

SERVICE PROCEDURE

Install Oil Cooler (CVT mounted heat exchanger with 4 ports)

1. Place the vehicle on a lift and raise it as needed to perform the following procedure.
2. Remove the front Bumper Fascia Assembly, front Under Cover, left front Fender Protector and left Air Guide.
 - Refer to the appropriate section of the ESM for the procedures to remove the items in step 2.

NOTE: The Air Guide is connected to the Radiator core support with a J-hook and must be lifted up before being pulled forward to remove.

3. Remove the Air Inlet Duct from the Air Cleaner Case.

WARNING: Never remove the radiator cap when the engine is hot. Serious burns may occur from high-pressure engine coolant escaping from the radiator.

4. Relieve any residual cooling system pressure.
 - a. Wrap a thick cloth around the radiator cap. Slowly turn it a quarter of a turn to release the pressure.
 - b. Then turn it all the way.
5. Clamp both of the coolant hoses attached to the CVT Fluid Cooler to prevent coolant loss.

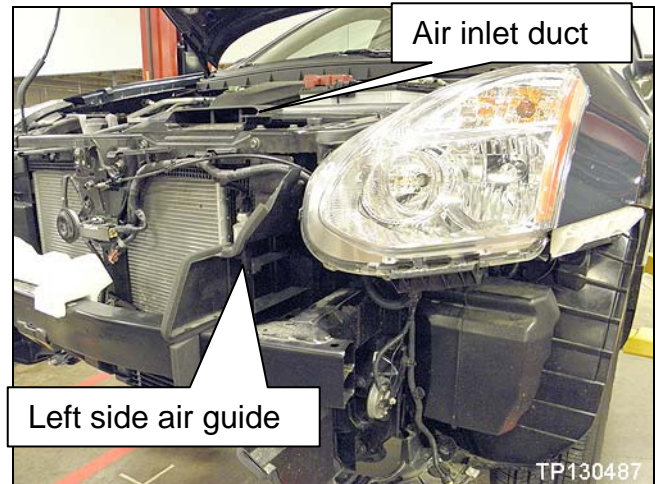


Figure 1

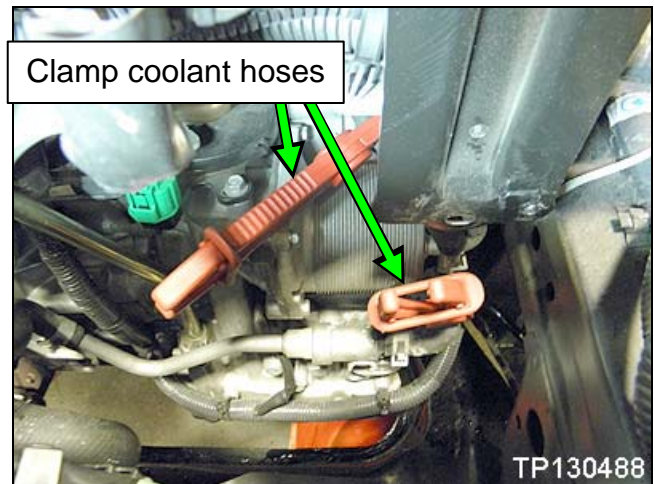


Figure 2

6. Remove "bolt A" and loosen "bolt B" for the Water Hose Bracket in Figure 3.

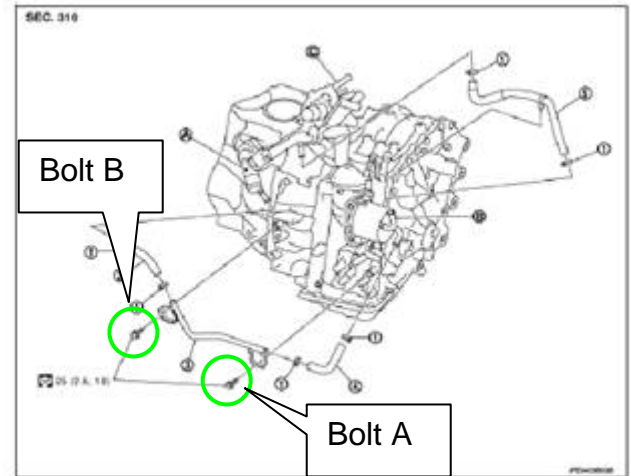


Figure 3

7. Remove the spring clamps from the CVT Fluid Cooler water hoses and then remove both hoses from the CVT Fluid Cooler.

NOTE: These spring clamps will be saved and reused for reassembly.

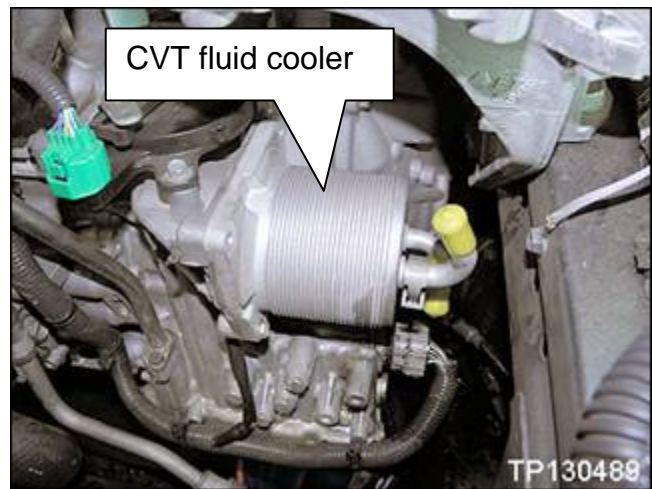


Figure 4

8. Remove the CVT Fluid Cooler mounting bolts and remove the CVT Fluid Cooler.
9. Clean any debris from the CVT Fluid Cooler mounting surface with brake cleaner and a lint free cloth.

NOTE: Use genuine Nissan Brake Cleaner or equivalent. Make sure the product that is used complies with local regulations.

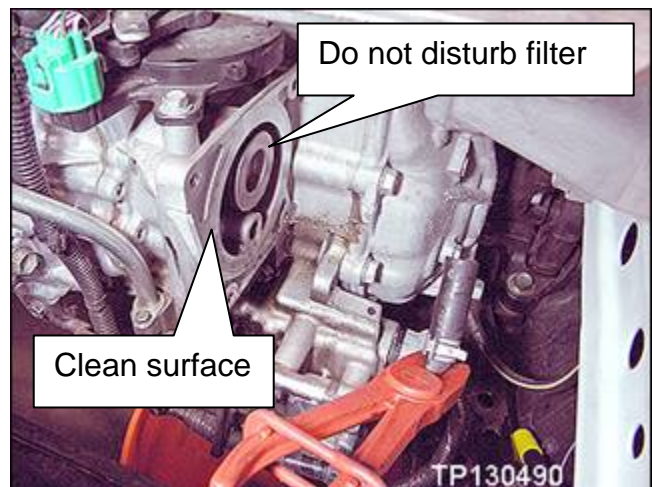


Figure 5

10. Coat the new O-ring on CVT Fluid Cooler using NS-2 CVT fluid before installing it onto the CVT Cooler mounting area.



Figure 6

11. Install the new CVT Fluid Cooler from the kit onto the CVT and tighten the mounting bolts to 3.63 N•m (0.37 kg-m, **32 in-lb**).

12. Remove any residual coolant from the inside of both of the coolant hoses before re-assembly of the hoses to the CVT fluid cooler.

NOTE: Use genuine Nissan Brake Cleaner or equivalent. Make sure the product that is used complies with local regulations.

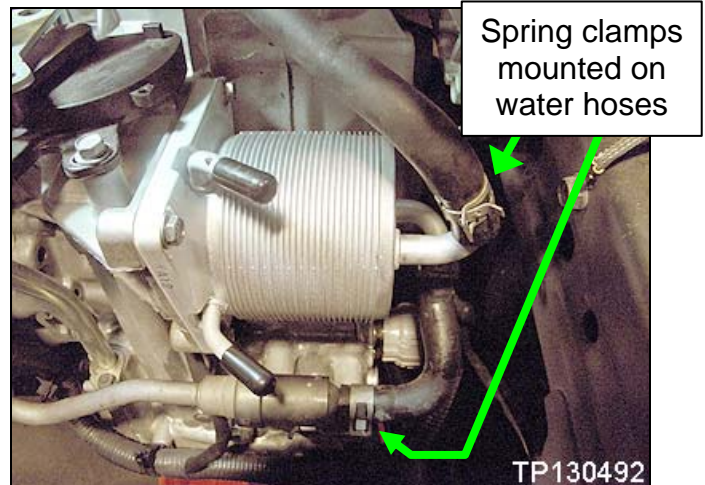


Figure 7

13. Re-install the water hoses onto the new CVT Fluid Cooler and then reinstall the spring clamps.

- Position the spring clamps as close to each fitting bulge as possible and then release them.

NOTE: Confirm that the clamps are not on top of each fitting bulge or on an angle.

14. Re-install the Water Hose Bracket and tighten bolt A and bolt B from step 6 to 4.2 N•m (0.43 kg-m, **37 in-lb**).

Install the COOLER ASSY-AUTO TRANS (external air-to-ATF CVT cooler)

1. Remove the SEAL-LOWER and create a notch to clear new BRKT ASSY-O/COOLER, LWR, and then re-install the SEAL-LOWER.
 - a. See Figure 10 for reference to locate the pre-existing weld nuts in the lower radiator support that the BRKT ASSY-O/COOLER, LWR (No. 3), shown in Figure 11 and Figure 12, will be attached to.
 - b. Place the BRKT ASSY-O/COOLER, LWR from the kit over the SEAL-LOWER and mark "bracket width" where the material will be removed as shown in Figure 8 and Figure 10.
 - c. Remove only enough material (Figure 9 and Figure 10) to allow the BRKT ASSY-O/COOLER, LWR to be installed to the lower radiator support (approximately 127mm x 50.8mm [5" x 2"]).
 - o Remove gently to avoid cracking the material.

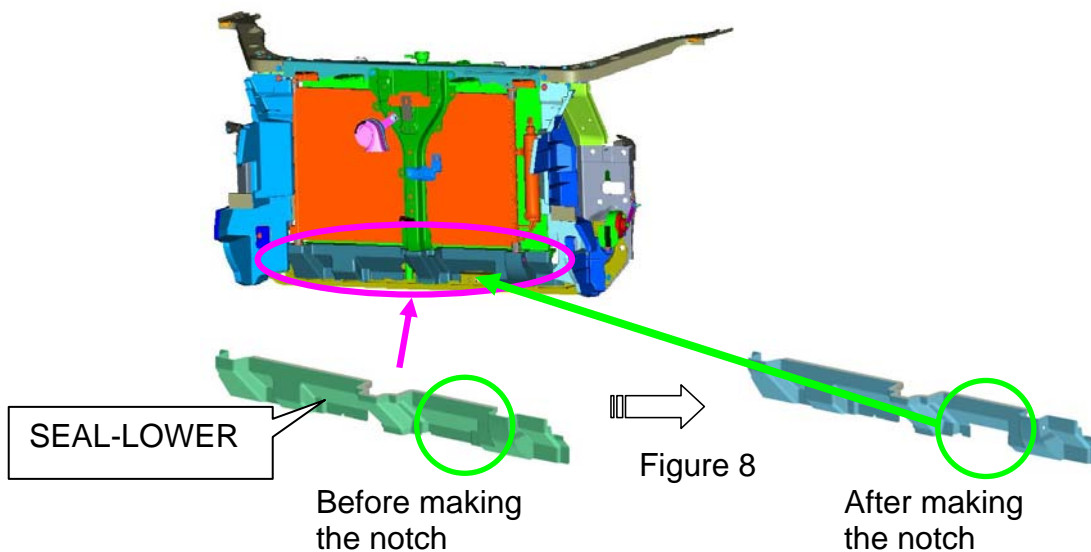


Figure 9

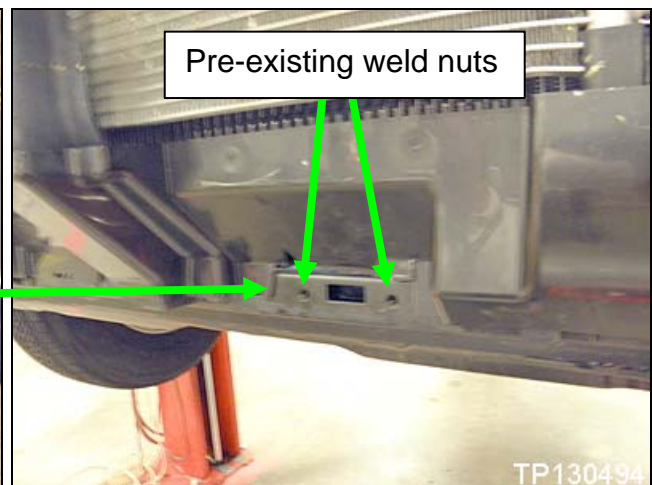


Figure 10

Figure 9 and Figure 10 illustrate the area to remove the material to allow clearance to install the BRKT ASSY-O/COOLER, LWR.

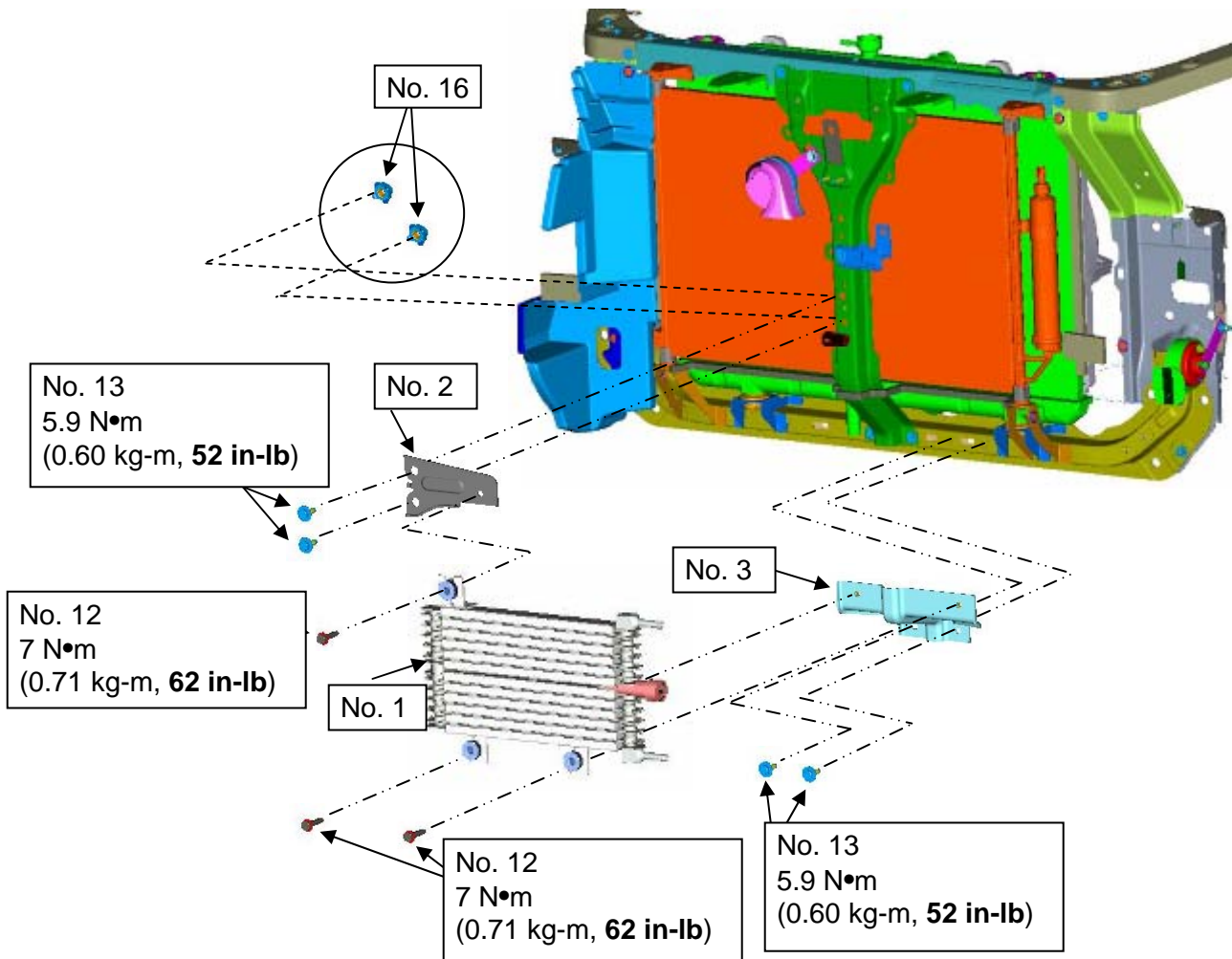


Figure 11

Figure 11 illustrates the COOLER ASSY-AUTO TRANS and attachment points to vehicle and is for reference when performing steps on page 7.

NOTE: Refer to Table A on page 13 for parts descriptions and quantities in the kit.

NOTE: Refer to Figure 11 on page 6 for steps 2-4 below.

2. Install BRKT ASSY-O/COOLER, LWR (No. 3) to the lower radiator support.

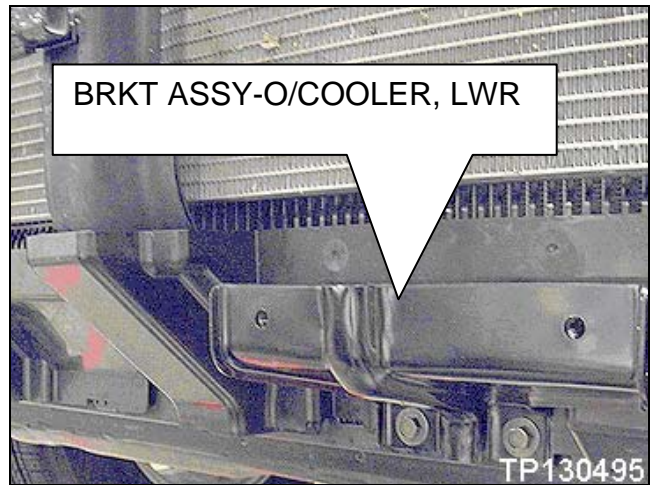


Figure 12

3. Install BRKT ASSY-O/COOLER, UPR (No. 2) to the center member.
 - Leave nuts loose at this time.

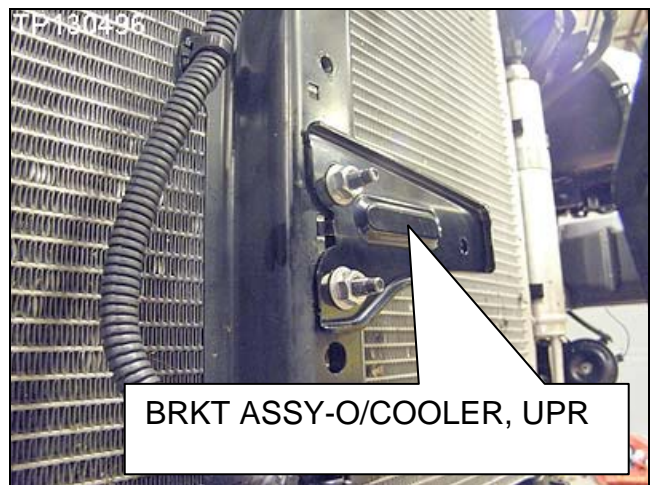


Figure 13

4. Install COOLER ASSY-AUTO TRANS, OIL (No. 1) and torque all bolts to specifications provided in Figure 11.

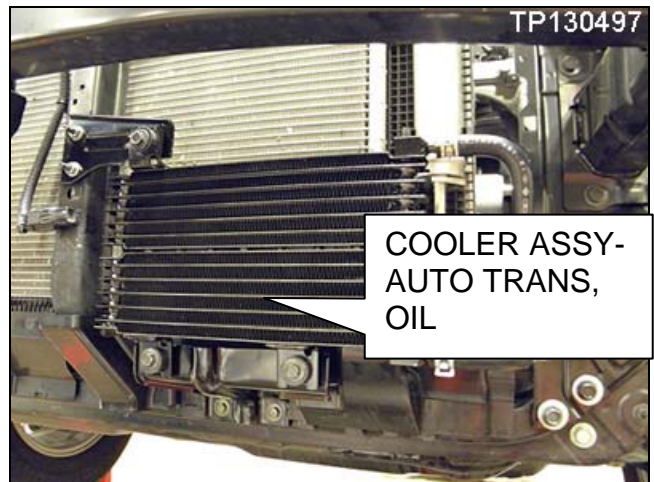


Figure 14

Assemble the Hoses and Side Bracket

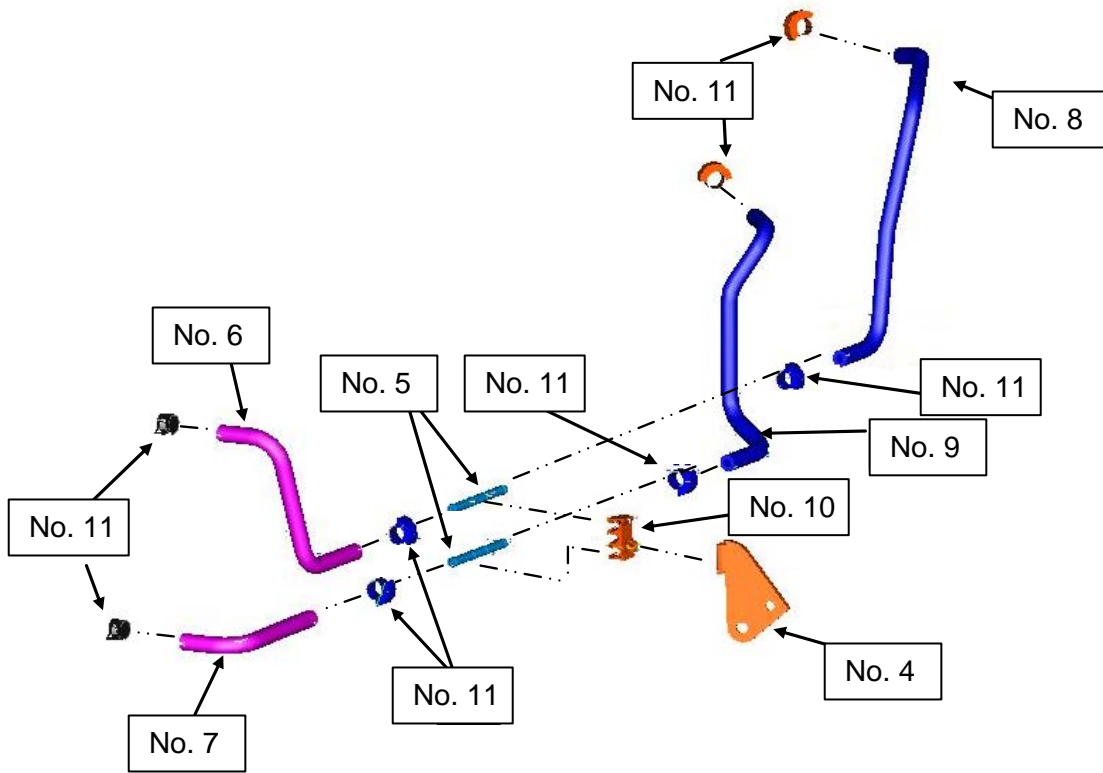


Figure 15

Figure 15 illustrates the COOLER ASSY-AUTO TRANS Hose Assembly referenced in steps 1-3 on page 9.

NOTE: Refer to Table A on page 13 for parts descriptions and quantities in the kit.

NOTE: Refer to Figure 15 on page 8 for steps 1-3 below.

1. Install hoses (No. 6/7/8/9) to TUBE-OIL COOLER (No. 5) with CLAMP-HOSE (spring clamp No. 11).

- Match the color marks on the hoses and rotate until the marks are aligned (Figure 16).
- Position the spring clamps as close to each fitting bulge as possible and then release them.

NOTE: Confirm that the clamps are not on top of a fitting bulge or on an angle.

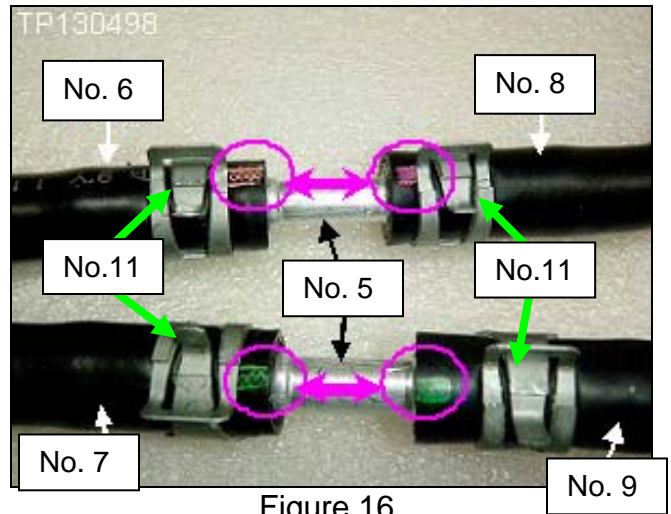


Figure 16

2. Install the CLIP-TUBE (No. 10) to the BRKT ASSY-O/COOLER, SIDE (No.4).

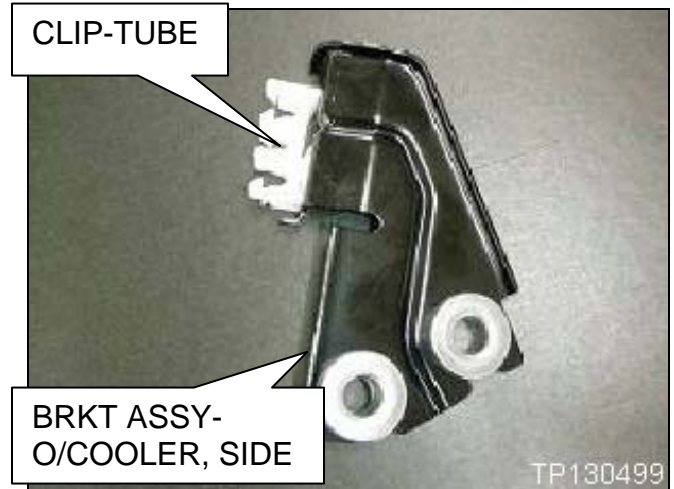


Figure 17

3. Assemble the Hoses to the Bracket.

- Install the pink color coded hose on the top and the green on the bottom of BRKT ASSY-O/COOLER, SIDE (No.4).

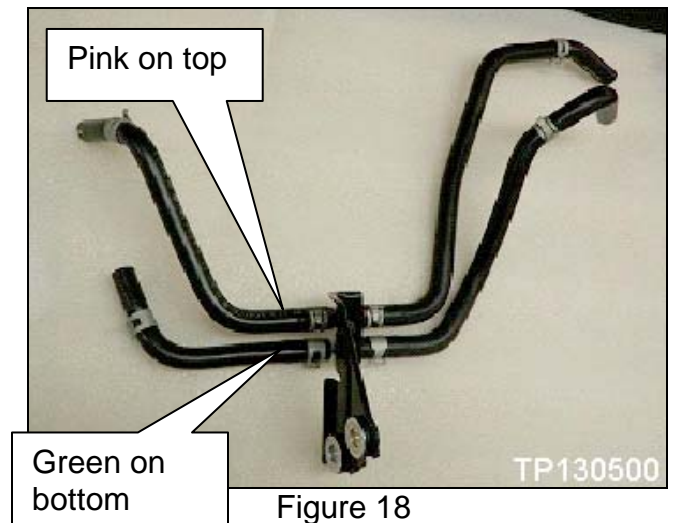


Figure 18

Install Hose and Bracket assemblies

NOTE: Refer to Figure 15 on page 8 and Figure 19 below for steps 1-3 below.

1. Install the assembled HOSE and BRKT onto the vehicle:
 - a. Pass the hoses shown in blue (Figure 19) between the radiator and the bulkhead.
 - b. Install BRKT ASSY-O/COOLER, SIDE (No. 4) with two bolts (No. 14) to the pre-existing weld nuts and torque with the specification provided in Figure 19.

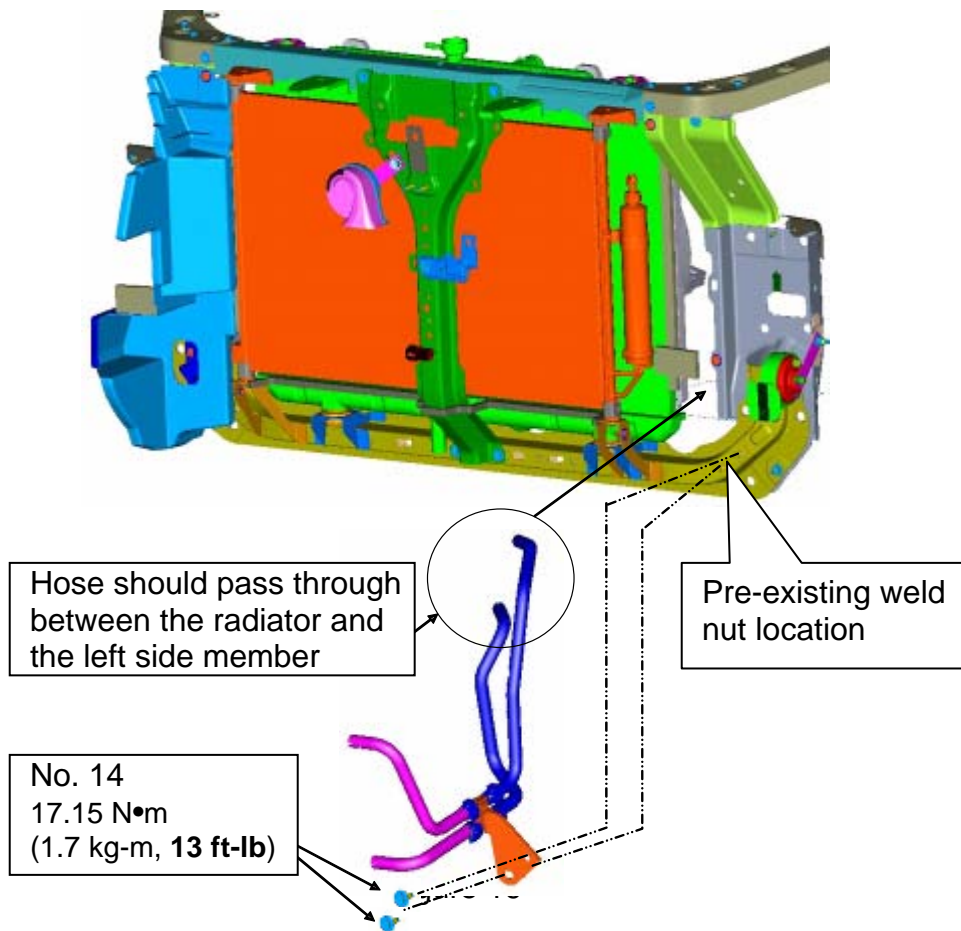


Figure 19

2. Place 2 new CLAMP-HOSE (spring clamp, No. 11) onto the hoses and install the HOSE (No. 6/7, Figure 15) onto COOLER ASSY-AUTO TRANS, OIL (No. 1) with the white paint marks facing toward front of the vehicle (Figure 20).
 - Position the spring clamps as close to each fitting bulge as possible and then release them.

NOTE: Confirm that the clamps are not on top of a fitting bulge or on an angle.

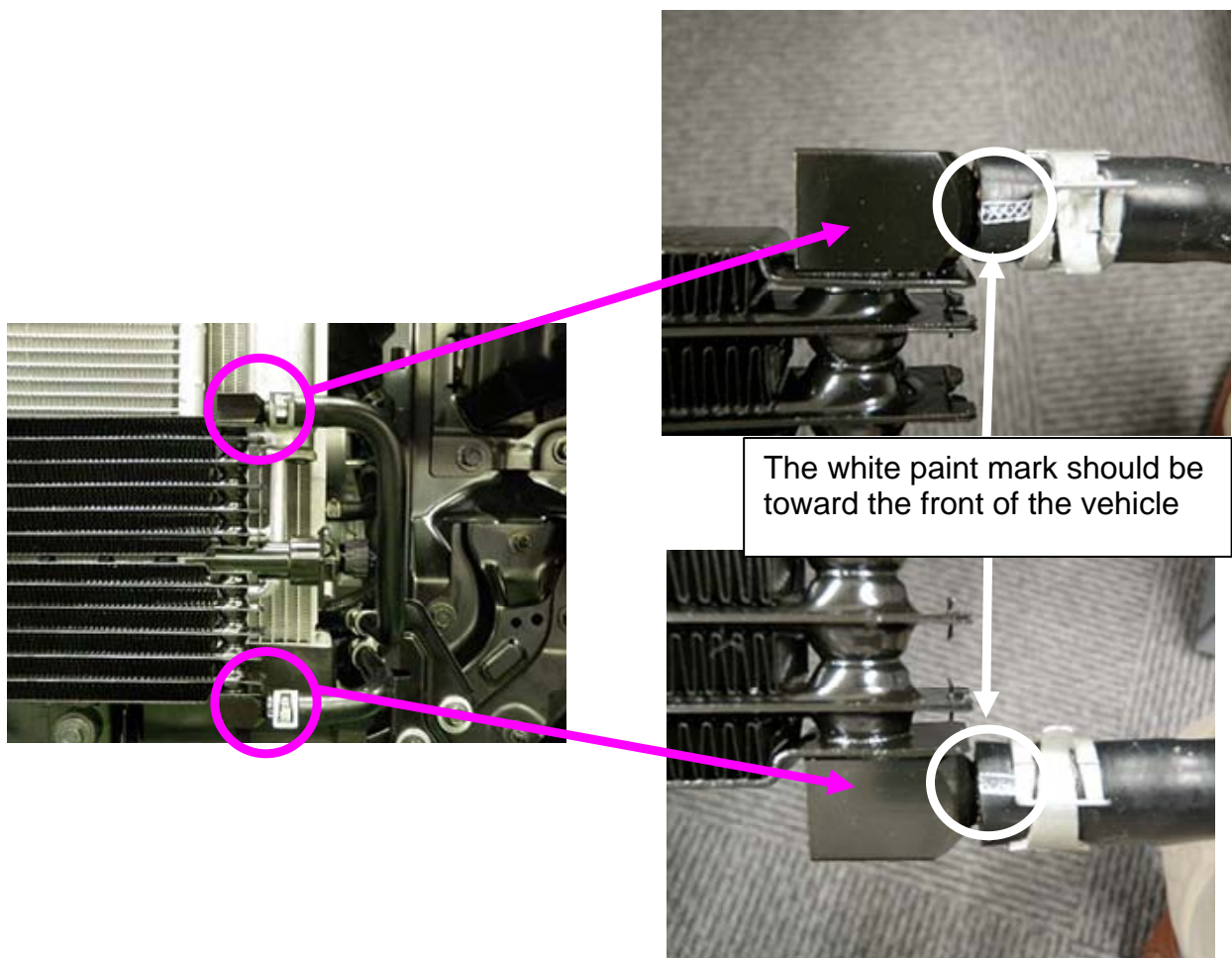
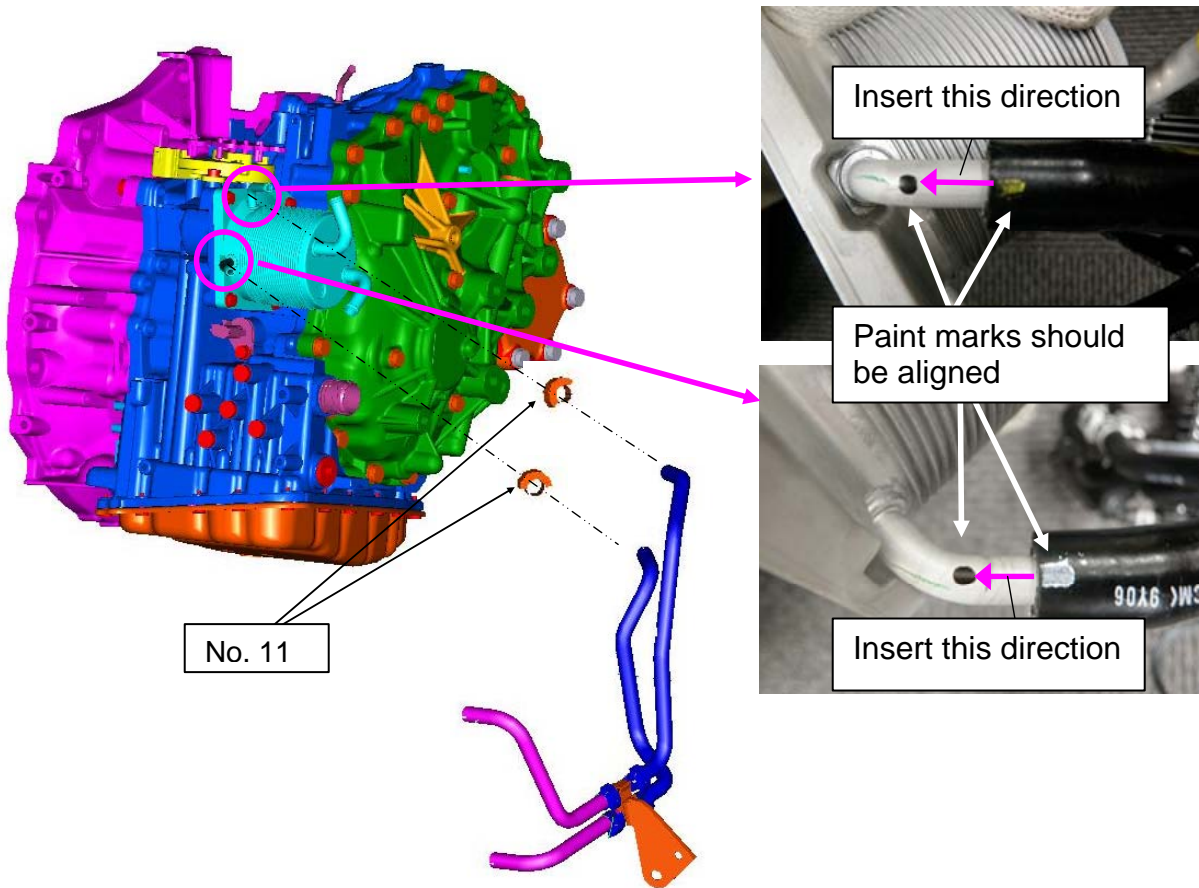


Figure 20

3. Place 2 new CLAMP-HOSE (spring clamp, No. 11) onto the hoses and install the cooler hoses (shown in blue, Figure 21) to the CVT Fluid Cooler.
 - Position the spring clamps as close to each fitting bulge as possible and then release them.

NOTE: Confirm that the clamps are not on top of a fitting bulge or on an angle.



4. Re-install the front Bumper Fascia Assembly, front Under Cover, left front Fender Protector, left Air Guide, and the Air Inlet Duct in the reverse order.
5. Check the level of the coolant and add as needed.
 - Refer to ESM for correct coolant for the model year vehicle that is being worked on.
6. Check the level of the CVT NS-2 Fluid and add as needed.
 - Refer to ESM for correct method to check fluid level for the model year vehicle that is being worked on.