

CorkSport MAZDA PERFORMANCE



Installation Instructions for CorkSport 1986-1991 Rx7 Stainless Braided Oil Cooler (OC) Lines

Contents

- 1 OC Short Line
- 1 OC Long Line
- 6 Crush Washers
- 6 Page Installation Instructions

Tools Required

- 10mm socket with driver
- 10mm wrench
- 17mm wrench
- 21mm wrench
- 23mm wrench
- 23mm socket
- Torque wrench (if available)
- 10 Inch Crescent wrench
- Quart of your favorite oil
- Floor Jack
- Jack stands
- Hammer
- Pan to catch oil
- Safety glasses
- Rags
- Optional: Oil filter
- Optional: 5 quarts of your favorite oil

WARNING: Your oil cooler is aluminum. Make sure the banjo bolts for the oil cooler lines are straight when installing or you can cross thread the cooler requiring you to get a replacement.

NOTE: The rx7 used for making these installation instructions is a 1987 Rx7 Turbo with manual steering and no A/C. Installation in your rx7 could be slightly different.

NOTE: If the OIL check engine light ever comes on while driving shut-off the engine as soon as it is safe to do so. Do not run a rotary engine with low/no oil!

CAUTION: Do not fold or pinch the oil cooler lines. A kink in the line could impede oil flow.

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Step 1: Put on your safety glasses. Jack up vehicle and secure it on jack stands on a level surface. Remove the plastic under tray. It is held on by eight 10mm headed bolts.

Step 2: Disconnect your battery and remove. The stock battery bracket is held by two 10mm headed nuts.

Step 3: Remove the stock battery tray. It is held in by three 10mm headed bolts and one 10mm nut.

Step 4: Remove the radiator fan. The Radiator fan is held on by four 10mm headed bolts. By using the alternator belt you can keep the fan pulley from spinning to help loosen the nuts. If your car is equipped with power steering and or A/C you will need to remove the belts. The tensioner nut for the power steering is 17mm (B in illustration 1a). The tensioner nut for the A/C is 21mm (A in illustration 1a). Once the tensioner nuts are loose you can loosen the 10mm headed bolts (C in illustration 1a) on the top of the A/C and power steering bracket to take the tension off the belts and remove them. See illustration #1 and 1a below.



Illustration #1

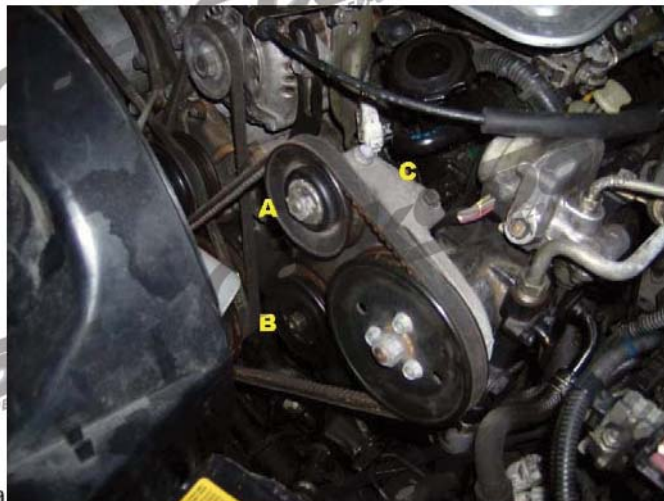


Illustration #1a

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Step 5: With the radiator fan (and belts if equipped with A/C and power steering) removed you will have access to the front cover of the engine where the shorter oil cooler line attaches. Slide your catch pan under the car beneath the front cover. With the 10 inch Crescent wrench and the 21mm wrench loosen the oil cooler line from the front cover (see illustration #2 below). The 21mm wrench will be used to keep the fitting from spinning when loose while removing the oil cooler line. There will be oil that drains out. Hold the oil cooler line low into the pan to drain out the oil in the line.



Illustration #2

Step 6: Once the oil is through draining from the line you will need to remove the 23mm headed banjo bolt from the lower oil cooler line on the oil cooler (see illustration #3 below). You will want to place the catch pan under the oil cooler before you remove this bolt. Let the oil drain from the oil cooler before moving to the next step.

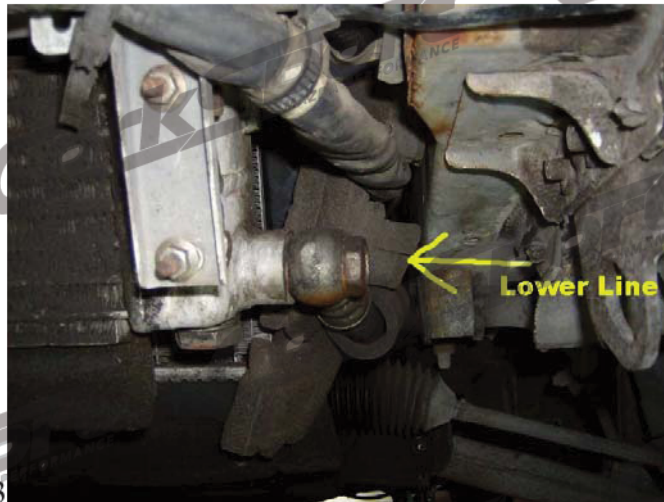


Illustration #3

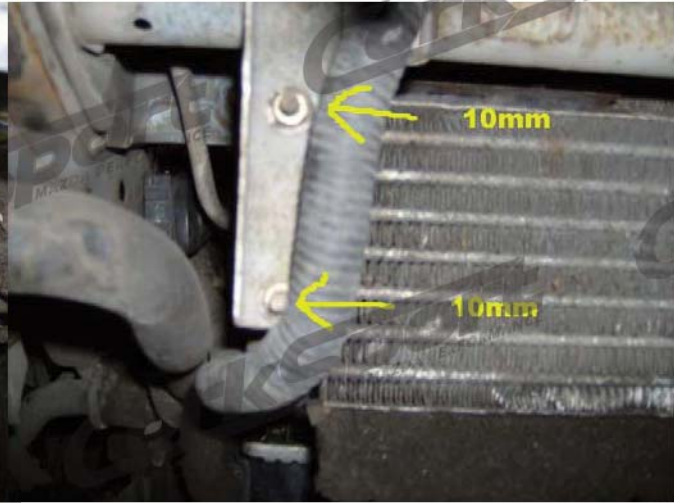
Step 7: Remove the four 10mm headed nuts that hold the oil cooler to the car. See illustration #4 and #5 below.

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Illustration #4



Illustration #5



Step 8: With the oil cooler loose remove the upper oil cooler line 23mm headed banjo bolt. Use the oil cooler to help with leverage. Be careful not to damage the oil cooler when doing this. Once the oil cooler is free from the line let the oil cooler drain if there is any residual oil. Use a small hammer to bend the aluminum line stop on the oil cooler. Bend the stop away from the oil cooler.

Step 9: From under the vehicle remove the 23mm headed banjo bolt on the back drivers side of the engine (see illustration #6 below). The removal of the line will let oil drip. Remove the factory zip tie that holds the oil level sensor wire. Remove the line from the engine bay noting the path the line fits.

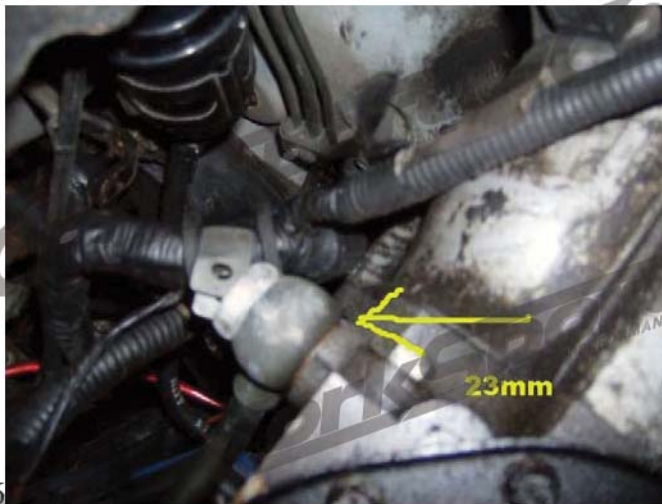


Illustration #6

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Step 10: Install the longer oil cooler line to the drivers side back location of the engine with two new crush washers on either side of the fitting. Make sure to route the oil cooler line in the same path as the original line along the engine. Leave the bolt loose for now. See illustration #7 below.



Illustration #7

Step 11: Route the oil cooler line like the original through the location next to the radiator. See illustration #8 below. Do not connect the oil cooler line to the front cover yet.



Illustration #8

Step 12: Install the top oil cooler line with the 23mm headed banjo bolt with new copper crush washers on both sides of the fitting. Torque the banjo bolt to 41-50 ft/lbs.

Step 13: Install the lower oil cooler line with the 23mm headed banjo bolt using the copper crush washers on both sides of the fitting. Torque the banjo bolt to 41-50 ft/lbs.

Step 14: Connect the top oil cooler line to the front cover of the engine.

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Step 15: Mount the oil cooler back into its brackets and tighten the four 10mm headed bolts to 61 to 87 inch/lbs. Tighten the rear oil cooler line to the drivers side back location of the engine now to 41-50 ft/lbs.

Step 16: Double check the clearance of the upper oil cooler line. Make sure the line is not touching the radiator or the metal radiator support. Tighten the front cover oil cooler line with the 10 inch Crescent wrench and the 21mm wrench. See illustration #9 below.



Illustration #9

Step 17: If you are going to change your oil drain the oil from the oil pan. Change your oil filter and fill your engine with approximately 6 quarts of oil. If you are just changing the lines add approximately a quart of oil.

Step 18: Reinstall the power steering and A/C belts and tighten the tensioner. Reinstall the radiator cooling fan with the four 10mm headed bolts. Tighten the nuts to 65-90 inch/lbs.

Step 19: Reinstall the battery tray with the three 10mm headed bolts and one 10mm headed nut. Install your battery and bracket with the two 10mm headed nuts. Connect your battery cables.

Step 20: Locate your fuse box underneath your hood. It is located in front of the drivers side shock tower. Locate and remove the 30 amp "EFI" fuse.

Step 21: Crank your engine over until you see the oil pressure gauge on the dash read pressure. Check all the fittings on the oil cooler lines for leaks. If a leak is found re-torque the fitting or tighten the connection if a torque wrench is not available.

Step 22: Reinstall the 30 amp "EFI" fuse and start your car. Double check for oil leaks.

Step 23: Turn off your car and lower your car on to the ground. Double check the oil level and add oil if needed.

Step 24: Start your car and let it run the engine until it is warm. Check for leaks. Drive the car a short distance. Check for leaks.

Step 25: Turn off your car and reinstall the under tray with the eight 10mm headed bolts.

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