

If you choose to use a bench lathe, you must ensure that the rotor is phase-matched to the hub to minimize the overall run-out.

TCI will not accept repeat warranty claims when the same or a similar complaint is indicated.

Brake Noise [Squeal/Groan]

A brake squeal is a high pitched noise, while a brake groan is a low pitched noise. In both cases, the cause is commonly environmental in nature. In both cases, a brake service is required which will correct the problem.

Chamfering the pads, lubricating the backing plate, removing the glaze from the pads and sanding/scuffing the brake rotors, are all common repair methods.

Cases such as continuous noise on brake application may be warrantable if supported by a customer complaint.

Policy

- Reference to policy 2.19, cleaning and/or lubricating required to resolve a customer complaint is only covered up to 24 months or 32,000 Kilometres, whichever occurs first.
- In addition, the repair procedure of cleaning and/or lubricating will not be accepted as an 'Add-On' repair.
- The machining or replacement of a rotor will not be accepted on a brake noise claim, unless otherwise stated in a TSB and that the vehicle is applicable to the TSB.

Brake Pads

Brake Pads are a wear and tear item. The rate of wear and tear is also dependant on the environment and the customer's driving habits. Brake-related components that become seized or restricted in movement will contribute to brake pad wear; however the wear associated with this condition is usually "uneven wear".

With brake noise, as it relates to pads, the chamfer, glazing and even debris, all need to be considered. All of the aforementioned are normal characteristics of pad wear. All of these characteristics are serviceable conditions and are not covered under warranty beyond the 24 months or 32,000 Kilometres, whichever occurs first. "Generally" after 24 months or 32,000 Kilometres, [or unless otherwise stated in a TSB], brake pads should be considered a customer-pay item.

Policy

- Toyota will consider, under normal, reasonable driving conditions, excessive pad wear as covered under warranty up to 12 months or 20,000 Kilometres, whichever occurs first.

Education is critical as it relates to dealing with brake-related issues. The technician must be accredited in brake repairs and continuously updated on new technologies and techniques as well as Toyota's warranty policies as they relate to brakes. The service counter staff should have a full and clear understanding of brakes and how they work, in order to fully explain the details to customers. It is suggested that all service staff review 'Fundamentals of Brake Service' found on the Service page of Infostream under 'Warranty Administration'.

Equipment is also extremely important. The lathe must be properly maintained, have routine service inspections and be tested for trueness. Once again, TCI strongly encourages the use of an 'On-Car' brake lathe system. If the 'Off-Car' system is used, the repositioning of the machined rotor must be phase-matched to the vehicle's hub in order to reduce come-backs or repeat repairs.

Brake components on Toyota vehicles have been continuously improved over the years. These improvements have resulted in high quality brake systems, eliminating a number of 'past' brake problems, while ensuring high brake performance.

There are several factors that affect brake performance, as well as affecting the durability of the brakes. Environmental issues, driving habits, lack of maintenance or improper maintenance can all contribute to a customer complaint.

The following is a reinforcement of existing policies and a reminder of existing repair procedures as outlined in the vehicle's repair manual and/or the 'Fundamentals of Brake Service', which is posted on the service page on Infostream.

Environmental Factors:

- Corrosion or a build-up of salt, dirt or dust affecting the movement, appearance or performance of the Disc Rotor, Pads, Shims, Pad Retainers or Pad Clips

Policy

- Conditions as reported by customers, which are caused by environmental factors, are not covered under warranty.
- * Exception: Unless otherwise stated in a TSB and the vehicle is applicable to that TSB.

Brake Vibration (Disc Run-Out)

- Rust, Overheating, Brake Drag, can all contribute to an abnormal disc run-out condition.
- Improper phase-matching of the disc to the axle hub or improper torque of the wheel assembly can also affect disc run-out.
 - A recent brake study found that some dealerships had 10% or more customer brake complaints within 6 months of a previous service. This suggests that improper phase-matching or improper torquing of the wheel assembly contributed to the complaint.
- If the disc has abnormal run-out which is related to a defect, generally the customer complaint will occur early on in the vehicle's life, whereas discs which exhibit abnormal run-out after several to tens of thousands of Kilometres, indicate the presence of some other factor, resulting in the abnormality.

Policy

- The customer's complaint is brake vibration and a warrantable condition has been determined, presenting abnormal disc run-out, in such a case you must machine the rotors.
- Measurements of the disc run-out before and after the machining of the rotors must be documented on the work order. (ref: policy 4.10)
- * Exception a): If it is determined that more than 50% or more of the available material will need to be removed, replace the rotors (see repair manual for specifications). Run-out measurements must be recorded on the work order.
- * Exception b): Unless otherwise stated in a TSB and that the vehicle is applicable to the TSB.

TCI strongly recommends the use of the 'On-the-Car Brake Lathe' as it takes the axle hub run-out variances into account and the rotor is machined, phased-matched to the hub.
