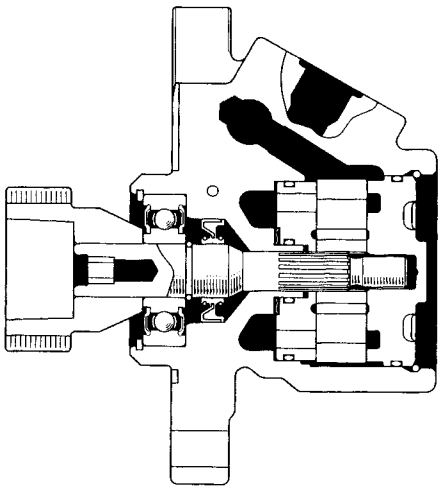
■CONSTRUCTION AND OPERATION

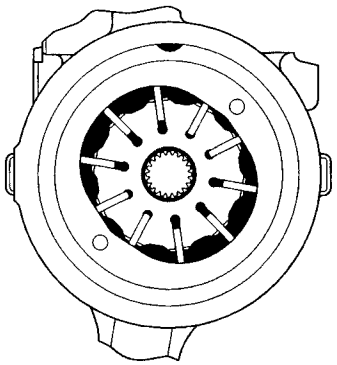
In this item is explained on the power steering. In case of the manual steering is not explained because of simple and popular things.

1. Vane Pump and Reservoir

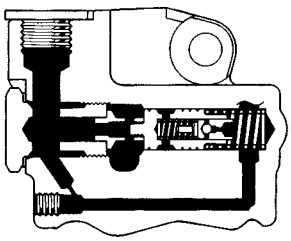
- Wide cab models are equipped with a compact, lightweight vane pump with built-in flow control valve.
- Separate reservoir tanks were provided on their models for improved serviceability during inspection and removal/reinstallation work.



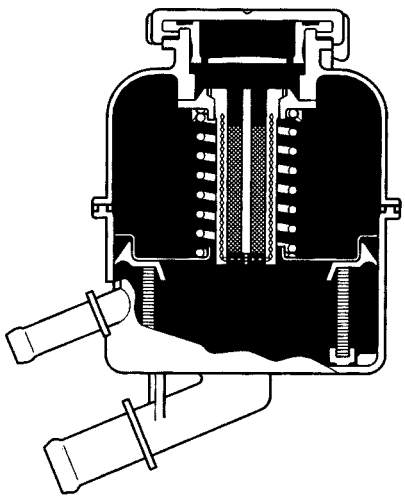
Vane pump cross section



Vane pump part



Flow control valve cross section



Reservoir tank cross section

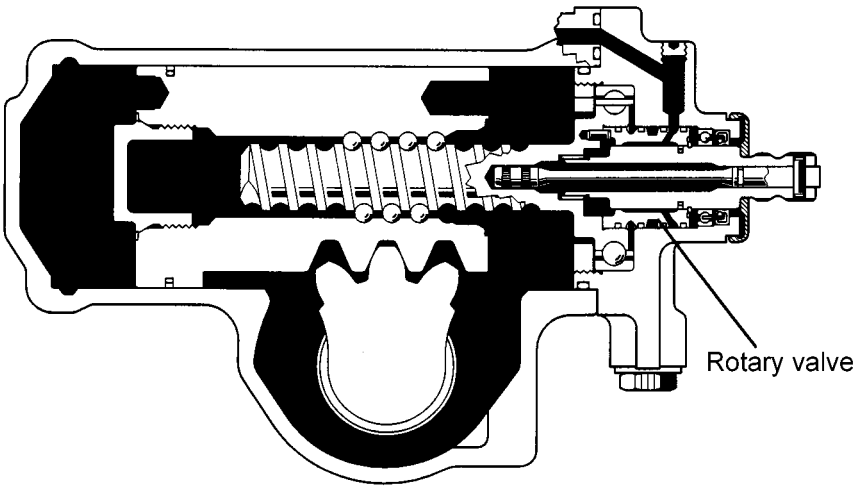
▶ Vane Pump Specifications ◀

Gross vehicle weight rating		5.5 ton GVWR	7.5 ton GVWR
Pumping speed	(r/min.)	500~6000	←
Theoretical discharge rate	(L/min.)	13.3	←
Relief pressure	(Mpa)	7.6	9.7

2. Steering Gear

▶ Recirculating Ball Steering ◀

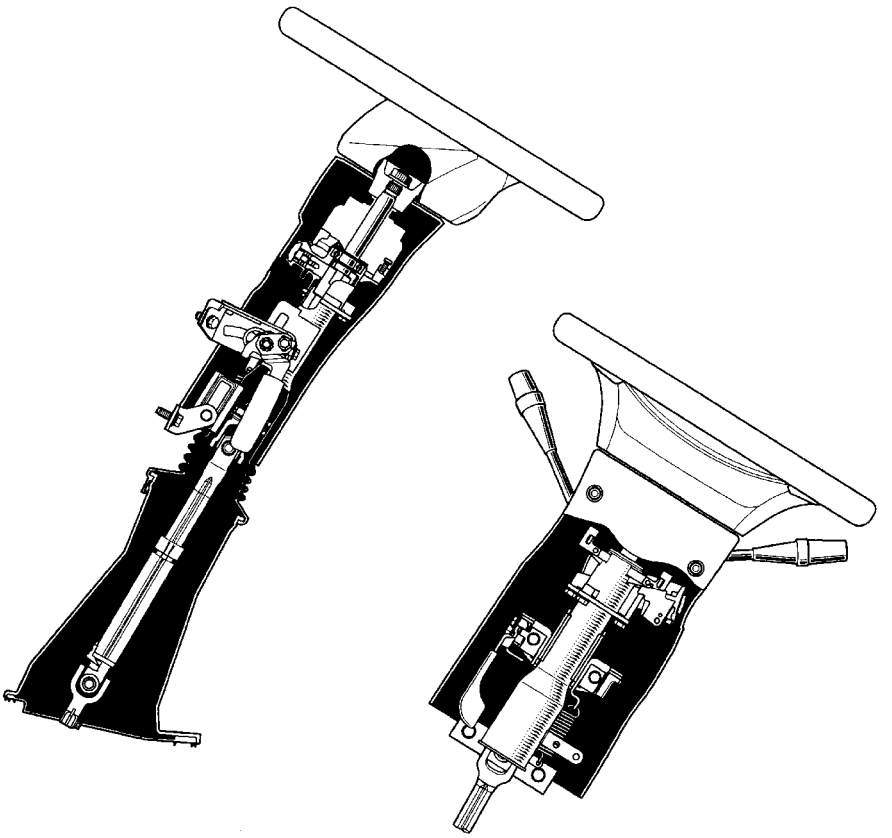
The oil pressure changeover valve in the recirculating ball steering gear was changed from a spool type to a rotary type to obtain a natural steering feeling.



Recirculating ball steering gear cross section

3. Steering Column

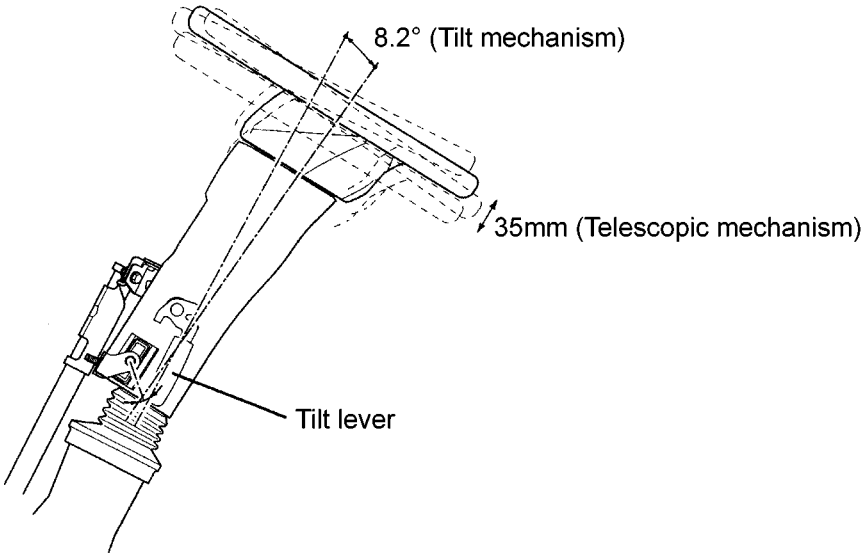
- Wide cab models are equipped with a steering column with tilt and telescopic adjustment for improved handling characteristics and riding comfort.
- The column is also equipped with an energy-absorbing device with a newly developed E/A (energy-absorbing) plate.



Tilt and telescopic type steering column

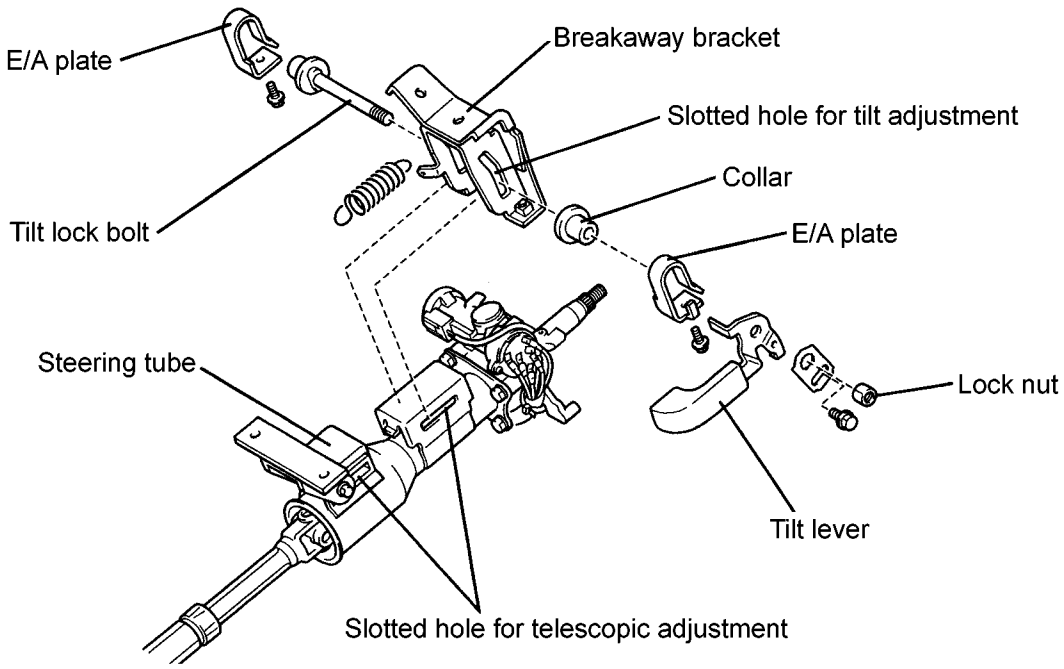
[1] Tilt and telescopic mechanism

The tilt and telescopic mechanism has an 8.2° tilt and 35 mm telescopic adjustment range, and both adjustments are stepless and controlled by operation of a single tilt lever.



1) Construction

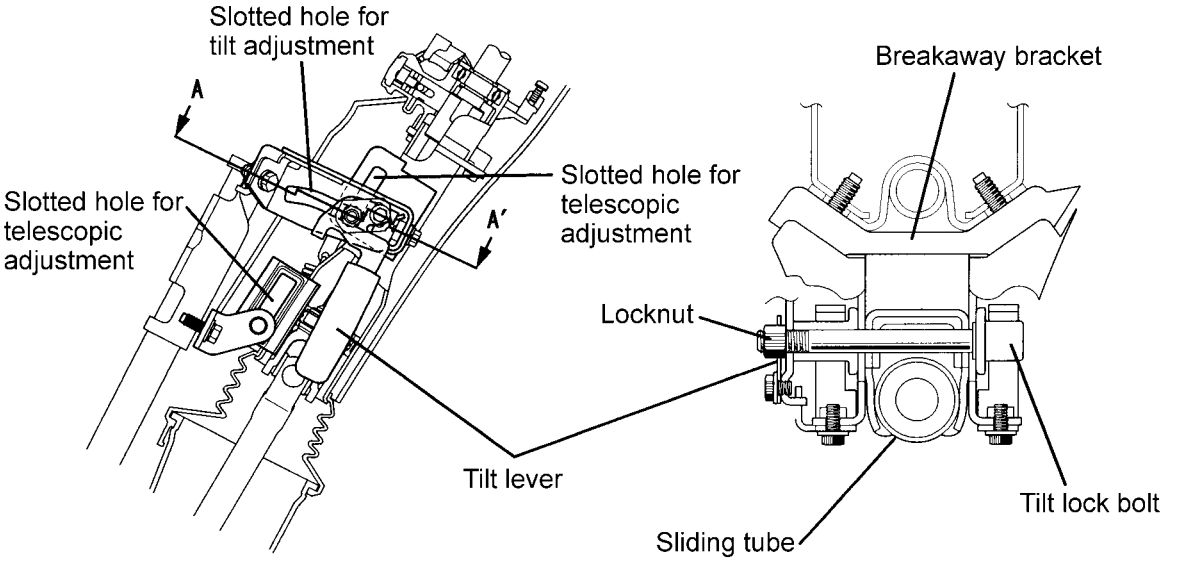
The tilt and telescopic mechanism consists of a breakaway bracket, steering tube, tilt lock bolt, tilt lever, and other components. Slotted holes were provided on the breakaway bracket and steering tube.



* E/A : Energy Absorbing

2) Operation

Operating the tilt lever releases the locknut and tilt lock bolt, which are coupled to the lever, and frees the breakaway bracket and the steering tube. During tilt adjustment, the tilt lock bolt moves back and forth inside the slotted hole in the breakaway bracket; for telescopic adjustment, the bolt moves up and down inside the slotted hole in the steering tube. The steering wheel can be moved to the desired position and fixed in place by locking the tilt lever.

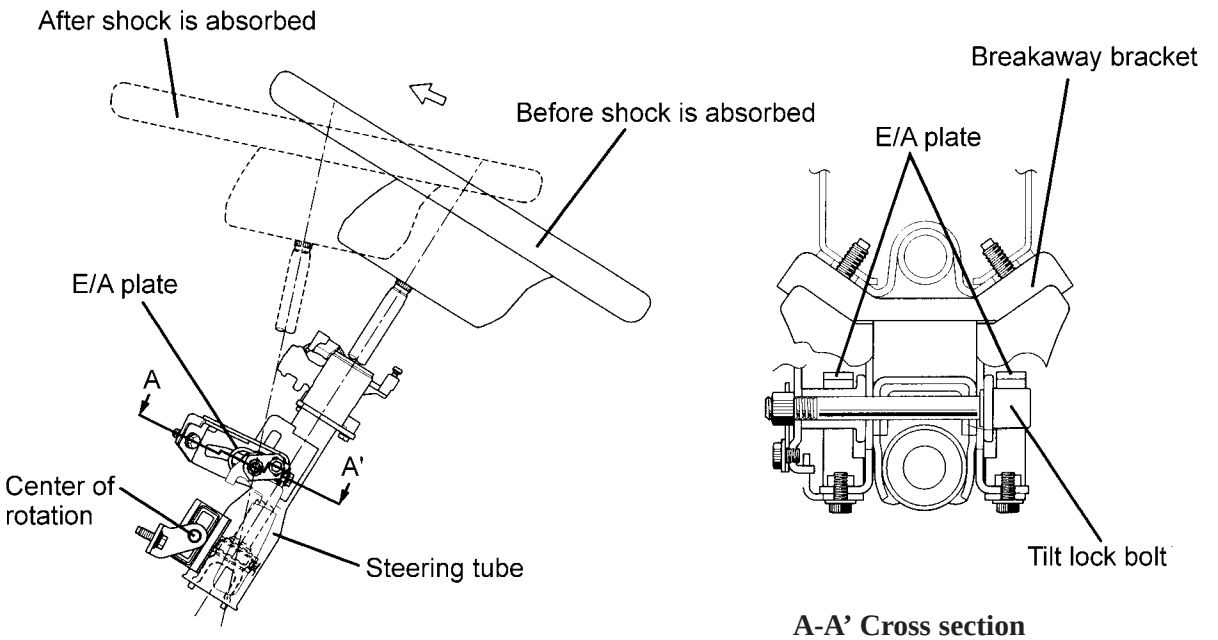


A-A' Cross section

[2] Energy-absorbing mechanism

1) E/A plate construction

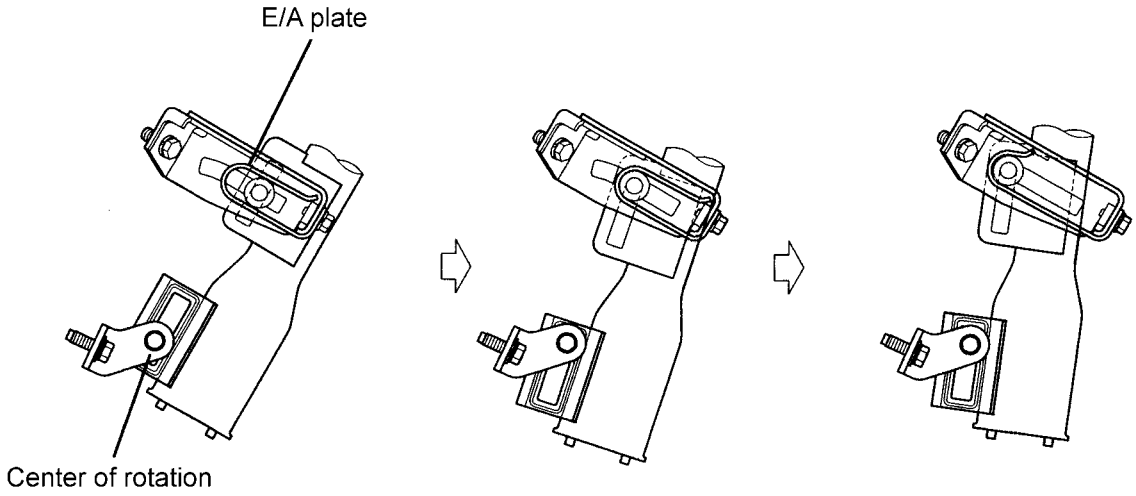
The energy-absorbing mechanism is comprised of a tilt lock bolt, breakaway bracket, E/A plate, and other parts.



A-A' Cross section

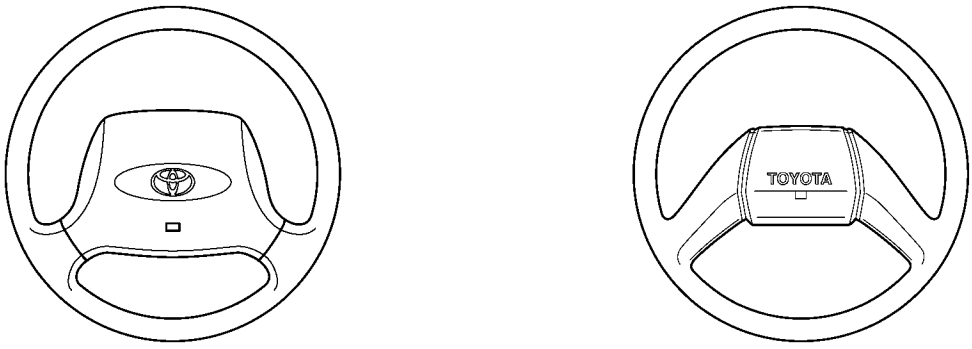
2) E/A plate operation

When a frontal collision occurs, the energy is absorbed by the steering wheel and at the same time the steering column turns around its lower bracket toward the front of the vehicle as the E/A plate deforms. This reduces the impact on the driver.



4. Steering Wheel

A urethane two-spoke steering wheel is provided as standard equipment on wide cab models. For regular cab models, steering wheel is made of polypropylene.



239CH01

Wide cab model
Regular cab option model

Regular cab model

Two-spoke steering wheel