

# Steering: Testing and Inspection

## Power Steering System

| Symptom  | Possible Cause   | Remedy   |
|--|--|--|
| <b>Steering wheel feels heavy (at low speed)</b>                                   | <ul style="list-style-type: none"> <li>● Fluid deteriorated, low viscosity, different type of fluid mixed</li> <li>● Pipes or hoses deformed, air entering through joint</li> <li>● Insufficient air purging from P/S circuit</li> <li>● P/S belt worn, lacking in tension</li> <br/> <li>● Tire inflation pressure excessively low</li> <li>● Front end alignment out of order</li> <br/> <li>● Steering wheel installed improperly (twisted)</li> <li>● Bind in tie rod or tie rod end ball joint</li> <li>● P/S pump hydraulic pressure fails to increase</li> <br/> <li>● P/S pump hydraulic pressure increases but slowly</li> <li>● Steering gear box malfunction</li> </ul> | <p>Replace fluid.</p> <p>Replace defective part.</p> <p>Purge air.</p> <p>Adjust belt tension or replace belt as necessary.</p> <p>Inflate tire.</p> <p>Check and adjust front end alignment.</p> <p>Install steering wheel correctly.</p> <p>Replace defective part.</p> <p>Check pressure and repair or replace defective part.</p> <p>Check pressure and repair or replace defective part.</p> <p>Replace gear box.</p> |
| <b>Steering wheel feels heavy momentarily when turning it to the left or right</b> | <ul style="list-style-type: none"> <li>● Air drawn in due to insufficient amount of fluid</li> <li>● Slipping P/S belt</li> <br/> <li>● P/S pump hydraulic pressure fails to increase</li> <br/> <li>● P/S pump hydraulic pressure increases but slowly</li> <li>● Steering gear box malfunction</li> </ul>  | <p>Add fluid purge air.</p> <p>Adjust belt tension or replace belt as necessary.</p> <p>Check pressure and repair or replace defective part.</p> <p>Check pressure and repair or replace defective part.</p> <p>Replace gear box.</p>  |
| <b>Poor recovery from turns</b>  | <p><b>NOTE:</b><br/> <b>To check steering wheel for recovery, with vehicle running at 22 mile/h (35 km/h), turn steering wheel 90° and let it free. It should return more than 60°.</b></p> <ul style="list-style-type: none"> <li>● Deformed pipes or hoses</li> <li>● Steering column installed improperly</li> <li>● Front end alignment out of order</li> <br/> <li>● Ball joints binding</li> <li>● P/S pump hydraulic pressure fails to increase</li> <br/> <li>● P/S pump hydraulic pressure increases but slowly</li> <li>● Steering gear box malfunction</li> </ul>   | <p>Replace defective part.</p> <p>Install steering column correctly.</p> <p>Check and adjust front end alignment.</p> <p>Replace defective part.</p> <p>Check pressure and repair or replace defective part.</p> <p>Check pressure and repair or replace defective part.</p> <p>Replace gear box.</p>  |

| Symptom  | Possible Cause  | Remedy  |
|--|---|---|
| <b>Vehicle pulls to one side during straight driving</b> | <ul style="list-style-type: none"> <li>● Mismatched or uneven tire</li> <li>● Low or uneven tire inflation pressure</li> <br/> <li>● Brake dragging in one wheel</li> <li>● Front end alignment out of order</li> <br/> <li>● Rear end alignment out of order</li> <br/> <li>● Malfunction of control valve in gear box</li> </ul>  | <p>Replace tire.<br/>Inflate tires to proper pressure or adjust right &amp; left tires inflation pressure.</p> <p>Repair.<br/>Check and adjust front end alignment.<br/>Check and adjust rear end alignment.<br/>Replace gear box.</p>                      |
| <b>Steering wheel play is large and vehicle wanders</b>  | ● Refer to <b>Suspension: Testing and Inspection</b>  |   |
| <b>Fluid leakage</b>                                     | <ul style="list-style-type: none"> <li>● Loose joints of (hydraulic pressure) pipes and hoses</li> <li>● Deformed or damaged pipes or hoses</li> </ul>  | <p>Retighten.</p> <p>Replace defective part.</p>  |
| <b>Abnormal noise</b>                                    | <ul style="list-style-type: none"> <li>● Air drawn in due to insufficient amount of fluid</li> <li>● Air mixed into fluid from pipes or hoses</li> <li>● Slipping (loose) P/S belt</li> <li>● Worn P/S belt</li> <li>● Loose gear box fastening bolt</li> <li>● Loose linkage or joints</li> <li>● Pipes or hoses in contact with part of vehicle body</li> <li>● Vanes of P/S pump defective</li> <li>● Malfunction of control valve in gear box</li> <li>● Bearing of P/S pump shaft defective</li> </ul> | <p>Add fluid and purge air.<br/>Replace pipes or hoses.<br/>Adjust belt tension.<br/>Replace belt.<br/>Retighten bolts.<br/>Retighten.<br/>Install pipes and hoses correctly.</p> <p>Replace defective part.<br/>Replace gear box.<br/>Replace bearing.</p> |

GENERAL DIAGNOSIS TABLE