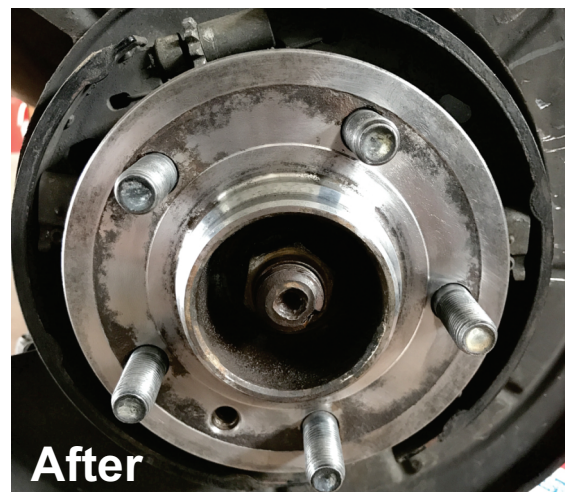
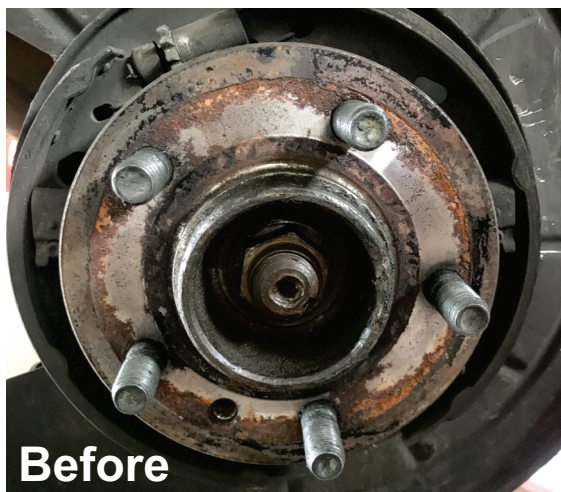


FIRST THINGS FIRST: CLEAN YOUR HUBS

When you remove your old discs there WILL be considerable rust build-up on the mounting surface of the hub. It is ESSENTIAL that you clean this rust off with a wire brush or emery paper and then with a brake cleaner or solvent. The mounting surface of the hub MUST be perfectly silver and clean (see images below). Failure to do this will result in excessive run-out and the onset of brake judder within 3000 to 8000 km's after fitment.

If you have used an M8 bolt to remove the old disc (a feature on many Japanese vehicles) please ensure no burr has been left on the hub mounting face by the loosening action. If so, file the burr down, or use a scraper to clean it up.



SECOND: ENSURE PROPER FITMENT

- Powerbrake discs are marked 'left' and 'right'. Ensure they are fitted to the correct side of the vehicle.
- Do not clean the black dry-coating off our discs. Fit them as is.
- Do not use any greases or lubricants between the Powerbrake disc and the hub, our dry coatings applied to the disc will make future removal very easy.
- Some pads have different INNER and OUTER plates. Check carefully before fitting them to the calipers.
- During installation, check that the caliper sliding pins are in good condition - the calipers should slide freely on their pins. If they do not move freely, use a high temperature silicone grease to lightly coat the sliding pins and ensure free movement, or replace them.
- All caliper tension springs or anti-rattle plates should be inspected for wear or fatigue and be replaced if necessary. Failure to do so can result in brake squeal/noise.
- Do not use any copper-slip anywhere on your brake pads, shims or calipers.
- Re-fit the wheels and tighten the wheel nuts to the torque specified by the manufacturer in your owner's manual. Failure to torque the wheel nuts correctly can distort the disc casting, leading to brake judder.

THIRD: GO AND BED YOUR POWERBRAKE DISCS AND PADS

Step 1 Drive normally for 250 km's to establish proper surface area contact between discs and pads. Use firm brake pedal pressures during this period but try to avoid stopping from very high speeds. Note: Long open-road trips do not count towards the 250 km's as you are not using your brakes regularly enough.

Step 2 After 250 km's, find a quiet road - drive slowly for a few kms, using the brakes gently to bring them up to temperature. You are just getting some moderate heat into your discs so that you do not thermal shock them during the next step.

Step 3 Next, while observing potential traffic behind you, perform 6 to 8 relatively hard stops from freeway speeds down to 20kph. (Do not actually bring the vehicle to a complete stop at any stage). Between stops, accelerate back to freeway speeds as quickly as possible. The idea is to put some heat into the discs.

After a few stops, you may feel the pads fade (i.e. the friction level will drop off) and a little smoke may be evident from the pads. This is normal. As soon as you feel this happening, or after the 6 to 8 stops you can drive on, using the brakes as little as possible for at least 10 km's in order to allow airflow to cool the discs.

Step 4 Park the car and let the brakes cool completely to ambient temperatures (at least 30 mins). The above procedure should have turned the Blue MTR tab (see overleaf) to light brown. If not, repeat Steps 1 to 3. The discs and pads are now ready to use.

FOURTH: BETTER LIFE AND PERFORMANCE FROM YOUR DISCS

Do not run your discs at temperatures over 630 deg C as that will substantially reduce disc and pad life. All Powerbrake™ discs feature our unique MTR™ (Maximum Temperature Recording) system. MTR consists of four different levels of thermally sensitive paint that is applied to the outside diameter of the disc. Each of the paints will permanently change colour at a specific temperature, thereby providing a record of the maximum temperature reached by the disc.

Blue paint - turns Light Brown at 275 °C	Orange paint - turns Yellow at 550 °C
Green paint - turns White at 460 °C	Pink paint - turns White at 630 °C

Ensure that you are running a brake pad compound that is designed to operate in the disc temperature range that your driving style produces. If you run your brake pads above their recommended maximum operating temperature (MOT) they will start to deposit friction material unevenly on the face of the disc leading to the development of disc thickness variation (DTV) and brake judder.

Warm up your discs prior to hard driving. It is best to get some heat into your discs by driving moderately prior to spirited driving sessions involving heavy, consecutive braking.

Slow down about 4-5 km's before you park the car. It is important that you do not park your car with extremely hot discs. After a spirited driving session, you should slow down and use the brake as moderately as possible for about 4-5 km's prior to reaching your destination.

Few actions stresses brake discs and pads like heavy, consecutive, traffic light to traffic light braking. Do not use your vehicle for 'street racing'. Limit heavy braking to 3-4 consecutive intersections before driving on and allowing airflow to cool the discs for a few minutes. Use the brakes only mildly during this cooling period and, if possible, do not bring the vehicle to a complete stop. It is important that you continue moving to allow airflow to cool the discs.

Do not use overly light pedal pressures when braking from higher speeds (+100kph). Rather use medium to hard pedal pressures. This ensures correct filming of the pad material on the disc surface.

Never intentionally wet your discs when they are hot. Be careful of using drive-through car washes when discs are hot.

Do not re-machine (turn) your Powerbrake discs. There should be absolutely no need to re-machine (turn) your discs, even when changing to a new set of pads. If you feel there is a need for whatever reason to re-machine the discs or you have been advised by a workshop to do so, please first contact us for advice.

Disc wear – All Powerbrake discs feature slots that are machined to minimum disc thickness. Once your slots disappear, your discs have reached minimum thickness and should be replaced as soon as possible.

FIFTH: OUR WARRANTY

Powerbrake guarantees to repair or replace any product manufactured by the company that is found to be faulty in workmanship or materials within 12 months of the invoice date. This warranty does NOT extend to faults or failure caused by abuse or misuse of the product, use of the product for any form of motor sport or track-day application, incorrect fitment, use of incorrect or defective associated parts (for example using an unsuitable pad compound for the intended application), or any other cause not relating to a defect in the design, materials or manufacturing of the Powerbrake part(s) in question. While Powerbrake products have an excellent reputation for durability, the company does not guarantee any of our brake products that are used by commercial logistics, security and emergency services, transport or freight companies.

IMPORTANT: All Powerbrake discs and calipers feature our MTR (Maximum Temperature Recording) systems that are applied to the outside diameter of each disc and the inboard face of each caliper. The above warranty is VOID if any Powerbrake disc is run to a maximum temperature in excess of 630 degrees C. Likewise, the above warranty is VOID if the MTR system is removed from any Powerbrake disc or caliper.

SIXTH: CONTACT US

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WARNING:

The author of this document cannot accept any responsibility for any proceedings or prosecutions brought or instituted against any person or body as a result of any use or misuse of any of the procedures described herein, or any loss, injury or damage caused thereby. The procedures described in this document are to be used in accordance with national traffic laws. Your safety depends on your own judgement while driving. If you misinterpret a procedure discussed in this document or drive irresponsibly, you could be seriously injured or killed as a result.