

13. GEAR SHIFTING CONTROL

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13-1. Description

The movement of the gearshift lever is transmitted by the control shaft to the transmission case, and the three fork shafts are actuated selectively to shift the transmission.

Such component parts as the gear shift control lever housing, extension rod and guide plate are designed as suspended type so that the engine vibration propagated to the gear shift control lever is decreased.

- ① Gear shift control lever knob
- ② Gear shift control lever
- ③ Lever cover
- ④ Lever boot
- ⑤ Dust cover
- ⑥ Lever housing
- ⑦ Lever seat
- ⑧ Spring
- ⑨ Dust seal
- ⑩ Guide plate
- ⑪ Extension rod
- ⑫ Control shaft rear boot
- ⑬ Gear shift control shaft
- ⑭ Extension rod dust seal
- ⑮ Control shaft front bush
- ⑯ Control shaft rear bush

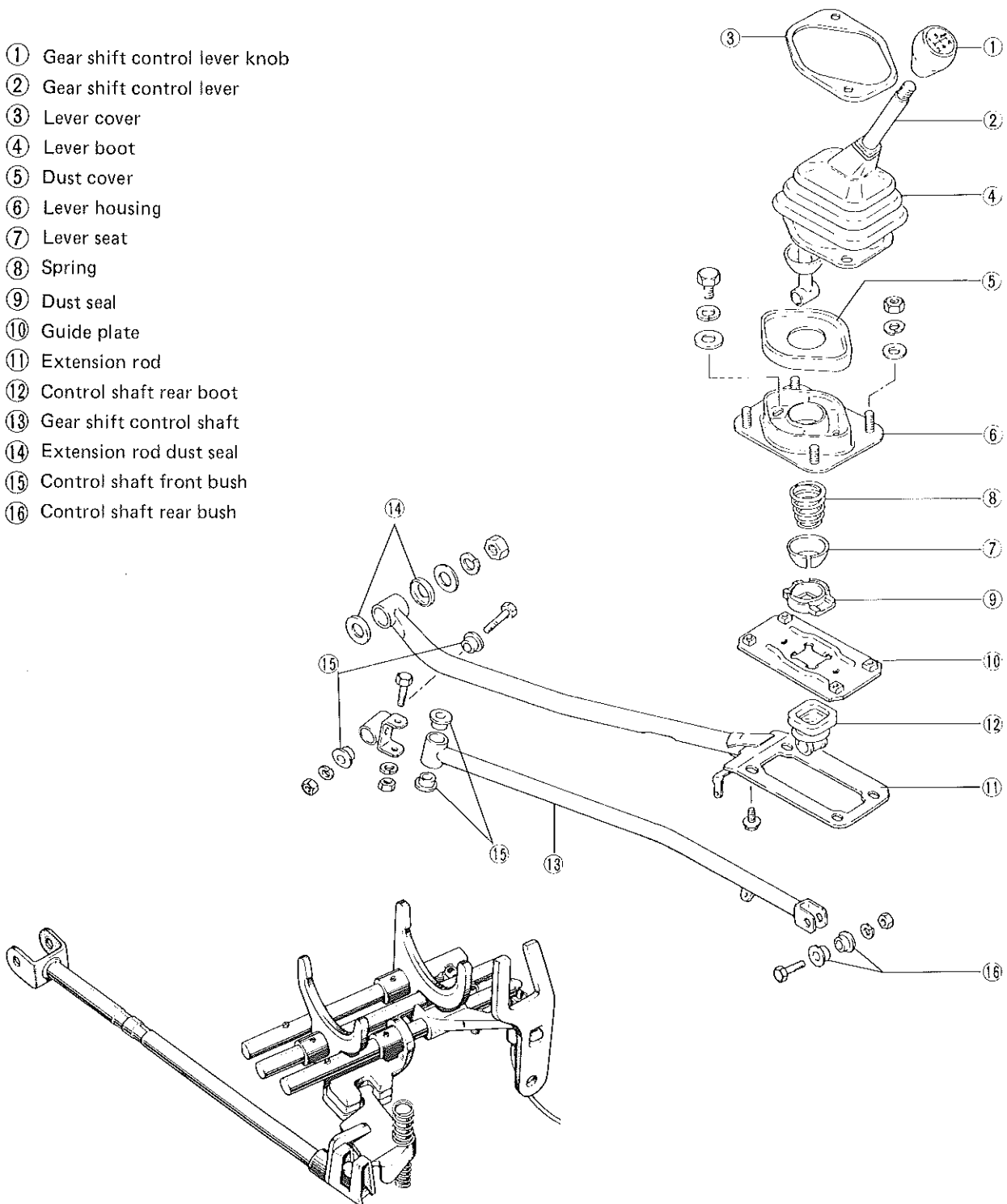


Fig. 13-1

13-2. Removal

Gearshift control lever

Remove the gearshift control lever according to the following procedure.

- 1) Remove the gearshift control lever housing nuts (4 pcs) and bolts (2 pcs).

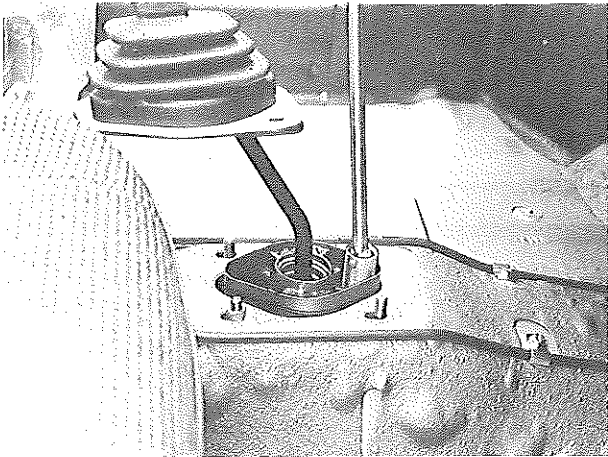


Fig. 13-2

- 2) Lift the front end of the machine by jacking, and support it on safety stands.
- 3) Remove the lever joint.
- 4) Remove the extension rod.

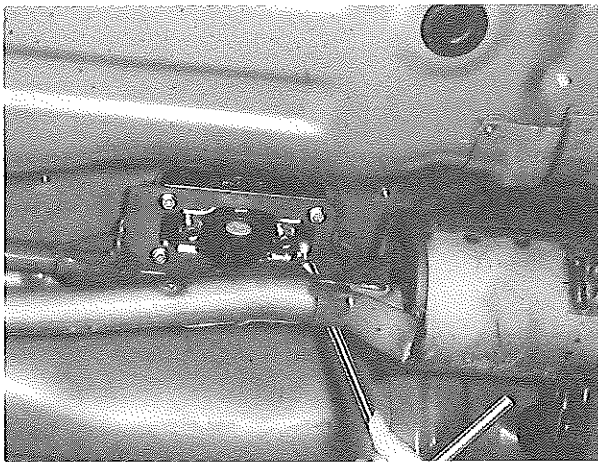


Fig. 13-3

- 5) Pull out the gearshift control lever downward.

Gearshift control shaft

To remove the control shaft, remove bolt ①. Connecting the gearshift control shaft and the gearshift shaft on the transmission side. Then remove the bolt ② from the control shaft.

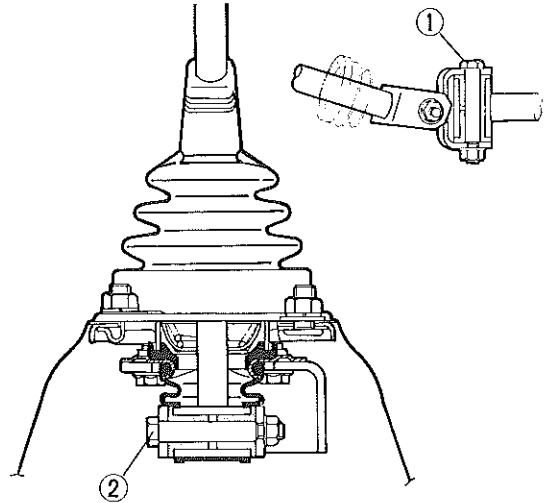


Fig. 13-4

13-3. Maintenance Services

Gearshift lever adjustment

[When each shift stroke is short]

(When gears are not in complete mesh)

Loosen gearshift control lever housing nuts ④ and guide plate bolts ⑤. Adjust the guide plate ③ by displacing it toward front and rear so that gearshift control lever ⑥ is brought in the middle of the guide plate and at the right angle.

NOTE:

Once guide plate ③ is positioned properly, tighten the guide plate bolts ⑤ and then housing nuts ④.

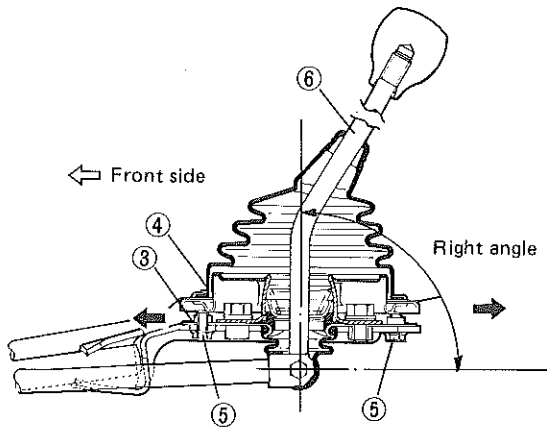


Fig. 13-5

Gearshift lever position inspection (select direction)

When the gearshift lever is brought into the neutral position, it should be in such a position along the lever select direction, as shown below, from where its direct shift in either "top" or "third" is possible.

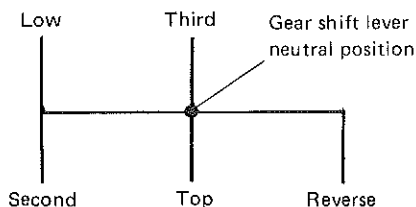


Fig. 13-6

If the gearshift lever is out of the above specified position, check the gearshift control shaft joint bushes for wear. If the bushes are free from wear and the gearshift lever is still out of the position where it should be, check the low speed select return spring ① or reverse select return spring ② for deterioration.

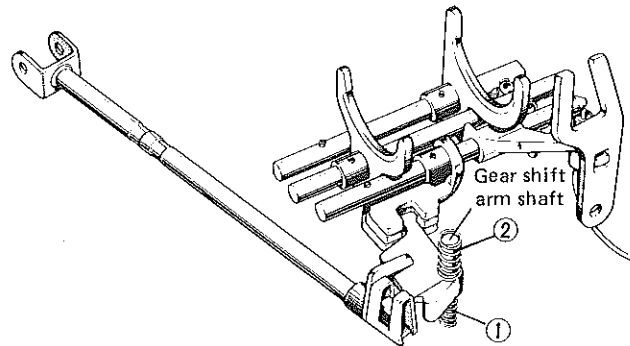


Fig. 13-7

Boot and dust seal inspection

Check the boot and dust seal for damage and replace if defective.

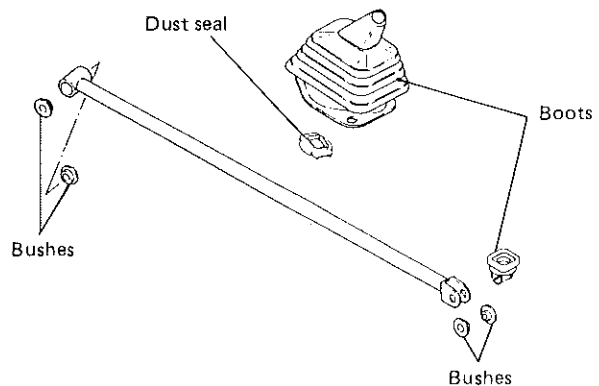


Fig. 13-8

Gearshift lever housing inspection

Check the rubber for damage or crack and replace if defective.

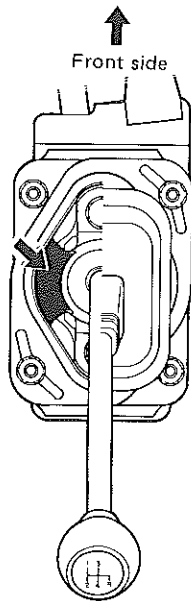


Fig. 13-9

13-4. Installation

Tightening torque

	To be tightened to:	N.m	kg-m (lb-ft)
①	Rear nut, gearshift control rod	8 ~ 10	0.8 ~ 1.0 (5.5 ~ 7.5)
②	Front nut, gearshift control rod	8 ~ 10	0.8 ~ 1.0 (5.5 ~ 7.5)
③	Bolt, control lever guide plate	8 ~ 10	0.8 ~ 1.0 (5.5 ~ 7.5)
④	Nut, control lever housing	15 ~ 20	1.5 ~ 2.0 (10.5 ~ 14.5)
⑤	Bolt, control lever housing	25 ~ 40	2.5 ~ 4.0 (18.0 ~ 29.0)
⑥	Extension rod nut	25 ~ 40	2.5 ~ 4.0 (18.0 ~ 29.0)

Points to be greased

- Ⓐ : Gearshift control shaft joint bushes
- Ⓑ : Between lever seat and lever dust seal

Gearshift control lever

- The control lever must be in the center of the guide plate and at the right angle.

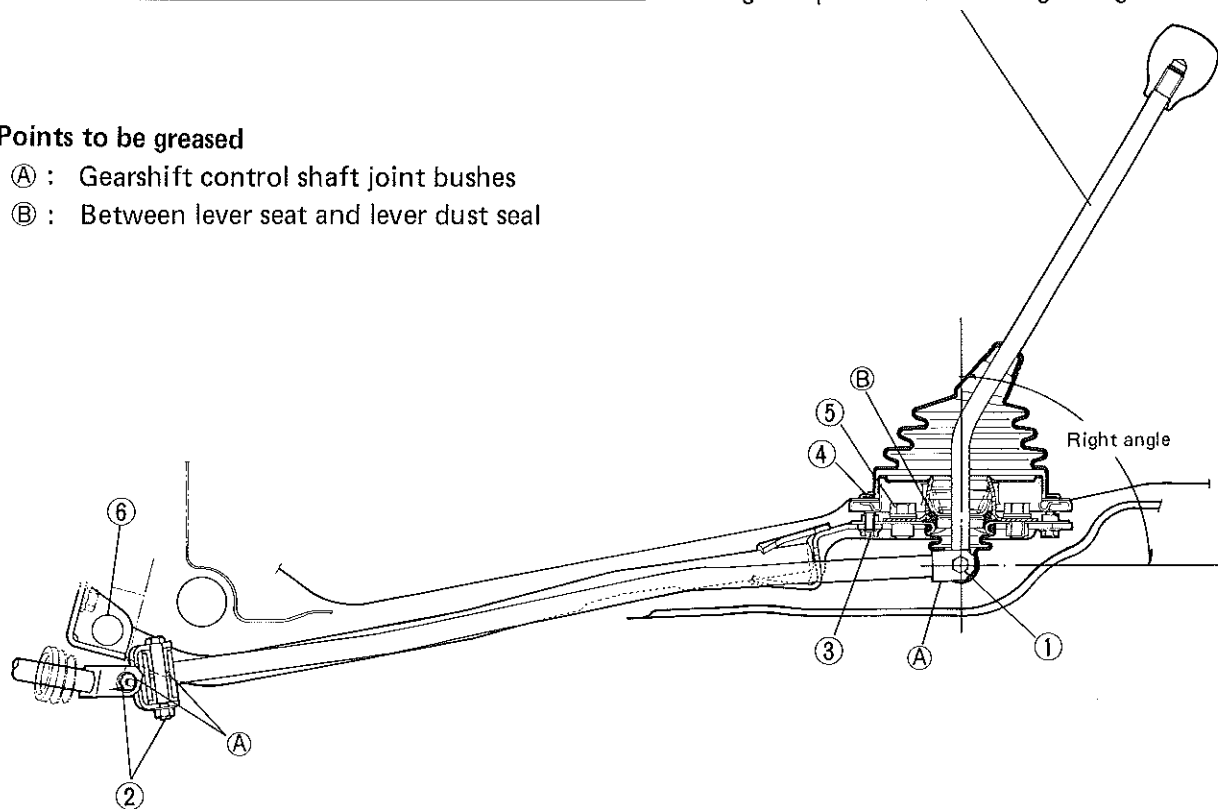


Fig. 13-10