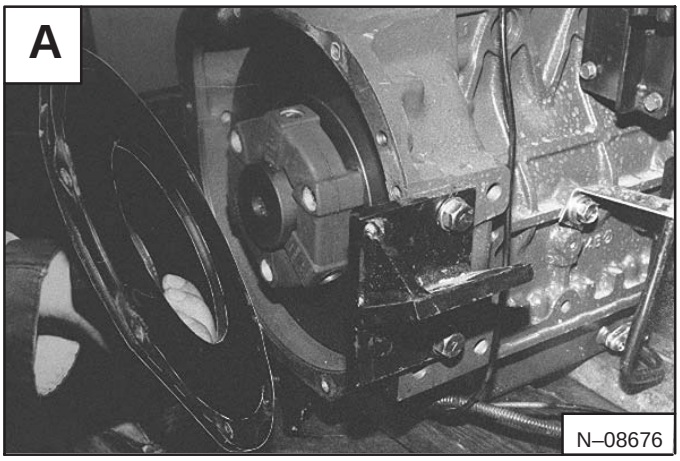
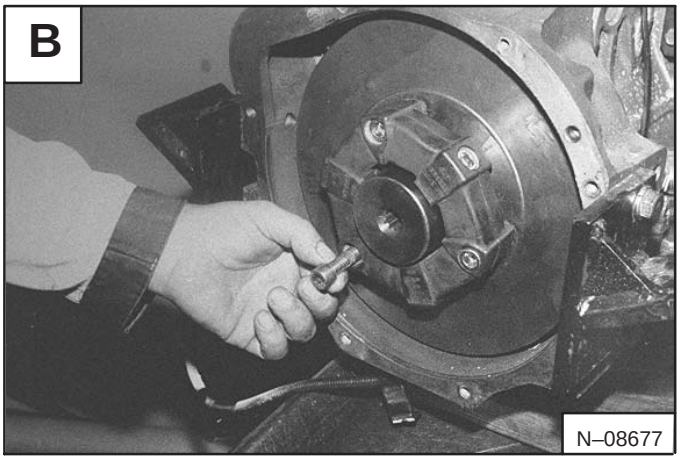
ENGINE FLYWHEEL (Cont'd)

Removal and Installation (Cont'd)

Remove the cover from the flywheel housing **[A]**.



Remove the bolts from the hydraulic pump coupler **[B]**.

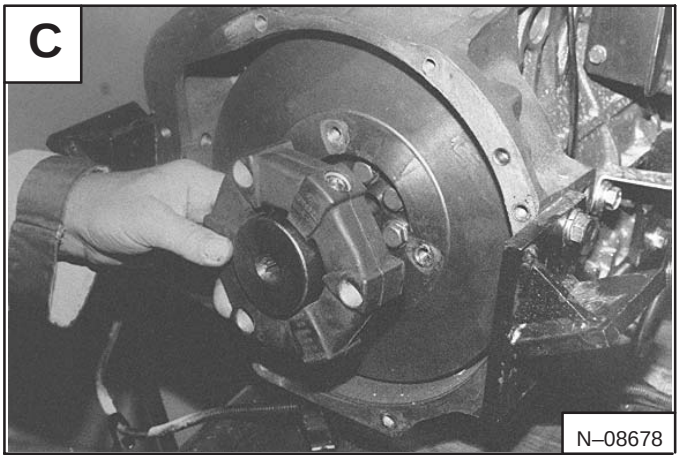


Remove the hydraulic pump coupler **[C]**.

Remove the bolts from the flywheel **[D]**.

***Installation**:* Tighten the bolts to 40–43 ft.–lbs. (54–59 Nm) torque.

Remove the flywheel.



Flywheel Ring Gear

⚠ WARNING

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- **When fluids are under pressure.**
- **Flying debris or loose material is present.**
- **Engine is running.**
- **Tools are being used.**

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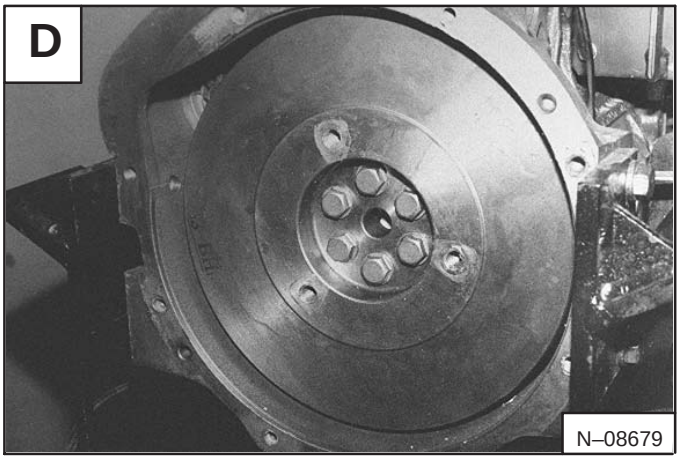
The ring gear on the flywheel is an interference fit. Heat the ring gear enough to expand it and hit it with a hammer, evenly to remove it.

Clean the outer surface of the flywheel to give a smooth fit.

Clean the new ring gear and heat it to a temperature of 450–500°F (232–260°C).

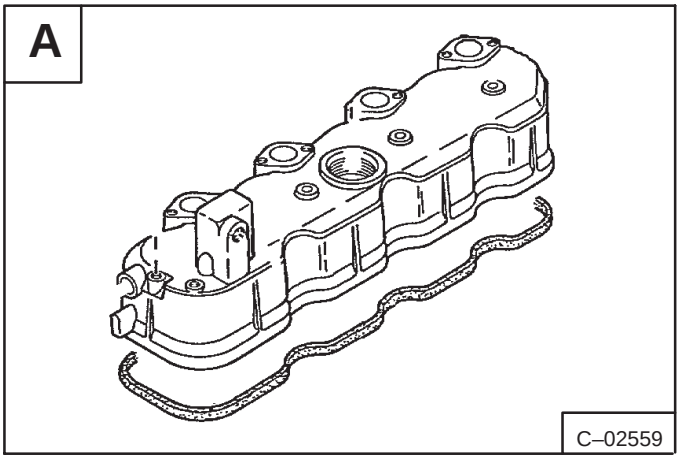
Fit the ring gear over the flywheel. Make sure the gear is seated correctly.



CYLINDER HEAD

Removal

Remove the nuts from the valve cover and remove the valve cover **[A]**.

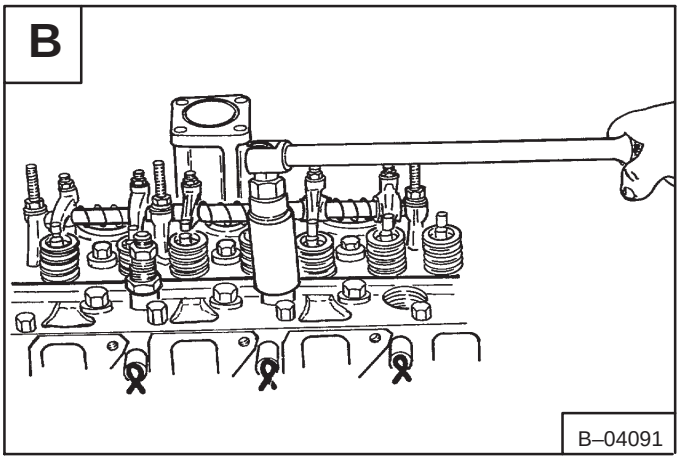


Disconnect the injector tubelines and bleed–off banjo fittings.

Remove the injector nozzles and the copper gasket **[B]**.

Remove the intake manifold.

Remove the belt shield and remove the alternator.

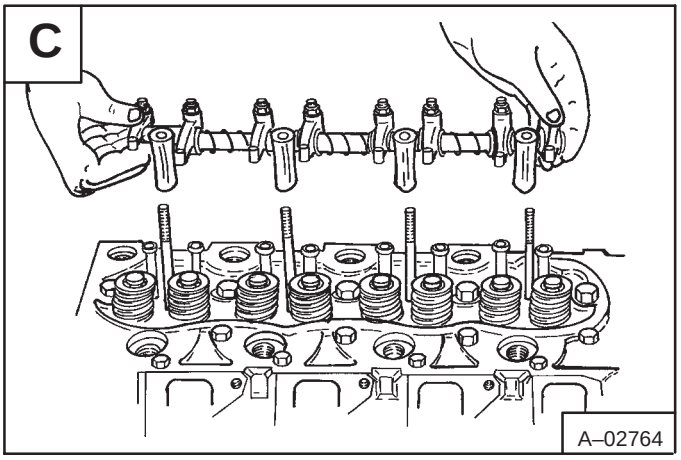


Remove the rocker arms **[C]**.

Remove the push rods.

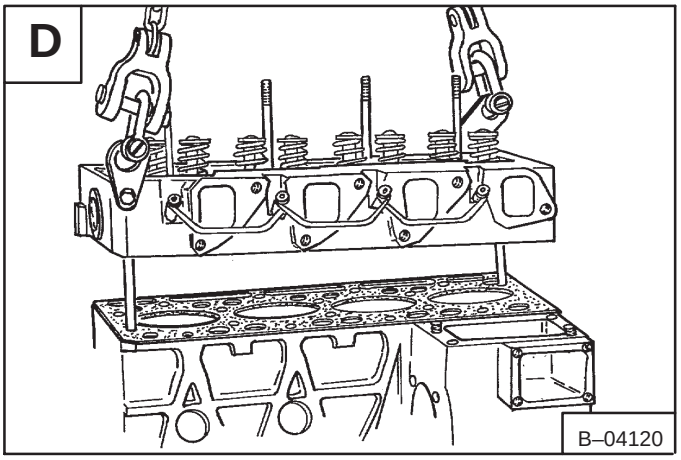
Remove the water return pipe.

Remove the cylinder head bolts.



Remove the cylinder head **[D]**.

Remove the cylinder head gasket and the O–rings.



CYLINDER HEAD (Cont'd)

Disassembly

NOTE: There may be a shim under the head gasket. Use the shim over again or replace it with the same size shim.

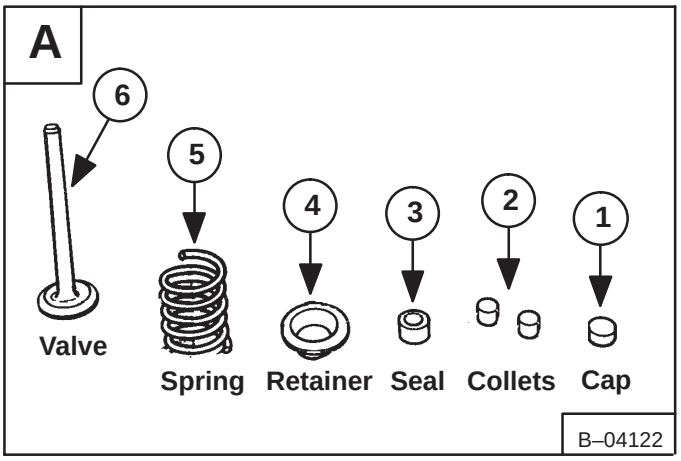
Remove the valve cap (Item 1) **[A]** and the valve spring collet (Item 2) **[A]**.

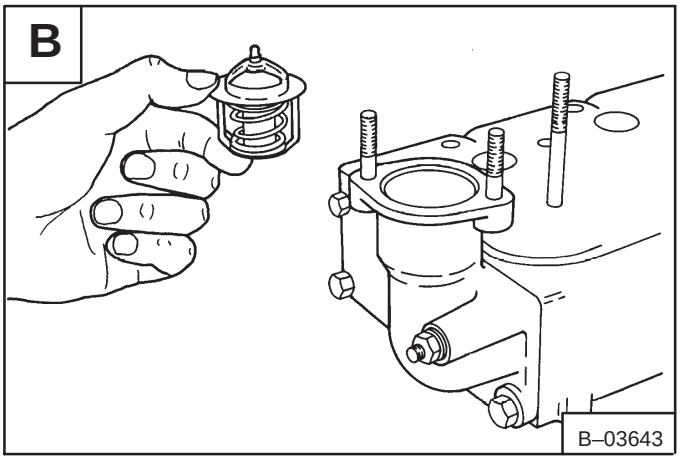
Remove the valve spring retainer (Item 4) **[A]**.

Remove the spring (Item 5) **[A]**.

Remove the seal (Item 3) **[A]** and the valve (Item 6) **[A]**.

Remove the thermostat **[B]**.





Servicing the Cylinder Head

Use the tool listed for the following procedure:

MEL1098 – Valve Lapper

Clean the surface of the cylinder head.

Put a straight edge (Item 1) **[C]** on the cylinder head.

NOTE: Do not put the straight edge across the combustion chamber.

Put a feeler gauge (Item 2) **[C]** between the straight edge and the surface of the cylinder head.

The maximum distortion of the cylinder head surface is ± 0.002 inch (± 0,05 mm).

If the measurement is more than the specifications, the cylinder head must be planed.

NOTE: Place a soft brass rod through the injector hole and tap the combustion chamber out before planing the head. Plane the same amount from the bottom side of the combustion chamber before installing it back in the head.

Clean the valve surface.

Measure the width of the valve seat **[D]**.