

How to Check Wheel Bearings

Vehicles employ two types of wheel bearings. Older vehicles use serviceable wheel bearings that are separate components from the hub. Many newer vehicles use a hub bearing assembly with an internally pressed and unserviceable bearing. Either type of bearing application can fail after time. Bearings exist in a hostile environment of heat and friction. They require the proper amount of lubrication, but no matter how much maintenance is supplied to them, they will still wear out after time. The common shelf life of a wheel bearing, under normal conditions, is between 85,000 and 100,000 miles.

Serviceable Bearings

Step 1

Jack the wheel in question up and then place the **vehicle** safely onto a jack stand.

Step 2

Spin the **wheel** as fast as you can by hand in order to listen or feel--through the sidewall of the tire--for resistance or excessive noise, such as slight grinding.

Step 3

Place your hands at 12:00 and 6:00 on the wheel and wiggle it in a rocking motion. Serviceable bearings generally allow slight movement--about 1/8 of an inch--in free play. Anything more than that will require retightening the bearing, servicing the bearing or replacing the bearing.

Step 4

Remove the hubcap and pry the dust cap off the center of the hub using a hammer and a small pry tool or straightedge screwdriver. Inspect the interior of the cap for dryness or lack of grease.

Step 5

Remove the cotter pin using a pair of needle-nose pliers. Remove the castle cap underneath the cotter pin. Remove the spindle nut using a pair of channel locks. Remove the bearing washer. Smack the top of the tire inward with one hand while placing your other by the spindle to catch the outer bearing. Wipe any excess grease from the bearing to inspect it for lubrication, visual dryness or heat damage to the bearings or cage. If the the bearing displays any issues, the hub and rotor assembly will need to be removed to extract the inner bearing. This will require removing and replacing the grease seal and the bearing racers. Bearings and racers should always be replaced in pairs. Repack the bearings with a quality bearing grease employing a wheel bearing packer.

Step 6

Replace the bearing washer to the wheel assembly--once inspected or after the bearings are replaced--then tighten the spindle nut as far as you can go by hand with a set of channel locks. Spin the tire several times in the natural forward

rotation to seat the bearing. Back the nut off 1/8 of an inch and then replace the castle cap and cotter pin. Pack the inside of the dust cap with bearing grease. Replace the dust cap and then the hubcap.

Hub Bearing Assemblies

Step 1

Place your hands at 9:00 and 3:00 on the raised wheel in question. While applying inward pressure, spin the tire rapidly to feel for resistance or audible noise when the tire is in motion.

Step 2

Place your hands at 12:00 and 6:00 on the wheel and try to wiggle it in a rocking motion. Any free play movement on a hub bearing assembly requires replacement.

Step 3

Remove the wheel in question. Remove the caliper mount and pad assembly from the wheel knuckle. Support the caliper to the chassis using mechanics wire. Remove the rotor.

Step 4

Clean the surface of the hub flange thoroughly with a honing stone to remove any corrosion or debris buildup on the flange. Affix the base of the dial indicator to the knuckle and then the tip of the indicator to the hub flange--leaving room for your hands to turn the hub. Lock the indicator in place. Set the indicator to zero.

Step 5

Turn the hub flange back and forth in 90-degree rotations while looking at the indicator. If the indicator moves 0.0004 degrees in any direction, the hub bearing needs to be replaced.