

## General Diagnostic Table

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

### 14. General Diagnostic Table

#### A: INSPECTION

Symptom		Main probable cause	Other probable cause
Poor brake performance	Long braking/stopping distance	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• Brake pad</li> <li>• Air in brake line</li> <li>• Tire specifications, tire wear and air pressure</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Brake booster</li> </ul>
	Wheels lock-up.	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Brake caliper</li> <li>• Brake pipe</li> </ul>
	Brake drag	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Parking brake</li> <li>• Axle &amp; wheels</li> <li>• Brake pedal play</li> </ul>	<ul style="list-style-type: none"> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Brake pad</li> <li>• Brake pipe</li> </ul>
	Brake pedal stroke is large.	<ul style="list-style-type: none"> <li>• Air in brake line</li> <li>• Brake pedal play</li> </ul>	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Brake pipe</li> <li>• Brake booster</li> </ul>
	Vehicle pitching	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• Uneven road surface</li> <li>• Suspension play or fatigue (Decreased damping force)</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> </ul>
Poor brake performance	Unbalance braking or unbalanced braking effect	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Uneven road surface</li> <li>• Tire specifications, tire wear and air pressure</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Master cylinder</li> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Axle &amp; wheels</li> <li>• Crown shaped road/road with banks</li> <li>• Suspension play or fatigue (Decreased damping force)</li> </ul>

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Vibration and noise <ul style="list-style-type: none"> <li>• When braking suddenly</li> <li>• When accelerating suddenly</li> <li>• When driving on slippery road surfaces</li> </ul>	Excessive brake pedal vibration	<ul style="list-style-type: none"> <li>• Uneven road surface</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• Brake booster</li> <li>• Suspension play or fatigue (Decreased damping force)</li> </ul>
	Noise from VDCH/U	<ul style="list-style-type: none"> <li>• VDCH/U (mount bushing)</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Brake pipe</li> </ul>	<ul style="list-style-type: none"> <li>• VDCCM</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> </ul>
	Noise from the front side of vehicle	<ul style="list-style-type: none"> <li>• VDCH/U (mount bushing)</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Brake booster</li> <li>• Suspension play or fatigue (Decreased damping force)</li> </ul>	<ul style="list-style-type: none"> <li>• Axle &amp; wheels</li> <li>• Tire specifications, tire wear and air pressure</li> </ul>
	In-vehicle noise	—	<ul style="list-style-type: none"> <li>• VDCCM</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> </ul>
	Noise from the rear side of vehicle	<ul style="list-style-type: none"> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Disc rotor</li> <li>• Parking brake</li> <li>• Brake pipe</li> <li>• Suspension play or fatigue (Decreased damping force)</li> </ul>	<ul style="list-style-type: none"> <li>• Axle &amp; wheels</li> <li>• Tire specifications, tire wear and air pressure</li> </ul>
Engine speed does not increase, or engine stalls when suddenly accelerated or driving on slippery road surface.		<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Parking brake</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Brake pad</li> <li>• Brake pipe</li> </ul>

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Poor straight directional stability of TCS	Wanders to left or right from straight forward direction.	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Wheel alignment</li> <li>• Uneven road surface</li> <li>• Crown shaped road/road with banks</li> <li>• Tire specifications, tire wear and air pressure</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Axle &amp; wheels</li> <li>• Suspension play or fatigue (Decreased damping force)</li> </ul>
	Vehicle spin	<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Brake pad</li> <li>• Tire specifications, tire wear and air pressure</li> <li>• Incorrect wiring or piping</li> </ul>	<ul style="list-style-type: none"> <li>• Brake caliper</li> <li>• Brake pipe</li> </ul>
Steering wheel drags when driving.		<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Incorrect wiring or hose connections</li> <li>• Power steering system</li> </ul>	<ul style="list-style-type: none"> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Disc rotor</li> <li>• Wheel alignment</li> <li>• Uneven road surface</li> <li>• Crown shaped road/road with banks</li> <li>• Suspension play or fatigue (Decreased damping force)</li> <li>• Tire specifications, tire wear and air pressure</li> </ul>
VDC operates while driving normally.		<ul style="list-style-type: none"> <li>• VDCH/U</li> <li>• VDCCM</li> <li>• ABS wheel speed sensor or clearance of sensor malfunction</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Yaw rate &amp; lateral G sensor installation malfunction</li> <li>• Wheel alignment</li> <li>• Uneven road surface</li> <li>• Crown shaped road/road with banks</li> <li>• Suspension play or fatigue (Decreased damping force)</li> <li>• Tire specifications, tire wear and air pressure</li> <li>• Incorrect wiring or piping</li> <li>• Power steering system</li> </ul>	—

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<p>VDC warning light/VDC OFF indicator light does not come on when the VDC OFF switch is depressed.</p> <p>NOTE: When pressing the VDC OFF switch for 10 seconds or more while the engine is running, the VDC OFF indicator lights go off and the switch cannot be operated any more. To recover VDC operation, turn the ignition switch from OFF to ON again.</p>	<ul style="list-style-type: none"><li>• Harness</li><li>• VDC warning light/VDC OFF indicator light bulb</li><li>• VDC OFF switch</li></ul>	—

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