

GROUP 11A

ENGINE <4G6>

GENERAL

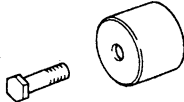
OUTLINE OF CHANGES

- The service procedures of camshaft and camshaft oil seal have been changed to correspond to the change of the camshaft position sensor.

SEALANTS

Items	Specified sealant	Remarks
Rocker cover and cylinder head Semi-circular packing	3M ATD Part No. 8660 or equivalent	Semi-drying sealant
Camshaft position sensor support	MITSUBISHI GENUINE PART MD970389 or equivalent	

SPECIAL TOOL

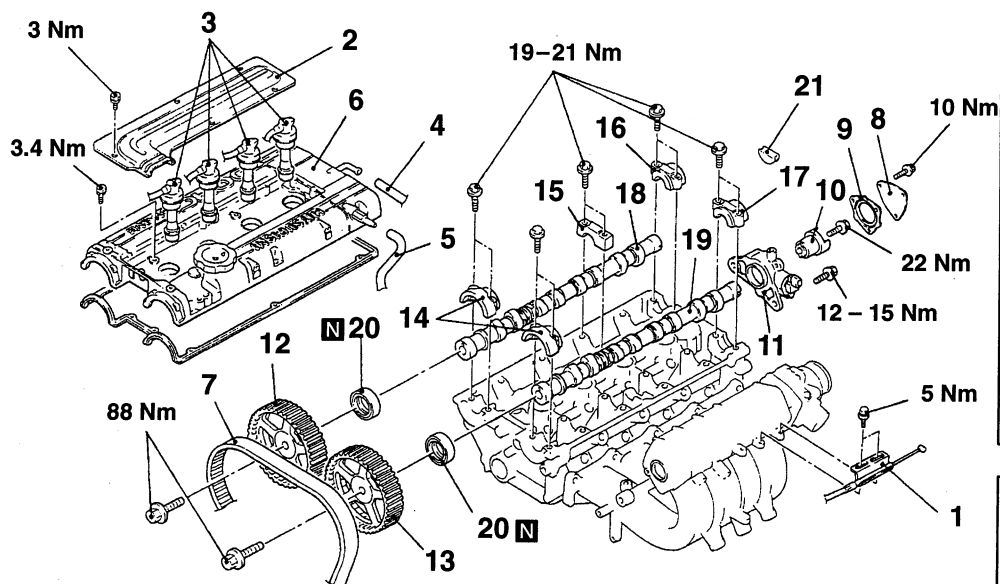
Tool	Number	Name	Use
	MD998713	Camshaft oil seal installer	Pressing-in camshaft oil seal

CAMSHAFT AND CAMSHAFT OIL SEAL**REMOVAL AND INSTALLATION****Pre-removal Operation**

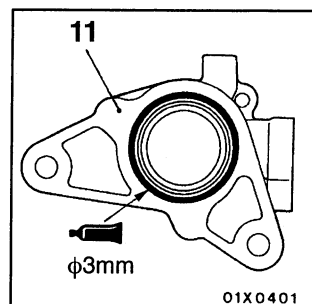
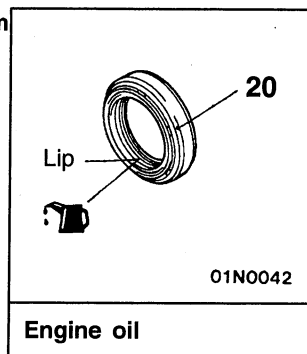
- Timing Belt Front Upper Cover Removal

Post-installation Operation

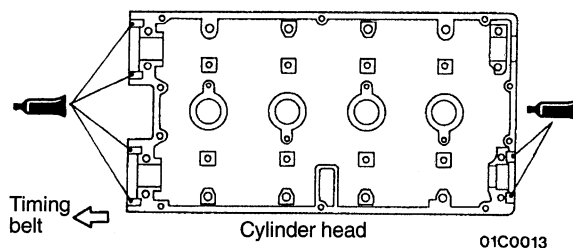
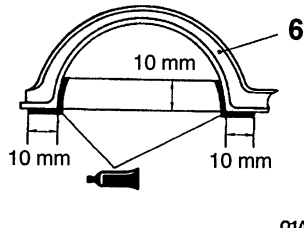
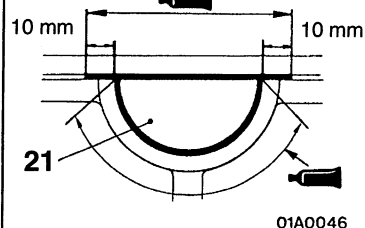
- Timing Belt Front Upper Cover Installation



01X0407
00005321



Specified sealant:
MITSUBISHI GENUINE
PART MD970389 or
equivalent



Specified sealant: 3M ATD Part No. 8660 or equivalent

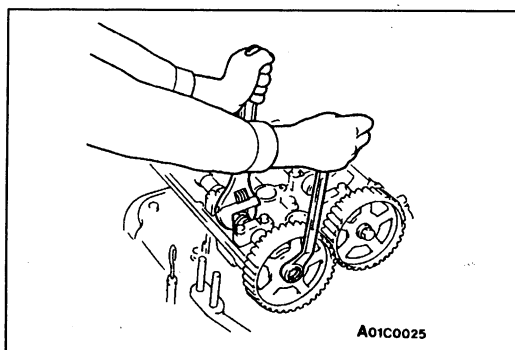
Removal steps

1. Accelerator cable connection
2. Center cover
3. Spark plug cable
4. Breather hose
5. PCV hose
6. Rocker cover
7. Timing belt (Refer to Basic Manual.)
8. Cover
9. Gasket
10. Camshaft position sensing cylinder
11. Camshaft position sensor support
12. Exhaust camshaft sprocket
13. Intake camshaft sprocket
14. Front camshaft bearing cap
15. Camshaft bearing cap
16. Rear camshaft bearing cap (R.H.)
17. Rear camshaft bearing cap (L.H.)
18. Exhaust camshaft
19. Intake camshaft
20. Camshaft oil seal
21. Semi-circular packing

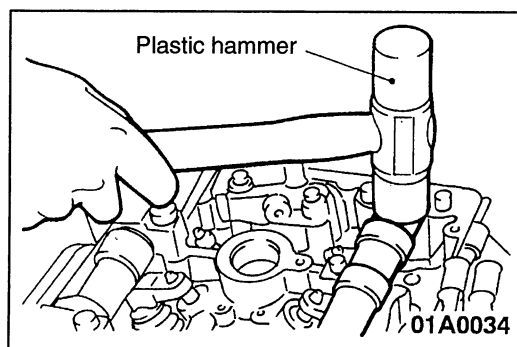
Installation steps

19. Intake camshaft
18. Exhaust camshaft
17. Rear camshaft bearing cap (L.H.)
16. Rear camshaft bearing cap (R.H.)
15. Camshaft bearing cap
14. Front camshaft bearing cap
20. Camshaft oil seal
13. Intake camshaft sprocket
12. Exhaust camshaft sprocket
11. Camshaft position sensor support
10. Camshaft position sensing cylinder
9. Gasket
8. Cover
7. Timing belt (Refer to Basic Manual.)
21. Semi-circular packing
6. Rocker cover
5. PCV hose
4. Breather hose
3. Spark plug cable
2. Center cover
1. Accelerator cable connection
(Refer to Basic Manual.)



**REMOVAL SERVICE POINTS****◀A▶ EXHAUST CAMSHAFT SPROCKET/INTAKE CAMSHAFT SPROCKET REMOVAL**

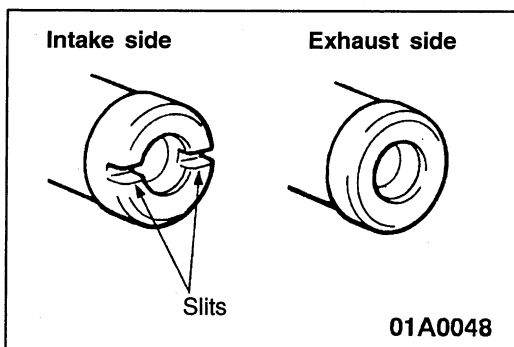
- (1) Use a wrench at the hexagonal part of the camshaft (to prevent the crankshaft from turning) to loosen the camshaft sprocket bolt.
- (2) Remove the camshaft sprockets.

**◀B▶ FRONT CAMSHAFT BEARING CAP/CAMSHAFT BEARING CAP/REAR CAMSHAFT BEARING CAP (R.H.)/REAR CAMSHAFT BEARING CAP (L.H.) REMOVAL**

- (1) Loosen the bearing cap installation bolts in two or three steps.
- (2) Remove the bearing cap.

NOTE

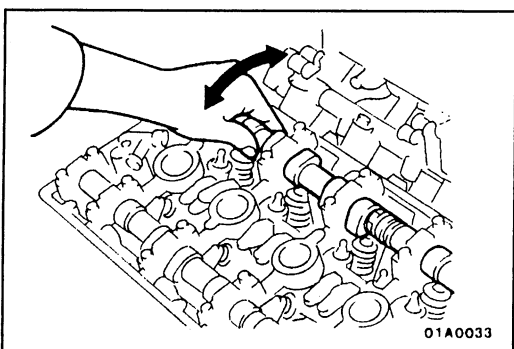
If the bearing cap is difficult to remove, use a plastic hammer to gently tap the rear part of the camshaft, and then remove.

**INSTALLATION SERVICE POINTS****▶A▶ INTAKE CAMSHAFT/EXHAUST CAMSHAFT INSTALLATION**

- (1) Install the camshafts on the cylinder head.

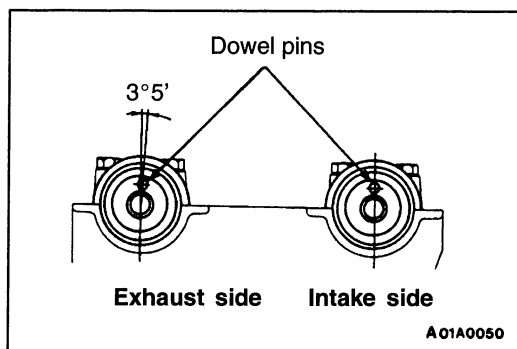
Caution

Do not confuse the intake side and the exhaust side.

**NOTE**

Install new camshafts using the following procedure.

- (1) Remove the rocker arms.
- (2) Lay the camshafts on the cylinder head and install the bearing caps.
- (3) Check that the camshaft can be easily turned by hand.
- (4) After checking, remove the bearing caps and the camshafts, and install the rocker arms.



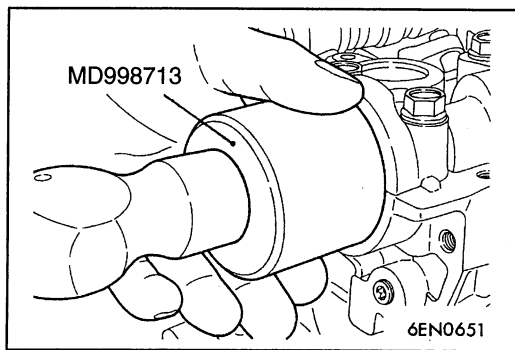
- (2) The camshaft's dowel pins should be at the positions shown in the figure.

►B◄ REAR CAMSHAFT BEARING CAP (R.H.)/REAR CAMSHAFT BEARING CAP (L.H.)/CAMSHAFT BEARING CAP/FROM CAMSHAFT BEARING CAP INSTALLATION

Tighten the bearing cap installation bolts to the specified torque in two or three steps.

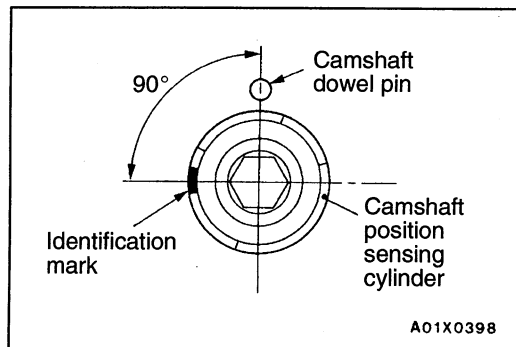
Caution

Tighten uniformly, otherwise the rocker arms will not be straight.



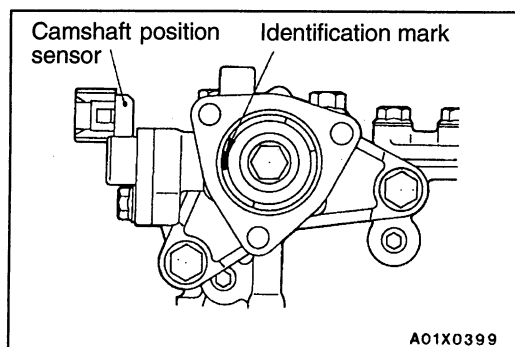
►C◄ CAMSHAFT OIL SEAL INSTALLATION

Use the special tool to drive the camshaft oil seal into position carefully.



►D◄ CAMSHAFT POSITION SENSING CYLINDER/CAMSHAFT POSITION SENSOR SUPPORT INSTALLATION

- (1) Install the camshaft position sensing cylinder to the end of the camshaft as shown in the illustration.



- (2) Install the camshaft position sensor support.
- (3) Check that the identification mark on the camshaft position sensing cylinder is pointing in the same direction as the camshaft position sensor installation direction when the camshaft is at the No.1 compression TDC position.