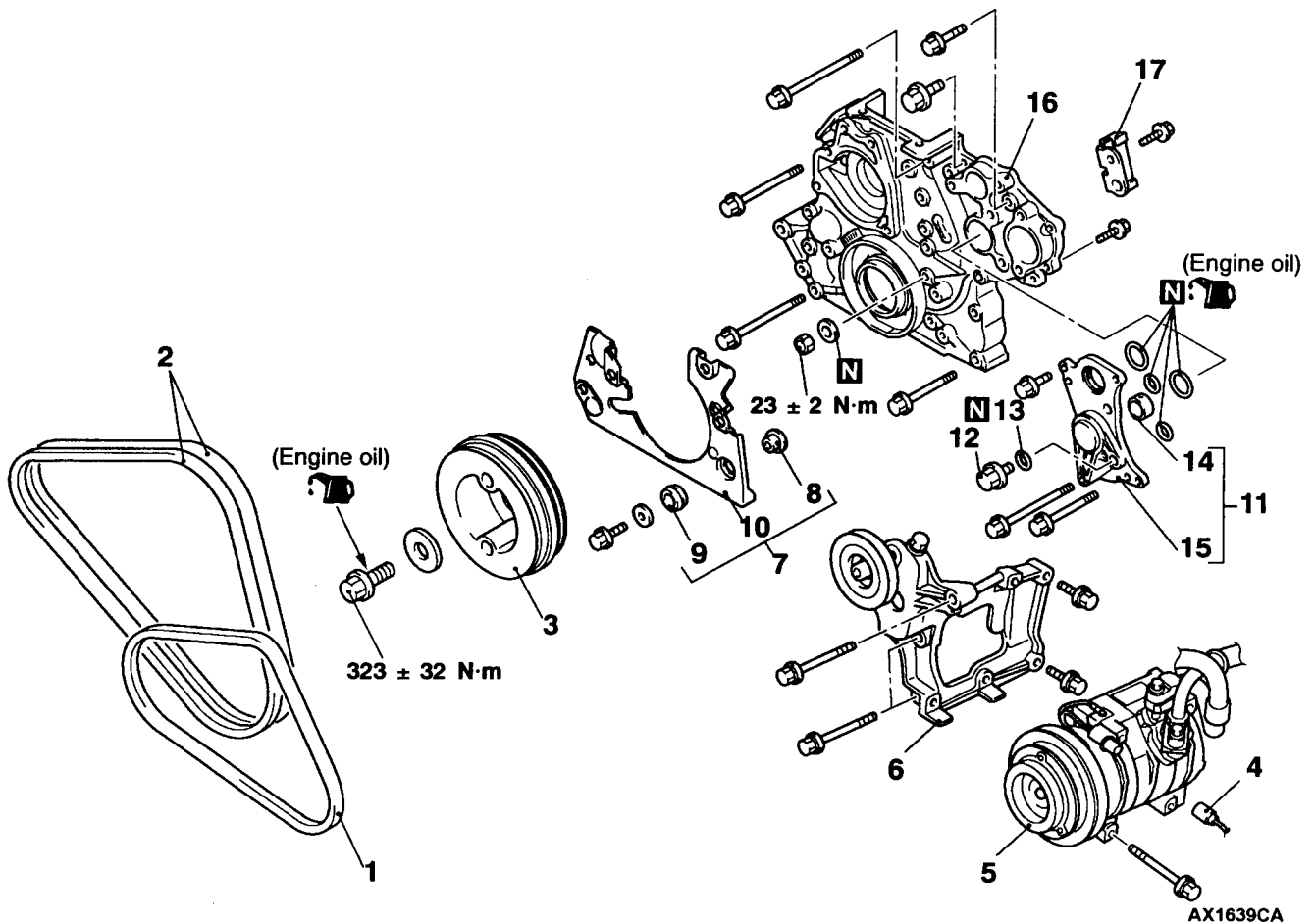


TIMING CHAIN

REMOVAL AND INSTALLATION

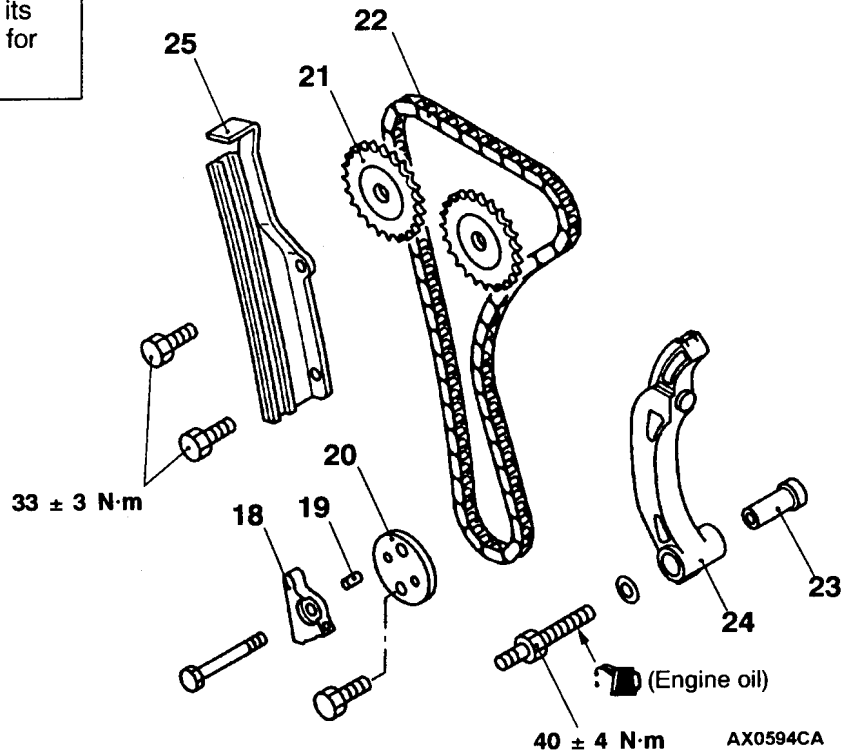
Pre-removal and Post-installation Operation

- Engine Coolant Drain and Refill
(Refer to GROUP 14 - On-vehicle Service.)
- Under Cover and Skid Plate Removal and Installation
- Engine Oil Draining and Refilling
(Refer to GROUP 12 - On-vehicle Service.)
- Fuel Line Air-bleeding
(Refer to GROUP 13C - On-vehicle Service.)
<Post-installation operation>
- Drive Belt Tension Check and Adjustment
(Refer to P.11C-5.)<Post-installation operation>
- Camshaft Removal and Installation
(Refer to P.11C-23.)
- Cooling Fan and Fan Clutch Assembly Removal and Installation (Refer to GROUP 14.)
- Vacuum Pump Removal and Installation
(Refer to P.11C-16.)
- Oil Pan Removal and Installation(Refer to P.11C-14.)

**Removal steps**

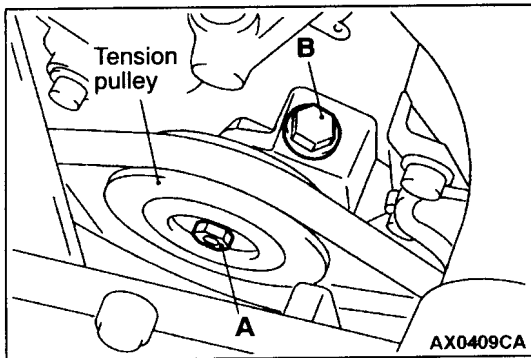
- | | | |
|----------------------------------|---|---|
| <p>◀A▶</p> <p>◀B▶</p> <p>◀C▶</p> | <ol style="list-style-type: none"> 1. A/C compressor drive belt
<Vehicles with A/C> 2. Alternator drive belt 3. Crankshaft pulley <ul style="list-style-type: none"> ● Alternator(Refer to GROUP 16.) ● Water pump(Refer to GROUP 14.) ● Cylinder Head Assembly
(Refer to P.11C-27.) 4. A/C compressor connector
<Vehicles with A/C> 5. A/C compressor
<Vehicles with A/C> 6. A/C compressor bracket and tension pulley assembly<Vehicles with A/C> | <ol style="list-style-type: none"> 7. Timing gear case cover assembly 8. Insulator collar 9. Insulator 10. Timing gear case cover ▶B◀ 11. Bearing block assembly 12. Drain plug 13. Drain plug gasket 14. Bearing block bushing 15. Bearing block ▶B◀ 16. Timing gear case 17. Lower guide plate |
|----------------------------------|---|---|

Apply engine oil to the timing chain and its contact surfaces for installation.



- ▶A◀ 18. Oil jet
- ▶A◀ 19. Spring pin
- ▶A◀ 20. Idler washer
- ▶A◀ 21. Camshaft sprocket

- ▶A◀ 22. Timing chain
- ▶A◀ 23. Tension lever shaft
- ▶A◀ 24. Tension lever
- ▶A◀ 25. Guide plate



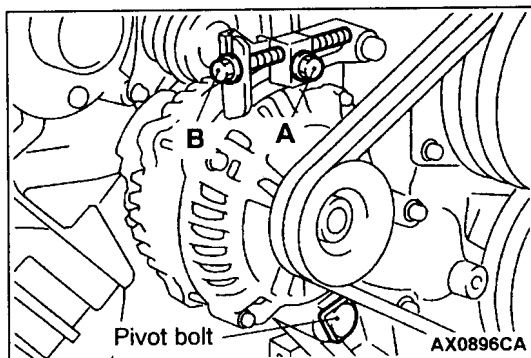
REMOVAL SERVICE POINTS

◀A▶ A/C COMPRESSOR DRIVE BELT REMOVAL

1. Loosen the tension pulley securing bolt A.
2. Loosen the adjusting bolt B to remove the belt.

Caution

To reuse the drive belt, mark its running direction (clockwise direction) on the belt back side with a chalk.



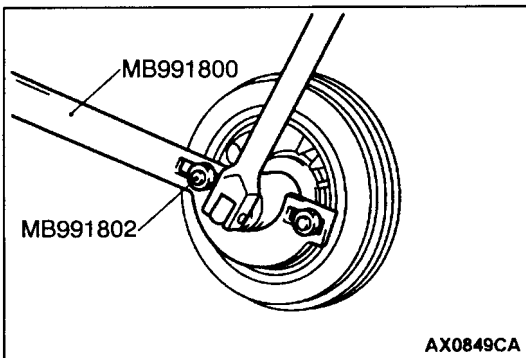
◀B▶ ALTERNATOR DRIVE BELT REMOVAL

1. Loosen the alternator pivot bolt, nut and the securing bolt A.
2. Loosen the adjusting bolt B to remove the belts.

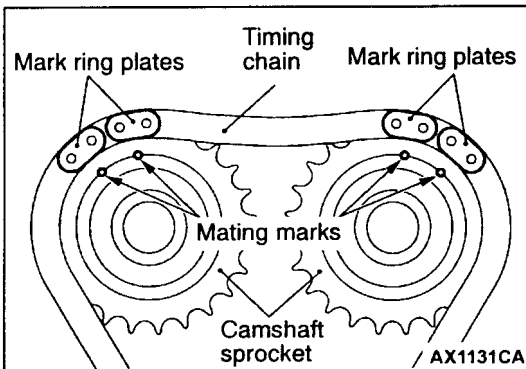
Caution

(1) To reuse the drive belts, mark its running direction (clockwise direction) on the belt backside with a chalk.

(2) To replace the drive belts, always replace them as a set.



◀C▶ CRANKSHAFT PULLEY REMOVAL



INSTALLATION SERVICE POINTS

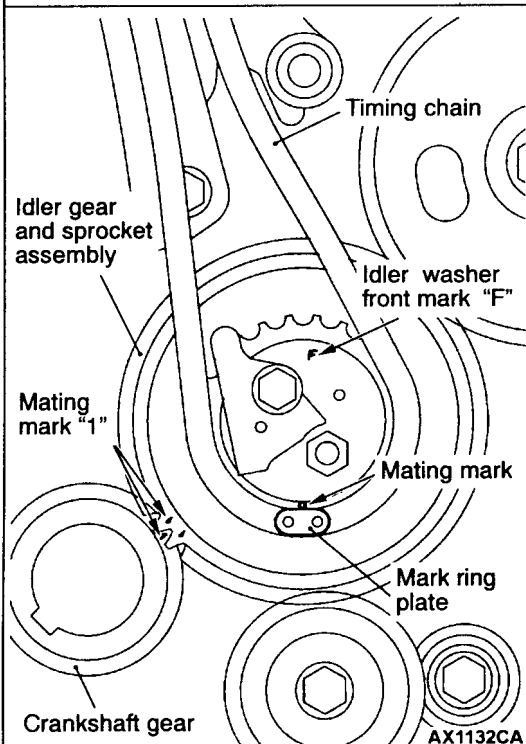
▶A◀ TIMING CHAIN/CAMSHAFT SPROCKET/IDLER WASHER/SPRING PIN/OIL JET INSTALLATION

1. Check that the mating mark on the idler gear and sprocket assembly is aligned with mating mark "1" on the crankshaft gear.
2. Align the mating mark on the idler gear and sprocket assembly with the dark blue mark ring plate on the timing chain.

Caution

Note that the timing chain has one mark ring plate for the idler gear and sprocket assembly side, and two mark ring plates for each camshaft sprocket.

3. Align the mark ring plates with the camshaft sprocket mating marks.
4. Tie up the timing chain and the camshaft sprocket with a cord to prevent the mating mark misalignment.
5. Install the idler washer, the spring pin and the oil jet. The idler washer front mark "F" must face toward the front of the engine.

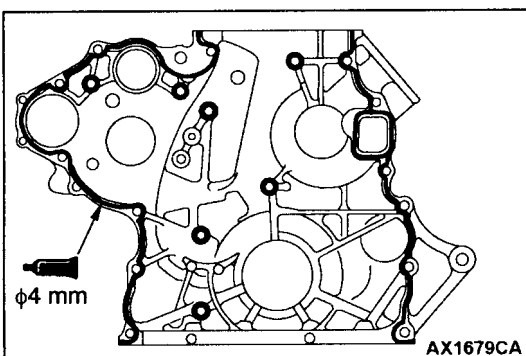


▶B◀ TIMING GEAR CASE/BEARING BLOCK ASSEMBLY INSTALLATION

1. Clean the timing gear case and the front plate mating surfaces with a scraper or a wire brush.
2. Apply a continuous bead of the specified sealant to the timing gear case mating surface as shown.

Specified sealant:

MITSUBISHI GENUINE PART MD970389 or equivalent

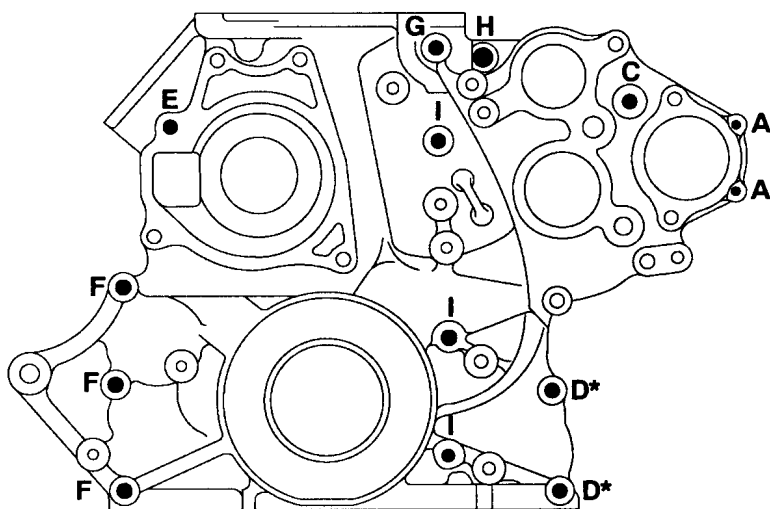


3. After applying the sealant, install the gear case within 15 minutes.

Caution

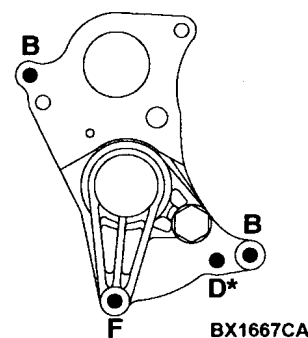
- (1) When installing the timing gear case, be careful not to disturb the sealant.
 - (2) Whenever the timing gear case mounting bolts are loosened or tightened again after the timing gear case installation, always apply the sealant again.
 - (3) After the timing gear case is installed, wait for at least one hour, and then start the engine.
4. Install the mounting nuts and bolts to the timing gear case and the bearing block assembly at the shown positions.

Timing gear case



BX1666CA

Bearing block assembly



BX1667CA

Name	Symbol	Size mm (D × L)	Name	Symbol	Size mm (D × L)
Flange bolt	A	6 × 20	Flange bolt	F	8 × 85
	B	8 × 30		G	8 × 90
	C	8 × 50		H	10 × 35
	D*	8 × 60	Cap nut	I	–
	E	8 × 75			

D=Nominal diameter
 L=Nominal length
 *: Vehicles without A/C