CATERPILLAR

Service Manual

272D SKID STEER LOADER

S/N B5W00001-UP

Printed by Heavy Equipment Manuals **Printed in U.S.A**
v2.20

Product: SKID STEER LOADER
Model: 272D SKID STEER LOADER B5W
Configuration: 272D Skid Steer Loader B5W00001-UP (MACHINE) POWERED BY C3.8 Engine

Disassembly and Assembly
Air Conditioning and Heating R134a for All Caterpillar Machines
Media Number -SENR5664-31 **Publication Date -01/05/2015** **Date Updated -23/10/2018**

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Refrigerant Orifice Tube Assembly - Remove and Install

SMCS - 7320-010-QT

The orifice tube may be located in the refrigerant line near the evaporator inlet, or in the in-line dryer.

If the orifice tube is located in the refrigerant line near the evaporator inlet, use the procedure that follows. If the orifice tube is located in the in-line dryer, refer to Dryer Replacement.

Removing the Orifice Tube

Refer to Safety Requirements before service work is performed on the air conditioning system.

The refrigerant must be recovered before removing the accumulator. Refer to the Testing and Adjusting, "Refrigerant Recovery" section.

NOTICE

Do not attempt to remove the orifice tube with pliers. Do not twist or rotate the orifice tube in the tube assembly.

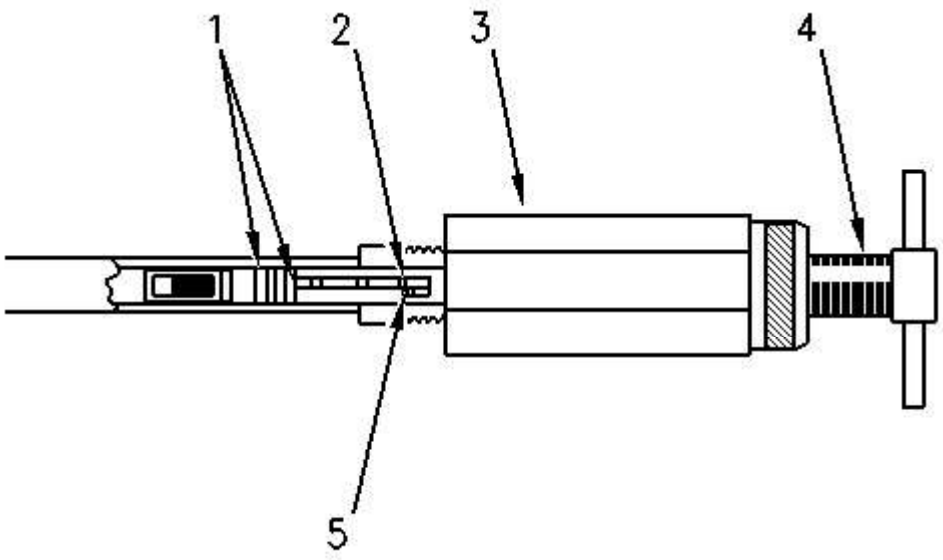

Illustration 1 g00379603

Orifice tube

(1) O-Ring seals

(2) Lugs

(3) Body

(4) Drive screw

(5) Finger lock

1. Disconnect the high side line at the enlarged section of the evaporator inlet port. This will expose the orifice tube for removal.
2. Align the short fingers of the **1U-9890** Orifice Removal Tool with the ribs of the orifice tube. Insert the tool onto the tube until the tool bottoms out.
3. Turn drive screw (4) clockwise. Turn far enough to engage the lugs (2) on the orifice tube in the finger lock (5) . The finger lock (5) is part of the removal tool.
4. Hold the drive screw (4) stationary. Thread the body (3) forward until the body makes contact with the inlet port.
5. Continue holding the drive screw stationary, and thread the body forward until the orifice tube becomes free.

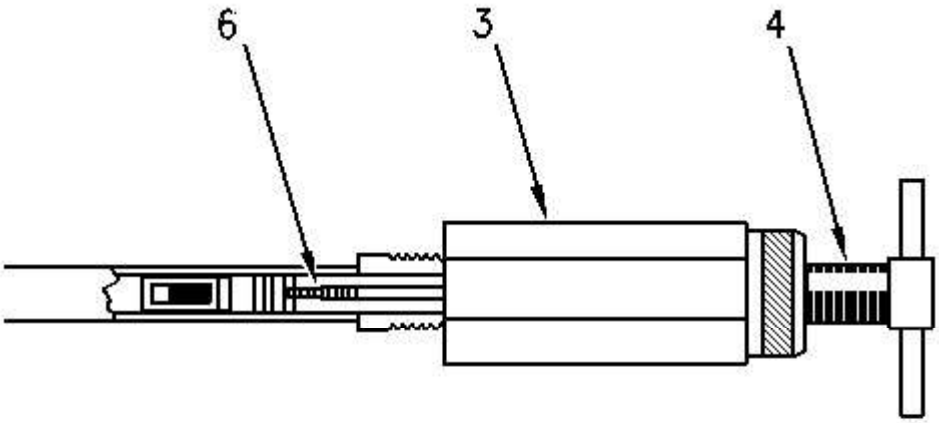

Illustration 2 g00381412

Removing the broken orifice tube

(3) Body

(4) Drive screw

(6) Extractor tip

6. For the removal of the orifice tube assembly, use the extractor tip (6) on **1U-9890** Orifice Removal Tool . Insert the tool into the evaporator inlet tube and thread the tool into the brass center of the orifice tube.
7. Repeat steps 3 and 4.
8. If only the brass center of the orifice tube is removed, thread the tool into the plastic body and repeat step 3 and 4.

Orifice Tube Installation

1. Lubricate the O-Ring on the orifice tube with the proper clean refrigerant oil.
2. Place the orifice tube into the **1U-9890** Orifice Removal Tool . Insert the orifice tube straight into the evaporator inlet tube without twisting until the tube is seated.
3. Disengage the removal tool from the orifice tube.
4. Use a new O-Ring that is lubricated with clean refrigerant oil. Reconnect the high side line at the enlarged section of the evaporator inlet port.
5. Do a leak test. Evacuate the system and recharge the system. Refer to the Testing and Adjusting, "Refrigerant Systems-Evacuate" section. Also, refer to the Testing and Adjusting, "Refrigerant Systems-Charge" section.

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In-Line Refrigerant Dryer - Remove and Install

SMCS - 7322-010-QT

Dryer Installation

WARNING

Personal injury can result from contact with refrigerant.

This system is under pressure at all times, even if the engine is not running. Heat should never be applied to a charged system.

Contact with refrigerant can cause frost bite. Keep face and hands away to help prevent injury.

Protective goggles must always be worn when refrigerant lines are opened, even if the gauges indicate the system is empty of refrigerant.

Always use caution when a fitting is removed. Slowly loosen the fitting. If the system is still under pressure, evacuate the system recovering the refrigerant before removing the fitting.

Personal injury or death can result from inhaling refrigerant through a lit cigarette.

Inhaling air conditioner refrigerant gas through a lit cigarette or other smoking method or inhaling fumes released from a flame contacting air conditioner refrigerant gas, can cause bodily harm or death.

Do not smoke when servicing air conditioners or wherever refrigerant gas may be present.

Before any checks of the air conditioning and heating system are made, move the machine to a smooth horizontal surface. Lower all implements

to the ground. Make sure the transmission is in neutral or park and that the parking brake is engaged. Keep all other personnel away from the machine or where they can be seen.

WARNING

Personal injury can result from hot coolant. Any contact with hot coolant or with steam can cause severe burns. Allow cooling system components to cool before the cooling system is drained.

NOTICE

Never weld of solder any charged components.