







Range Overview

Since 1950, Pedders has been designing and manufacturing suspension products specifically for harsh Australian conditions. Our market leading range of quality products is designed and developed in Australia and sold throughout our 120+ Australian store and dealer network. The TrakRyder range is tested and proven in Ambulance, Mining and International Law Enforcement Agency vehicles in some of the harshest environments in the world. Over 65 years of experience gives Pedders the leading edge in knowing what you the customer demands. TrakRyder delivers the rugged performance that will get you to your destination and back, whilst maintaining the ride quality that modern 4WDs have to offer.

TrakRyder also upgrades older model 4WDs with a boost in off road performance and ride quality. It's the product of all our years of R & D experience which enables us to deliver a premium level of ride comfort and handling for 4WD vehicles. In fact, we are so confident in our quality product that we back it up with a 2 year/40,000km 'No Fuss' nationwide warranty, which means that should a hassle occur, you can rest assured that you're covered.

TRAK RYDER

TrakRyder is suitable for 4WD owners who want to:

- Enhance the ride, control, comfort, off road ability and traction of their 4WD.
- Upgrade or replace their old or worn 4WD suspension.
- Increase ground clearance and articulation (the ability of the suspension to flex all four wheels onto the ground firmly, even when negotiating uneven terrain).
- Boost towing and load carrying ability.
- Minimise excessive squat (body tilts down in rear) when accelerating or when driving with a heavy load.
- Minimise excessive diving (body tilts down in front) when braking.
- Reduce rear end sag under load carrying or towing conditions.
- Drive in severe off road conditions.
- Control and minimise body roll when cornering.
- Enhance the safety of the vehicle.
- Reduce wear on vehicle components.
- Prolong the life of the tyres.

Comprehensive 4WD Parts Range

Pedders' TrakRyder suspension range includes thousands of quality components that have all been designed to improve the ride and handling characteristics of specific 4WD vehicles.

The range includes:

- Shocks & Air Bags
- Coil & Leaf Springs
- Brake Pads & Rotors
- Torsion Bars & Suspension Bushes
- Shackle & U Bolt Kits
- Alignment Kits
- Steering Dampers
- Adjustable Panhard Rods
- CV Shafts & Swivel Hub Seal Kits

Plus a host of additional ancillary products.

Shock Absorbers

TrakRyder Gas Charged Shock

Key Features:

- Premium grade oil used to withstand high operating temperature and continued rigorous use.
- Multi lip high pressure seal prevents shock absorber leaks and is designed to permanently seal the oil and gas inside the shock.
- Large 35mm bore and piston is greater than most original equipment size and provides an increased oil capacity for greater ride improvement.

Common Features & Benefits for TrakRyder Gas and TrakRyder Foam Cell Shock Absorbers:

- Heavy Duty twin-tube construction technology & heavy duty reinforced double welded mountings for long term durability.
- Rugged multi-purpose design improves stability and ride comfort for touring, load carrying, towing and 4WD applications.
- Advanced control for a comfortable ride and precise handling.
- Ideal for standard or raised height 4WDs and matched to Pedders range of TrakRyder springs.
- Individually shock dyno tested for quality assurance.
- Severe off road vehicle compliant for harsh off road conditions.



Shock Absorbers

TrakRyder Foam Cell Shock

Key Features:

- The TrakRyder foam cell shock provides larger cooling areas to improve shock performance and durability by allowing full oil contact with both the inner and outer housings.
- The foam cell technology found in the Pedders TrakRyder foam cell shock absorber virtually eliminates shock fade by eliminating the mixing of the oil and air which ensures optimum damping control in all conditions.
- Extra large 40mm bore and piston is much greater than original equipment size and provides a dramatically increased oil capacity for greater ride improvement.



The heavy duty TrakRyder EziFit Spring and Foam Cell Shock Absorber combination kits were designed, developed and manufactured to provide precise control without compromising ride comfort. Supplied as a complete assembly of matched suspension components, the TrakRyder EziFit Spring and Foam Cell Shock Absorber combination kits are suited for all types of driving conditions – whether it is for severe off road or simply driving to work. One of the added benefits of these kits is that you can choose your ride experience by selecting your preferred coil spring type to match your driving needs. A choice of Standard, Raised or Loaded ride heights is available to order with various kits.

The Key Features:

- Supplied as a matched set of pre-assembled suspension components including Pedders TrakRyder Foam Cell Shock Absorber, Pedders TrakRyder Heavy Duty Spring and Pedders TrakRyder Strut Mount.
- Reduced installation time as the components are supplied pre-assembled and ready for direct fitment.
- The TrakRyder foam cell shock provides larger cooling areas to improve shock performance and durability by allowing full oil contact with both the inner and outer housings.
- The foam cell technology found in the Pedders TrakRyder foam cell shock absorber virtually eliminates shock fade by eliminating the mixing of the oil and air which ensures optimum damping control in all conditions.
- Extra large 40mm bore and piston is much greater than original equipment size and provides a dramatically increased oil capacity for greater ride improvement.
- Individually shock dyno tested for quality assurance.
- Severe off road vehicle compliant for harsh off road conditions.
- Heavy Duty twin-tube construction technology and heavy duty reinforced double welded mountings for long term durability.
- Rugged multi-purpose design improves stability and ride comfort for touring, load carrying, towing and 4WD applications.
- Advanced control for a comfortable ride and precise handling.
- Ideal for standard or raised height 4WDs and matched to Pedders range of TrakRyder springs.



With the internally designed “Bridged Ferrel” mounting bush, Pedders have created a mount that will endure the rigorous operational conditions placed on the mounting bush.

A larger bonded surface area, used in conjunction with high quality rubber with the appropriate duro. The added advantage is the resistance of the bush “walking sideways” on the ferrule.

The casing has been designed to allow for increased pretension to occur when it is pressed into the shock absorber mount.



TrakRyder Springs



Key Features:

- TrakRyder coils are heavy duty units that provide the precise rate needed to carry the mass of heavy 4WD vehicle bodies and wheel assemblies.
- TrakRyder coils are made at Pedders' hi-tech spring manufacturing facility in Melbourne, Australia from the highest quality Australian spring steel.
- Produced according to a strictly controlled design, manufacturing and testing process that ensures Pedders' coils exceed original tolerances and are equal to or exceed the best in the world for consistency of rate, loaded height and reliability.
- Standard height and raised height coils for extra ground clearance are available for most vehicles and higher rated coils can be used to compensate for the extra weight of a bull bar, winch, rear step, or to improve a vehicle's load carrying or towing ability.
- Coils are matched to TrakRyder shocks to reduce body roll, rolling pitch and brake dive and to improve overall handling, comfort and traction through superior suspension control. Improving overall handling, comfort and traction.
- Built to ISO 9001 International Standards, ISO 14001 International Standards & AS/NZS 4801 Safety Standards to ensure a quality product in every coil produced.
- Stress relieved and 100% QA inspected.
- Loaded Height Tested.
- Severe off road vehicle compliant for harsh off road conditions.



Torsion Bars

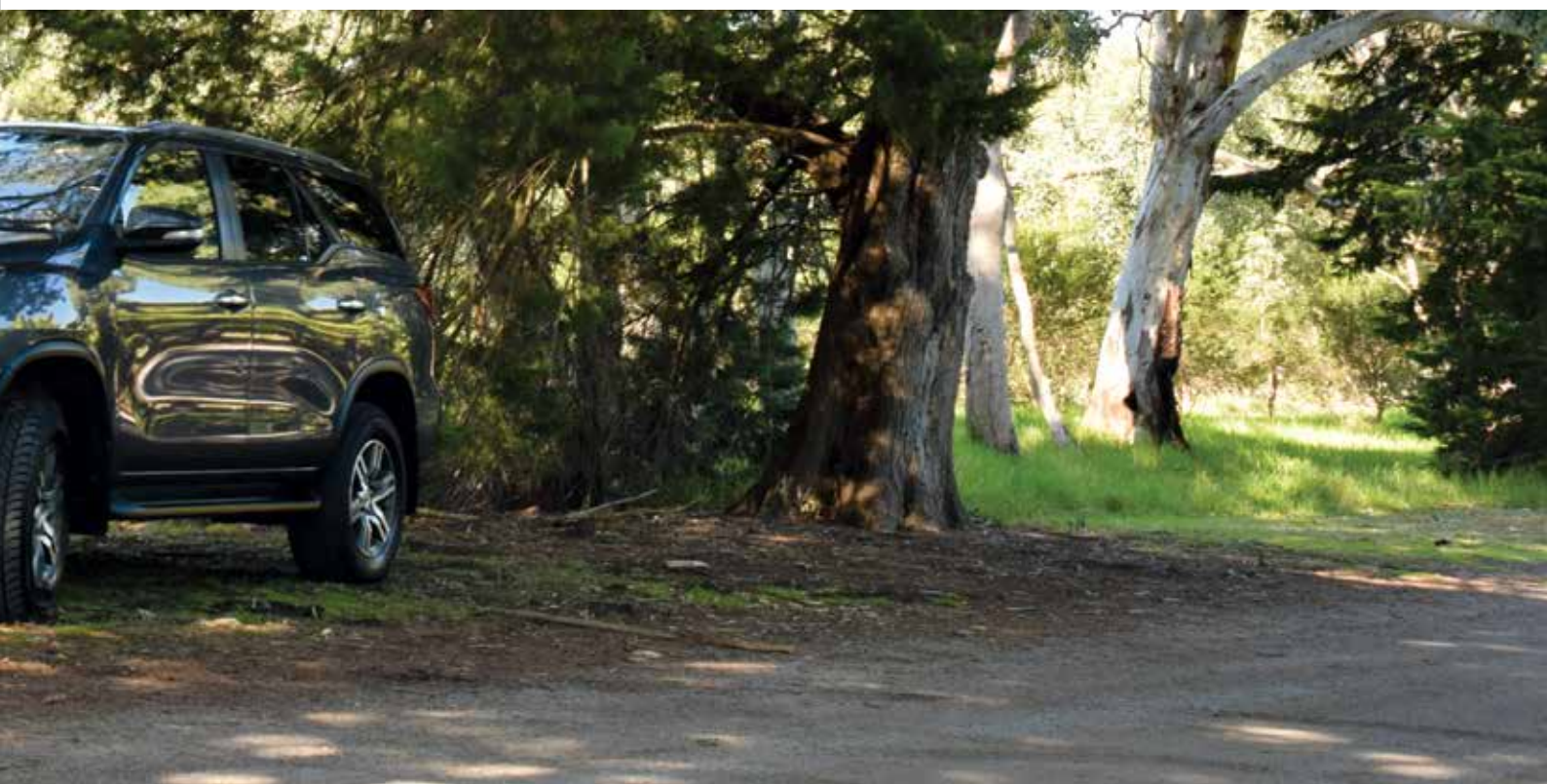
- Like Pedders' coil springs, TrakRyder torsion bars are made from the highest quality alloy spring steel and are manufactured according to strict quality production procedures.
- TrakRyder torsion bars are fully tempered (heat treated) for high durability, hardness and long term consistency.
- The splined end of the torsion bars are hot forged to produce a stronger structure which assists in longer product life.
- TrakRyder torsion bars are made to a larger diameter than most original bars, providing a firmer rate for greater control and improved load carrying ability.
- Heavy-duty replacement units provide a permanent upgrade for the front suspension.
- Whether your vehicle is in standard form or has been fitted with a bull bar, winch, dual battery system or any other heavy accessory, TrakRyder torsion bars provide extra control, stability and traction for enhanced performance.



Coil Spring Air Assist & Leaf Spring Air Assist

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.

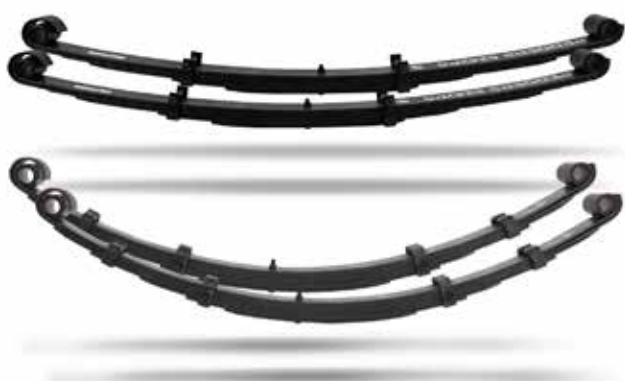


Leaf Springs

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 verses 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" cambering 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.

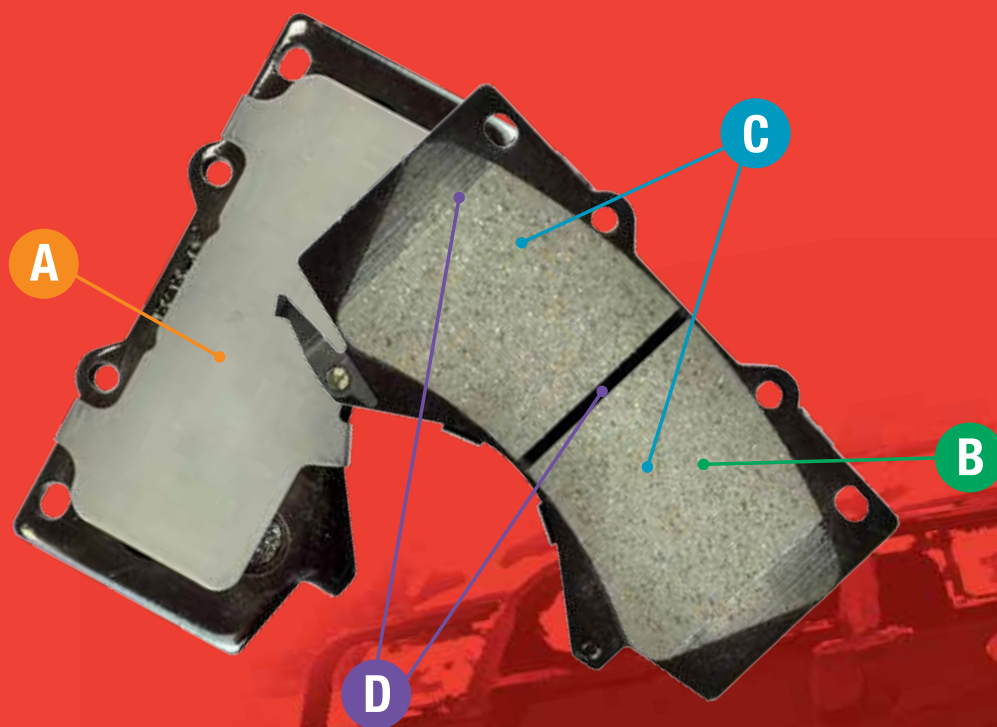


TrakRyder Kevlar Ceramic Brake Pads

Pedders TrakRyder Kevlar Ceramic 4WD and SUV Brake Kits offer superior stopping power that is demanded by those that tow, as well as the off-road enthusiast. Any time you add weight to a vehicle by towing a load, or simply adding a load, you change the operating conditions of your stock brake package. These operating conditions may exceed the ability of the stock braking components – solution Pedders TrakRyder Kevlar Ceramic Brake Pads. A range of high performance 4WD and SUV pads available from your local Pedders outlet.

Features and Benefits:

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



To Suit:

- Ford Ranger/Territory
- Holden Colorado/Rodeo
- Hyundai iLoad
- Isuzu D-MAX/MU-X
- Jeep Wrangler/Grand Cherokee SRT8
- Land Rover Defender/Discovery/Range Rover Sport
- Mazda BT50
- Mitsubishi Pajero/Triton
- Nissan Navara/Patrol
- Toyota HiAce/Hilux/Landcruiser/Prado
- VW Amarok
- Plus More!

Features and Benefits:

- A** Shimtech™ advanced shims to reduce vibration and brake noise.
- B** Kevlar Ceramic Friction formula for outstanding braking performance in all conditions.
- C** Ultra low dusting pads designed to keep your wheels clean.
- D** Slotted and chamfered friction material to reduce brake noise.

Brake Pads & Brake Rotors

Pedders Original Equipment Direct Replacement Disc Brake Rotors

Features and Benefits:

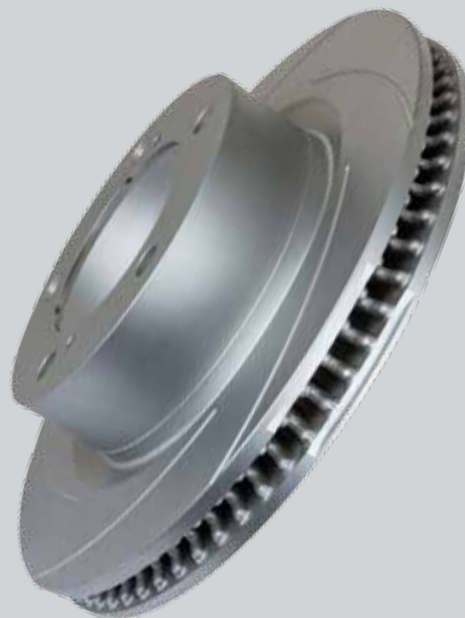
- Made from the highest grade raw materials and manufactured to the highest possible standards
- OEDR – Original Equipment Direct Replacement Brake Rotors
- Guaranteed to fit genuine OEM specifications
- Smooth brake pad bed-in



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



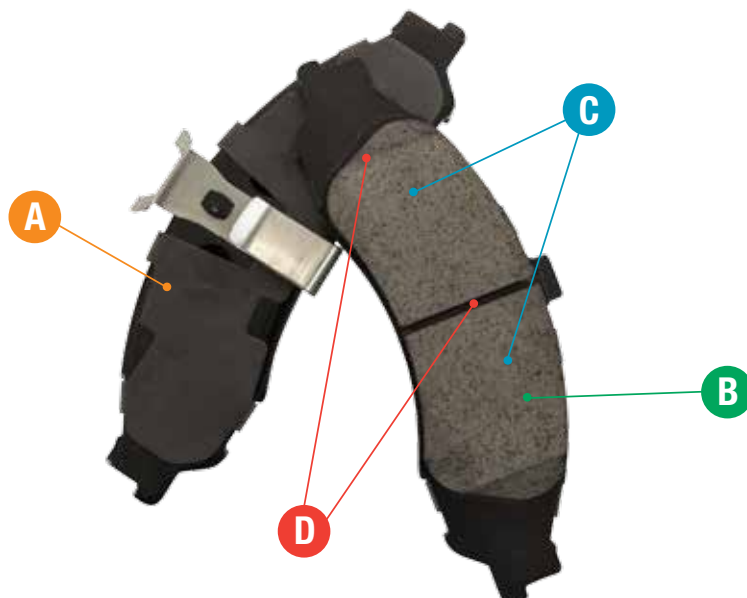
Pedders Ceramic Brake Pads

Features and Benefits:

- Ceramic technology
- Friction formula specifically designed for your vehicle
- Rotor friendly for longer disc life
- Quiet braking with high wear resistance.
- Shimtech™ advanced shims to reduce vibration and brake noise
- Friction material is slotted and chamfered for noise vibration and harshness control

Features and benefits:

- A** Shimtech™ advanced shims to reduce vibration and brake noise.
- B** Friction formula specifically designed for your vehicle.
- C** Quiet braking with high wear resistance.
- D** Friction material is slotted and chamfered for vibration and harshness control.



TrakRyder Product Range

Steering Dampers

- Pedders' TrakRyder steering dampers enhance driving feel and comfort by further reducing the jolts and impacts caused by heavy wheels and rough conditions.
- TrakRyder steering dampers feature an extra large 35mm bore. This provides optimum performance via the Foam Cell technology that enables the steering damper to operate even when the vehicle is on a severe incline.



Urethane & Rubber Bushes

- TrakRyder urethane bushes are the superior material choice for when high levels of suspension control and durability are required. They are particularly suited to applications requiring heavy load carrying ability, firm suspension control, or where regular exposure to corrosive materials is expected.
- Pedders' TrakRyder urethane bushes also incorporate a special cross hatch dimple profile on the working surface to enhance grease retention.
- Pedders TrakRyder rubber bushes are manufactured from high quality, durable rubber and are a direct replacement for the original bush.
- Designed to provide excellent NVH (noise vibration harshness) suppression while maintaining vehicle specific levels of front axle movement and articulation.



Shackle Kits

- Pedders' TrakRyder greasable shackle kits have heavier side plates. Some feature anti-inversion brackets as standard to avoid the problems of overextension of raised leaf springs.
- TrakRyder shackle kits are E-coated and designed as bolt-on replacements for most leaf sprung 4WDs, including Patrol, LandCruiser and Hilux.



Alignment Products

- Pedders' TrakRyder wheel alignment parts include components that enable the adjustment of camber and caster to optimise tyre contact with the road, extend the life of expensive 4WD tyres and improve handling.



TrakRyder Product Range

U Bolts

- Front & Rear heavy duty U-Bolt for direct fitment to leaf springs.
- Grade 10.9 to ensure additional strength in heavily loaded situations.



Adjustable Panhard Rods

- Made from tough heavy duty steel with powder coated finish.
- Comes with pre fitted heavy duty urethane bushes or spherical joints (subject to application fitments).
- Adjustable steering damper brackets (on selected models).
- Heavy Duty construction and bushings to handle the tough rigours of off road conditions.
- Adjustability allows correction of axle alignment for better trackability on raised vehicles.



CV Shafts

Pedders comprehensive range of replacement CV Shafts are made to exacting specifications including European SGS international quality ISO9001, QS9000, VDA6.1 and TS16949 certifications.



Swivel Hub & Wheel Bearing Kits

Pedders swivel hub and wheel bearing reconditioning kits come packed with high-quality seals, gaskets, felts and all of the tapered roller bearings you will need to get your swivel hubs and wheel bearing looking and performing the way they should; clean and leak-free.



Towbars

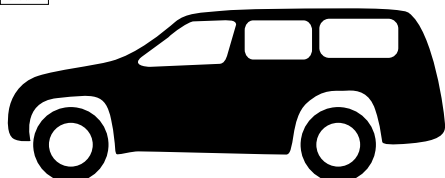
Our range of towbars and towing accessories are available at selected Pedders outlets.



TrakRyder Lift Kits

Pedders TrakRyder Kits Overview

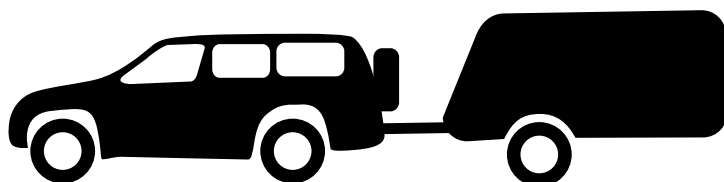
Pedders range of TrakRyder 4WD suspension upgrade kits have been designed to accommodate your choice of Touring, Expedition or Outback adventures. Each kit includes a set of 4 Pedders TrakRyder Shocks and Heavy Duty Coil Springs. Check the website for further details.



TrakRyder Touring (up to 1/2" or 13mm lift)



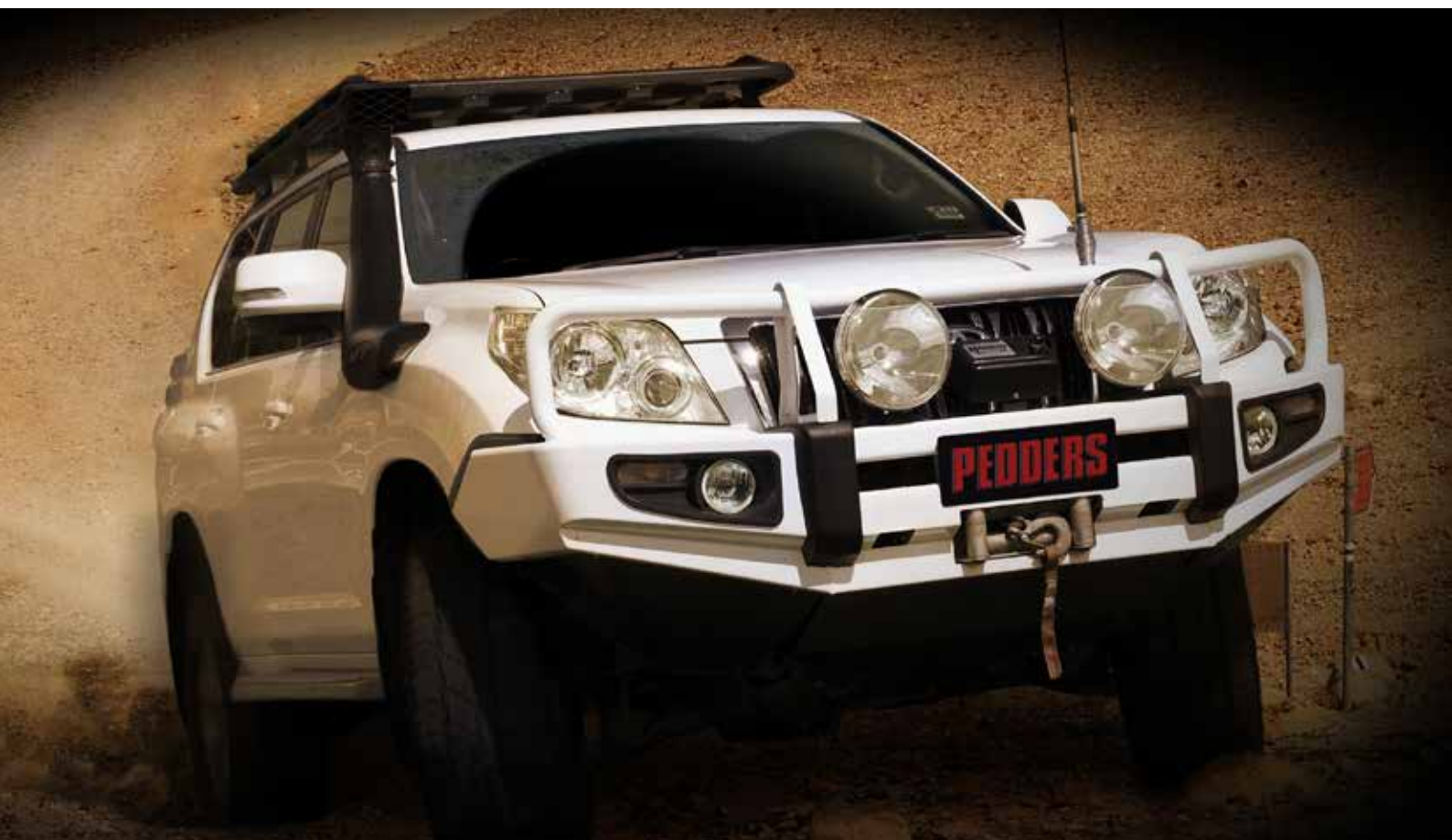
TrakRyder Expedition (up to 1" or 25mm lift)



TrakRyder Outback (up to 2" or 50mm lift)



TrakRyder 4" Lift Kit (up to 4" lift)





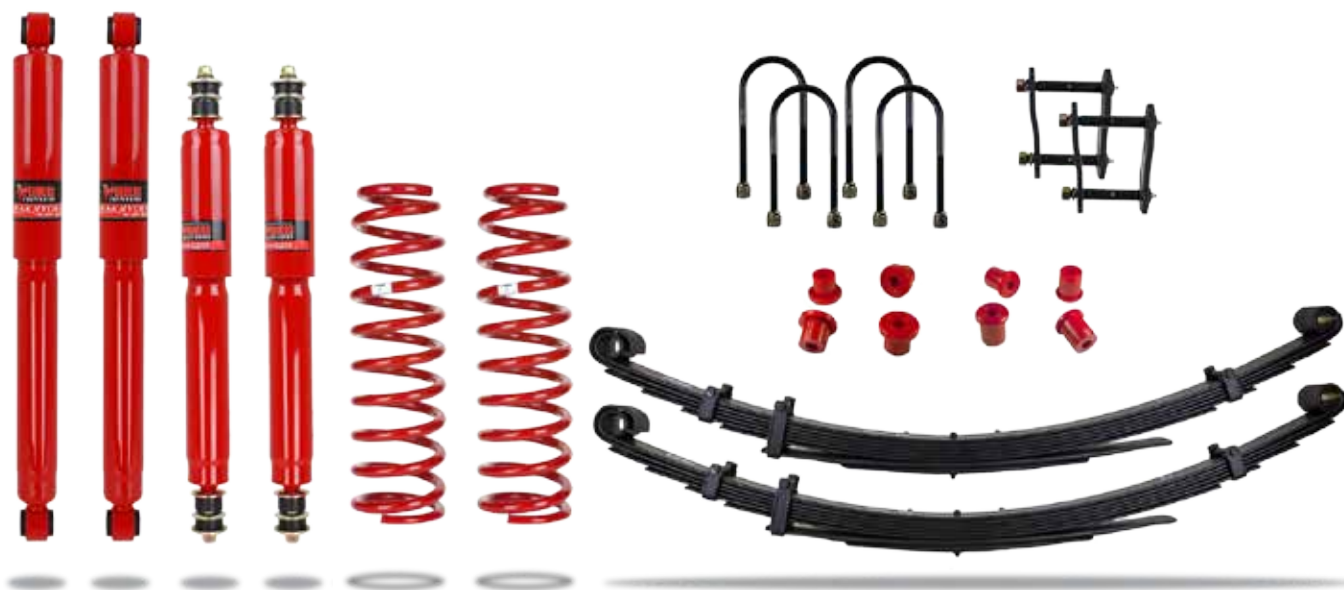
TrakRyder Touring (up to 1/2" or 13mm lift)

The spring and shock absorber rates were developed to provide an improved ride quality, a reduction in body roll and improved stability.

This kit is primarily designed to return the vehicle's ride height to it's original specification (up to 0.5"/13mm lift) and to re-energise the suspension capabilities through the addition of new shock absorbers.

Compatibility:

For vehicles used primarily as a commuter vehicle with general use, such as to and from work or the occasional long distance road trip as well as the occasional off road travel. This kit is suitable for vehicles fitted with a nudge bar, driving lights and standard wheels and tyres. The kit will also increase the capability of carrying a slightly heavier load such as bike rack, sporting equipment and light weight towing.





TrakRyder Expedition (up to 1" or 25mm lift)

The spring and shock absorber rates were developed to provide an improved load carrying capacity, with the advantage of increasing the stability leading to less body roll, while at all times having consideration for the ride comfort. This kit is primarily designed to reinstate the ride height to as new with a minor enhance of up to 1" (25mm). The Expedition Kit will also improve the braking and steering of the vehicle when towing, in conjunction with correctly fitted and approved weight distribution equipment.

Compatibility:

For vehicles used primarily for towing and/or load carrying. Ideal for carrying heavy loads, towing horse floats or caravans, and weekend of fun in the bush. This kit would be suitable for vehicles fitted with a nudge bar and driving lights, standard wheels and tyres, and general equipment such as a fridge or tool box.





TrakRyder Outback (up to 2" or 50mm lift)

The spring and shock absorber rates were developed to provide improved ground clearance and increased suspension travel, while improving vehicle stability on all road surfaces. This kit provides improved articulation on uneven road surfaces and improves tractability of all four wheels in difficult situations. It also allows for increased loads, such as camping or similar equipment. The increased ride height of up to 2" (50mm) allows the enthusiast "off roader" improved entry and exit angles over severe undulating terrain.

Compatibility:

For vehicles being used for on and off road, as well as general commuting. Ideal for towing caravans, horse floats, camper and general trailers. The kits would be ideal for vehicles fitted with a bull bar and driving lights, a dual battery system, or standard wheels with off road tyres fitted. The kit also has the ability to manage the extra weight of items, such as under car protection plates, roof racks, long range fuel tanks and rear drawer storage systems.



*M-Sport Ranger proudly riding on
Pedders TrakRyder Outback Kit.*

TrakRyder 4" Lift Kits

If you're looking for a complete 4" lift kit for your Toyota LandCruiser or Nissan Patrol then look no further, because Pedders has the solution for you!

Our 4" lift kits are supplied with the following rough terrain compliant components:

- TrakRyder raised extra heavy duty coil springs
- TrakRyder long travel foam cell shock absorbers
- Sway bar links
- Alignment products
- Extended brake hoses plus assorted chassis parts
- For the ABS models we also include the brake line as an extra component.



Things you should know about Suspension Lift Kits:

A suspension lift kit raises the entire suspension system, which allows 4WD owners to install much larger tyres and safely take the four wheel drive off road and into rougher terrains. Unlike other types of lift kits, suspension lift kits actually suspend the entire frame (with all the major parts including the engine and powertrain) to increase the distance between the chassis and the axles. Pedders Suspension lift kits raise the entire suspension by changing the shocks and the front and rear springs.

Pedders 4" Lift Kits to suit Nissan GQ-GU Patrol

Part #	Make	Model	Description
919027	Nissan	Patrol Y60 (GQ) - Y61 (GU)	Non ABS
919127	Nissan	Patrol Y60 (GQ) - Y61 (GU)	With ABS





TrakRyder 4" Lift Kits

Key Features & Benefits:

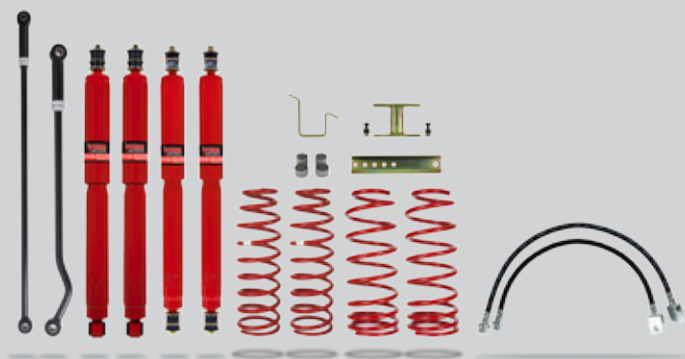
- Simply fit the parts, get the vehicle wheel aligned and you're ready to go!
- The 9500 series foam cell eliminates shock fade. The extra-large 40mm bore and piston is much greater than original equipment size and provides an even larger increased oil capacity for greater ride improvement.
- The TrakRyder raised extra heavy duty coil springs are made from premium quality grade steel, are stress relieved and 100% QA inspected.

- All sway bar links, alignment products, extended brake hoses plus assorted chassis parts have been designed, produced and tested off road to enhance the off road experience. All items are suited to rough terrain driving conditions.

NOTE:

- Vehicles can be further improved with the fitment of heavy duty/longer trailing arms, drag links and heavy duty steering dampers. See in-store for further details.

Competition Use Only. Not for Road Registered Vehicles.



Driving With a Lift Kit

Raising a four wheel drives suspension means increasing the car's centre of gravity. It's possible that the 4WD can become unstable, especially when turning at very high speeds. Adding a suspension lift kit can change the way a car feels to the driver, who may be used to a different type of handling the vehicle. Raised four wheel drives may also be more prone to leaning into banked turns. After installing a lift kit, drivers should practice driving the vehicle to get a better feel of the new suspension before doing any major off-roading.

Additional Adjustments

Installing a lift kit (particularly suspension lift kits) is a major overhaul. This may require 4WD owners to make additional adjustments. For example, some 4WDs may have to be re-gearred after adding larger tyres to compensate for the new tyre circumference. In addition, when oversize tyres are fitted it is highly recommended to install a Pedders heavy duty TrakRyder big bore steering damper.

Pedders 4" Lift Kits to suit Toyota 80/105 Series Landcruiser

Part #	Make	Model	Description
919047	Toyota	Land Cruiser 80/105 Series	Non ABS
919137	Toyota	Land Cruiser 80/105 Series	With ABS



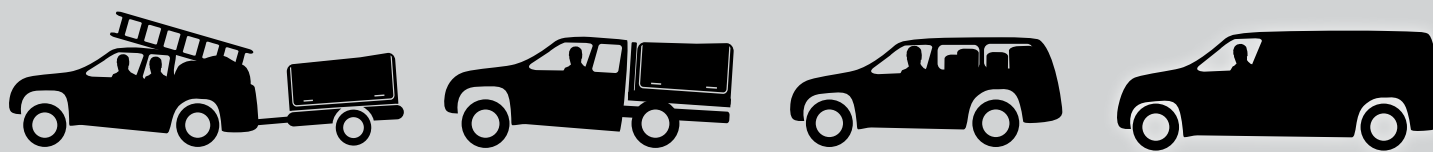
Pedders Tow & Load Assessment

Know Your Weight Now With Pedders Tow & Load Assessment.

Vehicle Weight from accessories, towing and loads is a significant factor in the safety and performance of your vehicle and hence Pedders have developed a world-first service, the Pedders Tow and Load Assessment, to assist customers in understanding their vehicle weight now and in the future.

What Is Weighing You Down?

All weight impacts the safety and performance of a vehicle and that weight will come from one, many or all of the following;

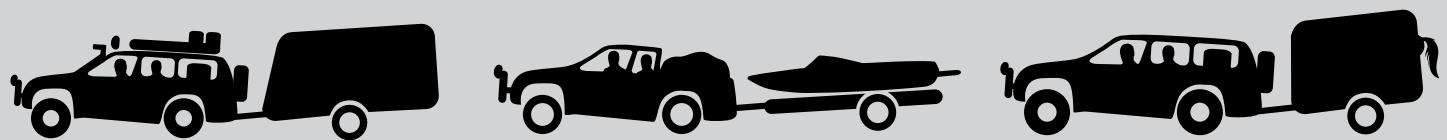


LOADS & CARGO



PEOPLE

ACCESSORIES



TOWING

Note: All vehicles have a maximum "Payload" which is the original manufacturers specification for the maximum allowable load for that vehicle.

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

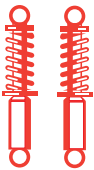
Our trained specialist technicians will systematically inspect your vehicle's entire steering and suspension system and other related undercar components from front to rear.



Brake Pad & Rotor Inspection

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

Pedders Tow & Load Assessment



Shock Absorber Test

Most cars will be subjected to a simulated condition, which enables evaluation of your shock absorbers and suspension. For other vehicles we have adequate alternative evaluation methods. As shock absorbers and suspension deteriorate over thousands of kilometres, it is often the case that a vehicle's safety is gradually compromised via increased braking distances, unstable cornering and various stability concerns.



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. So should your vehicle require work to be carried out to ensure its safety and dependability, we will outline for you within a scale of urgency the options available, using only Pedders approved components. This is a no obligation report, so you can decide what suits you best.

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

The Pedders Weight Matrix Software and Report is a unique, world-first program designed to assist you in better understanding your weight issues. 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. The priority items are any issues found within the Pedders Brake, Steering and Suspension check as these issues are magnified with the addition of weight. To assist with understanding the Pedders Tow and Load Assessment and in particular the Weight Matrix results a multi-page report can be printed or emailed and may be used by the Pedders expert at point of sale to discuss the findings and recommendations.

WEIGHT MATRIX INTRO

Customer: name
Vehicle: make/model or type
Reg: reg no
Date: vehicle
Date: issue
Tel: issue

Introduction

Thank you for choosing Pedders for your Tow and Load Assessment. As part of this comprehensive assessment we have entered your front and rear weight data into our Weight Matrix program. This complete software program is designed to provide customers with an accurate and conservative estimate of their vehicle weight and more importantly the impact of this weight from loads and accessories based on their vehicle.

The Pedders Weight Matrix uses a combination of exact, researched and estimated data to provide customers with an accurate estimate of their vehicle weight, remaining capacity weight balance and towing distance changes. From information gathered by weighing the vehicle and further information regarding their weight "scenario" Pedders experts will provide a conservative estimate of vehicle weight and towing capacity. Further information is provided below.

Weight Types

The Pedders Weight Matrix references 3 critical weights:

- ORIGINAL WEIGHT** is the weight of your vehicle as released from the manufacturer when released from new with no load and no fuel in the system, unless a manufacturer weight is released or not relevant an estimate based on your vehicle will be used.
- SCENARIO WEIGHT** Whether as measured in store, normal driving, towing a caravan, load carrying and so on, the vehicle comes that this report refers to is listed at the top of each page. The scenario weight is the actual or estimated weight of the vehicle scenario.
- ESTIMATED LOAD** is the difference between the "Original Weight" and the "Scenario Weight". If your vehicle has a Gross Vehicle Mass (GVM) test, the estimated load must not exceed this limit.
- PAYLOAD RANGE/CAPACITY** is the difference between the original load weight of the vehicle and the maximum rear or maximum Gross Vehicle Mass (GVM) or capacity limit of the vehicle. Capacity/Payload used is generally those specified by the vehicle manufacturer for the vehicle weight, unless a manufacturer or estimated weight may have been used based on our experience of similar vehicles. A Pedders Nationally Certified GVM Upgrade Kit provides additional Payload and where this is suitable for your vehicle a second set of bars will be shown below for your reference.

Weight Balance

In addition to overall weight gain, the shift in weight from original, front/rear or rearward, due to the addition of loads or accessories, affects the riding and performance of your vehicle. The Weight Balance Diagram provides you a snapshot of current and your vehicle's weight balance in each weight scenario compared to original.

Estimated Additional Braking Distance

The addition of weight from loads and accessories has a significant effect on braking performance and longevity as well as safety-related issues. The additional braking distance shown in appropriate additional braking distance based on the addition of weight from original and assuming all other factors remain constant.

WEIGHT MATRIX SUMMARY

Customer: name
Vehicle: make/model or type
Reg: reg no
Date: vehicle
Date: issue
Tel: issue

SCENARIO: TOWING BIG CARAVAN

Vehicle Weight

Following are your vehicle weights:

	FRONT	REAR	TOTAL
ORIGINAL KERN WEIGHT	XXXXXX	XXXXXX	XXXXXX
SCENARIO WEIGHT	XXXXXX	XXXXXX	XXXXXX
ESTIMATED LOAD	XXXXXX	XXXXXX	XXXXXX

Accessories and Loads

The following loads and accessories were noted on the vehicle within this scenario:

Item	Weight
Caravan	XXXXXX
Motorhome	XXXXXX
Trailer	XXXXXX
Truck	XXXXXX
Van	XXXXXX
Other	XXXXXX

Vehicle Payload Range

The following table shows the vehicle's payload range for the scenario weight.

Scenario Weight	Original	Scenario Weight	Weight Balance
FRONT	XXXXXX	XXXXXX	XXXXXX
REAR	XXXXXX	XXXXXX	XXXXXX
TOTAL	XXXXXX	XXXXXX	XXXXXX

WITH PEDDERS GVM UPGRADE

Scenario Weight	Original	Scenario Weight	Weight Balance
FRONT	XXXXXX	XXXXXX	XXXXXX
REAR	XXXXXX	XXXXXX	XXXXXX
TOTAL	XXXXXX	XXXXXX	XXXXXX

Estimated Additional Braking Distance

The additional braking distance shown in appropriate additional braking distance based on the addition of weight from original and assuming all other factors remain constant.

TOW & LOAD REPORT

Customer: name
Vehicle: make/model or type
Reg: reg no
Date: vehicle
Date: issue
Tel: issue

SCENARIO: TOWING BIG CARAVAN

Thank you for choosing Pedders for your Tow and Load Assessment. The report is designed to provide you with a snapshot of information and recommendations from the test critical areas within this assessment. Please consider this report in conjunction with the information contained within this report.

1. Pedders Brake, Steering and Suspension Check

The priority within the Pedders Tow and Load Assessment is to assess the general condition of your vehicle. A comprehensive Brake, Steering and Suspension Check has been conducted and reported separately. These components are critical to the safety and performance of your vehicle. Regularly check the state of these critical areas to ensure the effectiveness of any further weight-related upgrades to brakes, steering and suspension.

2. Your Vehicle Weight Matrix

Your vehicle has been weighed and assessed at current weight as well as different driving scenarios. These can be matched to original specifications to provide a snapshot of your vehicle's weight issues. The 4 critical pieces of information from the Weight Matrix Report comparing original weight and capacity to the scenario listed above are:

OVERALL TOTAL EXPECTED LOAD - XXXXXkgps
OVERALL REMAINING CAPACITY - (if under) XXXXXkgps
(if over) XXXXXkgps

OVERALL EXPECTED WEIGHT BALANCE SHIFT - XXX% REARWARD (FRONTWARD)
ESTIMATED ADDITIONAL STOPPING DISTANCE - XXXmetres

TOW & LOAD CONCLUSION

Customer: name
Vehicle: make/model or type
Reg: reg no
Date: vehicle
Date: issue
Tel: issue

The Effects of Your Weight on Your Vehicle

The following are the critical effects of weight on your vehicle:

- Chassis Dynamics:** The Pitch, Roll and Yaw (The front to back, side to side and rotational motion) of the vehicle body over the wheels and particularly the location of these movements to drive load. Increased weight changes the speed and magnitude of these movements and creates a greater discomfort between driver input and vehicle response.
- Suspension Travel:** The available upward compression or bending and downward (payload) range of movement within the vehicle's suspension system. Increased weight (payload) with less spring (payload) causes the vehicle to compress the available compression travel for normal suspension operation thus increasing the frequency and severity of contact with the lower spring (payload) side components, ineffective suspension control and increased risk of premature wear and tear to driving and suspension components.
- Braking Efficiency and Distance:** Increased Total Weight creates a magnification of energy and force onto the vehicle's braking system which in turn generates increased heat and slows, increasing total Weight and/or increased vehicle loading has a significant impact on brake performance, slowing, stopping and more importantly braking distance.
- Type Contact and Steering Effectiveness:** Towing and other increased rear and loads cause longitudinal weight transfer which reduces weight over the front axle. The result of this is reduced front tyre contact and grip with the road reducing the effectiveness of steering and braking to drive, stop and more importantly allowing the front of the vehicle to wander or drift.
- Wheel Alignment:** This is the correct angle of a vehicle's tyres to maintain tyre contact under normal driving conditions. Increased weight transfer changes the alignment of the vehicle's tyres, which affects the angle of the wheel resulting in the reduction of tyre contact with the road and increased tyre wear. Increased Wheel Alignment and Tyre Contact affects the degree of vehicle performance, most importantly safety through directional steering responsiveness and braking efficiency.
- Legal Compliance:** Every vehicle must comply within the weights limits specified by the original manufacturer. Failure to adhere to this limits the vehicle's safety.

Pedders Tow and Load Assessment Solution

- A vehicle's weight and performance of your tow and load carrying vehicle that items recommended for replacement within Pedders Brake, Steering and Suspension Check is undertaken BEFORE any upgrades.
- Every Load and Every Situation is Different and that is why Pedders can provide you with a customised load carrying and towing solution that can provide the following benefits:
 - Improved Drivability and Chassis Dynamics, especially under load.
 - Reduce under increase side height and suspension level under load.
 - Improve Braking Performance, Longevity and Stopping Distance under load.
 - Improve Tyre Contact and Steering Effectiveness under load.
 - Reduce correct wheel alignment and reduce tyre wear under load.
 - Provide greater payload for legal compliance (GVM) vehicles and.

Pedders specialty is matching it's wide range of brake, steering and suspension products, plus a range of ancillary load and towing solutions to achieve the best outcome no matter what you require. We provide a top rating, ISO 9001.

GVM+ Load Carrying Upgrade Solutions

Lock and Load with Pedders GVM+ Upgrade Solutions!

If you carry loads for a living or are serious about what you take with you on your next journey then look no further. Pedders GVM+ Upgrade Solutions offer one of the best suspension upgrades for your vehicle, proudly backed by our nationwide network of certified installers and service centres.

When your vehicle is fully loaded for the journey ahead or if you are carrying the tools of your work trade, chances are that your vehicle may be overloaded beyond its GVM and Payload capacity and you may not even know it. Common items such as tools, tool boxes, cargo, bull bars, winches, towbars, fuel, accessories, passengers, recovery gear all combine to add weight to your vehicle and decrease the available payload. It is also important to note that if you have purchased a cab/chassis, the weight of any tray or service body is considered to be part of the “kerb weight” - therefore further reducing the available payload.

Every vehicle on our roads today has an official legally allocated Gross Vehicle Mass rating (GVM) and Payload Capacity (how much weight a vehicle can carry in both passengers and cargo in the cab and tray bed). The GVM rating is the maximum allowable weight figure (in kg's) as specified by the manufacturer when fully loaded. It's essentially the maximum legal weight, that you can safely drive at for that particular vehicle.

Pedders now offer a GVM+ upgrade solution for selected Ranger models to assist in compliance for GVM ratings. Through exhaustive and detailed testing, the Pedders GVM+ Upgrade Kits have been approved by the (Commonwealth) Department of Infrastructure and Regional Development.

So if you're unsure about the GVM of your vehicle or if you think that you are running your vehicle over the legal weight limit, then book your car into one of our Test Lane or Test Lane Plus Stores for a Pedders Tech Check and Report. With the use of our approved Pedders Tow & Load Assessment outlets, we can check the axle weight and corner weights of your vehicle to determine the overall GVM figure, and advise you if your vehicle is overloaded, and what options are available for your vehicle.

BEFORE



AFTER



GVM+ Load Carrying Upgrade Solutions

GVM Upgrade Solutions from Pedders:

- We offer Australian certified suspension upgrade kits that comprise heavy duty Pedders Suspension components. This means that all of our GVM+ upgrade solutions kits are endorsed and certified by the (Commonwealth) Department of Infrastructure and Regional Development.
- All components installed as part of a Pedders GVM+ upgrade package are backed by a Pedders 2 Year/40,000kms Nationwide Warranty.
- Ideal choice for towing caravans, tradie/fleet vehicles, vehicles with service bodies, horse floats, camper and general trailers that need that extra load carrying capacity.
- Great for serious four wheel drives fitted with bull bars, winches, recovery equipment, drawer systems, camping gear and underbody protection looking for compliance to federal and state GVM laws.

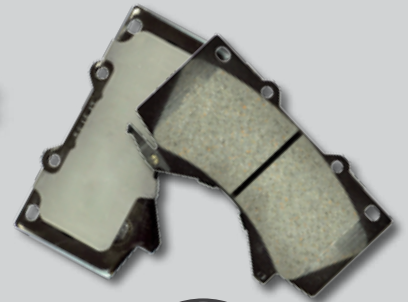
- When the GVM+ Upgrade kit has been installed to a new vehicle by the trained Pedders technicians at a Pedders store, a compliance plate will be fitted. The new vehicle can now be registered with new increased GVM. This procedure allows the vehicle to be legally used in all states of Australia. For vehicles that have already been road registered, the vehicle is to be inspected by an authorised Automotive Engineer in that state and issued with a compliance certificate.
- So, if you are planning a load carrying vehicle purchase, or have realised that your current vehicle isn't quite handling the load, we have the solution.



TRAK RYDER
BRAKE PADS

TrakRyder Brake Pads are an ideal addition for all Pedders GVM+ suspension upgrade kits. Tested and proven to be substantially higher in performance than original equipment.

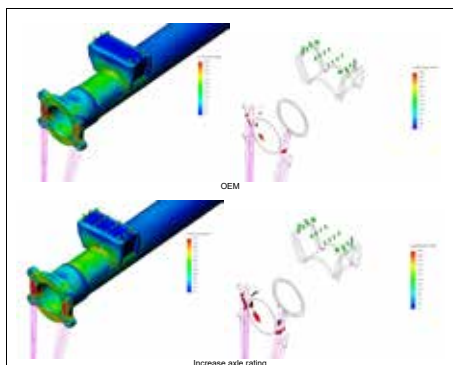
KEVLAR
CERAMIC



GVM+ Design, Research, Development & Engineering

After getting to this point in the process, Pedders outsources the engineering testing and certification to ensure all aspects of compliance with the Australian Design Rules. All solutions are rigorously tested and signed off prior to presentation of that evidence to the Federal Office for Vehicle Safety Standards in Canberra.

OEM vs Proposed GVM+ Increased axle rating (on selected vehicles).



ESC Testing with State of the Art Testing Procedures.



Certification

The process for approval certification as a Second Stage Manufacturer is quite similar to that of an Original Equipment Manufacturer. Each Pedders GVM+ upgrade solution must pass all Australian Design Rules and Safety Standard.

Our Range of GVM+ Approved Vehicles



Ford Ranger
Up to 3500Kgs



Holden Colorado RG
Up to 3420Kgs



Holden Colorado RG2
Up to 3450Kgs



Isuzu D-Max
Up to 3450Kgs



Mazda BT-50
Up to 3500Kgs



Mistubishi MQ Triton
Up to 3100Kgs



**Nissan Navara D23
Dual Cab**
Up to 3070Kgs



Nissan Navara D40
Up to 3215Kgs



Nissan Patrol
Up to 3505Kgs



Nissan Patrol Ute
Up to 3950Kgs Leaf
Up to 3505Kgs Coil



Toyota HiAce
Up to 3190Kgs LWB
Up to 3460Kgs SLWB



Toyota Hilux 05-15
Up to 3140Kgs



Toyota Hilux 2016
Up to 3450kgs



Toyota Hilux 2016 2WD
Up to 3450kgs



Toyota Landcruiser 76
Up to 3780Kgs



Toyota Landcruiser 78/79
Up to 3950Kgs



Toyota Landcruiser 200
Up to 3500Kgs



VW Amarok
Up to 3285Kgs



Pedders is Australia's Number 1 chain of franchised under-car specialist stores. We offer a comprehensive range of products and services for all suspension, braking, towing, load carrying and steering needs to suit passenger cars, four-wheel drives, light commercials and high performance vehicles.

Since 1950, Pedders has been designing, manufacturing, selling, fitting and servicing its world class products through its own network of warehousing, service and authorised dealer centres throughout the world.

Every Pedders store offers the most comprehensive specialist under-car diagnosis and repairs with unmatched courteous advice and service. Pedders' range of high quality parts is backed by the commitment of our service centres and regional authorised dealers, who are only too happy to offer advice on how you can improve your vehicle's ride, braking, towing, handling and steering.



Warranty

Pedders Suspension 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