

DAIHATSU

Rocky

CLUTCH

CLUTCH	CL- 2
CLUTCH RELEASE	CL- 3
CLUTCH PEDAL ADJUSTMENT	CL- 4
CLUTCH UNIT	CL- 5
TROUBLE SHOOTING	CL- 5
CLUTCH PEDAL	CL-12
CLUTCH PEDAL & RELEASE	
CABLE INSPECTION	CL-15

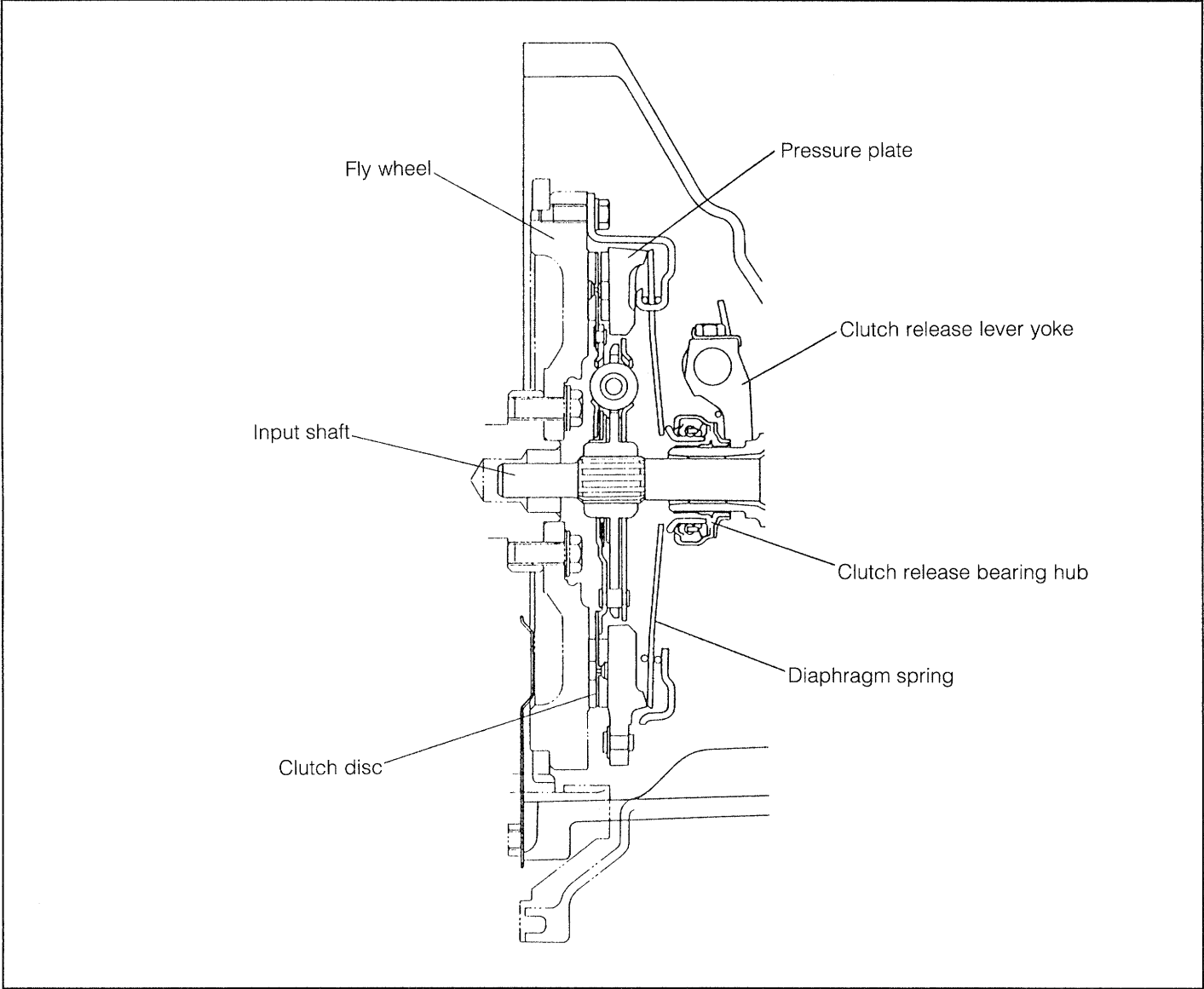
WRU90-CL001

CL

CLUTCH

CLUTCH

The clutch mechanism employs a dry, single-disc, diaphragm spring type. As for its operating method, it adopts a cable method which features positive operation and excellent serviceability.



WRU90-CL061

Clutch disc specifications

Clutch disc outer diameter		mm (inch)	200 (7.87)
Clutch disc inner diameter		mm (inch)	140 (5.51)
Thickness	Flywheel side	mm (inch)	3.5 (0.138)
	Pressure plate side	mm (inch)	3.5 (0.138)
Lining surface area		cm ² (inch ²)	160.14 (24.82)

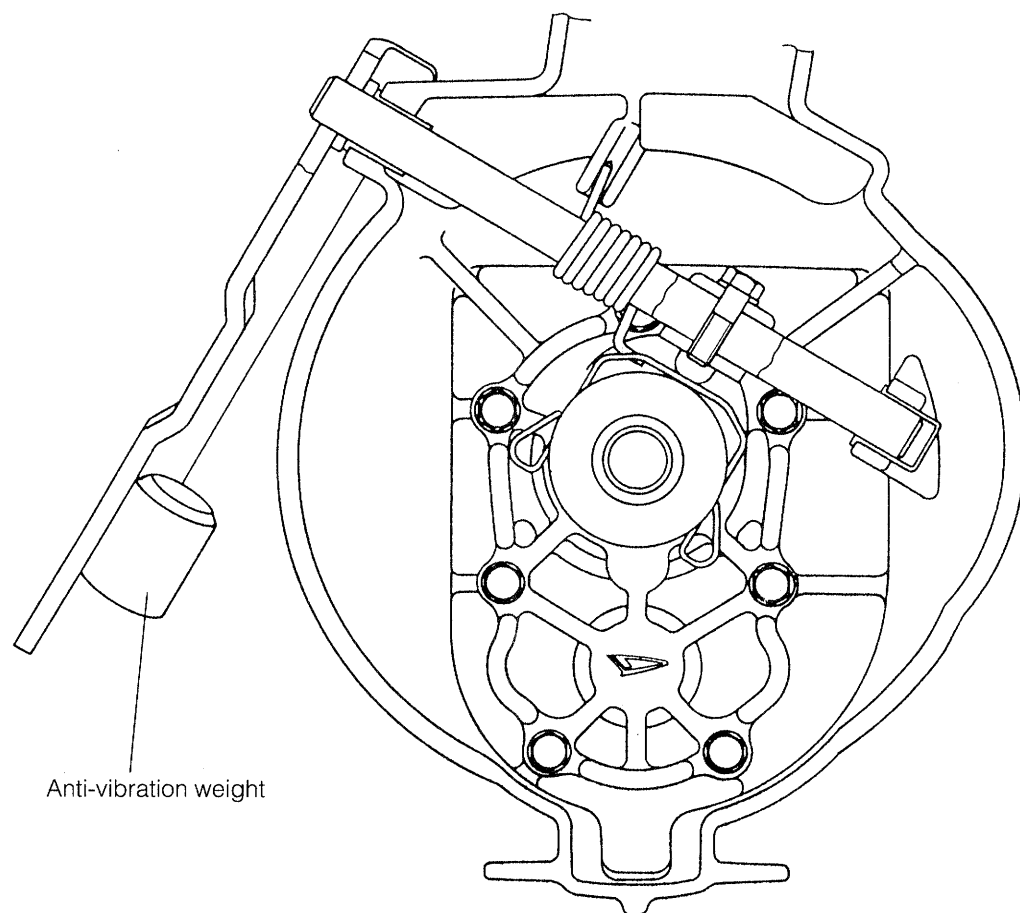
Clutch cover specifications

Clutch cover outer diameter	mm (inch)	253 (9.96)
Diaphragm spring load as assembled	kg (lb)	350 (772)

WRU90-CL061

CLUTCH RELEASE

The clutch release lever yoke is attached to the clutch release lever by means of a bolt. Furthermore, an anti-vibration weight is provided at the outer lever section



CLUTCH PEDAL ADJUSTMENT

1. Check the clutch pedal for installation height.
Pedal installation height

NOTE:

- Ensure that the clutch pedal installation height is 5.8 mm (0.228 inch) higher than the brake pedal surface. Adjust the clutch pedal installation height, as required. Then, adjust the clutch pedal installation height to the following specification.

(Distance between pedal pad upper surface's center and dash panel)

Clutch Pedal Installation Height:

221^{+6 mm}_{-2 mm} (8.700^{+0.236 inch}_{-0.0787 inch})

NOTE:

- The figure above indicates the dimension from the body metal section to the pedal. It is, therefore, necessary to roll up the carpet and floor mat prior to the measurement.

Tightening Torque:

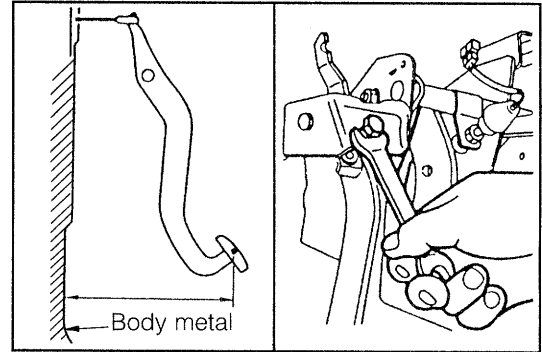
1.8 - 3.0 kg-m (13.0 - 21.7 ft-lb, 17.7 - 29.4 N-m)

2. Adjust the pedal installation height, as required.
(1) Slacken the lock nut. Turn the stopper bolt until the installation height conforms to the specification.
(2) Tighten the lock nut.
3. Clutch pedal free travel
(1) Depress the clutch pedal gradually until you feel a resistance from the clutch. Measure the depressing distance up to this point.

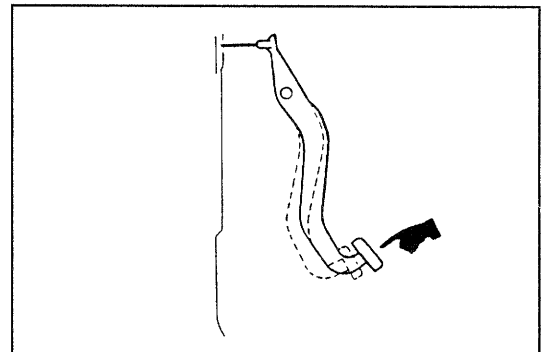
Specified Clutch Pedal Free Travel:

18 - 27 mm (0.709 - 1.063 inches)

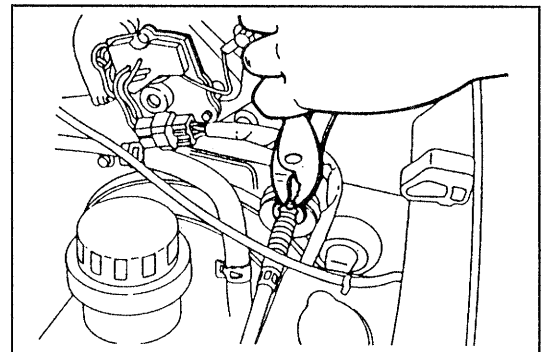
If the free travel of the clutch pedal fails to conform to the specification, adjust it to the specified value by changing the clip position of the clutch cable.



WRU90-CL063

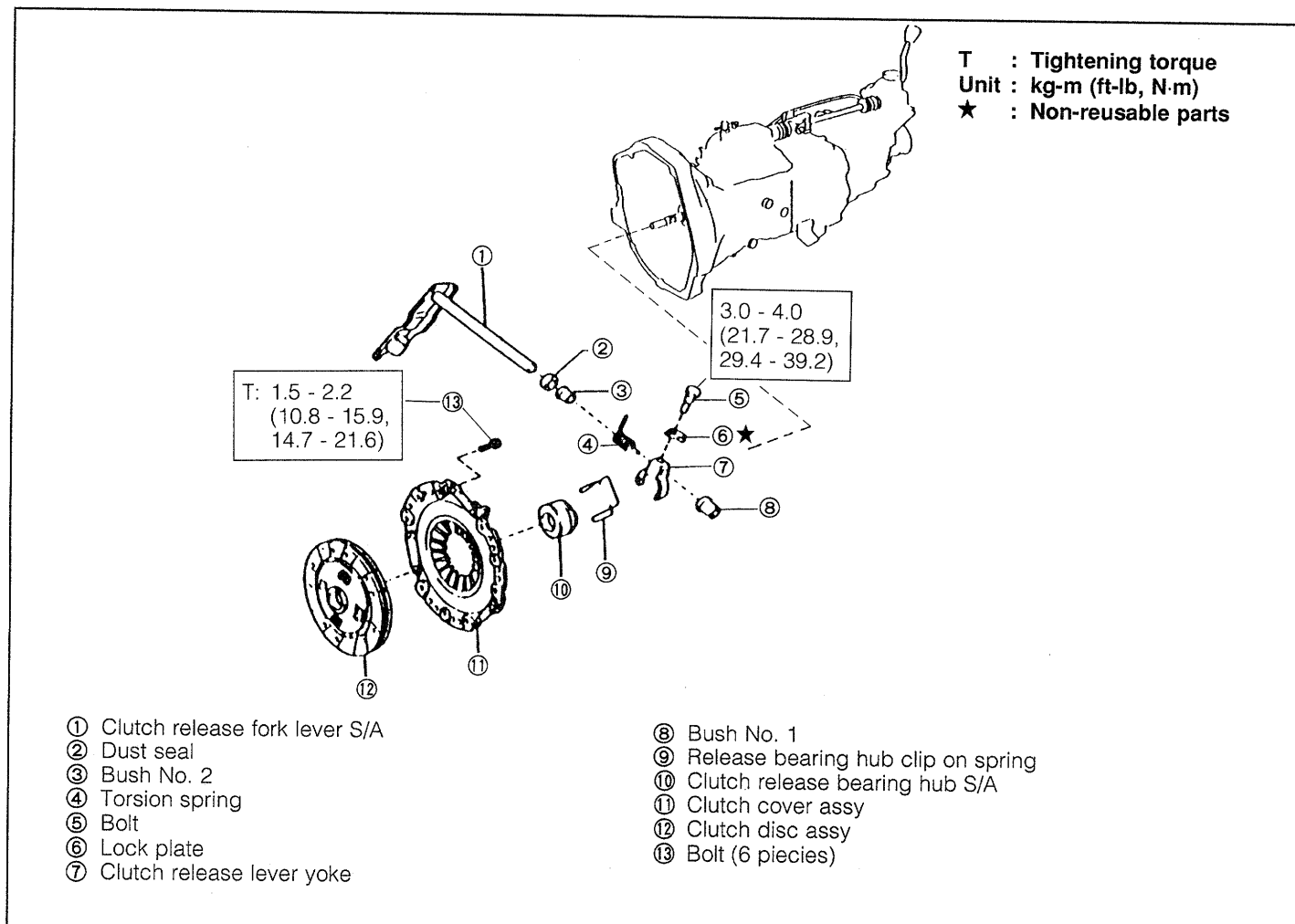


WRU90-CL064



WRU90-CL065

CLUTCH UNIT COMPONENTS



TROUBLE SHOOTING

WRU90-CL002

Symptom	Possible causes	Remedies
Dragging clutch	<ul style="list-style-type: none"> Excessive free travel or clutch pedal travel improperly adjusted Deformed clutch disc Clutch disc spline malfunctioning 	<ul style="list-style-type: none"> Adjust free travel or clutch pedal travel. Check clutch disc. Check clutch disc.
Clutch judder	<ul style="list-style-type: none"> Abnormal surface of clutch disc Excessive runout of clutch disc Unevenness of clutch cover diaphragm spring heights Faulty clutch release bearing 	<ul style="list-style-type: none"> Check clutch disc. Check clutch disc runout. Check clutch cover. Check clutch release bearing.
Slipping clutch	<ul style="list-style-type: none"> Worn clutch disc Excessively worn clutch pressure plate Faulty clutch cover diaphragm springs 	<ul style="list-style-type: none"> Check clutch disc. Check pressure plate. Check clutch cover.

WRU90-CL066

CLUTCH

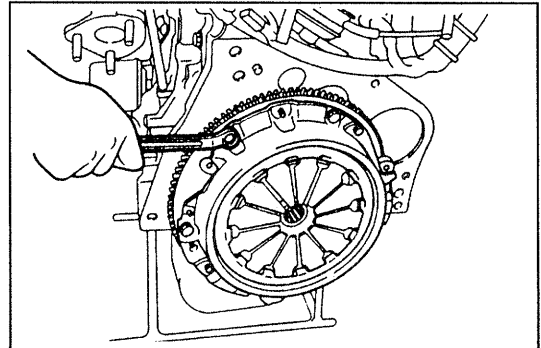
REMOVAL

1. Remove the transmission from the vehicle.

See page
MT-Section.

WRU90-CL003

2. Remove the clutch disc by removing the clutch cover with the six bolts.

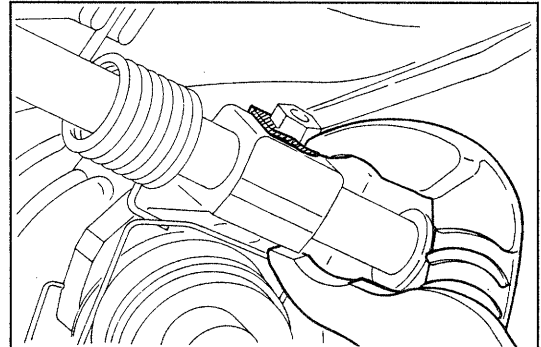


WRU90-CL004

3. Raise the lock plate by means of a common tool of water pump pliers.

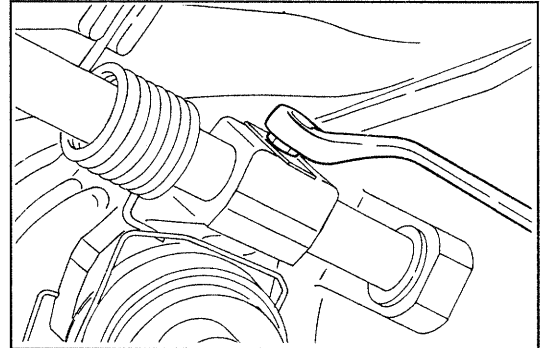
CAUTION:

- Never reuse the removed lock washer.



WRU92-CL073

4. Remove the bolt tightened to the clutch release lever.

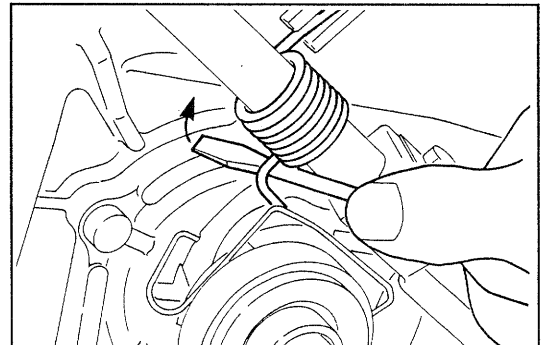


WRU90-CL006

5. Remove the torsion spring from the release lever yoke, using a standard screwdriver.

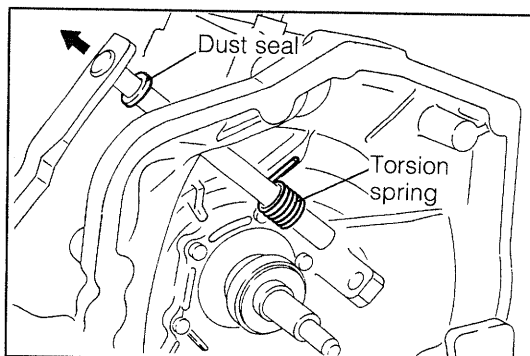
NOTE:

- Care must be exercised so that the torsion spring and standard screwdriver may not interfere with the release bearing hub clip when removing the torsion spring.



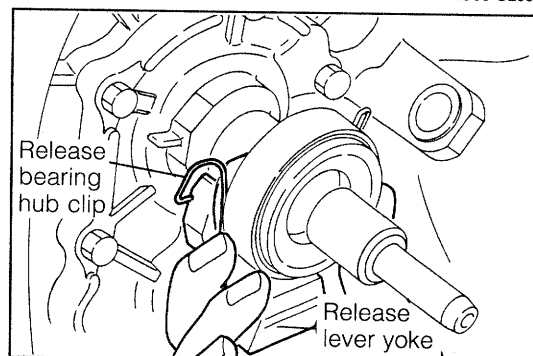
WRU90-CL007

6. While pulling out the clutch release lever subassembly, remove the torsion spring.
7. Remove the clutch release lever subassembly, with the dust seal attached, from the transmission case.



WRU90-CL008

8. Remove the release lever yoke, release bearing hub clip and clutch release bearing hub assembly as a set from the front bearing retainer.

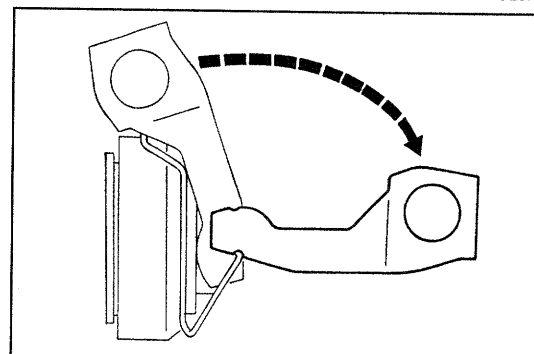


WRU92-CL074

9. Remove the release lever yoke from the release bearing hub clip by turning the release lever yoke clockwise.

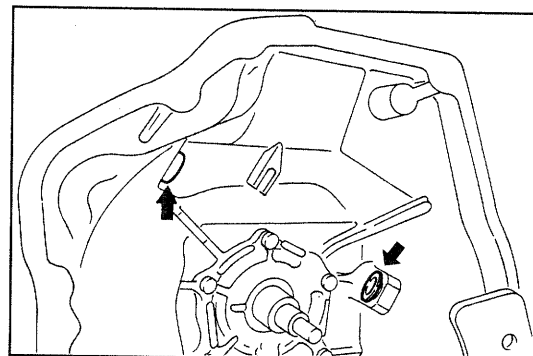
CAUTION:

- If the release bearing hub clip should be removed using a method other than the procedure above, it will cause the clip deformation.



WRU90-CL0010

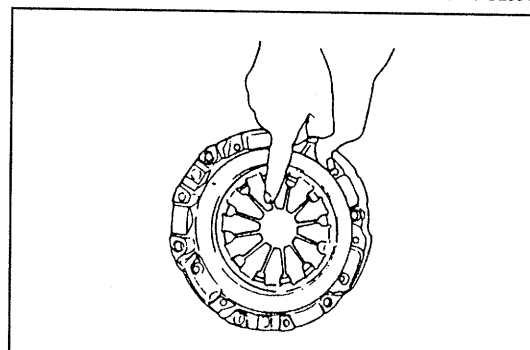
10. Remove the two bushes from the clutch housing.



WRU90-CL0011

INSPECTION

1. Check the diaphragm spring for damage or wear.

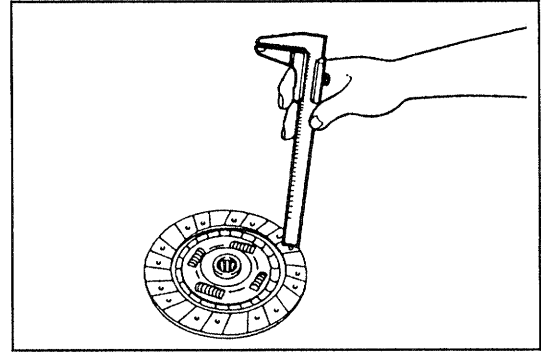


WRU90-CL0012

CLUTCH

2. Check of clutch disc for wear
Measure the height of the clutch disc from each rivet. Compare the lowest height against the allowable use limit below.

Allowable Use Limit: 0.3 mm (0.0118 inch)



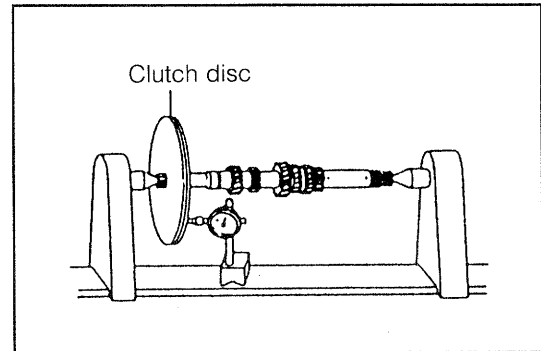
WRU90-CL067

3. Check of clutch disc for runout

Allowable Runout Limit

(Longitudinal Runout): 1.0 mm (0.0394 inch)

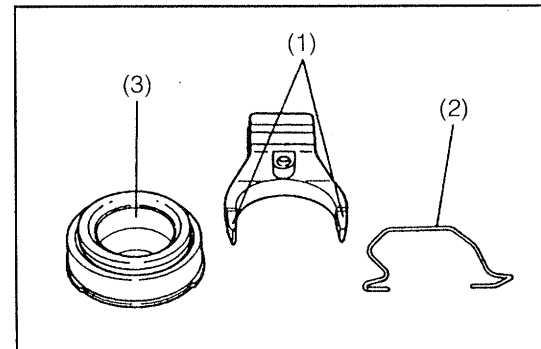
(Lateral Runout): 0.7 mm (0.0276 inch)



WRU90-CL013

4. Check the following parts.

- (1) Contact surface of release lever yoke with release bearing for wear
- (2) Release bearing hub clip for damage
- (3) Inner race of release bearing for wear

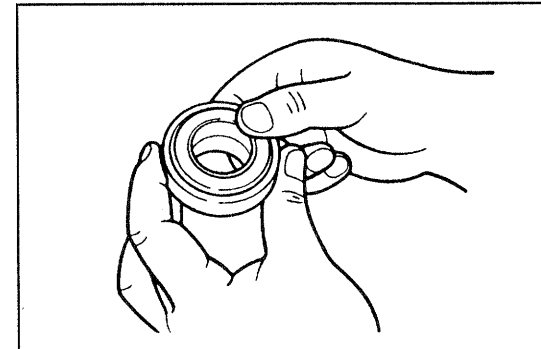


WRU90-CL068

5. Rotate the release bearing with your fingers. Ensure that the release bearing rotates smoothly without any binding.

NOTE:

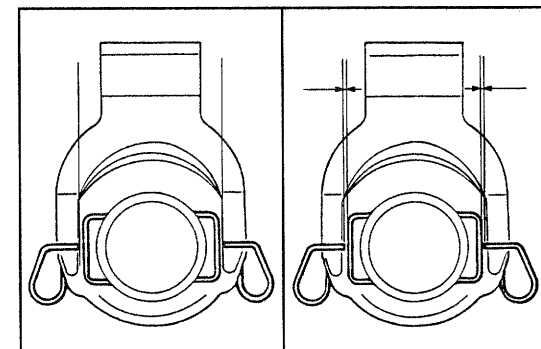
- Since the release bearing is packed with grease, never clean it, using oil.



WRU90-CL069

6. Assemble the release lever yoke, release bearing hub clip and clutch release bearing hub assembly as a set. (See page CL-10.)

- Visually inspect whether the release bearing hub clip comes at the end section of the release lever yoke within the range indicated in the right figure.



WRU90-CL014

7. Rotate the pilot bearing with your fingers. Prior to the installation of the clutch disc, ensure that the pilot bearing rotates smoothly without any binding.

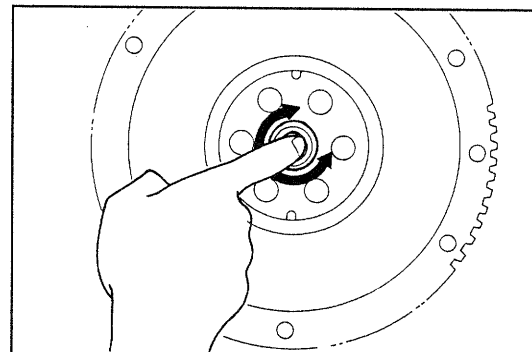
* As for the installation and removal of the pilot bearing, refer to the EM section.

INSTALLATION

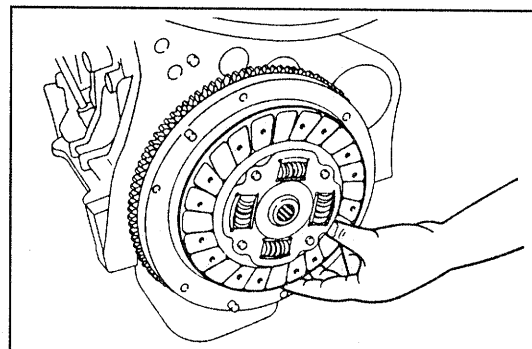
1. Install the clutch disc.

CAUTION:

- Do not allow oil grease to get on the rubbing face.



WRU90-CL015



WRU90-CL070

2. Install the clutch cover, using the following SST.

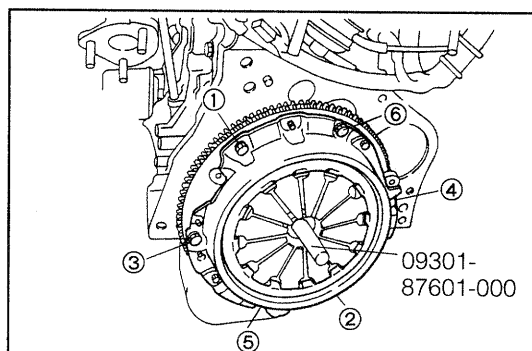
SST: 09301-87601-000

Tightening Torque:

1.5 - 2.2 kg-m (10.8 - 15.9 ft-lb, 14.7 - 21.6 N-m)

CAUTION:

- Be sure to tighten the bolts diagonally within the tightening torque range above so that the clutch cover may be tightened evenly.
(The right figure shows a typical example of tightening sequence.)



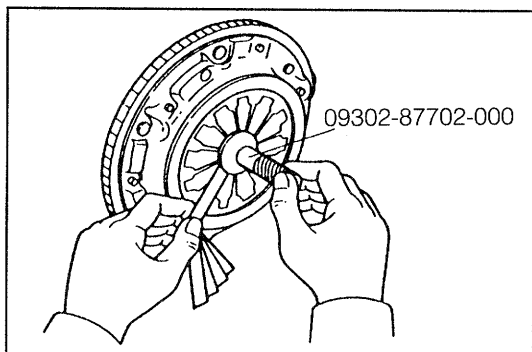
WRU90-CL016

3. Check the diaphragm spring fingers for unevenness in height, using the following SST.

Allowable Limit of Unevenness in Height:

0.8 mm (0.0315 inch)

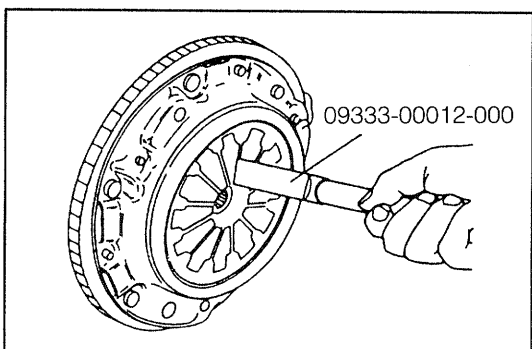
SST: 09302-87702-000



WRU90-CL071

4. If the inspection results reveal that the unevenness in height exceeds the allowable limit, correct the unevenness, using the following SST.

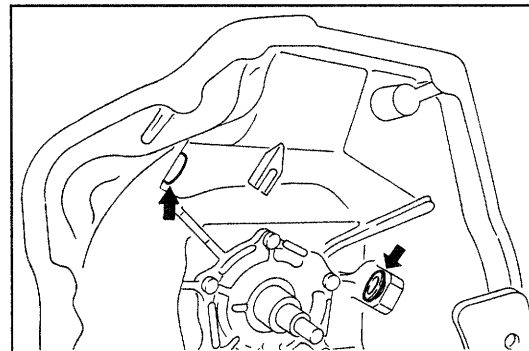
SST: 09333-00012-000



WRU90-CL072

CLUTCH

5. Apply Lithium base multi purpose grease to the entire periphery of the inner surface of the bush.
6. Insert the bush into the transmission case.

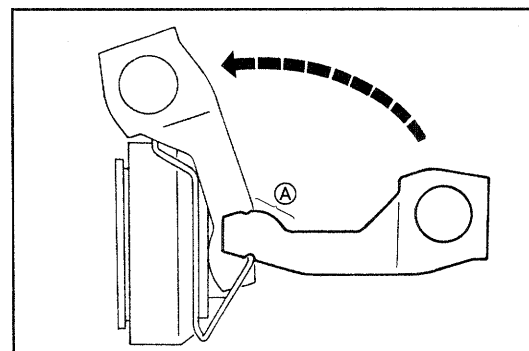


WRU90-CL017

7. Place the cut-out section of the release lever yoke on the release bearing hub clip. Turn the release lever yoke counterclockwise so as to set the clutch release bearing hub assembly, release bearing hub clip and release lever yoke.

NOTE:

- Prior to the setting, apply a suitable amount of Lithium base multi purpose grease (A section) to the clutch release bearing hub or to the sliding surface with the release lever yoke.

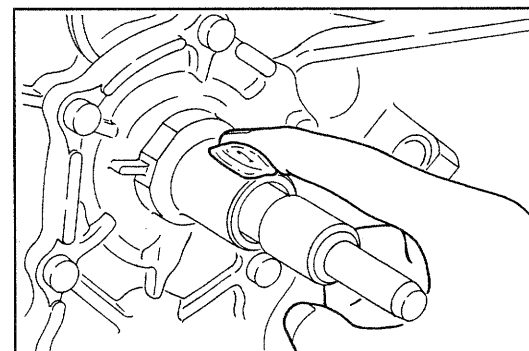


WRU90-CL018

8. Apply molybdenum disulphide lithium base grease to the surface of the front retainer bearing sliding section.

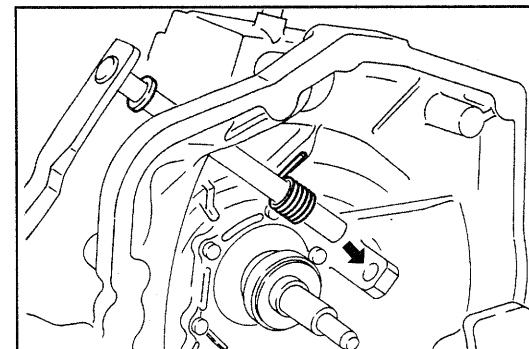
CAUTION:

- Excessive application of grease may cause clutch slippage.



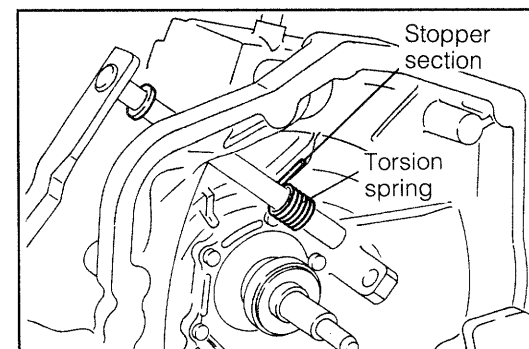
WRU90-CL019

9. Attach the dust seal to the clutch release lever subassembly.
10. Insert the clutch release lever subassembly into the transmission case.



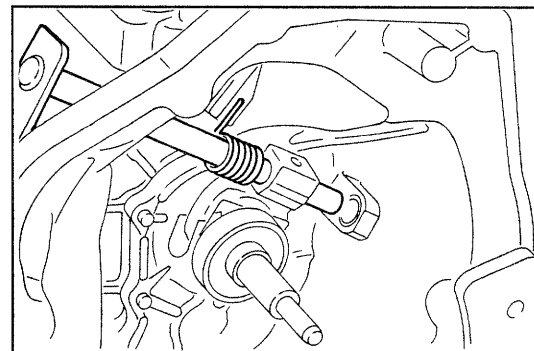
WRU90-CL020

11. Align the torsion spring with the stopper of the transmission case.



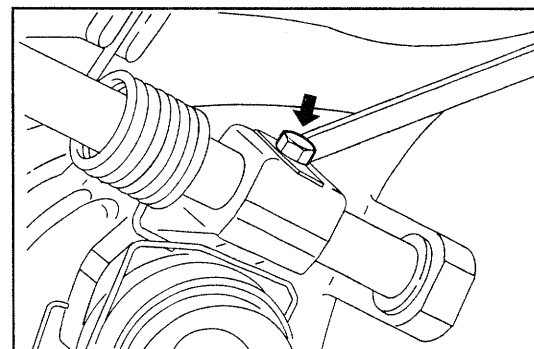
WRU90-CL021

12. Pass the clutch release lever subassembly through the release lever yoke provided with the release bearing hub clip and clutch release bearing hub assembly.



WRU90-CL022

13. Tighten the bolt. (Use the new lock plate.)
 Tightening Torque: 3.0 - 4.0 kg-m
 (21.7 - 28.9 ft-lb, 29.4 - 39.2 N-m)

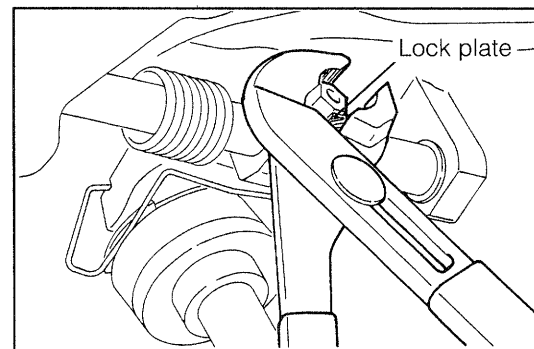


WRU90-CL023

14. After tightening the bolt, positively bend the lock plate along the side of the bolt, using a common tool of water pump pliers.

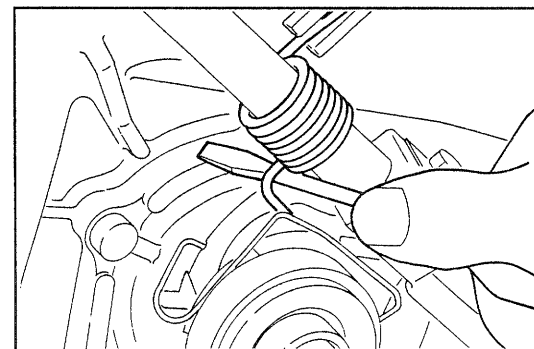
NOTE:

- Never use a chisel for this operation. If a chisel or the like should be used for bending the lock plate, the release bearing hub clip may be detached.



WRU90-CL024

15. Apply the torsion spring to the release lever yoke by means of a standard screwdriver.
16. Move the clutch release lever subassembly in a fore-&-aft direction by hand. Thus, visually inspect the clutch release bearing hub assembly, release bearing hub clip, release lever yoke and spring torsion operate as a set. Also, ensure that they move smoothly.



WRU90-CL025

17. Install the transmission on the vehicle.

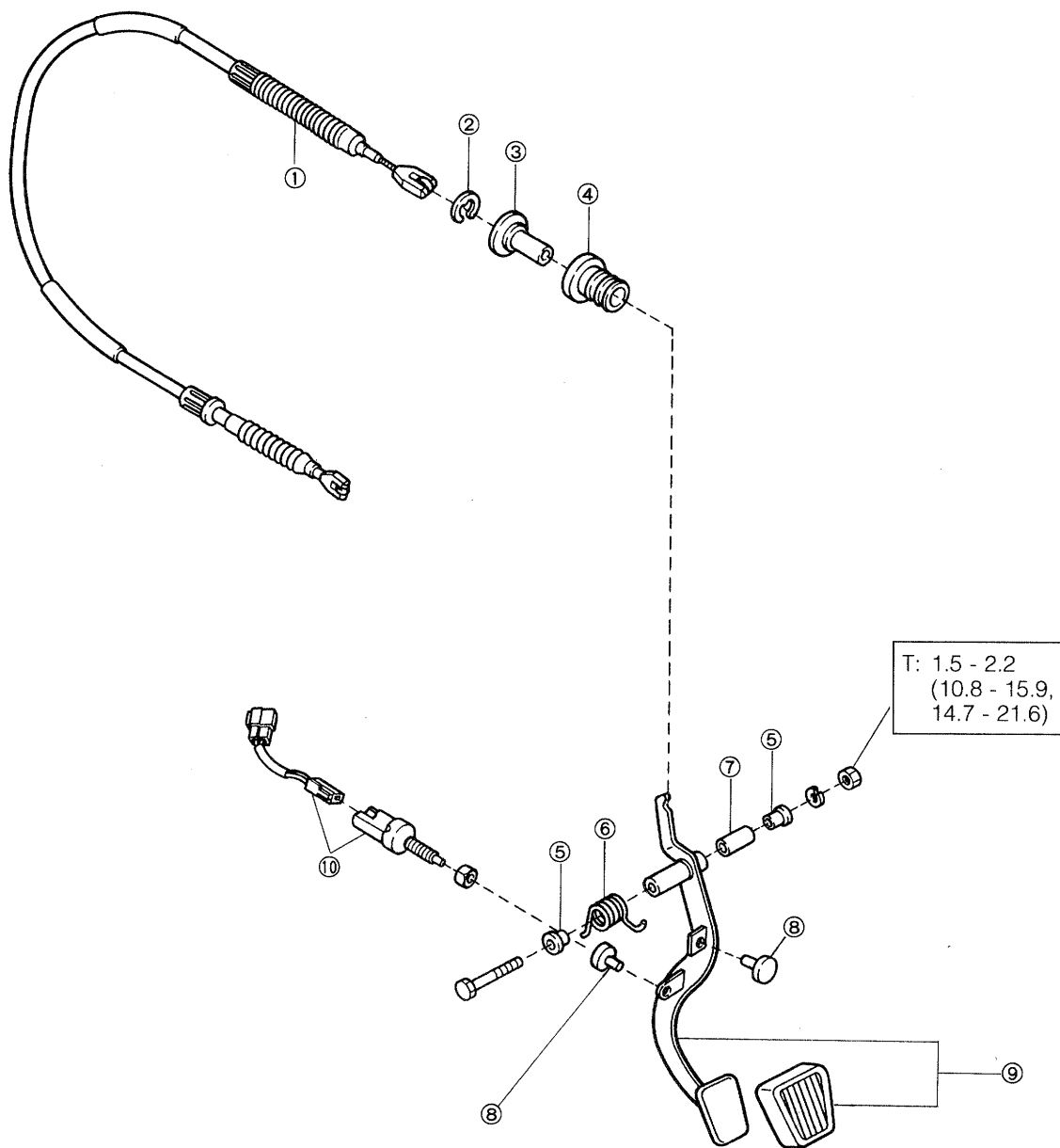
**See page
MT-Section.**

WRU90-CL026

CLUTCH

CLUTCH PEDAL COMPONENTS

T : Tightening torque
Unit : kg-m (ft-lb, N-m)

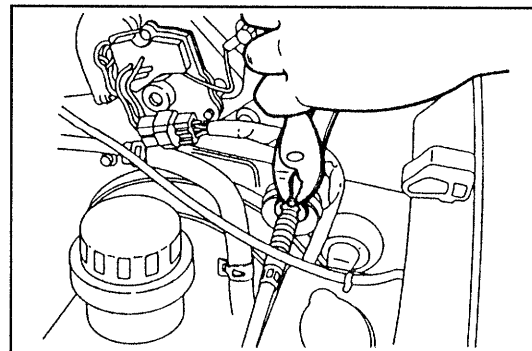


- ① Clutch release cable assy
- ② "E" Ring
- ③ Clutch cable inner holder
- ④ Bush
- ⑤ Bush

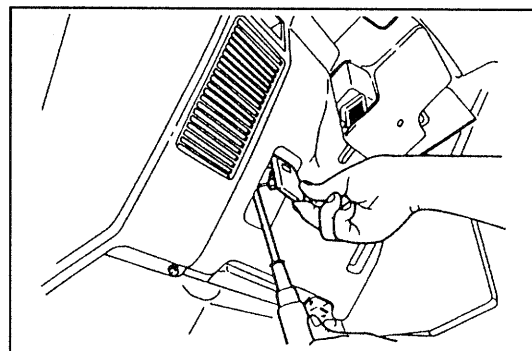
- ⑥ Spring
- ⑦ Spacer
- ⑧ Cushion
- ⑨ Clutch pedal S/A
- ⑩ Clutch switch

REMOVAL

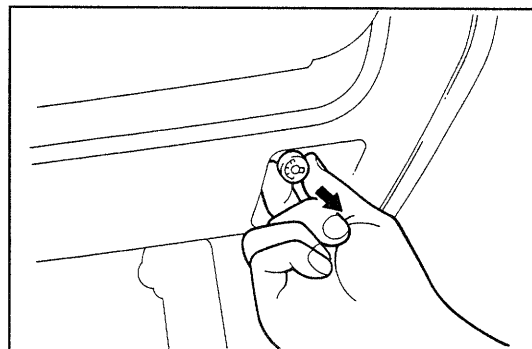
1. Remove the clutch cable and the clip of the clutch cable.
2. Remove the handle of the hood opener cable by removing the two screws.
3. Pull out the instrument light control switch knob toward you.
4. Remove the two screws at the instrument panel light control switch.
5. Remove the two screws located under the instrument panel finish lower panel.



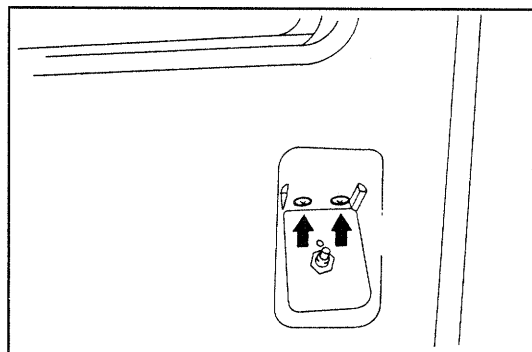
WRU90-CL028



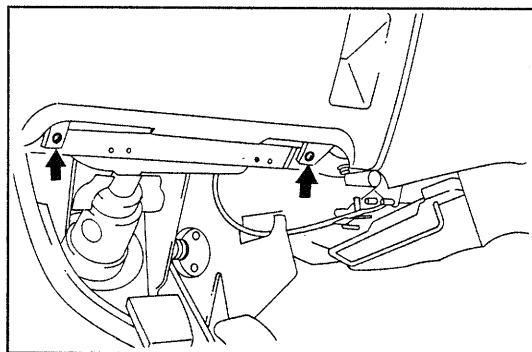
WRU90-CL029



WRU90-CL030



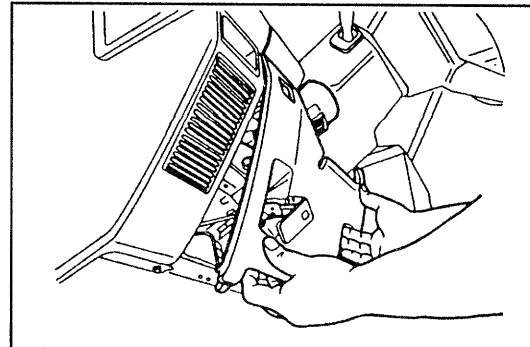
WRU90-CL031



WRU90-CL032

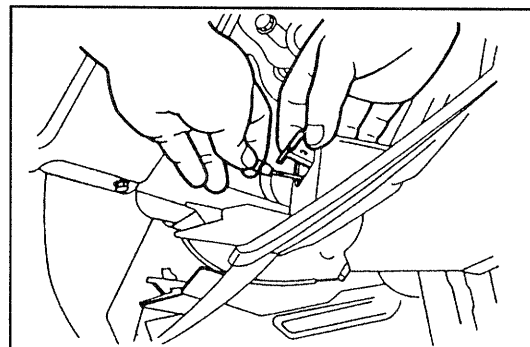
CLUTCH

6. Push up the instrument panel finish lower panel. Then, pull out them lightly toward you.



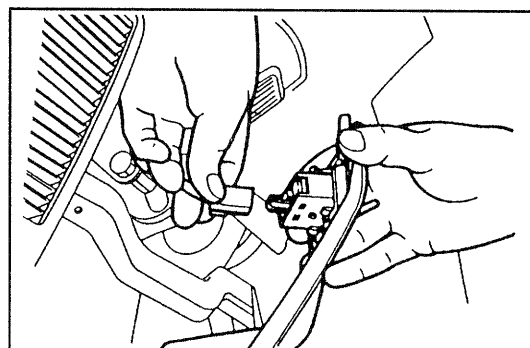
WRU90-CL033

7. Disconnect the hood opener cable.



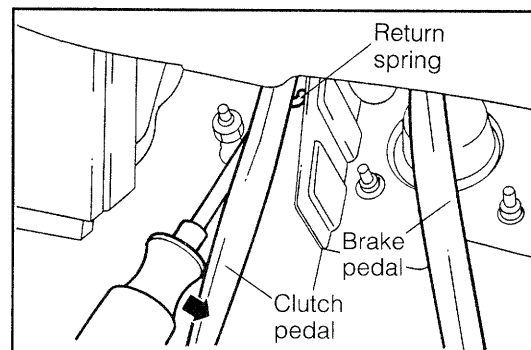
WRU90-CL034

8. Disconnect the coupler of the instrument panel light control switch.

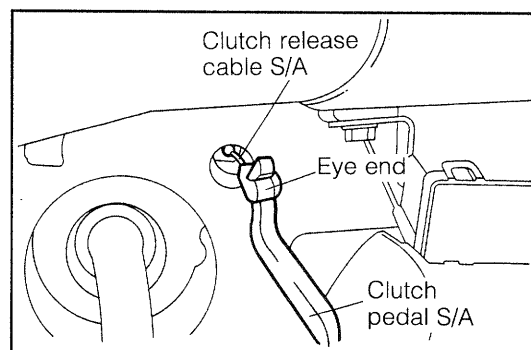


WRU90-CL035

9. Insert a standard screwdriver into between the return spring and the clutch pedal. Release the return spring which hooks at the clutch pedal by lowering the standard screwdriver.
10. At the lower side of the back of the instrument panel assembly, disconnect the eye end section of the clutch release cable subassembly from the forward end of the clutch pedal subassembly.



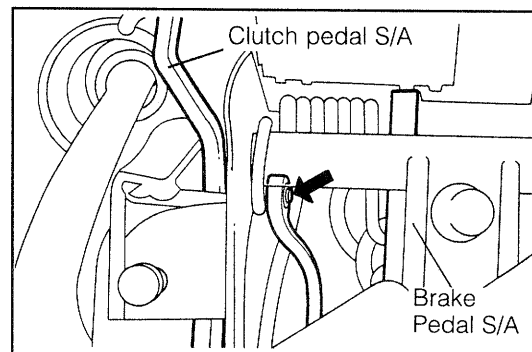
WRU90-CL036



WRU90-CL037

11. Removal of clutch pedal

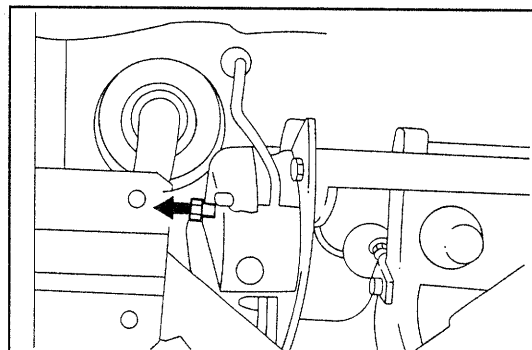
(1) Remove the clutch pedal shaft bolt by removing a nut.



WRU90-CL038

(2) Remove the clutch shaft bolt from the clutch pedal sub assembly.

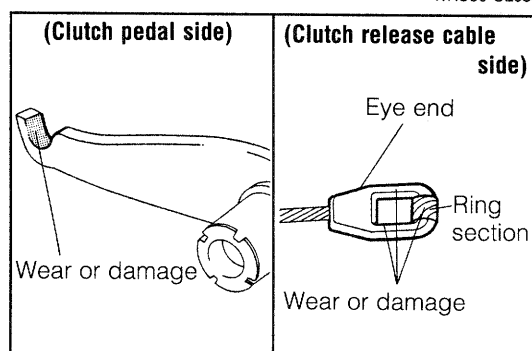
(3) Remove the clutch pedal sub assembly with the return spring installed.



WRU90-CL039

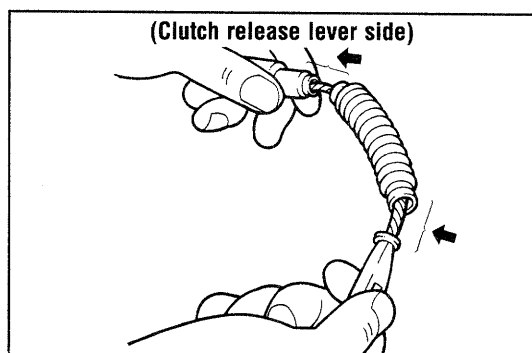
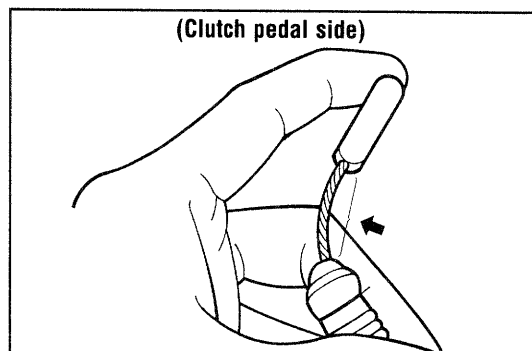
INSPECTION (Clutch pedal & Release cable)

1. Visually inspect the eye end's ring section of the clutch release cable assembly and clutch pedal assembly for wear or damage.



WRU90-CL040

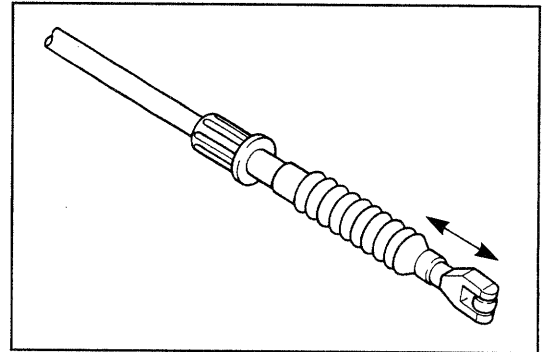
2. Visually inspect the inner cable at the clutch pedal and clutch release lever sides for damage, open wire and rust formation by bending the cable by hands.



WRU90-CL041

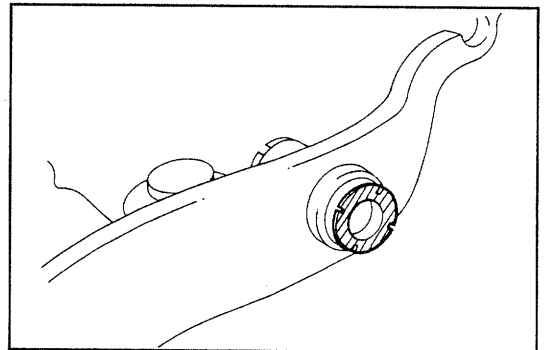
CLUTCH

3. Holding the eye end section of the inner cable by hands, move the inner cable in a fore-&-aft direction. Thus, check that the cable moves smoothly.



WRU90-CL042

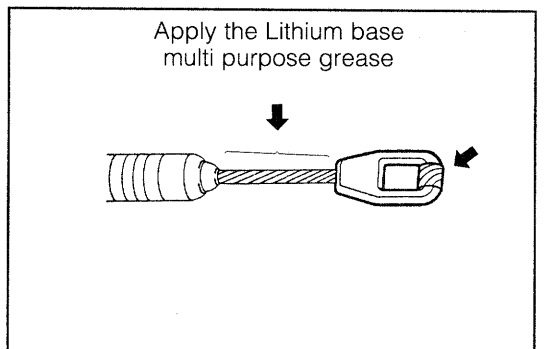
4. Visually inspect the bush for wear due to lack of grease.



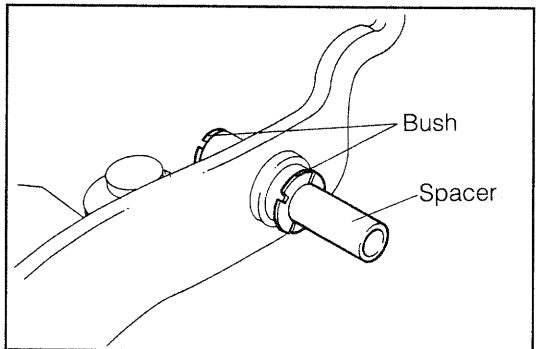
WRU90-CL043

INSTALLATION

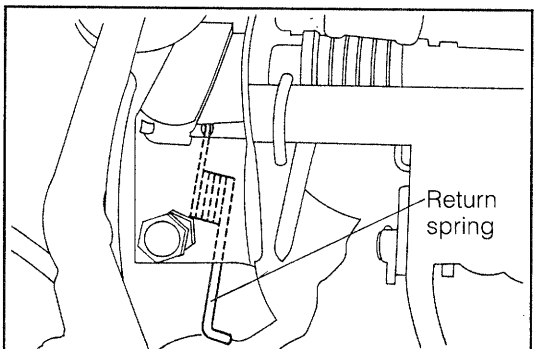
1. Apply Lithium base multi purpose grease to the eye end section of the clutch cable and inner cable.
2. Temporarily insert the clutch cable into the cable insertion hole.
3. After applying Lithium base multi purpose grease, install the two bushes and spacer to the clutch pedal subassembly.
4. Hook the return spring to the hook position of the pedal bracket.



WRU90-CL044

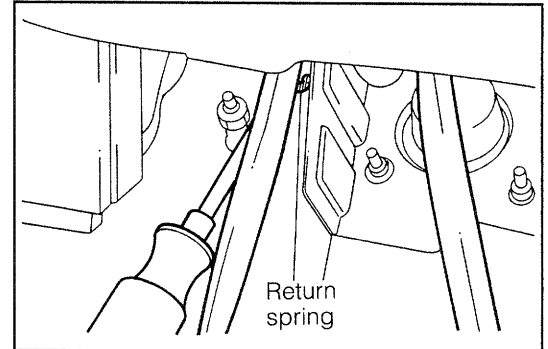


WRU90-CL045



WRU90-CL046

5. Install the clutch pedal subassembly to the return spring which has been hooked to the pedal bracket.



WRU90-CL047

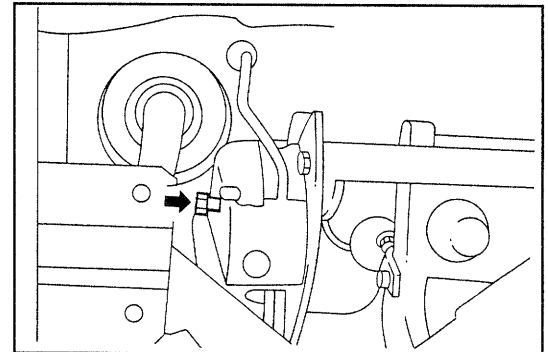
6. Insert the clutch pedal shaft bolt from the left side of the pedal bracket. Proceed to install and tighten the clutch pedal.

NOTE:

- Apply lithium base multi purpose grease to the clutch pedal.

Tightening Torque:

1.5 - 2.2 kg-m (10.8 - 15.9 ft-lb, 14.7 - 21.6 N-m)

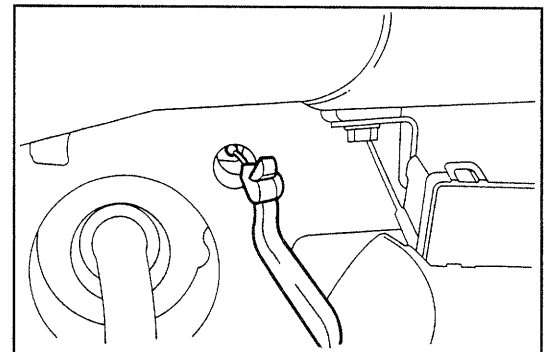


WRU90-CL048

7. Connect the clutch release cable subassembly to the clutch pedal subassembly.
8. Attach the return spring to the clutch pedal and pedal bracket, using a standard screwdriver.

NOTE:

- Apply lithium base multi purpose grease to the clutch cable and the installation section of the pedal.

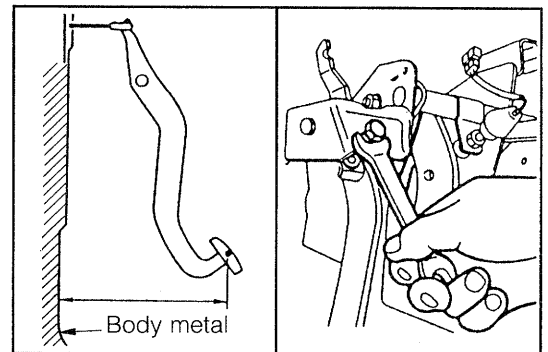


WRU90-CL049

9. Adjust the clutch pedal height by means of the set bolt.

NOTE:

- As for the adjusting procedure for the clutch pedal installation height, see the step 1 at page CL-4.

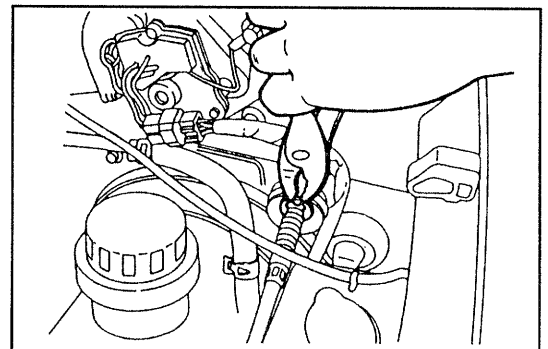


WRU90-CL050

10. Adjust the clutch free travel by moving the clip of the clutch cable.

NOTE:

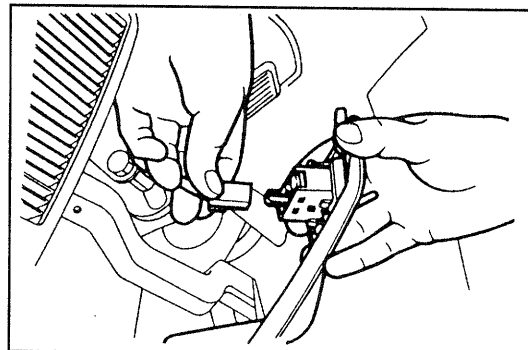
- As for the adjustment of the free travel, see the step 3 at page CL-4.



WRU90-CL051

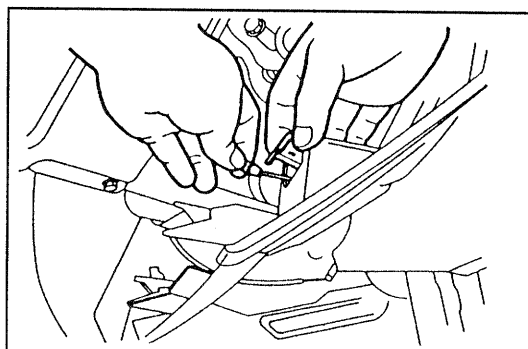
CLUTCH

11. Connect the coupler of the instrument panel light control switch.



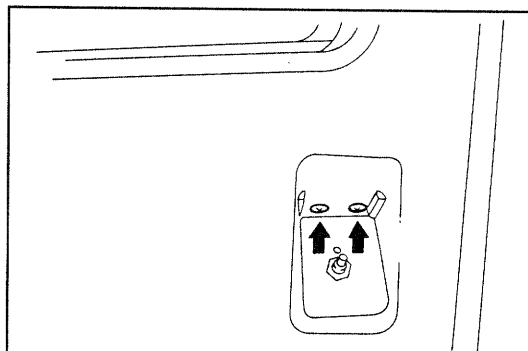
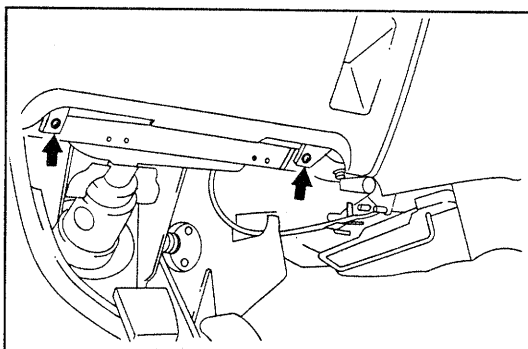
WRU90-CL052

12. Connect the hood opener cable.



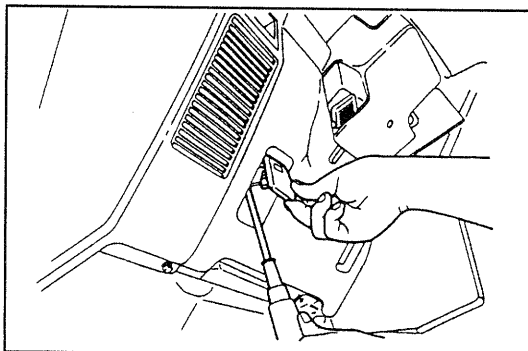
WRU90-CL053

13. Install the instrument panel finish lower panel with the two screws.



WRU90-CL054

14. Install the handle of the hood opener cable with the two screws.
15. Insert the instrument panel light control switch knob.



WRU90-CL055