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PRECAUTION AND PREPARATION

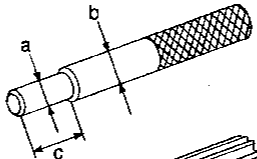
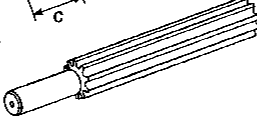
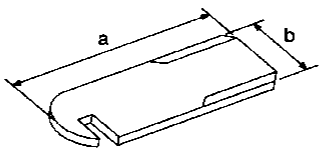
Precaution

WARNING:

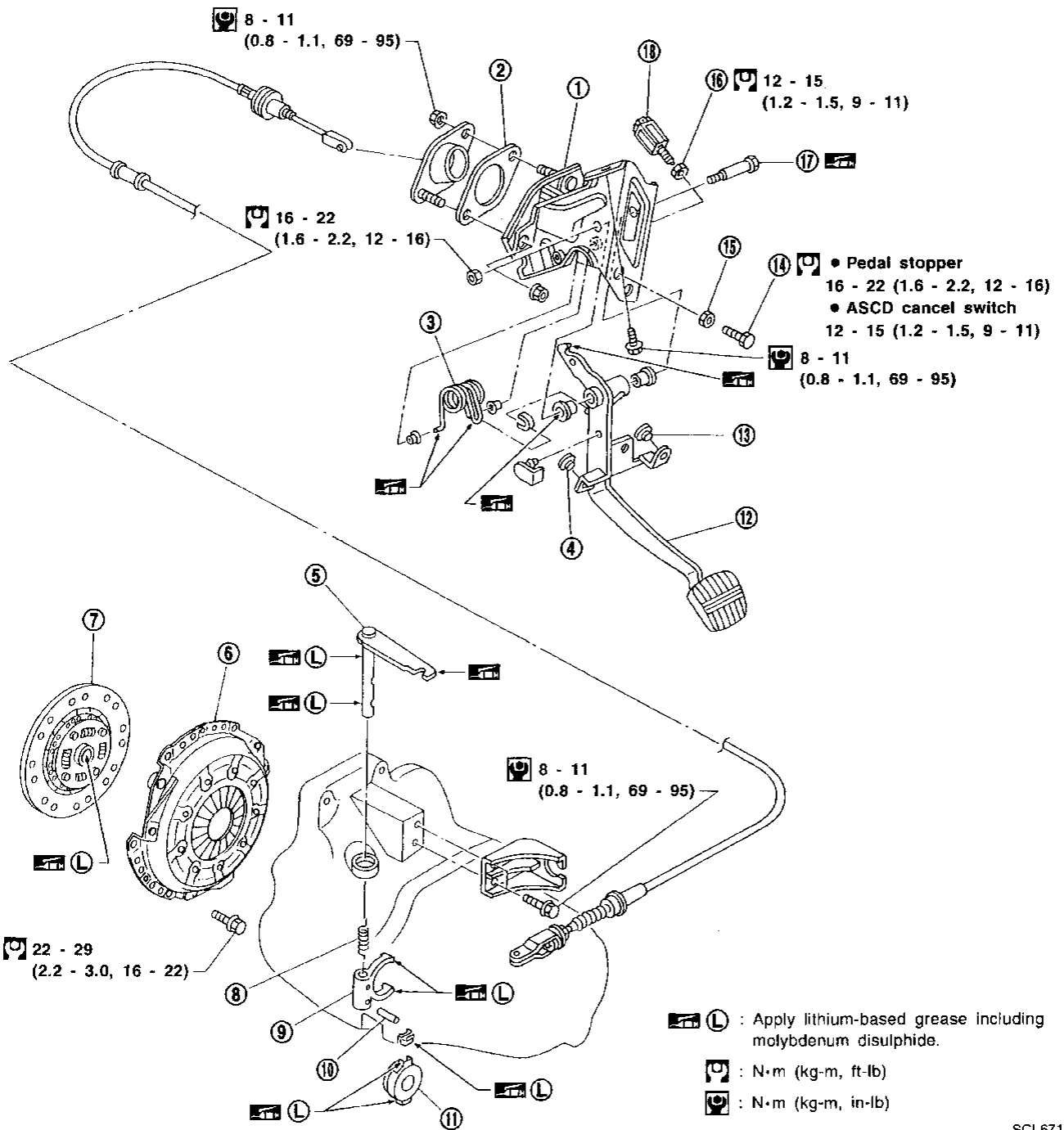
After cleaning the clutch disc, wipe it with a dust collector. Do not use compressed air.

Special Service Tools

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
KV30101600 (New) KV30101000 (Former) (J33213) Clutch aligning bar	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>New</p>  </div> <div style="text-align: center;"> <p>Former</p>  </div> </div> <p style="text-align: center;">NT645</p> <div style="text-align: right;"> <p>Installing clutch cover and clutch disc</p> <p>a: 15.9 mm (0.626 in) dia. b: 17.9 mm (0.705 in) dia. c: 40 mm (1.57 in)</p> </div>
ST20050240 (—) Diaphragm spring adjusting wrench	<div style="text-align: center;">  </div> <p style="text-align: center;">NT404</p> <div style="text-align: right;"> <p>Adjusting unevenness of diaphragm spring of clutch cover</p> <p>a: 150 mm (5.91 in) b: 25 mm (0.98 in)</p> </div>

CLUTCH SYSTEM

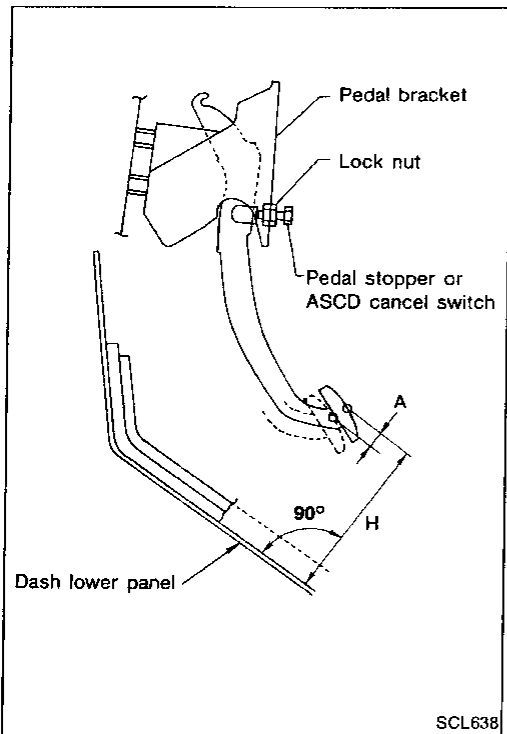


- ① Clutch pedal bracket
- ② Insulator
- ③ Assist spring
- ④ Stopper rubber
- ⑤ Withdrawal lever
- ⑥ Clutch cover

- ⑦ Clutch disc
- ⑧ Return spring
- ⑨ Clutch lever
- ⑩ Spring pin
- ⑪ Release bearing
- ⑫ Clutch pedal

- ⑬ Stopper rubber
- ⑭ Pedal stopper or ASCD cancel switch
- ⑮ Lock nut
- ⑯ Lock nut
- ⑰ Fulcrum pin
- ⑱ Clutch interlock switch

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Adjusting Clutch Pedal

1. Adjust pedal height with pedal stopper or ASCD cancel switch.

Pedal height "H":
159.5 - 169.5 mm (6.28 - 6.67 in)

2. Adjust withdrawal lever play "B" according to the following procedure.

CAUTION:

When clutch cable is replaced with a new one, fully depress clutch pedal 50 times as a break-in procedure (to pre-stretch the clutch cable). Then, adjust the cable as follows:

- a. Push withdrawal lever by hand until resistance is felt, and then tighten adjusting nut.
- b. Turn back adjusting nut 2.5 to 3.5 turns, and then tighten lock nut.

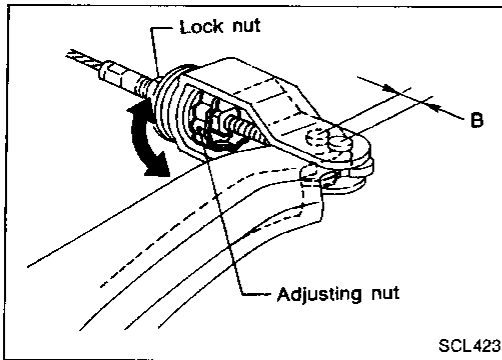
Withdrawal lever play "B":
2.5 - 3.5 mm (0.098 - 0.138 in)

Lock nut:

⊗ : 3 - 4 N·m (0.3 - 0.4 kg-m, 26 - 35 in-lb)

3. As a final check, measure pedal free travel at center of pedal pad.

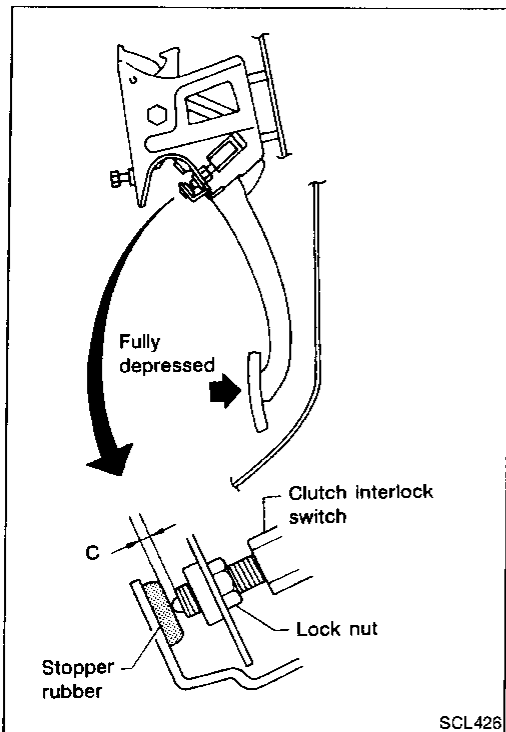
Pedal free travel "A":
10.8 - 15.1 mm (0.425 - 0.594 in)



—MODELS WITH CLUTCH INTERLOCK SYSTEM—

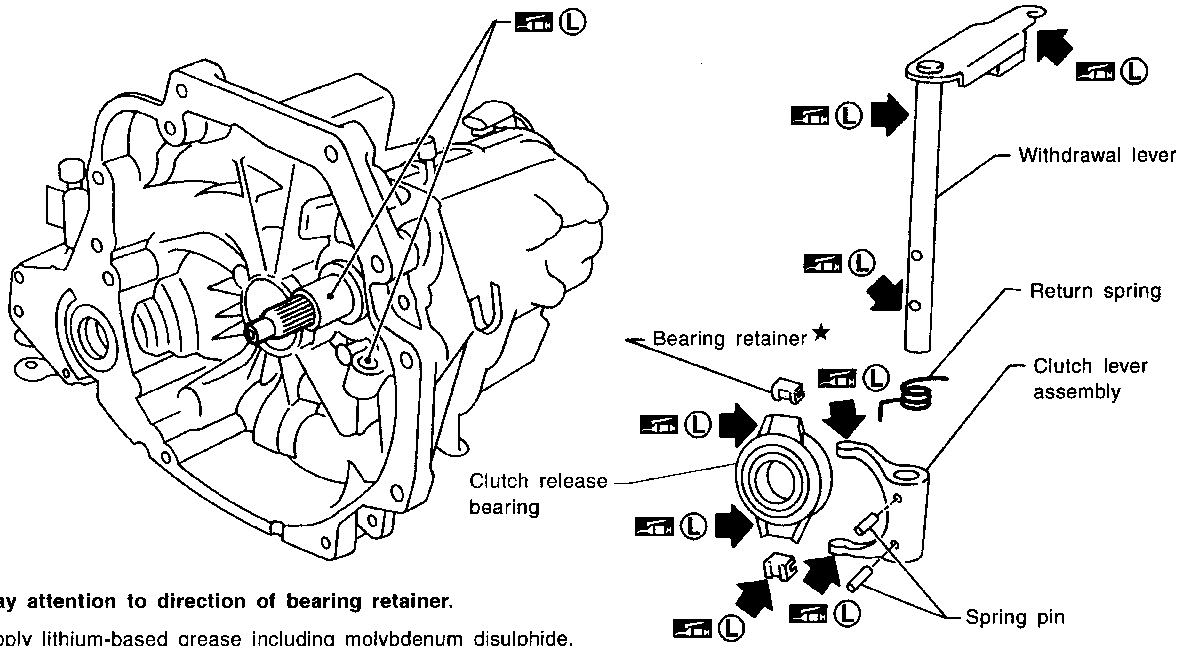
4. Adjust clearance "C" shown in the figure while fully depressing clutch pedal.

Clearance "C":
0.3 - 1.0 mm (0.012 - 0.039 in)



CLUTCH RELEASE MECHANISM

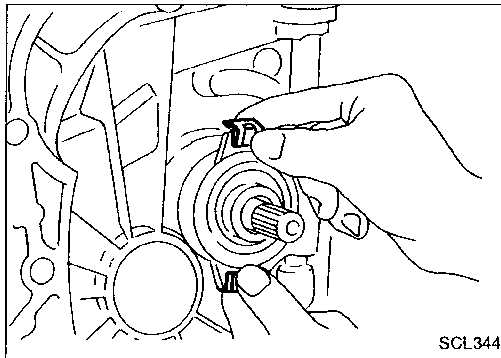
SEC. 321



★ : Pay attention to direction of bearing retainer.

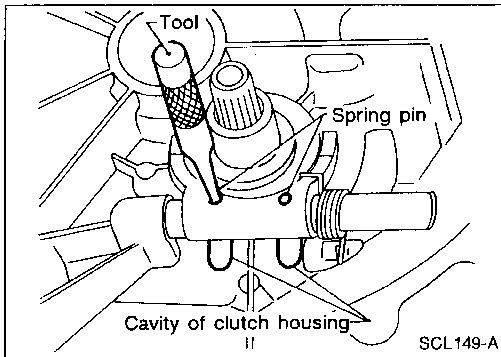
L : Apply lithium-based grease including molybdenum disulphide.

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REMOVAL AND INSTALLATION

- Remove release bearing by pulling bearing retainers outward.

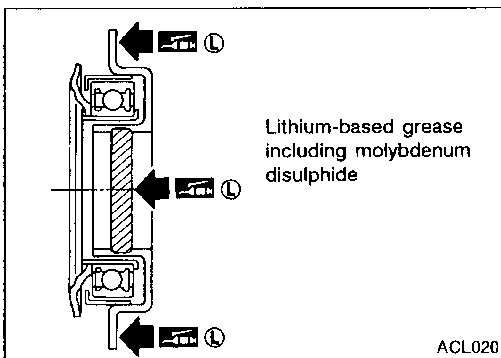


- Align spring pin with cavity of clutch housing and tap out spring pin.

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.

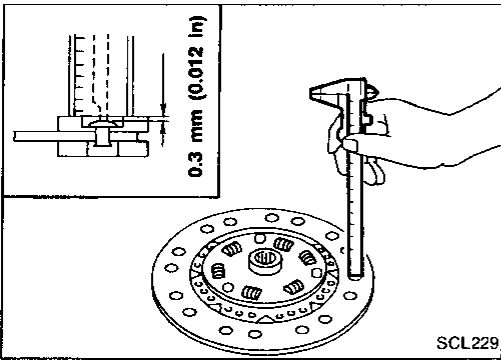
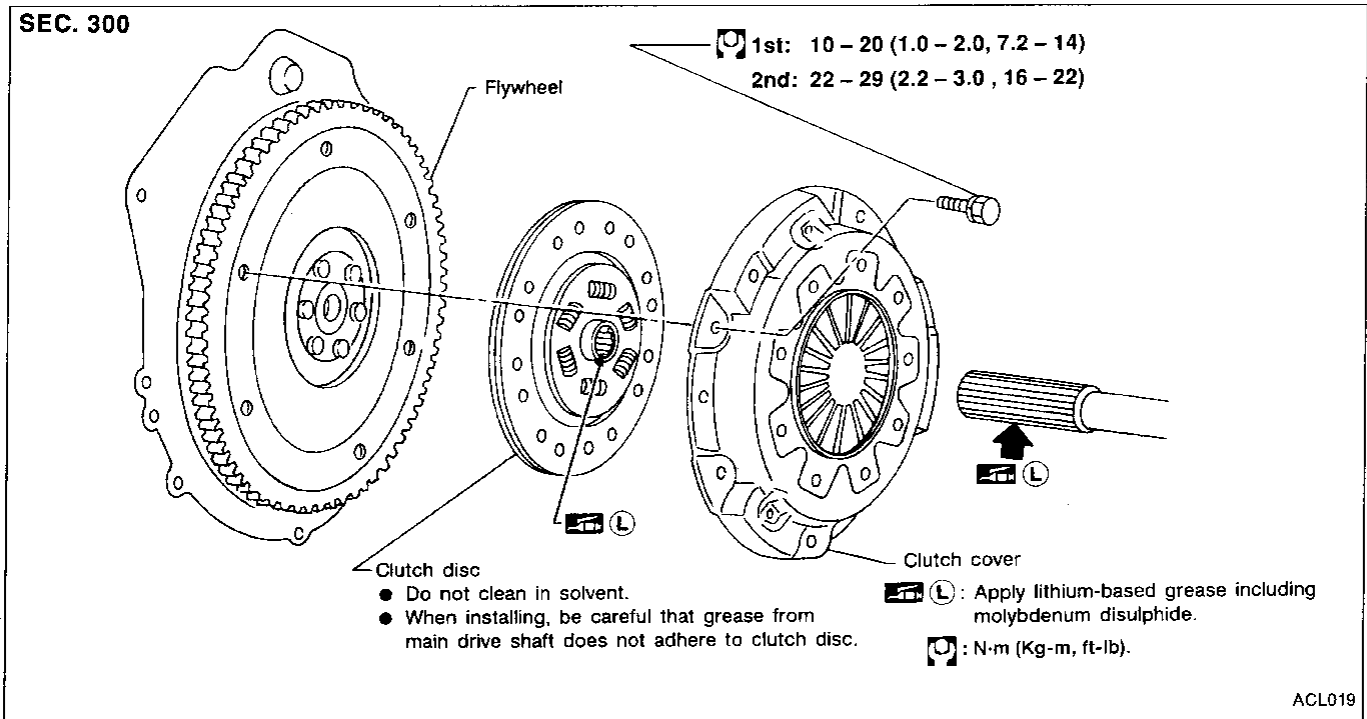


LUBRICATION

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

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CLUTCH DISC AND CLUTCH COVER



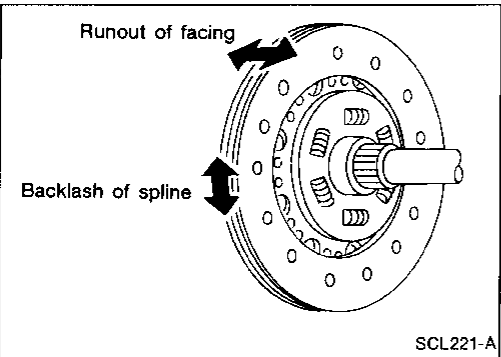
Clutch Disc

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)**



- Check clutch disc for backlash of spline and runout of facing.

**Maximum backlash of spline (at outer edge of disc):
0.9 mm (0.035 in)**

**Runout limit:
1.0 mm (0.039 in)**

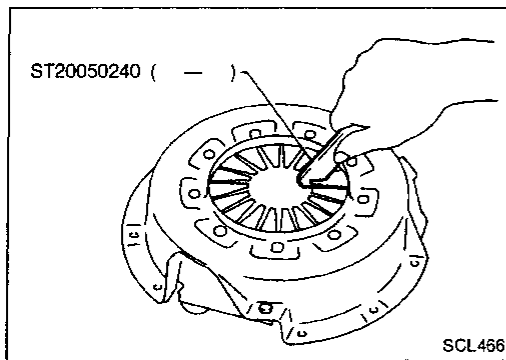
**Distance of runout check point (from hub center):
102.5 mm (4.04 in)**

- Check clutch disc for burns, discoloration or oil or grease leakage. Replace if necessary.

INSTALLATION

- Apply recommended grease to contact surface of splines.
- Too much lubricant may damage clutch disc facing.

CLUTCH DISC AND CLUTCH COVER



Clutch Cover and Flywheel

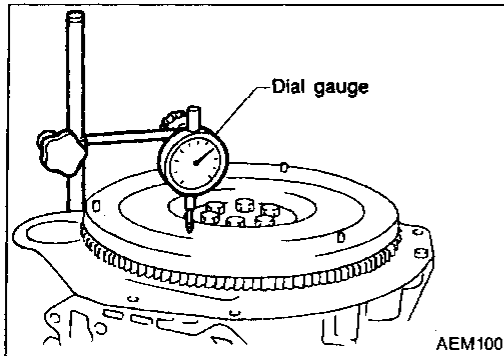
INSPECTION AND ADJUSTMENT

- Check clutch cover, installed on vehicle, for uneven diaphragm spring toe height.

Uneven limit:

0.7 mm (0.028 in)

- If out of limit, adjust the height with Tool.



FLYWHEEL INSPECTION

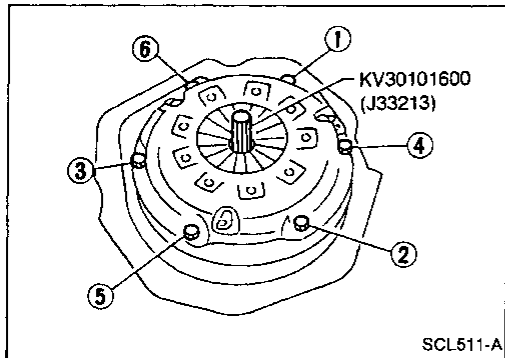
CAUTION:

Do not allow any magnetic materials to contact the ring gear teeth.

- Inspect contact surface of flywheel for slight burns or discoloration. Clean flywheel with emery paper.
- Check flywheel runout.

Maximum allowable runout:

Refer to EM section ("Inspection", "CYLINDER BLOCK").



INSTALLATION

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

First step:

☐: 10 - 20 N·m (1.0 - 2.0 kg-m, 7 - 14 ft-lb)

Final step:

☐: 22 - 29 N·m (2.2 - 3.0 kg-m, 16 - 22 ft-lb)

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SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications

CLUTCH CONTROL SYSTEM

Type of clutch control	Mechanical type
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CLUTCH COVER

Engine	SR20DE
Model	215
Full-load	N (kg, lb) 4,413 (450, 992)

CLUTCH DISC

Unit: mm (in)

Engine	SR20DE
Model	215
Facing size (Outer dia. x inner dia. x thickness)	215 x 140 x 3.5 (8.46 x 5.51 x 0.138)
Thickness of disc assembly with load	7.6 - 8.0 (0.299 - 0.315) with 3,923 N (400 kg, 882 lb)

Inspection and Adjustment

CLUTCH PEDAL

Unit: mm (in)

Pedal height "H" *1	159.5 - 169.5 (6.28 - 6.67)
Pedal free travel "A" (at pedal pad)	10.8 - 15.1 (0.425 - 0.594)
Withdrawal lever play "B"	2.5 - 3.5 (0.098 - 0.138)
Clearance "C" (between pedal stopper rubber and clutch interlock switch) *2	0.3 - 1.0 (0.012 - 0.039)

*1: Measured from surface of dash lower panel to surface of pedal pad.

*2: Clutch pedal fully depressed.

CLUTCH COVER

Unit: mm (in)

Cover model	215
Uneven limit of diaphragm spring toe height	0.7 (0.028)

CLUTCH DISC

Unit: mm (in)

Disc model	215
Wear limit of facing surface to rivet head	0.3 (0.012)
Runout limit of facing	1.0 (0.039)
Distance of runout check point (from hub center)	102.5 (4.04)
Maximum backlash of spline (at outer edge of disc)	0.9 (0.035)