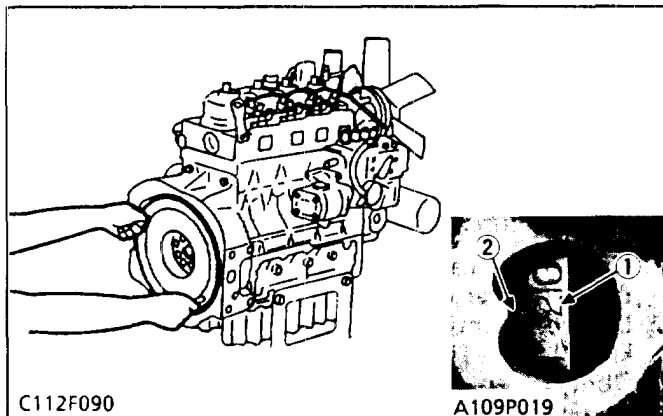


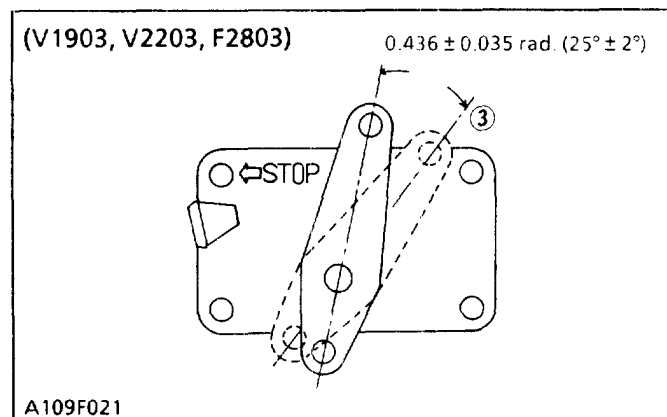
# 4 FUEL SYSTEM

## CHECKING AND ADJUSTING

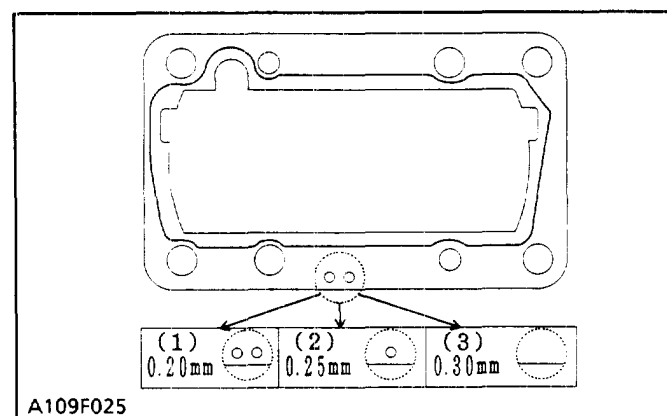
### [1] INJECTION PUMP



- (1) Timing Mark  
(2) Projection



- (3) Stop Lever in Free Position



- (5) 2-holes : 0.20 mm  
(6) 1-hole : 0.25 mm  
(7) Without hole : 0.30 mm

#### Injection Timing

1. Remove the injection pipes.
2. Set the speed control lever to maximum fuel discharge position.

#### NOTE

- The F2803, V2203 and V1903 pumps have a displacement angle. In adjusting the injection timing, pull the stop lever from its free position by  $0.436 \pm 0.035 \text{ rad. } (25^\circ \pm 2^\circ)$  toward the stop position.
- 3. Turn the flywheel counterclockwise (facing the flywheel) until the fuel fills up to the hole of the delivery valve holder for 1st cylinder.
- 4. Turn the flywheel further and stop turning when the fuel begins to flow over, to get the present injection timing.
- 5. (The flywheel has mark 1TC and four lines indicating every  $0.087 \text{ rad. } (5^\circ)$  of crank angle from  $0.175 \text{ rad. } (10^\circ)$  to  $0.436 \text{ rad. } (25^\circ)$  before mark 1TC) Calculate the angle which the projection of the window points out. If the calculation differs from specified injection timing, add or remove the shim to adjust.

#### (Injection Timing)

- D1403 / D1703 :  $0.14 \text{ to } 0.27 \text{ rad.}$   
 V1903 / V2203 :  $(17^\circ \text{ to } 19^\circ) \text{ B.T.D.C.}$   
 F2803 :  $0.314 \text{ to } 0.349 \text{ rad. } (18^\circ \text{ to } 20^\circ) \text{ B.T.D.C.}$

#### NOTE

(Engine serial number : D1403-12211, D1703-4253, V1903-1562, V2203-60896, F2803-105567 or lower)

- Shims are available in thickness of 0.15 mm, 0.30 mm. Combine these shims for adjustments.
- Addition or reduction of shim (0.15 mm, 0.0059 in.) delays or advances the injection timing by approx.  $0.026 \text{ rad } (1.5^\circ)$ .
- After adjusting the injection timing, apply liquid-type gasket (Three Bond 1215 or its equivalent) to both sides of the injection pump shim before reassembling.

(Engine serial number : D1403-12212, D1703-4254, V1903-1563, V2203-60897, F2803-105568 or higher)

- The sealant is applied to both sides of the soft metal gasket shim. The liquid gasket is not required for assembling.
- Shims are available in thickness of 0.20 mm, 0.25 mm and 0.30 mm. Combine these shims for adjustments.
- Addition or reduction of shim (0.05 mm, 0.0020 in.) delays or advances the injection timing by approx.  $0.0087 \text{ rad } (0.5^\circ)$ .
- In disassembling and replacing, be sure to use the same number of new gasket shims with the same thickness.