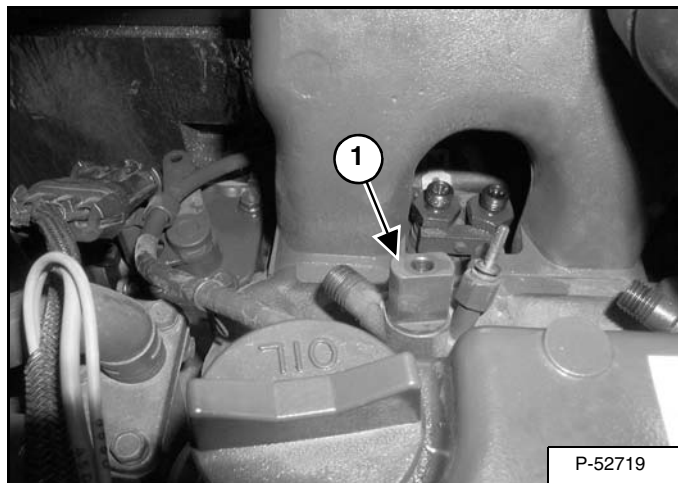


## ENGINE COMPONENTS AND TESTING (CONT'D)

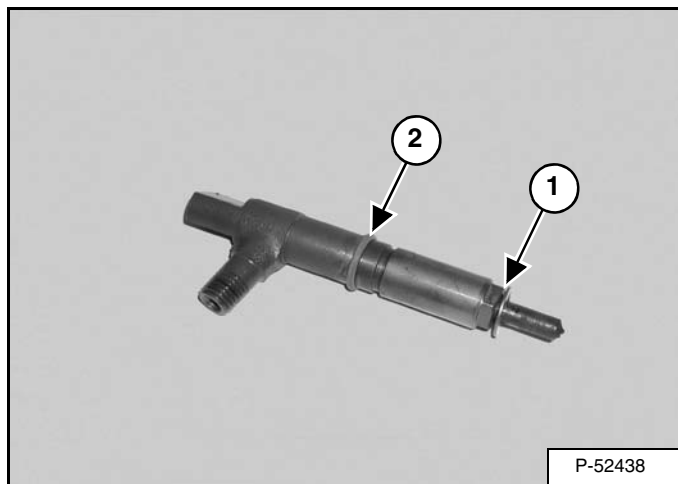
### Fuel Injector Nozzles Removal And Installation (Cont'd)

Figure 70-50-46



Remove the injector nozzles (Item 1) [Figure 70-50-46].

Figure 70-50-47



Remove the washer (Item 1) and O-ring (Item 2) [Figure 70-50-47] from the injector nozzles.

**NOTE:** Replace the copper washer (Item 1) and O-ring (Item 2) [Figure 70-50-47] anytime new or used fuel injectors are installed.

## ENGINE COMPONENTS AND TESTING (CONT'D)

### Fuel Injector Nozzle Check

# ! WARNING

During cold weather (32°F [0°C] and below), do not operate machine until the engine has run for at least five minutes at less than half throttle. This warm-up period is necessary for foot pedal operation and safe stopping. Do not operate controls during warm-up period.

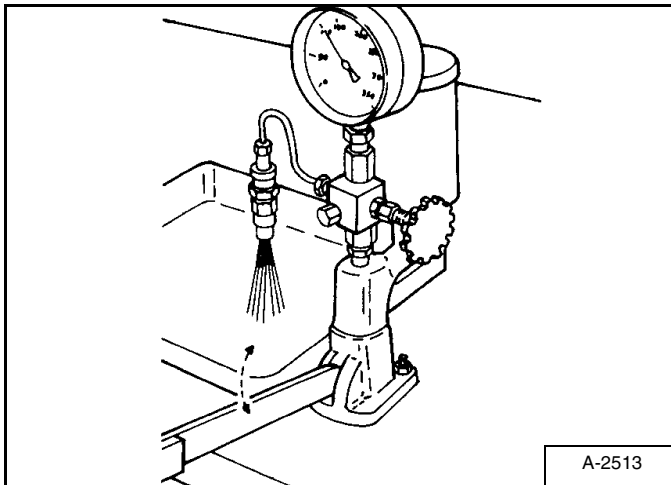
When temperatures are below -20°F (-30°C), the hydrostatic oil must be heated or kept warm. The hydrostatic system will not get enough oil at low temperatures. Park the machine in an area where the temperature will be above 0°F (-18°C) if possible.

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The tool listed will be needed to do the following procedure:

OEM1064 - Injector Nozzle Tester

Figure 70-50-48



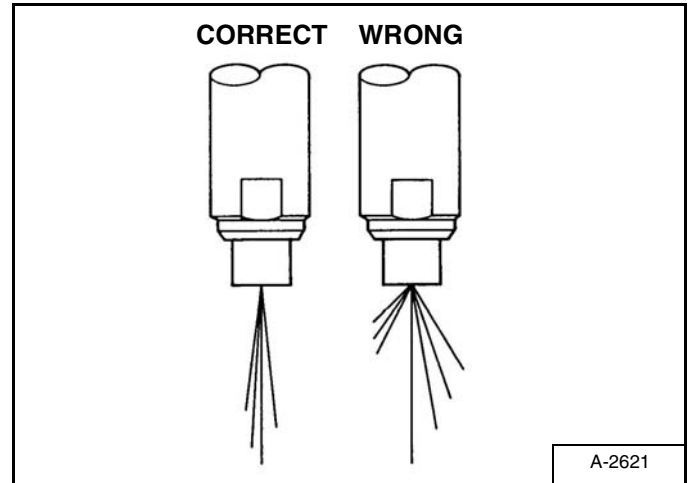
Connect the nozzle to the tester with the nozzle down [Figure 70-50-48].

Operate the hand lever at a slow rate and record the opening pressure. If the pressure is not correct, replace the fuel injection nozzle.

Fuel Injection Pressure	2702 - 2916 PSI (187 - 201 bar)
-------------------------	------------------------------------

Check for inside leakage. Operate the hand lever until the pressure is 2418 PSI (167 bar). Keep the nozzle under this pressure for 10 seconds, check to see if fuel leaks from the nozzle. If fuel leaks, replace the nozzle.

Figure 70-50-49



Check that the spray pattern is correct [Figure 70-50-49].

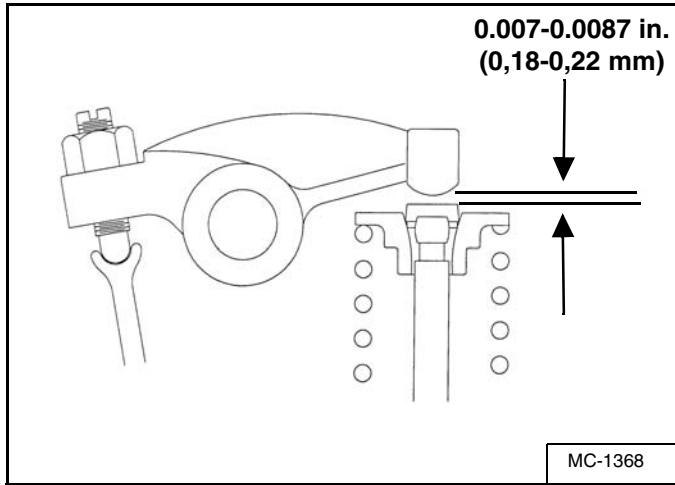
1. Fuel does not come out the side of the nozzle.
2. Drops of fuel are not present at the nozzle.
3. The injector has an even flow coming from the nozzle.

## ENGINE COMPONENTS AND TESTING (CONT'D)

### Valve Clearance Adjustment

Adjust the valve clearance with the engine stopped and cold.

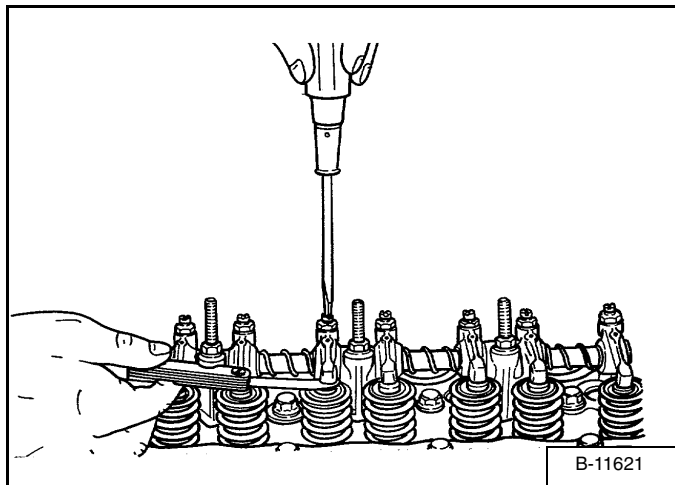
**Figure 70-50-50**



The correct valve clearance is 0.007 - 0.0087 in. (0,18 - 0,22 mm) **[Figure 70-50-50]**.

Make sure the piston is at T.D.C. when making the adjustment for the valves of the particular cylinder.

**Figure 70-50-51**



Put the correct size feeler gauge between the rocker arm and valve stem. Turn the adjustment bolt until the clearance is correct **[Figure 70-50-51]**.

## ENGINE

### Removal And Installation

Disconnect the battery. (See BATTERY on Page 60-20-1.)

Remove the air cleaner. (See AIR CLEANER on Page 70-30-1.)

Remove the muffler. (See MUFFLER on Page 70-20-1.)

Drain the hydraulic reservoir. (See HYDRAULIC RESERVOIR on Page 20-130-1.)

Remove the hydraulic pump. (See HYDRAULIC PUMP on Page 20-50-1.)

Remove the flywheel. (See ENGINE FLYWHEEL on Page 70-70-1.)

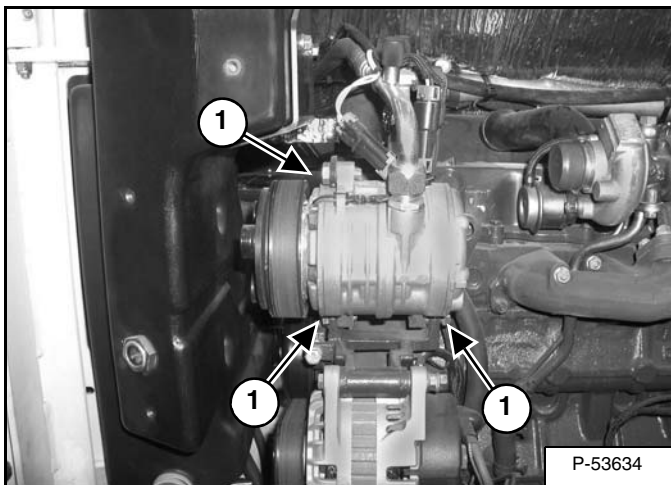
Drain the radiator. (See RADIATOR on Page 70-40-1.)

Remove the seat and seat mount. (See SEAT AND SEAT MOUNT on Page 50-40-1.)

Remove the starter. (See STARTER on Page 60-40-1.)

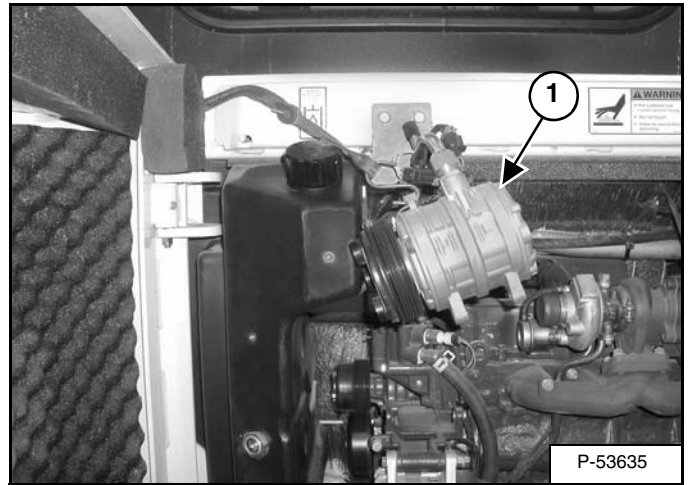
Remove the engine accessory drive belt. (See ENGINE ACCESSORY DRIVE BELT on Page 10-140-1.)

**Figure 70-60-1**



Remove the bolts (Item 1) [Figure 70-60-1] from the A/C compressor.

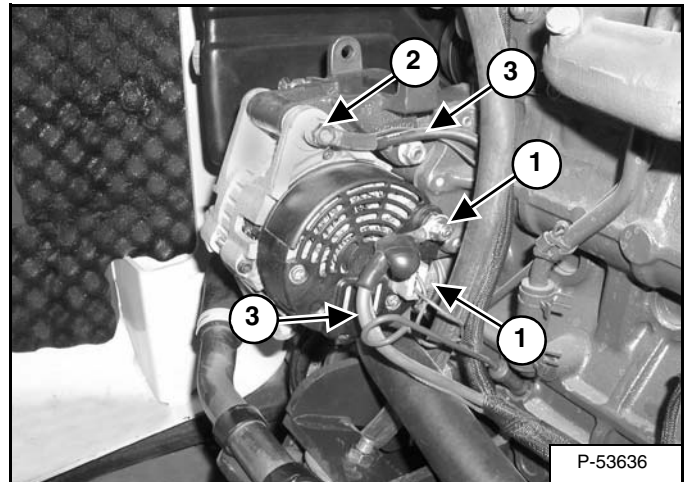
**Figure 70-60-2**



Suspend and support the compressor (Item 1) [Figure 70-60-2].

**NOTE: The A/C system does not need to be evacuated if the compressor hoses are not removed.**

**Figure 70-60-3**



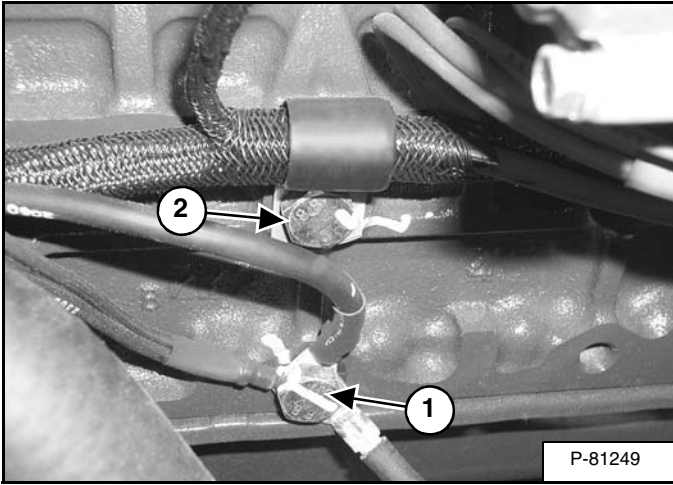
Disconnect the wire harness (Item 1) [Figure 70-60-3] from the alternator.

Remove the nut (Item 2) and ground cable (Item 3) [Figure 70-60-3].

## ENGINE (CONT'D)

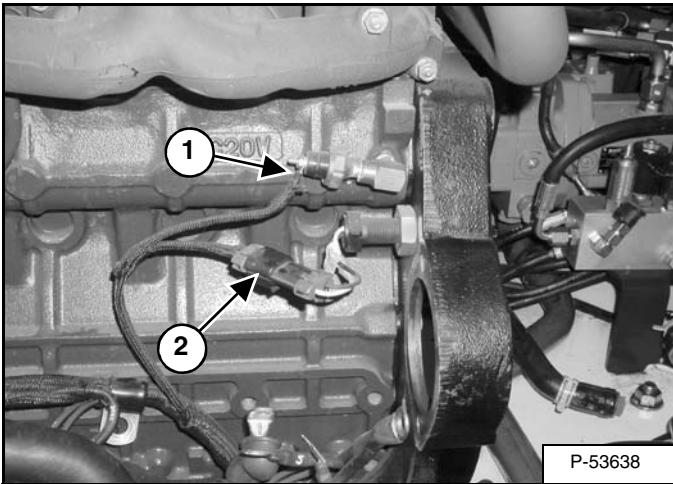
### Removal And Installation (Cont'd)

Figure 70-60-4



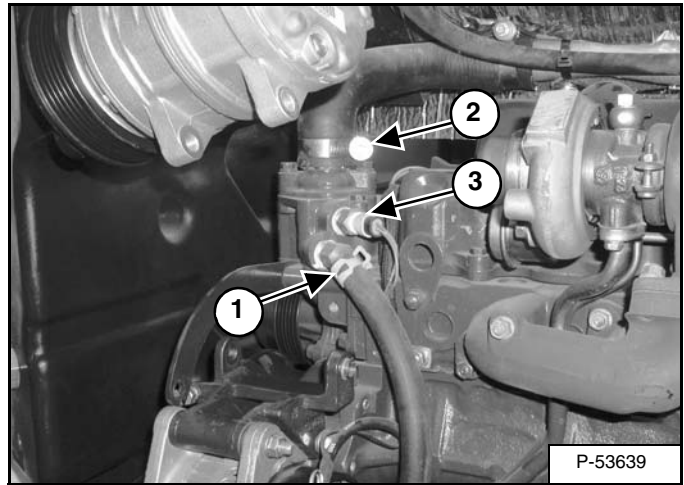
Remove the bolt (Item 1) and ground wires from the engine block. Remove the bolt (Item 2) [Figure 70-60-4] and wire harness clamp.

Figure 70-60-5



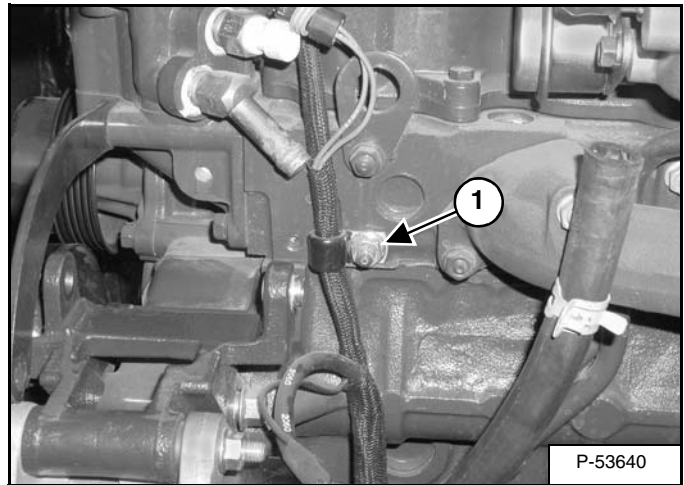
Disconnect the oil pressure switch (Item 1) and engine speed sensor (Item 2) [Figure 70-60-5] from the wire harness.

Figure 70-60-6



Remove the heater hose (Item 1) and radiator hose (Item 2). Disconnect the temperature sender (Item 3) [Figure 70-60-6].

Figure 70-60-7



Remove the nut and clamp (Item 1) [Figure 70-60-7].