

GEARING DYNAMICS TOYOTA VDJ & HZJ LAND CRUISER GEARLESS CENTRE DIFFERENTIAL



In use in mines around the globe for over 20 years, the Gearing Dynamics Gearless Centre Differential (GCD) has become a part of many mines cost saving and safety strategies.

By reducing the wind-up during cornering, the GCD enables the operator to be able to negotiate any tight corners significantly easier making a safer journey for everyone in the vehicle.

Added to the safety benefits, installing a GCD will reduce maintenance costs. With savings of up to \$6,000 per annum, companies will recoup the cost of the GCD with much reduced maintenance costs after less than 12 months of operation.

Gearing Dynamics Pty Ltd



GCD ADVANTAGES

- REDUCES WIND-UP
- VEHICLE SAFER TO DRIVE
- LESS WEAR ON CV JOINTS
- LESS WEAR ON DIFFERENTIALS
- CONSIDERABLE COST SAVINGS
- SIMPLE AND QUICK TO INSTALL
- LOCKS THE VEHICLE IN L₄ RANGE

Why do we need them in our vehicles?

THE BENEFITS OF A GCD FOR YOUR MINE

Toyota Land Cruisers are renowned for the “wind-up” they exhibit when cornering. This “wind-up” has several negative effects on the vehicle including:

- Vehicle is difficult to steer through corners
- Excessive wear on entire driveline from CV Joints to differentials

The Gearless Centre Differential (GCD) overcomes these problems by introducing what is effectively a differential which is installed directly into the existing vehicle transfer case.

It achieves its unique operation with the use of Detroit locker technology, which balances the torque between the front and rear axles—Automatically and without any operator intervention.

By installing GCD’s in your Toyota Land Cruisers, you are not only making your fleet safer for your employee’s, but you will start saving money for your mine.

Another benefit of a GCD is that it locks the vehicle in permanent Low Range 4WD, thereby restricting the vehicles top speed. Ideal for speed limiting in mines.

Is wind-up that much of a problem?

WIND-UP IS COSTING YOU MONEY!

A common train of thought is that Land Cruisers have been designed as a 4WD vehicle and that any issues would be ironed out now after all the years the Land Cruiser has been around and that wind-up must be the product of something else—Conditions, tires or some other cause.

However, despite the wind-up being an issue for many years, it still exists even in current model Land Cruisers. And the cause of wind-up is the simple fact that there is no torque balancing between the front and rear axle.

A Gearing Dynamics GCD solves the problem. Quickly. Easily. Reliably. Permanently.

Our feedback shows that one mine over 10 years has extended the life of the CV Joints from around 300 hours to over 2000 hours by simply installing GCD’s.

With the true cost (Parts, labor, vehicle downtime etc.) of replacing CV Joints around \$1500—\$2000, it isn’t hard to see that GCD’s are a genuine cost saving device. And when you take in to consideration additional wear on steering knuckles, diffs and universal joints, the savings multiply.

With an installation time of around 3 hours, the GCD’s are a breeze to install. And all without removing the transfer case from the vehicle.

And most GCD’s will outlast the vehicle itself provided the regular service operations are performed to the transfer case. Our feedback indicates that failures with GCD’s are primarily due to the transfer case running out of oil, generally due to the transfer case being corroded completely through and therefore losing all oil from the transfer case. If a vehicle is unserviceable, the GCD can simply be removed and transferred into the next vehicle.

MAKE YOUR FLEET SAFER

Safety should be paramount in any business. Installing a GCD will instantly transform the vehicle into a considerably safer vehicle to drive, protecting the well-being of your employees.

GLOBAL USAGE

Our GCD's have been used in mines in Australia, Canada, Papua New Guinea, Democratic Republic of Laos, Ireland and many other countries.

RELIABILITY

The Gearing Dynamics GCD has stood the test of time. Since its inception in the 1990's, our GCD's have been used by mining companies around the globe. Made from only the highest quality materials and built to exacting specifications, you can rest assured that a Gearing Dynamics GCD will prove it's worth to your mine site.



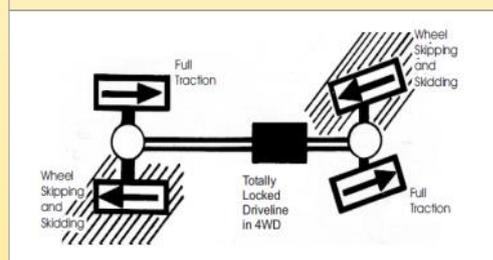
COMPATIBILITY

Our range currently includes 2 models. One for the VDJ series and one for the HZJ series of Land Cruisers. They will fit both Left Hand Drive and Right Hand Drive vehicles, and in all body styles—Single Cab, Dual Cab, Wagon and Troop Carrier. All models are low range, permanent 4 wheel drive only.

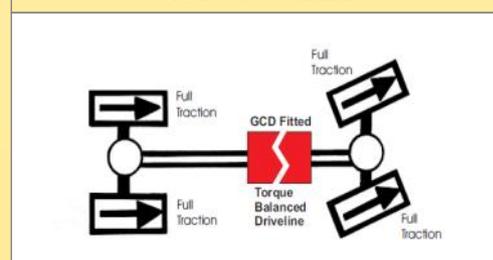
VEHICLE INSTALLATION

The GCD installs inside the existing transfer case and uses the existing vehicle tail shaft. The High/Low range shifter within the vehicle becomes redundant and serves no purpose once the GCD is installed. Both kits come with everything required to complete the installation apart from sealants to seal the transfer case and oil to fill the transfer case once installation is complete. Gaskets, bearings, flange nuts and more, plus a comprehensive illustrated installation manual are included in each kit.

STANDARD TOYOTA GEARS



GCD INSTALLED



**BACKUP
AFTER SALES
SERVICING**

Once you have our products on-site, we are here to support you. We provide email and phone support, along with a range of replacement parts for your GCD. From replacement flanges to shim kits, we have stock on hand for fast dispatch to your site to get you moving again..

We also provide rebuilding services for your GCD's in the event that damage has caused the GCD to not function as it is intended.

Our team works hard to ensure that we constantly have stock on hand of all models of our GCD's and other products to be able to expedite orders that are priority.

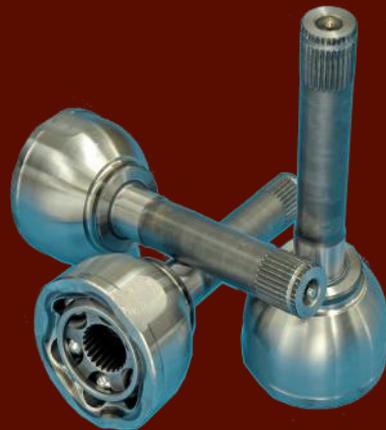
We stock a range of other products for Toyota Land Cruisers:

- Split CV Boots—Keeps the elements out of swivel housings and CV Joints
- Greaseable CV Joints—Keep your swivel housing and CV in good shape by keeping them lubricated
- Gear Lockout Plates, Fixed Front Drive Hubs and more

Our extensive supply chain allows us to provide competitive prices on:

- Flashlube diesel filters and oil catch cans
- LED Work Lights
- Land Cruiser HD Brake Upgrades and Tail Shaft Park Brakes
- A large range of genuine and non-genuine spare parts

Contact us today to discuss your requirements.



Gearing Dynamics Pty Ltd

GEARING DYNAMICS

26 Hume Reserve Court
Bell Park, Victoria 3215

+61 3 52 722 844
service@gearingdynamics.com
www.gearingdynamics.com

