A. DESCRIPTION

Some subject vehicles may have an A/C refrigerant leak between the A/C pipe and the expansion valve. Dealers should inspect the joint part between the A/C pipe and the expansion valve for refrigerant leakage by using a black light. A yellow fluorescent dye is added in the refrigerant during production.

For vehicles that are found to have an A/C leak from the refrigerant leak inspection, replace the O-rings of the A/C pipes (HI and LO) with a modified one (with enlarged diameter). If a leak still exist, replace the A/C pipe (HI) with a new one.

B. VEHICLE INSPECTION PROCEDURE

1. Verify that the vehicle is within the following range:

VIN Range	Production Date Range
JM1ND****G0100033 - 103904	April 20, 2015 through July 29, 2015

- If the vehicle is in the above VIN list, go to step 2.
- If the vehicle is not in the above VIN list, it is not applicable to DRW05.

2. Perform a Warranty Vehicle Inquiry using your eMDCS System. Refer to eMDCS System - Warranty Vehicle Inquiry Results table below.

eMDCS System - Warranty Vehicle Inquiry Results

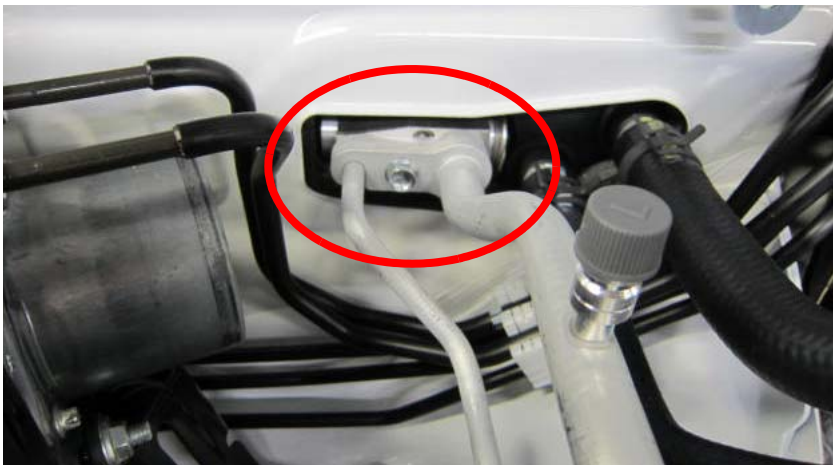
If eMDCS displays:	Action Required:
“Campaign: DRW05 Open”	Proceed to “INSPECTION PROCEDURE”
“Campaign: DRW05 Closed”	Return vehicle to inventory
“Campaign: DRW05 Open” or “Closed” is not displayed	Campaign does not apply to this vehicle. Return the vehicle to inventory

C. INSPECTION PROCEDURE

1. Move the vehicle to a darkened area of the service shop as the dye can be hard to see in bright light.
2. Turn the engine off and open the hood.

   NOTE: Make sure to wear safety goggles.

3. Direct a black light toward the joint part between the expansion valve and the A/C pipes (HI and LO) and look for a refrigerant leak.



What a yellow dye leak looks like with a black light:

- If ANY yellow color dye leak is detected, it is NO GOOD. Check the VIN list with “NG”. Inspection is complete. Go to REPAIR PROCEDURE.
- If NO yellow color dye leak is detected, go to next step.

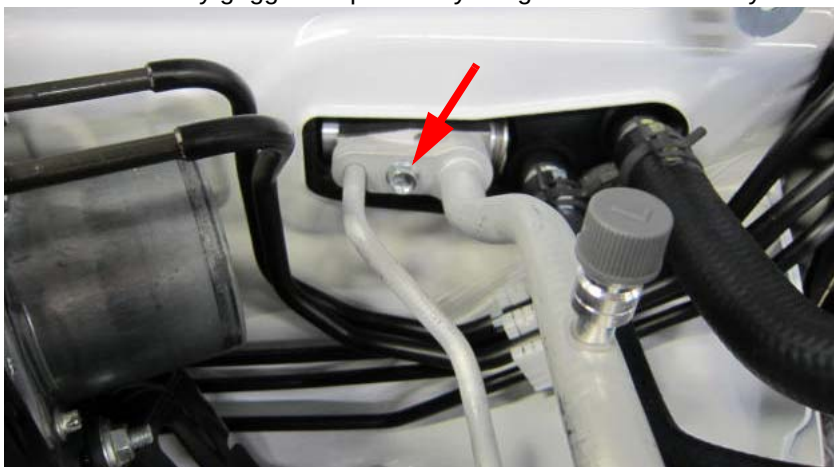
4. Slide a finger on the under part of joint between the expansion valve and the A/C pipe (High), then direct a black light to the finger to see if any yellow dye leak has adhered to the finger.
   - If ANY yellow color dye leak is detected on the finger, it is NO GOOD. Check the VIN list with “NG”. Inspection is complete. Go to REPAIR PROCEDURE.
   - If NO yellow color dye leak is detected on the finger, go to next step.
5. Looking at the joint part between the expansion valve and the A/C pipe (High) from the front of the vehicle, direct the black light to see if any yellow dye leak is detected.
   - If ANY yellow color dye leak is detected around the A/C pipe (High), it is NO GOOD. Check the VIN list with “NG”. Inspection is complete. Go to REPAIR PROCEDURE.
   - If NO yellow color dye leak is detected, the vehicle is OK. Check the VIN list with “OK”. Inspection is complete. Return the vehicle to inventory.

CAUTION: The both-side adhesive tape of the sponge around the expansion valve reacts to the black light and emits light. DO NOT mistake this light for a refrigerant leak.

D. REPAIR PROCEDURE

1. Evacuate the system using a refrigerant recovery machine.
2. Remove the bolt securing the A/C pipes.

   NOTE: Make sure to wear safety goggles to protect eyes against fluorescent dye.



3. Separate the A/C pipe (HI) and the A/C pipe (LO) from the expansion valve.
4. **To prevent moisture or foreign material from entering the refrigeration cycle, plug all openings of the A/C pipes and expansion valve.**

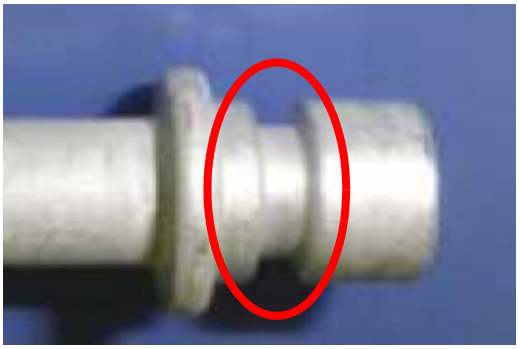
   CAUTION: If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur.

5. Remove the O-ring from the A/C pipe (HI).

   CAUTION: Pay close attention so as not to damage the surface of the A/C pipe during the O-ring removal.

6. Make sure that the O-ring seating portion and the area around it are free from foreign material and refrigerant (fluorescent dye).

   NOTE: If needed, clean the area off with brake cleaner. Make sure there are no fibers adhering to the pipe.



7. Install the O-ring (Small) of the O-ring kit to the A/C pipe (HI).

   CAUTION: DO NOT wipe off the oil on the O-ring surface during the installation. If the O-ring looks dry, add a drop of oil to it.

8. Remove the O-ring from the A/C pipe (LO).

   CAUTION: Pay close attention so as not to damage the surface of the A/C pipe during the O-ring removal.

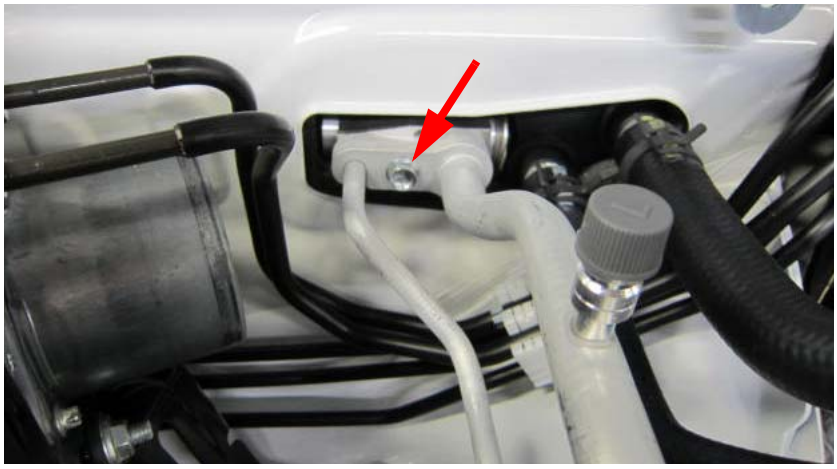
9. Make sure that the O-ring seating portion and the area around it are free from foreign material and refrigerant (fluorescent dye).

   NOTE: If needed, clean the area off with brake cleaner. Make sure there are no fibers adhering to the pipe.

10. Install the O-ring (Large) of the O-ring kit to the A/C pipe (LO).

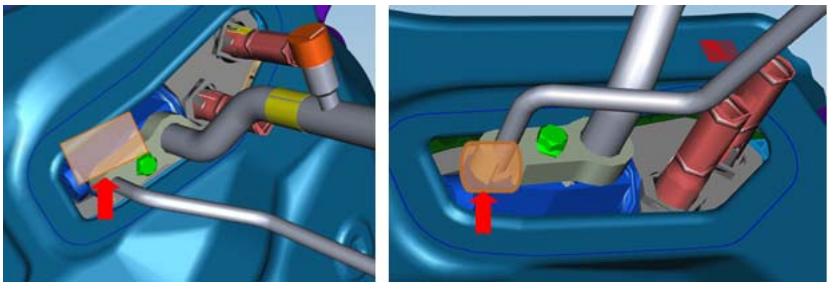
    CAUTION: DO NOT wipe off the oil on the O-ring surface during the installation. If the O-ring looks dry, add a drop of oil to it.

11. Insert the A/C pipe (HI) and A/C pipe (LO) straight into the expansion valve. and tighten the bolt to 8-10 Nm (6-7 ft lbs).



12. Inspect the joint portion of the expansion valve, the A/C pipe (HI) and the area around for any adhesion of foreign material or refrigerant (fluorescent dye).

    NOTE: If needed, clean the area off with brake cleaner and a clean cloth.



13. Charge the refrigerant according to the procedure in the workshop manual “REFRIGERANT CHARGING”.
14. Verify the repair
    a. Start the engine and raise the engine speed to 4,000 rpm, keeping it there for 5-10 seconds with the following conditions.
        - A/C switch: ON
        - Air flow volume: MAX
        - Air flow temperature: MAX COLD
    b. Using a black light, verify that there is no adhesion of fluorescent dye around the joint portion of the expansion valve and the A/C pipe (HI).
        - If there is no refrigerant leak, the repair is complete.
        - If a leak is found, replace the A/C pipe (HI) with a good one according to the procedure in the workshop manual.
15. Return the vehicle to inventory.