. Aggressive cornering or uneven ground requires greater levels of fuel to keep the fuel pickup fully submerged.*

Special tools:

- 12mm crows foot
- 11⁄16 in crows foot
- 5mm ball end allen extension
- Piston circlip install tool

NOTES ON ACCESSORIES:

- *Rear Window is not compatible with turbo kit*
- *Kawasaki® 6 point harness, tire rack, alternator kit, polycarbonate roof, and rear bumper are compatible with no modifications*
- *Kawasaki® Sport Roof is compatible with modification. Mounting bracket is included*

Installation Instructions

Pre-Installation

1. Start the car and ensure normal operation. Address any issues prior to installation.

NOTE*: Driveability issues must be addressed before installing the turbo kit.*

2. Thoroughly clean the vehicle and work area.

Kit Contents

3. Unbox the two large kit boxes and lay out components.
4. Check the quantity of components in the boxes. Use the provided packing parcel list as a reference.

NOTE: *There may be loose components in some boxes, be sure to check packaging material for missing parts.*

Engine Disassembly

5. Let the engine cool to room temperature and disconnect the battery.
6. Remove bed and upper cowl. The breather is mounted to the bed and must be removed before the bed can be fully removed.
7. Remove intake air transfer tube
8. Disconnect electrical harness mounting clips on bed frame. Cut the zip ties mounting the O2 sensor grommets
9. Remove the muffler.
10. Crack the coolant vent plug. Do not remove or coolant will leak. Remove vent mounted bolts from the bed frame.
11. Remove bed frame.
12. Remove the stock intake plenum. Set aside the three compression limiters and bolts.
13. Remove the CVT intake and exhaust ducts.
14. Remove breather
15. For California models, remove the Evaporative System hoses from the ports on the throttle body.
16. Disconnect fuel rail supply line and remove throttle bodies.
17. Remove exhaust pipe shielding. Do not remove the exhaust pipe from the head at this time.
18. Remove the radiator cap in the front of the vehicle. Drain the coolant. The two drain plugs are located in the middle of the vehicle above the rear plastic skid plate.
19. Remove the coolant vent screw from the engine completely to allow the remainder of the coolant to drain.
20. Drain the oil.
21. Remove the spark plugs.
22. Remove the valve cover.
23. Remove rear tires and shocks.

NOTE: *Lowering the rear of the car as much as possible makes kit installation easier.*

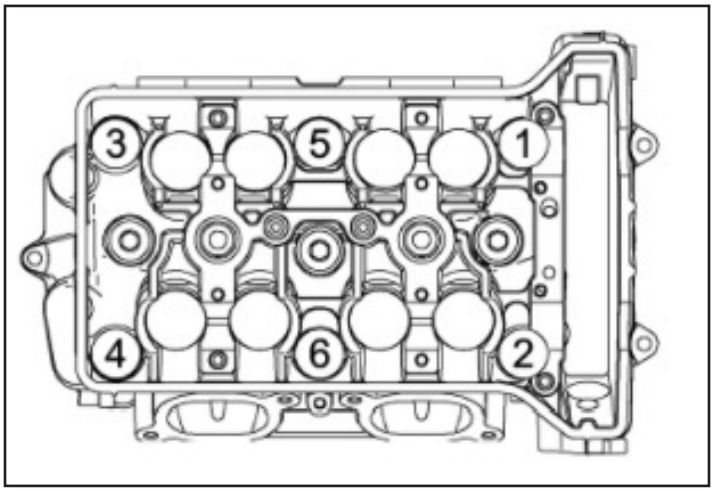
24. Remove the alternator access cover and plug on the passenger side of the engine. Remove the timing mark plug.
25. Check and record the valve lash. Review measurements versus the Kawasaki® service manual. Needed adjustments should be made later during installation.
26. Using a ratchet and socket, rotate the engine forward (clockwise when viewed from the passenger side of the vehicle) until the 2/T mark on the alternator rotor aligns with the notch in the timing inspection hole, indicating top dead center (TDC) on cylinder 2. The intake and exhaust cam sprocket timing marks should be lined up with the top of the head. If they are 180˚ off, rotate the engine one additional turn.
27. Rotate the engine 30–40˚ backwards, until the passenger side exhaust cam lobe is just leaving the valve bucket. At this position all cam lobes should be off of the buckets.
28. Loosen the cam chain slide tensioner spring screw. Remove the two screws retaining the tensioner.
29. Remove the cam caps. Loosen the screws evenly to prevent the caps from becoming crooked if there is any load from valves. Ensure the ring dowels are retained. There are two per cap

NOTES: *Do not use a ball end allen to remove the socket head screws. Using a straight allen reduces the chance of stripping the head. Cam caps are matched to each head. Do not interchange them between heads.*

30. Disconnect the coolant lines from the cylinder and head. There is one line to disconnect from the head rear of the engine and two on the cylinder in front of the engine.
31. Remove the chain slide screw from the head on the passenger side of the engine.
32. Remove the M6 head helper screws. There are two on the passenger side of the head and one on the driver side.

NOTE: *Do not use a ball end allen to remove the socket head screws. Using a straight allen reduces the chance of stripping the head.*

33. Remove the M11 head bolts in the following order.



34. Remove the head with the exhaust pipe still attached. Retain the two locating dowels.

NOTE: *Do not tip the head upside down or remove the cam buckets.*

35. Remove the exhaust pipe from the head.

36. Remove the cylinder. Retain the two locating dowels.

37. Lay clean rags on the case deck to prevent small parts falling into the case. Using a small screwdriver or pick, remove the wrist pin circlip from the passenger side piston. The wrist pin may need to be gently tapped out using a socket and mallet.

38. Remove the rags. Lifting up firmly on the cam chain, rotate the engine 180˚ to bring the driver side piston to approximate TDC. Replace the rags and remove the driver side piston circlip and wrist pin.

Engine Assembly

39. Install the rings on the new pistons. Using a circlip install tool, insert a circlip in the driver side of the piston. The valve notches are oriented to the rear/intake side.

40. With the clean rags still in place, coat the wrist pin with a small amount of clean engine oil and slide through the piston and connecting rod. Install the passenger side circlip.

NOTE: *Ensure the valve pockets are oriented to the rear of the engine.*

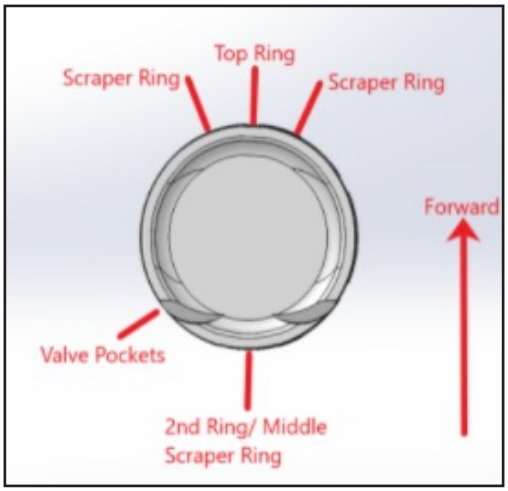
41. Rotate the engine and repeat on the passenger side piston, remove the rags when the pistons are installed.

42. Install a new base gasket. Place the locating dowels in the case.

NOTE: *M6x12mm bolts may be used to hold down the base gasket during cylinder installation.*

43. Rotate the engine so both pistons are level.

44. Orient the piston rings gaps as shown. Ensure the oil ring is completely seated and the spring ring is not overlapping on itself.



45. Apply a small amount of clean engine oil to each of the rings

46. Place the cylinders over the chain slides and set the cylinder on top of each piston

47. Compress the rings for each piston with your fingers to insert them into the cylinder. An assistant may be helpful with this process. It may help to start one piston before the other.

NOTE: *Masking tape may be used on top of the base gasket to protect fingers. If used, be sure to remove all tape before the cylinder is completely seated.*

48. Once all piston rings are inserted in the cylinder, wiggle the cylinder back and forth until it sits flush onto the locating dowels.

⚠ WARNING ⚠

Take care to not bend any rings during assembly. If the cylinder does not slide on easily, *do not force it!*

49. Holding the cylinder down and the cam chain up, rotate the piston on each side to bottom dead center (BDC) and coat each cylinder wall with a small amount of clean engine oil.

NOTE*: Keep tension on the cam chain to reduce the risk of skipping a tooth on the lower sprocket.*

50. Connect coolant hoses on the cylinder. Orient the spring clamps in the same position as they were when removed to reduce the chance of leaks.

51. Install a new head gasket and insert the locating dowels.

52. Before installing the head on the car, place new exhaust port gaskets on the studs and install the turbo onto the head. Tighten the nuts.

NOTE*: Do not tip the head upside down.*

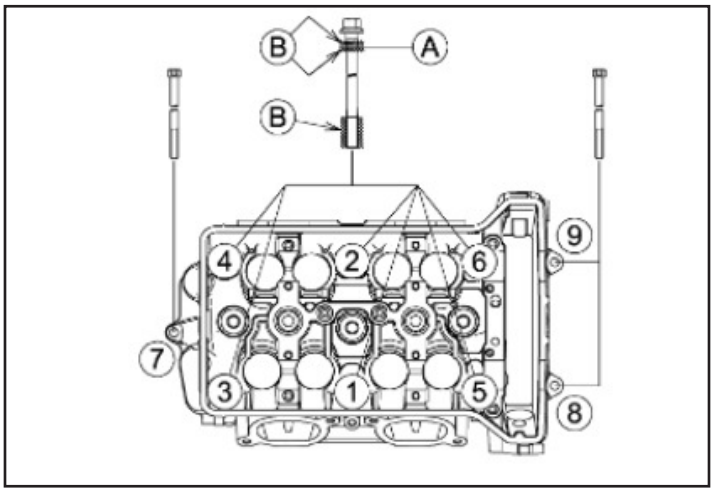
Torque Exhaust Manifold Nuts: 180 in-lbs/20 Nm

53. Start a M6 x 20mm screw in the oil drain port on the turbo closest to the head. Do not fully tighten, and leave at least ½" open.

54. If valve adjustment was needed, adjust the valves to be within spec.

55. Insert the o-ring into the oil drain tube groove. Slide the slotted end of the oil drain tube onto the started bolt. Install the other M6x20mm screw and tighten.
Torque Oil Drain Flange Bolt: 106 in-lb/12 Nm

56. Place the head on the cylinders and locate on the dowels. Coat the head bolt threads, washers, and helper bolt threads in clean engine oil and install.
Torque the M11 and then the M6 bolts in the sequence below.
Torque M11 Cylinder head bolts: First: 22 ft-lbs/30 Nm
Second: 52 ft-lbs/70 Nm M6 Cylinder head bolts: 106 in-lb/12 Nm



57. Install and tighten the cam chain torque slide bolt on the passenger side of the head. Torque Cam chain slide bolt: 216 in-lb/18 Nm
58. Connect the coolant hose to the head.
59. Clamp the intake cam in a vice with non-marring jaws or using a rag. Remove the two screws to remove the cam sprocket.

***NOTES**: Intake and Exhaust cams can be identified by the "IN" or "EX" cast into the body.*
Do not use a ball end allen to remove the socket head screws. Using a straight allen reduces the chance of stripping the head.

60. Clean the oil from the cam hole and screw threads. Install the Turbo Cam Sprocket so the holes labeled "IN" align with the threaded cam holes. Apply green threadlocker to the screw threads and install. Repeat with the exhaust cam. Torque Cam Sprocket Bolt: 106 in-lbs/12 Nm
61. Lightly oil the cam journals and valve buckets.
62. With the engine set at TDC on cylinder 2, install the exhaust cam first, and then intake cam so the timing marks align with the top of the head. Do not install the cam cap.

***NOTE**: Ensure all of the slack in the cam chain is at the rear of the engine.*

63. Rotate the engine 30–40˚ backwards (CCW) until all cam lobes are unloaded from the buckets. Ensure the cam chain does not jump a tooth.

***NOTE**: Keep tension on the chain while rotating.*

64. Install both cam caps and tighten screws in the order stamped on the cap. Ensure each cap has two ring dowels. Torque Cam Cap Screws: 106 in-lbs/12 Nm
65. Remove the cap and spring from the cam chain tensioner. Release the stop and slide the rod into the body.
66. Install the body with the stop facing upwards. Apply blue threadlocker to the bolts and tighten.
Torque Cam Tensioner Mounting Bolts: 89 in-lbs/10 Nm
67. Push the tensioner spring in until it stops clicking, and install the tensioner cap over it. Tighten.
Torque Cam Tensioner Cap: 180 in-lbs/20 Nm
68. Rotate the engine forward to TDC on cylinder 2 and re-check the cam timing. The intake and exhaust marks should be aligned with the top of the head.

***NOTE**: There should be no slack in the chain between the sprockets.*

69. Rotate the engine by hand two full turns, check for smooth motion throughout. Any hard stops should be addressed.
70. Re-check valve timing and valve lash.

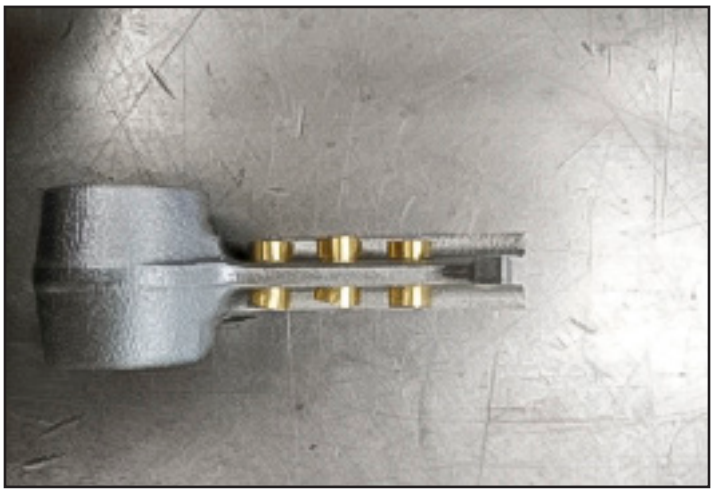
***NOTE**: Re-checking the valves is very important and must be done!*

71. Lightly oil the cam lobes and timing chain.
72. Install valve cover along with the cover seal and tighten bolts. Torque Valve Cover Bolts: 89 in-lbs/10 Nm
73. Install the supplied HR 10 spark plugs.
Torque Spark Plugs: 115 in-lbs/ 13Nm
74. Connect ignition coils to spark plugs. Make sure the rubber boot is seated.
75. Install the alternator rotor bolt cap, cover, and inspection cap.
Torque Timing Inspection Cap: 180 in-lb/20 Nm
Torque Alternator Rotor Bolt Cap: 180 in-lb/20 Nm
Torque Alternator Rotor Bolt Cap Cover bolts: 89 in- lb/10 Nm

Flyweight Upgrade

76. Remove the clutch housing cover and primary clutch carrier.
77. Install the appropriate bolts in the secondary to loosen the belt. Remove the belt.
78. Remove the primary clutch.
79. Evenly loosen the eight bolts holding the primary clutch cover.
80. Remove the snap rings and flyweight pin, and remove flyweights from the clutch assembly.
81. Inspect the flyweights for excessive wear. Worn weights should be replaced prior to installation.
82. Insert a brass slug into each of the inner 3 holes closest to the pivot of the flyweight. Using a punch and hammer, mushroom the slug until tight. Repeat for the additional flyweights.

***NOTES**: The slugs are designed to be added to OEM flyweights. The flyweights must be between 91–93 grams*
Use three slugs for 31" or smaller tires, two slugs for tires greater than 31"



83. Re-install the flyweights, pins, and snap rings. Ensure the flyweight

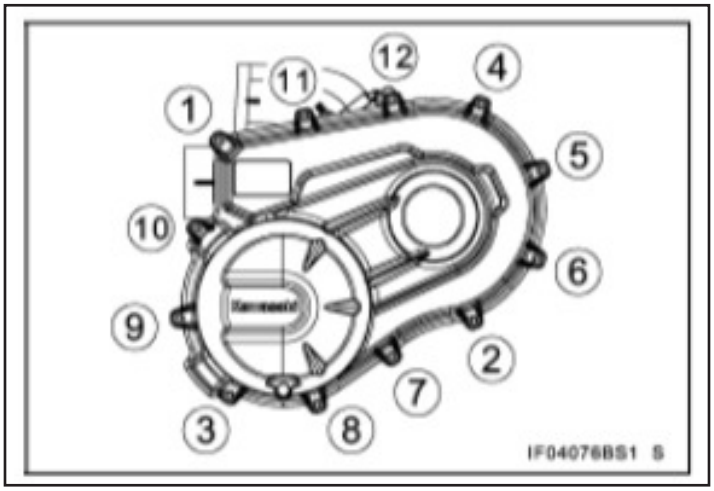
swings freely against the roller.

84. Install the cover, aligning the arrows on the cover and movable sheave. Apply blue threadlocker and tighten evenly. Torque Primary Clutch Cover Bolts: 111 in-lbs/5 Nm
85. Install the primary clutch on the shaft. Tighten the nut. Torque Primary Clutch Nut: 170 ft-lbs/230 Nm
86. Install the belt and then the primary clutch carrier. Tighten nuts and bolts.

***NOTE**: The belt is directional, which is labeled with arrows on the belt.*

Torque Primary Clutch Carrier M6 Bolts: 132 in-lbs/15 Nm
Torque Primary Clutch Carrier M8 Nuts: 180 in-lbs/20 Nm

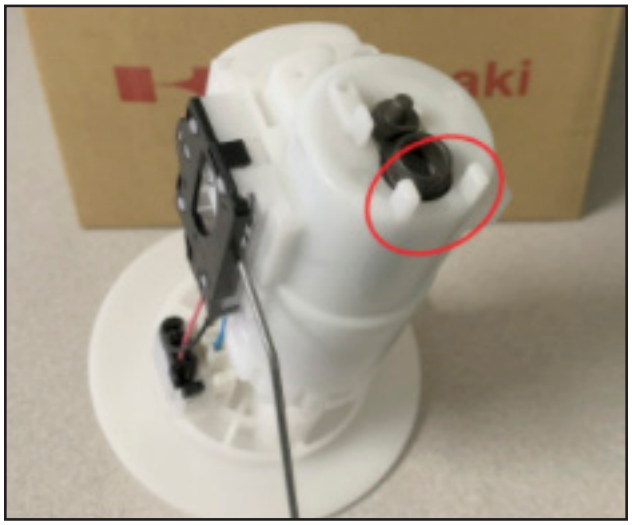
87. Remove the bolts from the secondary and rotate until the belt is at the top of the secondary sheave.
88. Install the clutch housing cover by installing the bolts in the following order.



Torque Clutch Housing Bolts: 80 in-lbs/9 Nm

Fuel Filter Installation

89. Remove the passenger seat, seat rails, and fuel pump cover.
90. Disconnect the fuel line connector and electrical connector.
91. Remove the fuel pump retainer bolts. Remove the fuel pump from the tank.
92. Remove the fuel chamber on the bottom of the pump, exposing the fuel filter. Remove the fuel filter.



93. Using a wire cutter, remove the two tabs on the bottom of the pump by the fuel inlet.
94. Install the upgraded fuel filter, orienting it on the pump locating peg.
95. Install the fuel chamber.
96. Place the fuel pump back in the tank. Install the retaining ring and tighten the bolts evenly.
    Torque Fuel Pump Bolts: 52 in-lbs/5.9 Nm
97. Connect the fuel line and electrical connector. Ensure the locking tab on the fuel connector is fully depressed.
98. Install the seat and rails. Tighten Bolts.
    Torque Seat Rail Bolts: 180 in-lbs/20 Nm

Intercooler Installation

ACCESSORY NOTES:

- *If an accessory 6-point harness has already been installed, remove the rear brackets and skip the two following steps.*
- *Minor adjustment of any accessory tire rack may be needed to clear the intercooler.*
- *If the accessory sport roof has been installed, the seal and seal rail will need to be clearanced. A relocation bracket is provided for the mount.*

99. Cover the intake ports of the engine, turbo inlet and outlet, and any other exposed internal components.
100. Using a Dremel or similar tool, remove the four cutout areas in the firewall behind the seats. Remove the horizontal section of the firewall directly above the cutout sections.

***NOTE**: The body screws retaining the firewall to the frame may need to be removed for easier cutting.*

101. Set the intercooler mounting tab behind the frame. If an accessory 6-point seat belt has already been installed, place the intercooler behind the seat belt mounting brackets.

102. Install the 3 M8 mounting bolts from the front of the car. Use the supplied nylock nuts. Torque Intercooler lower M8 bolts: 144 in-lbs /16.5 Nm

103. Install the intercooler bracket onto the intercooler. Then install the tube brace onto the bracket. Torque upper M6 and M8 lower intercooler bolts: 144in lbs/16.5 NM

104. Remove the four thumb screws from the intercooler brace tee clamp. Place the clamp on the upper frame rail and intercooler brace with the thumb screws on the underside.

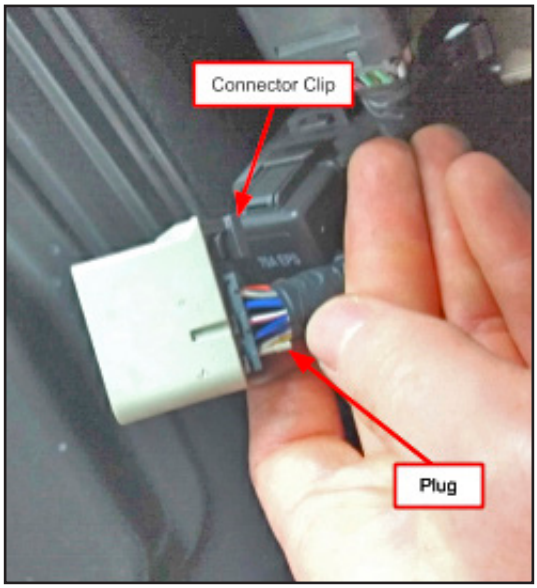
105. Make sure the intercooler is vertical. Firmly tighten the two lower screws by hand, then the two upper screws.

106. Install the two intercooler fans onto the intercooler shroud with the wiring pointing down. Tighten the M6 x 12mm bolts. Torque Intercooler Fan M6 bolts: 106 in-lbs/12 Nm

107. Feed the Intercooler Fan Harness through the firewall port behind the driver's seat. The relay, fuse holder, and square terminal should be in the cockpit, and the ground, fan connectors, and bullet terminal in the engine bay/wheel well.

108. Remove the ECM cover and disconnect the ECM from the wiring harness.

109. On the gray connector, remove the gray plug from the corner terminal with a fingernail. **Do *NOT* use a pliers.**

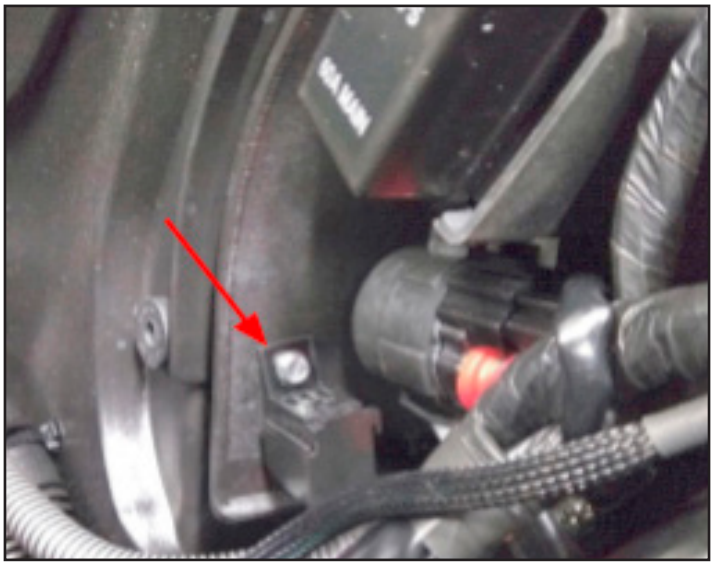


110. Remove the blue wedge block from the face of the connector. Pry out gently with a small screwdriver in the slots to remove.

111. Insert the square terminal into the back of the connector. Ensure the orientation matches the other terminals in the connector. Push gently until the terminal locks into place. Reinstall the wedge block, making sure the new terminal is pushed toward the connector clip.

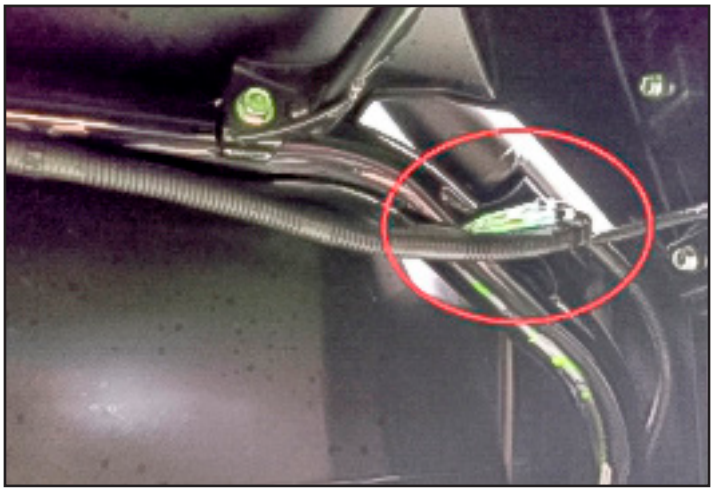
112. Connect the ring by the fuse holder to the positive terminal on the battery.

113. Mount the relay block with the self tapping sheet metal screw in the ECM bay just below the 60 amp main fuse to the center of the vehicle. Install the relay.



114. Push the extra wire into the engine bay. Route the wire along the main harness past the ground junction in front of the driver's side rear wheel.
115. Connect the ring terminal to the ground junction.

116. Route the bullet terminal to the accessory connections above and behind the rear wheel. Connect the bullet terminal to the positive terminal. Ensure the terminal is fully protected by the rubber cover.

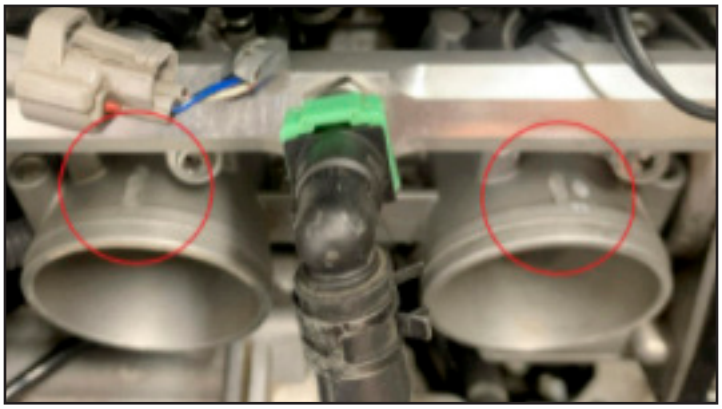


117. Connect the intercooler fans.
118. Secure the harness with zip ties to avoid contact with moving or hot parts.

***NOTE**: Proper operation of the fans can be checked by disconnecting the intake air temperature sensor, located on the plenum. The fans should turn on and turn off when the sensor is reconnected.*

Intake Plenum, Throttle, Fuel System Installation

119. Remove the injectors, fuel rail, and MAP sensor from the throttle assembly.
120. Remove the o-ring from the included MAP sensor and install the adapting hose. Install the retaining clamp.
121. Remove the rubber mount from the stock MAP sensor by pulling firmly from the bottom. Pull the mount through the new MAP sensor mounting hole.
122. Install the MAP sensor on the throttle, ensuring the hose is firmly on the throttle port.
123. Apply thread sealant to the threads of the fuel damper and install in the end port of the fuel rail.
Torque Fuel Damper: Finger snug plus 1-2 full rotations.
124. Install the Quick-Connect fitting in the center fuel rail port with an aluminum sealing washer. Tighten.
Torque Fuel Rail Quick Connect Fitting: 180 in-lbs/20 Nm
125. Apply the included lubricant to the high flow injector o-rings. Carefully insert the injectors into the new fuel rail bore using a twisting motion. Ensure an o-ring has not twisted or rolled in the bore. The connectors should be oriented to the top/front of the vehicle.
126. Remove the throttle body injector dust seals from the stock injectors and install on the high flow injectors. Discard the seals on the high flow injectors.
127. Cover the inlet port of the throttle body and any other exposed internals.
128. Using a grinder, remove the lugs located on the top of the throttle body as shown below. Make sure to remove any sharp edges.



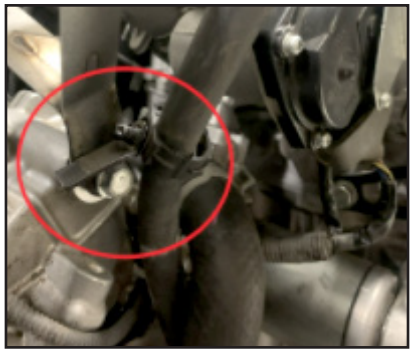
129. Install the injector/rail/damper assembly on the throttle body. Gently wiggle the injectors back and forth while tightening the screws. Properly installed injectors should be able to rotate with moderate force.
Torque Fuel Rail Screws: 31 in-lbs/3.5 Nm
130. Install the injector wiring adaptors.
131. Install the throttle assembly in the intake boots on the cylinder head. Ensure the throttle is fully seated in the boots and tighten the clamps.
Torque Throttle body boot clamps: 18 in-lbs/2.0 Nm
132. Connect the injector wiring plugs and map sensor plug to the wiring harness.
133. Remove the clamp bracket retaining the fuel line from the transmission case. Reinstall the bolt.
134. Install the upper and lower plenum mounting brackets, and ⅛" NPT drain plug in the plenum. See below for orientation.

Torque M6 Plenum mounting bracket bolts: 106 in-lb/12 Nm Torque ⅛" NPT Plenum drain plug: finger tight plus one turn

***NOTE**: Do not over-tighten, brass inserts may be stripped*

135. Slide 2.5" couplers and clamps fully onto the intake runners.
136. Using the factory bolts and spacers, install the plenum in the three factory mounting locations. Install the fuel line clamping bracket on the front/upper bracket as shown below. Torque M8 Plenum mounting bracket bolts: 180 in-lb/20 Nm
137. Slide the couplers forward onto the throttle bodies as far as possible. Orient clamps to avoid interference with the fuel line and tighten. Torque T-Bolt Band Clamp: 60 in-lb/6.8 Nm
138. Install the temperature sensor in the plenum using the existing hardware and supplied M5x14mm bolt as shown. Torque M5 bolt: 88 in-lb/10 Nm

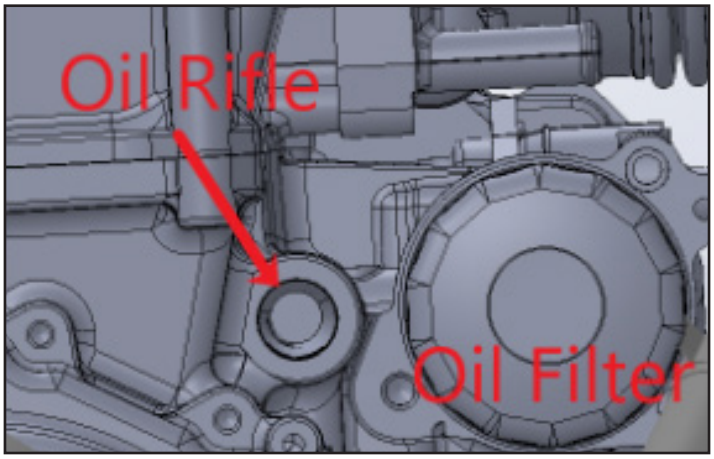
139. Route fuel line on right/passenger side of intake runners. Clamp the line to the clamping bracket.



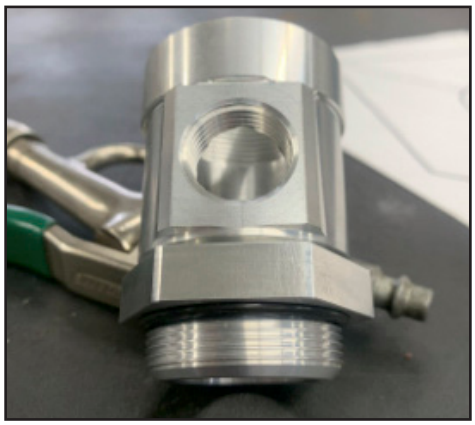
140. Push the fuel line onto the fuel rail fitting and lock the retaining tab.
141. Cycle the key to build fuel pressure. Check for fuel leaks around the injectors, fuel rail fitting, and fuel rail damper. Address any leaks present.

Turbo Oil System Installation

142. Remove the plug from the end of the oil rifle. A significant amount of torque will be needed to remove it as it is installed with a green threadlocker.



143. Install the nut fully onto the oil return adaptor. Place the o-ring into the groove just below the nut.



144. Remove the factory oil fill cap from the engine case and install on the return adaptor. Thread the adaptor into the case until the o-ring is lightly seated. Back off until the NPT port is oriented toward the oil filter.

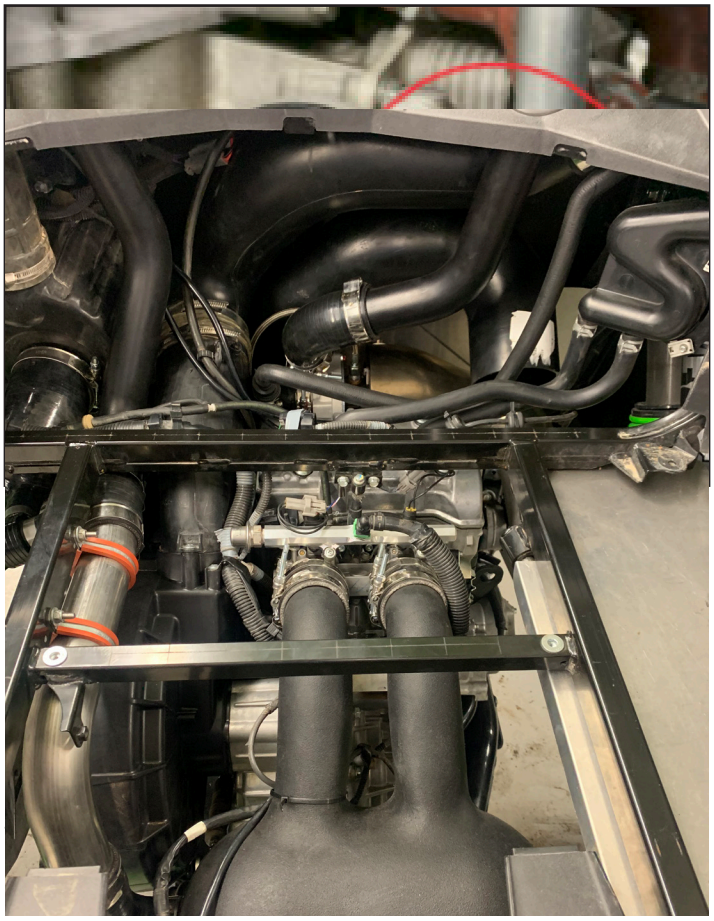
145. Install the ⅝" x 5" section of hose as far as possible onto the oil drain tube. The use of dish soap can aid installation. Install two spring clamps over the tube.

146. Install the ½ NPT x ⅝ barbed brass fitting into the hose then thread it into the adaptor.
Torque Oil drain brass barb fitting: Finger Snug plus 1–2 full turns.

147. Slide the hose down the oil drain onto brass fitting if needed. Place a spring clamp on each end of the tube.

148. Tighten the oil return adapter nut down on the o-ring.

149. Install the ⅝" P-Clamp on the tube. Screw into the thread by the oil filter and tighten.
Torque Oil Drain P-Clamp Bolt: 106 in-lb/12 Nm



154. Install the turbo oil supply line onto AN-4 fittings.
Torque using 11⁄16 in crows foot wrench.

***NOTE**: A wrench may be needed on the previously installed adapters to prevent loosening during install. Do not overtighten AN-4 fittings.*

Torque AN-4 Oil fitting: 160 in-lb/18 Nm

155. Install P-Clamp on the supply line and bolt to the hole drilled in the 14 frame using M6x20mm and Nylock nut.

Exhaust System Installation

156. Install the muffler, using the factory brackets and bolts. Ensure the rubber mounting dampers are in place.
Torque Muffler Bracket M8 Bolt: 180 in-lb/20 Nm

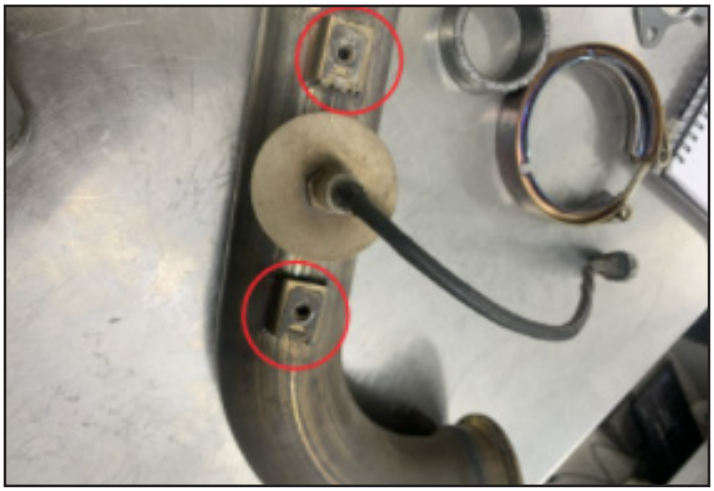
157. Place a muffler gasket and exhaust gasket on each end of the exhaust pipe. Place the exhaust pipe loosely on the muffler studs and slide the V-band clamp over the V-band flanges on the turbo outlet. Start the nuts on the muffler studs.

158. Tighten the V-band flange, then the four nuts on the muffler studs.

***NOTE**: The V-band clamp must be tightened first or the exhaust pipe can be overstressed from misalignment and fail prematurely!*

Torque V-band Clamp Nut: 106 in-lb/12 Nm
Torque Muffler Stud Nuts: 26 ft-lb/35 Nm

159. Install M6 clip nuts on the heat shield brackets on the exhaust pipe. Place the heat shield and install M6 bolts into the two clip nuts and the boss on the turbine housing and tighten.
Torque Exhaust Heat Shield Bolts: 106 in-lb/12 Nm



160. Install the stock O2 sensor with the supplied adaptor. Tighten. Torque Oxygen Sensor: 216 in-lb/25 Nm

Charge Air System Installation

161. Install the factory bed frame. Tighten the bolts.
Torque Bed Frame M6 Bolts: 192 in-lb/22 Nm
Torque Bed Frame M12 Nuts: 32ft-lb/48 Nm

162. Install the silicone coupler and stainless charge tubes from the filter box to the turbo inlet. Orient the silicone couplers to avoid the shock. Tighten the clamps.

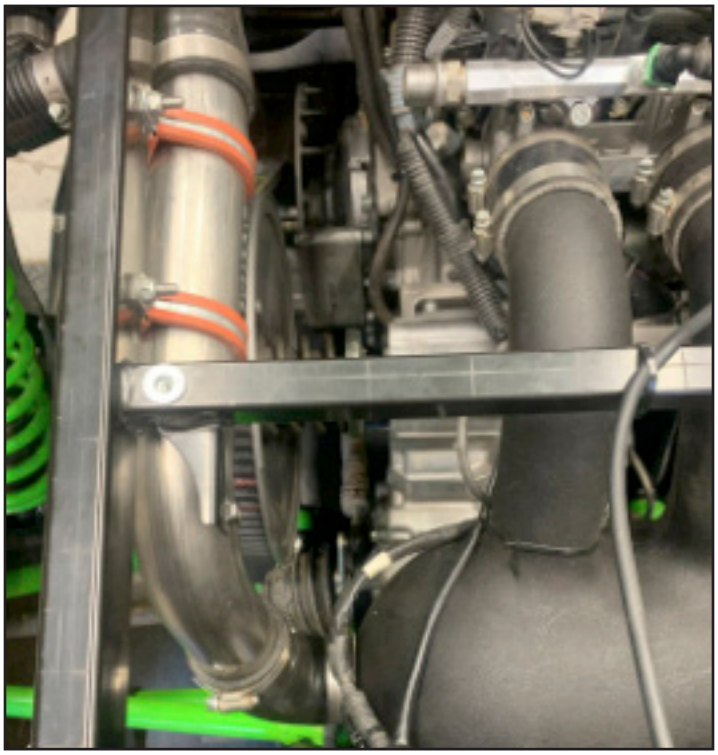
***NOTE**: Use dish soap or similar to ease installation of the silicone couplers. Torque T-Bolt Band Clamp: 60 in-lb/6.8 Nm*

163. Install the silicone couplers and tube from the plenum to the blow off valve.

164. Drill ¼" holes in the bed frame for the P-clamps.

NOTE: The coupler to the plenum will need trimmed. Use straight edge to ensure clean cuts.

165. Install the two P-clamps onto the tube as shown below with provided M6 bolts and lock nuts. Tighten.



166. Cut the holes in the top cowl with the supplied templates using a dremel or similar tool (3" hole saw also works well). Install the cowl but do not fasten it down.

167. Trim one side of the elbow coupler 1.25". Trimmed side will go on the turbo outlet.

168. Install the intercooler inlet and outlet tubes. Slide the couplers and T-bolt band clamps to the intercooler fully over the tubes. Thread them through the cowl holes, then slide the couplers onto the intercooler.

169. Tighten the T-bolt clamps
Torque T-Bolt Band Clamp: 60 in-lb/6.8 Nm

170. Hold the blow off valve over the silicone couplers in the orientation shown below. Mark the filter box to turbo inlet coupler with a permanent marker where it meets the body of the blow off valve. Cut with a hose cutter.

171. Install the blow off valve as shown. Use a worm clamp on each side of the valve and tighten. Screw the adjuster all the way in then back out 3 full turns. Torque : 60 in-lb/6.8 Nm

172. Insert the T fitting into the end of the 18" rubber hose from the blow off valve. Route the line to the inside towards the bed frame.

173. Connect the engine vacuum lines from the throttle body to the other end of the T fitting, as shown below.

174. Fasten the line to the bed frame with a cable tie.

175. Run the line from the T fitting to the check valve, and then from the check valve to the purge valve in the cab.

***NOTE**: The orientation of the check valve is important, make sure the rounded side is facing the T fitting Breather Installation*

176. Remove the factory bracket from the breather. Remove the shorter of the two hoses on the bottom of the breather. Remove the long hose from the top of the breather.

177. Install the clip nuts on the breather relocation bracket. Install the breather on the bracket and the bracket onto the bed frame. Torque Breather Bolts: 106 in-lb/12 Nm

178. Cut the long hose that was running from the breather to the intake plenum in the locations below.

179. Route the cut hose from the empty port on the breather to the drivers side port on the valve cover. Secure with the OEM spring clamps.

180. Insert the plastic barbed fitting into the end of the supplied hose, secure with a spring clamp.

181. Attach the open end of the supplied breather hose to the top breather port and insert the barb fitting into the T fitting on the turbo inlet port coupler.

***NOTE**: When viewing the coupler from the driver's side of the vehicle, the T should be around 2 o'clock.*

182. Fasten the cowl with the OEM hardware.
183. Fasten the bed with the OEM hardware.
184. Replace the oil drain plug
185. Add new 15W-40 synthetic oil
186. Install the coolant drain plug and refill the coolant.

***NOTE**: Make sure the coolant breather bolt is closed after refilling the coolant*

187. Reinstall any remain body panels that were removed during assembly
188. Check the work area for any remaining parts. Calibration
189. Follow the attached instructions for flashing a tune using the PV3

***NOTE**: It is recommended to display Intake Air Temperature (F), Manifold Air Pressure (Psi), Engine Speed (RPM), and Throttle Position(%). Break In*

190. Start the car and let the engine coolant warm to 140˚F before driving.
191. Check for boost leaks around all couplers and sensors. Check for exhaust leaks around gaskets.
192. Address any leaks present.
193. Drive the car conservatively until engine temperature reaches normal operating temperature.
194. Shut off the engine and let it return to room temperature.
195. Repeat the last two steps to complete the engine heat cycles. Maintenance Schedule Follow Kawasaki®'s periodic maintenance chart as stated in the service manual.

***NOTE**: Check engine oil before every ride.*

PART #	DESCRIPTION	TORQUE SPEC
500-1485	Banjo Bolts	144 in-lbs
500-1493	Fuel Quick Connect Fitting	180 in-lbs
	Head Bolts (11mm)	First: 22 ft-lbs Second 52 ft-lbs
	Head Bolts (6mm)	106 in-lbs
	Cam Chain Slide Bolt	216 in-lb
	Exhaust Port Stud Nuts	180 in-lbs
	Muffler Stud Nuts	26 ft-lbs
LFT-0886	Intercooler Lower Mounting Bolts	144 in-lbs
LFT-0320	Intercooler Upper Mounting Bolts	106 in-lbs
	Valve Cover Bolts,	89 in-lbs
	Cooling system vent bracket bolts	78 in-lbs
	Cooling system vent plug	
	Camshaft Chain Tensioner Cap	180 in-lbs
	Cam Tensioner Mounting Bolt	89 in-lbs, Blue Threadlocker
	Cam Sprocket Bolt	106 in-lbs, Green Threadlocker
	Primary Clutch Cover Bolt	111 in-lbs, Blue Threadlocker
	Clutch Housing Bolt	80 in-lbs
	Primary Clutch Carrier Nut	180 in-lbs
	Primary Clutch Carrier Bolt	132 in-lbs
	Primary Clutch Shaft Nut	170 ft-lbs
	Muffler Bracket Bolts	180 in-lbs
	Seat rail bolts	180 in-lbs
	Fuel Pump Bolts	52 in-lbs
560-0278	Fuel Damper	Finger Snug plus 1–2 turns, Thread Sealant
	Fuel Rail Screws	31 in-lbs
500-1477 **500-1488**	T-Bolt Band Clamp	60 in-lbs
500-1489	Oil drain brass barb fitting	Finger snug plus 1–2 full turns
500-1490	Oil Drain P-Clamp Bolt	106 in-lbs
LFT-0320	Oil Drain Flange Bolts	106 in-lbs
500-1484	Oil supply adaptor, ½ BSPT x M12x1.5	Finger snug plus 1–2 full turns
	Oil Supply Bracket M8 Bolt	180 in-lbs
	Oil Supply P-Clamp M6 Bolt	106 in-lbs
	Muffler Bracket M8 Bolt	180 in-lbs
500-1483	V-band Clamp Nut	106 in-lbs
	Muffler Stud Nuts	26 ft-lbs
LFT-0320	Exhaust Heat Shield Bolts	106 in-lbs
LFT-0320	Intercooler Fan M6 bolts	106 in-lbs
	Oxygen Senso	216 in-lbs
	Bed Frame M6 Bolts	192 in-lbs
	Bed Frame M12 Nuts	32 ft-lbs
560-0282	HR 10 Spark Plug	115 in-lbs
500-1748	Intercooler Mount Bolt	144 in lbs

SPECIFICATIONS:

Power Output: 155 hp crankshaft, 125 hp wheels

Turbo Wastegate Actuator Pressure: 10psi

Oil: 15-40 Synthetic

Fuel: 91 Octane or higher

TROUBLESHOOTING		
SYMPTOM	**CAUSE**	**REMEDY**
Intake temperature too high	• Boost leak • Turbo wastegate actuator hose disconnected • Intercooler clogged	• Check for disconnected charge air tube • Check for disconnected turbo wastegate actuator hose • Unclog intercooler
Engine misfires at high throttle/boost	• Injector connection faulty • Fuel damper faulty • Turbo wastegate actuator hose disconnected • Leaking/Disconnected MAP sensor hose	• Check for disconnected charge air tube • Check for disconnected turbo wastegate actuator hose • Inspect MAP sensor
Engine misfires at mid throttle/boost	• Injector connection faulty • Fuel damper faulty • Leaking/Disconnected MAP sensor hose	• Check for disconnected injectors • Inspect MAP sensor
Engine overheats	• Low on coolant • Radiator fan malfunctioning • Radiator plugged • Headgasket Failure	• Refill coolant • Replace radiator cooling fan • Unclog radiator • Replace head gasket
Engine bogs at high RPM	• Clogged fuel filter • Faulty fuel pump • Low fuel pressure	• Replace fuel filter • Replace fuel pump • Repair any fuel leaks

Packaging Parcel List

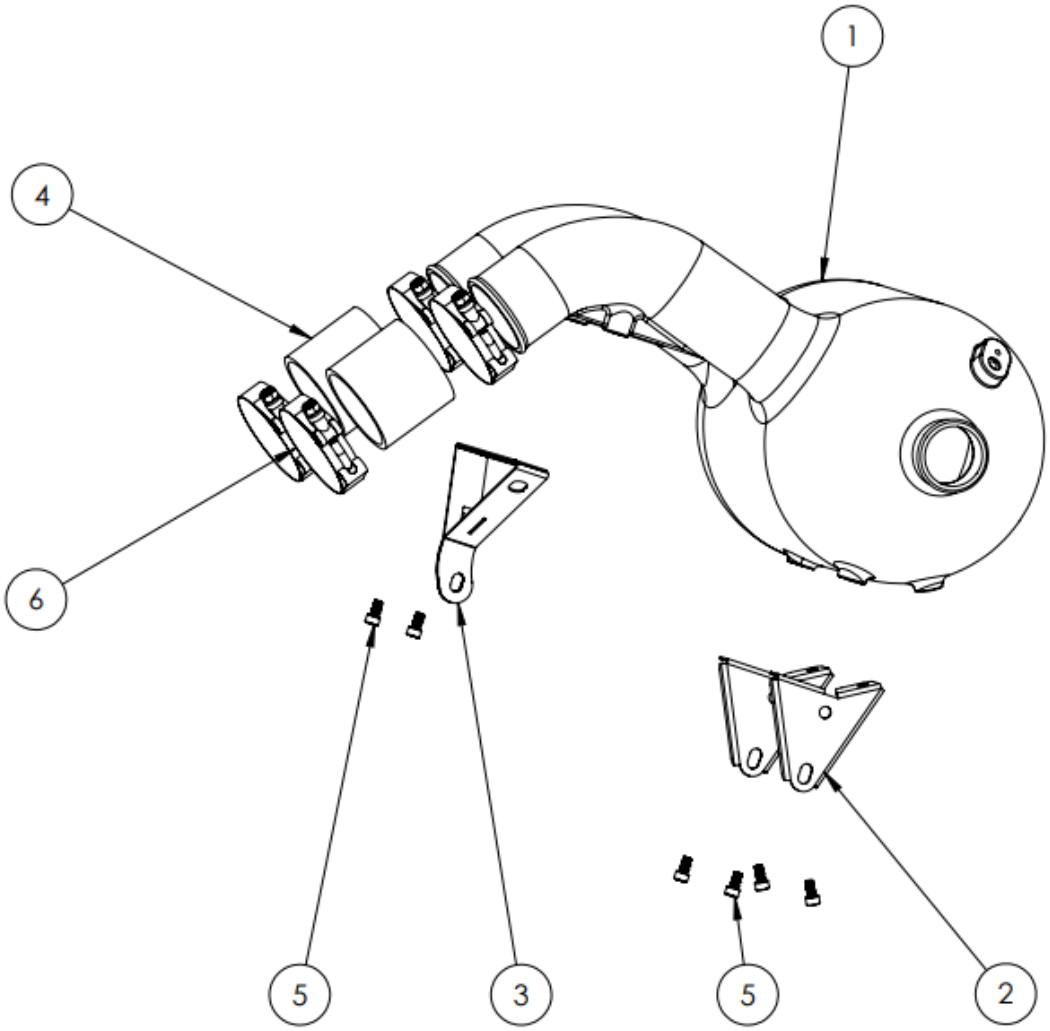
A. 560-0341 Performance Package, Turbo Kit, Box A, 2023-up KRX4 Models
   a. 560-1747 Hardware Kit, Turbo Kit, 2023-up KRX4 Models
      i. LFT-0320 Screw, SHC, M6 x 12mm L, 1 mm Pitch *QTY 31*
      ii. 500-1541 Screw, Self Tapping, Sheet Metal, #8 x ½"
      iii. 500-1134 Nut, Clip-on, M6, Stainless Steel *QTY 9*
      iv. 500-1486 Washer, Sealing, M12, Aluminum *QTY 1*
      v. 500-1534 Screw, Flanged, Hex Head, M8x 1.25mm x 20mm *QTY 1*
      vi. LFT-0959 Screw, SHCS, M6 x 1.0 x 40mm *QTY 2*
      vii. LFT-0334 Nut, Lock, Flanged, Non Marring, Nylon Insert, Class 8, M6 x 1, Zinc Plated, Steel *QTY 8*
      viii. 500-0272 Washer, Flat, M6, Zinc *QTY 4*
      ix. 50-8331A Plug, Pipe, w/Yellow Sealant Patch, ¾ Taper, ⅛-27 NPTF x .188", Zinc, Steel
      x. LFT-1307 Washer, M6x1.5mm, Zinc *QTY6*
      xi. 500-0499 Screw, SHC, M5x14mm, Stainless Steel
      xii. 500-1654 Screw, Hex, M8x12mm, 1mm pitch, Zinc *QTY 2*
      xiii. 50-8124-S Fitting, Hose, Tee, Male, 1.94" x .1875", White, Nylon
      xiv. 500-1271 Screw, SHC, M6 x 20mm, Stainless Steel *QTY 3*
      xv. 500-1748 Screw, BHS, M8 x 1.25 x 65mm, Fully Threaded *QTY 3*
      xvi. CHL-0589 - Nut, Nylock, M8 x 1.25, Class 10, Zinc *QTY 3*
      xvii. CHL-0481 - Washer, M8, 8.4mm ID x 16mm OD *QTY 6*
   b. 560-0309 Plenum, Upper, Weldment, 2020-up KRX Models
   c. 170-0666 Bracket, Plenum, Lower, 2020-up KRX Models *QTY 2*
   d. 170-0663 Plenum, Intake, Rotomolded, 2020-up KRX Models
   e. 550-1044 Muffler, Kit, Power Tune XTO, Race Only, KRX
   f. 500-1540 Decal, Turbo, 2020-up KRX Models *QTY 2*
   g. 510-0977 Publication, Instruction Sheet, Turbo Kit Assembly, 2023-up KRX4 Models
   h. 560-0271 Bracket, Breather, Stainless Steel, 2020-up KRX Models

B. 560-0323 Performance Package, Turbo Kit, Box B, 2020-up KRX Models
   a. 560-0263 Turbocharger, Assembly, 10psi, 2020-up KRX Models
   b. 500-1483 Clamp, V-Band, 3", Stainless Steel
   c. 560-0327 Coupler, Kit, Turbo Kit, 2020-up KRX Models
      i. 170-0682 Coupler, 2" ID x 3" L, Black, Silicone *QTY 2*
      ii. 500-1475 Coupler, 90deg, 2" ID, Silicone, Black *QTY 2*
      iii. 170-0683 Coupler, 2.5" ID x 3" L, Black, Silicone *QTY 2*
      iv. 500-1476 Coupler, T-Hose, 2" ID x 1" ID Branch, SIlicone, Black *QTY 2*
      v. 170-0656 Hose, Air Filter to Turbo, Silicone, 2020-up KRX Models
   d. 560-0272 Hose, Breather, Formed, 2020-up KRX Models
   e. 560-0325 Performance Package, Turbo Kit, Electronic, Gasket, Engine Internals, 2020-up KRX Models
      i. 551-1699 Gasket, Exhaust Manifold, 2020-up KRX Models *QTY 2*
      ii. 560-0281 Sprocket, Cam, 10 deg offset, 2020-up KRX Models *QTY 2*
      iii. 560-0274 Sensor, MAP, 3 Bar, 2020-up KRX Models
      iv. 560-0275 Tube, MAP Sensor, Formed, Black, Epichlorohydrin Polymer, Duro 75, 2020-up KRX Models
      v. 560-0273 Harness, Wiring, Intercooler Fan, 2020-up KRX Models
      vi. 570-0052 Relay, 12 V, 5 Pin, CM Series
      vii. 550-0375 Adapter, Oxygen Sensor, 12mm to 18mm Stainless Steel

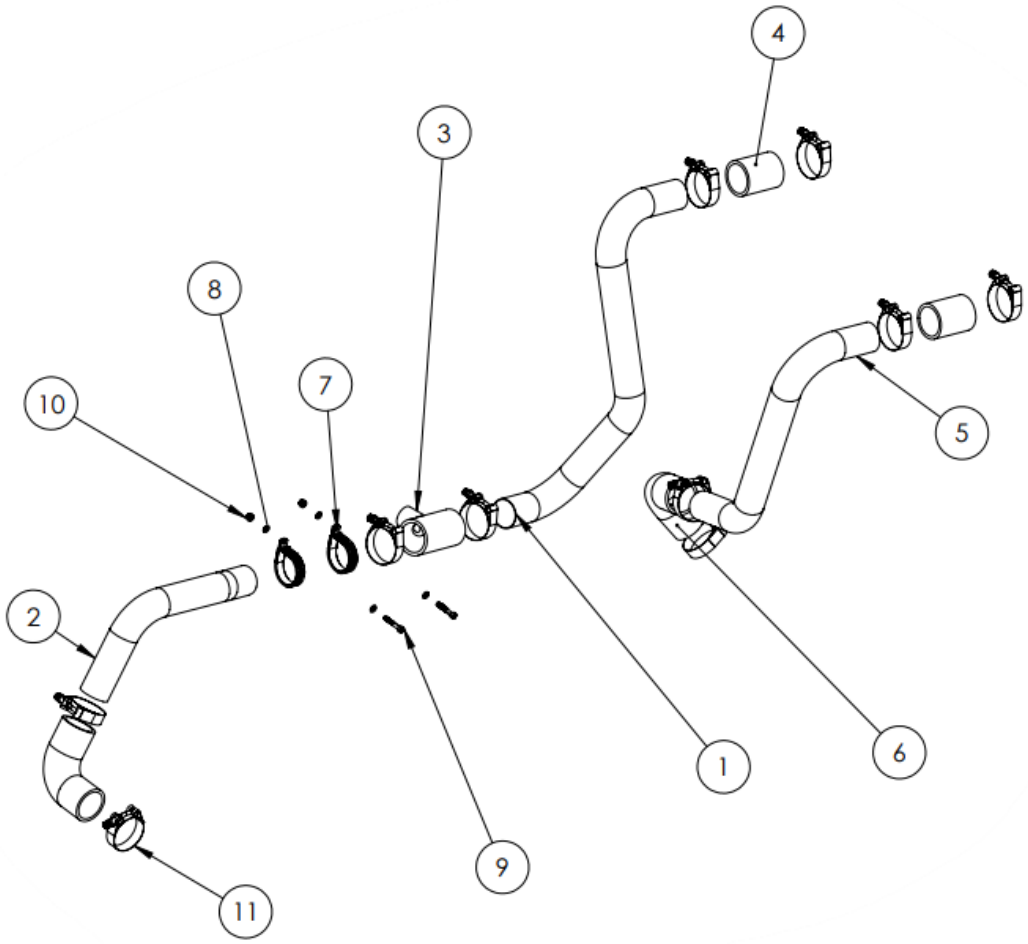
viii. 551-1771 Gasket, Muffler, 2020-up KRX Models
ix. 551-1770 Gasket, V-Band, 3", 2020-up KRX Models
x. 560-0282 Spark Plug, 10mm, HR 10, 2020-up KRX Models *QTY 2*
xi. 500-1653 Hose, 3/16"ID x 9"L, Buna-N Rubber
xii. 500-1551 Plug, Kit, Brass, 2020-up KRX Models
1. 500-1533 Plug, .230" x .375", Brass *QTY 12*
xiii. 50-8124-S Fitting, Hose, Tee, Male, 1.94" x .1875", White, Nylon
xiv. 560-0317 Hose, 3⁄16"ID x 18"L, Buna-N Rubber
xv. 500-1542 Check Valve, .1875", Nylon
xvi. 570-0051 PV3, Calibration, Turbo, 10psi, 2020-up KRX Models
f. 560-0328 Clamp, Kit, Turbo Kit, 2020-up KRX Models
i. 500-1477 Clamp, Hose, Band Style, Lined, 57-65mm ID *QTY 13*
ii. 500-1478 Clamp, Hose, Band Style, Lined, 83-91mm ID
iii. 500-1479 Clamp, HOse, Worm Drive, Lined, SAE #16 *QTY 3*
iv. 500-1480 Clamp, P Style, 2" ID QTY 2
v. 560-0318 Clamp, Hose, Band Style, 65-75ID QTY 4
vi. 500-1490 Clamp, P-Style, 5⁄8" ID QTY 2
vii. 500-1553 Clamp, Spring-Band, Constant Tension, 13/16"
viii. 500-0990 Cable, Tie, 11.3", Black *QTY 10*
ix. 50-8003 Cable, TIe, 1⁄16" x 3", Black, Nylon *QTY 20*
x. 500-1555 Clamp, Snap, 9⁄16", Plastic
g. 560-0329 Tube, Kit, Oil, Turbo, 2020-up KRX Models
i. 160-0235 Adapter, Oil FIll, Aluminum, 2020-up KRX Models
ii. 560-0270 Nut, Oil Fill, Aluminum, 2020-up KRX Models
iii. 500-1489 FItting, 1⁄2" NPT, x 5⁄8" Barb, Brass
iv. 500-1491 Fitting, Barbed, 1⁄2" x 1", Black, Plastic
v. 500-1487 O-Ring, -126, 1.362"ID x 1.568" OD, Viton
vi. 500-1596 Fitting, 1/2" BSPT x 1/4" NPT, Aluminum
vii. 500-1598 Fitting, M12 x 1.5mm x AN4, Stainless Steel
viii. 500-1597 Fitting, 1/4" NPT x AN4, Zinc Plated, Steel
ix. 500-1599 Washer, Sealing, M12, Copper
x. 500-1629 Hose, High Temperature, 5/8" ID x 5", Black, Textile Reinforced
xi. 500-1488 O-Ring, -17, .676" ID x .816" OD, Viton
xii. 560-0269 Tube, Oil, Turbo Drain, 2020-up KRX Models
xiii. 160-0236 Tube, Oil, Turbo Supply, 2020-up KRX Models
xiv. 560-0292 Clamp, Spring-Band, Constant Tension, 15⁄16" *QTY 2*
xv. 500-1556 Clamp, P-Style, Vibration Damping, 1⁄4" ID *QTY (1-2)*
h. 551-1773 Heat Shield, Exhaust, Turbo, Laser Cut, Stainless Steel, 2020-up KRX Models
i. 560-0324 Performance Package, Turbo Kit, Box C, Engine Internals, Exhaust, Fuel System, Charge Tube, 2020-up KRX Models
i. 560-0337 Intercooler, Assembly, 2023-up KRX4 Models
1. 170-0658 Intercooler, 8" x 18" x 3.5", 2020-up KRX Models
2. 560-0336 Shroud, Intercooler, Powdercoated, Denim Black,2023-up KRX4 Models
3. 560-0311 Guard, Intercooler, Powdercoated, Denim Black, 2020-up KRX Models
4. 500-1482 Bumper, Adhesive, 3⁄4" OD x 5⁄32" H, Polyurethane Rubber *QTY 8*
5. 560-0320 Bumper, Adhesive, 11⁄16" OD x 3⁄8" H, Polyurethane Rubber *QTY 6*
6. Decal, Caution Hot, 2020-up KRX Models

ii. 920-0157 Piston, Set, Standard, Forged, Gapped, 9.0:1 Compression, 2020-up KRX Models
iii. 170-0702 Valve, Kit, Blow-off, Black, Aluminum
iv. 170-0791 Tube, Intercooler to BOV, Stainless Steel, 2023-up KRX4 Models
v. 170-0790 Tube, Turbo to Intercooler, Stainless Steel, 2023-up KRX4 Models
vi. 170-0731 Tube, Air Filter to Turbo, Stainless Steel, 2020-up KRX Models
vii. 170-0732 Tube, BOV to Plenum, Stainless Steel, 2020-up KRX Models
viii. 170-0789 Brace, Intercooler, Powdercoated, Denim Black, 2023-up KRX4 Models
ix. 560-0267 Clamp, Intercooler Brace, 2020-up KRX Models
x. 560-0310 Bracket, Roof, Powdercoated, Denim Black, 2020-up KRX Models
xi. 5650-0330 Fuel System, Kit, Turbo Kit, 2020-up KRX Models
    1. 560-0276 Fuel Injector, Set, w/ Adapters, 85lb/hr 2020-up KRX Models
    2. 560-0277 Fuel Rail, High Flow Injectors, Machined, Aluminum, 2020-up KRX Models
    3. 560-0278 Damper, Fuel, ⅜" NPT
    4. 500-1493 Fitting, M12 x 1.5 x 5/16" Quick Connect
    5. 560-0291 Filter, Gas, In-Tank, 2020-up KRX Models
    6. 500-1552 Sealant, Thread, Loctite, 567, .2oz
    7. 500-1486 Washer, Sealing, M12, Aluminum
    8. 510-0870 Decal, S&S® Off Road, 2" x 3"
    9. 510-0871 Decal S&S® Off Road, 4" x 6"
    10. 510-0895 Publication, Instruction Sheet, Fuel System Kit, 2020-up KRX Models
xii. 560-0316 Fan, Intercooler, Modified, 7.5", 12 V *QTY 2*
xiii. 560-0279 Gasket, Head, 2020-up KRX Models
xiv. 560-0280 Gasket, Base, 2020-up KRX Models
xv. 170-0669 Tube, Exhaust, Turbo, Weldment, 2020-up KRX Models
xvi. 560-0339 Bracket, Intercooler, Powdercoated, Denim Black, 2023-up KRX4 Models

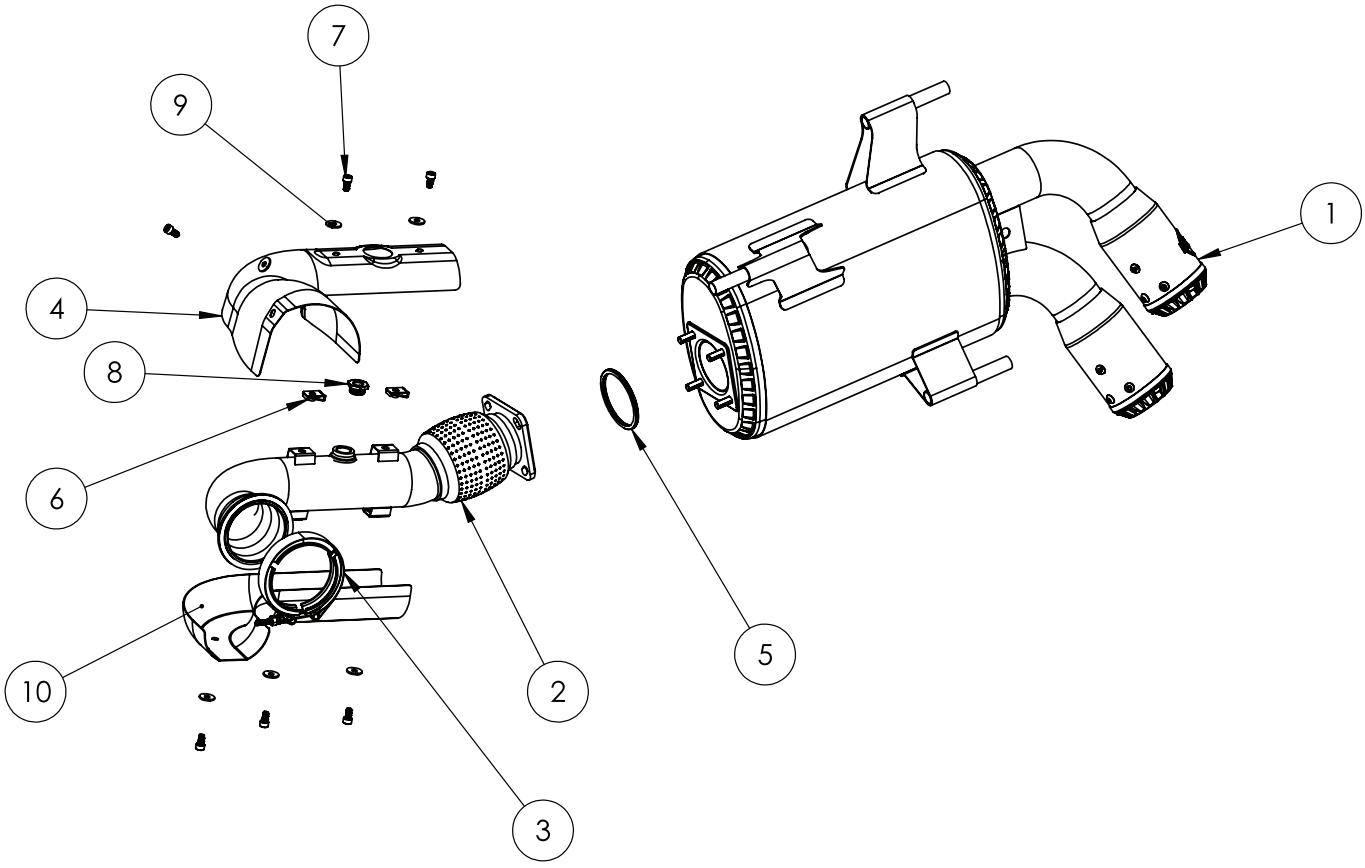
1. Plenum, Intake, Rotomolded, 2020-up KRX Models **170-0663**
2. Bracket, Plenum, Lower, 2020-up KRX Models.....**170-0666**
3. Plenum, Upper, Weldment, 2020-up KRX Models **560-0309**
4. Coupler, 2.5"ID x 3"Length, Black, Silicone.....**170-0683**
5. Screw, SHC, M6 x 12mm L, 1mm Pitch **LFT-0320**
6. Clamp, T-Bolt, Lined, 67-75mm ID.....**560-0318**



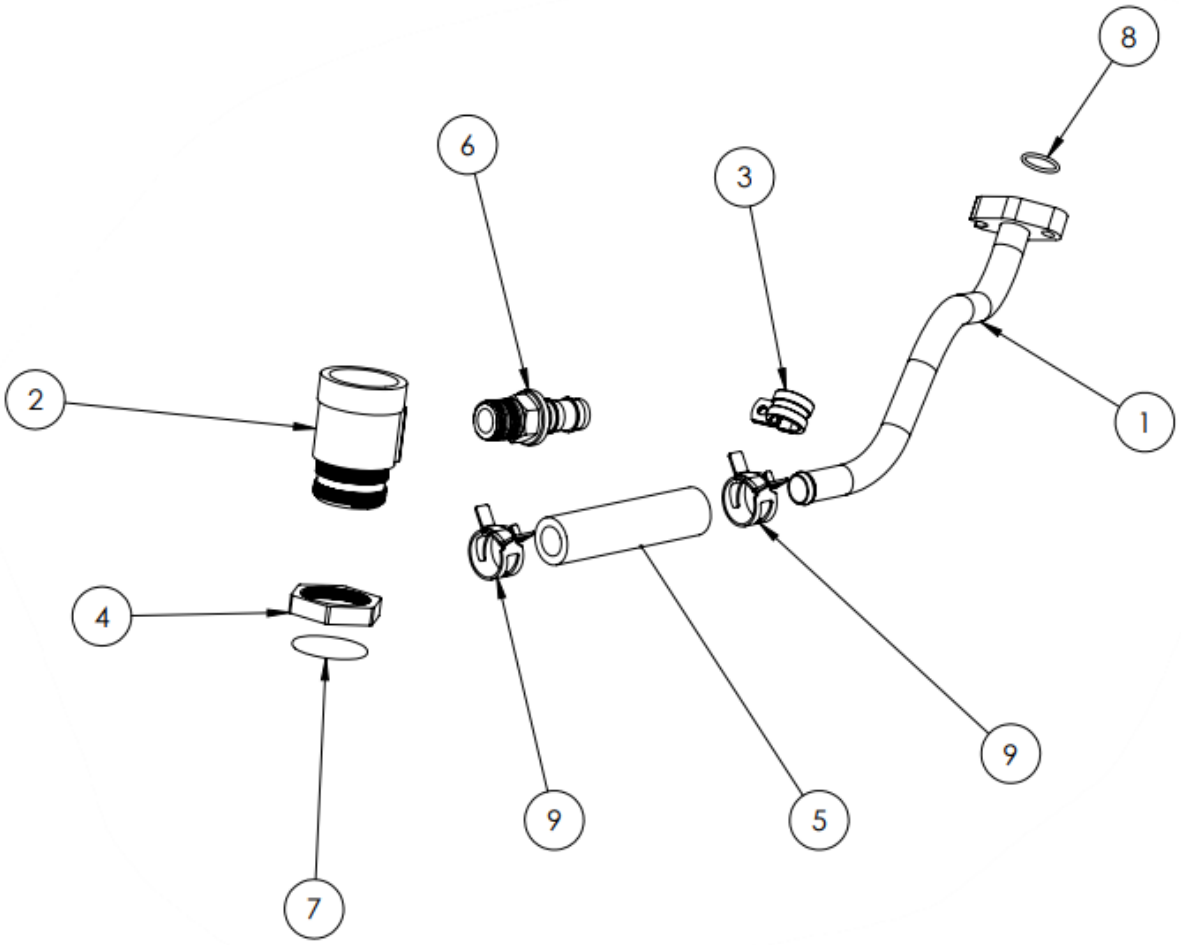
1. Tube, Intercooler to BOV, Stainless Steel, 2023-up KRX4 Models **170-0791**
2. Tube, BOV to Plenum, Stainless Steel, 2020-up KRX Models **170-0732**
3. Coupler, T-Hose, 2.00" ID x 1" ID Branch, Silicone, Black **500-1476**
4. Coupler, 2" ID x 3" Length, Black, Silicone **170-0682**
5. Tube, Turbo to Intercooler, Stainless Steel, 2023-up KRX4 Models **170-0790**
6. Coupler, 90 deg, 2" ID, Silicone, Black **500-1475**
7. Clamp, P Style, 2" ID **500-1480**
8. Washer, Flat, M6, Zinc **500-0272**
9. Screw, SHCS, M6 x 1.0 x 40mm **LFT-0959**
10. Nut, Lock, Flanged, Nonmarring, Nylon Insert, Class 8, M6 x 1, Zinc Plated, Steel **LFT-0334**
11. Clamp, Hose, Band Style, Lined, 57-65mm ID **500-1477**



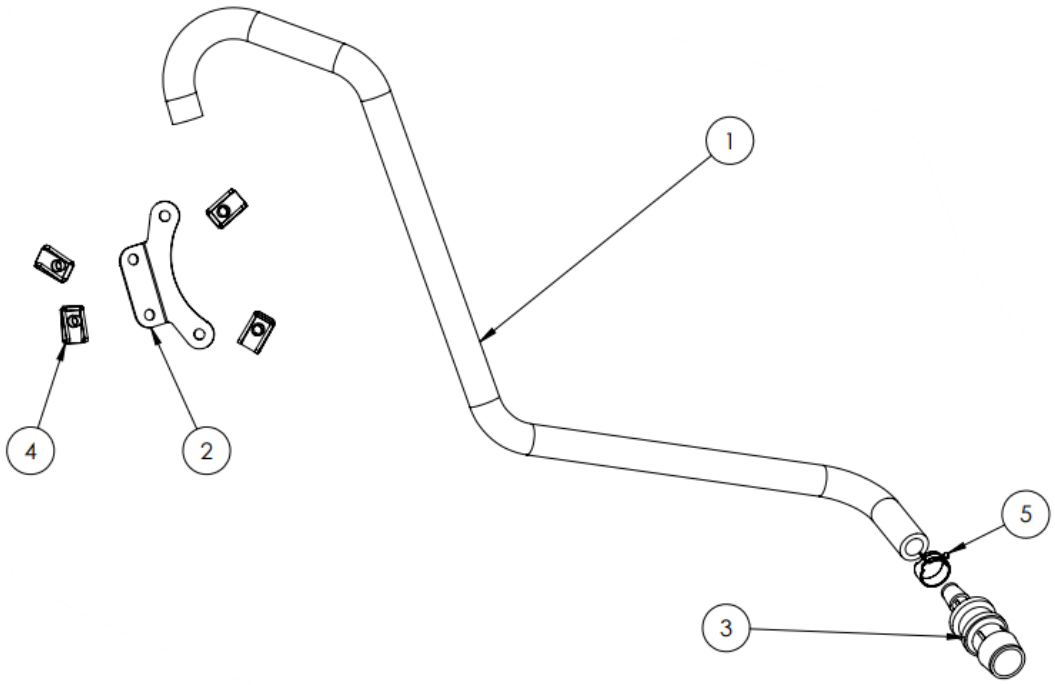
1. Muffler, Kit, Power Tune XTO, Race Only, KRX **550-1044**
2. Tube, Exhaust, Weldment, 2020-up KRX Models **170-0669**
3. Clamp, V-Band, 3", Stainless Steel **500-1483**
4. Heat Shield, Exhaust, Turbo, Laser Cut, Stainless Steel, 2020-up KRX Models..... **551-1773**
5. Gasket, Muffler, 2020-up KRX Models **551-1771**
6. Nut, Clip-On, M6, Stainless Steel..... **500-1134**
7. Screw, SHC, M6 x 12mm L, 1mm Pitch **LFT-0320**
8. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel ... **550-0375**
9. Washer, M6 x 1.5mm, Zinc..... LFT-1307
10. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel . **550-0375**



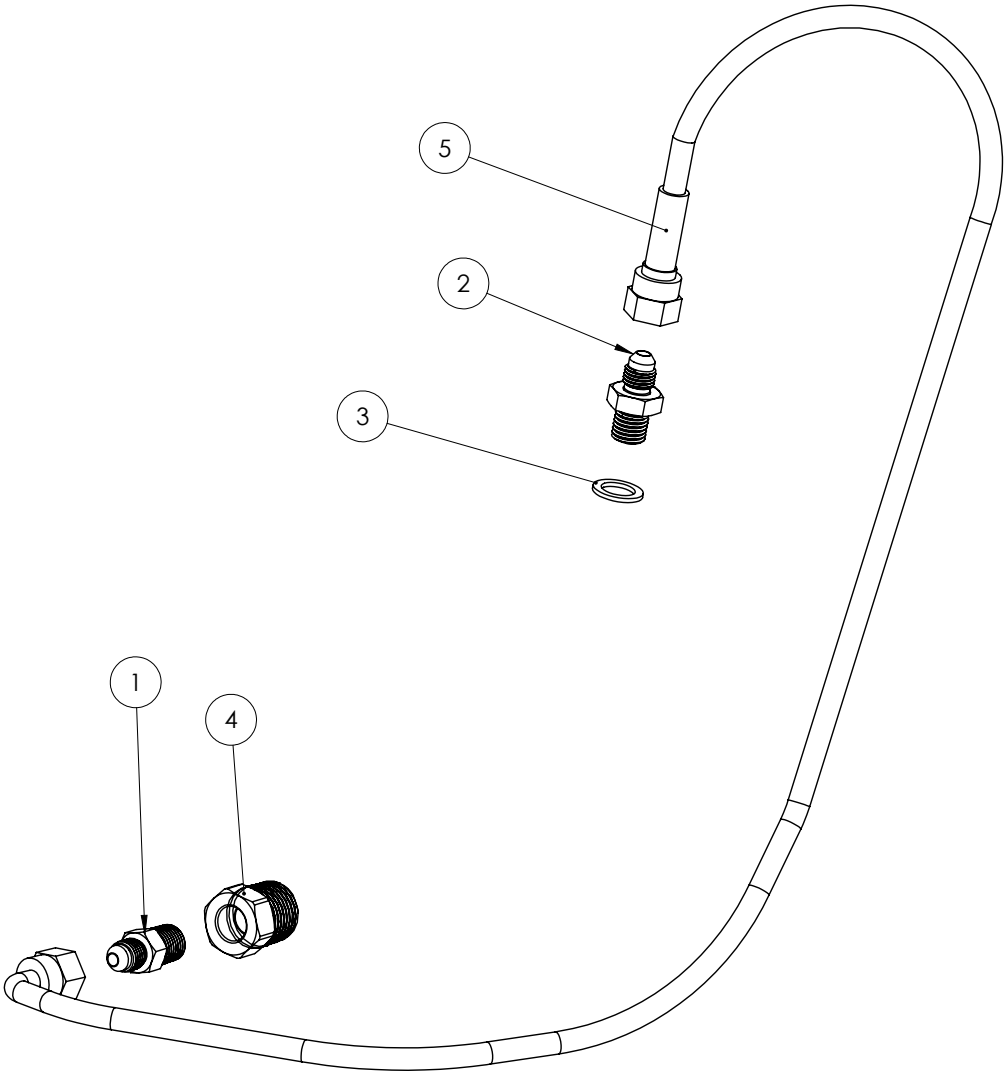
1. Tube, Oil, Turbo Drain, 2020-up KRX Models **560-0269**
2. Adapter, Oil Fill, Aluminum, 2020-up KRX Models **160-0235**
3. Clamp, P-style, 5/8" **500-1490**
4. Nut, Oil Fill, Aluminum, 2020-up KRX Models **560-0270**
5. Hose, 5/8" ID x 4" L, Black, Textile Reinforced **560-0290**
6. Fitting, 1/2" NPT x 5/8" Barb, Brass **500-1489**
7. O-ring, (-126), 1.362" ID x 1.568" OD, Viton® **500-1487**
8. O-ring, (-017), .676" ID x .816" OD, Viton® **500-1488**
9. Clamp, Spring-Band, 15/16" **560-0292**

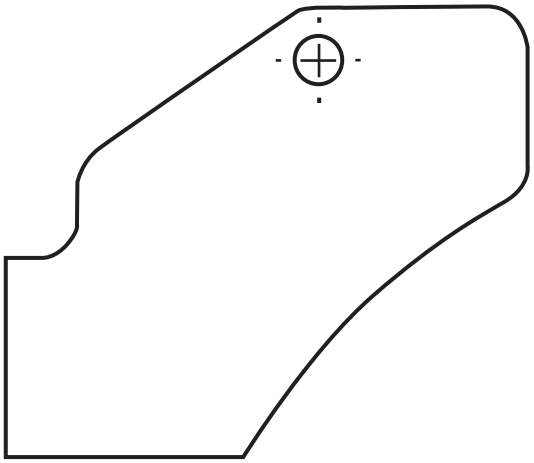


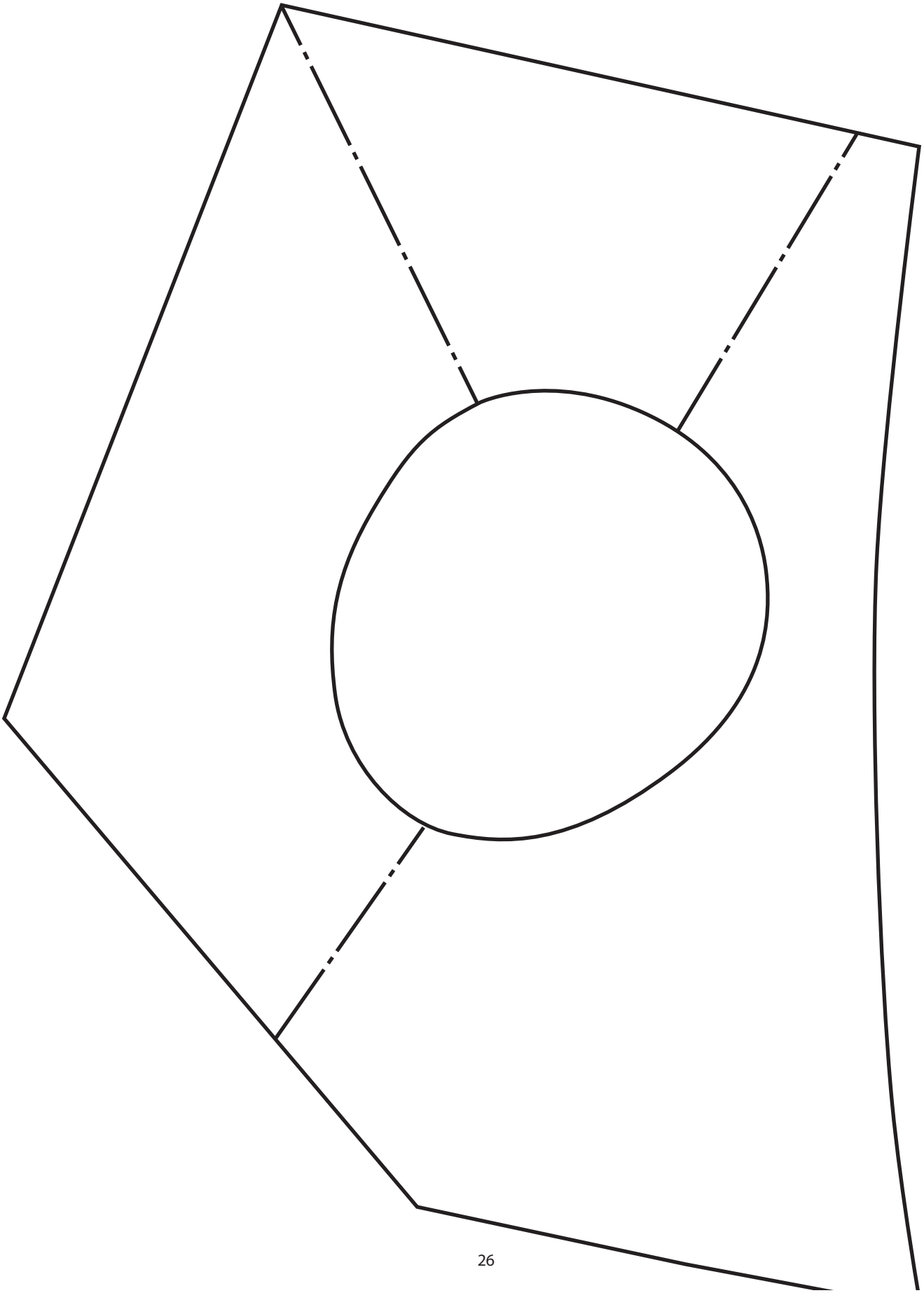
1. Hose, Breather, Formed, 2020-up KRX Models **560-0272**
2. Bracket, Breather, Stainless Steel, 2020-up KRX Models **560-0271**
3. Fitting, Barbed, Black, Plastic. **500-1491**
4. Nut, Clip-On, M6, Stainless Steel. **500-1134**
5. Clamp, Spring-Band, Constant Tension, 13/16". **500-1553**

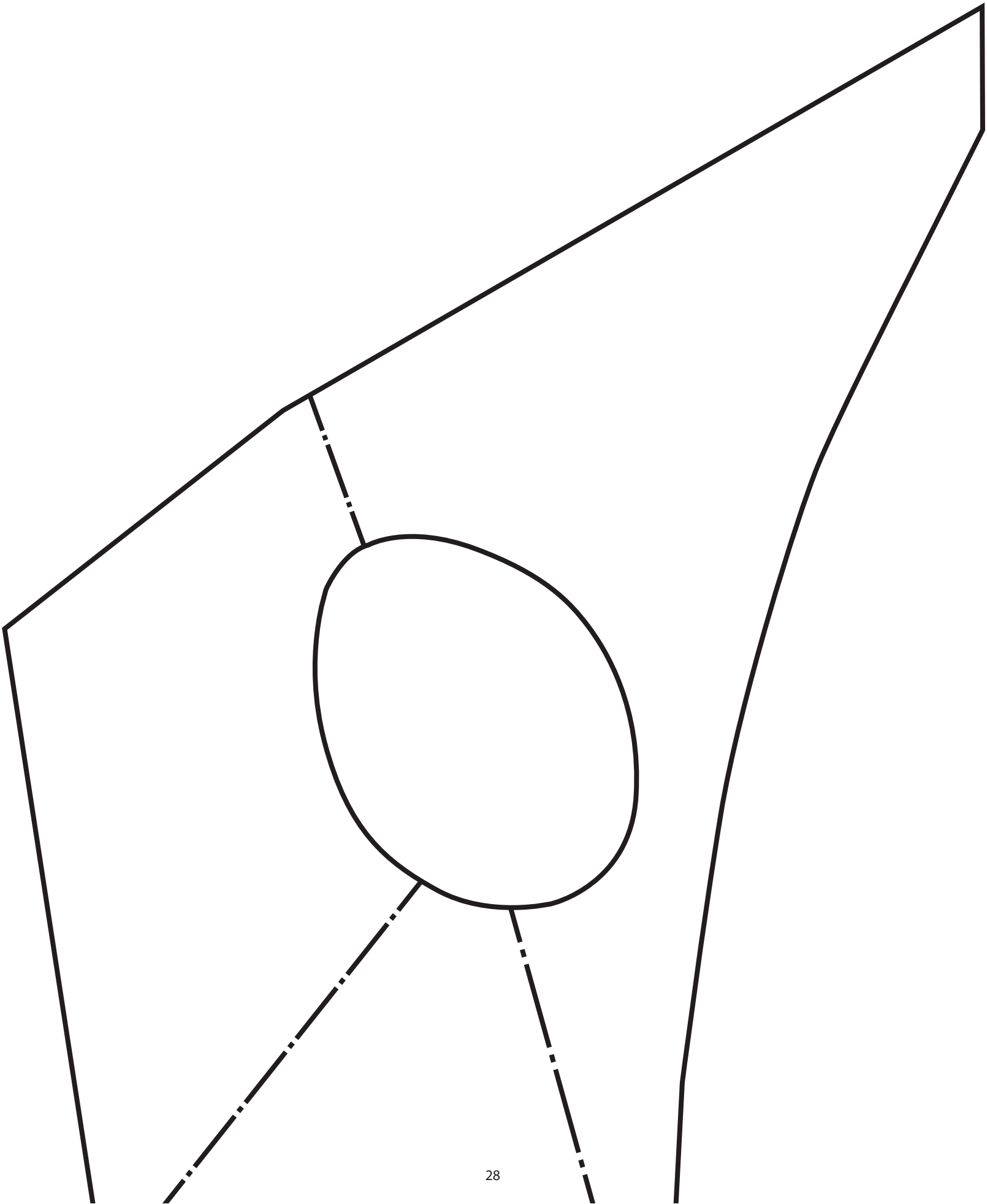


1. Fitting, 1/4" NPT x AN4, Zinc Plated, Steel **500-1597**
2. Fitting, M12 x 1.5mm x AN4, Stainless Steel **500-1598**
3. Washer, Sealing, M12, Copper **500-1599**
4. Fitting, 1/2" BSPT x 1/4" NPT, Aluminum **500-1596**
5. Hose, Oil, Turbo Supply, 2020-up KRX Models. **160-0236A**









Calibration Installation: Power Vision 3

DISCLAIMER:

S&S parts are designed for high performance applications and are intended for the very experienced rider only. The installation of S&S parts may void or adversely affect your factory warranty. In addition such installation and use may violate certain federal, state, and local laws, rules and ordinances as well as other laws when used on motor vehicles used on public highways, especially in states where pollution laws may apply. Always check federal, state, and local laws before modifying your vehicle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties, and risks associated therewith.

SAFE INSTALLATION AND OPERATION RULES:

- Before installing your new S&S parts:
- All torque specifications and assembly procedures are critical. Failure to follow the instructions may result in catastrophic failure of the engine or other components
- Gasoline is extremely flammable and explosive under certain conditions and toxic when breathed. Do not smoke. Perform installation in a well ventilated area away from open flames or sparks.
- If the vehicle has been running, wait until engine and exhaust pipes have cooled down to avoid getting burned before performing any installation steps.
- Disconnect battery to eliminate potential sparks and inadvertent engagement of starter while working on electrical components.
- Read instructions thoroughly and carefully so all procedures are completely understood before performing any installation steps. Contact S&S with any questions you may have if any steps are unclear or any abnormalities occur during installation or operation of a vehicle with a S&S part on it.
- Consult an appropriate service manual for your vehicle for correct disassembly and reassembly procedures for any parts that need to be removed to facilitate installation.
- Use good judgment when performing installation and operating the vehicle. Good judgment begins with a clear head. Don't let alcohol, drugs or fatigue impair your judgment. Start installation when you are fresh.
- Be sure all federal, state and local laws are obeyed with the installation. For optimum performance and safety and to minimize potential damage to carb or other components, use all mounting hardware that is provided and follow all installation instructions.
- Exhaust fumes are toxic and poisonous and must not be breathed. Run vehicles in a well ventilated area where fumes can dissipate.
- Some factory hardware and components will be reused. Retain all hardware until installation is complete and proper operation has been verified.
- Foreign debris such as dust and dirt can cause excessive wear and possible failure of engine components. Thoroughly clean the vehicle before beginning installation.

Overview-

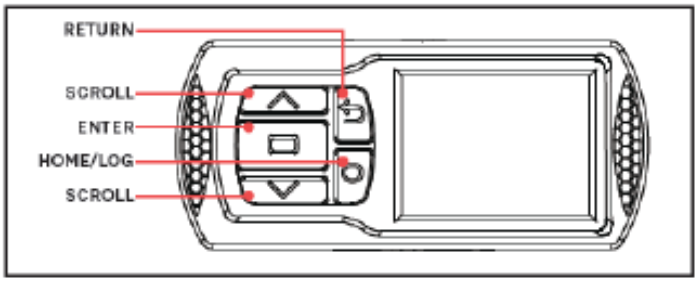
The included Power Vision 3, (PV3) unit has been preloaded with the Tune File for your turbocharger kit. These instructions will cover the steps to connect the PV3 and flash the correct Tune File into your vehicle's ECU.

The PV3 has the following features-

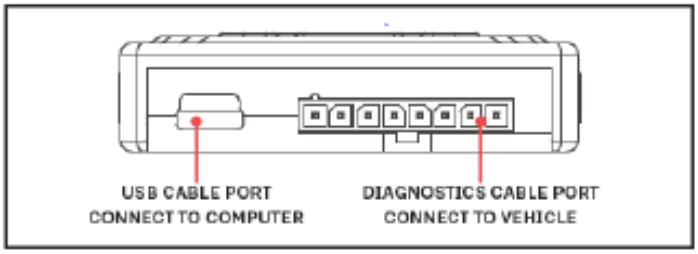
- Flashing Tune Files
- Gauges display & Data Logging
- Access to diagnostic data
-

Controls and connections of the Power Vision are shown in Figure 1

Figure 1:



POWER VISION OVERVIEW—FRONT VIEW



POWER VISION OVERVIEW—SIDE VIEW

Installing the PV3

Note- Loading the Tune File will require the vehicle to be keyed on for a few minutes. If the battery is low or weak it is recommended a battery charger be connected during the Tune File loading process.

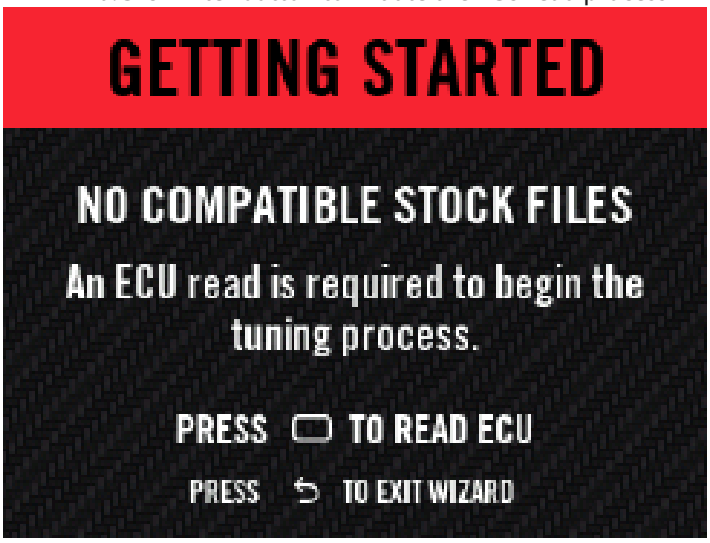
Note- The PV3 does not need to be mounted to the vehicle.

Caution- If you choose to mount the PV3 make sure the PV3 and included diagnostic cable will not interfere with the operation and/or steering of the vehicle.

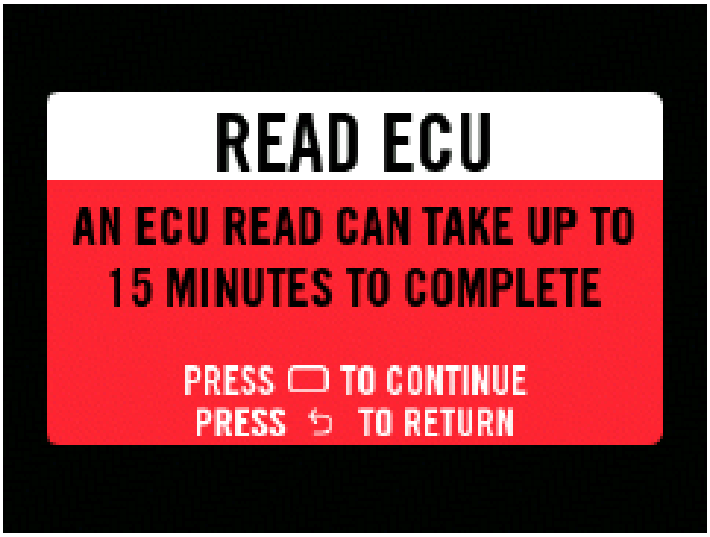
Connecting the PV3 Attach the diagnostic cable to the diagnostic port on the PV3 and to the 6 pin diagnostic port on the vehicle. The vehicle diagnostic port can be found inside of the cab, The port is below the dash near the gas pedal.

Getting Started

1. Connect the PV3 to the vehicle.
2. Once connected, turn the key on and wait a moment for the PV3 to power up and display the Getting Started Screen
   a.Click Enter button to initiate the ECU read process



3. Click the Enter button to Continue **Read ECU**. Note that this may take up to 15 minutes.

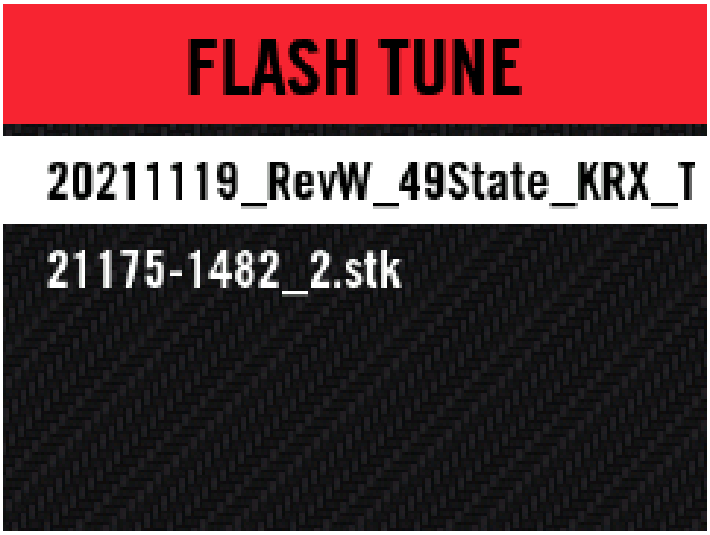


4. PV3 will indicate **READ SUCCESSFUL** when the ECU Read has been completed. Press Return button.

5. PV3 will now show the Ready To Flash screen. Click Enter button

6. The next screen to appear is the Flash Tune Screen. All S&S Tune files are denoted by a part number followed by a tune file description. Two tunes should be present, one will be the recently read stock file and the other will be the applicable S&S tune for your vehicle.

7. On the PV3 unit, use the up/down arrows to highlight the correct tune file PN for your application and then hit the Enter button.



8. The PV3 will now ask to pair to your vehicle. This is required to flash the tune, so press enter to pair.

9. Once the tune file is selected, the TUNE INFO screen will appear. This screen gives the full description of the tune file. Ensure description matches the configuration of your vehicle and then hit Enter to start ECU Flash.

10. The PV3 will ask if you want to flash with the selected tune file. Press enter to flash.

11. The PV3 will go through the Tune Writing process then display Flash Complete screen

At this point the tune file has successfully been flashed to the vehicle's ECU. Turn the ignition key off for at least ten seconds to complete the process.

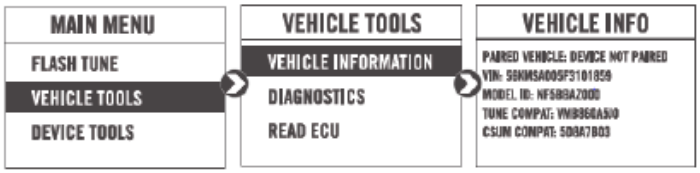
Accessory Functions in Power Vision

The following steps cover the accessory menus and options available in your Power Vision

Viewing the Vehicle Information-

This menu allows you to view the device status (paired/not paired), VIN #, Model ID, ECU serial number, tune compat, and checksum compat.

Select **Vehicle Tools>Vehicle Information**

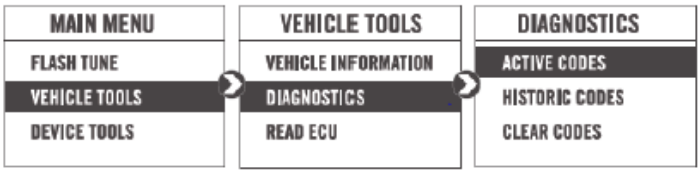


Viewing Diagnostic Codes-

This menu allows you to read and clear diagnostic troubl codes.

1. To read codes, select Vehicle Tools>Diagnostics>Active Codes

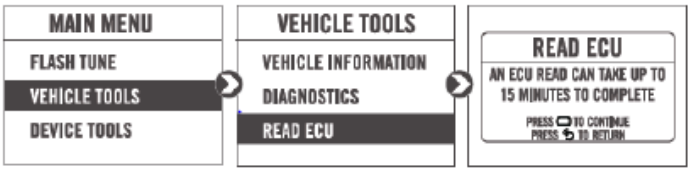
2. To clear codes, select Vehicle Tools>Diagnostics>Clear Codes



Reading the ECU-

This menu allows you to read the ECU. This process takes about fifteen minutes.

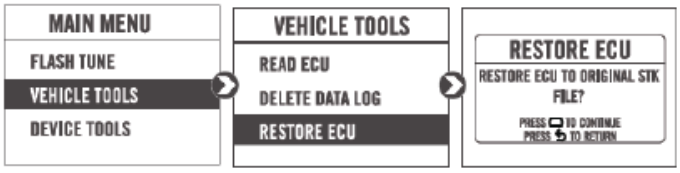
Select **Vehicle Tools>Read ECU**



Restoring the ECU-

This menu allows you to restore the ECU. Use Restore ECU if the device does not complete the flash or if your vehicle will not start.

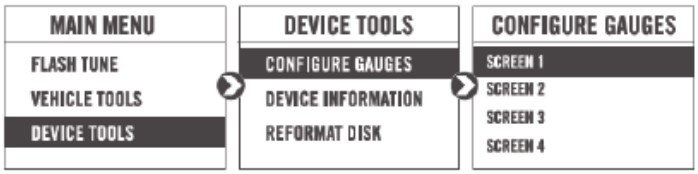
Select **Vehicle Tools>Restore ECU**

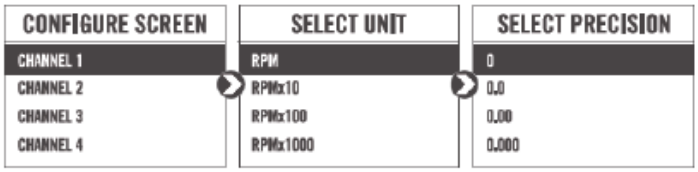


Configuring Gauges-

This menu allows you to configure up to four different gauge screens. Each gauge screen has four configurable channels.

1. From the Main Menu, select Device Tools>Configure Gauges
2. Select a gauge screen and press Enter
3. Select a channel and press Enter
4. Select a channel from the list and press Enter
5. Select the precision or units for that channel and press Enter
6. Continue setting up the remaining channels as desired
7. Continue configuring the remaining gauge screens as desired

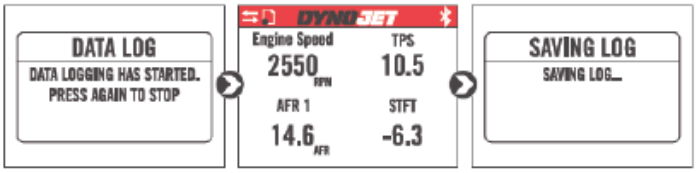


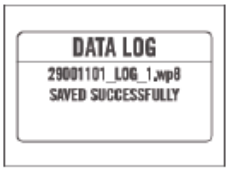


Logging Data

1. Press the Log button to begin logging. The Power Vision screen will illuminate a bright red banner across the top when logging
2. Press the Log button again to stop logging
3. Use the Power Core software to view log files

Snapshot Log: Press and hold the Log button for two seconds to record the previous two minutes of operating time.

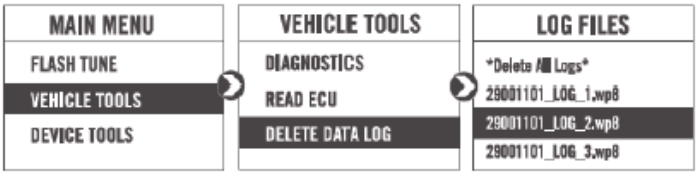




Deleting Data Logs

This menu allows you to delete data logs.

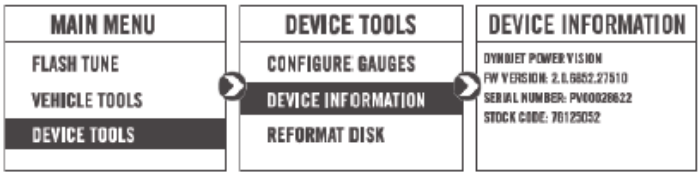
1. Select **Vehicle Tools>Delete Data Log**
2. Select a specific log to delete or select *Delete All Logs*



Viewing Device Information

This menu allows you to view the device firmware version, serial number, and stock code.

Select **Device Tools>Device Information**

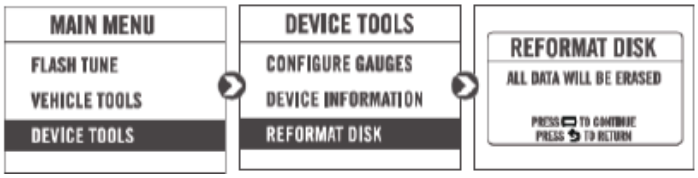


Reformatting the Disk-

This menu allows you to reformat the disk and erase all data.

Warning: Reformatting will erase all of the preloaded calibrations on your device. DO NOT perform this function unless advised to do so by S&S Cycle technical support.

Select **Device Tools>Reformat Disk**

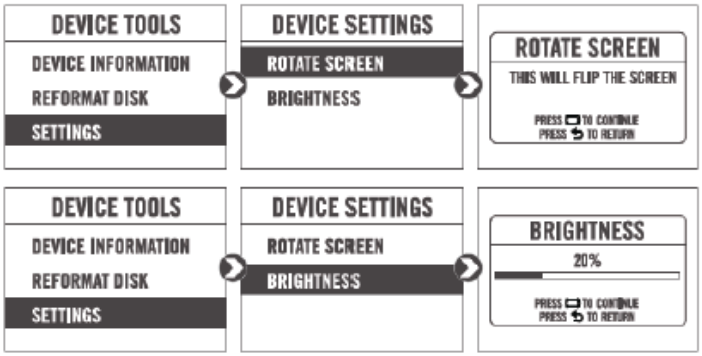


Changing the Settings

This menu allows you to rotate the screen allowing you to change the orientation of the Power Vision device along with adjusting the screen brightness.

Select **Device Tools>Settings>Rotate Screen** to flip the screen.

Select **Device Tools>Settings>Brightness** to change the screen brightness.



Updating the Device-

This menu allows you to update the device with the latest firmware.

1. Go to www.dynojet.com/PowerVision.
2. From the top navigation menu, select Support>Downloads.
3. Select Power Vision 3.
4. Download the Power Vision 3 Firmware
5. Save the file to your device.
6. Select Device Tools>Update Device

Warning: Your Power Vision was preloaded with the latest firmware at the time of programming. Do not perform a device update unless advised to do so by S&S Cycle Technical Support.