

CLUTCH

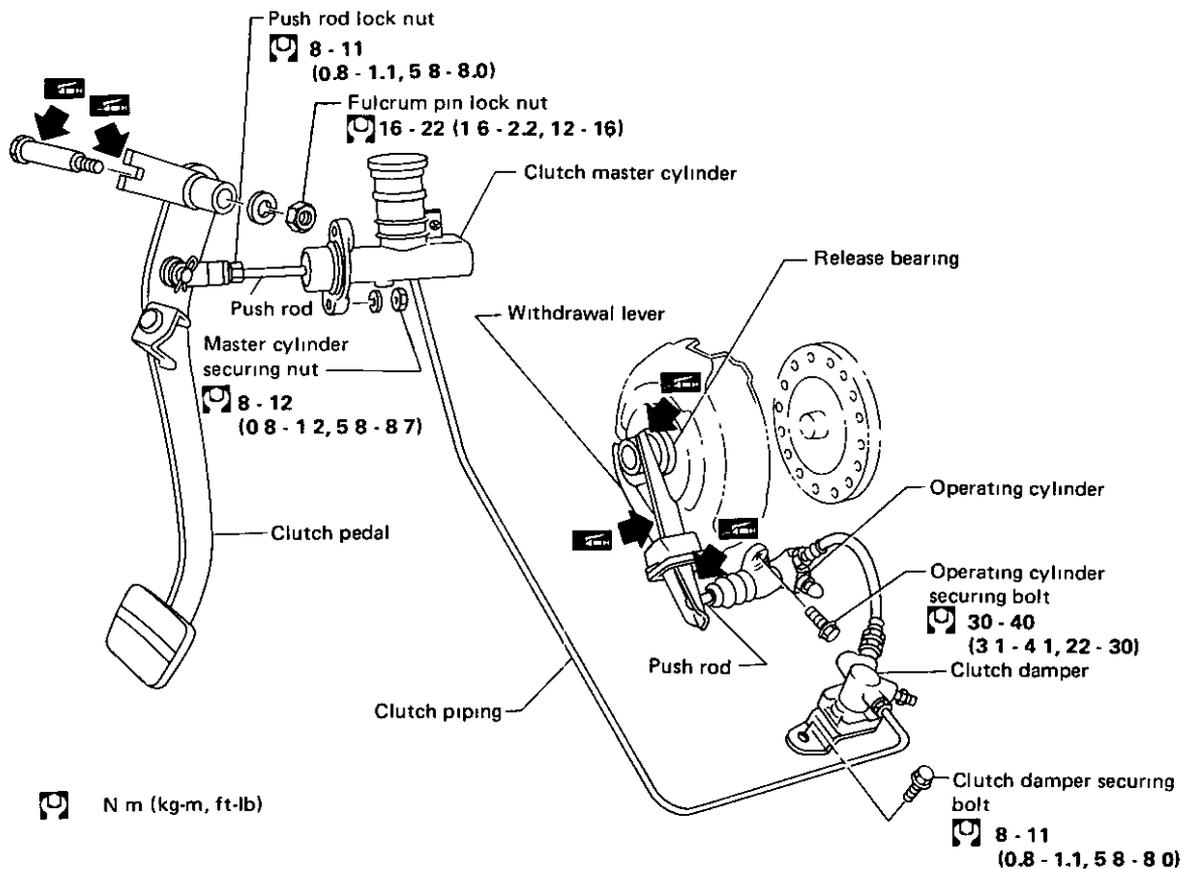
SECTION **CL**

CONTENTS

HYDRAULIC CLUTCH CONTROL	CL- 2
CLUTCH CONTROL – Release Bearing	CL- 6
CLUTCH UNIT	CL- 7
SERVICE DATA AND SPECIFICATIONS (S D S)	CL-10
SPECIAL SERVICE TOOLS	CL-12



HYDRAULIC CLUTCH CONTROL



SCL161

Precautions

- Recommended fluid is brake fluid "DOT 3".
- Do not reuse drained brake fluid
- Be careful not to splash brake fluid on painted areas.
- When removing and installing clutch tube, use Tool GG94310000.
- To clean or wash all parts of master cylinder, operating cylinder and clutch damper, clean brake fluid must be used.
- Never use mineral oils such as gasoline or kerosene. It will ruin the rubber parts of the hydraulic system.

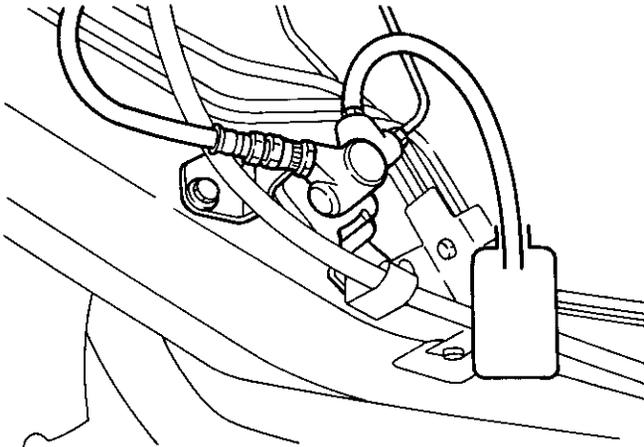
HYDRAULIC CLUTCH CONTROL

Bleeding Procedure

- Carefully monitor fluid level at master cylinder during bleeding operation.
- Bleed air according to the following procedure
Clutch damper → Operating cylinder

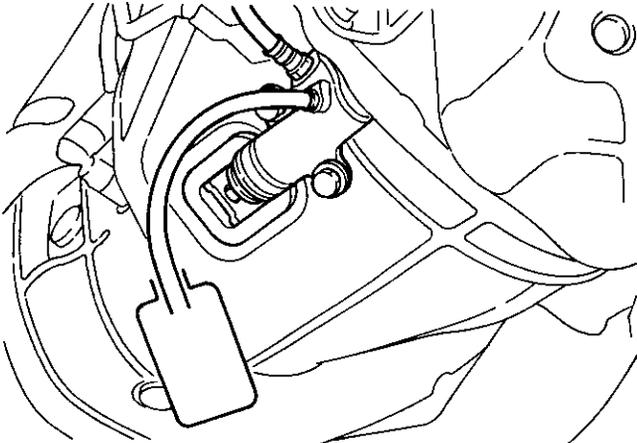
1. Top up reservoir with recommended brake fluid
2. Connect a transparent vinyl tube to air bleeder valve.

Clutch damper



SCL204

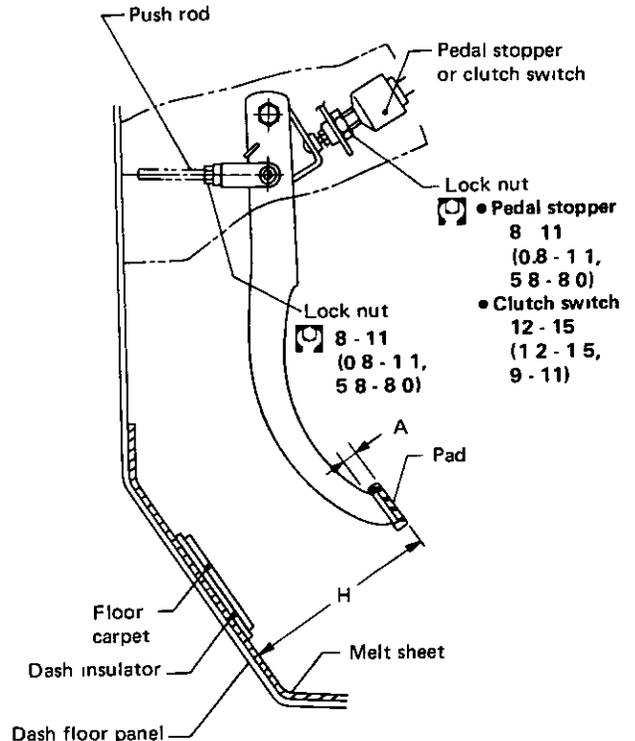
Operating cylinder



SCL203

- 3 Fully depress clutch pedal several times
- 4 With clutch pedal depressed, open bleeder valve to release air
- 5 Close bleeder valve
- 6 Repeat steps 3 through 5 above until brake fluid comes out of air bleeder valve without air bubbles

Adjusting Clutch Pedal



N m (kg-m, ft-lb)

SCL162

Pedal height "H"

195 - 205 mm (7.68 - 8.07 in)

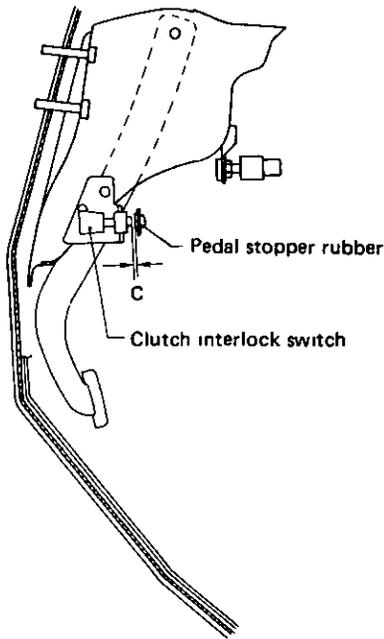
Pedal free play "A"

1 - 3 mm (0.04 - 0.12 in)

- 1 Adjust pedal height with pedal stopper or clutch switch
2. Adjust pedal free play with push rod

HYDRAULIC CLUTCH CONTROL

Adjusting Clutch Pedal (Cont'd)



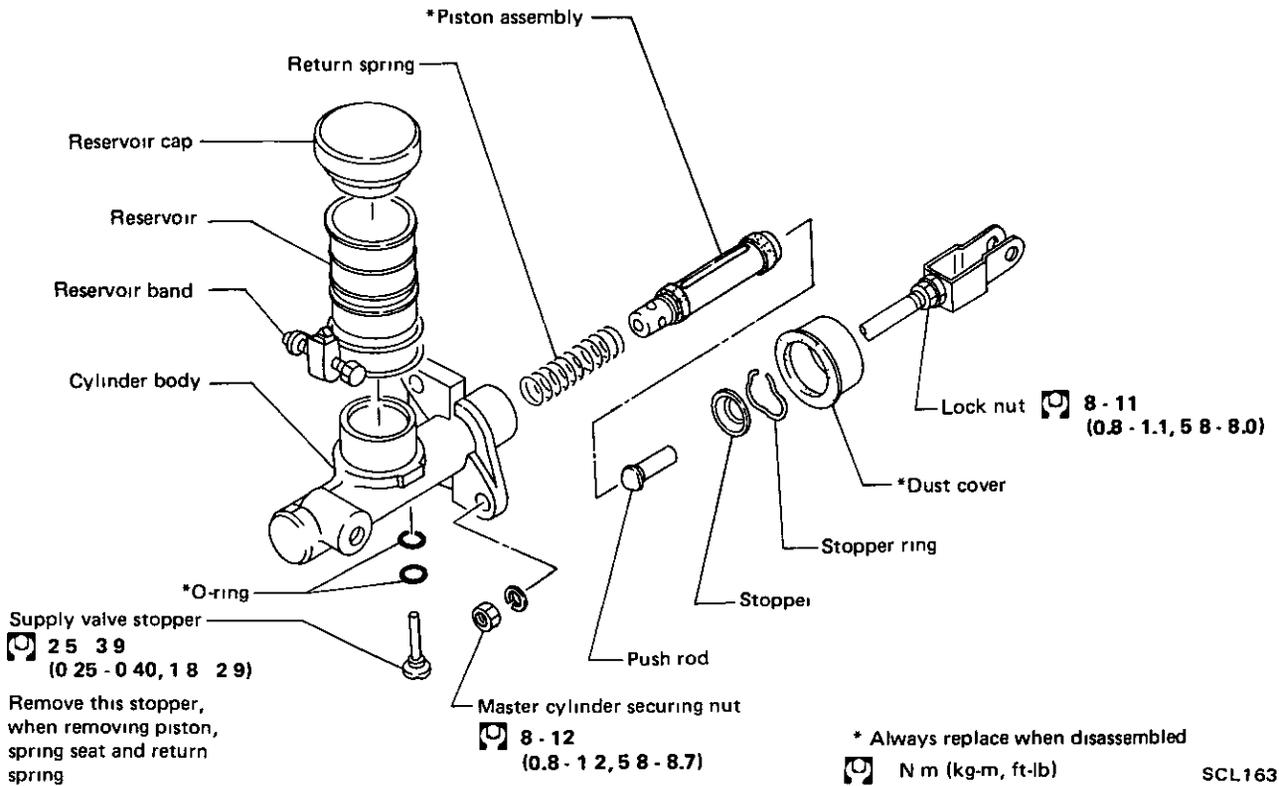
SCL274

- Adjust clearance "C" between pedal stopper rubber and threaded end of clutch interlock switch while depressing clutch pedal fully

Clearance C:

1.5 - 3.5 mm (0.059 - 0.138 in)

Clutch Master Cylinder



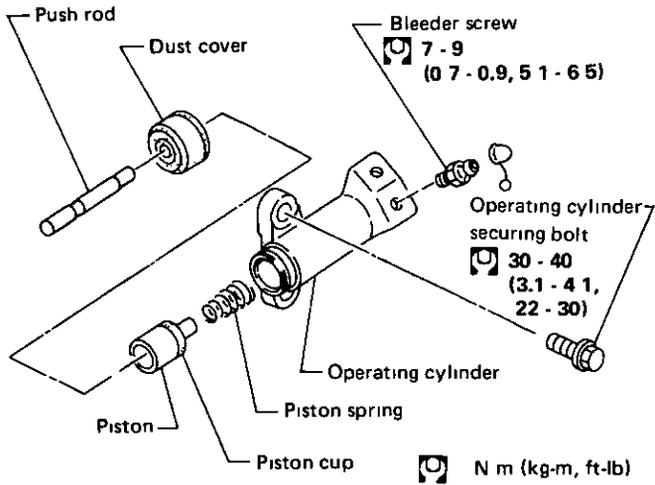
INSPECTION

- Check parts for wear or damage. Replace component if any wear or damage is found.

HYDRAULIC CLUTCH CONTROL

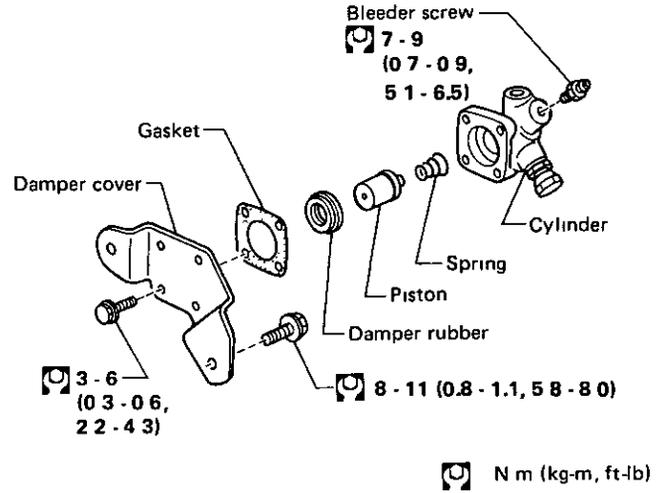
Operating Cylinder

Clutch Damper



SCL164

- Do not reuse piston cup and dust cover



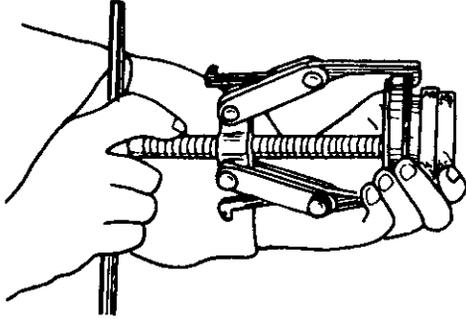
SCL205

- Do not reuse piston cup
- Do not let oil touch the damper rubber as it will ruin the rubber.

CLUTCH CONTROL — Release Bearing

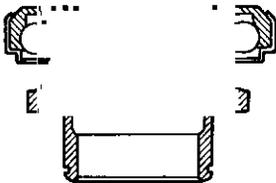
Release Bearing

REMOVAL AND INSTALLATION



CL145

Press

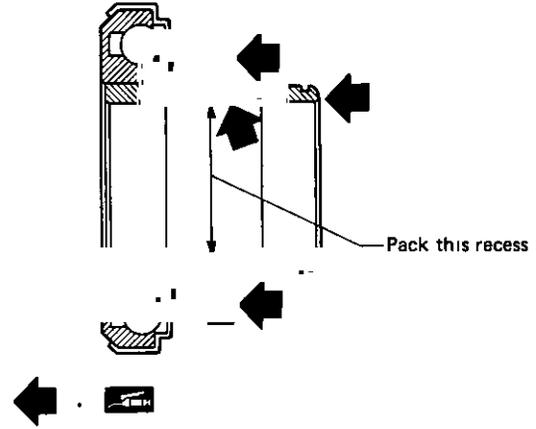


SCL166

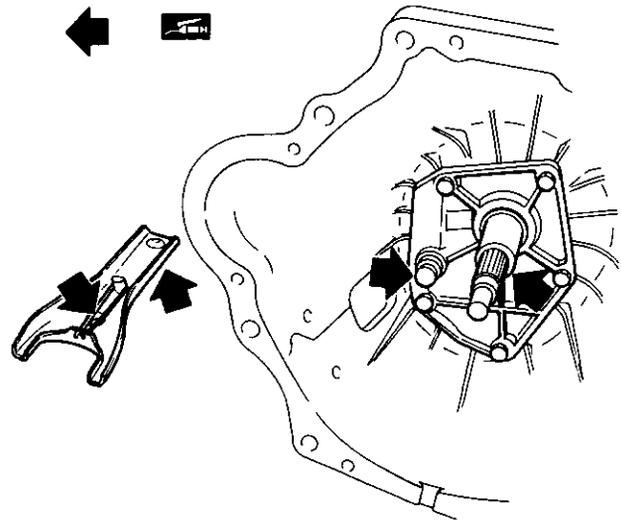
LUBRICATION

- Apply recommended grease to contact surface and sliding surface

Too much lubricant might cause clutch disc facing damage.



SCL167

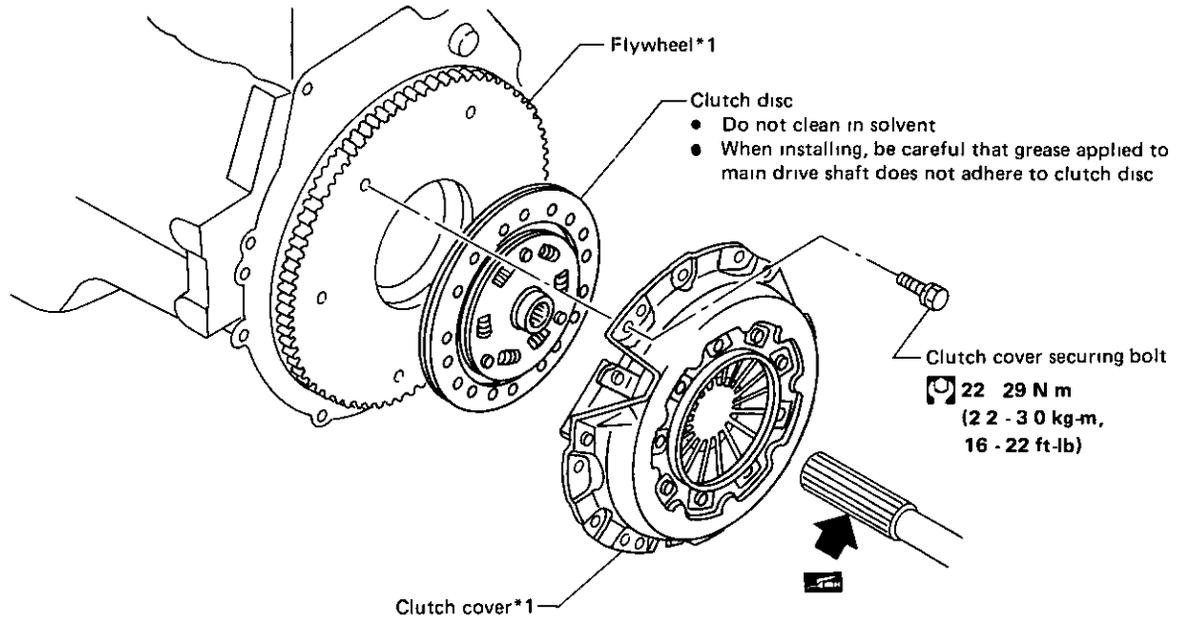


SCL168

CLUTCH UNIT

Clutch Unit

- *1 Slight burn or discoloration of contact surface with clutch disc can be corrected by polishing with emery paper



SCL206

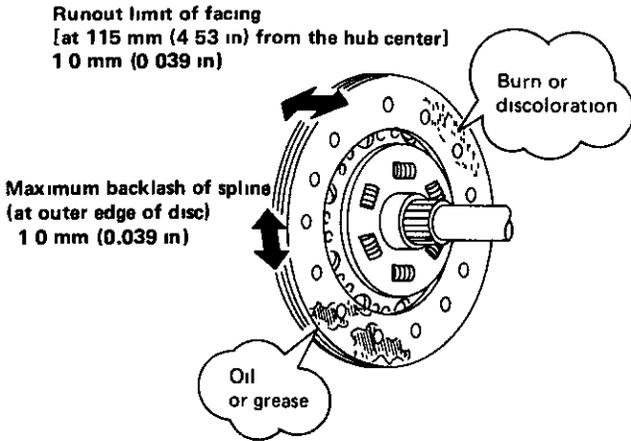
WARNING

Clean away clutch disc dust using a dust collector after cleaning with a cloth. Do not use compressed air.

CLUTCH UNIT

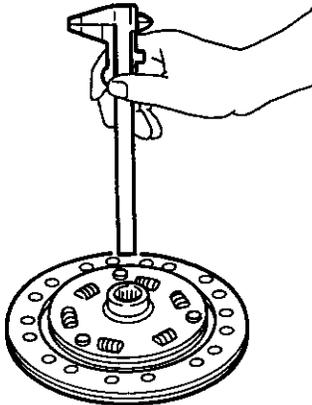
Inspecting Clutch Disc

Check clutch disc for runout, etc



SCL153

Check clutch disc for wear



- Measure the depth of rivet head
More than 0.3 mm (0.012 in)

SCL207

Inspecting Clutch Cover

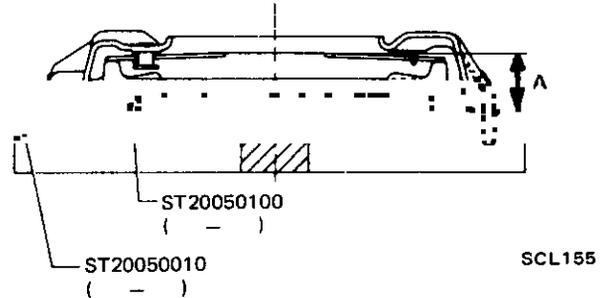
- Check height and unevenness of diaphragm spring after setting Tool.

Diaphragm spring height "A":

C240S: 37.5 - 39.5 mm (1.476 - 1.555 in)

C250S: 36.5 - 38.5 mm (1.437 - 1.516 in)

Uneven limit: 0.5 mm (0.020 in)



SCL155

- Adjust unevenness of diaphragm spring with Tool.

ST20050240

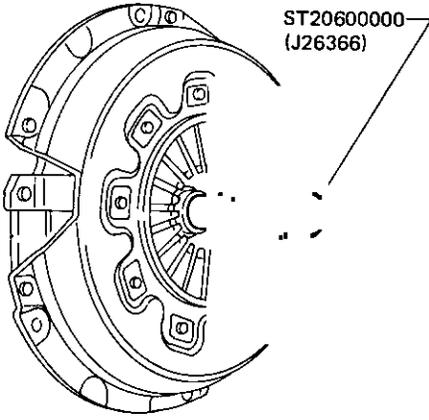


- Check thrust rings for wear or damage by shaking cover assembly up and down to listen for chattering noise, or lightly hammering on rivets for a slightly cracked noise

CLUTCH UNIT

Installing Clutch Cover

- Insert Tool into clutch disc hub when installing clutch cover and disc



SCL208

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

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

Model	240TBL	250TBL
Engine	VG30E	VG30ET
Facing size Outer dia x inner dia x thickness mm (in)	240 x 160 x 3.5 (9.45 x 6.30 x 0.138)	250 x 160 x 3.5 (9.84 x 6.30 x 0.138)
Thickness of disc assembly With load 5,884 N (600 kg, 1,323 lb) mm (in)	7.9 - 8.3 (0.311 - 0.327)	7.9 - 8.3 (0.311 - 0.327)

CLUTCH COVER

Model	C240S	C250S
Engine	VG30E	VG30ET
Full load N (kg, lb)	4,904 (500, 1,103)	5,884 (600, 1,323)

Inspection and Adjustment

CLUTCH PEDAL

Unit mm (in)

Pedal height "H" 195 - 205 (7.68 - 8.07)

Pedal free play "A" 1 - 3 (0.04 - 0.12)

Clearance between pedal
stopper rubber and threaded
end of clutch interlock switch 1.5 - 3.5 (0.059 - 0.138)

CLUTCH DISC

Unit mm (in)

Model	240TBL	250TBL
Wear limit of facing surface to rivet head	0.3 (0.012)	0.3 (0.012)
Runout limit	1.0 (0.039)	1.0 (0.039)
Distance of runout checkpoint (from the hub center)	115 (4.53)	120 (4.72)
Maximum backlash of spline (at outer edge of disc)	1.0 (0.039)	1.0 (0.039)

CLUTCH COVER

Unit mm (in)

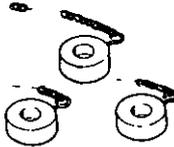
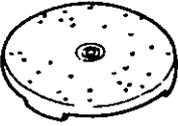
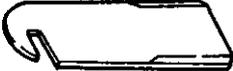
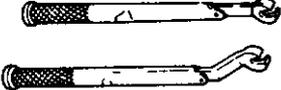
Model	C240S	C250S
Diaphragm spring height	37.5 - 39.5 (1.476 - 1.555)	36.5 - 38.5 (1.437 - 1.516)
Uneven limit of diaphragm spring toe height	0.5 (0.020)	0.5 (0.020)

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

Tightening Torque

Unit	N m	kg-m	ft-lb
Pedal stopper lock nut	8 - 11	0.8 - 1.1	5.8 - 8.0
Clutch switch lock nut	12 - 15	1.2 - 1.5	9 - 11
Fulcrum pin securing nut	16 - 22	1.6 - 2.2	12 - 16
Master cylinder push rod lock nut	8 - 12	0.8 - 1.2	5.8 - 8.7
Master cylinder securing nut	8 - 12	0.8 - 1.2	5.8 - 8.7
Supply valve stopper	1.5 - 2.9	0.15 - 0.30	1.1 - 2.2
Operating cylinder securing bolt	30 - 40	3.1 - 4.1	22 - 30
Bleeder screw	6 - 10	0.6 - 1.0	4.3 - 7.2
Clutch damper securing bolt	8 - 11	0.8 - 1.1	5.8 - 8.0
Damper cover to cylinder	3.7 - 5.0	0.38 - 0.51	2.7 - 3.7
Clutch tube flare nut	15 - 18	1.5 - 1.8	11 - 13
Clutch hose to operating cylinder and clutch damper securing nut	17 - 20	1.7 - 2.0	12 - 14
Clutch cover securing bolt			
VG30E	22 - 29	2.2 - 3.0	16 - 22
VG30ET	34 - 44	3.5 - 4.5	25 - 33

SPECIAL SERVICE TOOLS

Tool number (Kent-Moore No)	Tool name	
ST20600000 (J26366)	Clutch aligning bar	
ST20050100 (-)	Distance piece	
ST20050010 (-)	Base plate	
ST20050240 (-)	Diaphragm spring adjusting wrench	
GG94310000 (-)	Flare nut torque wrench	

NISSAN FACTORY SERVICE MANUAL CDROM END-USER LICENSE AGREEMENT

NOTICE TO USER: THIS IS A CONTRACT. BY PURCHASING AND USING THE SERVICE MANUAL ON CDROM, YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

This End User License Agreement accompanies the Service Manual on CDROM product and related explanatory materials. Please read this Agreement carefully. By purchasing and using the Service Manual on CDROM, you are implying that you have carefully read, agree with, and will adhere to the conditions set forth in this agreement. If you do not wish to accept the terms of this End User Agreement please do not use the Service Manual on CDROM. You will not be permitted to use the Service Manual on CDROM without consenting to this end user agreement.

Upon your acceptance of this Agreement, Courtesy Nissan grants to you a nonexclusive license to use the Service Manual on CDROM, provided that you agree to the following:

USE OF SOFTWARE

You may install the contents of the CD on a hard disk or other storage device for personal use only. Each Service Manual on CDROM comes with a single user license. Under no circumstances should the contents of the Service Manual CDROM be placed on a server for purposes of distributing or allowing access to the material over a network.

COPYRIGHT AND TRADEMARK RIGHTS

The Service Manual CDROM is owned by Courtesy Nissan and its structure and organization, all graphics and coding are considered intellectual property of Courtesy Nissan. The Service Manual on CDROM is also protected by United States Copyright Law and International Treaty provisions. This Agreement does not grant you any intellectual property or resale rights to the Service Manual CDROM.

RESTRICTIONS

You agree not to modify, adapt, translate, reverse engineer, decompile or disassemble the PDF file on the Service Manual CDROM. The Service Manual on CDROM is licensed and distributed by Courtesy Nissan for single user utilization of its contents only. Licensed users will be permitted to use the contents of the Service Manual CDROM for multimedia presentation to an audience from a single machine using a large display or projection device but the Service Manual CDROM may not otherwise be distributed, sold to or made accessible to multiple users.

NO WARRANTY

The software is being delivered to you AS IS and Courtesy Nissan makes no warranty as to its use or performance. COURTESY NISSAN DOES NOT AND CANNOT WARRANT THE PERFORMANCE OR RESULTS YOU MAY OBTAIN BY USING THE SERVICE MANUAL CDROM OR DOCUMENTATION, NOR MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, AS TO NONINFRINGEMENT OF THIRD-PARTY RIGHTS, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL COURTESY NISSAN BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES FOR ANY REASON.

Courtesy Nissan
1777 North Central Expressway
Richardson, TX 75080
(800)527-1909

GOVERNING LAW AND GENERAL PROVISIONS

This Agreement will be governed by the laws of the State of Texas, USA, excluding the application of its conflicts of law rules. This Agreement will not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms. You agree that the Service Manual on CDROM will not be shipped, transferred or exported into any country or used in any manner prohibited by the United States Export Administration act or any other export laws, restrictions or regulations. This Agreement shall automatically terminate upon failure by you to comply with its terms. This Agreement may only be modified in writing signed by and authorized officer for Courtesy Nissan.

Courtesy Nissan
1777 North Central Expressway
Richardson, TX 75080
USA

YOUR ACCEPTANCE OF THE FOREGOING AGREEMENT IS IMPLIED UPON PURCHASING AND USING THE SERVICE MANUAL CDROM.