

LCE 2TR Supercharger

Part Number: 7015220 2TR 2005 - 2023



****Premium Fuel Required****

Installation Preparation

Before you begin, we recommend that you thoroughly clean the engine and engine compartment. If you do not, debris could be introduced to engine internals.

Make sure the engine has cooled fully before beginning the installation.

To help later, draw a diagram of your engine's vacuum hose routing before you disconnect anything. You will need to compare the supercharger ports to your factory intake at various points throughout this install. Study and closely follow the vacuum diagram pertaining to your vehicle found in the back of these instructions. The LCE Supercharger has been designed to reuse most of the factory hardware. As you remove them, keep them with their original component or otherwise label their location.

Kit Contents

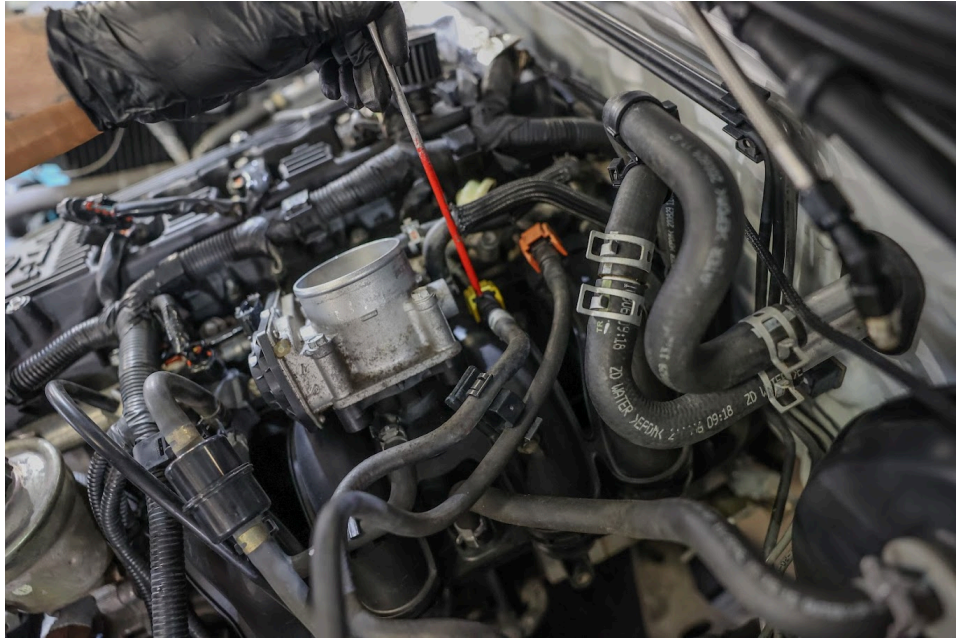
Item #	Quantity	Description
1016153	1	Supercharger Pulley
7012008	1	Supercharger Body
7010067	1	Supercharger Elbow
7010066	1	Supercharger Manifold
1032085	1	Throttle Body Teflon Gasket
1032040	1	2TR Lower Intake Gasket
7010025	1	2TR Supercharger Belt
1084008	4	Laser Iridium Spark Plugs

2TR-FE Supercharger Installation Instructions

- 1.) Disconnect the battery and remove it from the vehicle.
- 2.) Remove the air intake tube.
- 3.) Label coolant lines attached to the throttle body, disconnect and plug to keep from leaking. (See Image 1)



- 4.) Disconnect harness from TPS and remove throttle body.
- 5.) Relieve pressure from the fuel system and disconnect the 2 fuel lines from the fuel rail. (See Image 2)



6.) Disconnect harness from EVAP VSV, remove bolt securing it to intake manifold and tie out of way. (See Image 3)



7.) Disconnect and label remaining lines and electrical connections and remove the intake manifold. Retain the (2) factory intake manifold mounting nuts. Cover intake ports with tape.

8.) Remove fuel damper from rear of fuel rail. Remove the bolt securing line next to the damper and gently bend towards the fire wall. These lines will need final adjustment to run behind supercharger elbow. (See Image 4)



9.) Remove the serpentine belt. Remove mechanical fan by loosening fan, then shroud and lifting out together.

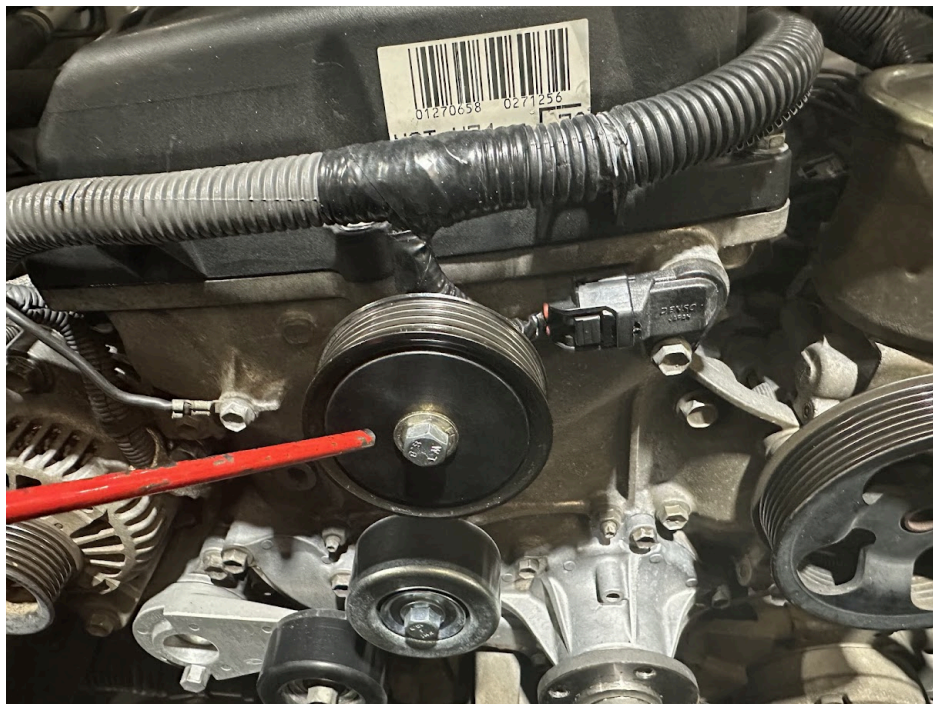
10.) Install block support bracket w/ threaded hole in forward position. Use (2) supplied M8x20mm bolts and (2) M8 lock washers. Install support arm loose to block support using supplied M8x15mm bolt and M8 lock washer.

11.) Remove (2) top right timing cover bolts and install tensioner bracket 1 using (2) supplied 1 5/16" spacer tubes. (See Image 5)



12.) Mount crank pulley to existing harmonic balancer using (4) supplied M8x30mm bolts, (4) M8 flat washers and red thread locker.

13.) Install idler pulley using supplied M8x50mm bolt and flat washer. (See Image 6)



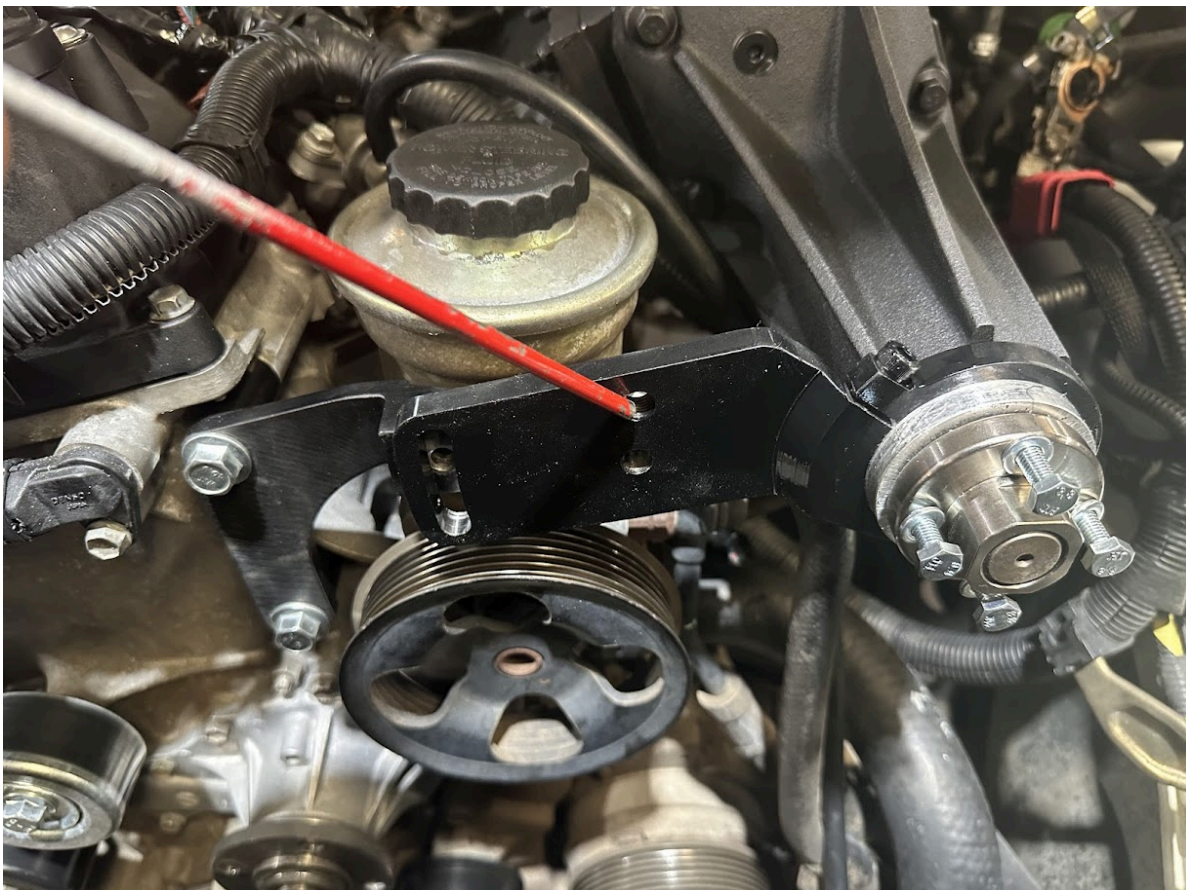
14.) Bend oil dipstick tube approximately 3" away from the steering pump to clear the charger and allow future access to the dipstick.

15.) Remove tape from intake ports and clean the surface. Make sure that no debris enters intake ports.

16.) Install supplied intake gasket into recess of charger and lower supercharger into engine compartment with rear of charger angled downward. Slide over factory studs and install factory nuts finger tight. Using (3) supplied M8x25mm bolts and M8 flat washers, secure supercharger to cylinder head and torque to 18 ft lbs.

17.) Reaching under the supercharger, attach the block support arm to the stud on underside of the charger body and secure it with M8 flat washer, lock washer and M8 nut.

18.) Install tensioner bracket 2 by sliding over charger snout w/ threaded hole on top. (See Image 7) Make sure it is seated as far back on the snout as possible. Thread in supplied M8x35mm bolt using M8 flat washer finger tight. Make sure the bracket slides freely, adjusting bracket 1 as needed. Once it slides freely, torque bracket 1 bolts to 34 ft lbs.



19.) Install tensioner to tensioner bracket 2 using supplied M10x60mm flange head bolt.

20.) Install pulley to snout of the charger using (4) supplied M6x20mm bolts and (4) M6 flat washers using red thread locker.

21.) Install vacuum fittings using PTFE paste on threads.

Valve Cover Breather = $\frac{3}{8}$ NPT x $\frac{5}{8}$ hose barb

Fuel Pressure Regulator = $\frac{1}{8}$ NPT x $\frac{1}{8}$ hose barb

Brake Booster = $\frac{1}{8}$ NPT x $\frac{3}{8}$ hose barb

PCV Valve = $\frac{1}{8}$ NPT x $\frac{3}{8}$ hose barb

22.) Use a zip tie to secure EVAP VSV to the wiring loom that runs over the fuel pressure regulator. Remove the factory line running from VSV and replace it with the supplied silicone line. Route under supercharger snout and attach to the check valve.

23.) Install (4) supplied M8 studs short side into water pump pulley flange using red thread locker. Lower fan and shroud into engine compartment together. Secure shroud with factory hardware. Install factory water pump pulley, supplied fan spacer then fan. Secure using supplied M8 flat washers, lock washers then M8 nuts.

24.) Install factory serpentine belt then supplied supercharger serpentine belt.

25.) Remove coils from spark plug tubes and using compressed air or vacuum, remove debris before removing spark plugs. Replace spark plugs with supplied cooler heat range spark plugs.

26.) Install throttle body to supercharger elbow using supplied teflon gasket using factory hardware. Hook up coolant lines as labelled previously.

27.) Reinstall all vacuum lines and electrical connections.