



cherokee

SERVICE MANUAL

CARD 1 OF 4

**PA-28-140
PA-28-150
PA-28-160
PA-28-180
PA-28-235
PA-28R-180
PA-28R-200**

PIPER AIRCRAFT CORPORATION

The engine manufacturer does not recommend oils by brand names. Use a quality brand Aviation Grade Oil of the proper season viscosity. For information on the use of detergent oil, refer to paragraph 2-77 and/or the latest revision of Lycoming Service Instruction No. 1014.

2-73. FILLING OIL SUMP.

The oil sump should normally be filled with oil to the mark on the engine dipstick. The quantity of oil required for the engines may be found in Table II-I. The specified grade of oil may be found in Table II-IX, the Lubrication Chart, or on the right cowl panel or each engine oil filler access door. To service the engine with oil, open the right cowl panel or quick release access door on top of the cowl and remove the oil filler cap with dipstick.

2-74. DRAINING OIL SUMP.

CAUTION: ON PA-28R-200 AIRCRAFT, IF AN OIL QUICK DRAIN VALVE IS INSTALLED, ASCERTAIN THAT IT IS PIPER P/N 492-172. (SEE FIGURE 8A-5.) INSTALLATION OF AN INCORRECT DRAIN COULD DAMAGE THE SUMP OR THE DRAIN ITSELF. THIS MAY RESULT IN LOSS OF ENGINE OIL AND A POSSIBLE ENGINE SEIZURE.

To drain the oil sump, provide a suitable container with a minimum capacity of that required to fill the sump. Remove the engine cowl and open the oil drain valve located on the underside of the engine by pushing the arms of the drain up and turning counterclockwise. This will hold the drain in the open position. It is recommended the engine be warmed to operating temperature to ensure complete draining of the old oil.

2-75. OIL SCREENS. (SUCTION.)

The oil suction screen, located either on the bottom aft end of the engine sump, installed horizontally, or forward of the carburetor installed vertically. To remove both types, cut the safety wire and remove the hex head plug. The screen should be cleaned at each oil change to remove any accumulation of sludge and to examine for metal filings or chips. If metal particles are found in the screen, the engine should be examined for internal damage. After cleaning and inspection, place the screen inside the recess in the hex head plug, to eliminate possible damage to the screen. Insert the screen into the housing and when certain that the screen is properly seated, tighten and safety the plug with MS-20995-C41 safety wire.

2-76. OIL SCREEN. (PRESSURE.)

The oil pressure screen, located in a housing on the accessory case of the engine, between the magnetos, should be cleaned at each oil change to remove any accumulation of sludge and to examine for metal filings or chips. If metal particles are found in the screen, the engine should be examined for internal damage. When reinstalling the screen, it is recommended that a new gasket be used. Ascertain that the screen fits flush with the base surface of the screen housing. Position housing on mounting pad and install attachment bolts. Torque bolts within 50 to 70 inch-pounds.

PIPER CHEROKEE SERVICE MANUAL

1705

1. STARTER RING GEAR
2. FLOW DIVIDER
3. LIFTING STRAP
4. SHOCK MOUNT (SEE SKETCH A)
5. INJECTOR NOZZLE
6. OIL FILTER
7. BAFFLE ASSEMBLY, RIGHT
8. TACHOMETER CABLE
9. VACUUM PUMP
10. MAGNETO, RIGHT
11. OIL FILLER
12. MANIFOLD PRESSURE LINE
13. PROPELLER GOVERNOR
14. ENGINE MOUNT ASSEMBLY
15. EXHAUST STACK
16. SPARK PLUG

17. INTAKE TUBE
18. BAFFLE ASSEMBLY, LEFT
19. MAGNETO, LEFT
20. AIR FILTER BOX
21. FUEL PUMP
22. FUEL INJECTOR
23. OIL TEMPERATURE LEAD
24. INJECTOR INLET HOSE

25. BOLT
26. WASHER
27. SPACER
28. SHOCK MOUNT (SILVER CODING)
29. SHOCK MOUNT (GOLD CODING)
30. ENGINE MOUNT ASSEMBLY
31. ENGINE
32. PLACARD - CAUTION

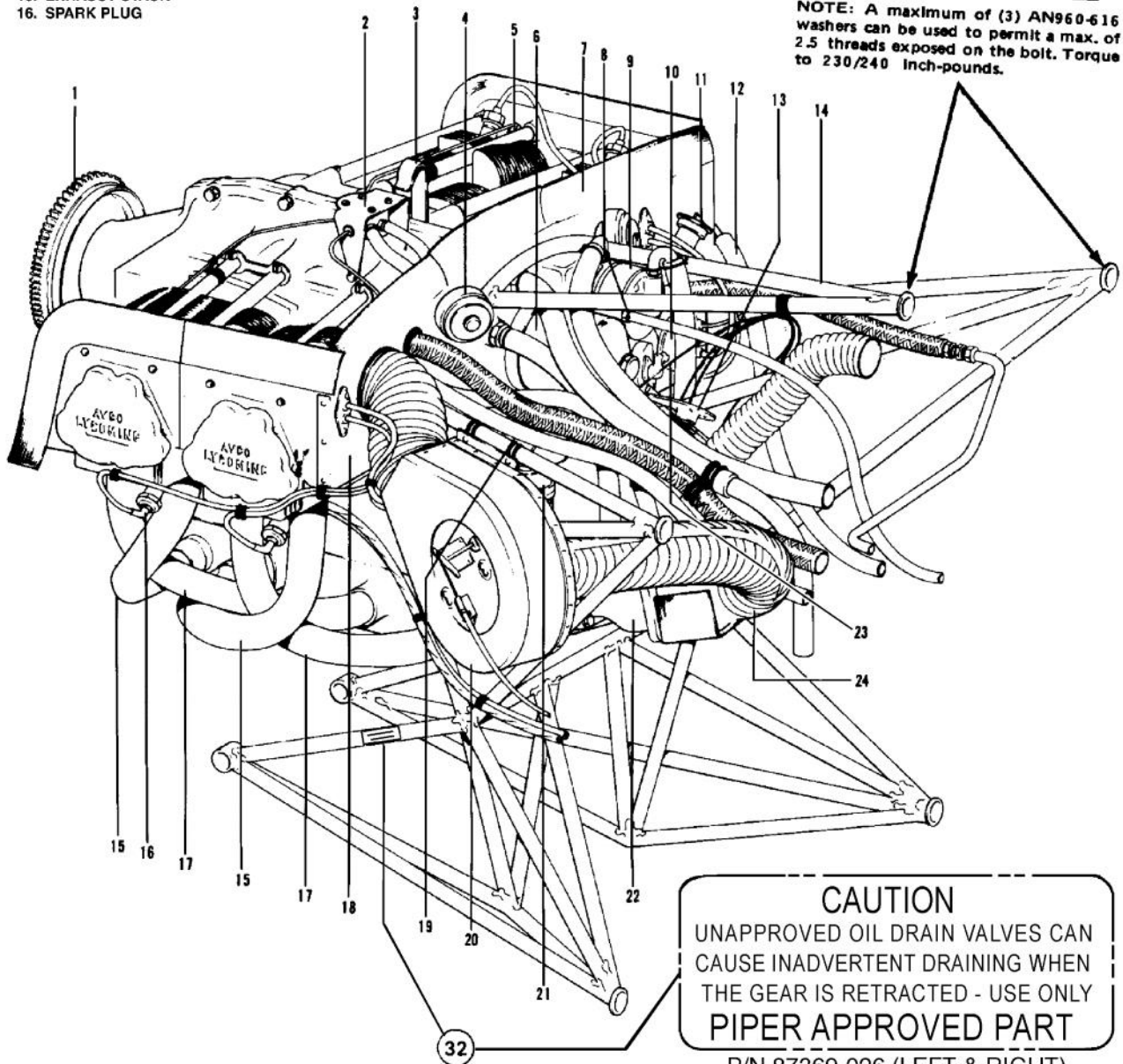
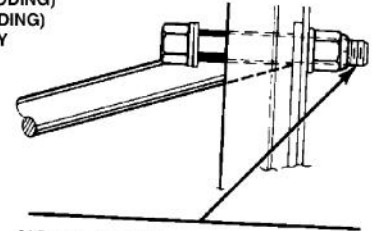


Figure 8A-5. - Engine Installation (PA-28R-200)

PIPER CHEROKEE SERVICE MANUAL

C311

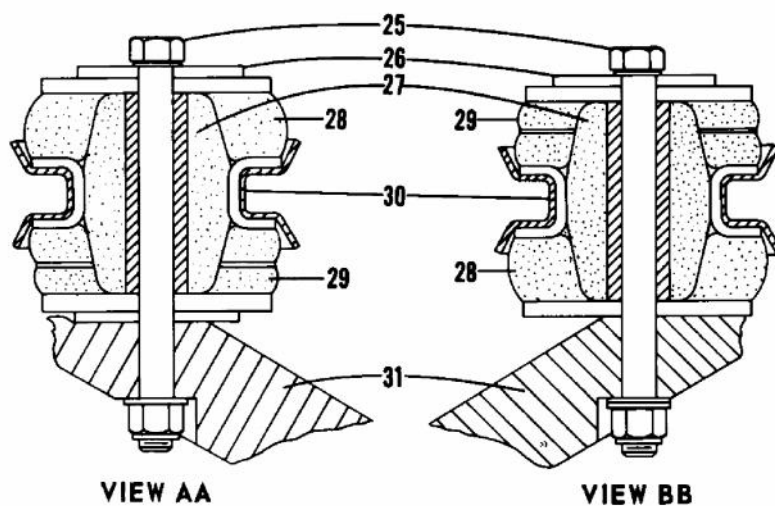
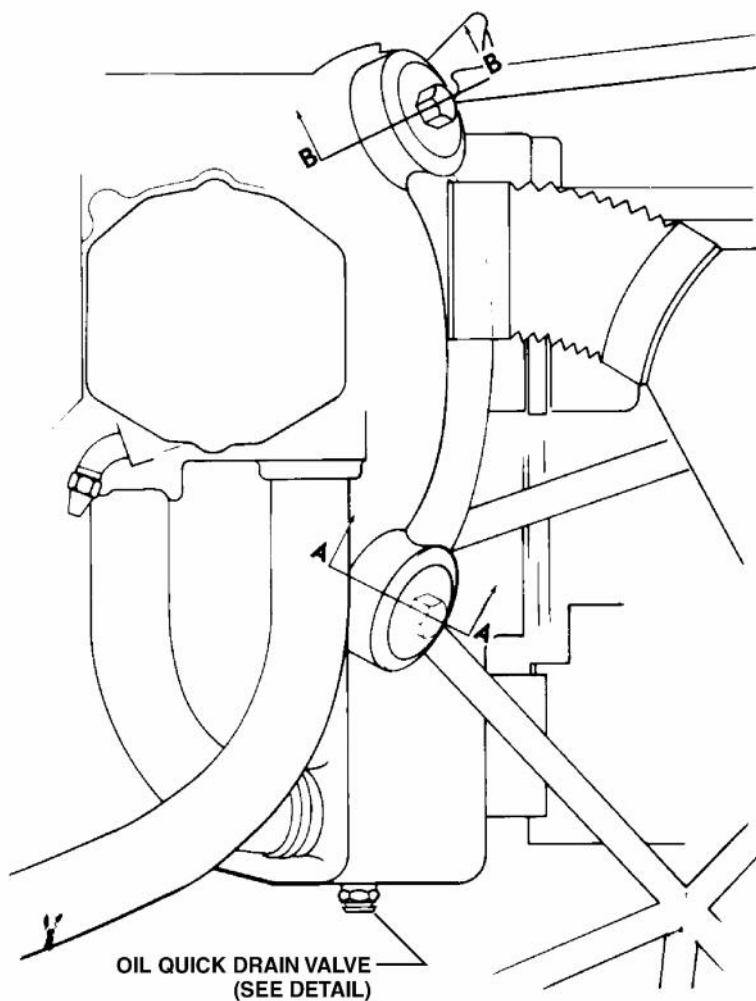
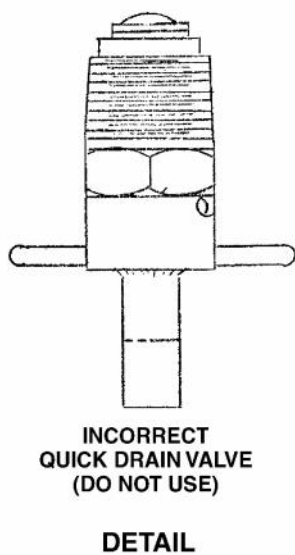
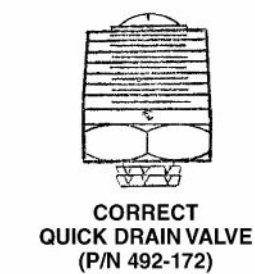


Figure 8A-5. - Engine Installation (PA-28R-200) (cont.)