

REAL Torque

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Contact maintenance for any questions on 0800 80 80 69

Cardan Shaft Parking brakes

Cardan shaft park brake mechanisms can be fitted as original equipment to both light and heavy trucks.

In NZ generally these are only fitted to smaller under 10 ton GVM trucks but can be found on some heavier imported trucks. This type of parking brake acts by locking the driveshaft at the gearbox output shaft end and may use either a single brake drum and shoes or a disc calliper, rotor and pad design.

Generally, a cardan shaft park brake system uses a ratcheted handbrake lever and cable to apply the brake – similar to what you would find in your car. You will know if the vehicle is equipped with a Cardan shaft park brake from the “ratchet” feel of the lever. It can also be a pull type lever next to the steering column. Larger trucks may have an air operated switch incorporated.

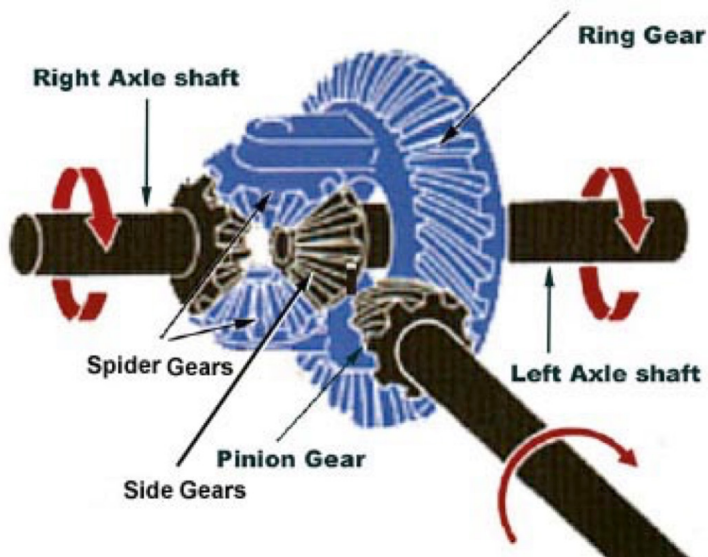


Cardan shaft park brake assembly fitted onto rear of gearbox.



Typical handbrake lever of Cardan Shaft park brake equipped truck. You will notice the “ratchet” type feel.

Cardan shaft park brakes are exactly that – a parking brake. They are designed to be used only when the vehicle is at a complete stop. They are not as efficient as other systems that act on the trucks wheel brakes directly. Cardan shaft park brakes have a limited amount of holding capacity compared to other systems especially when the truck is fully loaded and parked on steep gradients.



If well maintained and adjusted correctly they are suitable for flat ground operation but should not be solely relied upon when parking on hills or slippery surfaces. Wheel chocks should be used in this situation as an additional precaution. It is important to ensure both rear wheels are parked on a similar surface due to the natural action of a differential, if there is a loss of traction on one wheel while parked on a steep gradient it may allow the truck to move. This is because only the driveshaft is being clamped by the park brake and the truck differential may still allow one wheel to turn freely if the tyre isn't gripping well.



It is crucial when a cardon shaft parkbrake is used that the vehicle is never jacked up, as it relies on both drive wheels holding traction. Lift one, and the vehicle will move. Hence wheel chocks are important.

NEVER apply the park brake while the truck is moving as this can severely damage the brake shoes, gearbox or driveline.



TR Tips

Tips and Tricks

- ▶ If you're unsure if the vehicle is fitted with a cardan shaft park brake, feel for the "ratchet" in the lever.
- ▶ Always ensure the park brake is fully applied.
- ▶ When on a steep gradient or uneven surface, use wheel chocks.
- ▶ A wheel chock should be approximately 25% of the vehicles tyre diameter and fit snugly.
- ▶ Ensure the park brake is fully disengaged while driving to prevent premature friction material wear.
- ▶ Be aware of any fluid leaks under the vehicle and have them check ASAP. A leaking gearbox output seal could contaminate the cardan shaft brake linings reducing its effectiveness
- ▶ Maintain correct adjustment.