PTE Buick Stock Location Intercooler Instructions



Remove factory intercooler.

1. Disconnect battery (you will be removing the electric radiator fan).
2. Loosen hose clamps for stock inlet pipe on both sides. Remove inlet pipe and hoses.
3. Loosen clamp from turbo to intercooler hose connection.
4. Remove factory electric radiator fan. There will be two 10mm nuts with studs on top and two 10mm bolts on the bottom near the radiator support. Disconnect electrical connector to the fan and proceed to pull the fan out of the engine compartment.
5. Remove four 10mm bolts that support factory intercooler to support brackets. There will be one bolt on the driver side bracket, two bolts on the passenger side pan bracket, and one underneath the pan bracket.
6. Pull intercooler off of turbo and then pull the entire intercooler towards radiator at an angle and carefully maneuver out of engine compartment.
7. Remove nut that holds the pan bracket to the bottom front cover stud. Remove pan bracket.

Install New PTE Intercooler

1. Screw aluminum standoff spacer onto factory front cover stud located at the bottom corner of the passenger side. The smaller side of the spacer faces the engine block while the larger side faces the intercooler (see picture). This is the original stud that supported the factory pan bracket.

2. Take the large aluminum bracket piece, line up the hole at the bottom (protruding side of bracket piece facing out on right hand side towards radiator), and install long dark bolt with gold washer loosely.

3. Line up the top bracket hole to the bottom water pump bolt. (This way you can see which bolt you need to take out)

4. Slide bracket out of the way. Prep the threads of the supplied long aluminum bolt with TFE thread paste (because this bolt will protrude into the water port in the front cover). Now slide the washers onto bolt (smaller gray washer first, then larger gold washer).

5. Take a catch pan and slide it under the water pump where you are going to take out the water pump bolt (it will leak some water). Loosen and remove water pump bolt. Quickly slide aluminum bracket back in place and line up the holes. Hold small aluminum spacer behind bracket and install new long aluminum bolt, with washers, with the thread paste on it. Leave bracket loose for final adjustment later on. (See figure 1)

6. Once the bracket is installed, install supplied intercooler-to-turbo hose and clamps onto intercooler. You may now install the intercooler without the shroud. Line up the intercooler hole on the driver side factory v-bracket. You are going to re-use the factory bolt. Line up the hole and install the bolt loosely. Now line up the studs located on the backside of the intercooler to the bracket holes and install the provided nuts and washers loosely. Push intercooler hose onto turbo discharge. Next install aluminum inlet pipe, hoses and clamps to intercooler and throttle body. Verify clearance of intercooler to crank pulley fan. Once alignment of intercooler has been verified, you can now tighten all the bolts and t-bolt clamps nice and snug including the water pump bolt and the standoff spacer bolt.

7. Now you must install the aluminum shroud. The shroud will go over the front sway bar (notice the large openings on each side of the shroud). There are 10 Phillips screws that hold the shroud onto the intercooler, 5 on each side. Install all screws loosely at first, and then proceed to tighten all screws snug.

8. Provided are two aluminum side plates that need to be installed with the screws provided. The reason the plates are not pre-drilled is because every car will vary with clearance of the front sway bar. Depending on how old the factory motor mounts are, or if you have added aftermarket mounts, will change the clearances slightly. Thus you need to drill your own holes for the plates. The plates, when installed, help maintain the seal of the shroud to the intercooler.

9. Double check to make sure everything has been tightened and make sure you aren't leaking any more water with the new water pump bolt. If all is clear, reinstall electric radiator fan, reconnect the battery, and start the car to verify there are no leaks or interference issues. Going from a stock intercooler to this new PTE unit will dramatically increase horsepower and you will need to compensate the fueling for it. Go easy and tune slowly. You will notice huge gains with this intercooler.

PTE Buick Stock Location Intercooler Parts-List Sheet

1 – PTE Stock Location Intercooler
1 – Aluminum intercooler shroud
1 – 3” Aluminum inlet pipe
1 – Aluminum support bracket
1 – Longer water pump bolt
1 – Aluminum standoff spacer
1 – Small aluminum spacer
1 – Short dark bolt
1 – Lock washer
2 – Large Grade 8 washers
2 – Grade 8 Studs (pre-installed on back of intercooler)
2 – Small Grade 8 washers (pre-installed on back of intercooler)
2 – Grade 8 nuts (pre-installed on back of intercooler)
2 – Aluminum block off plates (used on intercooler shroud)
4 – Short self-tapping screws (used on aluminum block off plates to shroud)
10 – Short self-tapping screws (used on aluminum intercooler shroud)
1 – 4” long 3” ID silicone hose (intercooler to inlet pipe connection)
1 – Silicone transition hose for turbo to IC (type varies w/ turbo size)
1 – Silicone transition hose, inlet pipe to t-body (type varies w/ t-body size)
6 – T-body clamps (4 ea. 3”, other 2 size varies w/ turbo and t-body size)
1 – Installation instruction manual

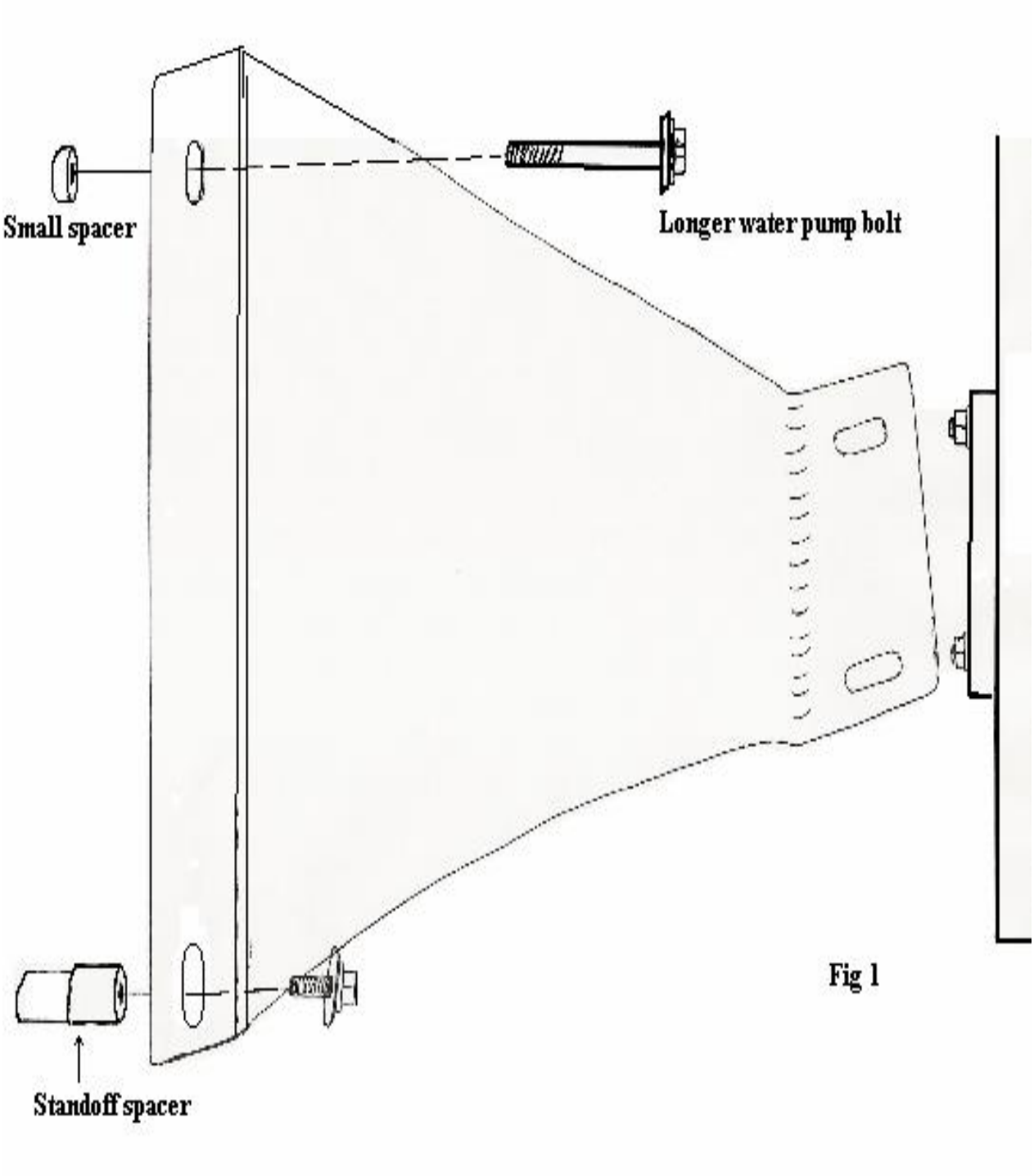


Fig 1

Stock Location Buick Intercooler

(# 053-2005)

Installation Instruction Revision

During installation of the intercooler, with regards to the factory V- bracket on the drivers side of the motor and the new intercooler bracket on the passengers side of the motor, the bolts need to be loosened before tightening any intercooler bolts. Once all bolts are installed/threaded into the back and side of the intercooler, tighten the v bracket bolts/studs, then tighten the passenger side bracket bolts and stand off stud. Lastly, tighten the intercooler to bracket bolts on both sides. Using this method will help with adjusting/centering the intercooler on the car and It is important to check clearance between the idler arm and intercooler tank before tightening all bolts. Do so by turning the steering wheel completely to the right and checking for any interference between the idler arm and intercooler. If no interference found, tighten your bolts. If the idler arm hits the intercooler, adjust/move the intercooler to clear the arm. It might also me necessary to adjust the position of the intercooler with regards to turbo to intercooler hose alignment. If you have any questions, please give us a call. # 855-996-7832