

ENGINE LUBRICATION AND COOLING SYSTEMS

SECTION LC

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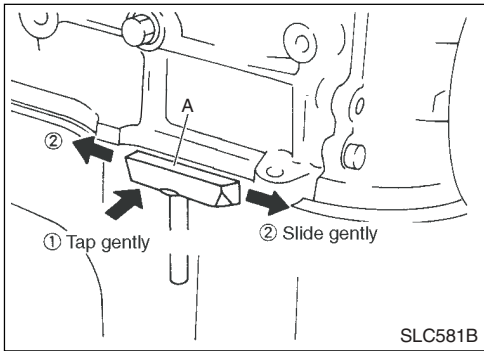
ENGINE LUBRICATION SYSTEM

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### Precautions



### Liquid Gasket Application

#### REMOVING THE APPLIED LIQUID GASKET

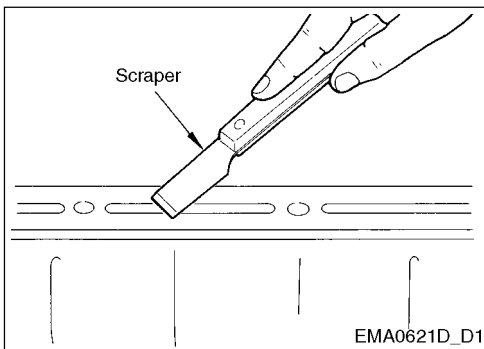
- After removing the bolts and nuts, remove the liquid gasket using a seal cutter (A: KV10111100).

#### CAUTION:

- **Be careful not to damage the mating surfaces.**
- Use a plastic hammer to tap gently for locations hard to use the seal cutter during removal.

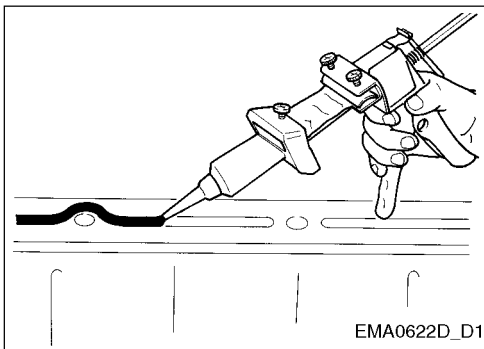
#### CAUTION:

- **When it is necessary to use the minus (-) screwdriver, be careful not to damage the mating surfaces.**



#### LIQUID GASKET APPLICATION PROCEDURE

1. Remove the liquid gasket on the applied surfaces and mating surfaces with a scraper.
  - Completely remove all liquid gasket at grooves, bolts and bolt hole threads.
2. Clean these surfaces with white gasoline and completely remove all moisture, oil and other foreign particles.
3. Apply genuine liquid gasket with the tube pressure (commercial tool).
4. Apply the liquid gasket at designated locations with correct lengths.
  - Apply the liquid gasket at the surfaces grooves.
  - Apply the inner side of the bolt hole.
  - Assemble within 5 minutes from liquid gasket application.
  - Wipe out the stained liquid gasket.
  - Do not tighten the bolts temporarily after installation.
  - Wait at least 30 minutes before refilling engine oil and coolant.

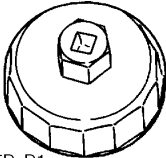


#### CAUTION:

- **If instructed in this Manual, follow the instructions.**

Preparation

Commercial Service Tool

| Item              | Description                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Oil filter wrench | <div><p>ZZA1085D_D1</p></div> Removing oil filter |

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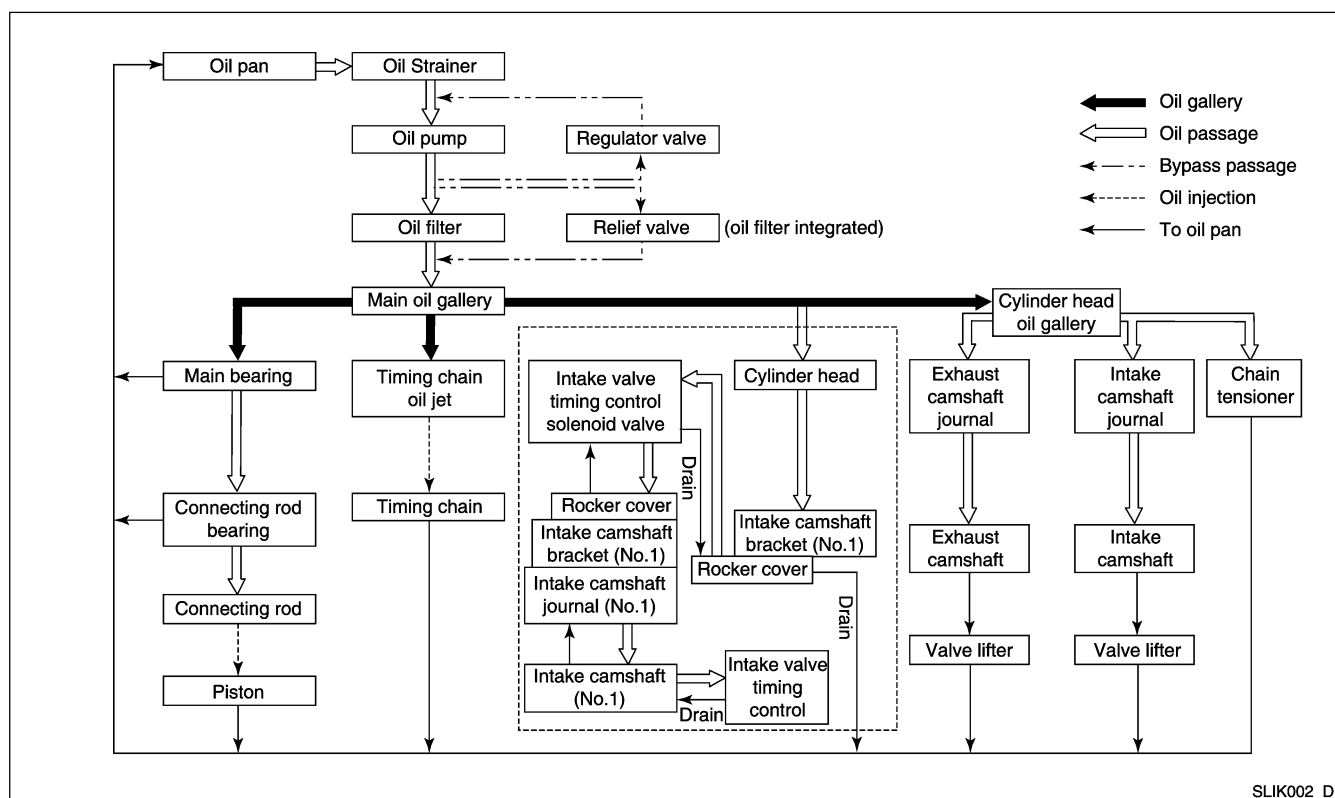
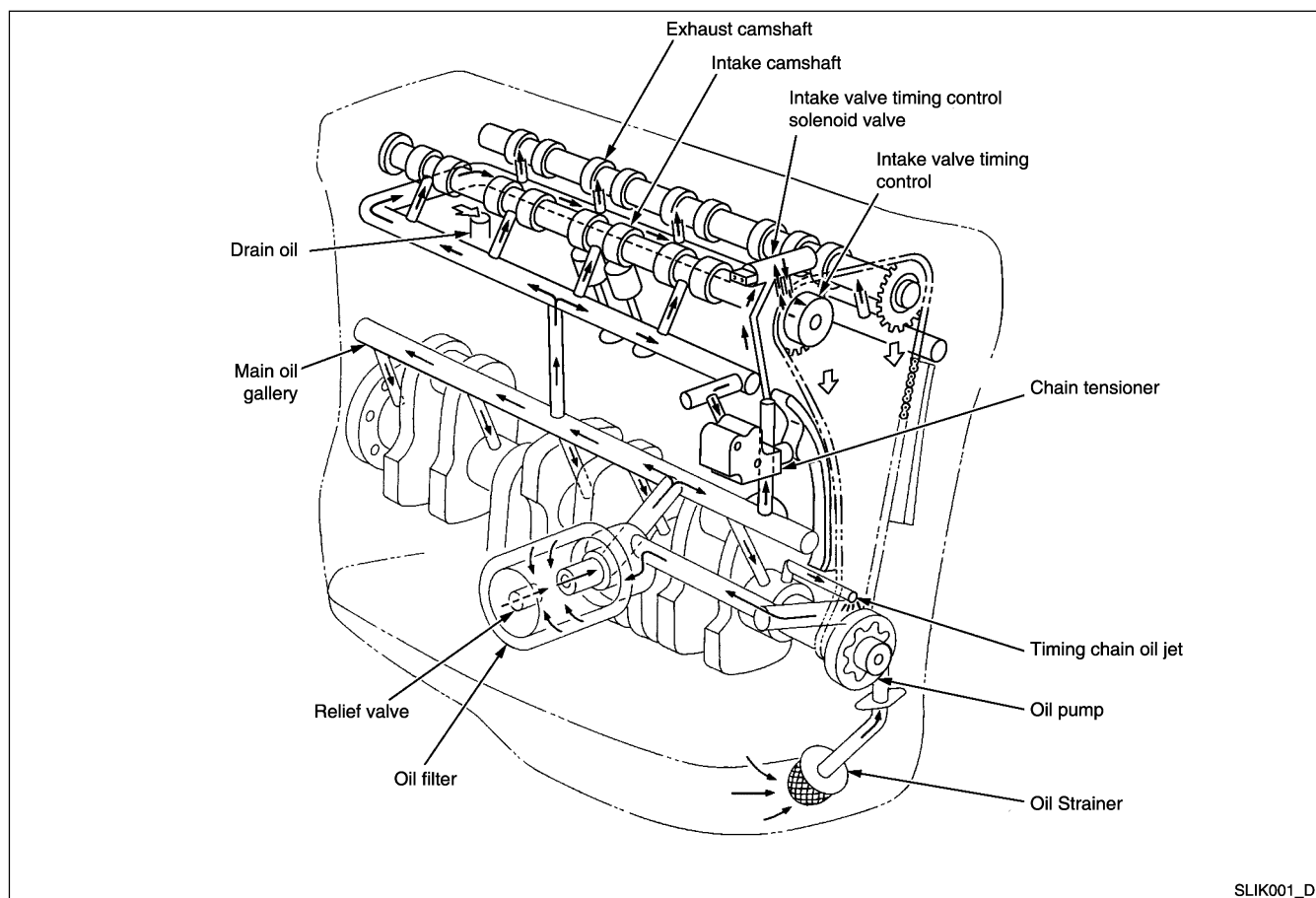
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## Lubrication Circuit



## Engine Lubrication System

## Standard Value • Limit Value

|                                                                                |                                       |                                                                                              |
|--------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------|
| Engine oil pressure<br>MPa (kgf/cm <sup>2</sup> )<br>*Oil temperature at 80°C. | When idling<br>2,000 rpm<br>6,000 rpm | Approx. more than 0.07 (0.7)<br>Approx. more than 0.28 (2.9)<br>Approx. more than 0.42 (4.3) |
| Engine oil change<br>(with SH, SJ or SL grades)                                |                                       | Refer to MA section.                                                                         |
| Engine oil capacity (L)                                                        | H level                               | 2.7                                                                                          |
|                                                                                | L level                               | 2.0                                                                                          |
|                                                                                | Without oil filter                    | Approx. 2.5                                                                                  |
|                                                                                | With oil filter                       | Approx. 2.7                                                                                  |
|                                                                                | Whole capacity (factory capacity)     | 3.1                                                                                          |
| Oil filter replacement                                                         |                                       | Refer to MA section.                                                                         |
| Oil pump clearances (mm)                                                       |                                       | 0.114 ~ 0.200                                                                                |
| Between the outer rotor and front cover                                        |                                       | Less than 0.180                                                                              |
| Between the inner rotor and outer rotor tip                                    |                                       | 0.030 ~ 0.070                                                                                |
| Between the inner rotor and front cover                                        |                                       | 0.030 ~ 0.090                                                                                |
| Between the outer rotor and front cover                                        |                                       | 0.045 ~ 0.091                                                                                |
| Between the inner rotor and front cover inner                                  |                                       | 0.040 ~ 0.097                                                                                |
| Regulator valve                                                                |                                       |                                                                                              |

## Tightening Torque

Unit: N•m (kgf-m)

|                     |                           |
|---------------------|---------------------------|
| Oil pressure switch | 12.3 - 17.2 (1.25 - 1.75) |
| Oil pump cover      | 5.9 - 7.8 (0.60 - 0.80)   |
| Oil strainer        | 6.3 - 8.3 (0.60 - 0.85)   |
| Regulator           | 39.2 - 58.8 (4.0 - 6.0)   |

