



Timing Belt Cover

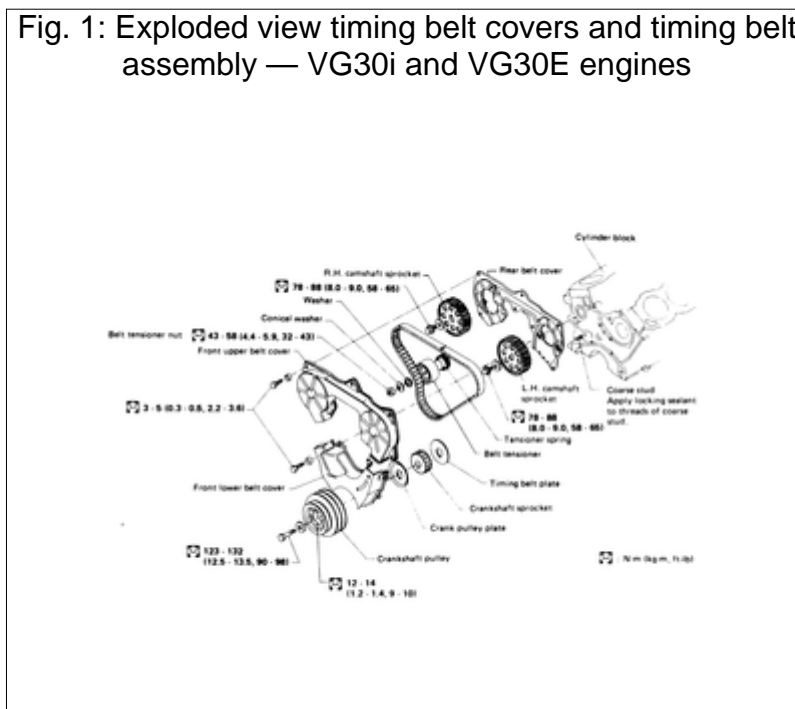
REMOVAL & INSTALLATION

VG30i Engine

NOTE: The front oil seal is a part of the oil pump assembly.

1. Remove the radiator shroud, the fan and the pulleys.
2. Drain the coolant from the radiator and disconnect the water pump hose.
3. Remove the power steering, A/C compressor and alternator drive belts.
4. Remove the suction pipe bracket, then remove the lower hose from the suction pipe.

Fig. 1: Exploded view timing belt covers and timing belt assembly — VG30i and VG30E engines



5. Remove the spark plugs.
6. Set the No. 1 piston at TDC of its compression stroke, then remove the idler bracket for the compressor drive belt.
7. Remove the crankshaft pulley.
8. Loosen all bolts and remove the upper and lower timing belt covers.

To install:

9. Install the two timing belt covers and tighten the mounting bolts to 2–4 ft. lbs. (3–5 Nm).
10. Press the crankshaft pulley onto the crankshaft and tighten the bolt to 90–98 ft. lbs. (123–132 Nm). Install the spark plugs.
11. Install the A/C compressor idler bracket.
12. Install the suction pipe bracket and connect the lower hose. Install all drive belts and adjust their tension.
13. Reconnect the water pump hose.
14. Install the fan, shroud and pulleys.
15. Refill the engine with coolant and bleed the cooling system of air.
16. Run the engine and check for any leaks.

Fig. 2: Removing the upper timing belt cover

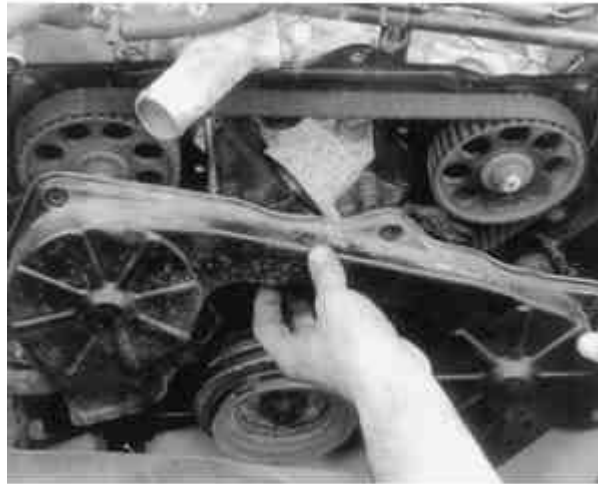


Fig. 3: Unfasten the crankshaft pulley bolt, then remove the pulley with a suitable puller

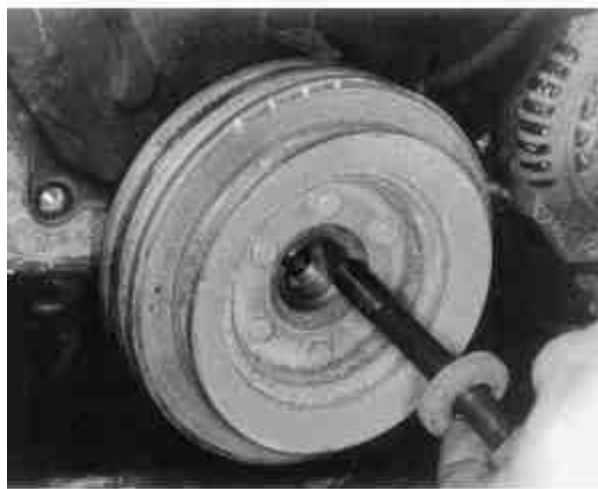


Fig. 4: View of the crankshaft pulley — note the pulley is keyed for correct installation



Fig. 5: Removing the lower timing belt cover



VG30E Engine

NOTE: The front oil seal is a part of the oil pump assembly.

1. Remove the engine under cover.
2. Remove the radiator shroud, the fan and the pulleys.
3. Drain the coolant from the radiator and disconnect the water pump hose.
4. Remove the radiator.
5. Remove the power steering, A/C compressor and alternator drive belts.
6. Remove the spark plugs.
7. Remove the distributor protector (dust shield).
8. Remove the A/C compressor drive belt idler pulley and bracket.
9. Remove the fresh air intake tube at the cylinder head cover.
10. Disconnect the radiator hose at the thermostat housing.
11. Unfasten the crankshaft pulley bolt, then remove the pulley with a suitable puller.
12. Unfasten the bolts, then remove the front upper and lower timing belt covers.

To install:

13. Position the two timing belt covers on the block and then tighten the mounting bolts to 2–4 ft. lbs. (3–5 Nm).
14. Press the crankshaft pulley onto the shaft, then thread and tighten the bolt to 90–98 ft. lbs. (123–132 Nm).
15. Connect the radiator hose to the thermostat housing.
16. Reconnect the fresh air intake tube at the cylinder head cover.
17. Install the A/C compressor drive belt idler pulley and bracket.
18. Install the distributor protector (dust shield).
19. Install the spark plugs.
20. Install the power steering, A/C compressor and alternator drive belts.
21. Install the radiator.
22. Reconnect the water pump hose, then install the fan, shroud and pulleys.
23. Fill the engine with coolant (bleed the cooling system).
24. Start the engine and check for any leaks.
25. Install the engine under cover.

