

PRODEMAND

YMMS: 2000 Isuzu Rodeo LS

Nov 29, 2020

Engine: 3.2L Eng

License:

VIN:

Odometer:

3.5L V6 DOHC (6VE1)/3.2L V6 DOHC (6VD1) ENGINES TIMING BELT INSTALLATION

TECHNICAL SERVICE BULLETIN

Reference Number(s): IB00-S005, Date of Issue: FEBRUARY, 2000

ISUZU: See Affected Vehicles

AFFECTED VEHICLES: See Affected Vehicles

Affected Vehicles

The following models equipped with "Direct Attack" DOHC 3.2L/3.5L V6 engine:

- 1998-2000 Rodeo (UE)/Amigo (UA)
- 1998-2000 Trooper (UX)
- 1999-2000 VehiCROSS (VX)

Service Information

This information bulletin outlines the proper steps to index the camshafts with the crankshaft. In the event that camshaft timing has been disrupted, due to timing belt breakage or camshafts/crankshaft being rotated without a timing belt, this is important prior to timing belt installation. **Due to the gear-ratio used by each camshaft pulley to drive the camshafts, engine timing cannot be indexed conventionally.**

Refer to this information as an addendum to the appropriate Workshop Manual.

Service Procedure

IMPORTANT: *In the following procedures, the references to 9 or 12 o'clock positions are based on deck plane of the cylinder deck-to-cylinder head mating surface (as viewed from the front of the engine), and NOT relative to the shop floor.*

1. In the event that camshaft timing has been disrupted, due to timing belt breakage or camshafts/crankshaft being rotated without a timing belt, please proceed to Step 2. Otherwise, continue with Step 22 for timing belt servicing procedures (after removal of front timing belt covers as outlined in the appropriate Workshop Manual).
2. After cylinder head servicing as outlined in the appropriate Workshop Manual, proceed to the following steps.
3. Lubricate and install the idler gear.
4. Inspect the idler gear retaining cover for wear.

NOTE: *There is a 0.039 lubrication hole drilled into the idler gear retaining cover. Always inspect this hole for obstruction.*

Fig : Identifying Idler Gear Retaining Cover Lubrication Hole

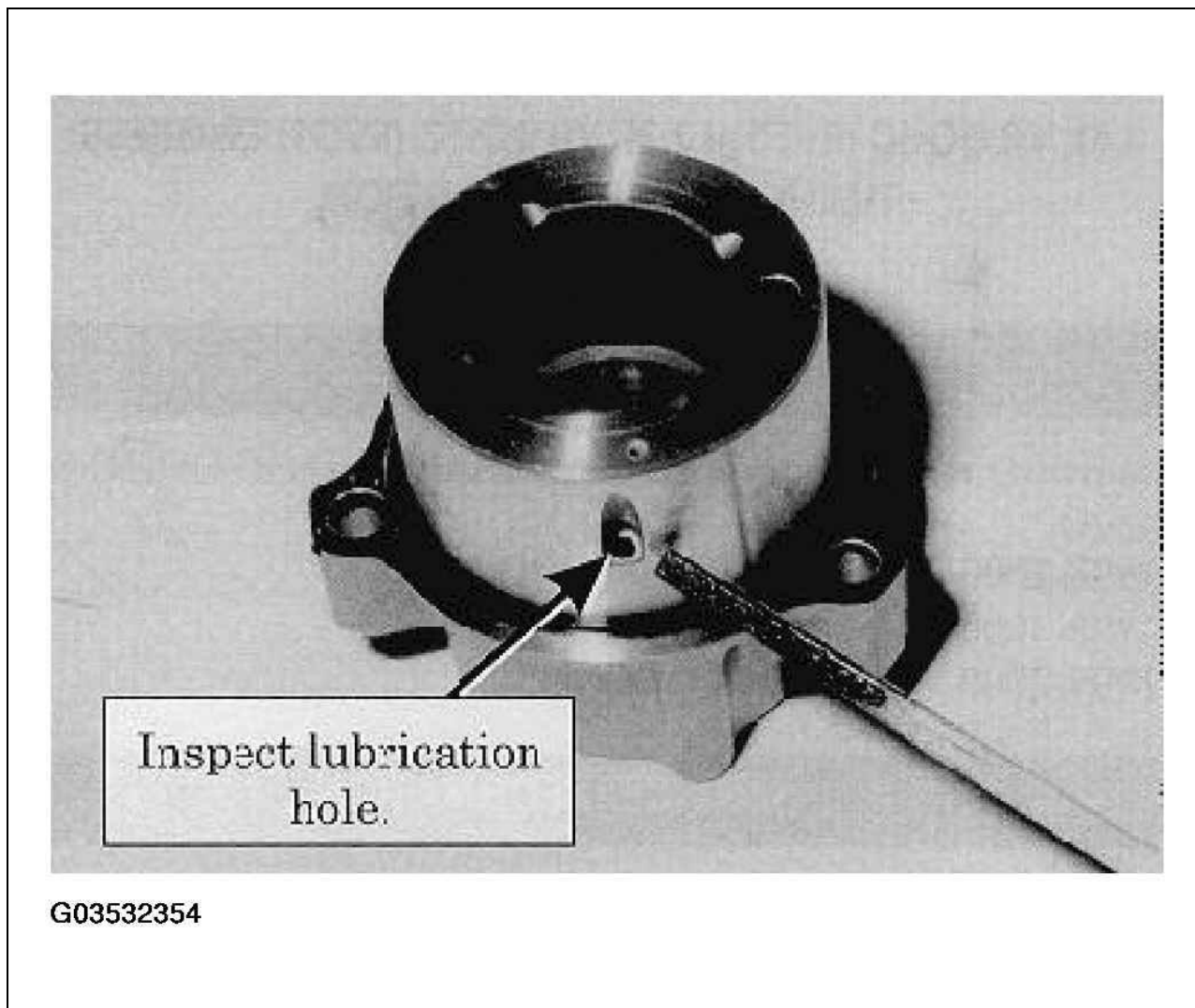
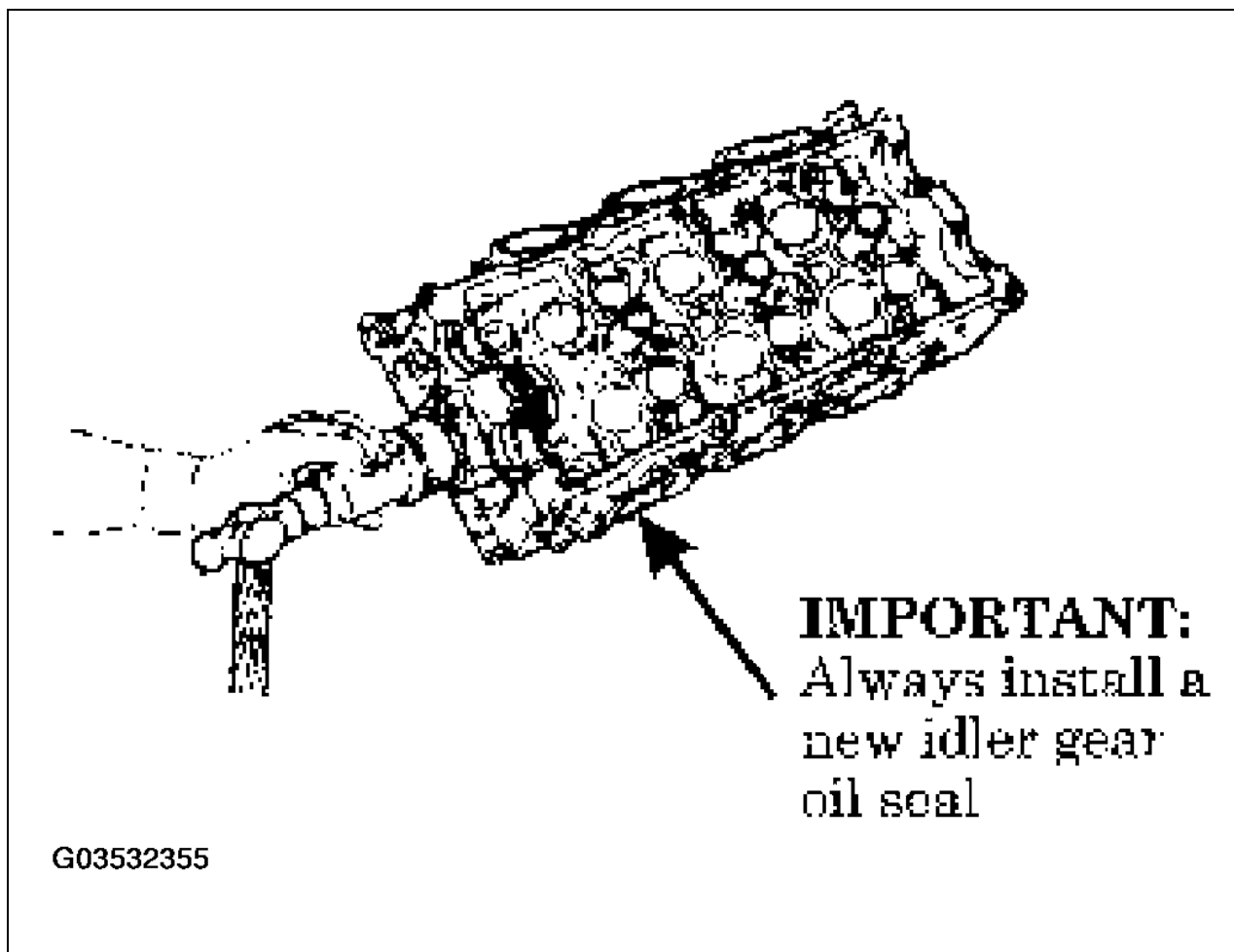


Fig : Installing Idler Gear Oil Seal Using Special Tool J-42985

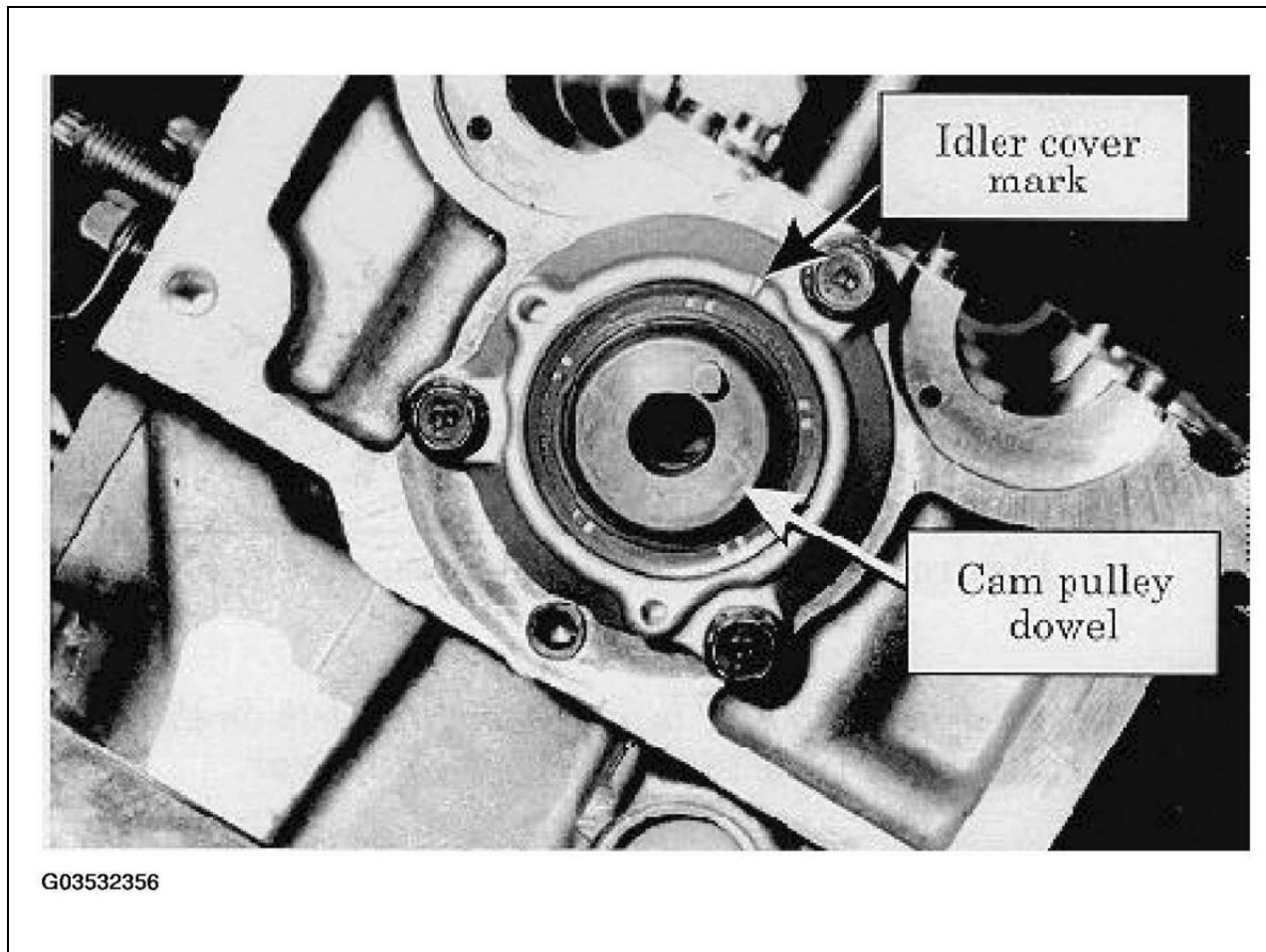


IMPORTANT: Do not use a liquid gasket material on the idler retaining cover. Always replace the retaining cover with a new O-ring. Be sure to lubricate the O-ring prior to installation.

5. Install the idler cover and torque (10 N.m, 8 lb ft) the 6 mm bolts (Refer to Figure).

6. Align the right bank idler shaft alignment marks.

Fig : Aligning Right Bank Idler Shaft

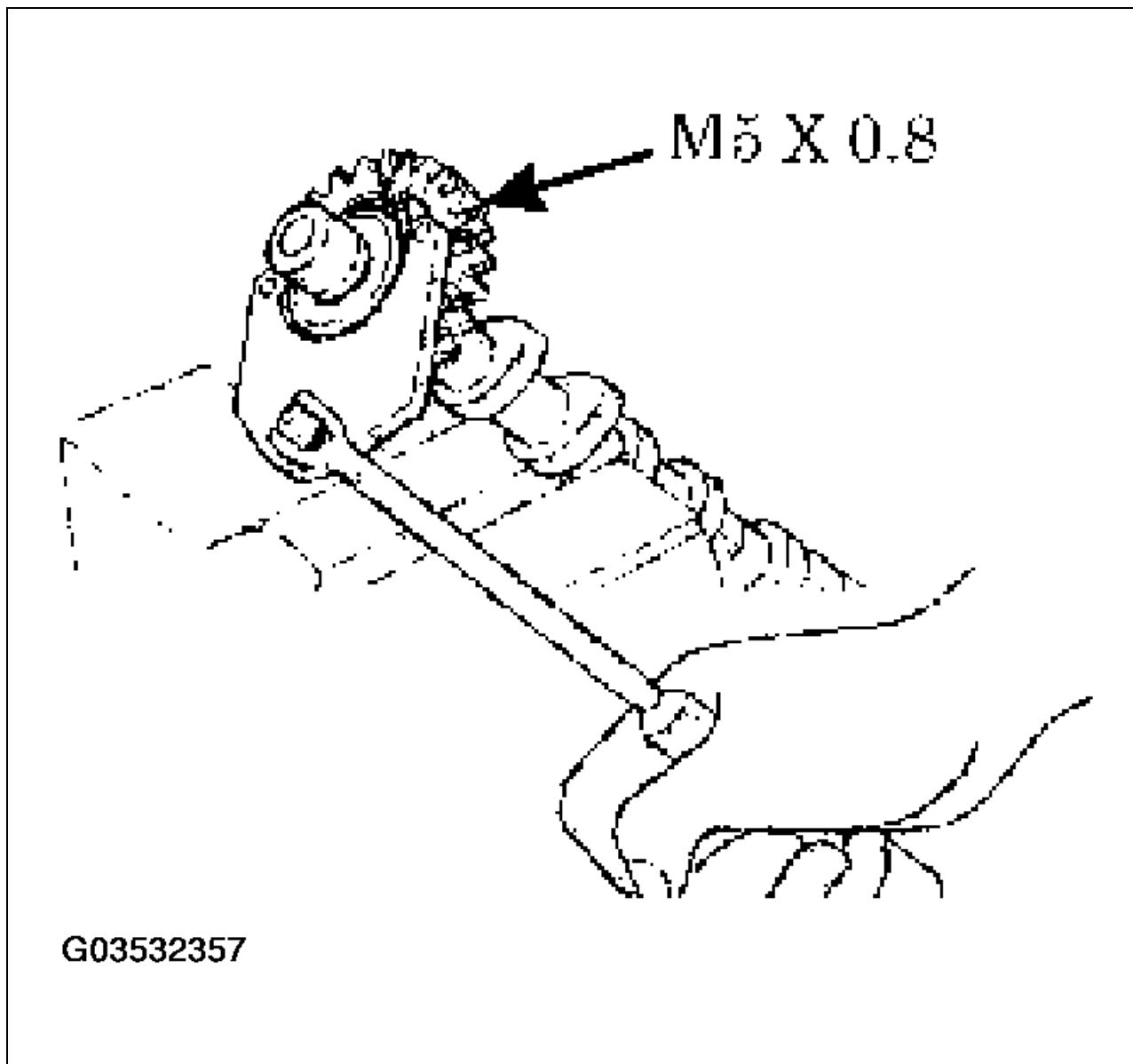


IMPORTANT: *Align the idler gear dowel pin to its corresponding mark on the idler gear retaining cover before installing the camshafts.*

7. Use special J-tool to pre-load the sub gear assembly.

NOTE: Use special J-tool J-42686. Once the sub-gear has been pre-loaded, install the 5 mm bolt supplied with the tool and insert it into the camshaft from the back of the camshaft gear assembly. Tighten the bolt to lock the sub-gear in place.

Fig : Pre-Loading Sub Gear Assembly



IMPORTANT: *When the sub/gear is pre-loaded, the teeth on the sub gear should be aligned with the teeth on the camshaft gear.*

8. Install the odd bank camshaft(s) into the cylinder head.

NOTE: *Before installing the camshafts, pre-lube the cam lobes using a suitable molybdenum assembly grease.*

Fig : Aligning Timing Marks

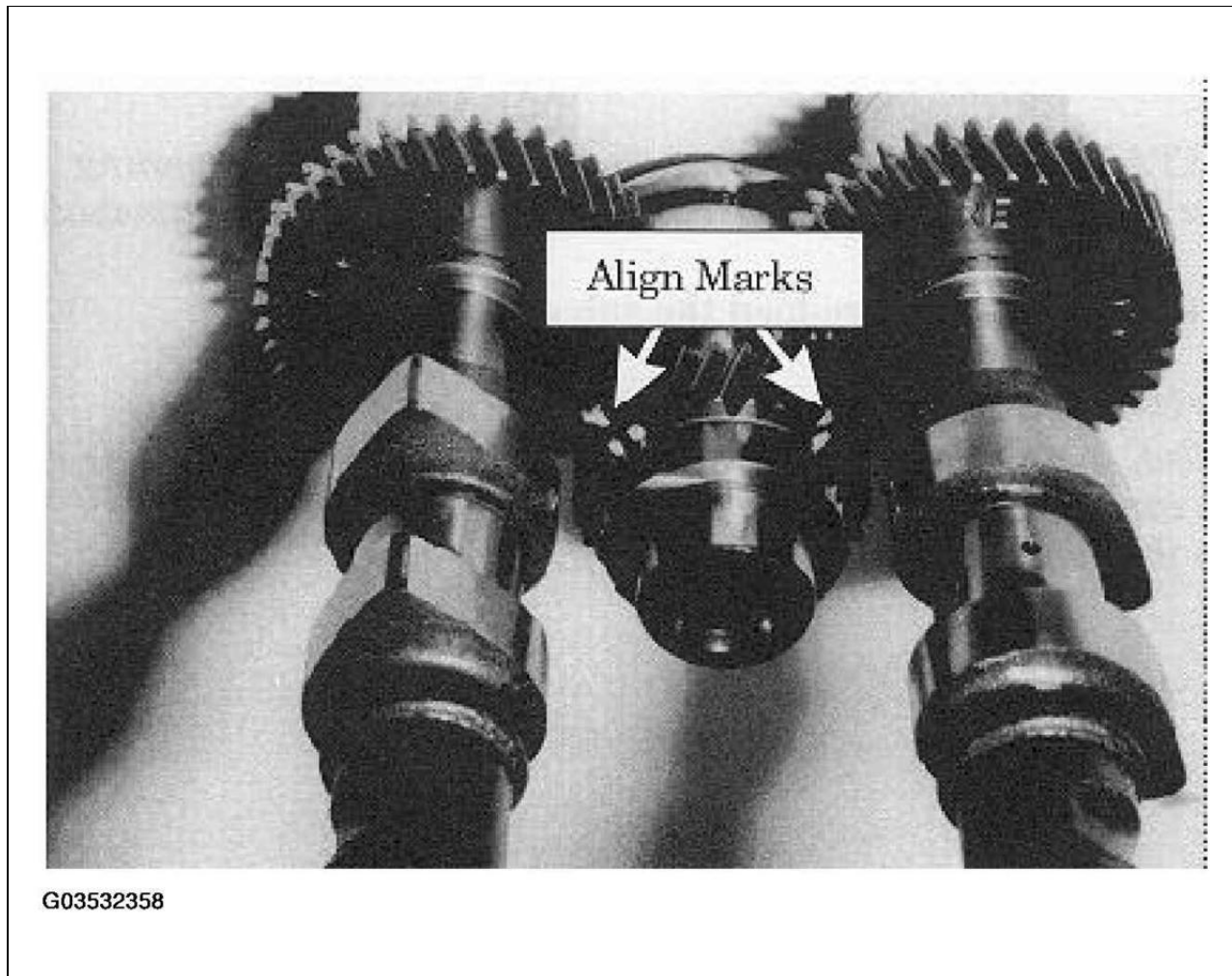
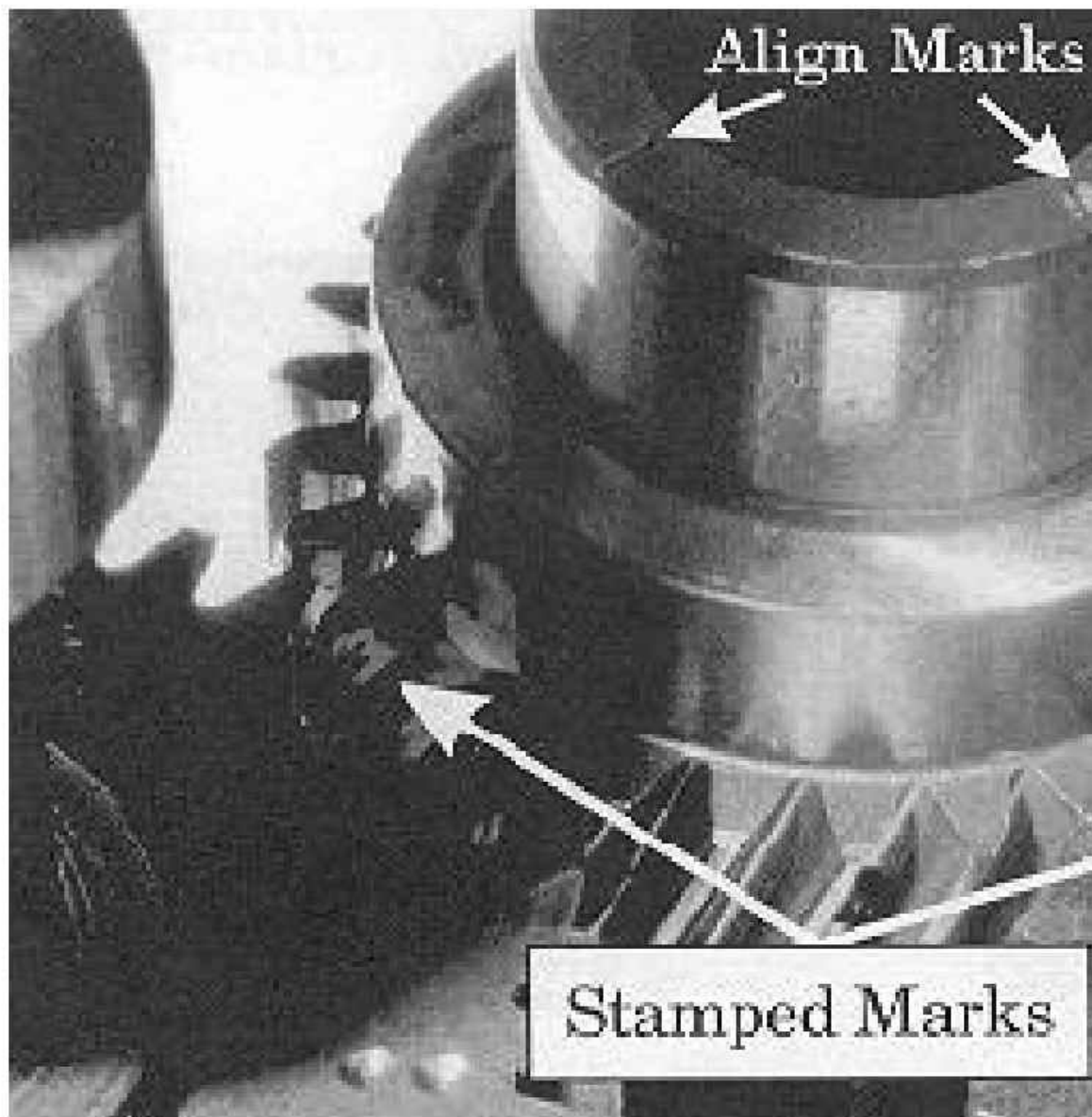


Fig : Aligning Timing Marks



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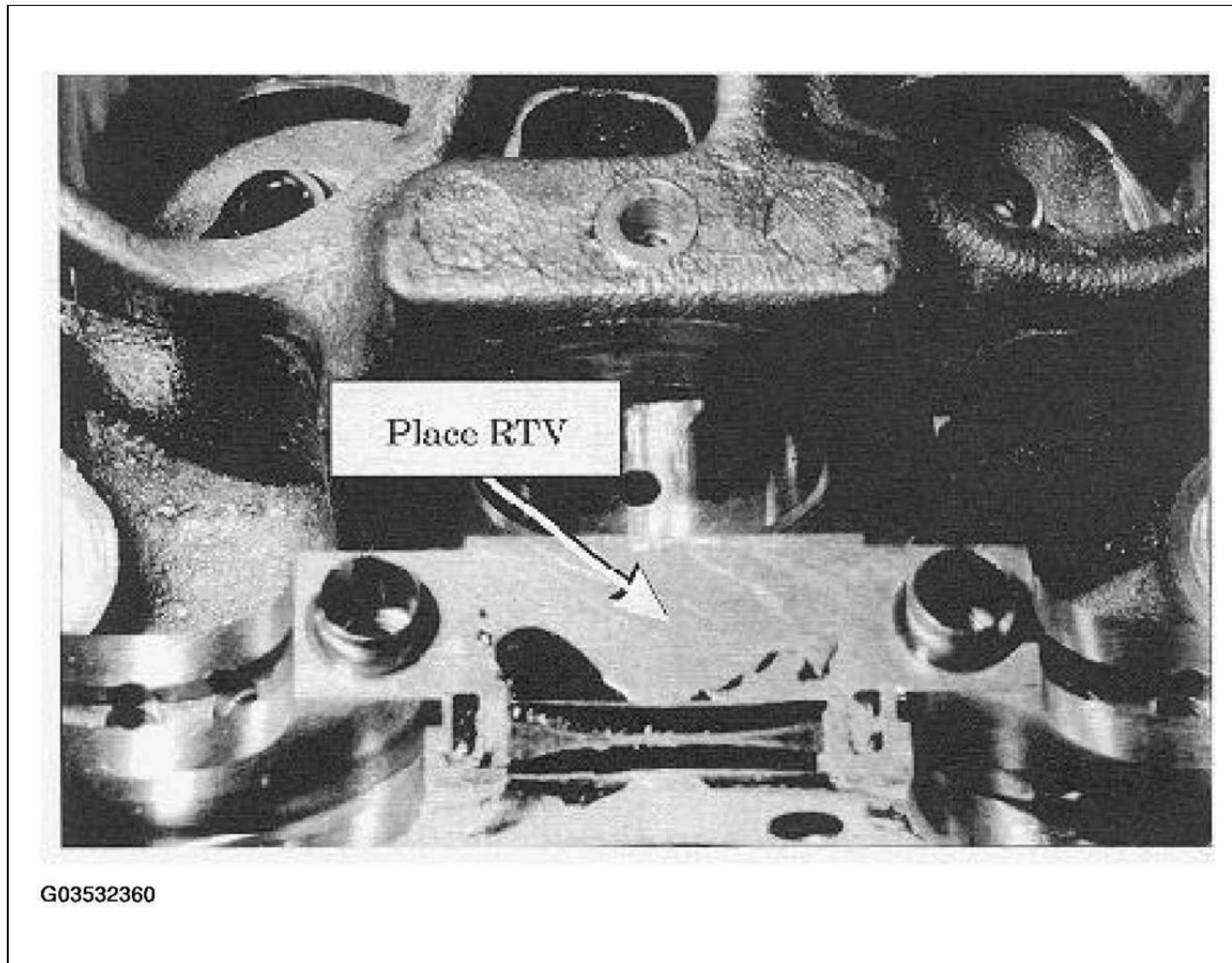
IMPORTANT: *The single dot on the camshaft gears must be aligned with their corresponding marks on the idler gear. Also, do not remove the 5mm bolt holding the sub-gear, until the camshaft journal caps are installed and the bolts are torqued.*

9. Install the camshaft journal retaining caps and torque (10 N.m, 8 lb ft).

IMPORTANT: *The camshaft journal caps are numbered to prevent mis-matching. However, pay close attention When installing the caps on the odd bank cylinders, because the cap arrows will face the front of the cylinder head.*

10. Place a small amount of RTV sealer on the head surface where the cap contacts the head surface.

Fig : Placing Small Amount Of RTV



11. Repeat Steps 3-5 for even bank cylinders.
12. Align the left bank idler shaft marks (Refer to Figure).
13. Pre-load the sub-gear assemblies (Refer to Figure).
14. Install the even bank camshafts and pre-lube the cam lobes using a suitable molybdenum assembly grease (Refer to Figure).

15. Install the camshaft journal retaining caps and torque (10 N.m, 8 lb ft).

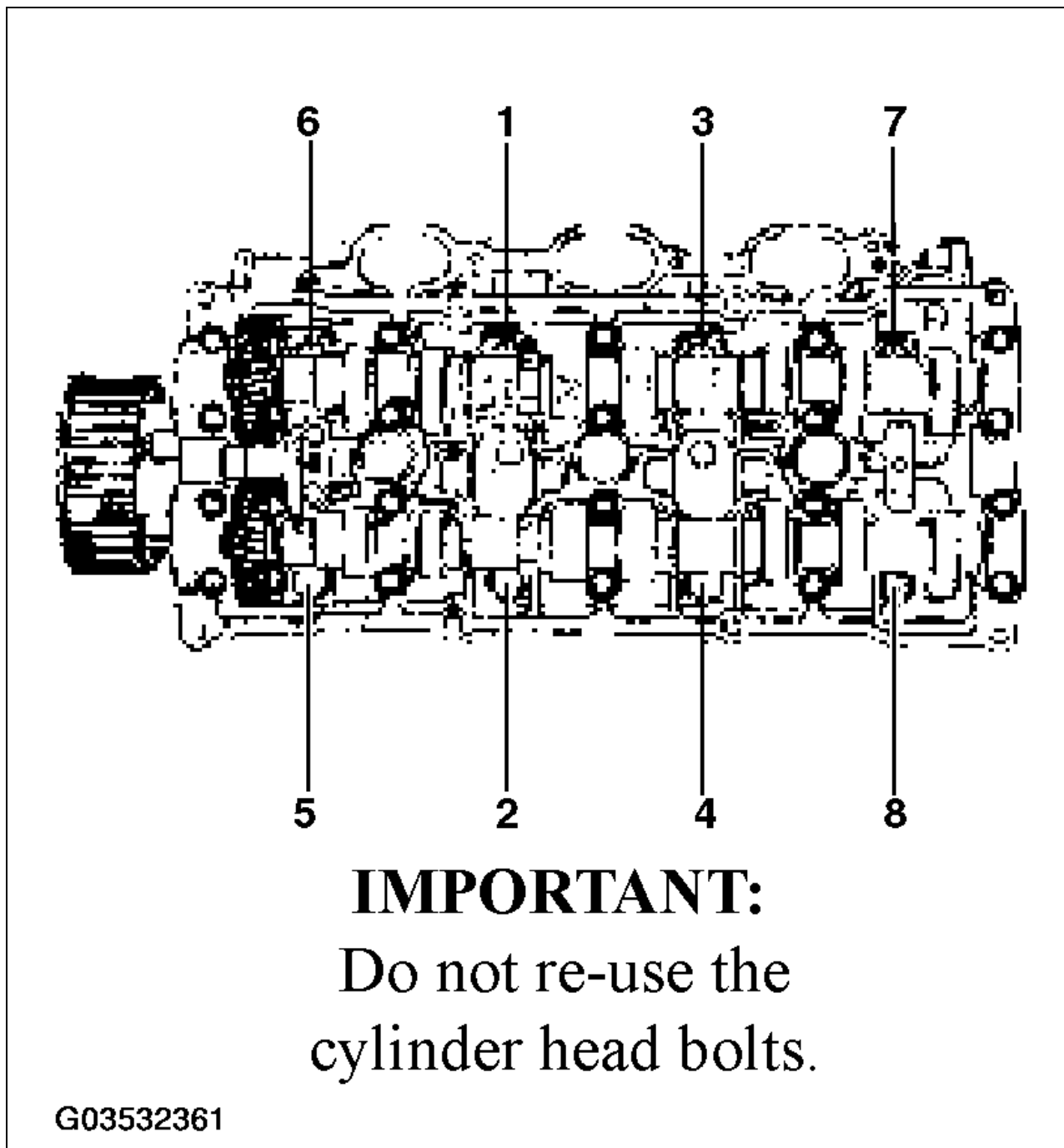
IMPORTANT: *The camshaft journal caps are numbered to prevent mis-matching. However, pay close attention when installing the caps on the even bank cylinders, because the cap arrows will face the rear of the cylinder head.*

16. Place a small amount of RTV sealer on the head surface where the cap contacts the head surface (Refer to Figure).
17. Install the cylinder heads.

IMPORTANT: *When replacing the cylinder head gaskets, be sure to use the correct gasket for each bank.*

18. Torque (64 N.m, 47 lb ft) the cylinder head bolts with oil applied to the threads using the following procedure.

Fig : Identifying Cylinder Head Bolts Torque Sequence



19. Install odd bank cam pulley and even bank cam pulley (Torque: 98 N.m, 72 lb ft).

NOTE: *Skip this step if the pulley has not been removed.*

20. Install both head covers and tighten bolts (Torque: 9 N.m, 7 lb ft).

NOTE: *Use only a couple of bolts to register the cover.*

21. Rotate the crankshaft until the mark on the crankshaft sprocket aligns with the mark on the oil pump cover. This will position the #2 piston at TDC. (Figure)