

Brake Disc Machining

NOTE: Do not use a bench lathe to machine the brake discs. Use an on-vehicle brake lathe only. Read the entire operating manual and/or view the video shipped with the lathe before installing, operating or repairing the lathe.

NOTE: An on-vehicle brake lathe with an automatic runout adjustment feature is preferred. However, if the lathe is not self adjusting, the lathe oscillation must be adjusted using a dial indicator. The total indicated runout target is 0.000 mm (0.000 in). The maximum indicated runout should be no more than 0.050 mm (0.002 in). If the runout adjustment (automatic or manual) is carried out correctly prior to machining, then the final brake disc runout will be within specification and a runout measurement is not necessary after machining.

NOTE: Lateral runout and disc thickness variation measurements are not required because correct adjustment of the on-vehicle brake lathe will make sure that these dimensions are within specification.

1. Remove the wheel and tire. For additional information, refer to [Section 204-04](#).
2. **NOTICE:** Do not allow the caliper to hang from the brake hose or damage to the hose may occur.

Remove the bolts and position the brake caliper or brake caliper and anchor plate assembly aside, as required.

- Support the brake caliper using mechanic's wire.

3. Install the hub adapter using:
 - four wheel nuts on a 4-stud wheel hub.
 - five wheel nuts on a 5-stud wheel hub.
 - six wheel nuts on a 6-stud wheel hub.
 - four wheel nuts on a 7- or 8-stud wheel hub.
 - five wheel nuts on a 10-stud wheel hub.
4. Install the cutting lathe.
5. If the lathe is not self adjusting, adjust the lathe oscillation using a dial indicator. The total indicated runout target is 0.000 mm (0.000 in). The maximum indicated runout should be no more than 0.050 mm (0.002 in).
6. Center the cutting head, adjust the cutting bits and install the chip deflector/silencer.
7. **NOTE:** The depth of the cut should be between 0.10 and 0.40 mm (0.004 and 0.015 in). Lighter cuts will cause the bit to heat up and wear faster. Heavier cuts will cause poor brake disc surface finish.

Machine the brake disc.

8. Remove the lathe and the silencer.
9. Remove the wheel nuts and hub adapter.
10. Remove the metal shavings.
11. Measure the brake disc thickness.
 - If the measurement is below the minimum specification, install a new brake disc. For additional information, refer to [Section 206-03](#) for front disc brakes or [Section 206-04](#) for rear disc brakes.
12. **NOTE:** It is not required to install new brake pads if friction material is within specifications. For additional information, refer to Specifications in this section.

Position the brake caliper or brake caliper and anchor plate assembly.

- Install the bolts.
- For fastener torque specifications, refer to [Section 206-03](#) for front disc brakes or [Section 206-04](#) for rear disc brakes.

13. Install the wheel and tire. For additional information, refer to [Section 204-04](#) .
