

AUTOMOTIVE DIAGNOSTIC CHECKS GUIDE

IDENTIFY THE SYMPTOM. VERIFY THE SOURCE.

Professional general diagnostic guidance for common driveline, wheel-bearing, and suspension concerns associated with CV axles, hub bearings, and strut assemblies.

IMPORTANT DIAGNOSTIC NOTICE

This guide is intended as a general diagnostic aid and does not replace vehicle-specific OE service information, technical service bulletins, scan-tool procedures, or a qualified technician's inspection. Similar symptoms can have multiple causes. Do not replace a component solely because a symptom appears to match a checklist item. Confirm the source before repair.

START WITH A COMPLETE VEHICLE CHECK

01

CONFIRM THE CUSTOMER CONCERN

Document when the symptom occurs: acceleration, deceleration, turning, braking, cruising speed, bumps, steering input, temperature, or load. Note speed, direction, frequency, and whether the symptom changes with throttle or braking.

02

CHECK VEHICLE HISTORY

Review recent repairs, collision history, suspension modifications, ride-height changes, wheel/tire changes, alignment work, and any previous axle, hub, or strut replacement.

03

PERFORM A VISUAL INSPECTION

Inspect tires, wheels, CV boots, axle shafts, hub area, brake components, struts, springs, mounts, suspension joints, ABS wiring, fluid leaks, loose hardware, and obvious contact or damage.

04

VERIFY BEFORE REPLACEMENT

Use the appropriate lift inspection, road test, scan data, dial indicator, chassis-ear/noise tools, or OE diagnostic procedure as applicable. Compare left/right components when useful.

CV AXLE DIAGNOSTIC CHECKS

CHECK

CLICKING OR POPPING WHILE TURNING

Often associated with an outer CV joint, especially when the sound increases under light acceleration in a tight turn. Inspect boots for tears or grease loss and confirm the noise is not from a wheel bearing, ball joint, brake shield, or other rotating component.

CHECK

VIBRATION DURING ACCELERATION

May be related to an inner CV joint, axle geometry, worn mounts, bent wheel, tire issue, driveline angle, or another rotating component. Note whether vibration changes between acceleration, cruise, and coast.

CHECK

CLUNK ON ACCELERATION / DECELERATION

Check inner joint play, axle retention, engine/transmission mounts, differential mounts, suspension bushings, and related driveline components. Some rotational play may be normal; compare with OE specifications and the opposite side.

CHECK

GREASE AROUND CV BOOT

Inspect the boot, clamps, joint housing, and surrounding area. A torn or loose boot can allow lubricant loss and contamination. Determine whether the joint has been operated without adequate lubrication before deciding on repair.

HUB BEARING DIAGNOSTIC CHECKS

CHECK	HUMMING / GROWLING WITH ROAD SPEED A wheel-bearing concern often changes with vehicle speed and may change as load transfers during gentle steering. Tire tread noise can sound very similar, so inspect tires and compare road surfaces before condemning the bearing.
CHECK	WHEEL PLAY OR LOOSENESS With the vehicle safely supported, check for abnormal play using the OE procedure. Play may also come from ball joints, tie-rod ends, control-arm bushings, or other suspension components. Some bearing designs can be noisy without measurable looseness.
CHECK	ABS / WHEEL-SPEED SENSOR CONCERN Inspect the connector, harness routing, sensor air gap where applicable, encoder ring, corrosion, debris, and scan-tool wheel-speed data. Do not assume the hub is defective until wiring and related systems are checked.
CHECK	HEAT / ROUGHNESS After ruling out brake drag, compare hub temperatures cautiously and rotate the wheel/hub as permitted by the OE procedure. Roughness, binding, or abnormal noise may indicate bearing damage, but brake and driveline components can create similar symptoms.

STRUT & SUSPENSION DIAGNOSTIC CHECKS

CHECK	BOUNCE / POOR BODY CONTROL Inspect struts/shocks for leakage or damage and evaluate vehicle response using the OE procedure. Excessive movement may also involve springs, bushings, tires, sway bars, or other suspension components.
CHECK	KNOCK / CLUNK OVER BUMPS Inspect upper strut mounts/bearings, sway-bar links and bushings, control-arm bushings, ball joints, loose fasteners, spring seating, and other suspension contact points. Do not assume the strut cartridge is the source of every clunk.
CHECK	UNEQUAL RIDE HEIGHT Check tire pressure and size, vehicle loading, broken/sagging springs, spring seating, suspension damage, and ride-height specifications. The damper itself generally does not determine static ride height on conventional passive strut systems.
CHECK	PULL / UNEVEN TIRE WEAR Check tire condition and pressure, alignment, ride height, bent or worn suspension parts, brakes, and steering components. Strut replacement may require alignment, but alignment symptoms alone do not confirm a failed strut.
CHECK	STEERING NOISE / BINDING Inspect the upper strut bearing/mount, spring seating, steering linkage, ball joints, and related components. Observe spring and mount movement while steering when safe and appropriate.

SYMPTOM QUICK REFERENCE

SYMPTOM	POSSIBLE AREAS TO CHECK
Clicking on turns	Outer CV joint • CV boot/grease loss • brake shield/contact • suspension joint
Vibration under acceleration	Inner CV joint • axle/driveline geometry • mounts • wheel/tire • driveline components
Hum/growl with speed	Hub bearing • tire tread/cupping • brakes • other rotating components
Clunk over bumps	Strut mount • sway-bar link/bushing • ball joint • control-arm bushing • loose hardware
ABS warning / erratic wheel speed	Hub encoder/sensor • wiring/connector • contamination/corrosion • related ABS system
Uneven tire wear / pull	Alignment • tires • ride height • worn/bent suspension • brake drag

DIAGNOSTIC SAFETY & BEST PRACTICES

!	DO NOT perform under-vehicle inspections unless the vehicle is supported by approved lifting equipment.
!	DO NOT road-test a vehicle with a known unsafe wheel bearing, loose suspension component, severe vibration, or compromised braking/steering condition.
!	DO NOT diagnose a component solely from sound; tire, brake, driveline, and suspension noises can overlap.
!	DO NOT disconnect ABS/SRS/electronic suspension components without following OE electrical and scan-tool procedures.



ALWAYS verify wheel fastener torque, tire condition/pressure, and obvious safety concerns before a diagnostic road test.



ALWAYS confirm the root cause before replacing parts and recheck the vehicle after repair.

TECHNICAL SUPPORT

For application, fitment, or diagnostic assistance involving NEXORA products, contact NEXORA Technical Support. Have the vehicle year, make, model, drivetrain/suspension information, VIN when appropriate, NEXORA part number, symptom description, and relevant diagnostic findings available.

PROFESSIONAL NOTE

A successful diagnosis separates the symptom from the cause. Use current OE service information and objective inspection or measurement whenever possible before authorizing component replacement.

PRECISION DRIVELINE PARTS, BUILT TO STAY INSTALLED.