

Disassembly and Assembly

C4.4 Engines for Caterpillar Built Machines

Media Number -UENR0602-12

Publication Date -01/08/2013

Date Updated -05/08/2020

i04047721

Air Compressor - Remove and Install - Twin Cylinder Compressor

SMCS - 1803-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A ⁽¹⁾	9U-6198	Crankshaft Turning Tool	1
A ⁽²⁾	5P-7306	Shaft Housing	1
	5P-7305	Engine Turning Tool	1
B	136-4632	Timing Pin (Crankshaft)	1
	268-1966	Adapter	1
C	1P-2320	Combination Puller	1

(1) The Crankshaft Turning Tool is used on the front pulley.

(2) This Tool is used in the aperture for the electric starting motor.

Note: Either Tooling (A) can be used. Use the Tooling that is most suitable.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Dispose of all fluids according to local regulations and mandates.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

Note: Put identification marks on all hoses, on all hose assemblies and on all tube assemblies for installation purposes. Plug all hose assemblies and tube assemblies. This helps to prevent fluid loss and this helps to keep contaminants from entering the system.



WARNING

Do not disconnect the air lines until the air pressure in the system is at zero. If hose is disconnected under pressure it can cause personal injury.

1. Release the pressure from the air system. Refer to the Original Equipment Manufactures (OEM) for the correct procedure.
2. Drain the coolant from the cooling system into a suitable container for storage or for disposal. Refer to Operation and Maintenance Manual, "Cooling System Coolant - Change" for the correct draining procedure.
3. If the engine is equipped with a hydraulic pump on the rear of the air compressor, remove the hydraulic pump. Refer to the OEM for the correct procedure.
4. Use Tooling (A) in order to rotate the crankshaft so that number one piston is at the top center position on the compression stroke. Refer to Systems Operation, Testing and Adjusting, "Fuel Injection Timing - Check" for the correct procedure.

Note: The air compressor must be timed with the engine in order to minimize engine vibration.

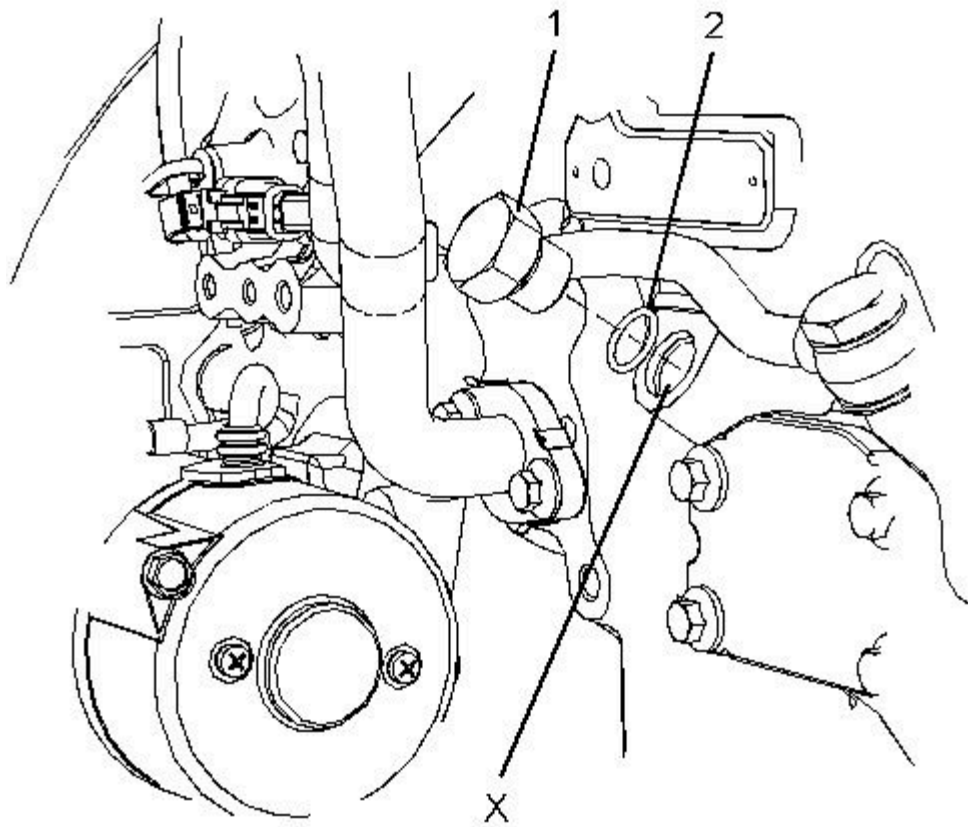


Illustration 1

g02418379

5. Remove plug (1) from the cylinder block. Remove O-ring seal (2) from the plug.
6. Install Tooling (B) into Hole (X) in the cylinder block. Use Tooling (B) in order to lock the crankshaft in the correct position.

Note: Do not use excessive force to install Tooling (B). Do not use Tooling (B) to hold the crankshaft during repairs.

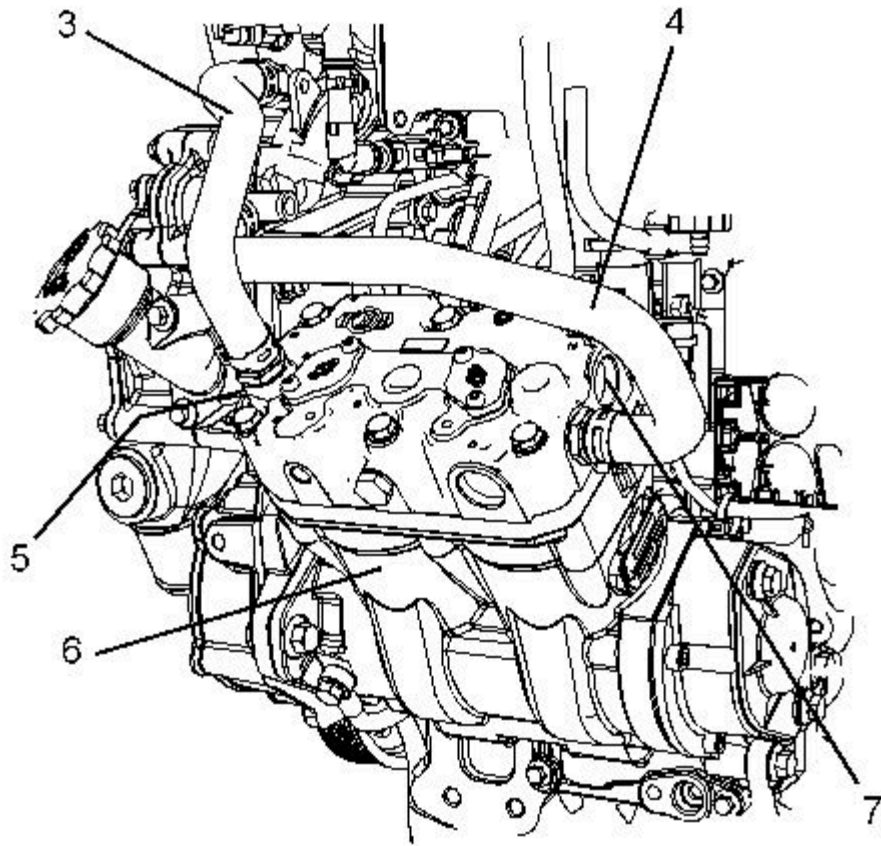


Illustration 2

g02418397

7. Slide hose clamps for coolant hose (3) and coolant hose (4) along the hose assemblies.
 8. Disconnect coolant hose (3) and coolant hose (4) from the connections on air compressor (6).
 9. Disconnect the air line from port (5) (not shown) and air line from port (7). Refer to the OEM for the correct procedure.
-

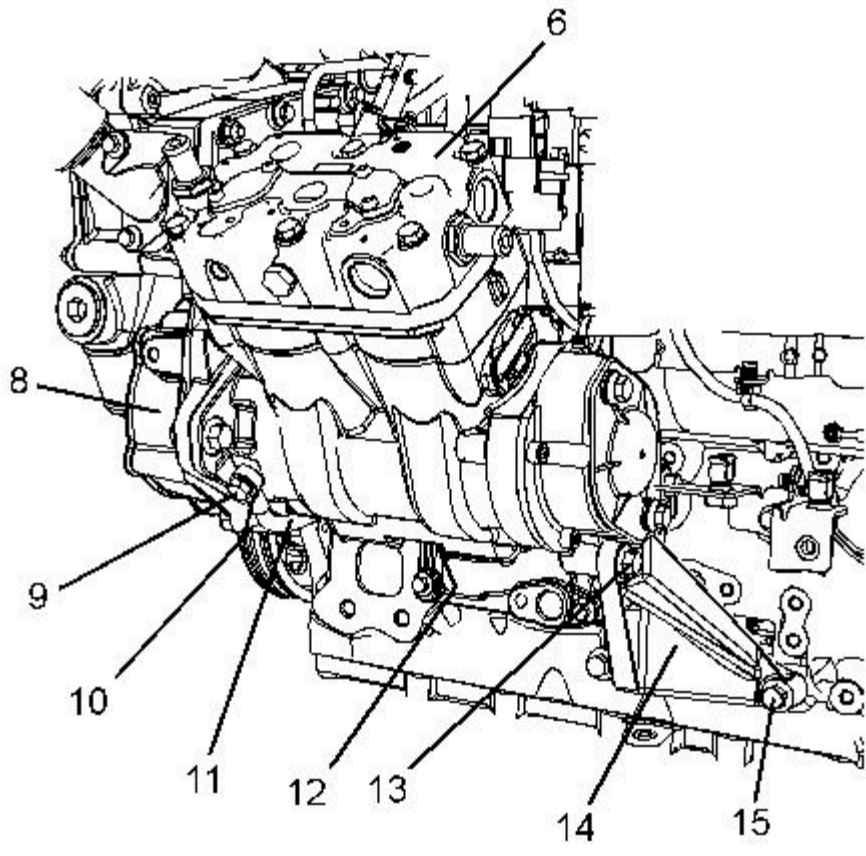


Illustration 3

g02418398

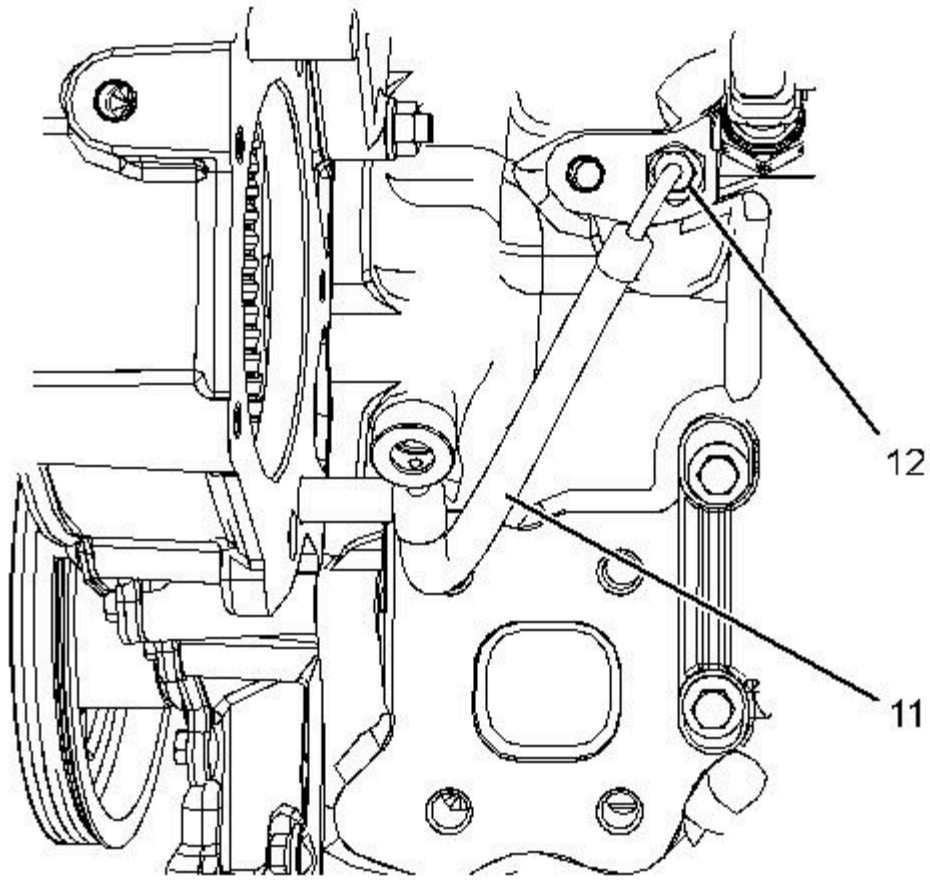


Illustration 4

g02420556

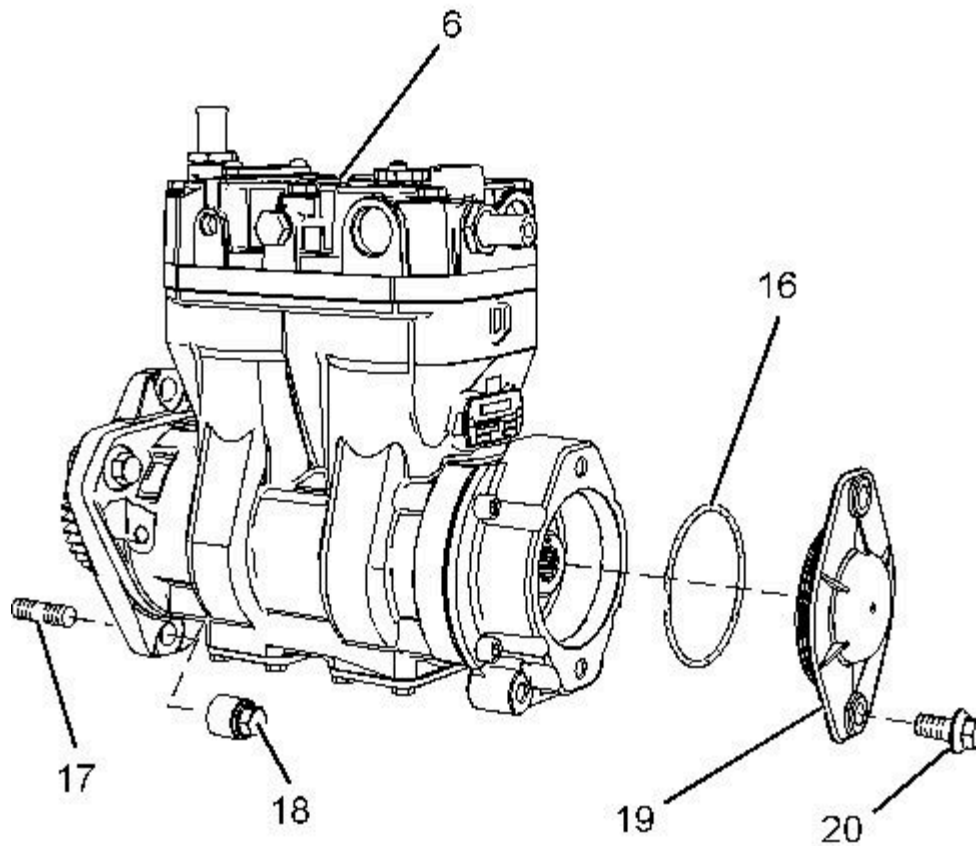


Illustration 5

g02418399

10. Remove banjo bolt (9) and remove sealing washers (10) (not shown).
 11. Remove bolt (13) and bolt (15) from support bracket (14). Remove support bracket (14) from compressor (6) and the cylinder block.
 12. Support air compressor (6). Remove nuts (18) and remove the air compressor from front housing (8).
 13. If necessary, follow Step 13.a through Step 13.b in order to remove the hose assembly.
 - a. Make a temporary mark in order to identify the position of hose assembly (11).
 - b. Disconnect nut (12) and remove hose assembly (11).
 14. If necessary, remove studs (17) from front housing (8).
 15. If necessary, remove bolts (20) and remove plate (19). Remove O-ring seal (16) from plate (19). Refer to Illustration 5.
-