JACKSON RACING

HONDA TALON TURBO

2019-2022 Honda Talon SXS
Jackson Racing Turbocharger System
Installation Manual

v1.7

General Information

Jackson Racing Turbocharger Systems are designed to be installed by a professional mechanic with a complete tool selection. If you have decided to complete the installation on your own, please be sure that you have the tools to handle the installation and ability to follow all instructions completely.

Please review the complete instruction manual before starting your installation. Please follow the instruction manual step by step and do not skip ahead.

Please refer to the Honda Service Manual for all safety procedures. The Honda Talon Service Manual is highly recommended and can be ordered online from http://www.helminc.com

Many stock parts are reused/reinstalled during installation. Do not damage or discard any pieces during disassembly or installation. We recommend marking any hose or wire before disconnecting to avoid confusion during reassembly.

Always wear safety glasses while working on your Talon.

You will be working around gasoline vapors. Keep all cigarettes, sparks and flames away while working around gasoline and fuel-related parts.

Jackson Racing Turbocharger Systems require **Premium grade (91+ Octane R+M/2)** gasoline. Fuel quality is very important in a high-performance application, so remember to only use a “Top Tier” gasoline. Before performing this installation make sure the fuel tank is empty of regular grade gasoline. The Jackson Racing ECU calibration is programmed for “Premium” unleaded gasoline. The ECU calibration is NOT programmed for non-street legal racing fuel, E85, or Methanol based fuels.

Do NOT use Octane Boosters in your fuel system. Octane Boosters will damage your spark plugs and your oxygen sensors when mixed incorrectly. Use of incompatible fuel that is not EPA/CARB compliant fuel can cause poor engine performance and can cause catastrophic engine failure that will not be covered under warranty.

Never fuel starve a forced induction engine or catastrophic engine damage will occur. Fuel starve detonation happens very quickly. Be aware of your fuel level.

Do not wrap the header tubes with any type of insulation. This will damage your header and will not be covered under warranty.

Do not tamper with the exhaust system beyond what is supplied in this turbocharger system. Any change to the exhaust system will cause catastrophic engine failure. Engine failures are not covered under Jackson Racing warranty. Jackson Racing is not responsible for any engine damage.

General Information

Required Specialty Tools:

- 12-Point Sockets (10mm and 12mm)
- Torque Wrench
- 24mm Wrench or Socket
- 27mm Wrench
- 32mm Wrench
- Push Pin Puller (Honda Part # 07AAC-SJAA100)

Hose Clamps: This Talon Turbo Kit comes with high quality, stainless steel hose clamps used by top race teams around the world. Gently tighten the hose clamp until the clamp stops taking input easily. At that point they are fully tightened. Do not over tighten these clamps or you will damage the clamps.

General Information

Model Identification:
HL6: 2 Seat Model
HL7: 4 Seat Model
DLX: Fox Live Valve
A Type: U.S. (49 State)
AC Type: California EVAP (Other 49 states included)

If you do not know your model identification, you can check on your ECU. The engine ECU can be found underneath the driver's seat on HL6 and under driver's side rear passenger seat on HL7. An "A" or "AC" identifier will be located on the ECU identification label.

Emissions Control Systems:
The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Environmental and Climate Change Canada (ECCC) require that Recreational Utility Vehicles comply with applicable exhaust emissions standards during their useful life.

You may not remove or disable any device or element of design that may affect an engine's emission levels.

Emissions Tampering Includes:

1. Removal of, or puncturing the muffler, baffles, header pipes, or any other component which conducts exhaust gases.
2. Removal of, or puncturing of any part of the intake system.
3. Lack of proper maintenance.
4. Removing or disabling any emissions compliance component, or replacing any compliance component with a non-compliance component.

Your Jackson Racing Turbocharger System carries a CARB EO#. Any tampering beyond the included components will violate the above emission laws.

Product Registration:
Register your turbocharger system to qualify for warranty and to receive the latest updates.
Visit: talon.jacksonracing.com/support/product-registration/

Technical Support:
Please contact Jackson Racing for any questions and concerns during your installation.
support@jacksonracing.com
909-927-8500 x2

Disassembly of Stock Components

1. Remove the battery cover located under the driver side rear wheel. Disconnect both positive and negative battery cables from the battery.

2. Remove the rear cargo area cover to gain access to the air filter area and the engine. NOTE: For better light during the install, we recommend temporarily removing the roof during installation.

3. HL6: Remove both the driver and passenger side seat bases. HL7: Remove both rear passenger seat bases. Remove by lifting the lever in the front of the seat and lift straight out.

4. Remove the 12mm headed bolts/nuts that hold both the driver side and passenger side seat assembly to the chassis and remove the seat assemblies. This will give you access to the plastic panel behind the seat.

5. Remove the plastic clips that hold the center console in place. These clips are the type that you push in the center pin to release them. Remove the one Allen head bolt from the behind the driver side seat and the one 10mm hex head bolt from the engine compartment side of the driver side plastic. Remove the remaining pull-type plastic clips from the lower plastic panel that is directly behind where the driver/passenger seats were located.

6. Remove the plastic panel and you will find the alternator cover on the front of the engine. It has a 24mm hex cover that protects the center alternator bolt. You will be removing this cover to make room for the oil return fitting from the turbo in a later section. Thoroughly clean this area of debris before removing the center nut so no dirt gets inside the engine.

7. Loosen the two Phillips head/7mm screws that hold the air filter hose clamps to the two throttle body hoses at the throttle body. They are easily accessible from the driver side rear wheel opening.

8. Remove the 11 plastic clips that hold the passenger side inner fender that goes up and over the right rear shock assembly. 2 clips are on the outside of the fender flare and 9 are inside the fender. This cover protects the air filter from debris. With the inner fender removed you can now remove all the plastic clips that holds the air filter snorkel to the tab on the upper inner fender area and all the remaining rubber panels.

9. While under the passenger side fender loosen the hose clamp that connects the air filter snorkel to the main air filter assembly. Remove the air filter snorkel from the passenger side inner fender area at this time. Remove the bracket that is mounted to the bottom of the stock air box assemble and the exhaust heat shield. These parts will not be reused.

10. From the rear tray area remove the clips that hold the air box lid and set it aside. Remove the three 10mm headed bolts that mount the air filter assembly to the chassis. Remove the air temperature sensor wiring harness from the air temperature sensor on back of the air box. Remove the valve cover vent tube from the back of the air box. And lastly remove the air box drain hose from the driver side of the air box where it attaches to the chassis. Lift the air filter box assembly from the vehicle. Put a clean shop towel over the throttle body openings so that no debris can fall into the throttle bodies while you are working in the engine compartment.

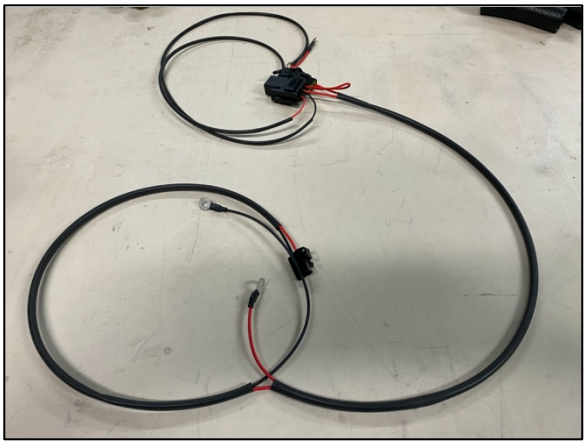
11. Remove the two 10mm headed hex bolts that hold the exhaust header heat shield to the chassis. This part will not be reused. Remove the two 12mm muffler bolts/springs that hold the stock muffler assembly to the exhaust header. Remove the 4 Acorn

nuts/washers from the head pipes where they mount to the cylinder head. Do not lose these special washers and nuts. They will be reused in the turbo installation. Lube the rubber isolator mount where it attaches to the stock exhaust header and remove the exhaust header. Save all header hardware for the installation of the turbo header.

Intercooler Fan Wiring Harness Installation

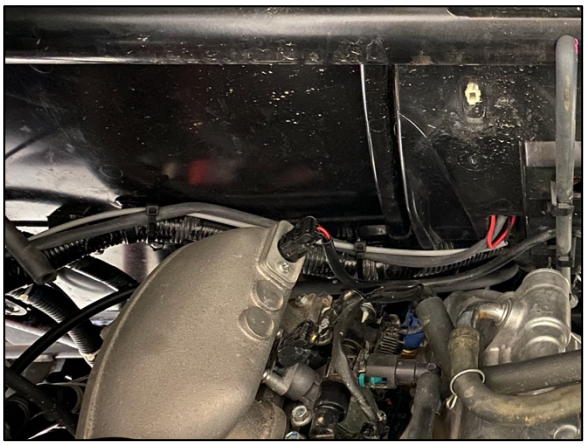
12. We will be installing the Intercooler fan wiring harness first. This fan harness will pull its power source directly from the battery via a 30A relay and a 20A fuse system. The system is triggered by the ECU via the 12v circuit of the coil. Because the system is controlled by the ECU, the fan will sometimes stay on for as much as a full minute after the key is turned off. This is a normal scenario and not an indication of an issue. It helps cool the turbo and intercooler after running.

13. Start by pulling the wiring harness out so you can identify each circuit. The system starts with a 12v sealed power connector and the 30A relay. You will have three sub-wiring harnesses that come from the relay/power connectors that make up the full system. The longest harness will have the SPAL cooling fan plug on it along with a Red eyelet which will be attached to the battery +12v power supply bolt and a Black eyelet which will be attached to the battery – negative supply bolt. The next sub-harness will simply have a Black eyelet on it that will be bolted to the chassis “ground” bolt on the driver side of the chassis below the battery box. The last sub-harness is the Relay “trigger” from the Coil +12v connector that consists of a female spade connector and a male spade connector that will be plugged directly to the coil positive spade connector.

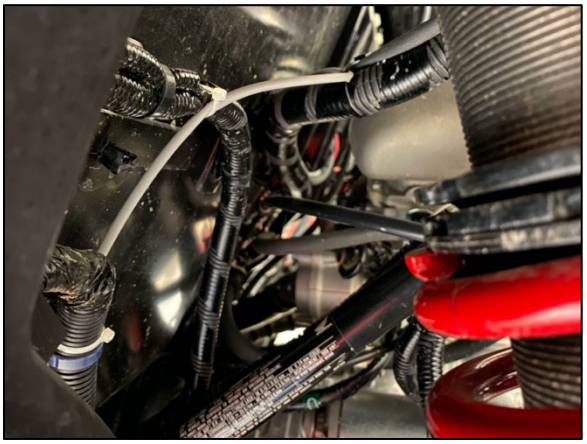


14. You will start your cooling fan wiring harness routing in the fuse box area directly between the seats in the driver compartment. Route the SPAL fan/battery +12v/battery ground sub-harness and the Chassis Ground harness through an existing rectangular hole behind the fuse box on the driver side.

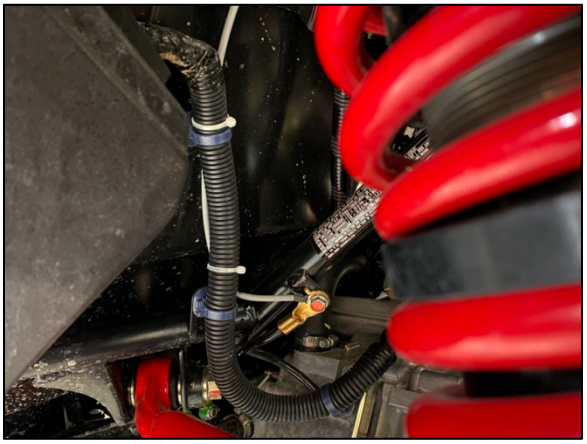
Route the two harnesses on top of the OEM Main wiring harness that is in the same area. Use plastic ties to secure the Cooling Fan sub-harness and the Chassis Ground sub-harness wiring to the OEM harness as it is routed along the back of the firewall towards the Battery Box area. Split off the Chassis Ground wiring harness from the OEM harness/Cooling Fan harnesses at the point that the OEM wiring harness leaves that last OEM plastic firewall security tie and the OEM wiring harness is routed to the battery box. Continue securing the Cooling Fan harness to the OEM harness as it routes itself INTO the battery box on the lower left side of the battery box. Install the Red wire eyelet to the 12v Positive terminal and the Black wire eyelet to the Negative battery terminals of the battery. The nuts that secure the battery bolts float in their mounts so you may have to partially remove the battery from its mounting position to hold the battery bolt mounting nut from behind while you thread in the Battery Cable mounting bolts. Continue routing the remaining length of Cooling Fan harness pass the Negative battery cable end and secure the remaining harness to the OEM harness as it LEAVES the battery box area on the bottom right of the battery box. As soon as the wiring harness is clear of the plastic tab at the bottom right of the battery box route the harness and secure the harness to the right lower battery support bracket on the chassis. The cooling fan will plug into this connector after the intercooler is mounted.



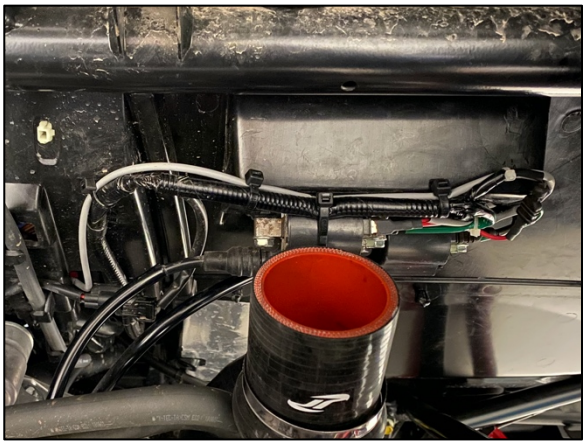
15. Go back to the point where the chassis Ground harness splits off from the Cooling Fan harness at the back of the firewall. Route the Ground harness across the back of the firewall towards the driver side of the inner fender. At that point you will find another horizontally mounted OEM wiring harness that is routed from under the driver seat area. Use plastic ties to secure the Ground harness to this new horizontal OEM harness. Directly below this horizontal wiring harness near the driver side inner fender is



yet another vertically mounted OEM wiring harness that is routed from the engine to the Voltage Regulator in the driver side inner fender. Use plastic ties to secure the Ground harness to this wiring as the Ground harness is headed to the chassis ground bolt on the driver side inner fender frame rail. Bolt the Ground harness to this chassis bolt. Use a small amount of thread locking adhesive to this bolt. Torque to 9 ft lbs. The purpose of all this security and routing is to be sure that the Ground harness can't be snagged by debris or damage in the case of the extreme tire failure.



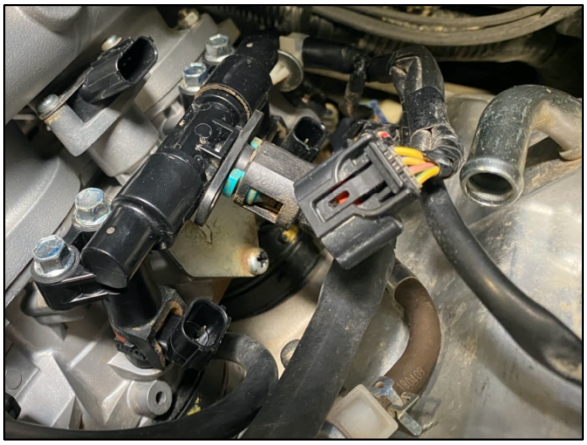
16. Go back to the interior of the vehicle and route the single Relay Trigger harness through the existing rectangular hole in the firewall on the passenger side. Secure the wiring to the ignition coil wiring harness until the ignition coil harness passes the first coil and splits and heads to the second coil. Loop the Relay Trigger coil back to the first coil (this coil feeds spark to the rearmost cylinder). Unplug the Red wire (12v) from the coil (upper most connector on the first coil) and install the female spade wire from the Trigger Relay harness to the coil. Plug the female spade wire from the OEM wiring harness into the insulated male spade connector on the Relay Trigger harness. Install a plastic wire tie around the entire coil and the coil wire harness and the Jackson Racing relay trigger harness and secure all of these harnesses to the coil. Your wiring harness routing is complete.



17. From the interior area use a small plastic tie to secure the fan relay to the wiring harness that is on the passenger side of the OEM relay area. Use another small plastic tie to secure the 12v sealed power adapter to the wiring harness on the driver side OEM relay area. Put the interior center cover back in place and your Cooling Fan harness installation is complete.

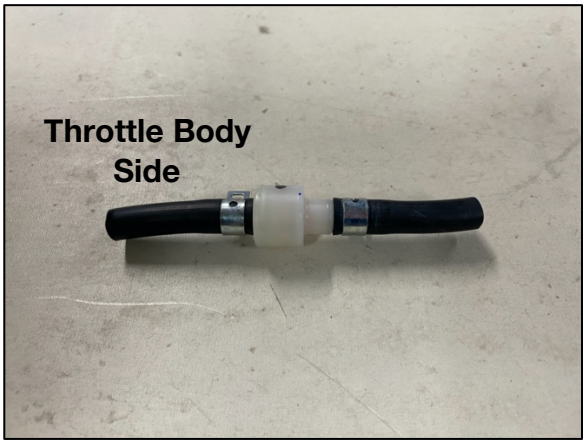
Fuel Injector & Intake Plenum Installation

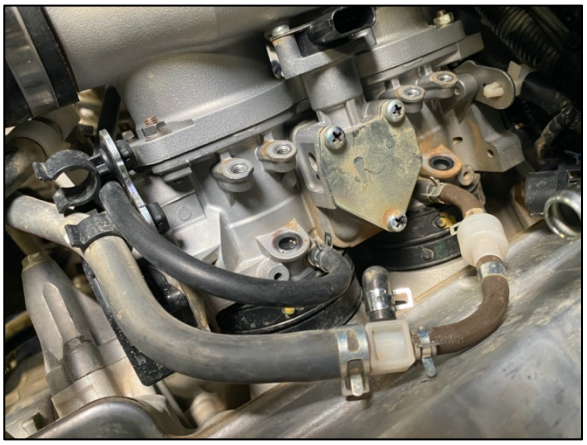
18. Unplug the stock injector clips and the Intake Air Control Valve (IACV) connector between the injectors. Unclip the injector wiring harness from the fuel rail. Clean out the area around the fuel injectors with compressed air or “Contact Cleaner” before removing the injectors so that no debris falls into the injector holes once the injectors are removed. Remove the four 8mm-hex bolts that hold the injector rail to the throttle body and remove the injectors.



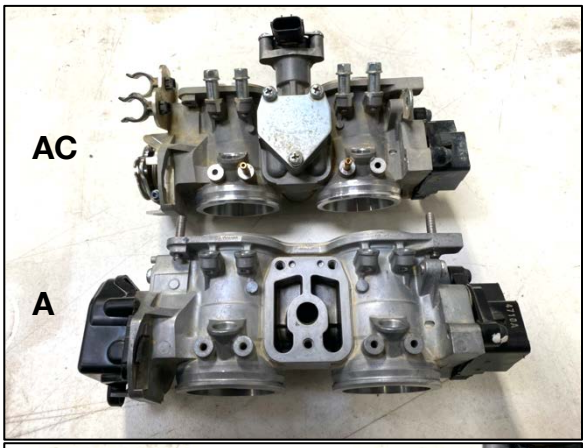
AC Type Talon:

19. Locate the square vacuum tee that connects the two small vacuum hoses on the throttle body to the larger EVAP Emissions hose. Remove both of the small vacuum hoses from the two throttle body vacuum fittings on the throttle body and lastly remove the vacuum hoses from the vacuum tee. You will not be reusing the hoses, but you will be reusing the spring clips. Install the EVAP check valve onto the forward (closest to driver’s compartment) vacuum fitting on the throttle body and secure with an original spring clip. Install the check valve with the square end towards the throttle body and the “stepped” end away from the throttle body. You should not be able to push air through the square side. Connect “stepped side” to the original vacuum tee and secure with the original spring clip. Install the new vacuum cap on the vacant vacuum fitting on the vacuum tee and secure with the original spring clip. Install the new 32” vacuum hose supplied onto the rear vacuum fitting (closest to the rear of the vehicle) and secure the hose with an original spring clip. Route this 32” hose around and between the fuel hose and the EVAP emissions hose “security clips” on the side of the throttle body. You will be connecting this hose to the recirculation valve later.

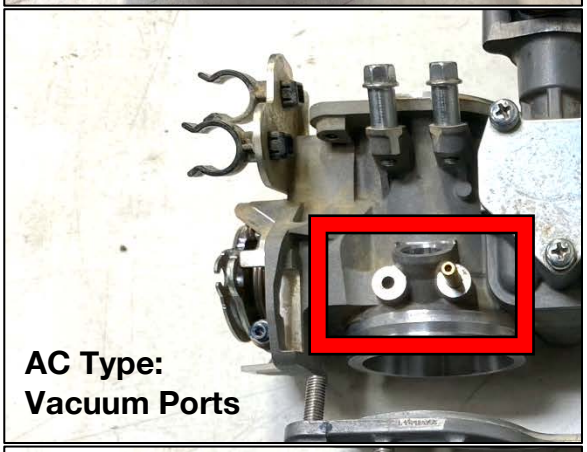


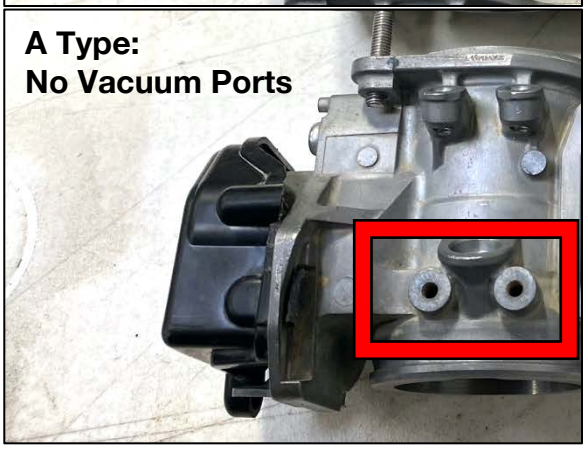


A Type Talon:
20. “A” type vehicles do not have vacuum fittings on the throttle body, which are required to operate the recirculation valve. You will need to remove the throttle body from the engine so you can use the supplied drill bit to drill the throttle body and install a vacuum fitting similar to the AC type model. Ignore the IACV plate that is missing in the center of the “A” type throttle body to the right.

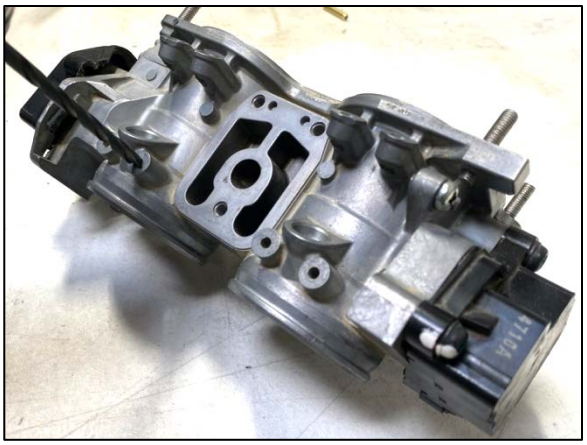


Thoroughly clean the area around the throttle body and cylinder intake manifolds as you will be removing the throttle body and you do not want any foreign material to fall into the intake ports. Unplug the Throttle Position Sensor (TPS) from the forward end of the throttle body and unclip the wiring harness from throttle body. Remove the Phillips screw that holds the throttle cable cover in place and set the cover/screw aside. Remove the throttle cable from the throttle body. From under the engine, loosen the two hose clamps that hold the throttle body onto the engine. Next to the forward throttle body hose is a bracket that holds the throttle body wiring harness and the EVAP hose on AC type vehicles. Remove the Phillips screw that holds this bracket in place. Remove the throttle body from the engine. The throttle body fits very tightly into the intake hoses even with the hose clamps loose. Cover the intake ports on the engine so nothing falls into the intake ports.

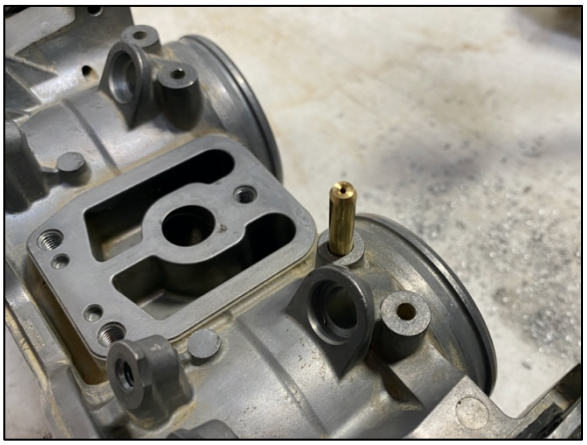




Set the removed throttle body on a clean surface to drill the vacuum port. Drill ONE of the 4 “dimpled” throttle body casting bosses, where an “AC type” vacuum port would be, using the smaller #30 drill bit. We recommend either dimple closest to the center of the throttle body, to replicate the AC type vacuum fitting location. Once the small hole is drilled, use the larger #14 drill bit through the same hole. Clean out the drill shavings from the inside of the throttle body. Using a small hammer, gently tap the supplied vacuum fitting into the throttle body



casting until it stops going in easily. Approximately .625” should be sticking out of the throttle body when fully seated.

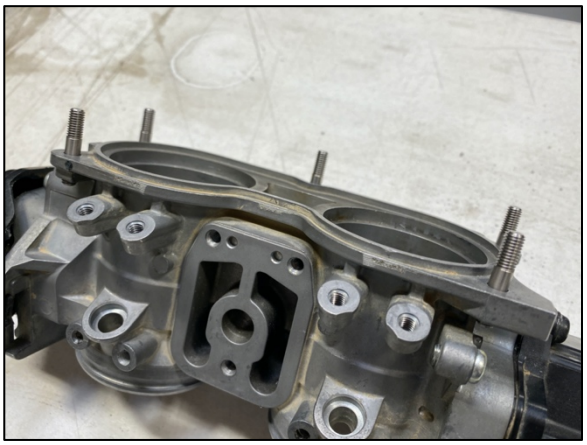


Reinstall the throttle body in reverse order. Be sure no foreign objects go down the ports or remain in the throttle body. When reinstalling the throttle body make sure you push them into the rubber inlet hoses all the way before tightening the OEM hose clamps.

Install the supplied 32” vacuum hose onto the new vacuum fitting and secure with the spring clip provided. Route the vacuum hose back around the rear of the throttle body (closest to the rear of the vehicle) and secure to the fuel line with plastic ties. You will be connecting this hose to the recirculation valve later.

21. Install the new Jackson Racing injectors supplied. Apply a small amount of grease or oil to the O-rings on the injectors prior to installing them into the fuel rail. Reinstall the fuel injectors and the fuel rail in reverse order. Make sure you have all the O-ring/Seals on the new injectors exactly the way they were on the original injectors. Reinstall the injector wiring harness.

22. Unbolt the stock plastic throttle body hose adaptor from the top of the throttle bodies. Install the new 5mm studs in the throttle body assembly. Apply a small amount of thread locking adhesive to the bottom of the studs prior to installing them in the throttle body.

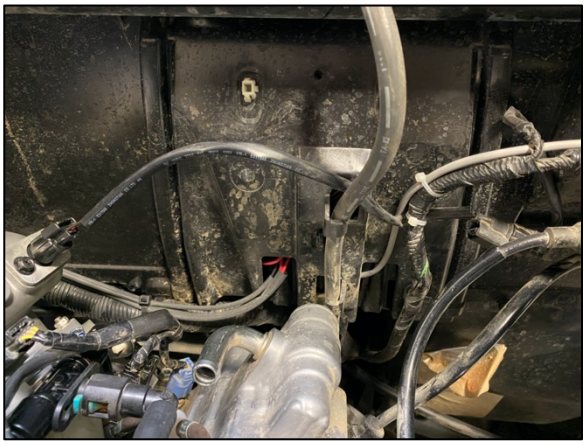


23. Locate the Intake Air Temperature (IAT) sensor from the stock air filter assembly. Install the new ¾” outside diameter O-ring supplied. This O-ring seals the sensor to the new cast intake manifold. Install the sensor with O-ring and cover plate onto the intake manifold with two 4mm screws. Apply a small amount of thread locking adhesive to the two screws prior to installing them.

24. Install the new throttle body rubber seal onto the groove in the new intake manifold. Follow instructions included inside the Honda seal kit.

25. Install the new intake manifold onto the throttle body using five 5mm flanged nylock nuts. Tighten gently as these are small studs and they are threaded into a cast aluminum throttle body.

Install the IAT Sensor extension harness from the original IAT sensor plug location behind the passenger seat to the new location of the Air Temperature Sensor in the intake manifold. Route the new harness between the fuel tank vent hose and the vertical frame tube keeping it low in the engine compartment and secure the harness with a plastic tie.

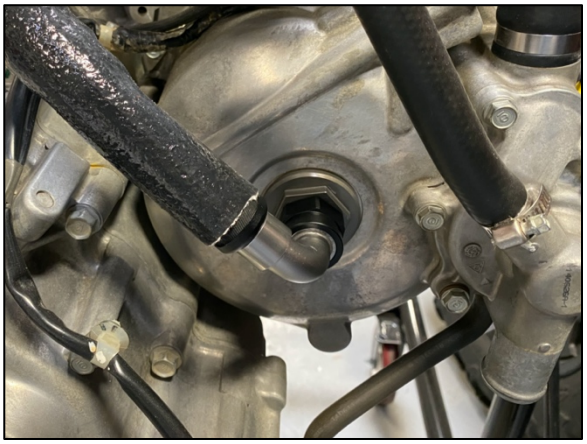


Oil Drain Initial Installation

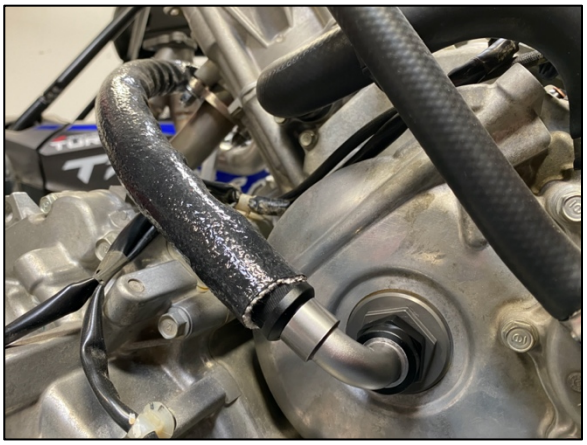
26. Locate the crankshaft hole nut on the front of the engine directly behind the front seats. It is easily accessible with the rear plastic removed. Clean the area around the 24mm hex crankshaft hole nut with “Contact Cleaner” or compressed air before removing it to avoid foreign material falling inside the engine.

Locate your new Jackson Racing Turbo Oil Drain (TOD) adapter and install a new O ring using a small amount of grease on the threads and in the groove to hold the O ring. Thread the M22 to AN-10 x 90º drain hose into the new Jackson Racing TOD Adapter.

Note: The AN-10 fitting is internally sealed so the threads can turn independent of the direction of the fitting. Prior to installing the M22 hose into the TOD Adapter we recommend applying penetrating oil in the M22 fitting and turning the barb by hand until the penetrating oil can work its way down into the internal O-ring in the fitting and make the joint turn easier.



Remove the stock 24mm hex crankshaft hole nut and thread the 32mm hex Jackson Racing TOD adapter with hose into the cover. Be very careful with this installation as you will be working in tight quarters with a fine thread alternator cover and you don’t want to cross-thread the adapter in the cover. As you thread the TOD Adapter into the alternator cover you will be unthreading the M22 oil drain hose by a few threads, this is okay. Once the TOD Adapter has started threading into the alternator cover you can start threading the M22 oil hose fitting into the TOD adapter to get everything tightened down to the alternator cover.



Tighten the 32mm hex TOD adapter and then tighten the M22 hose fitting into the adapter using a 27mm wrench. Route the oil drain hose towards the future turbo location.

27. Route the turbo oil drain hose from the front of the alternator cover towards the future turbo location. It will be routed below the horizontal radiator hose and above the main horizontally mounted wiring harness. Additionally, it will also be routed between the EVAP hose (where applicable), the vertical differential vent hose and the plastic wall between the driver compartment and the engine.

Turbo Support Rod Preparation

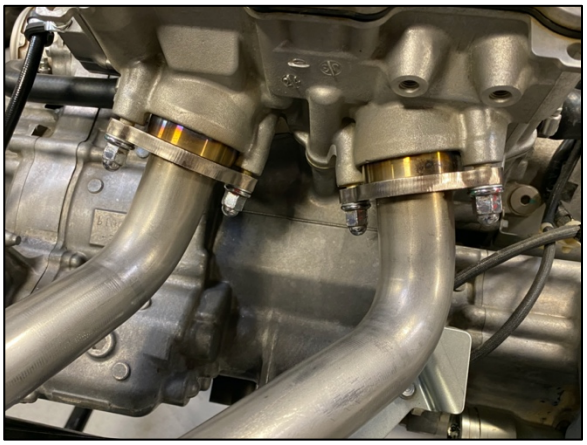
28. Locate the upper Turbo Support Rod bracket (stainless steel bracket with crescent shaped side with single hole bent tab), the Turbo Support Rod, the upper Support Rod Clevis mount, the lower Support Rod Heim mount and the two 3/8”-24 jam nuts.

Lubricate the threads of the Clevis Mount and the Heim Mount and thread a 3/8” x 24 jam nut on each mount before threading them into the Turbo Support Rod. Bolt the upper Clevis to the Upper Turbo Support Bracket using an M8x1.25x25mm flanged bolt and a copper plated M8x1.25 locknut. The copper locknut should be on the “inside” of the bracket as shown below.

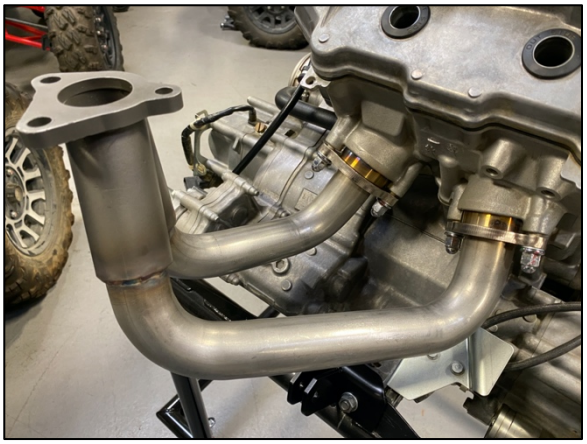
Snug the bolt/nut but do not fully tighten until the lower Heim Mount is bolted to the Lower Turbo Support Rod Mount after the turbo has been installed.

29. Remove the original stock copper exhaust gaskets from the exhaust ports if they haven't fallen out during header removal. Apply a small amount of grease to the two new round copper exhaust gaskets and insert them into the exhaust port. The grease is simply used to hold the gaskets in place during the installation, no other purpose.

30. Check that the exhaust studs are properly seated in the cylinder head prior to installing the new turbo exhaust manifold. These head studs occasionally come out of the head when the acorn nuts are removed. The proper distance from the end of the stud to the mounting point on the cylinder head is .940-1.0". If any of the studs have come unthreaded from the head, reinstall the studs until they are mounted to the proper dimension.



Raise the new turbo exhaust manifold up to the exhaust ports and maneuver the two head pipes into the ports. As the ports are a "splayed" design, the head pipes have to be convinced to go into the head.

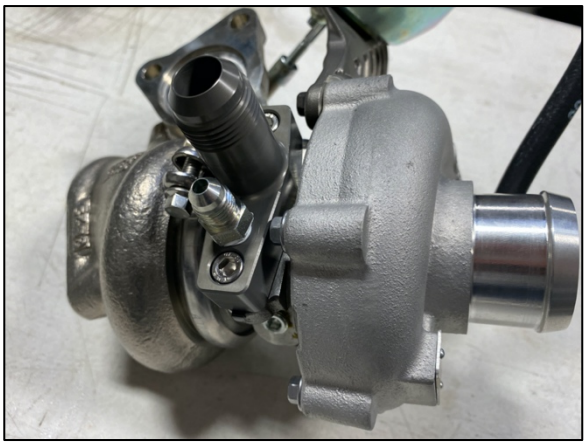


Install the original acorn nuts and flat washers on the new flanges and tighten the nuts to 20 ft lbs alternating back and forth from one nut to the other until the space between the flange and the head is even from side to side.

Once you have run the engine through a good heat cycle, recheck the torque on these exhaust acorn nuts. The copper gaskets will take a "set" and may require the nuts to be torqued one more time. The flange to cylinder head gap should be 0.100" (2.5mm). **Do not overtighten the acorn nuts or you will bend the flanges and damage the turbo manifold.**

Turbocharger Installation

31. Locate your turbocharger and install the Turbo Oil Supply (TOS) adapter using the supplied gasket and M6x1.0x18mm Allen head cap screws onto the bottom of the turbocharger. Torque evenly to 16 ft lbs.

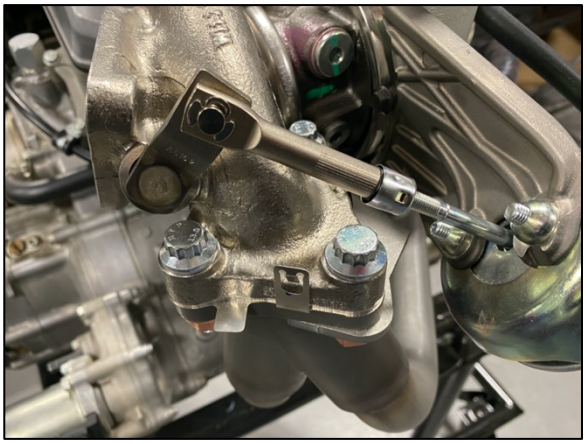


Locate your 1/8” NPT to AN4 fitting. Apply Teflon tape to the 1/8” NPT tapered threads and install into the TOS adapter. Apply the tape so that the end of the tape is pointed away from the direction of the rotation of the fitting when you are threading the fitting into the Turbo Oil Supply (TOS) adapter.

As this is a “tapered” thread there isn’t a “torque” setting that you can refer to during installation. The SAE standard for these types of fitting is as follows: Thread the 1/8” NPT fitting into the TOS using your fingers until the fitting will no longer thread in easily. Using a felt tip marker apply a line on one of the flats of the fitting and on the TOS just below the mark applied to the flat of the NPT fitting. Using a ½” wrench continue turning the fitting 1.5 additional turns by counting the felt marker line on the NPT adapter and the felt marker on the TOS adapter.

32. Install the turbocharger onto the new turbo exhaust manifold using:

- New turbo gasket
- (1) M8x1.25x45mm 12-pt chromoly bolt
- (2) sets of M8 wedge lock washers
- (1) M8 flanged copper locknut
- (2) M10x1.25x45mm 12-pt chromoly bolt
- (4) sets of M10 wedge lock washers
- (2) M10 flanged copper locknut

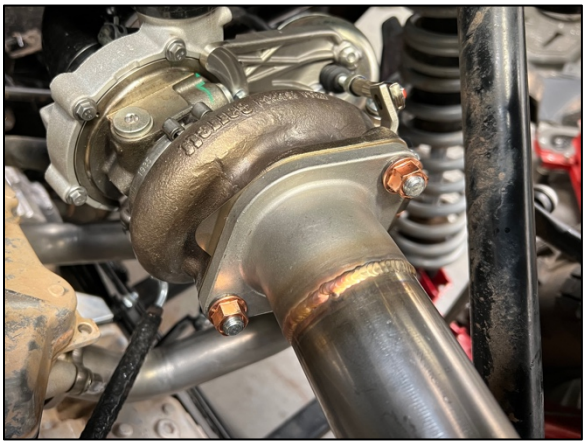


Two mounting holes are 10mm and one is 8mm. Apply anti-seize compound to aid with installation. Do not torque until later in the installation.

Raise the assembled Upper Turbo Support Rod/bracket up to the 8mm and 10mm mounting bolts on the forward side of the turbocharger. Gently tighten the self-locking copper nut/chromoly bolts until they are barely snug. You want the turbo to be able to gently move around on its flange until the remainder of the turbo-exit exhaust pipe is mounted to the turbo outlet and also mounted at the muffler using the OEM bolts/springs. The upper support rod mounting bolt should remain loose until the turbo has been torqued to specification. Support Rod copper nut should be on the header side of the bracket.

A wedge lock washer set should be installed between the flanged bolt and turbo, and the header and copper locknuts. See photo on Step 34 for final stack up.

33. You will be mounting to the Turbo Exit pip to the turbocharger using:
- (2) M10x1.25x1.5x40mm double end studs
- (2) sets of M10 wedge lock washers
- (2) M10x1.25 flanged copper locknuts

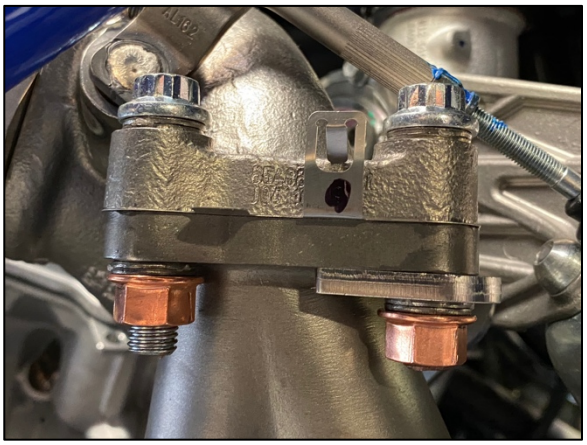


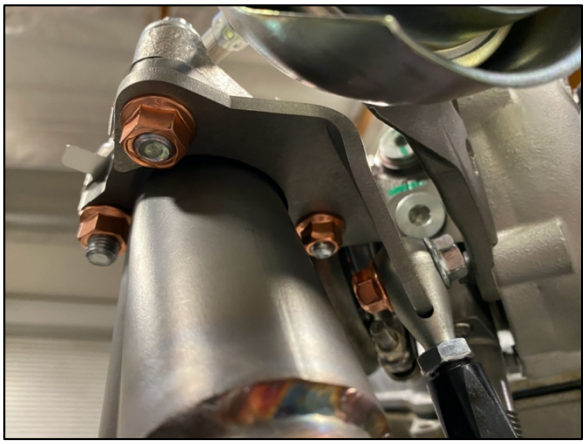
Hand install the **M10x1.5** thread pitch end of the stud into the turbocharger prior to installation of the turbo exit pipe.

Install the new Turbo Exit pipe and gasket from the turbocharger exit to the muffler entrance. You will be reusing your original tapered “donut” gasket where the stock header met up with the muffler. Lube the rubber exhaust hanger liberally with grease or penetrating oil prior to installation.

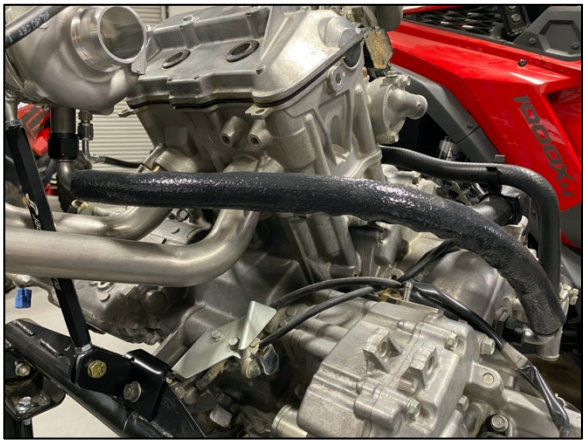
On the muffler end of the pipe you will be reusing the original muffler joint bolts/springs. Loosely install on both sides, then torque the muffler joint bolts/springs to 16 ft lbs first. Be careful not to cross thread these. Then install and torque the wedge lock washers and flanged copper locknuts on the exit side of the turbo to 20 ft lbs.

34. Now that the muffler and turbo-exit studs are tight it's time to torque the turbocharger in place. This process is always easier with two people. Using one person to tighten the bolts from above while another person holds the nuts from below torque all three mounting bolts to an initial torque setting of 20 ft-lbs. Now increase the torque on all bolts to 30 ft-lbs.





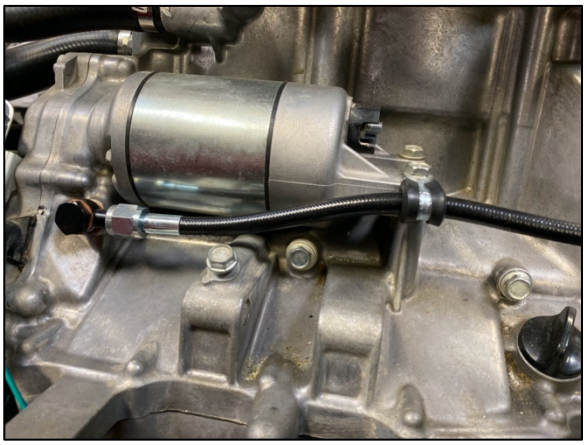
35. Connect the AN10 x 90º side of the drain hose to the turbo. If the 90º fitting isn't pointing directly at the drain fitting on the turbo you can rotate the fitting in the hose. Grasp the fitting and the hose and twist until the desired angle is achieved.



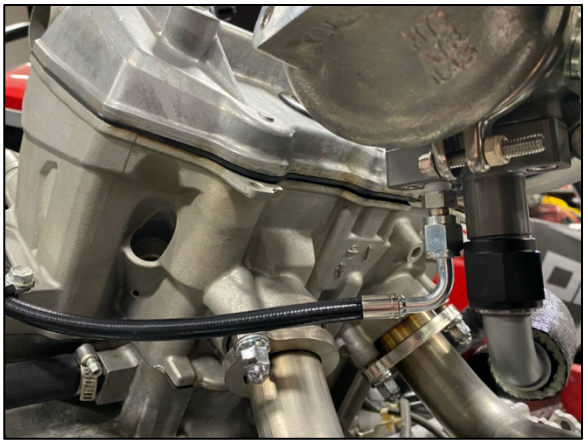
36. From the driver side of the engine you will see three 10mm headed bolts all in a horizontal row across the side of the engine below the starter. Remove the 10mm headed oil galley supply bolt located directly behind the driver seat and directly below the starter. This is the location that you will install an AN-4 banjo fitting using an M8x1.25x20mm banjo bolt and two crush washers, one washer on each side of the

banjo fitting. The original factory bolt is installed with a thread-locking adhesive. Carefully inspect for any thread locking adhesive that might be stuck in the threads and clean any debris from the oil galley hole.

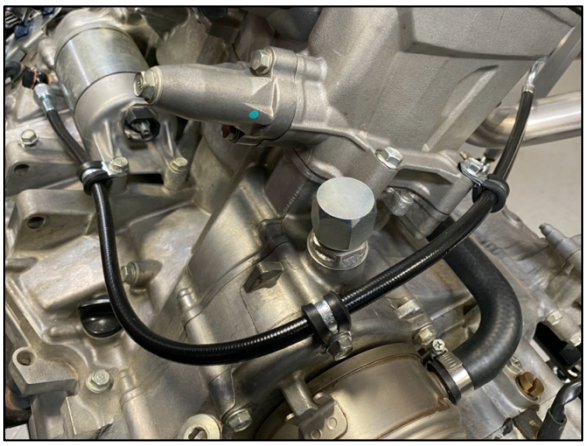
Install the banjo fitting facing rearward in a horizontal direction. Apply a small amount of thread locking adhesive to the banjo bolt prior to installation. Tighten the banjo bolt completely at this time.



37. Install the straight end of the high-pressure turbo oil supply hose to this fitting with the hose facing rearward. Route the hose around to the back of the engine and thread it onto the oil supply fitting at the turbocharger. Push the heat shield (not pictured) that is installed on your high-pressure hose to the oil hose area nearest the header. This heat shield will protect the hose against header heat.

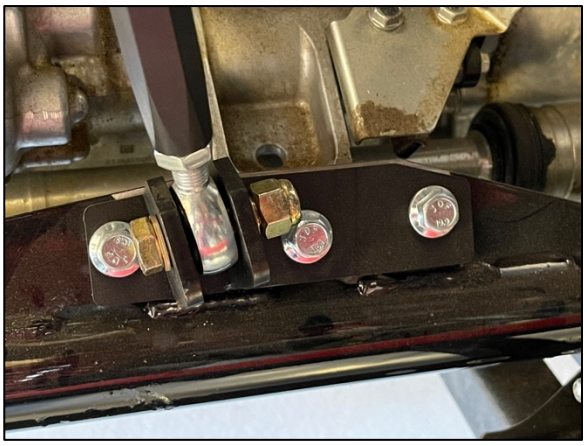


38. Install one of the 3 cushion clamps around the high-pressure hose just below the heat shield material and, using one of the engine cylinder base bolts, secure the cushion clamp so it holds the oil line safe from movement. Install the next cushion clamp using one of the bolts from the side of the engine's "oil tank cover". This bolt will be directly below where the oil-fill hose clamps to the engine fitting and directly above the engine oil cooler. Install the last cushion clamp using the 10mm hex head bolt at the starter to secure the hose. Rotate all the hoses/clamps until you have a natural alignment and the hose is safe. Once all cushion clamps are mounted correctly you can tighten all three bolts to 9 ft lbs. Finish this operation by tightening the tapered fitting oil supply hose at the TOS adapter by holding the NPT fitting with a ½" wrench while tightening the oil supply hose with a 9/16" wrench. Follow this up by tightening the tapered oil supply fitting at the banjo fitting on the driver side of the engine.



Lower Turbo Support Rod Bracket Installation

39. The turbo support rod bracket will mount into an existing hole in the passenger side motor mount bracket. You will need to remove the bottom skid plate that is directly under the passenger side motor mount to gain access to the mounting bolts for the motor mount. Once the skid plate is removed, you will need to support the engine with a floor jack so you can easily unbolt the long passenger side motor mount. You must remove the motor mount from the engine to install the Lower Turbo Support Rod bracket to this mount. You cannot get a nut or wrench behind the passenger side motor mount with it bolted to the engine.



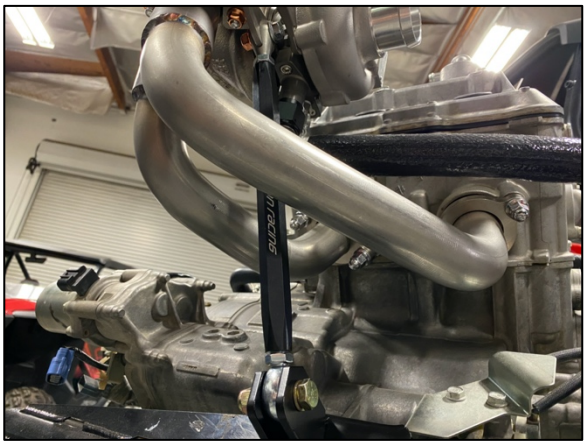
You will be using:
- (3) M8x1.25x25mm flanged bolts
- (6) sets of M8 wedge lock washers
- (3) M8x1.25mm flanged nuts

Install the Lower Turbo Support Rod bracket to the passenger side motor mount with the bolt and one set of wedge lock washers on top, and one set of wedge lock washers and flanged nut on the bottom side of the motor mount. Torque to 16 ft lbs. When tightening the bolt, make sure the bracket does not rotate. You want to make sure the support bracket stays level and follows the engine bracket.

For additional support and reliability, we highly recommend using the additional mounting holes in the lower support. Simply drill (2) 21/64” holes and install the remaining M8x1.25x25mm flanged bolts, M8 wedge lock washers, and M8x1.25mm flanged nuts.

Reinstall the passenger side motor mount in reverse order and reinstall the skid plate.

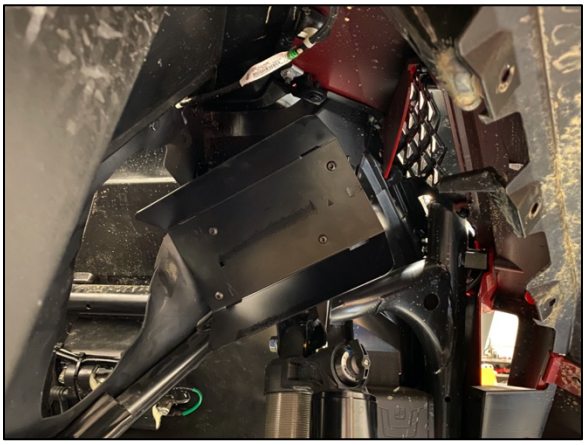
40. Now that the turbo is mounted/torqued and the lower support rod bracket is installed, you can install the lower 3/8”-24x1.5” Turbo Support Rod mounting bolt, 3/8”-24 nylock nut, and (2) AN flat washers (Yellow Zinc Hardware) through the lower support rod bracket. Torque the upper and the lower mounting bolt to 20 ft lbs. You will have to turn the Heim joint one half-turn at a time until the hole in the Heim joint matches the through hole in the lower Support Rod bracket. Once all bolts have been torqued, you can tighten the jam nuts on the Support Rod clevis and heim by holding the Support Rod with a 5/8” wrench while tightening the jam nuts on the heim and clevis with a 9/16” wrench.



Air Filter and Intake Installation

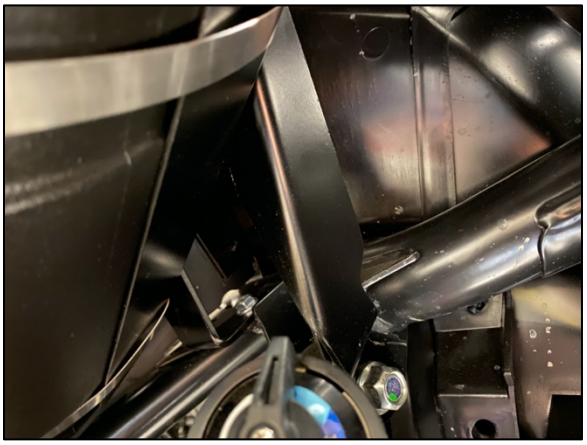
41. You will be mounting the air filter assembly in the right rear inner fender area.

Locate the Air Filter Base Bracket, the long Air Filter Shock Bracket (triangle identification mark) and the Air Filter Chassis Bracket (square identification mark). These three brackets must be assembled using (4) M6x1.0x16mm flanged button head cap screws (BHCS) and (4) M6x1.0 flanged nylock nuts. Bolt the long Air Filter shock bracket to the backside of the Air Filter Base Bracket by installing the M6x1.0x16mm flanged BHCS through the Air Filter Base bracket and then through the Shock Bracket and secure the bracket with the M6x1.0 flanged nylock nuts on the backside. Install the Air Filter Chassis bracket onto the Air Filter Base bracket in the same manner. Torque all nuts/bolts to 9 ft lbs.



Note: The triangle identification mark on each bracket should line up. The square identification mark on each bracket should line up.

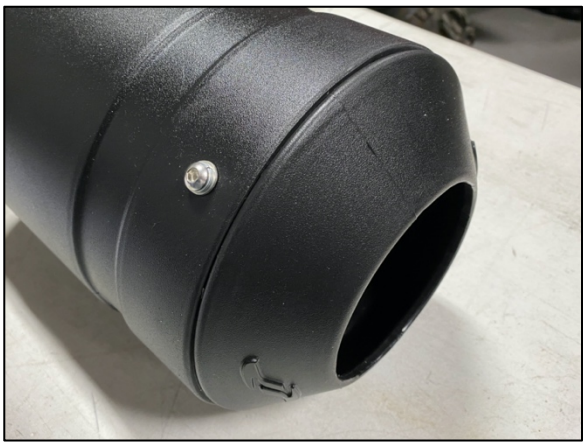
42. Remove the 17mm nut from the upper shock on the passenger side. Bolt the new Jackson Racing Air Filter Support bracket to this shock mount using the original 17mm hex nut on the shock bolt and install a M6x1.0x20mm flanged bolt/fender washer and M6x1.0 flanged nylock nut/fender washer through the existing hole in the chassis on the opposite side of the shock nut. Finish by torqueing the upper rear shock bolt to 20 ft lbs and the 6mm flanged bolt/nut to 9 ft lbs. Once you have torqued the bolts install two large diameter hose clamps through the slotted holes in the air filter base. These hose clamps will hold the Jackson Racing Air Filter assembly in place.



43. Install the new Jackson Racing Air Filter onto the “velocity stack” inlet connector. Secure with the hose clamp provided. Install the foam “large particle filter” over the air filter assembly. Apply a small amount of thread locking adhesive to the two 6mm studs found in the air filter hardware kit and install them into the threads in the “velocity stack”. The air filter is ready to be installed in the air filter housing.

44. Install the Jackson Racing Air Filter into the large plastic air filter housing. Secure the air filter to the air filter housing using (2) M6x1.0 nylock nuts and (2) 6mm fender washers. Install the cone shaped plastic debris cover onto the large plastic air filter housing using the (3) M6x1.0x16mm BHCS, lock washers and flat washers.

NOTE: For users that will encounter wet conditions, we recommend drilling a drain hole on the angled surface on the base of the air filter housing. Always have this drain hole on the bottom when installing.



45. Before final installation of the Jackson Racing Air Filter Assembly onto the Air Filter Mounting Bracket you will need to use scissors to trim the rubber debris guard to fit the new Jackson Racing Inlet Hose and air filter or remove the rubber guard altogether. Install the air filter assembly with the cone inlet directed away from the engine area. When installed correctly the opening in the inlet snorkel will have the original plastic tab that mounted the OEM intake hanging in its opening. You can cut this tab off if you never intend to reinstall your OEM intake.

Clamp the air filter assembly in place with the two large hose clamps you installed previously. Set the hex drive location of the hose clamp to be easily accessible from the inner fender area. This is where you will be removing the Air Filter Assembly to gain access to the Air Filter for servicing.

46. Reinstall the Snorkel cover with all 11 plastic clips after trimming the Snorkel cover. You will need to trim an interior corner of the Snorkel plastic where it meets the long Air Filter Shock bracket near the top shock mount. Follow the photo for proper trimming. Measure and make a mark with a silver felt pen 1.5” in from the edge following along the straight edge on both sides of the plastic as shown in the photo. Make a mark where the two lines come together. Drill a ½” hole in the plastic at that point. Using a set of Snips follow the straight edge of the plastic and cut the plastic until the Snips intersect the ½” hole you drilled. Repeat for the other side. File or sand the edge so that the plastic has smooth edges. Now you have a clean trimming of the plastic with a nice radius.

Note: In this next section you will be installing high strength silicone hoses that fit very tight for a secure connection. We recommend applying a LIGHT film of grease to the outside of each pipe that the silicone is going to be installed on EXCEPT at the air filter. You want the air filter connection very clean and dry. It makes rotating and aligning the silicone hoses and aluminum much easier and keeps the grease out of the interior of the tubing.

47. Install the 3” to 2” x 90º transition hose to the 3” air filter velocity stack. Rotate it so that it points down towards the turbocharger. Gently tighten the 70-90mm hose clamp just to hold the hose onto the velocity stack at this time. Do not grease this connection.

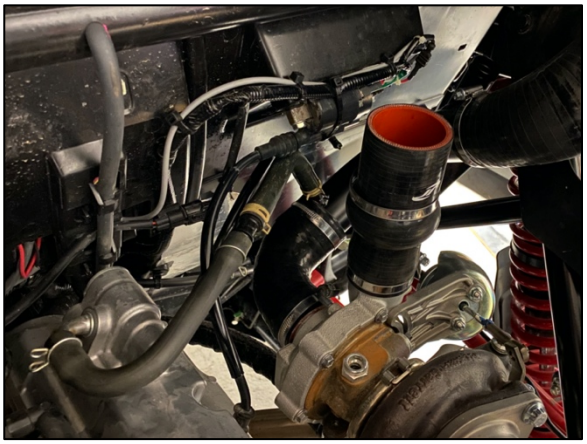
48. Install the 2” to 1.75” x 90º silicone hose onto the turbocharger and loosely clamp the hose at this time using a 40-60mm hose clamp. Apply a small amount of grease to the exterior of the turbocharger inlet prior to installation.

49. Install the 2” x 90º aluminum tube between the turbocharger hose and the air filter hose. Lube the outside of each end of the tube prior to installing it in the silicone. Rotate both hoses and the aluminum tube until a natural alignment is found. Tighten all hose clamps completely at this time.

50. You will be creating a new valve cover vent hose using the original valve cover vent hose on the valve cover and the original drain hose from your OEM air filter box. You will be cutting the 45 degree end off of the original valve cover vent hose where it was attached to the OEM air filter assembly.

Straighten the bend in the hose and mark 3” up from the end of the hose and cut the angle off of the hose at that point. Straighten the OEM air filter drain hose and make a mark at 5” up from where the short bend ends. This will be the end that doesn’t have the white drain plug fitting in the end of the hose. Cut the hose at that point. Join the two cut hoses together with the .5” hose connector supplied with your kit. DO NOT reuse the white Honda connecter, it is not a through connector.

Install the valve cover vent hose to the valve cover and route the newly spliced end between the firewall and the turbo exit and connect the new hose end onto the aluminum intake tube vent fitting. Twist the two hoses at the center where they join together until a natural alignment between the valve cover and the intake tube exists. Secure with all the original spring clamps at all four places.



51. Attach at 1.75” x 2” bellows hose to the turbocharger exit. Lube the outside of the turbo prior to installation. Secure the hose with the 40-60mm hose clamp provided.

52. Install a 2” x 90-degree silicone hose to the intake manifold so that the hose is facing vertically. Lube the outside of the intake manifold prior to installation. Loosely secure with the 50-70mm hose clamp provided. This hose will need to be able to move slightly so that when the intercooler is installed it can be rotated for a natural alignment. Once the natural alignment of the intercooler is obtained you can proceed with the final tightening of the hose.

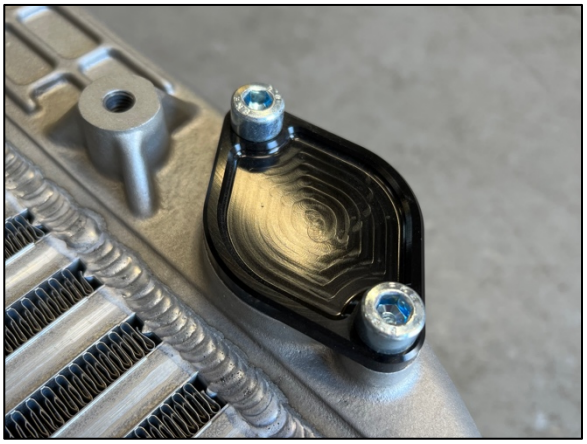
Intercooler Preparation

53. Locate the intercooler from its packaging. Be careful not to damage any of the cooling fins or tubes while handling the intercooler. The cooling fan is mounted so that the wiring and plug will exit towards the intercooler tank on the driver side of the engine compartment. The fan power supply will come from the area where the battery is located.

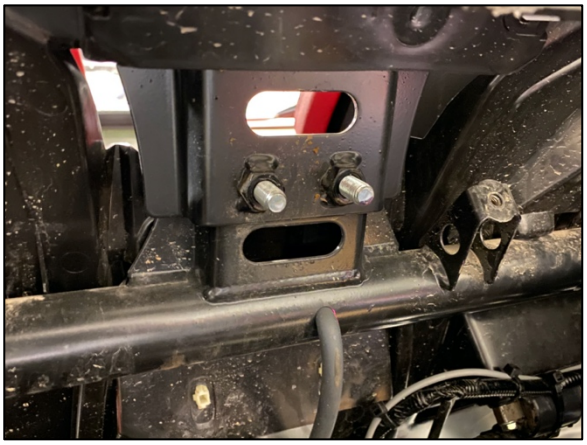
54. With the TURBO badge facing towards you, install the Jackson Racing/Turbosmart recirculation valve on the left side of the intercooler using one of the O-rings and two M8x1.25x25mm Allen Head Cap Screws (AHCS) provided. Mount it so that the horizontal 1” spigot faces towards the intercooler core and not away from the core.

Repeat this procedure for the Block-Off plate on the right side of the intercooler. The flat side of the block off plate is bolted down to the intercooler. The machined cut out faces up.

The important condition is that the recirculation valve be mounted on the intercooler tank side that the intercooler fan wiring exits on. Apply a small amount of thread locking adhesive to the bolts, then torque to 16 ft lbs.



55. Before mounting the intercooler you will need to install the upper intercooler chassis mount. Remove the plastic cover from between the passenger seats that protects the fuses and relays. Remove the two 14mm hex head bolts that hold the rear chassis cross bars together in the center and replace them with two M10x1.25x30mm flanged bolts provided. Torque to 20 ft lbs.



56. Locate the Upper Intercooler Chassis mounting bracket. This bracket will have two mounting holes in it and one mounting rod for the rubber mounting grommet to hang from. Make note of the bracket orientation, as installing upside down will hinder intercooler installation.

Install this bracket with the flat side UP and the mounting rod BELOW the horizontal surface on the two M10x1.25x30mm bolts you installed in Step #55 using two M10x1.25 flanged nuts. Torque the flanged nuts to 20 ft lbs after applying a small amount of thread locking adhesive. Install the three-hole rubber mounting grommet provided in your kit onto the single mounting rod of the Upper Intercooler Chassis Mount. Install the thicker of the three mounting points onto the mounting rod. Lubricate the rubber mount with grease or penetrating oil before installation.

57. Install the intercooler mounting bracket to the top of the intercooler using two M8x1.25x16mm flanged bolts and two 8mm flat washers. The mounting bracket has two mounting holes to bolt to the intercooler and two rods for the rubber mounting grommet to mount to. Attach the intercooler cross-mount to the top of the intercooler with the two rods facing back towards the side of the intercooler that the boost recirculation valve is mounted. Torque the bolts to 16 ft lbs after applying a small amount of thread locking adhesive.

Intercooler Installation

58. It's time to mount the intercooler/fan assembly. Lube the outside of the intercooler inlet and exit tubes and the three-hole rubber intercooler mounting grommet with lubricant to make the installation easier. Install the intercooler/fan assembly down onto the engine compartment. The fan wiring harness should exit towards the driver side and the Jackson Racing TURBO logo should be viewable from the rear storage area. Insert the 2.0" x 90-degree hose, installed earlier on the intake plenum casting, onto the intercooler exit fitting while at the same time inserting the intercooler inlet tubing into the 1.75" x 2.0" bellows hose located on the turbo exit and additionally pushing the two intercooler mounting rods through the rubber three-hole intercooler mounting grommet. Move the intercooler in the two mounting hoses to get the intercooler level in the engine compartment and secure both hoses with a 50-70mm hose clamps provided. Do not plug the cooling fan in until the ECU has been programmed, as the ECU requires as much battery voltage as possible to program. Running the cooling fan during ECU programming could cause issues.

59. Install the specially formed 1" ID hose from the turbo inlet tube to the Boost Recirculation Valve. This hose should be routed so that it goes under the intercooler upper chassis mount and above the intercooler cooling fins. Secure with the hose clamps provided.

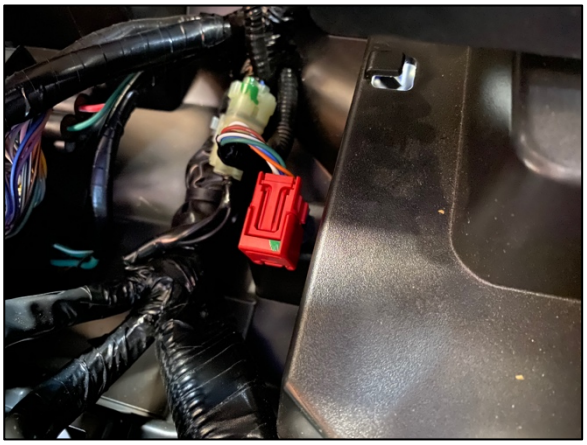
60. Connect the vacuum hose from the throttle body to the recirculation valve at this time.

ECU Reflash Procedure

61. Under the driver's seat bottom there is a rubber splash cover that protects the ECU and related components. Unclip the rubber cover to expose the ECU and a red data connector. Lift the retaining clip on the data connector and remove the protective plug from the data connector.

2019-2020 HL6 Models:
4 Pin (Top Photo)

2021-2022 HL6 & 2022 HL7 Models:
6 Pin (Middle Photo)



2020-2021 HL7 Models:
6 Pin (Bottom Photo)

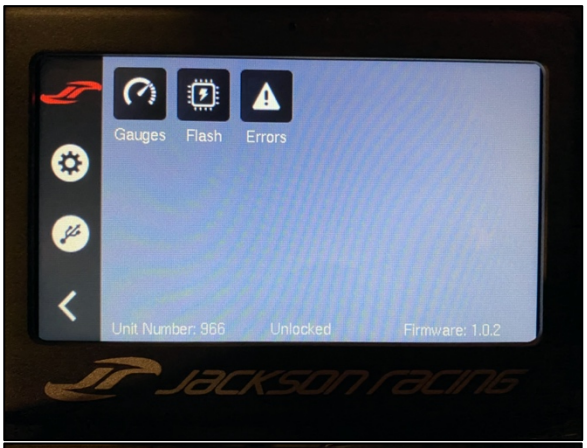
The appropriate harness was included based on the model vehicle when ordered.

6 Pin Models: Be careful with the male pins inside the 6 pin connector adapter. Make sure they are not bent when installing.

62. Unbox your Jackson Racing ECU Flash Tool and connect the included ECU harness to the rear of the Flash Tool. Now plug the male connector into the Red female data connector. (4 Pin model shown to the right)

Turn the ignition switch until the dash is illuminated but do not start the engine. Leave the switch on. **Turn off ALL equipment that could draw power from the battery during ECU programming, including head lights and accessory lighting. Make sure your battery has at least 12 volts available. This is IMPORTANT. Do NOT let the battery drain, or this will cause flash issues.**

63. On the home screen dash, touch anywhere to open the Main Menu. This is a touch screen, so be patient and deliberate with screen inputs.



Select the Red “JR” logo in the top left corner. Check the Firmware version in the bottom right corner of the Flash Tool. This firmware version should match the current firmware on talon.jacksonracing.com/support. If it does not, download the Firmware Update and FW Update Instructions.

Once your firmware is up to date, plug back into the vehicle. Select the “JR” logo in the top corner, then “Flash”.

Select your ECU/Vehicle type. Model Identification help is available in the “General Information” at the beginning of the installation manual. **Only select for the Year and Model of your vehicle. Calibrations are only compatible with their selected Year/Model.**

Select your tire size for proper DCT shift schedule.

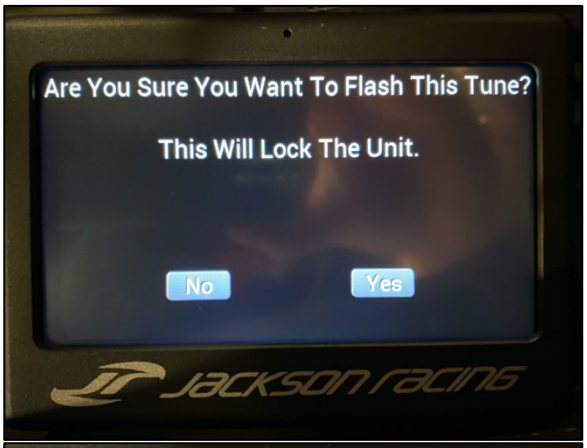
Select YES to lock unit to ECU and Flash Tune.

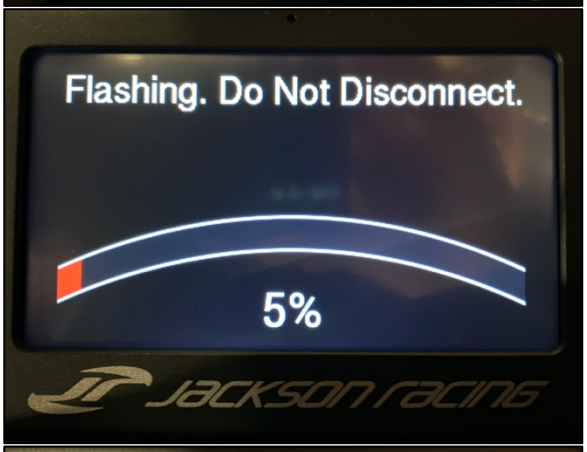
Let ECU Flash process go through. Again, do NOT turn off the vehicle. Do NOT have voltage fluctuate in any way during reflash procedure. If you forgot to turn your headlights off, that is okay. Do NOT turn them off while flashing.

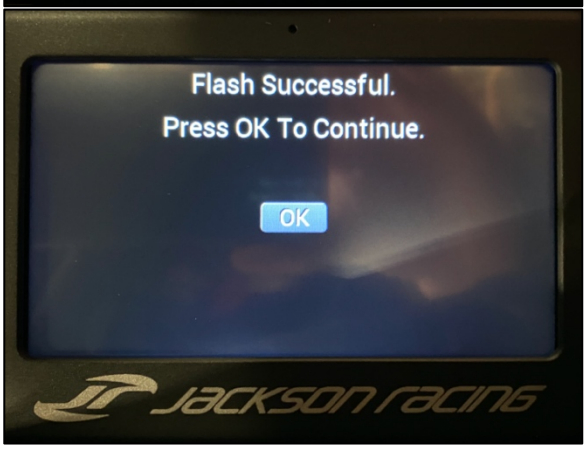
Once complete the Flash Tool will say, “Flash Successful” and press OK to continue and follow the prompts to key off vehicle.

Your Talon is now ready to start. Unplug the Jackson Racing ECU Flash Tool and put the programmer away in a safe place, as this unit is locked to your ECU. Do NOT leave the Flash Tool plugged into the vehicle.

Note: If you receive an error, select “OK” and then key off. Key back “ON” and retry.







Completing Installation

64. Plug the intercooler fan wiring to the intercooler fan at this time. When connected correctly the Intercooler Fan will run continuously when the ignition switch is on. The Cooling Fan Relay is controlled by the ECU via the ignition coil power supply. Occasionally the ECU will leave the coil powered up for up to 1 minute after turning the engine off. This will trigger the Cooling Fan Relay to continue to run and this is normal.

65. Reinstall all interior plastic trim at this time. Reinstall the seat brackets and seat bottoms.

66. Install your new Jackson Racing TURBO graphics. Check JacksonRacing.com for model specific styles.

67. Clean a flat visible surface in the engine bay and affix the enclosed CARB EO decal for inspection purposes. We recommend the firewall plastic panel on the driver side.

68. Start the vehicle and check for any fuel or oil leaks. Once the vehicle is completely warmed up you can reinstall your rear package tray cover.

After first ride, check all nuts and bolts. Check header bolts to make sure they are torqued up after first heat cycle.

69: **Register** your kit at talon.jacksonracing.com and enjoy your Jackson Racing Turbocharged Honda Talon!

Vehicle Maintenance

Jackson Racing Turbocharger Systems require Premium grade (91+ Octane R+M/2) fuel.

No additional oil is required as the turbocharger supply hose and the turbocharger itself have very little oil volume for storage. Oil is forced through the system under pressure and thus doesn't carry any measurable volume of oil.

Proper engine warm up is critical with a turbocharged vehicle. Always make sure your coolant temperature has reached at least 2 visible bars on the dash before driving in boost.

Factory service intervals should be strictly adhered to. Regular checks of the turbocharger system during the factory service intervals should be completed.

Boost is preset and the wastegate adjustment rod is sealed from the factory. Do not try to adjust your boost as it will void your warranty and cause catastrophic engine damage.

Do not tamper with the exhaust system. Any change to the exhaust system will cause catastrophic engine failure. Engine failures are not covered under Jackson Racing warranty. Jackson Racing is not responsible for any engine damage.

If you are installing a boost gauge, you want to read boost from the vacuum line going between the throttle body and the bypass valve. This will give you an accurate reading of boost to the engine. **Do NOT tap into the wastegate actuator hose.**

DUAL CLUTCH TRANSMISSION (DCT) CLUTCH INITIALIZE LEARNING
If the dash of your Honda Talon when the ignition switch is turned on shows the MT indicator and AT indicator at the same time, the clutch initialization learning procedure is necessary.

Before starting this procedure, check the following:
- No DTCs.
- Engine idle speed is normal.
- Sub-transmission is in "P" (parking) and cooling fan stops.

1. Warm up the engine to the normal operating temperature (engine oil temperature: 122-230°F) and stop the engine. At least two bars indicated on coolant temperature gauge.

NOTE: If the large "U" (extremely low oil temperature indicator), or small "U" (low oil temperature indicator) is displayed on the gear position indicator, the engine must be warmed up before proceeding.

2. Turn the ignition switch ON (I). The MIL will come on shortly. Wait until the MIL goes off and the gear position indicator displays "P".

NOTE: Do not turn the ignition switch to START (II). If the starter motor is running, the learning procedure will be canceled.

NOTE:
- Do steps 3 and 4 deliberately.

3. Complete the following:
- Depress the accelerator pedal fully.
- Release the accelerator pedal.
- Depress the accelerator pedal fully.
- Release the accelerator pedal.
- Depress the accelerator pedal fully and hold it.

4. Now complete the following, while still holding the accelerator down from Step 3.
– Move the shift select lever to "L" (low range) position. Check that the gear position indicator displays "L".
– Move the shift select lever to "P" (parking) position. Check that the gear position indicator displays "P".
– Move the shift select lever to "L" (low range) position. Check that the gear position indicator displays "L".
– Move the shift select lever to "P" (parking) position. Check that the gear position indicator displays "P".

5. Release the accelerator pedal. Check that the "–" is displayed on the gear position indicator and blinks at 2 second intervals, and the MT indicator and AT indicator are displayed.

NOTE:
– The ECU did not accept the “start clutch initialize learning” if the gear position indicator continues to display "P". Perform the initialize procedures from Step 1 again.

6. Start the engine and let it idle for approximately 60 seconds. The clutch initialize learning is successful, when the "–" on the gear position indicator, MT indicator, and AT indicator disappear.

NOTE:
– If the "–" starts blinking at interval of 0.5 second, the clutch initialize learning is unsuccessful. Perform the initialize learning procedure from Step 1 again.
– If the large "L" (extremely low oil temperature) or small "L" (low oil temperature) is displayed on the gear position indicator, warm up the engine until the "L" on the gear position indicator goes off. Stop the engine and perform the procedures from Step 1 again.

7. Stop the engine.

8. Turn the ignition switch ON (I). Check that the gear position indicator displays "P" and the MT indicator OR AT indicator comes on.

NOTE:
– If both MT indicator and AT indicator are displayed, the clutch initialize learning has not been completed.

LAUNCH MODE OPERATION (FOR 19-21 BASE MODEL VEHICLES)

Launch Mode allows the DCT start clutch to be engaged from a high engine speed which increases vehicle acceleration. This “Launch Mode” comes standard on FOX Live Valve models. We have added the same “Launch Mode” to Base Talons that do not have the Launch Mode activation button.

⚠️**WARNING:**
Only use Launch Mode with the vehicle properly warmed up. A minimum of 2 bars on the temperature gauge is highly recommended.

Only use Launch Mode on flat ground, with a clear path in front and sides of your vehicle.

Do not use Launch Mode when carrying cargo, on slippery surfaces or when the vehicle is not on flat ground.

Failure to follow the Launch Mode guidelines can lead to a crash in which you or others can be seriously hurt or killed.

Do not use Launch Mode as follows:
- Where there may be hidden obstacles or there is not a clear sight line
- Slippery surface such as concrete, mud, water and ice
- When carrying cargo
- For any objective other than takeoff

To Operate Launch Mode:

1. Stop the vehicle completely.

2. Make sure all doors and all side nets are securely closed.

3. Fasten your seat belt. Check to make sure your passenger fastens their seat belt and is holding the handhold firmly.

4. Make sure the front wheels are pointing straight.

5. Press and hold the brake pedal, shift the shift select lever into the high-range (H) position.

6. Press and hold the SPORT MODE switch until the SPORT MODE indicator starts blinking. The SPORT MODE indicator will not blink and engage Launch Mode when:
- Vehicle is not completely stopped.
- Shift position is not in the high-range (H).
- The brake pedal is not depressed firmly.
- The seat belt indicator blinks (the driver's seat belt is not latched).
- There is a problem with a vehicle system (the PGM-FI Malfunction Indicator Lamp (MIL) comes on.)

– The engine is not at normal operating temperature (the coolant temperature gauge displays "Lo" or the high coolant temperature indicator comes on.)
– the clutch temperature indicator blinks.

7. With both hands on the steering wheel, pull and hold both shift paddles back simultaneously.

8. Release the brake pedal and apply the accelerator pedal, pressing the accelerator pedal a minimum of 1/4 throttle.

9. To launch the vehicle, release both shift paddles simultaneously.

Launch Mode does not activate when:
– The shift paddles are not both pulled or released simultaneously (Step 7 & 9).
– The accelerator pedal is not pressed more than 1/8 when the shift paddles are released (Step 8 & 9).
– The vehicle speed exceeds 3 mph (5 km/h) in Step 8.

To Cancel Launch Mode After the SPORT MODE Indicator Is Blinking
Launch Mode will be canceled under the following conditions:
– When you press the SPORT MODE switch again.
– When you release either shift paddle.
– When you release the accelerator pedal and maintain zero accelerator position until the SPORT MODE indicator stops blinking.
– When 30 seconds or more have elapsed from the Launch Mode being activated.