

TECHNICAL RECOMMENDATIONS

TIPS FOR THE CORRECT REPLACEMENT OF BRAKE DISCS AND DRUMS

As important as selecting quality products is installing them correctly. Therefore, Fremax experts recommend you the following procedures to install discs and brake drums with maximum safety.

BRAKE DISC FITTING INSTRUCTIONS

Improper assembly will result in disc and pad misalignment. This lead to uneven wear of the parts, pulsation of the brake pedal and/or vibration on steering wheel, causing discomfort and unsafe driving.

TIP: Never assembly new pads on an uneven braking surface; this will cause brake inefficiency. Always measure the thickness of the disc braking surface, if it is below or close to the minimum thickness, resurfacing will leave it below, so replace the brake disc. The minimum thickness is engraved on the part and is also available at the catalog.



STEP 1

Remove the brake caliper, but don't leave it hanged by the hose (hang it out of your way with cord or wire, taking care not to put tension on the brake hose).

While bringing back the pistons, open the bleeder to drain the excess of brake fluid inside caliper housing to avoid damages to the ABS module or the master cylinder. Use a bottle to collect the fluid.



STEP 2

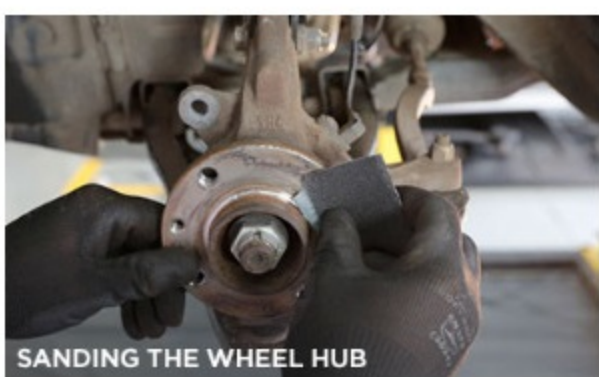
Remove the old brake disc. Sometimes, this can be as simple as merely pulling it off. However, if the brake disc hasn't been replaced in a long time, it may be stuck by corrosion, dirt and rust to the wheel hub and be difficult to remove. You may need to tap it with a hammer and a wooden block to loosen it.



STEP 3

Use a piece of sandpaper to clean the wheel hub face, making sure that this surface is completely free of any contamination (rust, soiling or burrs).

Tip: The permanence of any dirty at this surface compromises the assembly causing excessive oscillation of the disc.



STEP 4

With a dial indicator gauge measure the hub runout and the bearing clearance (maximum oscillation is 0.05mm and bearing clearance 0.02mm). Hub runout results in twice runout of the disc.



STEP 5

Assemble the new disc, fixing it with screws or wheel nuts (use spacers if necessary). Positioning the dial indicator at 5mm below the overall diameter of the braking surface measure again the runout of the assembly (maximum oscillation is 0.10 mm). In a hub and disc be careful in the assembly of the bearings, make sure that they are well-settled into housing.

Remember: all Fremax brake discs come with the Ready to Go technology. Wash up is not necessary before assembling the part. Special protective oil will not contaminate bake pads, making maintenance easier and faster.

TIP: never use an air impact wrench to fasten the wheel bolts, or wheel nuts. A torque wrench should be used - maximum torque for passenger cars is 8 kg to 10 kg, and 10 kg to 13 kg for light commercials. Bolts should be tightened following a cross pattern. Pay special attention while assembling spoke alloy wheels; ensure that spigot rings fit securely and flush with the mounting face of the alloy wheel.



STEP 6

Check tires, wheel bearings, steering system, suspension ball joints, bushings, grease seals, cv joints and shock absorbers. Looseness or wear on those components can compromise the brake system efficiency, causing pulsation of the brake pedal and/or vibration on steering wheel, carrying out a false diagnosis of failure.

STEP 7

Ensure vehicle owner understands that brake pads will take approximately 300 km (185 miles) to correctly bed-in on brake disc surface. Do not brake too aggressively or tow heavy loads until 300 km (185 miles) of normal driving has been achieved in order to not impair the efficiency, durability and safety of the system.