



# Load Carrying & Towing Solutions

A vehicle's suspension and brakes are designed to provide optimum handling and comfort under a "normal load carrying or towing situation".

## But what is deemed to be normal?

In our experience at Pedders Suspension, many light commercials, SUV & crossover vehicles that regularly carry close to their maximum load require brake, shock and spring replacements for safe and comfortable levels of driving control and support.

Likewise, passenger cars that regularly carry their maximum number of occupants with luggage or extra equipment such as trailers or campervans do not perform to their potential in terms of ride comfort and handling without suspension and brake upgrading.

Pedders has a comprehensive range of load carrying and towing products and the expert "No Bull" advice to help identify and satisfy the real needs of the private and commercial vehicle markets.

When towing or carrying heavy loads, a vehicle has reduced compression travel in the suspension, thus resulting in reduced bump stop clearance. Ride comfort, traction, handling, steering, braking efficiency and even the aim of the headlights can all be adversely affected thus reducing comfort levels, stability and safety.

Tow hitches distribute the weight of the towed vehicle, but do not compensate for the effects of the load on the vehicle's suspension.

Pedders Suspension recommends the installation of upgraded suspension components and brakes. This will restore a vehicles ride height, comfort, stability, safety, stopping ability and handling under loads. The available options listed in this brochure are all designed to suit particular needs and applications.

## Don't know where to begin?

Why not try a Pedders Tow & Load Assessment. Available at selected Pedders outlets this world class comprehensive services is designed for those that tow or carry loads. The assessment will help you to better understand the effects of weight on your vehicle relevant to your individual driving needs. More information is contained in this booklet.



# Shock Absorbers

Pedders have shock absorbers rated to match heavy duty springs for most applications. Included is a range of shocks that maintain superior comfort levels while providing that extra level of suspension control needed under those heavy load carrying conditions.

Also included in our range is our premium Foam Cell shock absorbers which are ideal for constant or heavy load carrying and towing applications.



TRAKRYDER  
Gas Pressurised  
Shock Absorbers

TRAKRYDER,  
Foam Cell  
Shock Absorbers

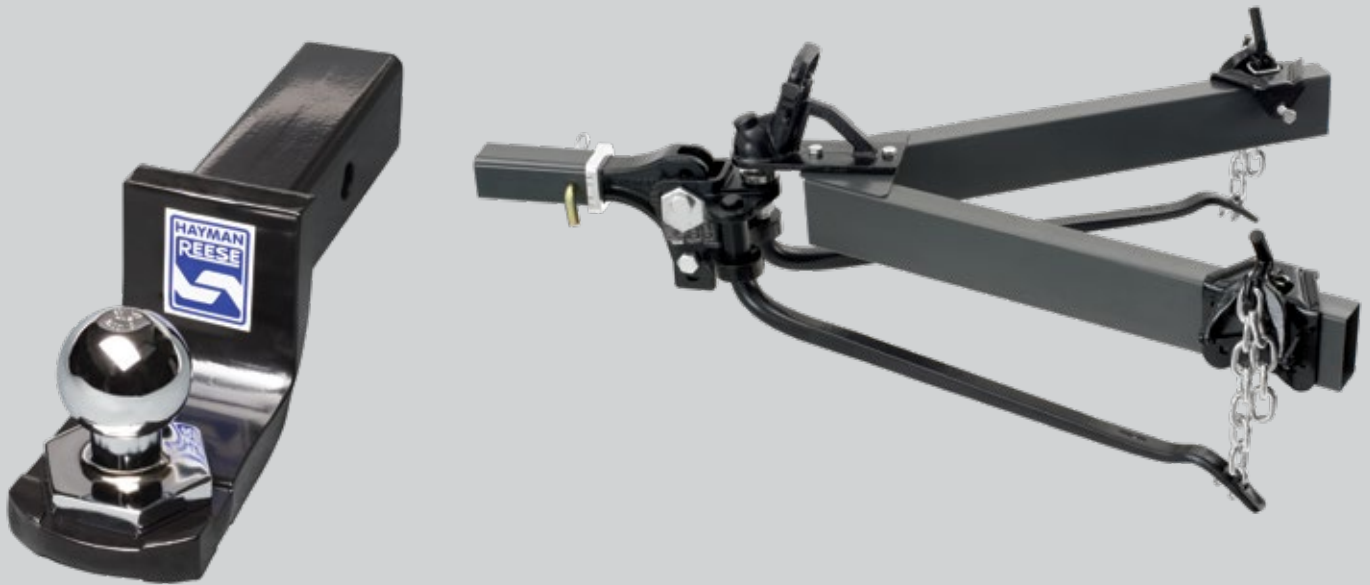


Pedders  
Shock Absorbers

# Towbars

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Choosing the right equipment is essential for safe, comfortable and trouble free towing. Pedders towing solutions include everything that is required from Hayman Reese such as towbars, accessories, brake controllers to weight distribution systems.



Approved Installer



# Heavy Duty Coils

Pedders heavy duty replacement coil springs improve the load carrying ability while maintaining high levels of comfort and control. We offer a range of HEAVY DUTY replacement coils for the heavy loads and “raised” height coils for extra ground clearance, or to compensate for permanent extra loads such as LPG tanks, long range fuel tanks, extra spare wheel carriers, bull bars, winches and storage systems.

## For Example: Toyota Prado Fitted with Pedders Raised Height Heavy Duty Coils

Pedders Suspension has 6 different designs of coil springs to suit the 120 series Toyota Prado's that need extra ground clearance for towing and load carrying. With a boat, caravan or trailer attached to the towbar the rear of the car may sag noticeably. As an example the Pedders 7828 & 7829 heavy duty towing coils are specifically designed to enhance the vehicles load carrying characteristics. They are also particularly suitable for people who are often towing heavy loads by trailer or or maximise the luggage areas.



Please visit our product catalogue for further listings of heavy duty coils to suit other makes and models.

**Before**



**After**



# Leaf Springs

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## Leaf Spring Packs

Pedders Suspension have a variety of replacement leaf spring packs for a wide range of 4WD & 2WD vehicles designed specifically for load carrying applications. Pedders replacement leaf spring packs are durable whilst providing improved vehicle control and stability due to the fact that they feature redesigned spring rates.

A number of these packs have a 2-stage design which provides a comfortable ride when unladen whilst maintaining extra height when a load is applied.



For heavy load carrying and towing, leaf springs remain the best performing suspension design. Pedders offer full replacement TrakRyder leaf spring packs that feature inter-leaf friction pads and metal eye sleeves to minimise binding or noise\*. They are constructed from only the highest grade steels for the most durable performance.

## Leaf Spring Resetting And Adding Extra Leaves

Although we have a large range of new applications there are still many cases that leaf springs require re-setting. Every Pedders store has the ability to do this for you in a relatively short period of time.

Simply contact your local Pedders Outlet for further information regarding Leaf Spring Resetting and Adding Extra Leaves.

\* Some exceptions apply



# Variable Load Leaf Springs

For most dual cab vehicles on our roads today, ride comfort versus load carrying capacity is always a compromise. By today's standards, we are experiencing more consumers requesting a better ride characteristic from their load carrying dual cab utes. The general expectation is that they want more of a sedan style ride from their vehicle.

Through innovative design, Pedders have developed variable leaf springs that achieve the best of both worlds: the ability to improve ride quality and vehicle load carrying capabilities.

Because the modern dual cab utilities are used as both a work horse and a family vehicle, the spring design has a requirement to fulfill dual roles. Pedders have a product to deliver an outcome that will be pleasing to the consumer.

## The selected range of Variable Load Leaf Springs offer:

- Improved ride quality in laden and unladen situations
- Increased articulation with a raised ride height
- Increased spring rate from O.E.
- Innovation in design and construction

Inter leaf friction is created with the leaves flexing through normal suspension travel, as a consequence a firmer ride may be experienced. With the fitment of "Inter Leaf anti friction pads" this reduces the resistance to movement and therefore will improve the quality of ride.

The more supple ride is also affected by the thickness of the laminates, by varying the dimensions of the leaves a more comfortable ride can be achieved.

With the formed taper or the "Application Specific" camber placed into the overload, increased travel can be achieved, thus increasing the travel before the primary pack comes into contact with the secondary or over load section of the spring.



# Air Assist Adjustable Air Suspension

Pedders Air Assist air bag kits for coil and leaf sprung vehicles make light work of heavy loads. Common benefits of both types of kits include:

- Improves towing and load carrying capability.
- Assist spring, shock & bush life.
- Maintains superior comfort levels while providing that extra level of suspension control needed when towing.
- Incorporates full adjustability.
- Improves braking and reduces body roll.
- Compensates for general instability associated with heavy loads.

NOTE: Pedders Suspension recommend replacement springs be installed where springs are sagged more than 10mm. Fitting auxiliary air springs to compensate for majority sagged coil or leaf springs will result in a harsh ride and poor handling.



## Features & Benefits:

- Exceptional load assistance characteristics.
- Improved towing and load carrying capability.
- Compensate for general instability associated with heavy loads.
- Increase shock life, improve braking and reduce body roll.
- Full adjustability to allow the Air Assist Bag to be matched to the load.
- Assist spring, shock and bush life.
- Maintain superior comfort levels while providing that extra level of suspension control needed when towing.

## Coil Spring Air Assist



## Leaf Spring Air Assist

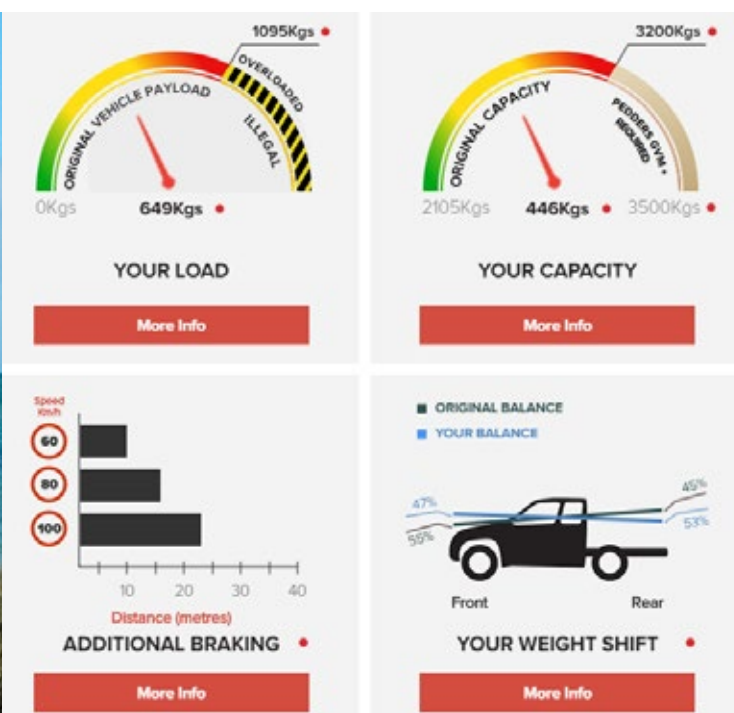


# Pedders Weight Matrix

Vehicle weight from accessories, cargo load and towing represents a significant factor in the safety and performance of your vehicle. That's why Pedders has developed this world-first Weight Matrix™ software to assist in understanding your vehicle weight in various tow and load “scenarios” and how it impacts vehicle dynamics.

Pedders Weight Matrix is a free service to use online, visit [https://matrix.pedders.com.au/retail\\_matrix](https://matrix.pedders.com.au/retail_matrix) to generate your report.

Please note that the Pedders Weight Matrix is to be used as a guide only and in some instances uses assumptions or estimates to provide information that is as accurate as possible. For exact vehicle weight, a greater level of detail, expert advice and solutions please contact your local Pedders Outlet to book your vehicle in for a Pedders Tow and Load Assessment.



## Wheel Alignment

In order to maximise the performance and handling of vehicles modified for load carrying or towing purposes, it is essential to perform a comprehensive wheel alignment while the vehicle is carrying a typical load. A correct wheel alignment will assist to reduce tyre wear and fuel consumption. Furthermore - a correct wheel alignment will also extend the life of your suspension and braking components.

At Pedders we offer 2 and 4 wheel alignment. However we highly recommend that all vehicles get a four wheel alignment, as opposed to a two wheel alignment. Failure to align all four wheels may compromise safety and handling characteristics.



# Brake Pads & Brake Rotors

When loading up a vehicle with extra weight we add extra pressure on our braking systems. That's why at Pedders we highly recommend upgrading your braking components to the very latest in design.

All brakes may look the same but Pedders range of brake parts has been designed to offer distinct benefits to assist you with your load carrying and towing needs. When load carrying and towing your vehicles brake pads work harder to stop the car. Pedders range of brake pads and rotors are designed to tolerate these braking conditions whilst maintaining braking efficiency when load carrying & towing.

Brake fade is common in brakes when load carrying and towing. As the vehicle works harder under load the temperature of the brake components heat up causing the brake system to struggle and maintain braking efficiency as intended. Pedders brake pad friction formula combines the use of ceramic fibre, copper and kevlar. These three core ingredients are the ultimate combination in reducing heat when load carrying and/or towing.

Our range of brake rotors are designed to offer consistent braking feel when towing and load carrying. When combined with Pedders brake pads they make for the ultimate in braking performance especially under heavy loads.

## Pedders Original Equipment Direct Replacement Disc Brake Rotors

### Features and Benefits:

- Made from the highest grade raw materials and manufactured to the highest possible standards
- OEDR – Original Equipment Direct Replacement brake rotors
- Provides longer service life of wheel bearings and steering components
- Guaranteed to fit genuine OEM specifications
- Smooth brake pad bed in



## Pedders Slotted & Geomet Coated Disc Brake Rotors

### Features and Benefits:

- Made from the highest grade raw materials and manufactured with the highest precision
- Curved slotted brake rotor design
- Designed for consistent brake pedal feel
- Geomet coated for better anti-corrosion protection
- High wear resistance
- Exceptional heat dissipation under extreme conditions



## Pedders Ceramic Brake Pads

### Features and Benefits:

- Ceramic technology
- Friction formula specifically designed for your vehicle
- Rotor friendly for longer disc life



## Pedders TrakRyder Kevlar Ceramic Brake Pads

### Features and Benefits:

- Kevlar Ceramic
- Outstanding Braking Performance
- Ultra Low Dusting
- Longer Lasting Formulation
- Dual Rubber Backed Shims
- Smooth Bite & Consistent Firm Pedal



# Rear Disc Brake Conversion Kits

For ute drivers and fleet owners, braking performance under load and excess weight can create a safety issue. With Pedders Rear disc brake conversion kits the braking performance is simply epic! Independent testing proved an average of 34% improvement in braking efficiency under heavy GVM load\*. This upgrade braking kit is a must have for all **Toyota Hilux, Ford Ranger, Mazda BT50, Isuzu D-Max and Nissan Navara** ute owners. Available now at your local Pedders outlet. Trade enquiries welcome.

## Key Features & Benefits:

- Easy inspection. The car owner does not have to remove the wheels to look at the disc brake system.
- Increased stopping power over drum brakes. Smaller pad area, but more clamping efficiently. Brake pedal feel and modulation are improved.
- The disc brakes are completely self-adjusting and have less moving parts.
- It takes longer for the disc brake to achieve brake fade, because they have a wider surface area that is directly exposed to air.
- Disc brakes drain water quickly whereas once water enters a drum brake, it stays there longer hindering braking efficiency.
- Brake mounting is very easy. Only two bolts are needed to be removed to replace brake pads.
- Kit is inclusive of all of the necessary hardware to update the rear drum brake to ad Pedders TrakRyder Rear Disc Brake. Kit contents includes are pair of Pedders TrakRyder Geomet coated and slotted disc brake rotors. Plus a set of rear TrakRyder Kevlar Ceramic brake pads.
- ADR 35/05 clauses 7.3-7.11 compliant - Extensive testing to support our Australian design rule certification.
- Installation video supplied along with fitting instructions.
- 2 Year 40,000kms Nationwide Warranty.
- Each rear drum to disc conversion kit must be installed by a Pedders outlet or approved distributor. Talk to your local Pedders expert for further information.



## Independent Engineering Test Results:

Toyota Hilux/Revo Gen 8 - Original Equipment - Drum Brakes			
Brake Effectiveness Test at Maximum Pedders GMV+ Load			
Initial Speed (Km/h)	Stopping Distance (m)	Average Deceleration (m/s <sup>2</sup> )	Braking Force (N)
100		3.78 (min)	685 (max)
102.8	92.0	4.47	167
100.6	99.7	4.23	231

Toyota Hilux/Revo Gen 8 - Pedders TrakRyder Rear Disc Brake Conversion			
Brake Effectiveness Test at Maximum Pedders GMV+ Load			
Initial Speed (Km/h)	Stopping Distance (m)	Average Deceleration (m/s <sup>2</sup> )	Braking Force (N)
100		3.78 (min)	685 (max)
100.9	67.0	5.78	160
101.5	60.7	6.56	198
101.2	63.7	6.25	234

\* Independent Australian engineering test results proved that at 100kmh the TrakRyder rear disc braking system upgrade stopped on average 32m sooner than original equipment (on Toyota Hilux/Revo Gen 8 4WD with Pedders GVM+ load of 3590kgs). An amazing result that enhances load carrying and towing performance. This kit is ADR35/05 compliant and is being fitted and registered in each state by your local Pedders outlet or distributor (with an approved motor vehicle engineer sign off).

# TrakRyder eXtreme Brake Kits

For the discerning driver who is particular about how their vehicle performs Pedders offers the TrakRyder eXtreme Brake Kit.

The braking results are staggering with the inclusion of a larger 6 pot caliper design, high tech TrakRyder eXtreme kevlar ceramic pads mated with a 10 slot dimpled and geomet coated larger diameter rotor.

Bigger braking surface means bigger stopping power. With the fitment of the all new Pedders TrakRyder eXtreme brake kit, independent Australian Engineering tests reflected an average improvement in braking distance by up to 14%.

## Features:

- Stainless steel braided hoses
- 10 slot and dimpled TrakRyder geomet coated rotors 356mm diameter
- TrakRyder eXtreme Kevlar Ceramic low dust brake pads
- TrakRyder eXtreme 6 pot design caliper brackets and bolts
- 6 Pot, 2 piece aluminium forged calipers



## To Suit:

- FORD RANGER
- MAZDA BT-50
- HOLDEN COLORADO
- ISUZU D-MAX

**EXCLUSIVE  
TO PEDDERS**

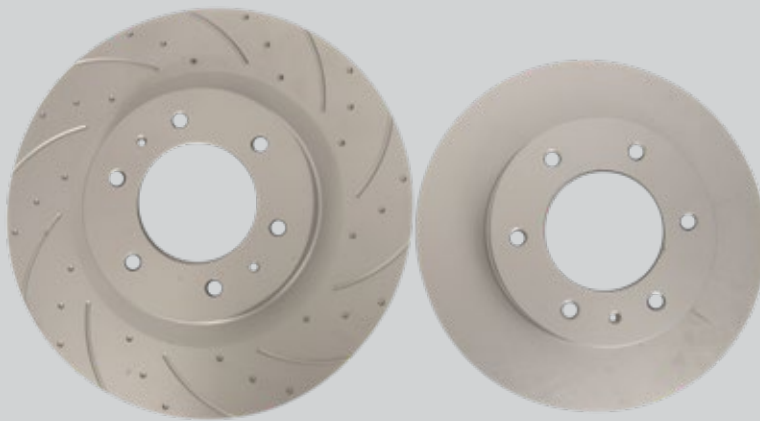


\* Independent Australian engineering test results proved that at 100kmh the TrakRyder eXtreme Brake Kit system upgrade stopped on average 11m sooner than original equipment (on Ford Ranger with Pedders GVM+ load of 3590kgs). An outstanding result that improves the braking efficiency and performance of the Ford Ranger. For even better results we also offer a Pedders Rear Drum To Disc Brake Conversion Kit. Under the same test conditions and fitted together with our TrakRyder eXtreme Brake Kit braking distances are reduced by 21%. This kit is suited for 18" wheels or larger. Further details available in store and on our website.

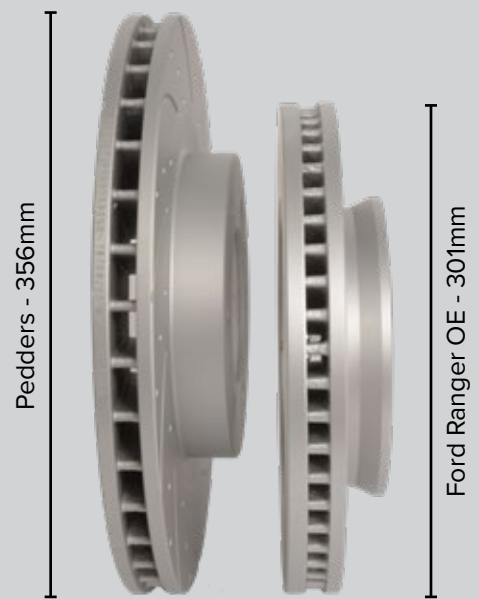


As fitted to the Ford Ranger PX.

## Size Does Matter!



Pedders - 356mm      Ford Ranger OE - 301mm



Pedders TrakRyder rotors feature greater cooling slots and an exclusive dimpled design.



# Pedders GVM Upgrade Solutions

With the rise in popularity of the use of four-wheel drives and utes to carry loads or tow, Pedders has now found that many vehicles coming into our workshops are operating either close to or over their GVM (Gross Vehicle Mass) limit.

The problem is – most vehicles are not designed to consistently carry heavy loads every day and overloaded vehicles present a major problem on our roads as they can be unsafe and may fail to comply with various insurance and roadworthy regulations.

If you think that your vehicle is often prone to being overloaded, then consider having the vehicle checked and weighed at your local Pedders outlet. Pedders offer GVM+ suspension upgrade solutions for selected vehicle models to assist in compliance for GVM ratings.

The reason for this solution is to satisfy O.H.& S. requirements, motor vehicle insurance, warranty issues and general road legal policies. In addition, a GVM+ kit from Pedders will help the vehicle ride smooth and perform to its potential in terms of ride, braking and performance.

Through exhaustive and detailed testing, the Pedders GVM+ Upgrade Kits have been approved by

the Federal Department of Infrastructure and Transport. All suspension components installed as part of a GVM+ upgrade kit are covered by Pedders 40,000 kilometre / 2 year warranty.

Visit [Pedders.com.au](http://Pedders.com.au) to view the full range of available GVM+ kits.

## The largest range Australia wide

- Ford Ranger
- Holden Colorado
- Isuzu D-Max/MUX
- Mazda BT50
- Mitsubishi Triton
- Nissan Navara/Patrol
- Toyota HiAce
- Toyota Hilux/Landcruiser
- Volkswagen Amarok
- Plus more!





The Pedders Tow and Load Assessment is a world-first and comprehensive service designed for those that tow or carry loads to better understand the effects of weight on their vehicle relevant to their individual driving scenarios.

There are 2 main parts to a Pedders Tow and Load Assessment.



## 1. Brake, Steering and Suspension Check

The priority within the Pedders Tow and Load Assessment is to firstly assess the general health of the vehicle's brake, steering and suspension systems which are the most safety-critical systems especially under the stress of additional weight from loads, towing and accessories. A Pedders Brake, Steering and Suspension Check (valued normally at \$28) will be undertaken as a critical part of the Pedders Tow and Load Assessment and will include the following:



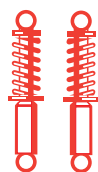
### Under Car Inspection

Our trained specialist technicians will systematically inspect your vehicle's entire steering and suspension system and other related undercar components from front to rear.



### Brake Pad & Rotor Inspection

Check and report on the wear and operating condition of these components, removing wheels as required.



### Shock Absorber Test

Most cars will be subjected to a simulated condition, which enables evaluation of your shock absorbers and suspension.



### No Obligation Analysis and Written Report

Our comprehensive written report shows the current status of all-vital suspension and steering systems. Pedders staff are trained to know how to accurately evaluate the results of the report.

## 2. Weight Matrix

The "Weight Matrix" component of the Pedders Tow and Load Assessment refers to knowing your weight now and looking at your weight in the future based on your towing and load carrying scenarios.



### Front & Rear Weight

Each participating Pedders outlet has a test lane or scales to weigh both the front and rear of your vehicle. The results of this vehicle weight form the basis of the first "as-weighed" scenario.



### Tow Ball Weight

Where relevant, participating outlets can assess the ball weight of caravans or trailers as this is an integral part of some weight scenarios. Please discuss the practicality and logistics of this with your participating Pedders outlet.



### Initial Accessories & Load Checklist

As part of the initial weighing of the vehicle your current loads and accessories will be listed as the basis of the "as weighed" scenario 1.



### Weight Matrix(TM) Software Report

Armed with your vehicle's current weight and expected weights from future scenarios the Weight Matrix software program and report will provide key pieces of information for each different scenario.

## Tow and Load Assessment Report, Advice and Solutions

Following completion of the Pedders Brake, Steering and Suspension Check including weighing the vehicle front and rear plus the loading of your individual scenarios into the Weight Matrix Software Program, your Pedders Expert will discuss the assessment and provide advice and recommend solutions.



## Warranty

Pedders Suspension & Brakes provides a comprehensive two-year, 40,000km nation wide warranty on Pedders brand-name products designed for road use, including brakes, shock absorbers, struts, springs and steering gears.#



#Some exceptions apply. Please contact your local store for further information.

[www.pedders.com.au](http://www.pedders.com.au)