

INSTALLATION INSTRUCTIONS

SUBJECT: ALLISON TRANSMISSION COOLER LINES FOR 2011-14 LML DURAMAX

FPE-2022-76
August, 2022

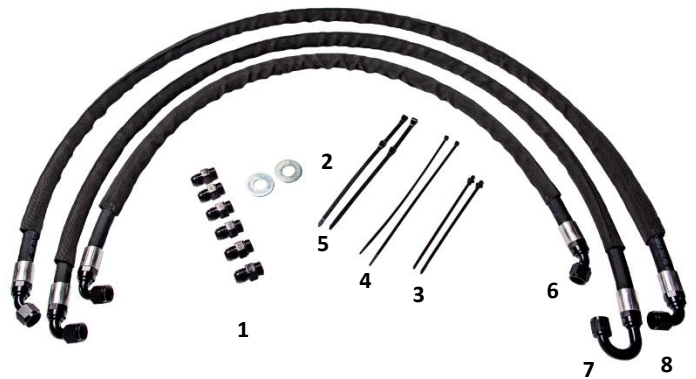
FITMENT: 2011-2014 CHEVY/GMC LML pickup trucks with 6.6L Duramax and Allison Transmission

KIT P/N: FPE-TL-LML-1114

ESTIMATED INSTALLATION TIME: 4 Hours

KIT CONTENTS:

| Item | Description | Qty |
|------|---|-----|
| 1 | 7/8"-14 O-ring to -10AN fitting | 6 |
| 2 | Large OD washer | 2 |
| 3 | Fir tree push mount cable tie | 2 |
| 4 | Locking cable ties | 2 |
| 5 | Double hose clamps | 2 |
| 6 | Transmission cooler line – (short, 45/90 deg) | 1 |
| 7 | Transmission cooler line – (medium, 180/90 deg) | 1 |
| 8 | Transmission cooler line – (long, 45/90 deg) | 1 |



WARNINGS:

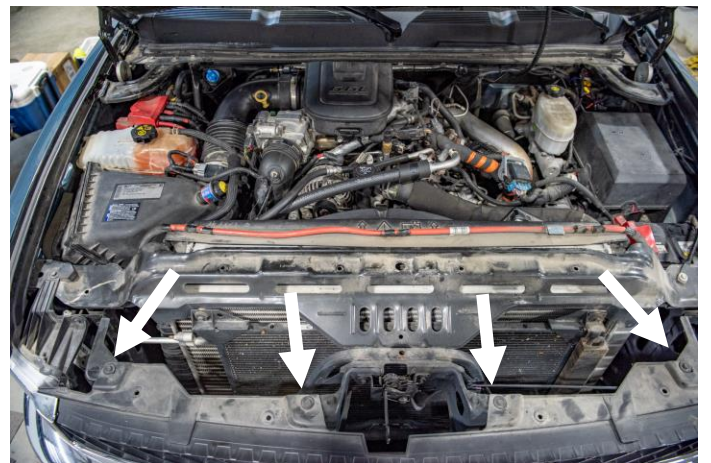
- Use of this product may void or nullify the vehicle's factory warranty.
- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
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INSTALLATION INSTRUCTIONS

NOTE: Allow the coolant system and transmission to cool. Relieve the coolant pressure from the coolant system by removing the coolant cap.

FRONT GRILL AND BUMPER REMOVAL

Remove the engine bay plastic cover panel by removing the plastic expansion fasteners that retain it to the front grill and body. Remove the front grill retention bolts located along the top of the grill.



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Using a long pry bar, release the lower retaining clips for the front grill.



Remove the front grill. Next remove the front bumper by removing the upper retaining bolts with an 18mm socket.

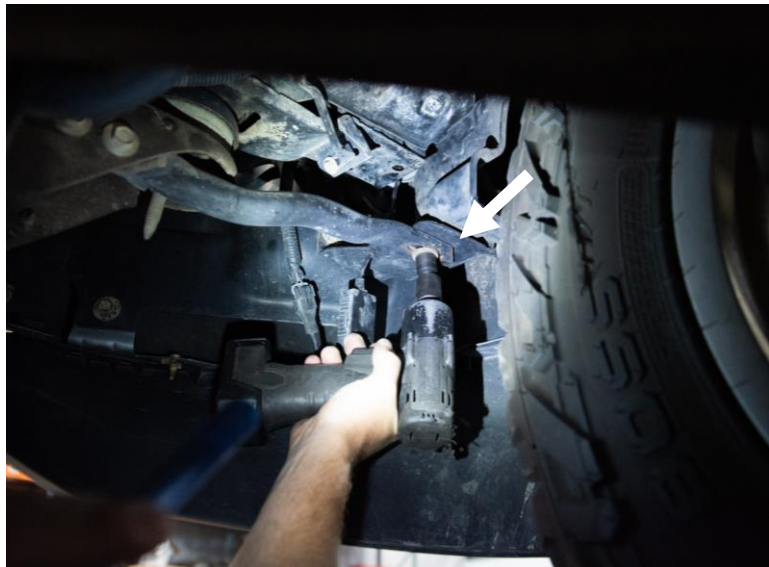


INSTALLATION INSTRUCTIONS

From the underside of the truck, disconnect the harness for the fog lights.



Remove the lower supports for the front bumper from the left and right sides of the vehicle.



Remove the front bumper assembly to provide for clear access to the transmission oil cooler.



INSTALLATION INSTRUCTIONS

Remove the lower engine shroud.



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ENGINE BAY

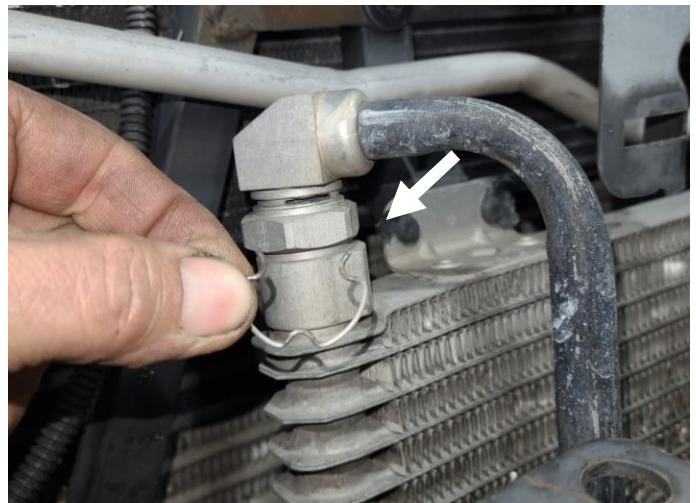
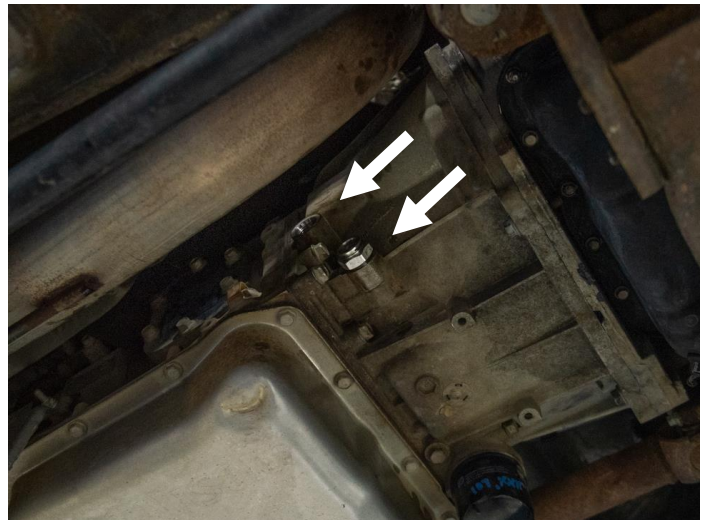
To allow for removal of the existing OE lines and installation of the new lines:

- Remove the passenger side fender liner
- Remove the engine air intake
- Remove the coolant reservoir support brace
- Remove the passenger side CAC pipe



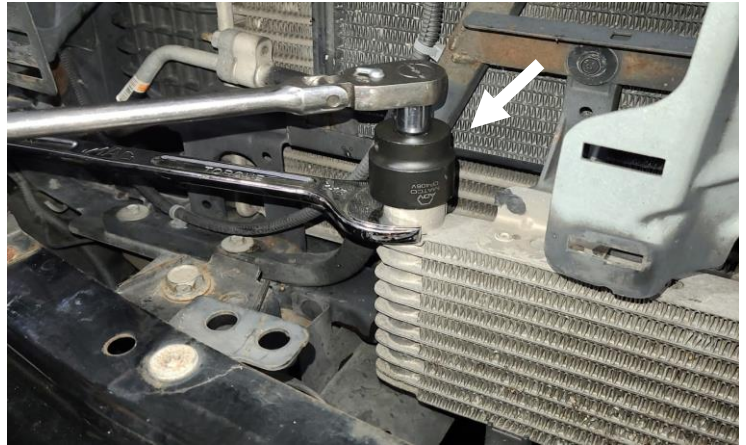
OEM TRANSMISSION LINE REMOVAL

Remove the clips that retain the transmission lines to the transmission, radiator, and transmission cooler with a small pic or screwdriver. Disconnect the OE lines at each location and remove the OE line assemblies from the truck.



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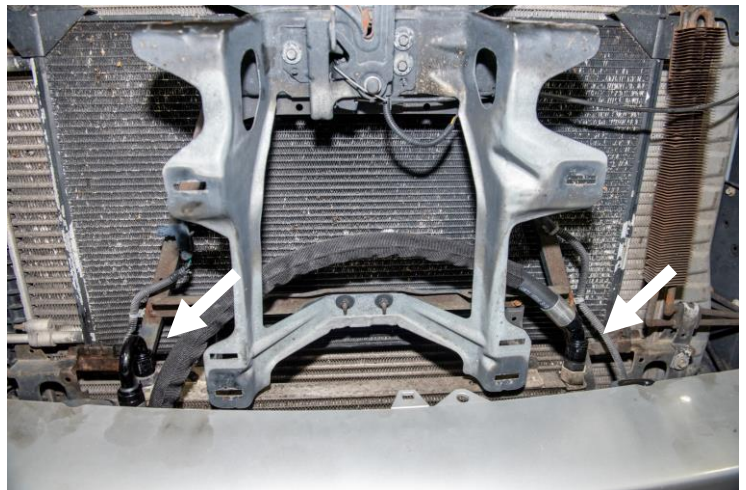
With the OE transmission lines removed from the truck, use a 1 1/8" back up wrench and 1 1/4" socket or wrench to remove the factory fittings from each side of the transmission cooler.



NEW FITTING INSTALLATION

Use a backup wrench when removing the factory fittings from the transmission cooler and when installing the new fittings included with the kit.

Install one of the 7/8"-14 O-ring to -10AN fittings into the left and right-side ports of the oil cooler.

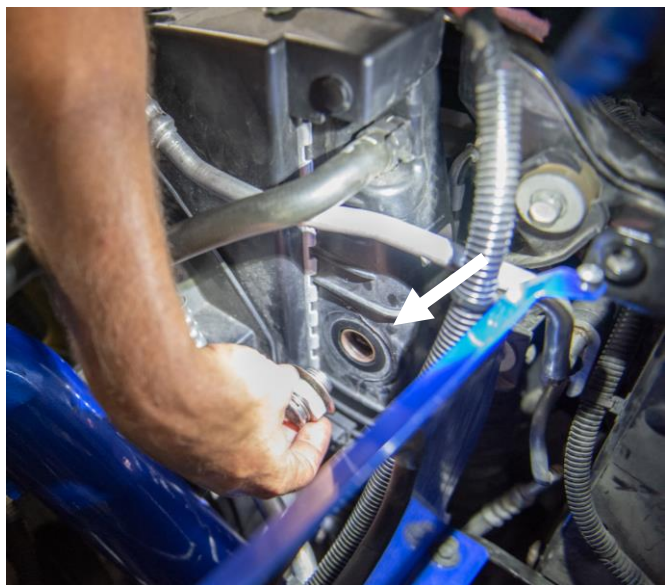


INSTALLATION INSTRUCTIONS

Assemble the large flat washers onto two of the 7/8"-14 O-ring to -10AN fittings.

- A. **Remove** the O-ring from the fitting.
- B. Place the large flat washer on the side where you removed the O-ring and **replace** the O-ring onto the fitting with the washer below it.
- C. Install into the radiator, removing and replacing one fitting at a time.

IMPORTANT NOTE: Install and remove ONE FITTING AT A TIME on the radiator, removing both fittings at the same time may result in the internal cooler coming loose on the inside of the tank.



INSTALLATION INSTRUCTIONS

Install the two fittings into the radiator, removing and replacing one fitting at a time.



Remove the two OE fittings from the transmission using a 1 1/4" socket or wrench.

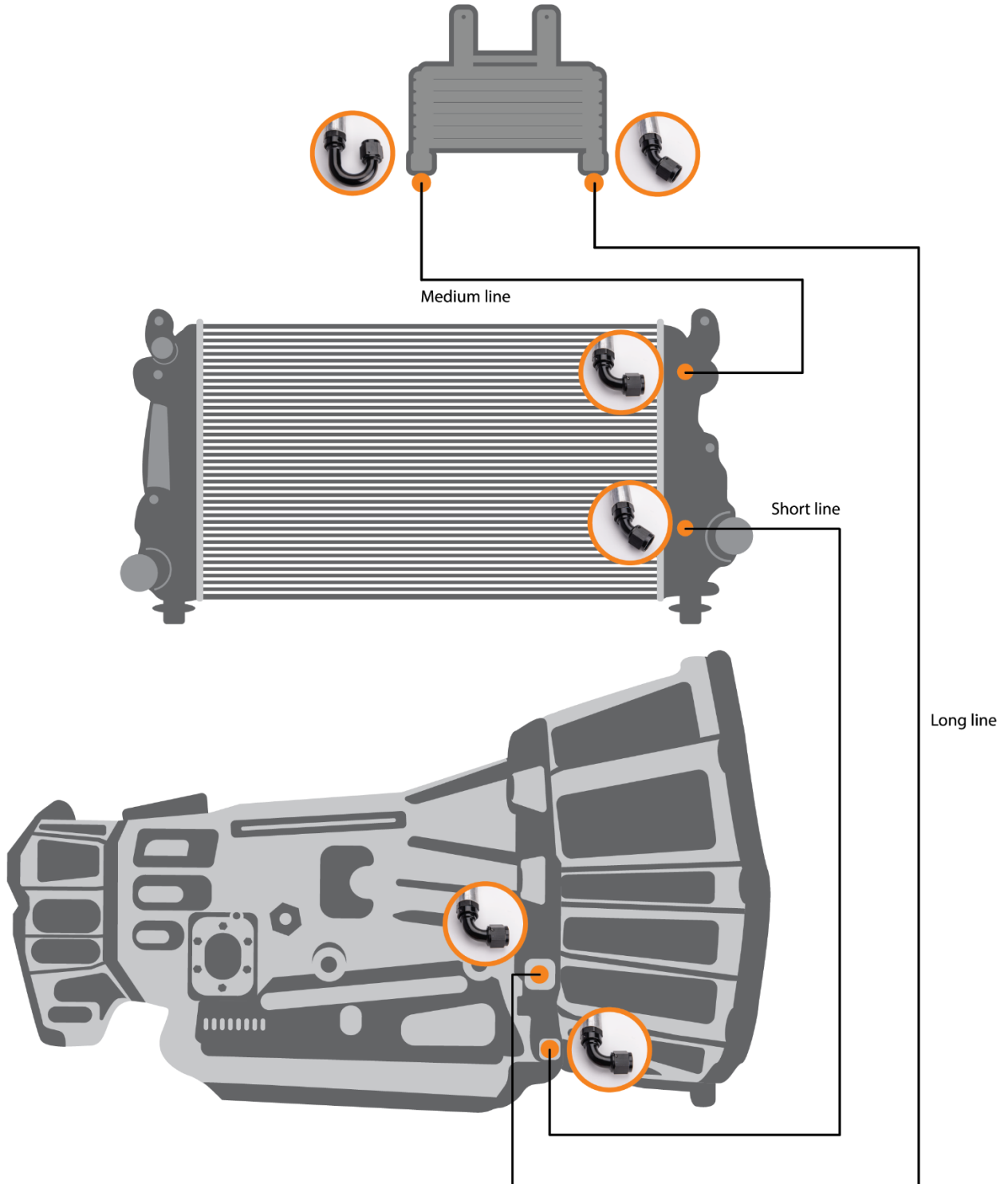


Install two of the 7/8"-14 O-ring to -10AN fittings into the "To Cooler" and "From Cooler" ports on the transmission.



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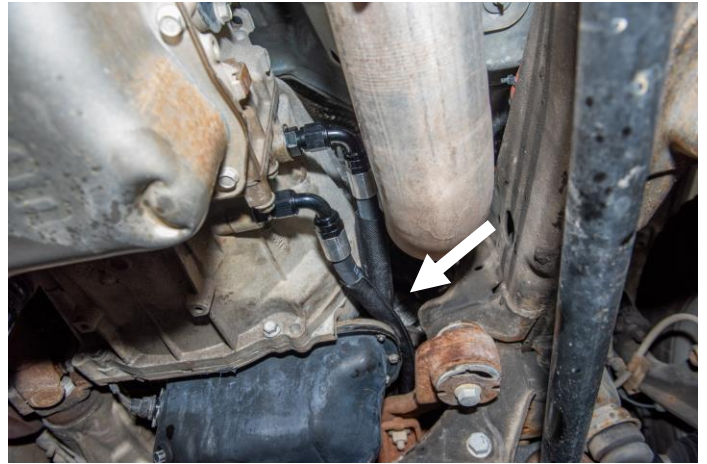
ROUTING DIAGRAM



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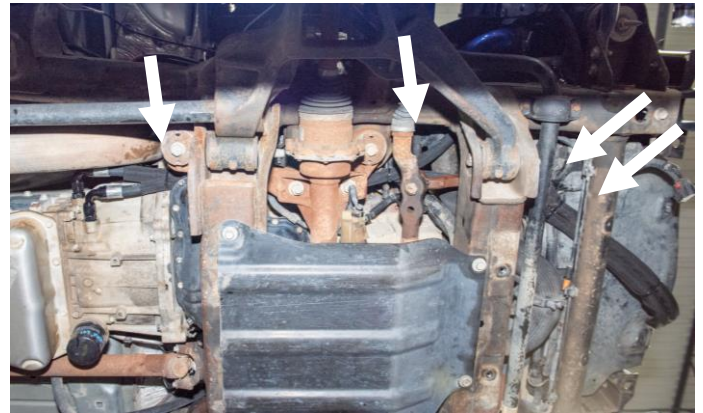
RECOMMENDED LINE ROUTINGS

Route the long and short length lines to the transmission closely alongside the transmission bell housing, above the engine oil pan split line. Use zip ties to retain the hose assemblies.

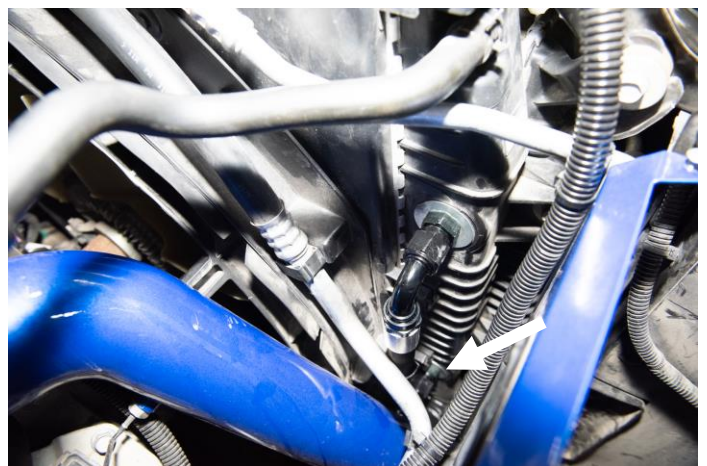


Route the long and short length lines over the main chassis members and suspension anti-roll bar.

Route the lines uniformly along the passenger side of the chassis, just inside the frame rails by approximately 6".



The short length hose is routed from the transmission "TO COOLER" to the bottom-side radiator fitting. The 45 degree fitting is utilized on the radiator side, aligned slightly downward and toward the center of the chassis.

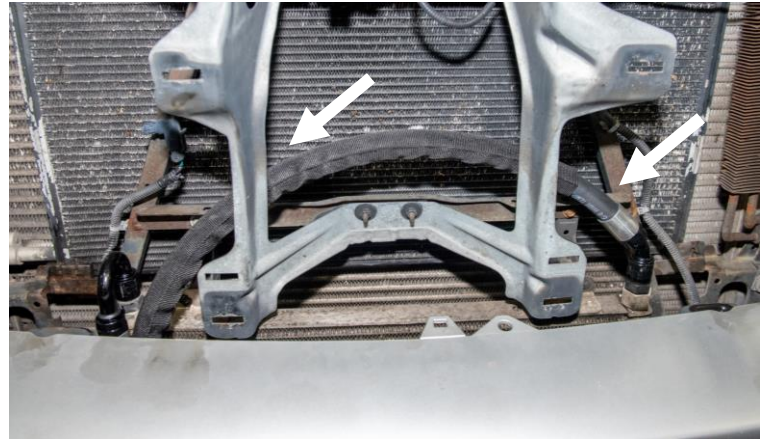


INSTALLATION INSTRUCTIONS

RECOMMENDED LINE ROUTINGS

The longest line should be routed to the right-hand side (driver side) of the transmission cooler. Route the line behind the grille support bracket and downwards. Both the left and right side lines will route under the radiator.

The medium length line is routed from the left side (passenger side) of transmission cooler to the top-side radiator fitting.



The medium length hose (with the 180 degree fitting) is routed to the left (passenger side) of the transmission cooler. Use the fir tree wire tie to secure the longest hose to the cooler bracket at the hole location shown at right.



Route the lines over the top of the chassis cross-tube. Use the double hose clamps provided in the kit to secure the hoses together.

