

# General Diagnostic Table

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

## 13.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>• VDCCM&amp;H/U</li> <li>• Brake pad</li> <li>• Aeration to brake line</li> <li>• Tire specifications, tire wear and air pressures</li> <li>• Incorrect wiring or piping connections</li> </ul>   | <ul style="list-style-type: none"> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Brake booster</li> </ul>  |
|                        | Wheel lock                     | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Incorrect wiring or piping connections</li> </ul>  | <ul style="list-style-type: none"> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Brake caliper</li> <li>• Brake pipe</li> </ul>  |
|                        | Brake drag                     | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Parking brake</li> <li>• Axle and 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>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Brake pad</li> <li>• Brake pipe</li> </ul>  |
|                        | Long brake pedal stroke        | <ul style="list-style-type: none"> <li>• Aeration to brake line</li> <li>• Brake pedal play</li> </ul>   | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Master cylinder</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Brake pipe</li> <li>• Brake booster</li> </ul>  |
|                        | Vehicle vertical pitching      | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Road surface (uneven)</li> <li>• Suspension play or fatigue (reduced damping)</li> <li>• Incorrect wiring or piping connections</li> </ul>   | <ul style="list-style-type: none"> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> </ul>   |
| Poor brake performance | Unstable or uneven braking     | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Road surface (uneven)</li> <li>• Tire specifications, tire wear and air pressures</li> <li>• Incorrect wiring or piping connections</li> </ul> | <ul style="list-style-type: none"> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Master cylinder</li> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Axle and wheels</li> <li>• Road with crowns or banks</li> <li>• Suspension play or fatigue (poor damping)</li> </ul> |

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| Symptom  |  | Main probable cause  | Other probable cause  |
|--|--|--|---|
| <p><b>Vibration or noise</b></p> <ul style="list-style-type: none"> <li>• When braking suddenly</li> <li>• When accelerating suddenly</li> <li>• While driving on a slippery road</li> </ul> | Excessive brake pedal vibration  | <ul style="list-style-type: none"> <li>• Road surface (uneven)</li> <li>• Incorrect wiring or piping connections</li> </ul>  | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Brake booster</li> <li>• Suspension play or fatigue (poor damping)</li> </ul>   |
|  | Noise from VDCH/U  | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U (mount bushing)</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Brake pipe</li> </ul>  | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> </ul>                   |
|  | Noise from the front side of vehicle   | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U (mount bushing)</li> <li>• Defective ABS wheel speed sensor or sensor gap</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 (poor damping)</li> </ul> | <ul style="list-style-type: none"> <li>• Axle and wheels</li> <li>• Tire specifications, tire wear and air pressures</li> </ul>   |
|  | Noise inside passenger seat  |  | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> </ul>                   |
|  | Noise from the rear side of vehicle  | <ul style="list-style-type: none"> <li>• Defective ABS wheel speed sensor or sensor gap</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 (poor damping)</li> </ul>   | <ul style="list-style-type: none"> <li>• Axle and wheels</li> <li>• Tire specifications, tire wear and air pressures</li> </ul>   |
|  | Engine does not accelerate or goes into a stall when accelerating suddenly or driving on a slippery surface. | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</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>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Brake pad</li> <li>• Brake pipe</li> </ul> |

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| Symptom   |                                      | Main probable cause  | Other probable cause   |
|---|--------------------------------------|--|--|
| Poor change-direction-operation stability of TCS  | Deviation to right or left direction | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Brake caliper</li> <li>• Brake pad</li> <li>• Wheel alignment</li> <li>• Road surface (uneven)</li> <li>• Road with crowns or banks</li> <li>• Tire specifications, tire wear and air pressures</li> <li>• Incorrect wiring or piping connections</li> </ul>   | <ul style="list-style-type: none"> <li>• Disc rotor</li> <li>• Brake pipe</li> <li>• Axle and wheels</li> <li>• Suspension play or fatigue (poor damping)</li> </ul>   |
|   | Vehicle spin                         | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Brake pad</li> <li>• Tire specifications, tire wear and air pressures</li> <li>• Incorrect wiring or piping connections</li> </ul>   | <ul style="list-style-type: none"> <li>• Brake caliper</li> <li>• Brake pipe</li> </ul>  |
| Steering wheel drag while driving   |                                      | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Incorrect wiring or piping 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>• Road surface (uneven)</li> <li>• Road with crowns or banks</li> <li>• Suspension play or fatigue (poor damping)</li> <li>• Tire specifications, tire wear and air pressures</li> </ul> |
| VDC operates while driving normally.  |                                      | <ul style="list-style-type: none"> <li>• VDCCM&amp;H/U</li> <li>• Defective ABS wheel speed sensor or sensor gap</li> <li>• Defective steering angle sensor or improper neutral position</li> <li>• Defective yaw rate &amp; G sensor or improper installation</li> <li>• Wheel alignment</li> <li>• Road surface (uneven)</li> <li>• Road with crowns or banks</li> <li>• Suspension play or fatigue (poor damping)</li> <li>• Tire specifications, tire wear and air pressures</li> <li>• Incorrect wiring or piping connections</li> <li>• Power steering system</li> </ul> |  |
| TCS OFF indicator light does not come on when the TCS OFF switch is depressed.<br><br>NOTE:<br>When pressing TCS OFF switch for more than 10 seconds, TCS OFF indicator light goes off and cannot operate any more. When turning the ignition switch from OFF to ON, the previous status is restored. |                                      | <ul style="list-style-type: none"> <li>• Harness</li> <li>• Indicator light bulb</li> <li>• TCS OFF switch</li> </ul>  |  |

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