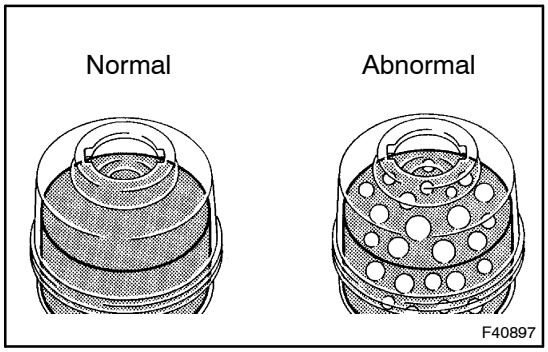
510CV–01

ON–VEHICLE INSPECTION

1. BLEED POWER STEERING SYSTEM

(a) Check the fluid level.
(b) Jack up the front of the vehicle and support it with stands.
(c) Turn the steering wheel.
  (1) With the engine stopped, turn the wheel slowly from lock to lock several times.
(d) Lower the vehicle.
(e) Start the engine.
  (1) Run the engine at idle for a few minutes.
(f) Turn the steering wheel.
  (1) With the engine idling, turn the wheel to the left or right full lock position and keep it there for 2 – 3 seconds, then turn the wheel to the opposite full lock position and keep it there for 2 – 3 seconds.
  (2) Repeat (1) several times.
(g) Stop the engine.

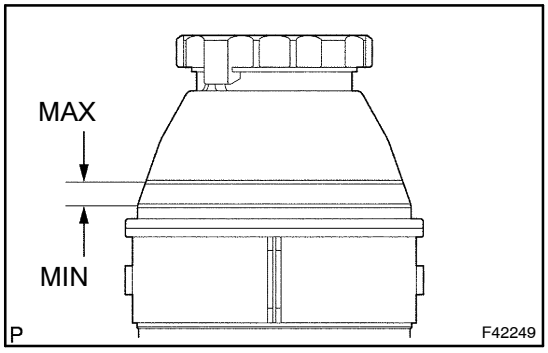


(h) Check for foaming or emulsification.

NOTICE:

If the system has to be bled twice because of foaming or emulsification, check for fluid leaks in the system.

(i) Check the fluid level.



2. CHECK FLUID LEVEL

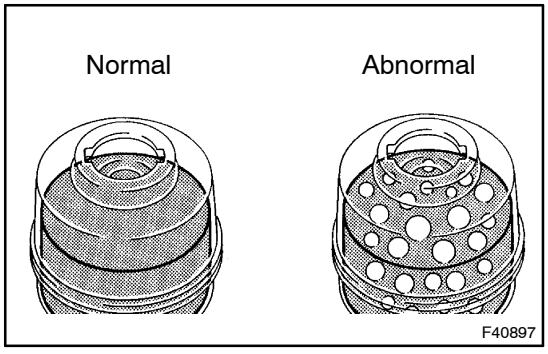
(a) Put the vehicle in a level place.
(b) With the engine stopped, check the fluid level in the oil reservoir.

If necessary, add fluid.

Fluid: ATF DEXRON® II or III

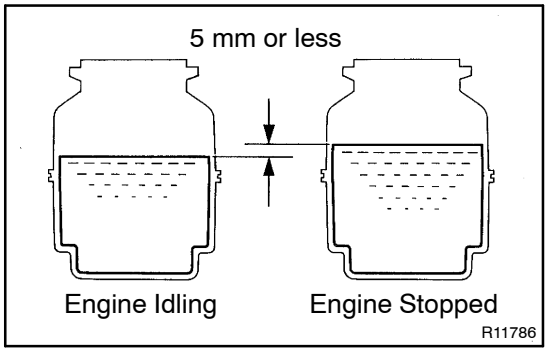
HINT:

Check that the fluid level is within the MAX LEVEL range on the reservoir.



(c) Check for foaming or emulsification.

If foaming or emulsification is found, bleed the power steering system.



(d) With the engine idling, measure the fluid level in the oil reservoir.
(e) Stop the engine.
(f) Wait a few minutes and measure the fluid level in the oil reservoir again.
Maximum fluid level rise: 5 mm (0.20 in.)

If a problem is found, bleed the power steering system.

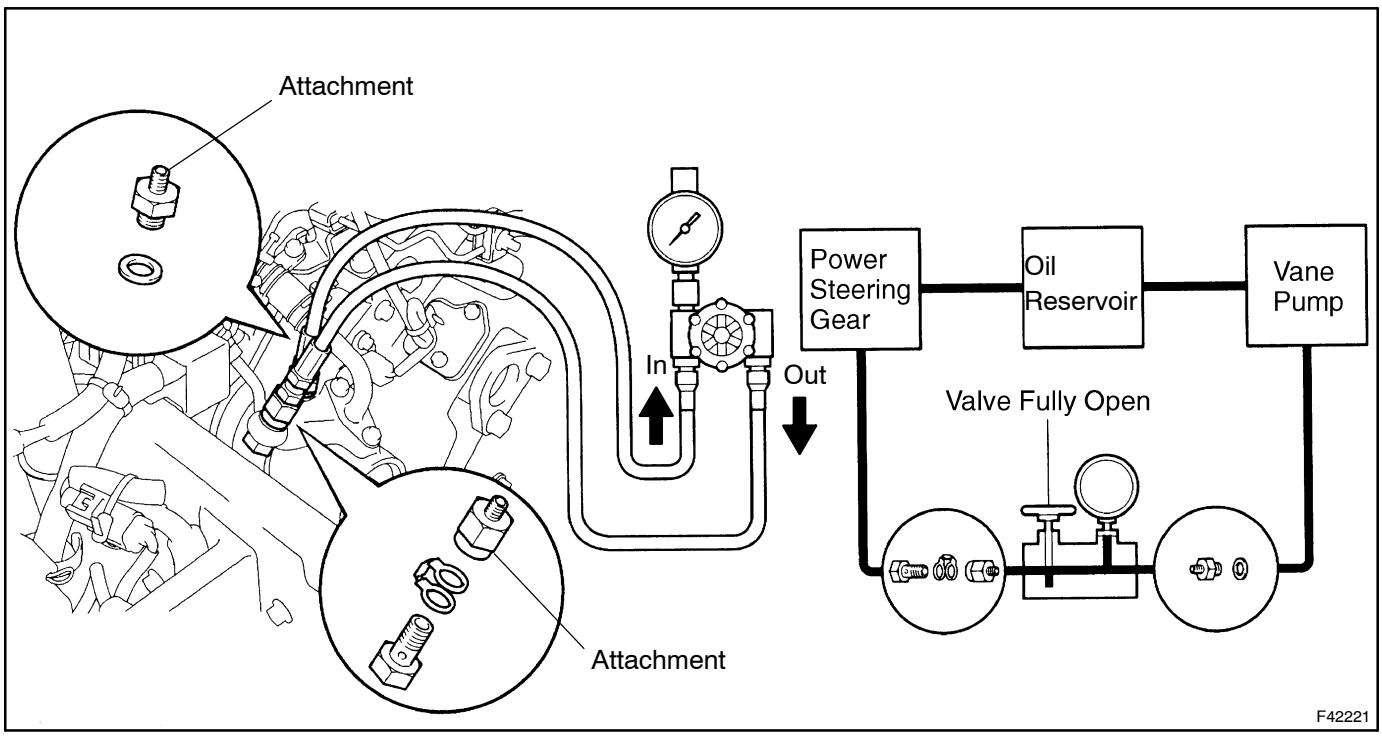
(g) Check the fluid level.

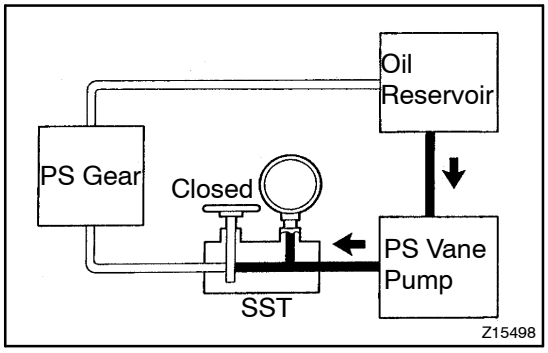
3. CHECK STEERING FLUID PRESSURE

(a) Disconnect the pressure feed tube from the vane pump (See pages 51–10, 51–18, 51–27 and 51–37).
(b) Connect SST, as shown in the illustration.
SST 09640–10010 (09641–01010, 09641–01030, 09641–01040)

NOTICE:
Check that the valve of the SST is in the open position.

(c) Bleed the power steering system.
(d) Start the engine and run it at idle.
(e) Turn the steering wheel from lock to lock several times to raise fluid temperature.
Fluid temperature: 75 – 80°C (167 – 176°F)





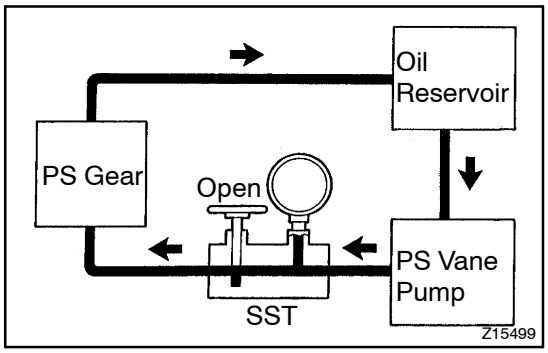
(f) With the engine idling, close the valve of the SST and observe the reading on the SST.

Minimum fluid pressure:

Model	Fluid pressure
4 ton model (6 Hub bolts)	9,300 kPa (95 kgf/cm^2, 1,351 psi)
2 ton model (5 Hub bolts)	7,400 kPa (75 kgf/cm^2, 1,067 psi)

NOTICE:

- **Do not maintain the valve closed for more than 10 seconds.**
- **Do not allow the fluid temperature to become too high.**



(g) With the engine idling, open the valve fully.

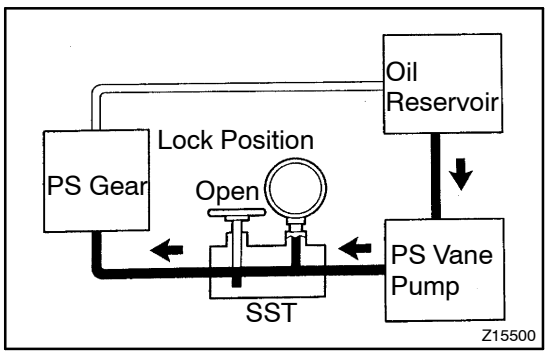
(h) Measure the fluid pressure at engine speed of 1,000 rpm and 3,000 rpm.

Difference fluid pressure:

490 kPa (5 kgf/cm^2, 71 psi) or less

NOTICE:

Do not turn the steering wheel.



(i) With the engine idling and valve of SST fully opened, turn the steering wheel to the full lock position and check the reading on SST.

Minimum fluid pressure:

Model	Fluid pressure
4 ton model (6 Hub bolts)	9,300 kPa (95 kgf/cm^2, 1,351 psi)
2 ton model (5 Hub bolts)	7,400 kPa (75 kgf/cm^2, 1,067 psi)

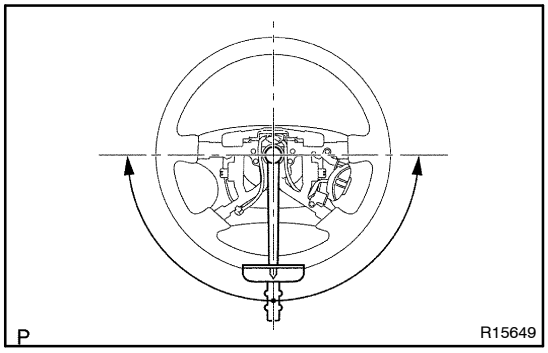
NOTICE:

- **Do not maintain the steering wheel at the lock position for more than 10 seconds.**
- **Do not allow the fluid temperature to become too high.**

(j) Disconnect the SST.

SST 09640–10010 (09641–01010, 09641–01030, 09641–01060)

(k) Connect the pressure feed tube to the vane pump (See pages 51–10, 51–18, 51–27 and 51–37).



4. CHECK STEERING EFFORT

(a) Center the steering wheel.

(b) Remove the steering wheel pad (See page 50–8).

(c) Start the engine and run it at idle.

(d) Measure the steering effort in both directions.

Steering effort (Reference):
6 N·m (60 kgf·cm, 53 in.·lbf) or less

HINT:
Take the tire type, pressure and contact surface into consideration before making your diagnosis.

(e) Torque the steering wheel set nut.

Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)

(f) Install the steering wheel pad (See page 50–8).