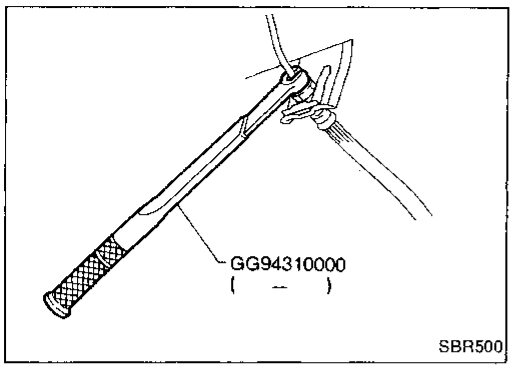
SECTION CL

CONTENTS

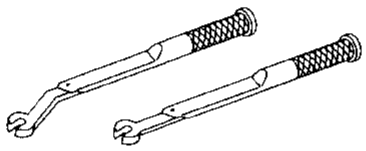
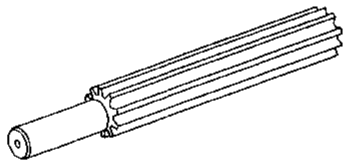
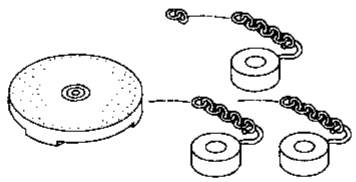
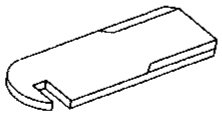


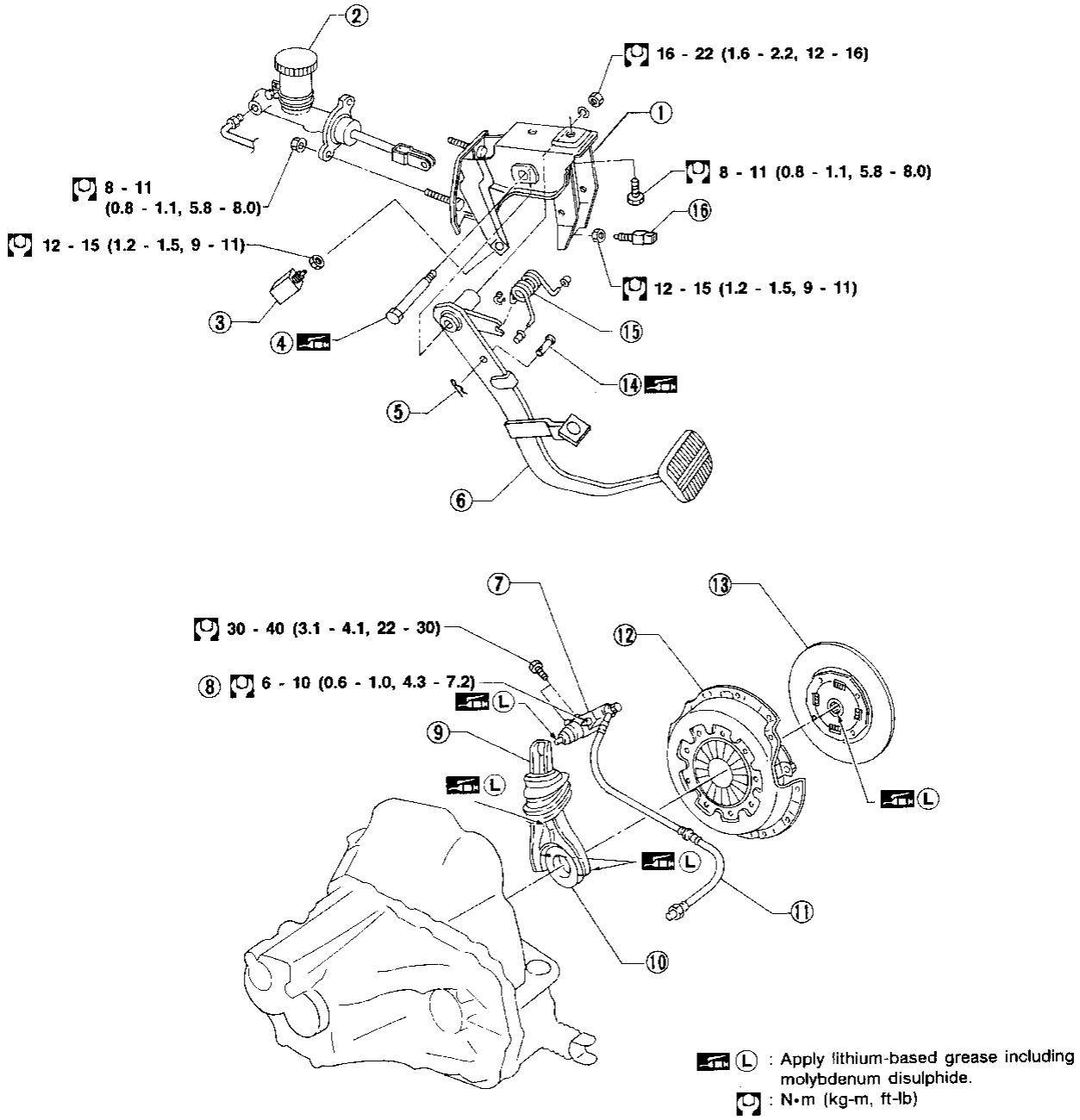
Precautions

- **Recommended fluid is brake fluid "DOT 3".**
- **Never reuse drained brake fluid.**
- **Be careful not to splash brake fluid on painted areas.**
- **When removing and installing clutch piping, use Tool.**
- **Use new brake fluid to clean or wash all parts of master cylinder, operating cylinder and clutch damper.**
- **Never use mineral oils such as gasoline or kerosene. It will ruin the rubber parts of the hydraulic system.**

WARNING:
After cleaning clutch disc, wipe it with a dust collector. Do not use compressed air.

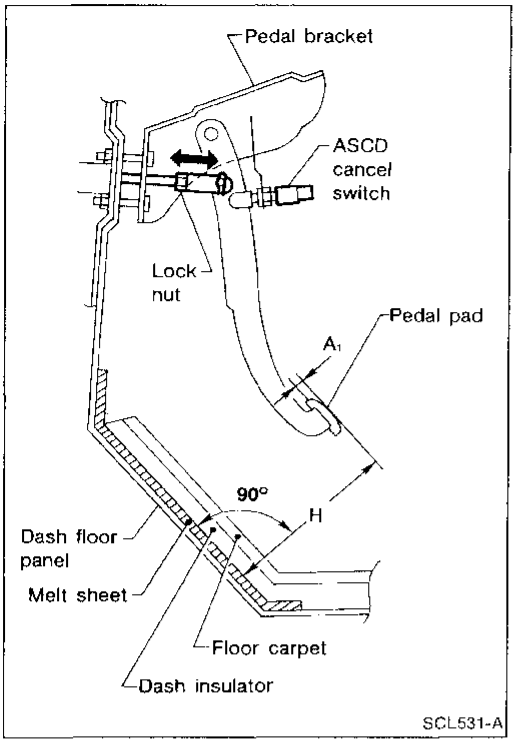
Special Service Tools

Tool number (Kent-Moore No.) Tool name	Description	
GG94310000 (—) Flare nut torque wrench	 NT064	Removing and installing clutch piping
KV30101000 (J33213) Clutch aligning bar	 NT061	Installing clutch cover and clutch disc
ST20050010 (—) Base plate ST20050100 (—) Distance piece	 NT058	Inspecting diaphragm spring of clutch cover
ST20050240 (—) Diaphragm spring adjusting wrench	 NT060	Adjusting unevenness of diaphragm spring of clutch cover



SCL442

① Pedal bracket
② Clutch master cylinder
③ Clutch interlock switch
④ Fulcrum pin
⑤ Pin
⑥ Clutch pedal
⑦ Operating cylinder
⑧ Air bleeder screw
⑨ Withdrawal lever
⑩ Release bearing
⑪ Clutch hose
⑫ Clutch cover
⑬ Clutch disc
⑭ Clevis pin
⑮ Assist spring
⑯ ASCD cancel switch

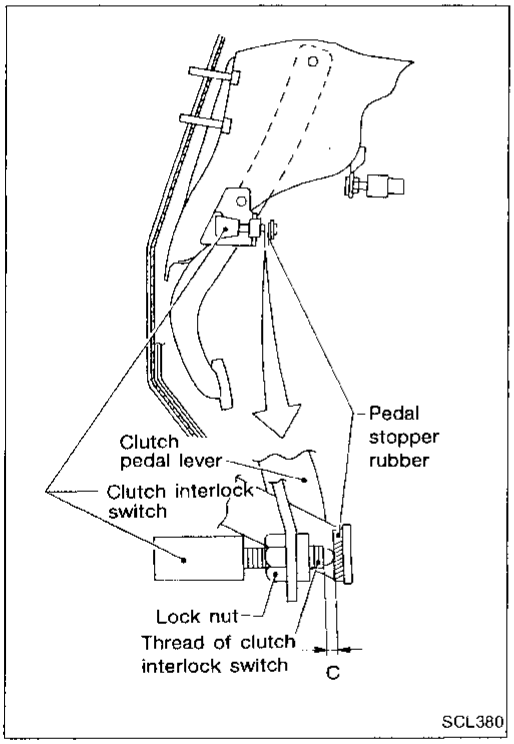


Adjusting Clutch Pedal

1. Adjust pedal height with ASCD cancel switch.
   Pedal height "H":
   165 - 175 mm (6.50 - 6.89 in)
2. Adjust pedal free play with master cylinder push rod. Then tighten lock nut.
   Pedal free play "A_1":
   1.0 - 3.0 mm (0.039 - 0.118 in)

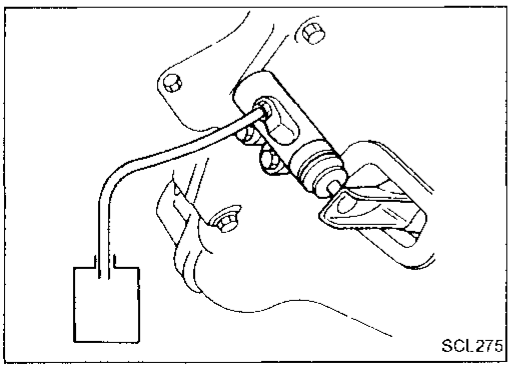
Pedal free play means the following total, measured at position of pedal pad:

- **Play due to clevis pin and clevis pin hole in clutch pedal.**



For U.S.A. model only

3. Adjust clearance "C" between pedal stopper rubber and threaded end of clutch interlock switch while depressing clutch pedal fully.
   Clearance C:
   0.1 - 1.0 mm (0.004 - 0.039 in)



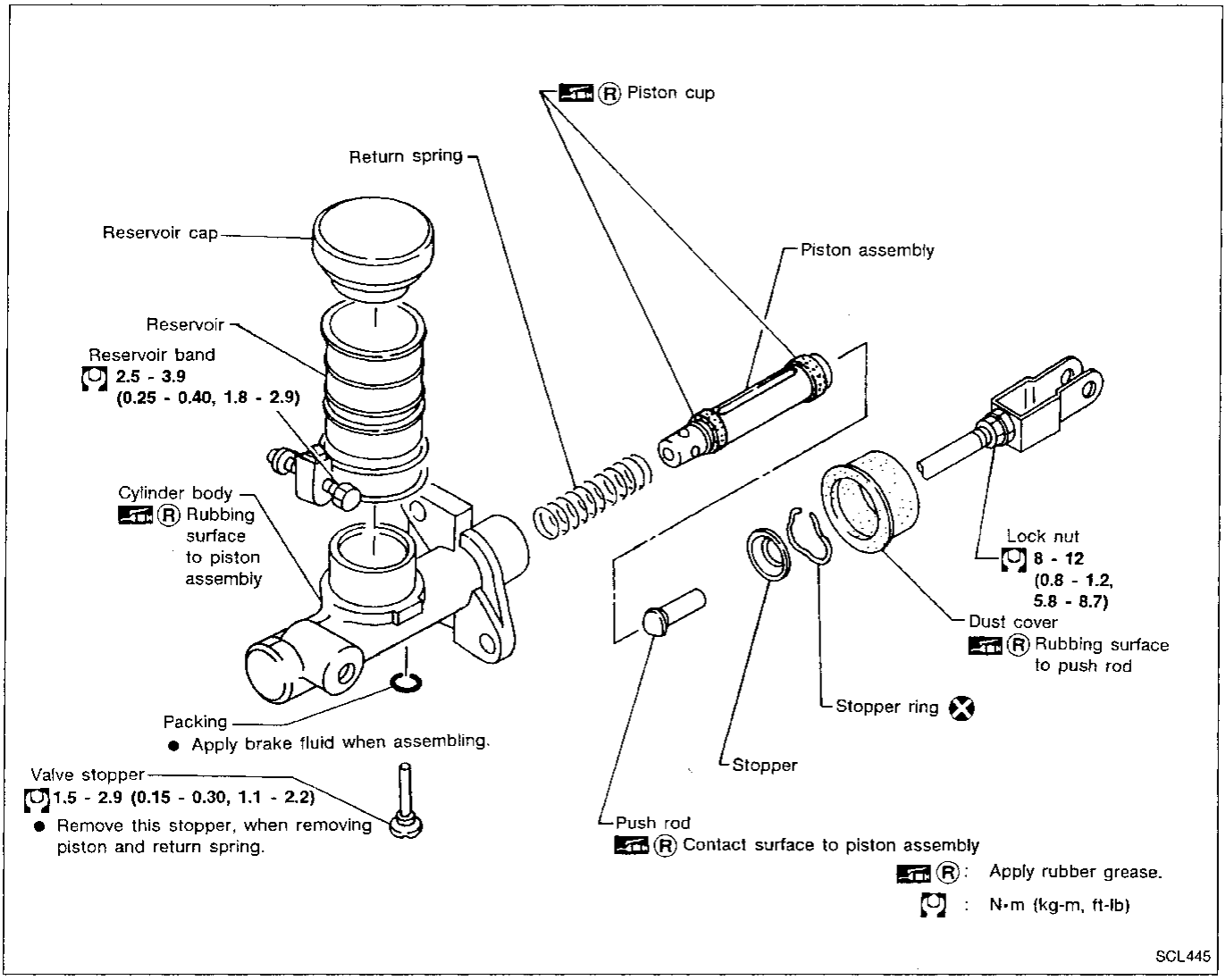
Bleeding Procedure

Bleed air according to the following procedure.

- **Carefully monitor fluid level at master cylinder during bleeding operation.**

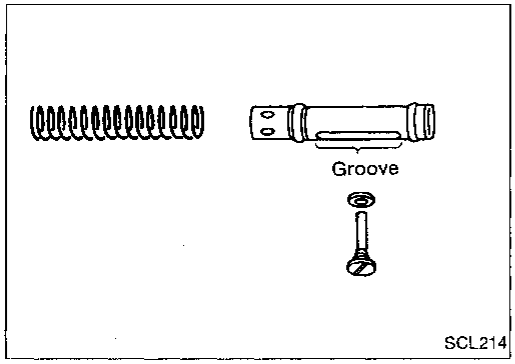
1. Top up reservoir with recommended brake fluid.
2. Connect a transparent vinyl tube to air bleeder valve.
3. Fully depress clutch pedal several times.
4. With clutch pedal depressed, open bleeder valve to release air, and close bleeder valve.
5. Repeat steps 3 through 5 above until clear brake fluid comes out of air bleeder valve.

Clutch Master Cylinder



DISASSEMBLY AND ASSEMBLY

- Push piston into cylinder body with screwdriver when removing and installing valve stopper.



- Align groove of piston assembly and valve stopper when installing valve stopper.
- Check direction of piston cups.

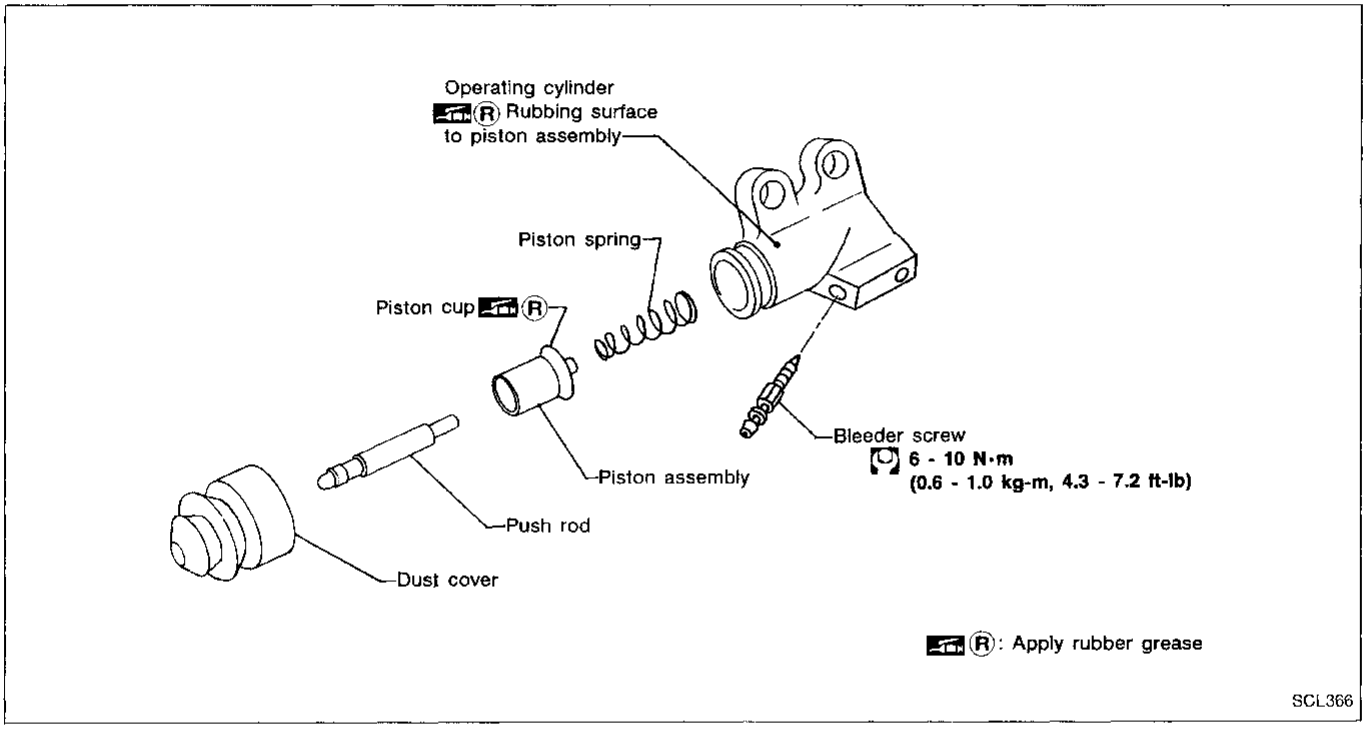
Clutch Master Cylinder (Cont'd)

INSPECTION

Check the following items, and replace if necessary.

- Rubbing surface of cylinder and piston, for uneven wear, rust or damage
- Piston with piston cup, for wear or damage
- Return spring, for wear or damage
- Dust cover, for cracks, deformation or damage
- Reservoir, for deformation or damage

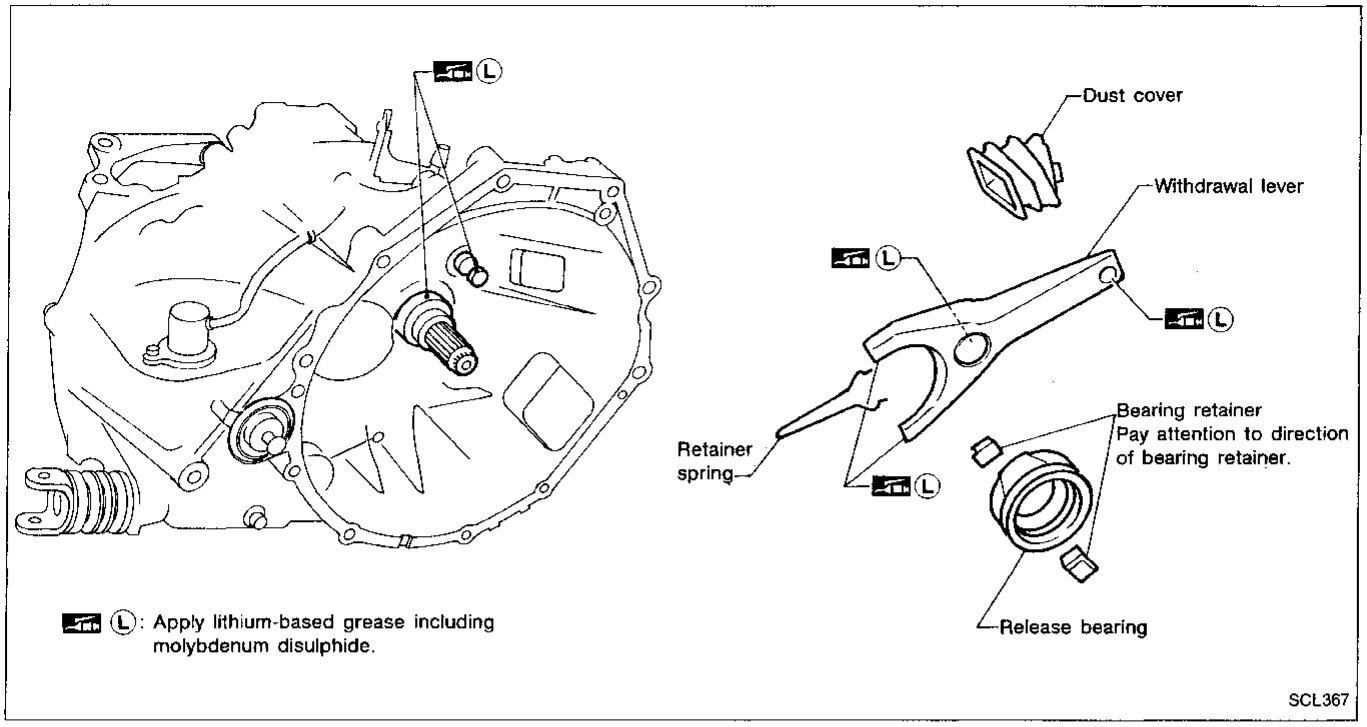
Operating Cylinder



INSPECTION

Check the following items, and replace if necessary.

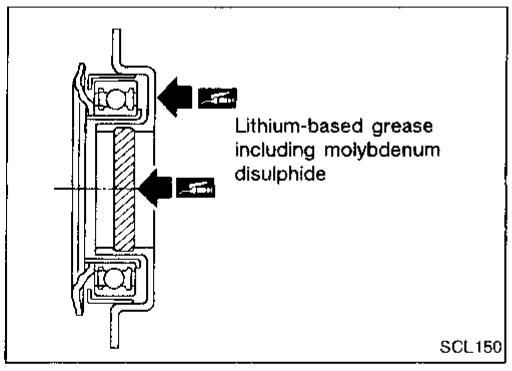
- Rubbing surface of cylinder and piston, for uneven wear, rust or damage
- Piston with piston cup, for wear or damage
- Piston spring, for wear or damage
- Dust cover, for cracks, deformation or damage



INSPECTION

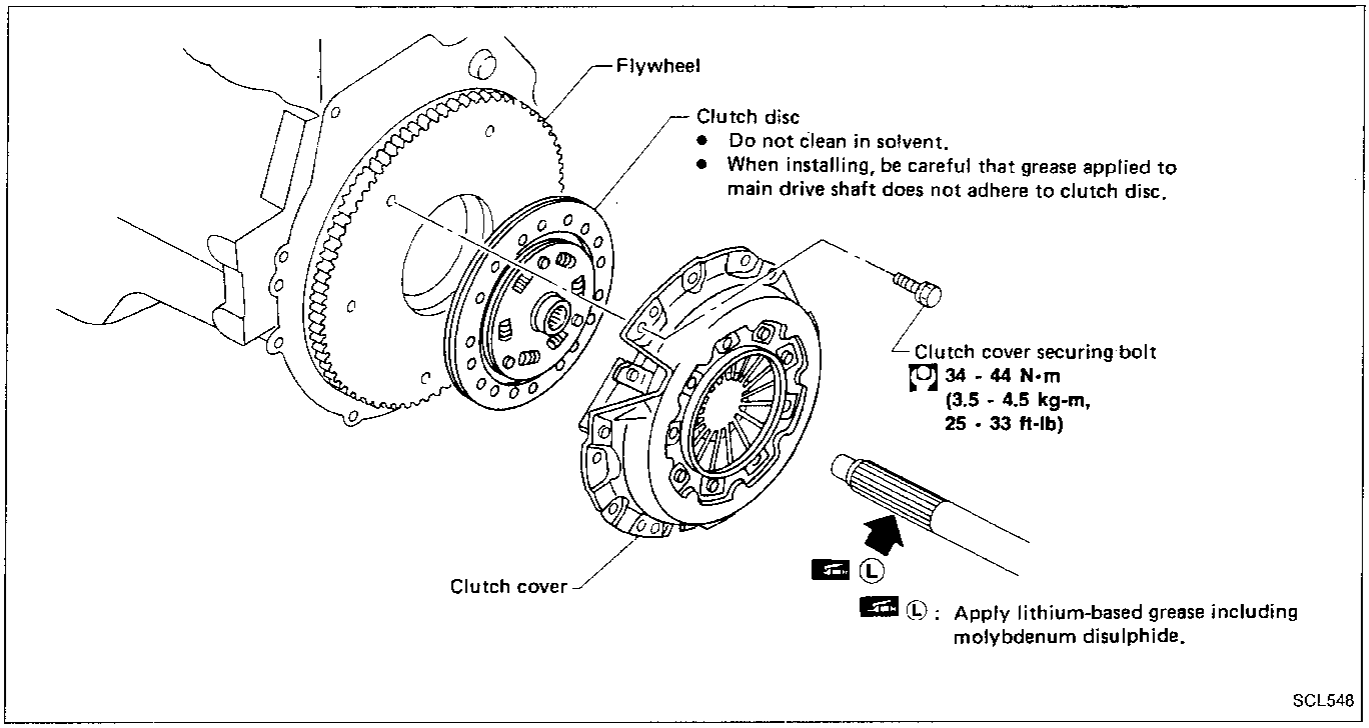
Check the following items, and replace if necessary.

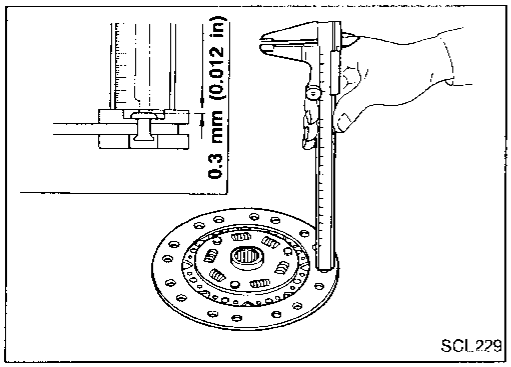
- Release bearing, to see that it rolls freely and is free from noise, cracks, pitting or wear
- Release sleeve and withdrawal lever rubbing surface, for wear, rust or damage

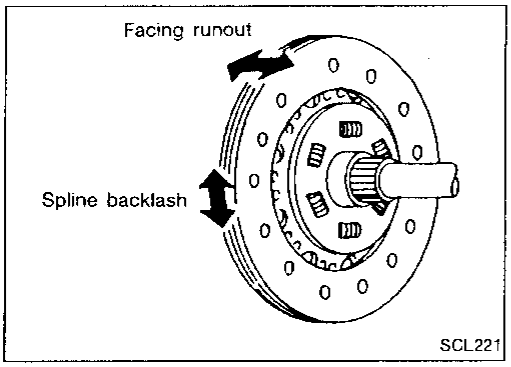


LUBRICATION

- Apply recommended grease to contact surface and rubbing surface.
- **Too much lubricant might damage clutch disc facing.**







Clutch Disc

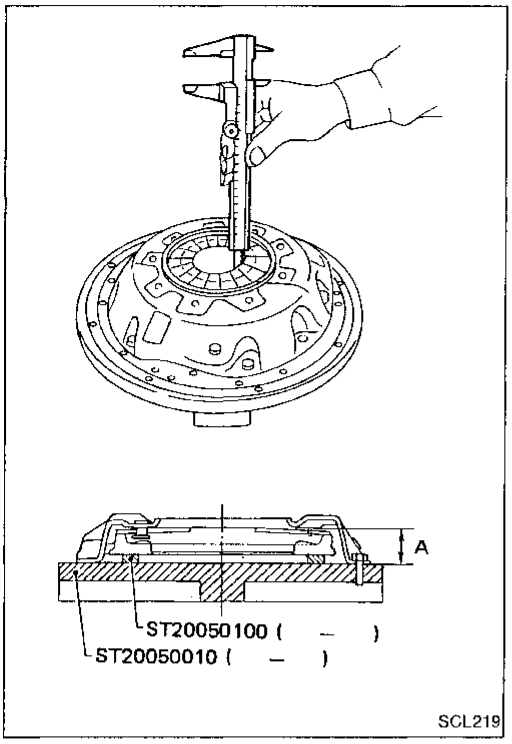
INSPECTION

Check the following items, and replace if necessary.

- Clutch disc, for burns, discoloration, oil or grease leakage
- Clutch disc, for wear of facing
  Wear limit of facing surface to rivet head:
  0.3 mm (0.012 in)
- Clutch disc, for spline backlash
  Maximum spline backlash (at outer edge of disc):
  1.0 mm (0.039 in)
- Clutch disc, for facing runout
  Runout limit:
  1.0 mm (0.039 in)
  Distance of runout check point (from hub center)
  115 mm (4.53 in)

INSTALLATION

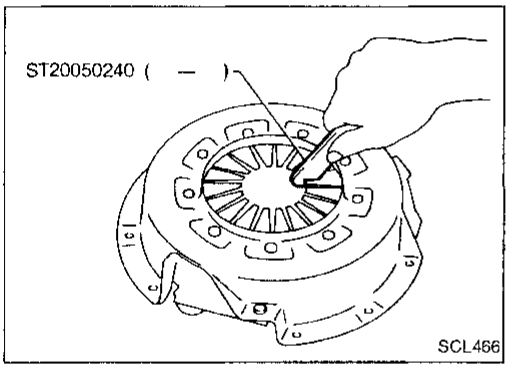
- Apply recommended grease to contact surface of spline portion.
- **Too much lubricant might damage clutch facing.**



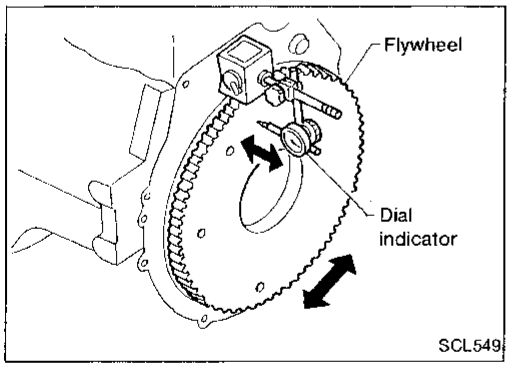
Clutch Cover and Flywheel

INSPECTION AND ADJUSTMENT

- Set Tool and check height and unevenness of diaphragm spring.
  Diaphragm spring height "A":
  37.5 - 39.5 mm (1.476 - 1.555 in)
- Check thrust rings for wear or damage by shaking cover assembly and listening for chattering noise, or lightly hammering on rivets for a slightly cracked noise. Replace clutch cover assembly if necessary.
- Check pressure plate and clutch disc contact surface for slight burns or discoloration. Repair pressure plate with emery paper.
- Check pressure plate and clutch disc contact surface for deformation or damage. Replace if necessary.

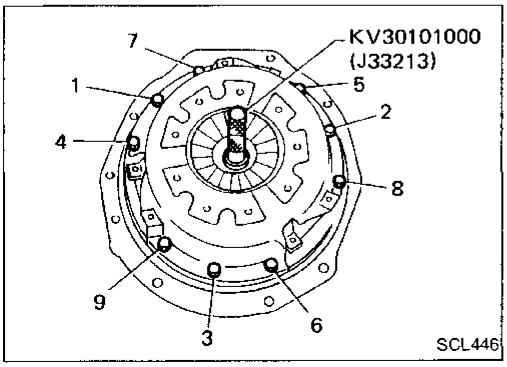


- Adjust unevenness of diaphragm spring with Tool.
  Uneven limit:
  0.5 mm (0.020 in)



FLYWHEEL INSPECTION

- Check contact surface of flywheel for slight burns or discoloration. Repair flywheel with emery paper.
- Check flywheel runout.
  Runout (Total indicator reading):
  Less than 0.15 mm (0.0059 in)



INSTALLATION

- Insert Tool into clutch disc hub when installing clutch cover and disc.
- Tighten bolts in numerical order.
- **Be careful not to allow grease to contaminate clutch facing.**

General Specifications

CLUTCH CONTROL SYSTEM

Type of clutch control	Hydraulic

CLUTCH MASTER CYLINDER

Inner diameter	mm (in)	15.87 (5/8)

CLUTCH OPERATING CYLINDER

Inner diameter	mm (in)	19.05 (3/4)

CLUTCH DISC

Unit: mm (in)

Model	240
Facing size (Outer dia. x inner dia. x thickness)	240 x 160 x 3.5 (9.45 x 6.30 x 0.138)
Thickness of disc assembly	
With load	7.6 - 8.0 (0.299 - 0.315) with 5,688 N (580 kg, 1,279 lb)

CLUTCH COVER

Model		240
Full-load	N (kg, lb)	5,688 (580, 1,279)

Inspection and Adjustment

CLUTCH PEDAL

Unit: mm (in)

Pedal height*	165 - 177 (6.50 - 6.97)
Pedal free play	1.0 - 3.0 (0.039 - 0.118)
Clearance between pedal stopper rubber and clutch interlock switch threaded end while clutch pedal is fully depressed.	0.1 - 1.0 (0.004 - 0.039)

*: Measured from surface of melt sheet to pedal pad

CLUTCH DISC

Unit: mm (in)

Model	240
Wear limit of facing surface to rivet head	0.3 (0.012)
Facing runout limit	1.0 (0.039)
Distance of runout check point (from the hub center)	115 (4.53)
Maximum spline backlash (at outer edge of disc)	1.0 (0.039)

CLUTCH COVER

Unit: mm (in)

Model	240
Diaphragm spring height	37.5 - 39.5 (1.476 - 1.555)
Uneven limit of diaphragm spring toe height	0.5 (0.020)