

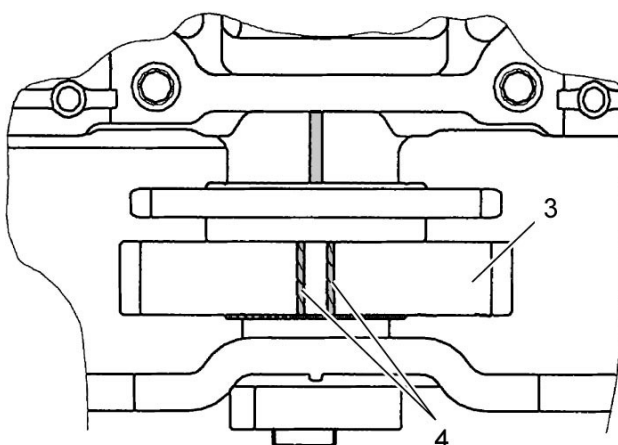
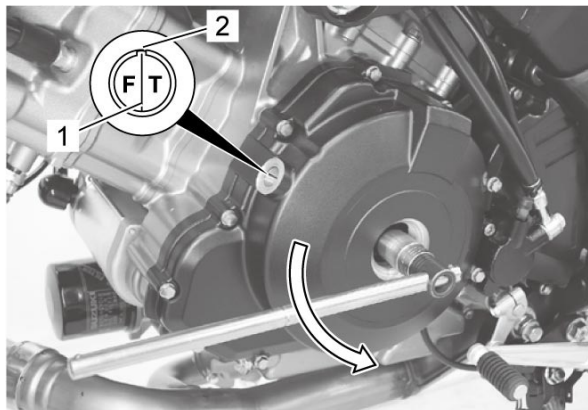
1D



Camshaft Installation

Front Cylinder Camshaft

- 1) Turn the crankshaft to bring the "F | T" line (1) on generator rotor to the index mark (2) of the valve inspection hole and also to bring the cam drive idle gear/sprocket No. 2 (Front cylinder) (3) to the position as shown.



4.	Paint
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- 2) Apply molybdenum oil solution to the camshaft journals and cam surfaces.

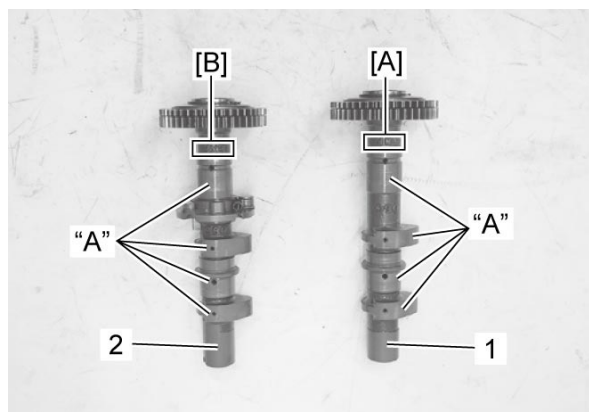
"A": Assembly lubrication (Molybdenum oil solution)

NOTE:

Identify the camshafts according to the following embossed letters.

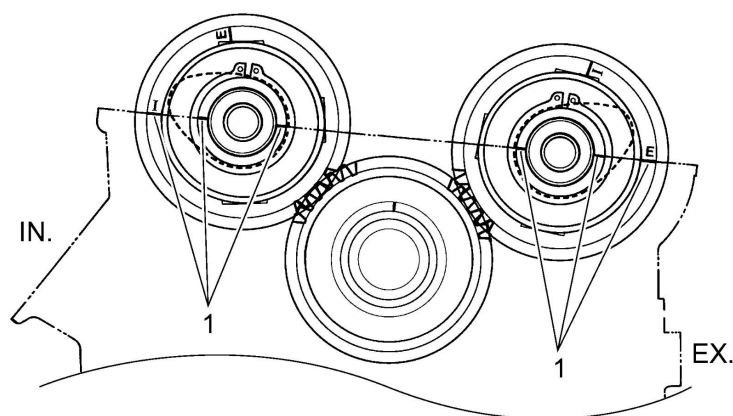
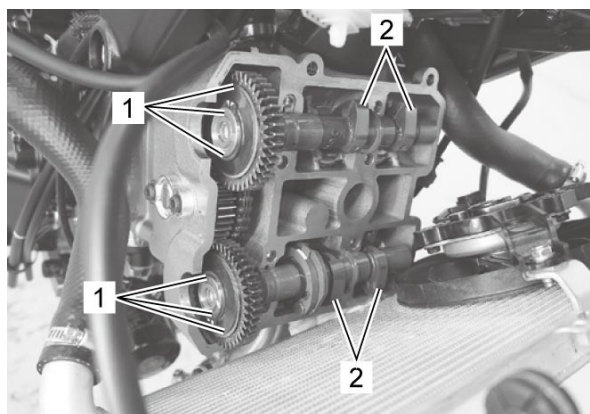
Intake camshaft (1): [A]

Exhaust camshaft (2): [B]

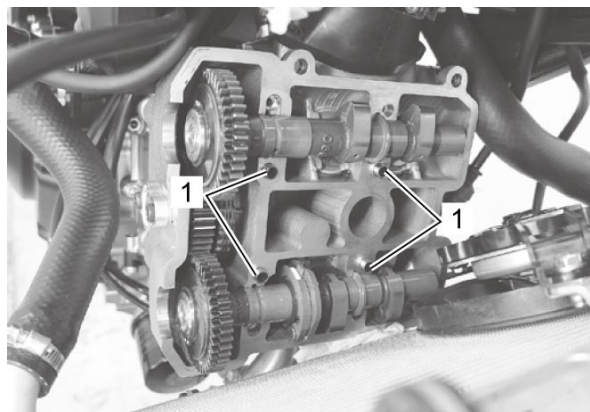


[A]:	INF	[B]:	EXF
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- 3)** Align the engraved lines (1) on the camshafts so that it is parallel with mating surface of the cylinder head. Check that the cam faces (2) are located as shown.



- 4)** Install the dowel pins (1).



- 5) Apply engine oil to the camshaft journal holders (1).
- 6) Install the camshaft journal holders (1), intake and exhaust.
- 7) Fasten the camshaft journal holders (1) evenly by tightening the camshaft journal holder bolts sequentially and diagonally.

NOTICE:

Damage to head or camshaft journal holder thrust surfaces may result if the camshaft journal holders (1) are not drawn down evenly.

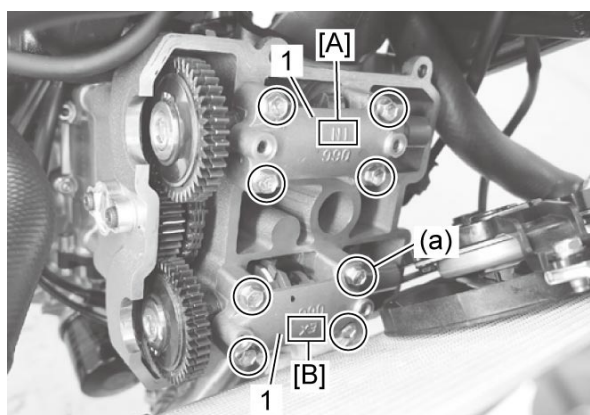
NOTE:

Each camshaft journal holder (1) is identified with a cast-on letters.

- 8) Tighten the camshaft journal holder bolts to the specified torque.

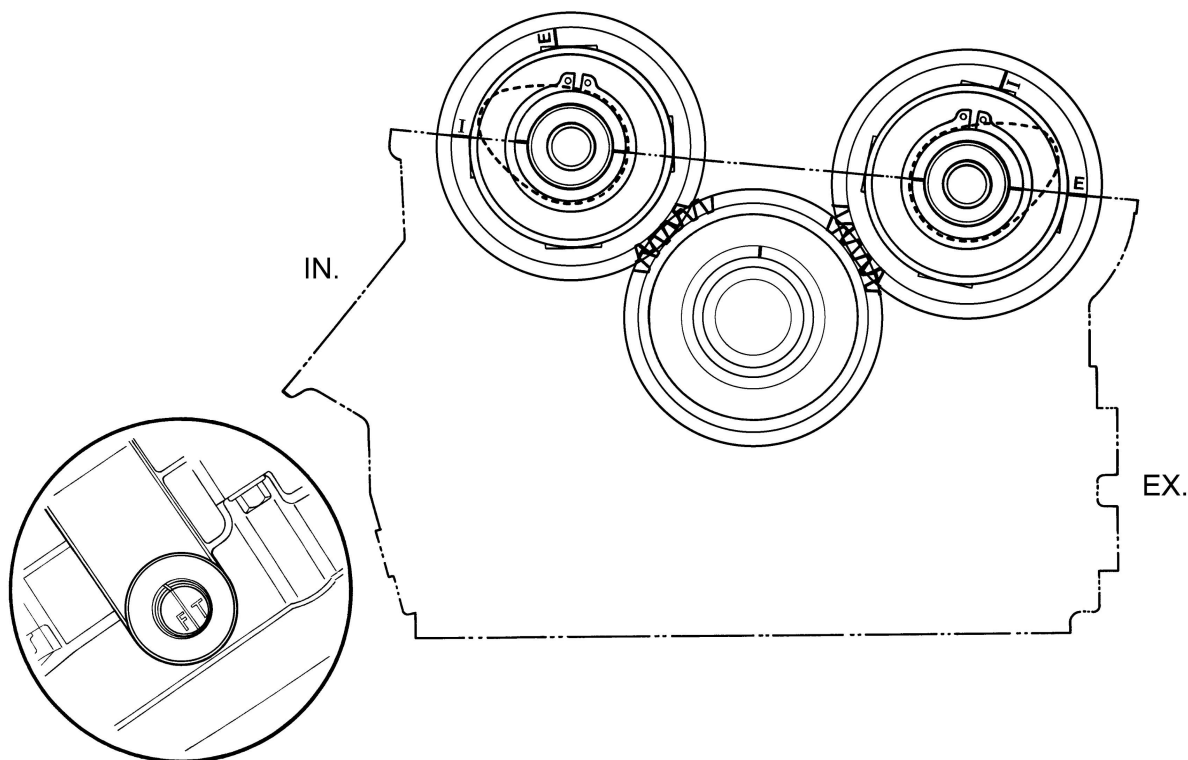
Tightening torque

Camshaft journal holder bolt (a): 10 N·m (1.0 kgf-m, 7.5 lbf-ft)



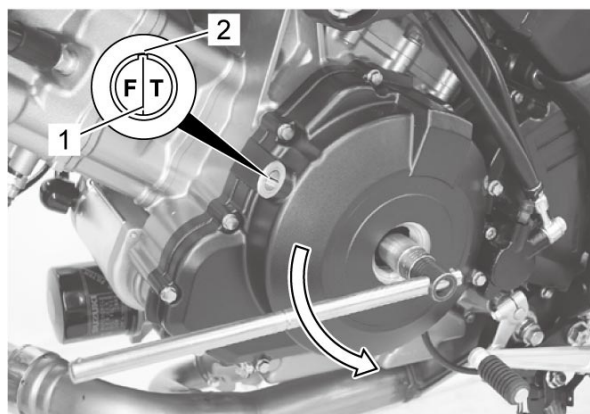
[A]:	IN	[B]:	EX
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- 9) Recheck the front cylinder camshaft positions, intake and exhaust.



Rear Cylinder Camshaft

- 1) From the position where the front cylinder camshafts have now been installed, rotate the crankshaft 360 degrees (1 turn) and align the "F | T" line (1) on the generator rotor with the index mark (2) of the valve timing inspection hole.



- 2) Apply molybdenum oil solution to the camshaft journal and cam surfaces.

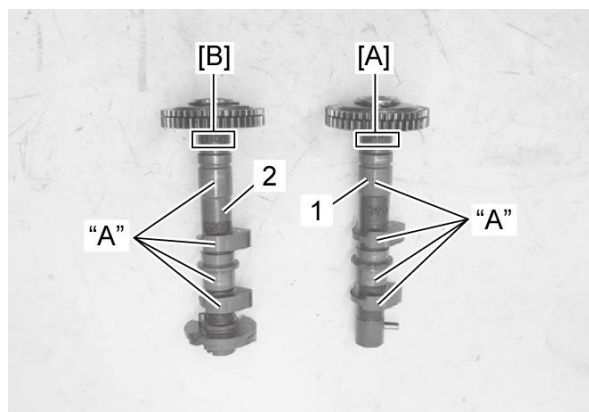
"A": Assembly lubrication (Molybdenum oil solution)

NOTE:

Identify the camshafts according to the following embossed letters.

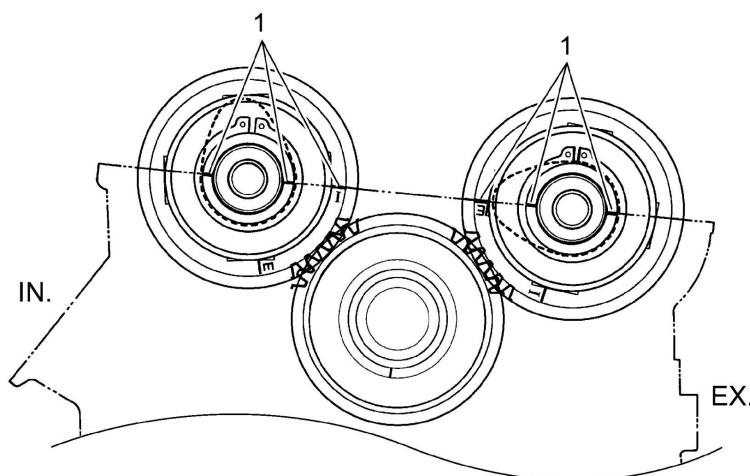
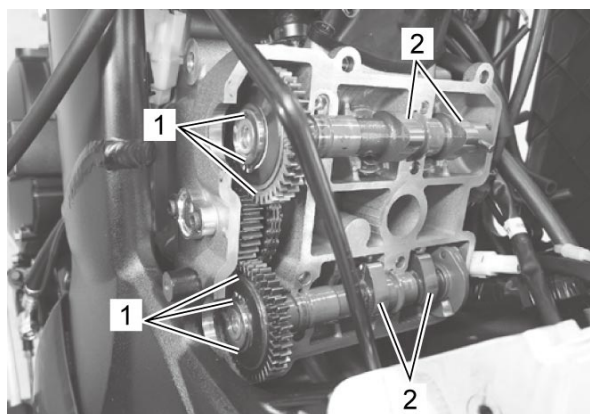
Intake camshaft (1): [A]

Exhaust camshaft (2): [B]

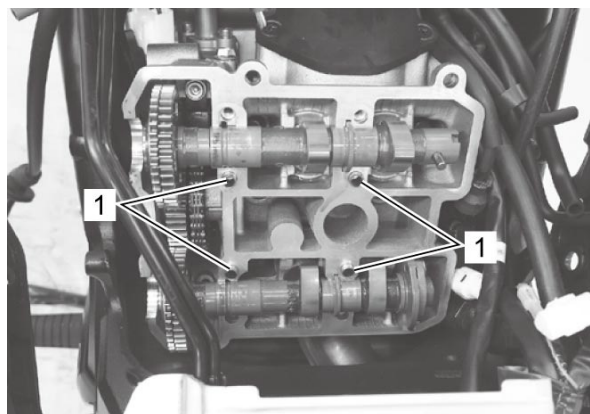


[A]:	INR	[B]:	EXR
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- 3)** Align the engraved lines (1) on the camshafts so that it is parallel with mating surface of the cylinder head. Check that the cam faces (2) are located as shown.



- 4) Install the dowel pins (1).



- 5) Apply engine oil to the camshaft journal holders (1).
 6) Install the camshaft journal holders (1), intake and exhaust.
 7) Fasten the camshaft journal holders (1) evenly by tightening the camshaft journal holder bolts sequentially and diagonally.

NOTICE:

Damage to head or camshaft journal holder thrust surfaces may result if the camshaft journal holders (1) are not drawn down evenly.

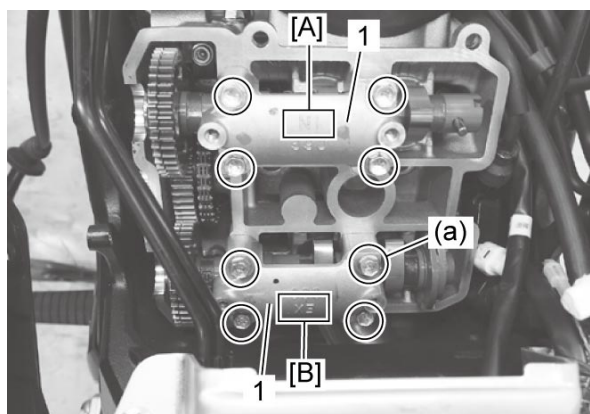
NOTE:

Each camshaft journal holder (1) is identified with a cast-on letters.

- 8) Tighten the camshaft journal holder bolts to the specified torque.

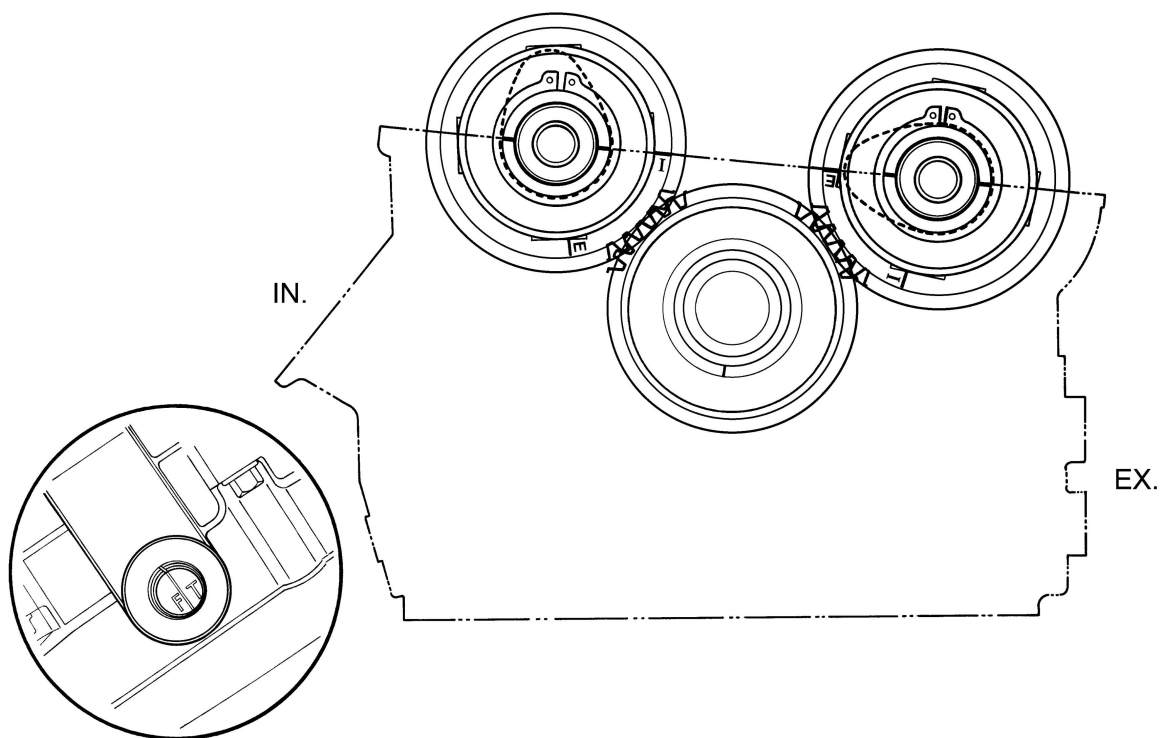
Tightening torque

Camshaft journal holder bolt (a): 10 N·m (1.0 kgf-m, 7.5 lbf-ft)



[A]:	IN	[B]:	EX
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- 9) Recheck the rear cylinder camshaft positions, intake and exhaust.

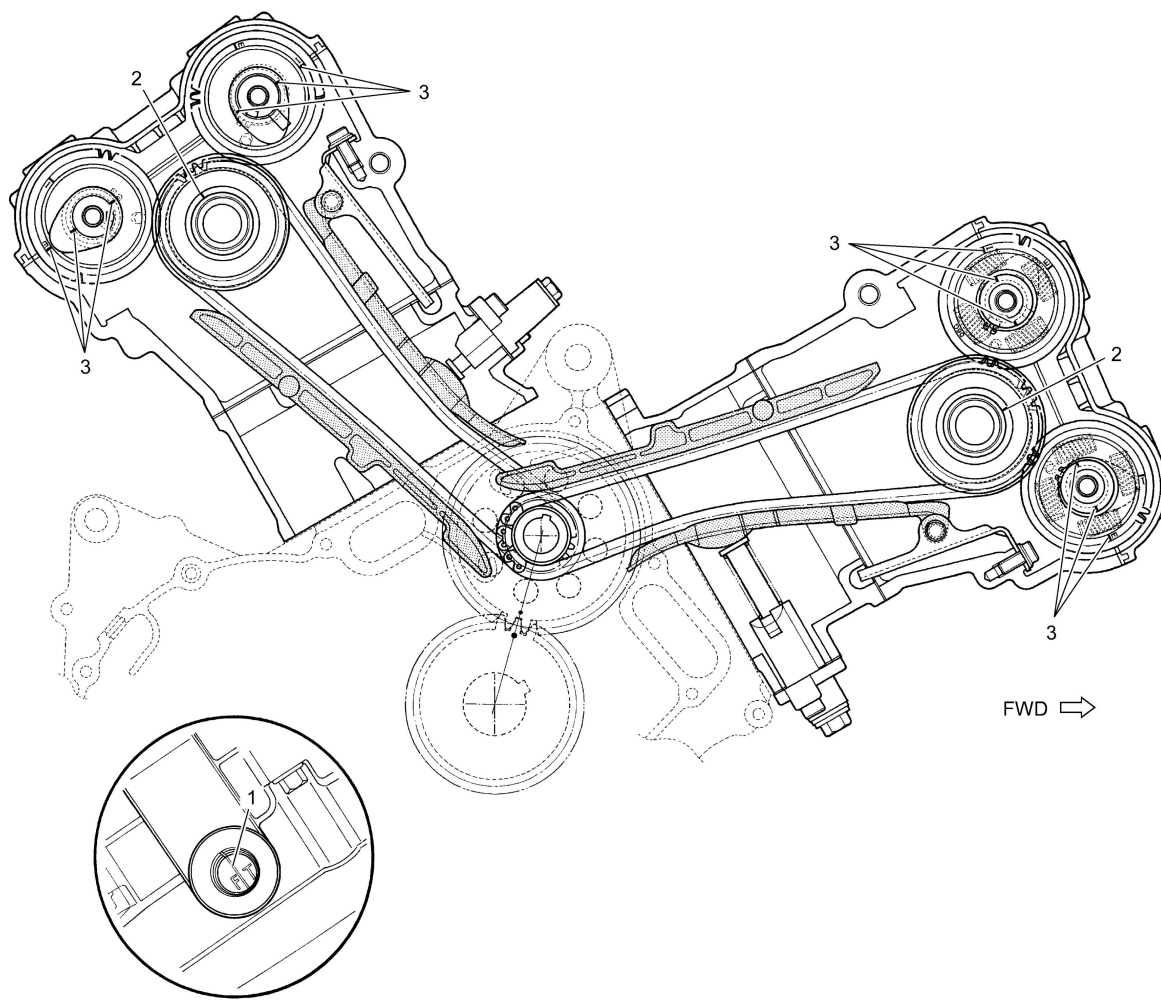


- 10)** After installing the rear cylinder camshafts, rotate the crankshaft 360 degrees (1 turn), and recheck the positions of the camshafts.

NOTICE:

Be sure to check the positions of the "F | T" line (1) on the generator rotor, engraved lines (2) on each cam drive idle gear/sprocket No. 2 and the engraved lines (3) on the camshafts.

Front cylinder TDC of compression stroke



- 11)** Check and adjust the valve clearance.
- 12)** Apply engine oil to the new O-ring (1).
- 13)** Install the new gasket (2).
- 14)** Tighten the generator cover plug (3) and valve timing inspection plug (4) to the specified torque.

Tightening torque

Generator cover plug (a): 15 N·m (1.5 kgf-m, 11.0 lbf-ft)

Valve timing inspection plug (b): 21 N·m (2.1 kgf-m, 15.5 lbf-ft)

