

STEERING SYSTEM

SECTION **ST**

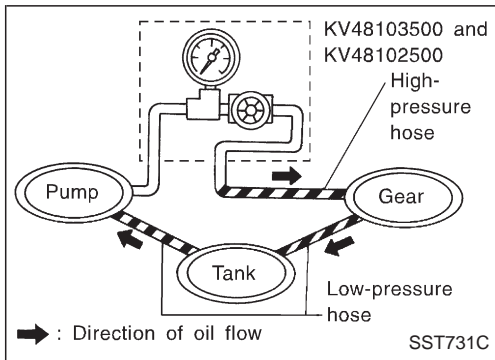
MODIFICATION NOTICE:

Models with the TD25T engine have been newly added.

CONTENTS

ON-VEHICLE SERVICE	1002	Disassembly and Assembly	1003
Checking Hydraulic System (For power steering)	1002	Inspection	1004
STEERING WHEEL AND STEERING COLUMN	1003	SERVICE DATA AND SPECIFICATIONS (SDS)	1005
		Inspection and Adjustment	1005

ON-VEHICLE SERVICE



Checking Hydraulic System (For power steering)

Before starting, check belt tension, driving pulley and tire pressure.

1. Set Tool. Open shut-off valve. Then bleed air. Refer to "Bleeding Hydraulic System".
2. Run engine at idle speed or 1,000 rpm.
 - **Make sure temperature of fluid in reservoir tank rises to 60 to 80°C (140 to 176°F).**

WARNING:

Warm up engine with shut-off valve fully opened. If engine is started with shut-off valve closed, fluid pressure in power steering pump increases to maximum. This will raise fluid temperature abnormally.

3. Check pressure with steering wheel fully turned to left and right positions while idling at 1,000 rpm.

CAUTION:

Do not hold the steering wheel at full lock position for more than 15 seconds.

Oil pump maximum pressure:

TD25T engine 8,140 - 8,728 kPa (81.4 - 87.3 bar, 83 - 89 kg/cm², 1,180 - 1,266 psi) at idling

4. If power steering pressure is below standard pressure, slowly close shut-off valve and check pressure.

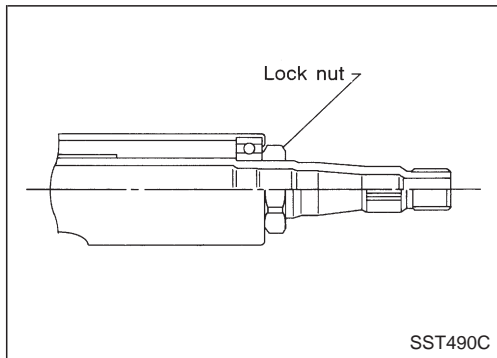
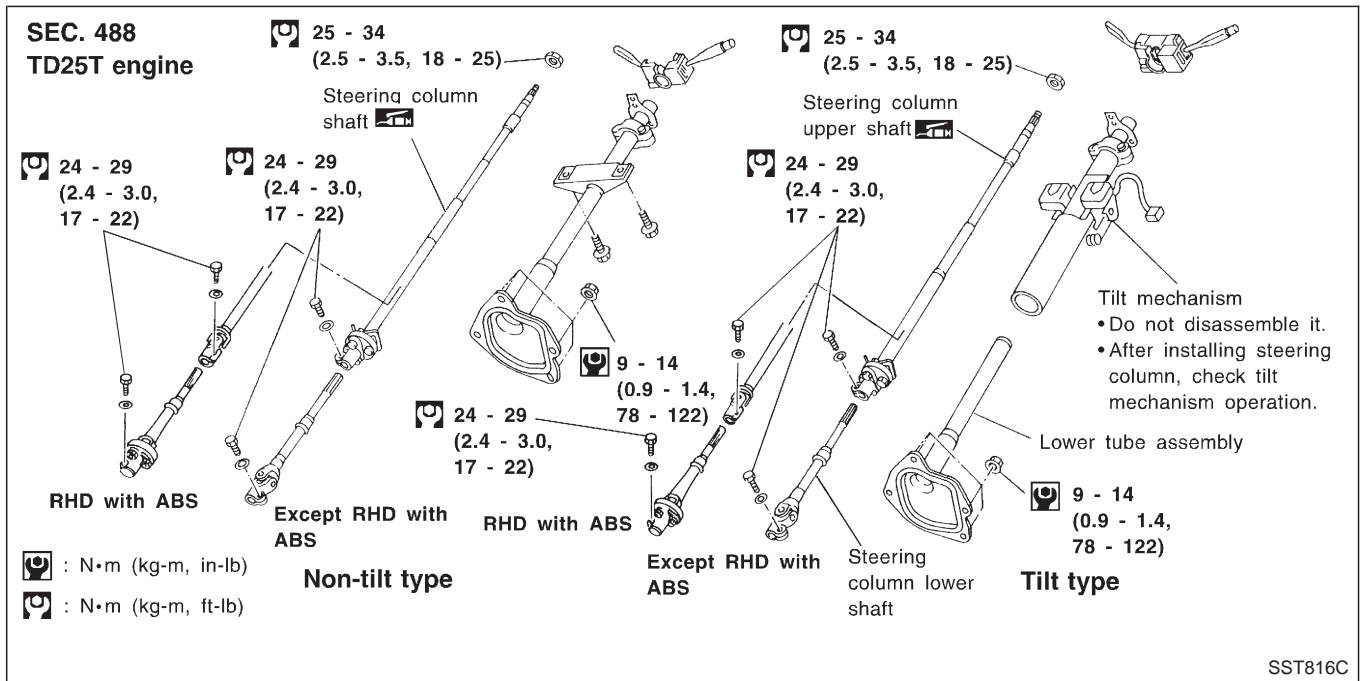
CAUTION:

Do not close shut-off valve for more than 15 seconds.

- When pressure reaches maximum pressure, gear is damaged. Check power steering gear. Refer to "POWER STEERING GEAR (Model: PB59K)".
 - When pressure remains below standard pressure, pump is damaged. Check power steering pump. Refer to "POWER STEERING OIL PUMP".
5. If power steering pressure is higher than standard pressure, power steering pump flow control valve is damaged. Check power steering pump. Refer to "POWER STEERING OIL PUMP".
 6. After checking hydraulic system, remove Tool and add fluid as necessary. Then completely bleed air out of system. Refer to "Bleeding Hydraulic System".

STEERING WHEEL AND STEERING COLUMN

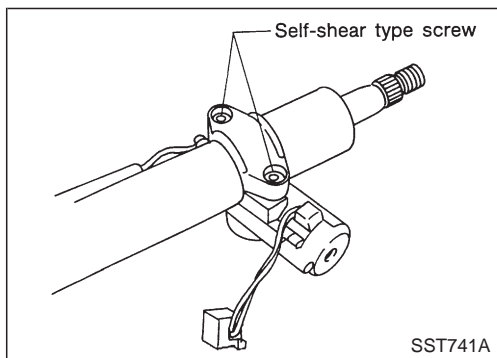
Disassembly and Assembly



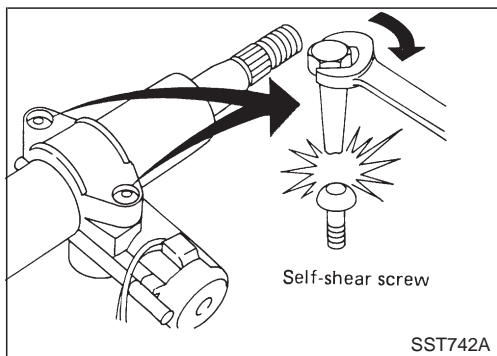
- When disassembling and assembling, unlock steering lock with key.
- Remove combination switch.
- Install lock nut on steering column shaft and tighten the nut to specified torque.

Lock nut:

: 25 - 34 N·m(2.5 - 3.5 kg-m, 18 - 25 ft-lb)



- Steering lock
 - a. Break self-shear type screws using a drill or other appropriate tool.



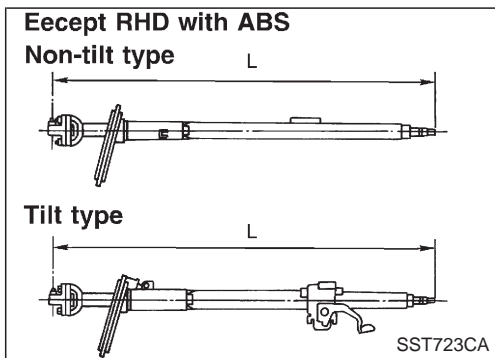
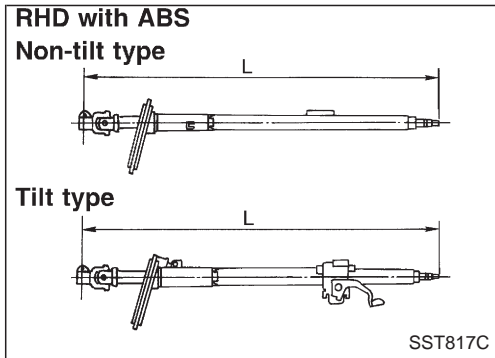
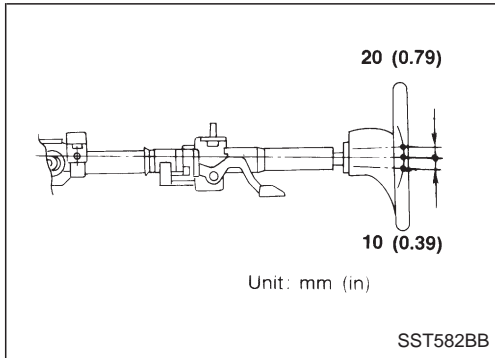
- b. Install self-shear type screws, then tighten until heads break off.

STEERING WHEEL AND STEERING COLUMN

Disassembly and Assembly (Cont'd)

Tilt mechanism

After installing steering column, check tilt mechanism operation.



Inspection

- When steering wheel does not turn smoothly, check the steering column as follows and replace damaged parts.
 - a. Check column bearings for damage or unevenness. Lubricate with recommended multi-purpose grease or replace steering column as an assembly, if necessary.
 - b. Check jacket tube for deformation or breakage. Replace if necessary.
- When the vehicle is involved in a light collision, check dimension "L". If it is not within specifications, replace steering column as an assembly.

Column length "L":

RHD with ABS

895.0 - 896.6 mm (35.24 - 35.30 in)

Except RHD with ABS

863.1 - 864.7 mm (33.98 - 34.04 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

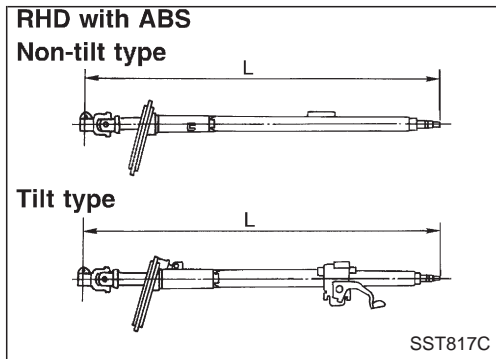
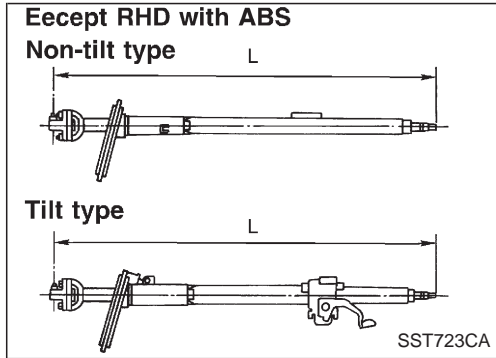
Inspection and Adjustment

STEERING COLUMN

TD25T engine

Unit: mm (in)

	Dimension "L"
RHD with ABS	895.0 - 896.6 (35.24 - 35.30)
Except RHD with ABS	863.1 - 864.7 (33.98 - 34.04)



POWER STEERING SYSTEM

(Model: PB59K)

Steering wheel turning force (at 360° from neutral position and circumference of steering wheel) N (kg, lb)	39 (4, 9) or less
Oil pump pressure kPa (bar, kg/cm ² , psi)	TD25T engine 8,140 - 8,728 (81.4 - 87.3, 83 - 89, 1,180 - 1,266) at idling
Fluid capacity ml (Imp fl oz)	Approximately 1,000 - 1,100 (35.2 - 38.7)
Normal operating temperature °C (°F)	60 - 80 (140 - 176)
Steering gear turning torque N·m(kg·cm, in·lb)	
360° position from straight-ahead position	0.15 - 0.78 (1.5 - 8.0, 1.3 - 6.9)
Straight-ahead position (As compared with steering wheel turned 360°)	0.2 - 0.5 (2 - 5, 1.7 - 4.3) higher
Maximum turning torque	0.44 - 1.18 (4.5 - 12, 3.9 - 10.4)
Backlash at pitman arm top end (in a straight-ahead position) mm (in)	0 - 0.1 (0 - 0.004)
End play (at sector shaft end in neutral position) mm (in)	0.1 (0.004) or less