



REVO 7

2013+ TOYOTA GT86 \ SCION FR-S \ SUBARU BRZ

START HERE

If you are not a certified technician or mechanically competent, it is strongly recommended to reference the factory service manual before attempting any disassembly or installation. If you do not have the manual, it can be purchased here:

<http://techinfo.subaru.com/index.html>

TECH HELP

If you need help with your install, please contact us at tech@raceseng.com or 610-421-6245

IN THE BOX

- Revo Crank
- Revo Water
- Revo Water Bolts (3)
- Revo Alternator
- Revo Idler (2)
- Revo Tensioner (2)

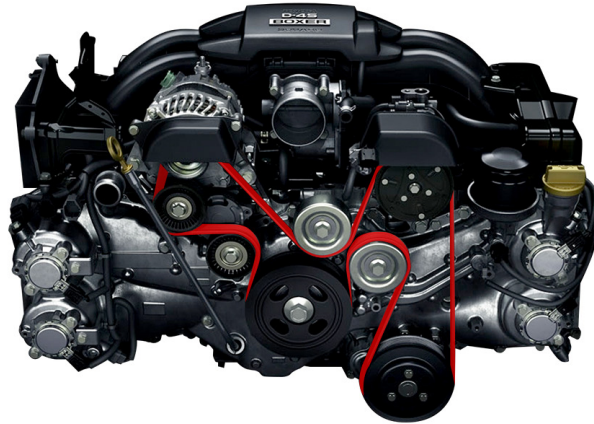
TOOLS YOU WILL NEED

- 10, 14, 22 and 24mm Sockets
- Breaker Bar
- Ratchet Wrench
- Torque Wrench (100+ ft. lbs.)
- Electric Impact Gun



INSTALLATION STEPS

- 1** Place the transmission in 6th gear and apply the parking brake. If you have an automatic transmission, please the reference service manual to properly lock flex plate. This will require a special tool that locks the flex plate from turning.
- 2** Remove the air intake. Procedures for this vary depending on your intake setup.
- 3** Use a 22mm socket and breaker bar to loosen the crankshaft bolt by turning counter clockwise. This may require 100+ ft. lbs. of force to break loose.
- 4** Use a 10mm socket and ratchet wrench to loosen the three water pump pulley bolts.
- 5** Use a 24mm socket and impact gun to loosen the alternator pulley nut.
- 6** Use a 14mm socket and ratchet wrench to turn the automatic tensioner pulley clockwise. This will release tension on the engine belt and allow you to remove the belt from the pulleys.
- 7** Use a 14mm socket and ratchet wrench to loosen the idler and tensioner pulley bolts.
- 8** Remove crank pulley. While doing this, make sure the crank pulley hub does not back out of the timing cover and the o-ring stays on the face of the hub. If the crank pulley hub comes out, you will need to align the keyway on the hub with the crankshaft keyway.
- 9** Completely remove the water pump, alternator, idler and tensioner pulleys.
- 10** Before installing the Revo Crank, make sure the nose of the crank pulley hub is clean. Install the Revo Crank by carefully lining up the round dowel to hole in the Revo Crank. Continue to slide the Revo Crank onto the hub until it is fully seated.
- 11** Put engine oil on the threads and below the head of the crank pulley bolt. Tighten the bolt to 45 ft. lbs., then tighten to 94 ft. lbs.
- 12** Install the Revo Water by applying blue Loctite on the 3 supplied bolts from Raceseng and hand tighten.
- 13** Install the Revo Alternator by applying blue Loctite on the factory nut and hand tighten.
- 14** Install the Revo Idlers and Tensioners by applying blue Loctite on the factory bolt and hand tighten. Note, the bearing retaining clips on the Revo Idler and Tensioner pulleys should be facing the front of the car. The Revo Idler and Tensioner face washers will cover the retaining clips.



15 Reference the belt diagram above to reinstall the serpentine belt. Reinstall the belt on all of the pulleys but leave the belt off the Revo Alternator pulley.

16 Using a 14mm socket and ratchet wrench, turn the automatic tensioner pulley clockwise and install the belt onto the Revo Alternator pulley. Slowly release and make sure the belt is properly seated on all of the pulleys.

17 Final pulley installation requires all of the pulleys to be properly torqued. See the list below and torque each pulley to the proper spec:

Crank 94 ft. lbs.

Water 11 ft. lbs.

Alternator 55 ft. lbs. (Tightening with an impact gun is sufficient)

Idler 30 ft. lbs. (Align the Raceseng Icon prior to torquing the pulley)

Tensioner 30 ft. lbs. (Align the Raceseng Icon prior to torquing the pulley)

18 Place the vehicle in neutral gear position, disengage the parking brake and rotate the crank using a 22mm socket and ratchet wrench. Make sure the belt is seated properly on each pulley before starting the car.

19 Start the engine and double check that the belt is properly rotating on each of the pulleys. Also, check each pulley to make sure it is not wobbling. If a pulley is wobbling, double check the installation.

20 Enjoy your new driving experience.