

SECTION CL

MODIFICATION NOTICE:

- Service Data and Specifications (SDS) have been changed.

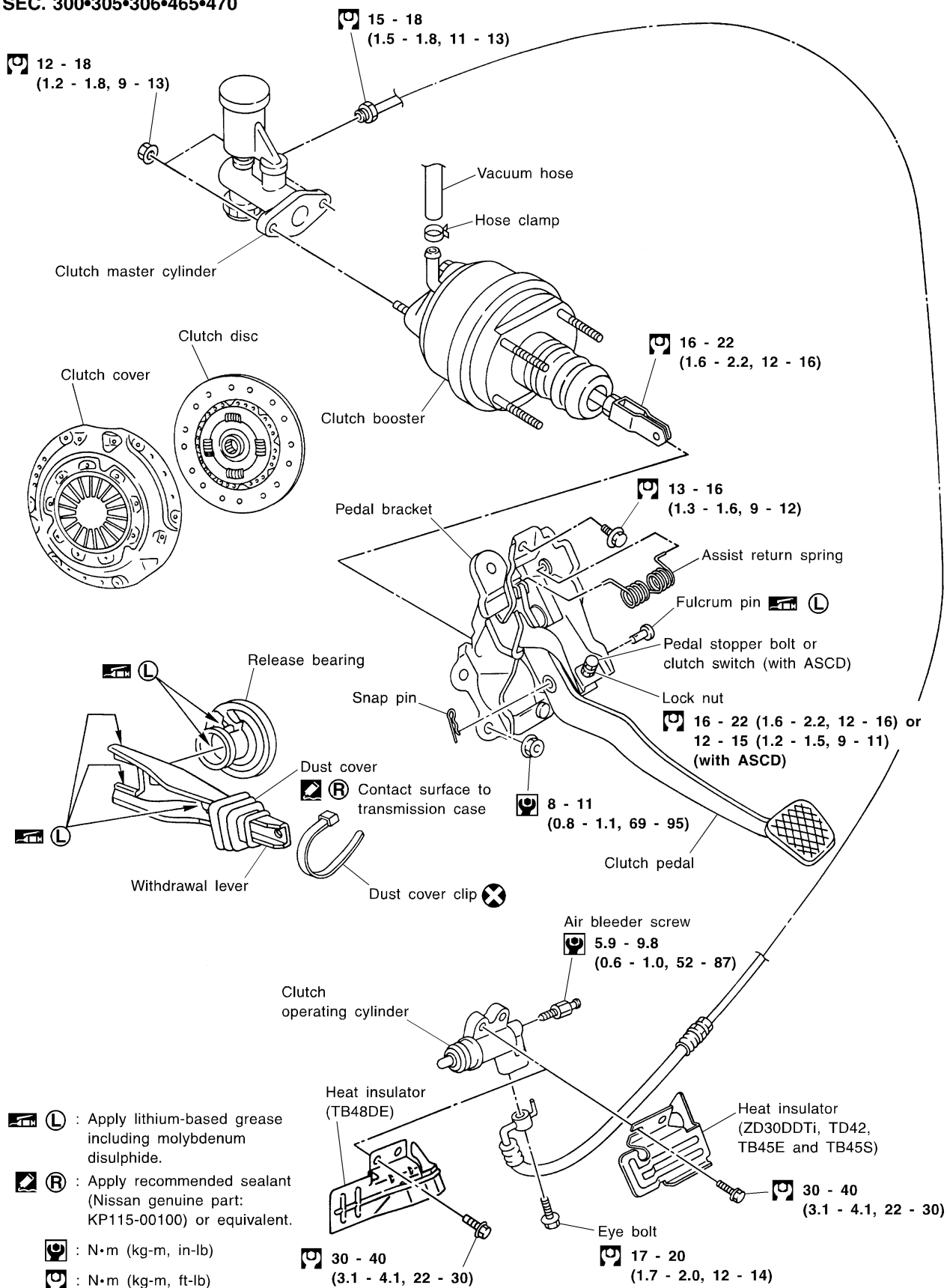
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CLUTCH SYSTEM

SEC. 300•305•306•465•470



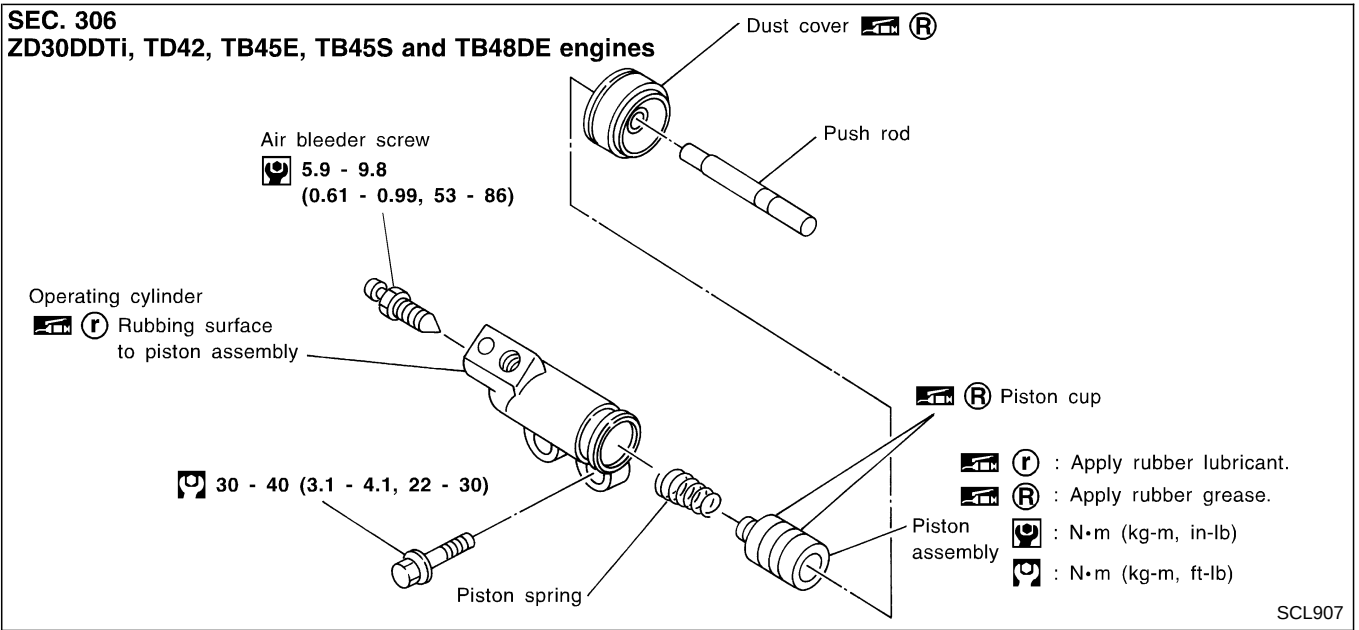
SCL906

HYDRAULIC CLUTCH CONTROL

Clutch Operating Cylinder

SEC. 306

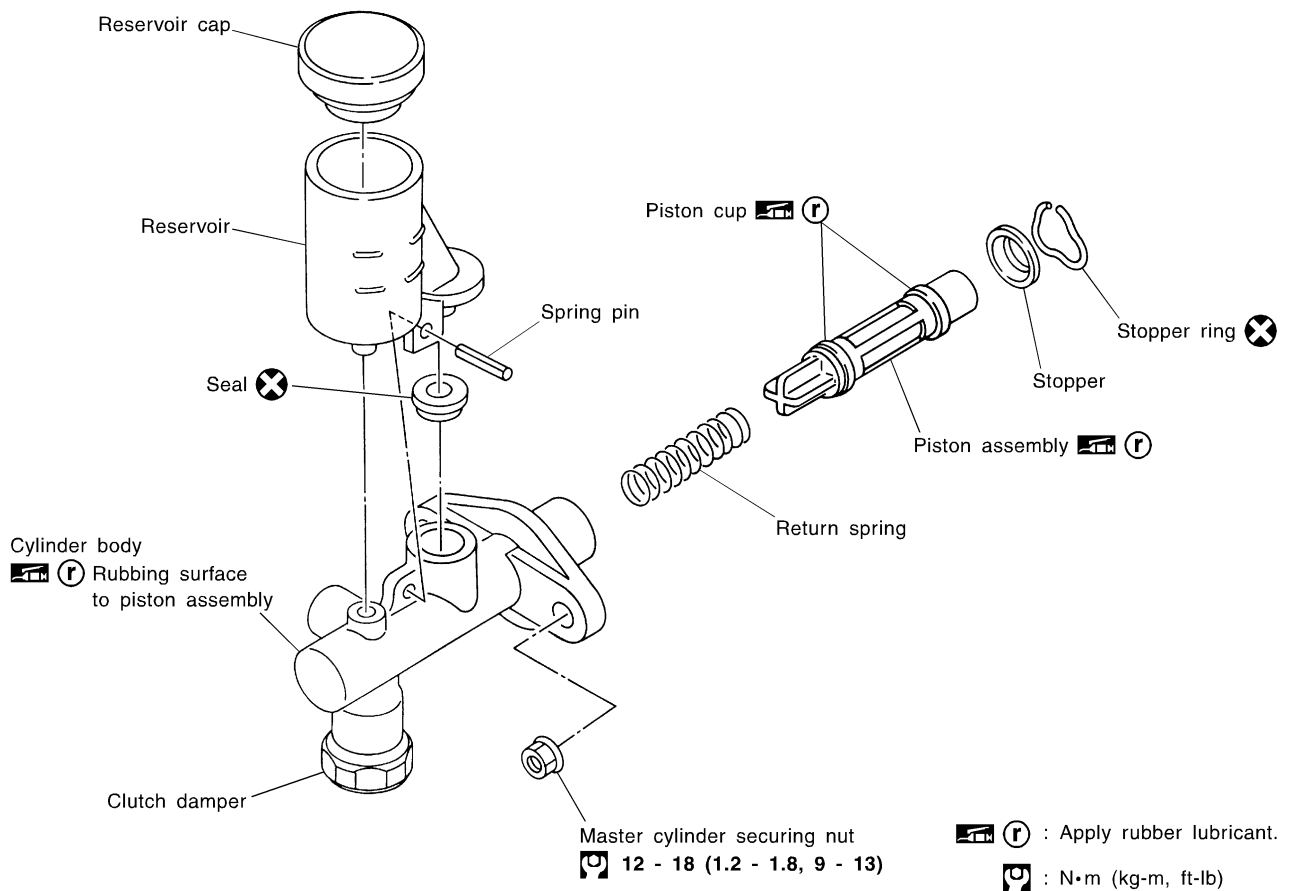
ZD30DDTi, TD42, TB45E, TB45S and TB48DE engines



HYDRAULIC CLUTCH CONTROL

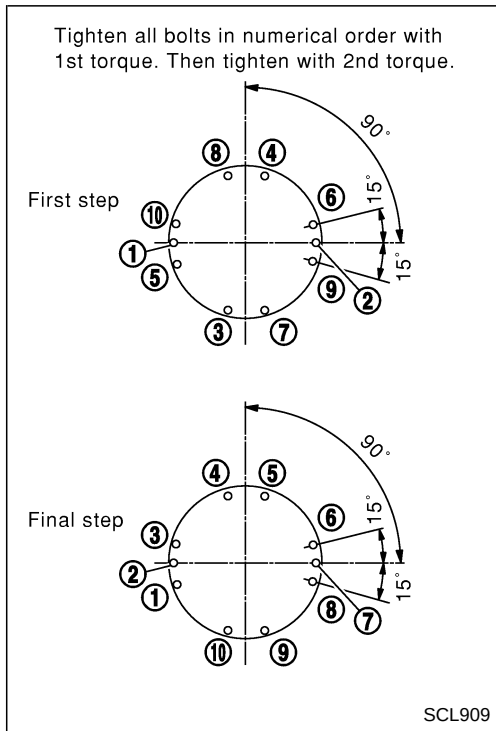
Clutch Master Cylinder

SEC. 305



SCL908

CLUTCH DISC AND CLUTCH COVER



Clutch Cover

INSTALLATION

Model 300

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

: 29 - 39 N·m (2.9 - 4.0 kg-m, 21 - 28 ft-lb)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications

CLUTCH CONTROL SYSTEM

Type of clutch control	Hydraulic
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CLUTCH MASTER CYLINDER (with clutch damper)

Unit: mm (in)	
Inner diameter	17.46 (11/16)

CLUTCH OPERATING CYLINDER

Unit: mm (in)	
Inner diameter	20.64 (13/16)

CLUTCH BOOSTER

Unit: mm (in)	
Type	M45
Diaphragm diameter	114.3 (4.50)
Check valve type	Built-in hose type

CLUTCH DISC

Applied model	ZD30DDTi
	275
	H/T and Wagon
Facing size (Outer dia. x inner dia. x thickness) mm (in)	275 x 180 x 3.5 (10.83 x 7.09 x 0.14)
Thickness of disc assembly with load mm (in)/N (kg, lb)	7.8 - 8.4 (0.31 - 0.33) /7,846 (800, 1,764)

CLUTCH COVER

Applied model	ZD30DDTi	
	275	
	H/T	Wagon
Full load N (kg, lb)	6,473 - 7,257 (660 - 740, 1,455 - 1,632)	7,355 - 8,366 (750 - 850, 1,654 - 1,874)

Inspection and Adjustment

CLUTCH PEDAL

Unit: mm (in)		
Applied model	ZD30DDTi	
	H/T	Wagon
Pedal height "H"	195 - 205 (7.68 - 8.07)	200 - 210 (7.87 - 8.27)
Pedal free play "A" (at pedal pad)	1.0 - 3.0 (0.039 - 0.118)	

*: Measured from surface of melt sheet to pedal pad

CLUTCH BOOSTER

Unit: mm (in)	
Output rod length "A"	1.30 - 1.55 (0.0512 - 0.0610)
Input rod length "B"	130 (5.12)

CLUTCH DISC

Unit: mm (in)	
Applied model	ZD30DDTi
	275
	H/T and Wagon
Wear limit of facing surface to rivet head	0.3 (0.012)
Runout limit of facing	1.3 (0.051)
Distance of runout check point (from the hub center)	132.5 (5.22)
Maximum backlash of spline (at outer edge of disc)	1.0 (0.039)

SERVICE DATA AND SPECIFICATIONS (SDS)

CLUTCH COVER

Unit: mm (in)

Applied model	ZD30DDTi
	275
	H/T and Wagon
Diaphragm spring height "A"	44 - 46 (1.732 - 1.811)
Uneven limit of diaphragm spring toe height	0.7 (0.028)