


3. Install:
- Spark plug

	<p><b>Spark plug</b> 13 Nm (1.3 m·kgf, 9.4 ft·lbf)</p>
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**TIP**  
Before installing the spark plug, clean the spark plug and gasket surface.

10. Connect:
- Spark plug cap

11. Install:
- All removed parts


**TIP**  
For installation, reverse the removal procedure.

EAS20700

## CHECKING THE IGNITION TIMING


**TIP**  
Prior to checking the ignition timing, check the wiring connections of the entire ignition system. Make sure all connections are tight and free of corrosion.

1. Remove:
- Seat
  - Fuel tank cover
  - Right side cover
- Refer to "GENERAL CHASSIS" on page 4-1.
2. Connect:
- Timing light
  - Digital tachometer

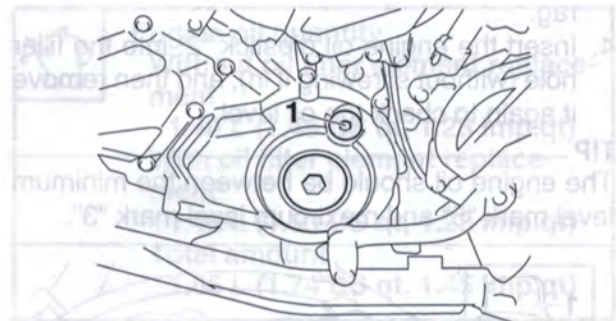
	<p><b>Timing light</b> 90890-03141 YU-03141</p> <p><b>Digital tachometer</b> 90890-06760 YU-39951-B</p>
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3. Check:
- Ignition timing

- a. Start the engine, warm it up for several minutes, and then let it run at the specified engine idling speed.

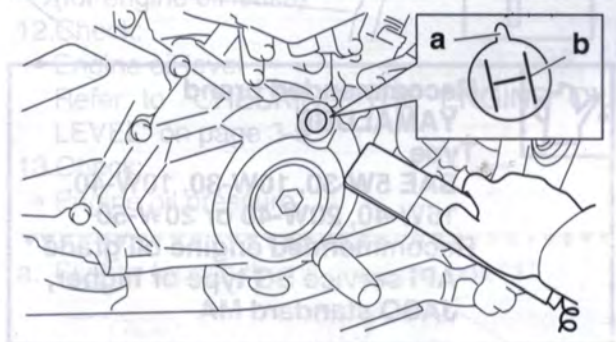
	<p><b>Engine idling speed</b> 1950–2050 r/min</p>
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- b. Remove the timing mark accessing screw "1".



- c. Check that the stationary pointer "a" is within the firing range "b" on the generator rotor. Incorrect firing range → Check the ignition system.

**TIP**  
The ignition timing is not adjustable.



- d. Install the timing mark accessing screw.

4. Detach:
- Timing light
  - Digital tachometer
5. Install:
- Right side cover
  - Fuel tank cover
  - Seat
- Refer to "GENERAL CHASSIS" on page 4-1.

EAS20910

## CHECKING THE ENGINE OIL LEVEL

1. Place the vehicle on a level surface.
2. Start the engine, warm it up until the engine oil has reached a normal temperature of 40°C (104°F), let it continue to idle for ten seconds, and then turn the engine off.

**TIP**  
To achieve the proper engine oil temperature for an accurate oil level reading, the engine must have first completely cooled down, and then warmed up again for several minutes to normal operating temperature.

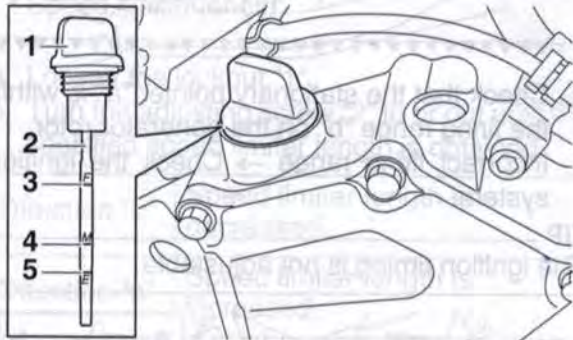
3. Remove the engine oil tank filler cap "1", and wipe the engine oil dipstick "2" off with a clean

rag.

- Insert the engine oil dipstick "2" into the filler hole (without screwing it in), and then remove it again to check the oil level.

**TIP**

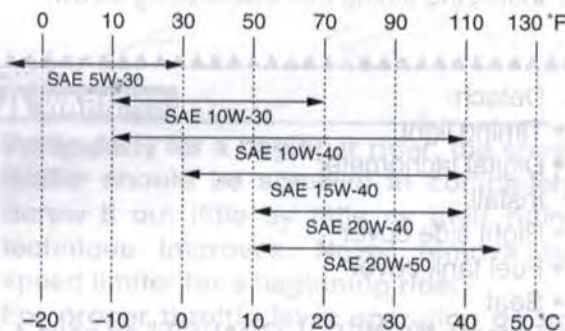
The engine oil should be between the minimum level mark "5" and maximum level mark "3".



**Recommended brand**  
**YAMALUBE**

**Type**  
SAE 5W-30, 10W-30, 10W-40,  
15W-40, 20W-40 or 20W-50

**Recommended engine oil grade**  
API service SG type or higher,  
JASO standard MA



ECA13361

**NOTICE**

- Engine oil also lubricates the clutch and the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives or use engine oils with a grade of "CD" or higher and do not use oils labeled "ENERGY CONSERVING II".
- Do not allow foreign materials to enter the crankcase.

- If the engine oil is at or below the minimum level mark "5", add sufficient oil of the recommended type through the engine oil tank filler hole to raise it to the correct level.

ECA1TD1301

**NOTICE**

Be sure the engine oil is at the correct level, otherwise engine damage may result.

**TIP**

When adding oil, be careful not to overfill the engine oil tank; the oil level rises faster starting from the half-level mark "4" on the dipstick.

- Insert the dipstick into the engine oil tank filler hole, and then tighten the engine oil tank filler cap.

ECA1TD1302

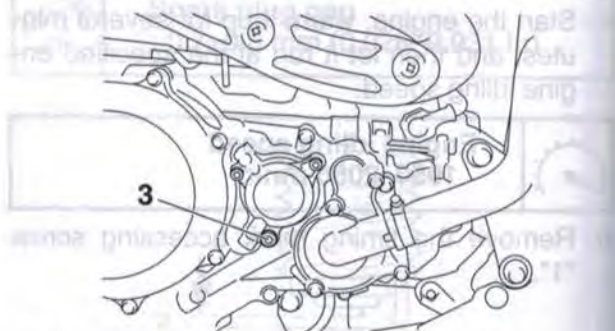
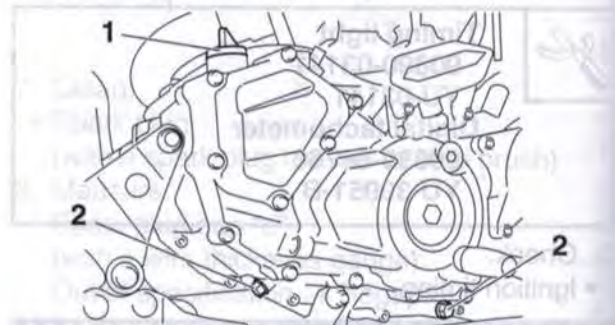
**NOTICE**

Make sure that the engine oil tank filler cap is securely tightened; otherwise, oil may seep out when the engine is running.

EAS20610

**CHANGING THE ENGINE OIL**

- Start the engine, warm it up for several minutes, and then turn it off.
- Remove:
  - Engine skid plate
 Refer to "GENERAL CHASSIS" on page 4-1.
- Place a container under the engine oil drain bolt.
- Remove:
  - Engine oil tank filler cap "1"
  - Engine oil drain bolts "2" (along with the gasket)
  - Oil filter element drain bolt "3"

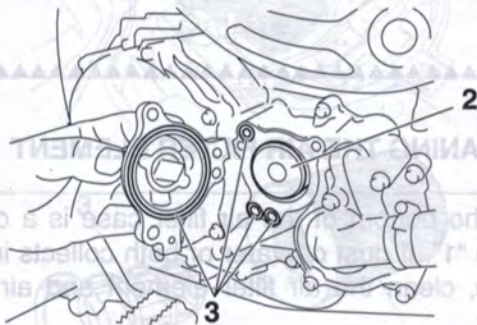
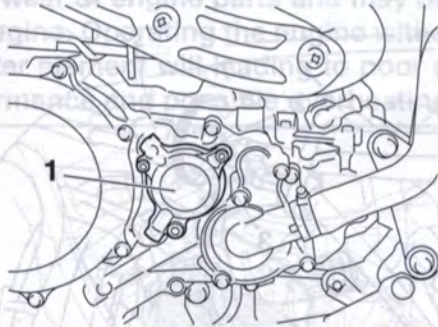


- Drain:
  - Engine oil

(completely from the oil tank and the crankcase)

6. If the oil filter element is also to be replaced, perform the following procedure.

- a. Remove the oil filter element cover "1" and oil filter element "2".  
b. Install new O-rings "3".



- c. Install the new oil filter element and the oil filter element cover.



**Oil filter element cover bolt**  
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

7. Install:

- Engine oil drain bolts (along with the new gasket)
- Oil filter element drain bolt



**Engine oil drain bolt**  
20 Nm (2.0 m·kgf, 14 ft·lbf)  
**Oil filter element drain bolt**  
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

8. Fill:

- Crankcase (with the specified amount of the recommended engine oil)



**Engine oil quantity**  
Without oil filter element replacement

1.40 L (1.48 US qt, 1.23 Imp.qt)

With oil filter element replacement

1.45 L (1.53 US qt, 1.28 Imp.qt)

**Total amount**

1.65 L (1.74 US qt, 1.45 Imp.qt)

9. Install:

- Engine oil tank filler cap

10. Start the engine, warm it up for several minutes, and then turn it off.

11. Check:

- Engine (for engine oil leaks)

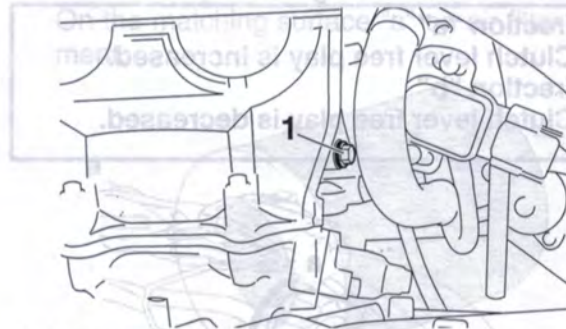
12. Check:

- Engine oil level  
Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-9.

13. Check:

- Engine oil pressure

- a. Slightly loosen the oil checking bolt "1".



- b. Start the engine and keep it idling until engine oil starts to seep from the oil checking bolt. If no engine oil comes out after one minute, turn the engine off so that it will not seize.

- c. Check the engine oil passages, the oil filter element and the oil pump for damage or leakage. Refer to "OIL PUMP" on page 5-41.

- d. Start the engine after solving the problem(s) and check the engine oil pressure again.

- e. Tighten the oil checking bolt to specification.



**Oil checking bolt**  
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

14. Install:

- Engine skid plate  
Refer to "GENERAL CHASSIS" on page 4-1.