

# **Terrafir***Ma*

*Serious 4x4 Accessories*

**ACCESSORIES FOR LAND ROVER VEHICLES**

## PHOTOGRAPHY CREDITS

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### Inside Front Cover

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## SPANNER RATING

In this catalogue we have accompanied any featured product with a “Spanner” rating to serve as a guide to how complex or technically challenging the fitting of the products are estimated to be. Please note that this is only meant as a guide and it is recommended that any work be thoroughly researched and planned beforehand and carried out in a safe environment with correct tooling and sensible precautions. Fitting of any product is carried out at the fitters own risk.

Any DIY work on a vehicle may have safety implications. We recommend that fitters seek advice if unsure.



**Novice** – Minimal tools required.



**Hobbyist** – Some drilling may be required. Standard tools should be required.



**Competent home mechanic** – Some drilling and cutting may be required. Occasional specialist tooling may be required.



**Advanced home mechanic** – Often drilling/cutting or calibration will be required. Specialist tooling often required. Occasional diagnostic aid may be necessary.



**Qualified technician** – Often safety critical. Diagnostic capability and specialist tooling required.



For further information, fitment advice, images, customer reviews or to find your nearest Terrafirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

Please note product information is correct at time of publication (December 2018). Product images are for illustration purposes only and are not reflective of actual size or proportion.

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Terrafirma has come a long way in 10 years, fuelled by the enthusiasm and demand from Land Rover owners everywhere; Terrafirma products have found their way into more than 100 countries Worldwide, cementing its position as the leading brand of Land Rover specific accessories in the industry. And it doesn't end here.

Ongoing development ensures existing items are improved and new parts are continually developed, tested and evaluated for inclusion into the range. Terrafirma not only produces products for recreational and competition off road but also for commercial and military applications too.





**Did you know, the name  
Terra Firma translates  
in Latin as Solid Earth**

The Terra Firma range of accessories and equipment has been created to meet the exceptional demands of Land Rover users and enthusiasts. Distributed Internationally through Allmakes 4x4 authorised parts and accessory dealers Terra Firma is one of the most recognised 4x4 accessory brands in the World.

Terra Firma offers choice, clear product identification and application, ensuring the correct product can be selected from the extensive and increasing range of accessories.

To satisfy the diverse requirements of owners both on and off road we have produced an amazing selection of accessories for Land Rovers. In particular Terra Firma suspension, which is by far the most comprehensive category including one of the largest ranges of upgraded shock absorbers, steering dampers, coil springs and suspension hardware available in the marketplace.

Terra Firma accessories are primarily designed to fit using original or existing mounting points. Only minimal customising may be required with minor trimming or drilling needed to maximise the performance of the vehicle. Trends change and new vehicle models are introduced, as such new products are continually being evaluated and tested for introduction.

In this catalogue you will find products from the diverse Terra Firma range providing a 'one stop shop' for Land Rover preparation requirements.

**TerraFirma**  
*Serious 4x4 Accessories*

# BRAKING

TerraFirma brake discs give excellent performance in all conditions.

TerraFirma brake discs offer increased bite from cold and excellent fade resistance in most 4WD braking applications. Whether it's a steep rocky descent, ploughing through mud and water or just daily driving these brake discs will give excellent stopping performance in all conditions.



## FEATURES INCLUDE:

CDG discs run cooler and minimise fade

CDG discs eject gasses and water to stop pads from hydroplaning



3 Grooves are machined into the brake disc to force away the dust and gasses that build up between the pad and disc, keeping the brakes cooler and reducing fade. Cross-drilling contributes to cooling and heat dissipation and also allows gasses to escape.

Of course discs can fill with mud when off road, and cleaning them out afterwards when washing the vehicle will help prolong performance and pad life, but with the angled grooves it is found that in most cases the discs will self-clean. Quality machining to high tolerances using the correct materials ensure TerraFirma brake discs will stand any test.

With overweight four-wheel drive vehicles with oversize tyres it's important to find a set of brake pads that really do perform. A heavily laden expedition



vehicle will quickly overheat brakes, very large tyres fitted to off road vehicles also require extra brake pedal pressure to stop them turning. Many so-called performance pads are better suited to sports type driving styles where heat is required and can be maintained to enable the pads to really work. Even some well-known brands require the temperature to build up before they start to work effectively.

To get the best from TerraFirma Cross Drilled and Grooved (CDG) brake discs we recommend the use of our Premium Ceramic brake pads.

**FEATURES INCLUDE:**

Does not fill with mud and seize on

Easy to adjust and replace pads

**DISC BRAKE  
HANDBRAKE  
KIT**

The original transmission brake on a Land Rover

Defender is not the most efficient handbrake system. On vehicles used in wet and muddy conditions the brake can rapidly run out of adjustment or become partially or even completely seized. A seized brake is almost as likely to seize on as it is to seize off which can then lead to vibrations, overheating and accelerated wear. All of these issues ultimately result in a handbrake that does not work.

The Terrafirma disc brake handbrake kit uses a precision machined brake disc combined with a unique fully floating brake calliper that retains its brake pads that are gently sprung loaded to prevent rattling. The high clamping force of the calliper, even when combined with a smaller diameter disc than



the original brake drum makes for a more effective system than a well serviced original set up. An added bonus of a smaller diameter brake disc is the reduced chance of the brake getting hung up on obstacles.

The Terrafirma disc brake handbrake kit comes with a sturdy mounting plate incorporating a disc protector as well as a new handbrake cable to ensure perfect operation.

*Replacement pads are also available.*

DESCRIPTION	PART NUMBER
Disc brake hand brake kit	<b>TFDBHBK</b>
Replacement brake pads	<b>TFDBHBK PADS</b>

VEHICLE	FR OR RR	TYPE	PART NUMBER
<b>Freelander 1</b>			
1.8P and 2.0D 2001 onwards	Front	Solid	<b>SDB100830CDG</b>
2.0 Td4 and 2.5 V6	Front	Vented	<b>SDB101070CDG</b>
<b>Discovery 1 and Range Rover Classic</b>			
2.0P, 200Tdi, 300Tdi, V8 Carb and V8 EFI	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
	Rear	Solid	<b>LR017953CDG</b>
<b>Discovery 2</b>			
Td5 and V8P 1998 to 2004	Front	Vented	<b>SDB000380CDG</b>
Td5 and V8P 1998 to 2004	Rear	Solid	<b>SDB000470CDG</b>
<b>Discovery 3</b>			
Tdv6 and 4.0P	Front	Vented	<b>SDB000604CDG</b>
4.4P	Front	Vented	<b>SDB000614CDG</b>
Tdv6 and 4.0P	Rear	Vented	<b>SDB000636CDG</b>
4.4P	Rear	Vented	<b>SDB000646CDG</b>
4.4P with Dynamic pack	Rear	Vented	<b>SDB000646CDG</b>
<b>Discovery 4</b>			
Tdv6 and 5.0P	Front	Vented	<b>SDB000624CDG</b>
Tdv6 and 5.0P	Rear	Vented	<b>SDB000636CDG</b>
<b>Defender 90</b>			
	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
	Rear	Solid	<b>LR017953CDG</b>
<b>Defender 110/130</b>			
	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
Salisbury rear axle 1994 to 2002	Rear	Solid	<b>LR017953CDG</b>
Rover rear axle 2002 onwards	Rear	Solid	<b>LR018026CDG</b>
<b>Range Rover P38</b>			
2.5D, 4.0P and 4.6P	Front	Vented	<b>NTC8780CDG</b>
2.5D, 4.0P and 4.6P	Rear	Solid	<b>SDB000470CDG</b>
<b>Range Rover L322 2002 to 2010</b>			
Td6 and V8P	Front	Vented	<b>SDB000201CDG</b>
Td6, Tdv8 and V8P	Front	Vented	<b>LR031843CDG</b>
Td6, Tdv8 and V8P	Front	Vented	<b>SDB500182CDG</b>
Td6, Tdv8 and V8P	Rear	Solid	<b>SDB000211CDG</b>
<b>Range Rover 2010 onwards</b>			
Tdv8 5.0P	Rear	Vented	<b>LR031844CDG</b>
<b>Range Rover Sport</b>			
Tdv6, Tdv8, 4.2P, 4.4P and 5.0P	Front	Vented	<b>SDB000624CDG</b>
Tdv6, Tdv8, 4.2P, 4.4P and 5.0P	Rear	Vented	<b>SDB000646CDG</b>

**SDB100830CDG****SDB101070CDG****LR017951CDG**

# PREMIUM CERAMIC BRAKE PADS

## ✓ FEATURES INCLUDE:

Quieter than semi-metallic pads – emit noises that are above the range of human hearing

Produce finer, lighter-coloured brake dust which does not stick to wheels

Longer lifespan than organic or semi-metallic

Stable under a wide range of temperatures for consistent performance



**2** The comparative new kid on the block is the ceramic brake pad. Terrafrima Premium ceramic brake pads are composed of a dense ceramic material (like pottery fired in a kiln) with embedded copper fibres. In use since the 1980s, ceramic pads were developed as an alternative replacement for organic and semi-metallic brake pads because at the time these types produced too much noise and dust. Ceramic pads are also generally easier on rotors than semi-metallic pads.

VEHICLE	YEAR FROM-TO		PART NO.
Discovery 4	2010	end	<b>LR015519TF</b>
Range Rover	2010	2012	<b>LR015519TF</b>
Range Rover Sport	2010	2013	<b>LR015519TF</b>
Discovery 3 LR3	2004	2009	<b>LR019618TF</b>
Discovery 4	2010	end	<b>LR019618TF</b>
Range Rover	2002	2009	<b>LR019618TF</b>
Range Rover Sport	2005	2009	<b>LR019618TF</b>
Discovery 3 LR3	2004	2009	<b>LR021316TF</b>
Discovery 4	2010	end	<b>LR021316TF</b>
Range Rover Sport	2005	2009	<b>LR021316TF</b>
Range Rover	2010	2012	<b>LR026221TF</b>
Discovery 4	2010	end	<b>LR051626TF</b>
Range Rover	2013	end	<b>LR051626TF</b>
Range Rover Sport	2010	2013	<b>LR051626TF</b>
Range Rover Sport	2014	end	<b>LR051626TF</b>
Discovery 3 LR3	2004	2009	<b>LR055454TF</b>
Discovery 4	2010	end	<b>LR055454TF</b>
Range Rover	2002	2009	<b>LR055454TF</b>
Discovery 4	2010	end	<b>LR055455TF</b>
Range Rover Evoque with 17" brakes	2012	onwards	<b>LR059122CDG</b>
Discovery Sport with 17" brakes	2015	onwards	<b>LR059122CDG</b>
Defender (Not NAS)	1987	end	<b>SFP000250TF</b>
Defender (Not NAS)	1987	end	<b>SFP000260TF</b>
Defender (Not NAS)	1987	2006	<b>SFP000280TF</b>
Range Rover 02-09	2006	2009	<b>SFP500070TF</b>
Range Rover Sport	2005	2009	<b>SFP500070TF</b>
Discovery 2	1998	2004	<b>SFP500130TF</b>
Range Rover	1994	2001	<b>SFP500130TF</b>
Discovery 2	1998	2004	<b>SFP500150TF</b>
Defender (Not NAS)	1983	1991	<b>SFP500160TF</b>
Discovery 1	1989	1998	<b>SFP500160TF</b>
Defender (NAS)	1994	1997	<b>SFP500190TF</b>
Discovery 1	1989	1998	<b>SFP500190TF</b>
Range Rover 02-09	2002	2009	<b>SFP500210TF</b>
Discovery 1	1989	1992	<b>SFP500220TF</b>



LR015519TF



LR019618TF



SFP500190TF



# PERFORMANCE BRAKE PADS



ECE-R90



## FEATURES INCLUDE:

High Performance semi metallic high coefficient of friction pad material for increased stopping power

Superior bottom layer, stronger and cooler

New high quality low noise anti-squeal shim

Perfect fitting bright yellow back plate



Terrafirma Performance Brake Pads in unmistakable bright yellow are ideal for applications where stopping power is everything. A high coefficient of friction semi metallic friction material has been specially developed to improve braking in all circumstances that does not suffer from the consequences of longer service life, low dust and low noise that compromise the braking performance of standard brake pads. Terrafirma Performance Brake Pads give increased bite and pedal feel from cold and are ideal in both on and off-road conditions and especially when towing. Braking in low range with large tyres, high power engines and automatic transmissions requires less pedal pressure and Terrafirma Performance Brake Pads also restore braking confidence with heavily laden vehicles.

For best results combine with Terrafirma Crossed Drilled and Grooved brake discs.

VEHICLE	FRONT/ REAR	APPLICATION	PART NO.
Discovery 4 LR4 2010>	Rear	PERFORMANCE BRAKE PAD SET - WITH SPRINGS- REAR-D4 -RR L322 - RRS 10-13	<b>LR015519P</b>
Discovery 3 LR3 2005-2009	Front	PERFORMANCE - KIT - BRAKE PADS - FR - D3 - D4 - RRS 05- 09 - RR L322	<b>LR019618P</b>
Range Rover 2010>	Front	PERFORMANCE BRAKE PAD SET RR3 3.6D AND 5.0NA	<b>LR026221P</b>
Discovery 4 LR4 2010>	Front	PERFORMANCE BRAKE PAD SET FR - D4 - RR L322 - RRS 10-13 - RRS 14>	<b>LR051626P</b>
Range Rover Sport 2014>	Front	PERFORMANCE BRAKE PAD SET FR - D4 - RR L322 - RRS 10-13 - RRS 14>	<b>LR051626P</b>
Discovery 3 LR3 2005-2009	Rear	PERFORMANCE BRAKE PAD KIT - REAR - RRS05 -13 - D3 - D4 - RR L322	<b>LR055454P</b>
Discovery 4 LR4 2010>	Rear	PERFORMANCE - KIT - BRAKE LINING - REAR - D4	<b>LR055455P</b>
Defender 1983-2006	Rear	BRAKE PADS-NO PIN/CL - REAR - DEF - DEF07>	<b>SFP000250P</b>
Defender 1983-2006	Front	PERFORMANCE BRAKE PAD FR - DEF - DEF07>	<b>SFP000260P</b>
Defender 1983-2006	Rear	PERFORMANCE BRAKE PAD - REAR - DEF	<b>SFP000280P</b>
Range Rover 2002-2009	Front	PERFORMANCE FRONT BRAKE PAD SET - RRS 05-09 - TD8 3.6 DIESEL - RR L322	<b>SFP500070P</b>
Discovery 2 1998-2004	Rear	PERFORMANCE BRAKE PAD SET - REAR - RR P38 - D2	<b>SFP500130P</b>
Discovery 2 1998-2004	Front	BRAKE PAD SET - FR - D2	<b>SFP500150P</b>
Range Rover 2002-2009	Rear	SET-PAD-BRAKE - REAR - RR L322	<b>SFP500210P</b>
Discovery 1 1989-1998	Front	PERFORMANCE BRAKE PADS - FRONT - DISCO1 - RR CLASSIC	<b>SFP500220P</b>
Discovery 3 LR3 2005-2009	Rear	PERFORMANCE BRAKE PAD SET REAR - D3 - D4 - RRS 05-09	<b>LR021316P</b>



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# STAINLESS STEEL BRAKE LINES



## FEATURES INCLUDE:

Increases pedal feel

More resistant to abrasion and damage

More resistant to high temperature environments



TerraFirma have teamed up with the industry leader Goodridge to produce a full line up of the best quality stainless braided brake lines.

For over 40 years, racers from across the globe have turned to Goodridge for products to out-perform the competition. Drivers,

riders and teams have been pushing the limits with Goodridge since 1969.

Factory fitted brake lines are usually made of rubber. Even when new, rubber expands under pressure causing a decrease in braking performance and spongy pedal feel. TerraFirma Goodridge brake hoses won't expand under pressure, delivering precise braking when you need it.

Every TerraFirma Goodridge brake line is individually 100% pressure tested and guaranteed to be leak free. TerraFirma Goodridge brake lines are corrosion resistant and come with a lifetime guarantee. Every brake line kit is supplied with all fixings required to provide a perfect fit first time, every time!



Each hose has a PVC protective covering.

OEM Specification fitting plating with 968 hour salt spray protection.

UK manufactured and assembled product.

Eliminates spongy feel.

Greater braking efficiency.

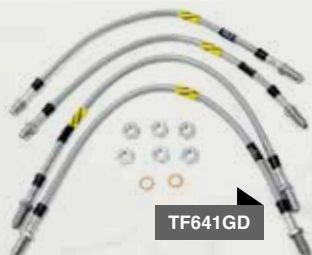
Superior resistance to abrasion and corrosion.

100% TUV, DOT, ADR and ISO approved.

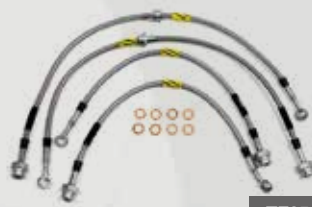
Every brake line is 100% pressure tested to 2000 PSI once fully assembled.

Goodridge stainless braided brake lines are the standard in professional motorsports where the ultimate in braking is required. TerraFirma Goodridge brake hoses increase braking efficiency and removes the spongy feel under arduous conditions. With an unmatched reputation backed by champions worldwide, there is no reason to choose anyone else.

VEHICLE	YEAR	HOSES IN KIT	DESCRIPTION	PART NO.
Defender	90	Up to 1999	3 Plus 2" extended kit	TF640GD
Defender	90/110/130	1999 - 2004	4 Plus 2" extended kit	TF641GD
Defender	110/130	Up to 1999	3 Plus 2" extended kit	TF642GD
Defender	90/110/130 ABS	1999 - 2004	4 Plus 2" extended kit	TF643GD
Defender	90/110/130 ABS	2004 -	4 Plus 2" extended kit	TF644GD
Defender	90/110/130 NO ABS	2004 -	3 Plus 2" extended kit	TF645GD
Discovery	Series 1	1989 - 1992	5 Plus 2" extended kit	TF646GD
Discovery	Series 1	1992 - 1994	5 Plus 2" extended kit	TF647GD
Discovery	Series 1 ABS	1994 - 1998	4 Plus 2" extended kit	TF648GD
Discovery	Series 1 NO ABS	1994 - 1998	3 Plus 2" extended kit	TF649GD
Discovery	Series 2	1998 - 2004	4 Plus 2" extended kit	TF650GD
Discovery	Series 3	2004 - 2009	6 Standard length kit	TF651GD
Discovery	Series 4	2009 - 2016	6 Standard length kit	TF652GD
Range Rover	Classic ABS	1990 - 1992	6 Plus 2" extended kit	TF653GD
Range Rover	P38	1994 - 2002	6 Plus 2" extended kit	TF654GD
Range Rover	L322	2002 - 2012	6 Standard length kit	TF655GD
Range Rover	L405	2012 -	6 Standard length kit	TF656GD
Freelander	Series 1	1997 - 2006	4 Plus 2" extended kit	TF657GD
Freelander	Series 2	2006 - 2014	4 Standard length kit	TF658GD
Evoque	ALL	ALL	4 Standard length kit	TF659GD



TF641GD



TF650GD



TF658GD

# EXPEDITION

All you need to equip your Land Rover for an adventure.

Whether your idea of an expedition is an afternoon doing some of Hampshire's Byways, a weekend trip across Wales or a full on trip through the African deserts TerraFirma has all the accessories you will need. From roof racks and ladders to Spare wheel carriers and snorkels, from Jerry cans and sand tracks to fridges we have it covered with this extensive range of off road expedition accessories.



#### FEATURES INCLUDE:

Wind noise reducing spoiler supplied

Lightweight extruded aluminium construction

Adjustable slat system



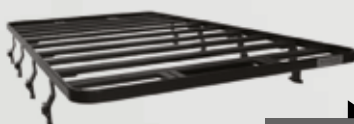
TF980



TF981



TF976



TF975

## ROOF RACKS



TerraFirma offers a range of roof racks to suit all the main criteria including features such as low noise, stylish contouring to match the roof profile of the Land Rover, excellent build quality and value for money. The roof racks are made of heat treated aluminium extrusion to ensure the correct degree of flexibility and rigidity. The cross bars incorporate a groove system where bolts can be located and positioned to easily attach roof tents, equipment, accessories and spot lights etc. and the high quality black powder coating gives a long lasting finish.

Each roof rack is supplied with raised legs that simply clamp onto the rain gutter. Rear access ladders are also available for Defender and Discovery 1 and 2.

DESCRIPTION	VEHICLE	PART NUMBER
Defender hard top and station wagon 1.8x1.4	90	TF976
Defender hard top and station wagon 2.8x1.4	110	TF975
Discovery 2.1x1.4	D1/D2	TF977
Rear ladder	90/110	TF980
Rear ladder	D1/D2	TF981



#### FEATURES INCLUDE:

Eliminates damage to rear door

Opens in conjunction with rear door

## SPARE WHEEL CARRIER



Originally Land Rover mounted

the spare wheel on the bonnet of early vehicles. This was fine

on a Series III with skinny tyres but as wheel and tyre options began to increase the logical choice was to put it on the back. Ever since then Land Rover owners have suffered with rattling, cracked and broken rear doors, the larger the wheel and tyre and the rougher the conditions the worse the situation. The swing-away spare wheel carrier is suitable for 90 and 110 Station Wagons and Hard Tops. Suits all models from 1985 - 2016.

This black powder coated, fabricated steel spare wheel carrier is attached primarily to the body capping and to the rear crossmember for improved load bearing as well as the rear door via an anti vibration sliding piston assembly that allows the carrier to move automatically when the door is opened and closed.

The hinges incorporate tough nylon bushes for long life and a rust free joint. The spare wheel carrier can be fitted in conjunction with the Terrafirma rear step tow bar.

Note: May not be suitable if fitted with other rear bumper accessories. Seek advice if unsure before fitting.



TF051



#### FEATURES INCLUDE:

45 litre capacity

Stainless steel liner

## PORTABLE FRIDGE FREEZER



The Terrafirma fridge

freezer is specially designed to operate in tough 4x4 and off road environments. Vibration resistant this fridge freezer is suitable for everything from weekend camping trips right through to full blown expeditions. Fisherman and medical organisations alike will also find the Terrafirma fridge freezer invaluable, able to perform even at +50deg. ambient temperature outside freezing down to -18deg.

The capacity is a popular 45 litres with dual compartments providing ample storage space for fresh and frozen produce and of course a few cold tins of drink.

The unique full surround static coil evaporator and easy to clean stainless steel liner ensures optimum cooling performance with a low average current draw of 1.65amps with the freezer set to -10deg. at +32deg. ambient.

The Terrafirma fridge freezer works in 12 and 24 volt applications and a 240v adaptor is available for use at home

The sturdy fully insulated cabinet incorporates a removable and reversible lid for ease of access and, so as to protect the fridge and add additional insulation, a snug-fitting protection jacket is available as an optional extra.



TFFR01

DESCRIPTION	VEHICLE	PART NUMBER
Defender hard top and station wagon spare wheel carrier - Terrafirma	90/110	TF051
Defender hard top and station wagon spare wheel carrier - Mantec	90/111	GMN051
45 litre fridge freezer	All vehicles	TFFR01
12/240v adaptor	All vehicles	TFFR02
Protection jacket	All vehicles	TFFR03
Towball mounted reclining 4 bike carrier	All vehicles	TF4325
Roof cross bar mounted single bike carrier	All vehicles	TF4327



### ✓ FEATURES INCLUDE:

Available in 5, 10 and 20 litre sizes

Full range of accessories available

## JERRY CANS



A Jerry can is a robust fuel container

originally made from pressed steel and designed in Germany in the 1930s for military use to hold 20 litres of fuel.

The stamped indentations on the sides serve two purposes: firstly to stiffen the sheet metal sides and secondly to allow greater surface area for expansion and contraction of the contents with heat and cold.

Original applications were denoted by the colour of the can although this has largely been ignored in recent times. Jerry cans are available in 5, 10 and 20litre capacity and accessories include a selection of spouts and holders that can be bolted together or attached to the vehicles structure.

DESCRIPTION	PART NUMBER
5 litre green Jerry can	<b>GJC05</b>
10 litre green Jerry can	<b>GJC10</b>
20 litre green Jerry can	<b>GJC20</b>
20 litre red Jerry can	<b>GJC20R</b>
10 litre Jerry can holder	<b>GJC004</b>
20 litre Jerry can holder	<b>GJC003</b>
Jerry can rigid spout	<b>GJC001</b>
Jerry can semi flexible spout	<b>GJC002</b>
Jerry can flexible spout	<b>GJC006</b>
Jerry can cap seal	<b>GJC99</b>
Jerry can long flexible steel spout	<b>GJC007</b>



### ✓ FEATURES INCLUDE:

1.5m long

Strong and durable yet lightweight

## SAND TRACKS



These 1.5m long 4mm thick perforated high grade aluminium sand tracks are

perfect for preventing your vehicle sinking when crossing soft ground and sand. They are ridged for strength and perforated for traction.

DESCRIPTION	PART NUMBER
Terrafirma alloy sand tracks	<b>TF888</b>



TF888



GJC99

GJC20

GJC003

GJC10



TF159

### ✓ FEATURES INCLUDE:

Complete kit from air box to roof line

Contoured to follow wing and windscreen lines

Stylish ram air head with grille

## P38 SNORKEL



Designed to follow the wing and contours of the windscreen to offer a raised air intake for the ever popular P38 Range Rover.

Originally conceived for the sandy dust of the Sahara Desert, Raised Air Intakes

ensure a cleaner air supply to your engine when driving in dusty conditions and improve your vehicle's wading ability for wet or flooded conditions.



**FEATURES INCLUDE:**

**Raises all breathers up out of harms way**

**Reduces the risk of water ingress**

## RAISED TRANSMISSION BREATHER KITS



The more of your vehicle that is likely to be submerged

the more items will benefit from the breathers being extended. Terrafirma offers a range of kits for Land Rovers to cover all of the common casings such as, front and rear axle, gearbox and transfer box and timing case. Breathers are raised to the highest point of the vehicle commonly the snorkel.

Fitting raised transmission breathers does not guarantee that water will not enter the axles and transmission especially on vehicles persistently used in deep water but it has been proven to significantly reduce the possibility and should rank as one of the most important off road accessories to be fitted.



**FEATURES INCLUDE:**

**UK designed and made**

**Prevents heater getting blocked**

## SNOW COWLS



Terrafirma Snow Cowl is made in the UK by an expert plastics moulding company, and is based on the military Snow Cowl application.

This all-weather accessory helps to prevent Snow, Mud, Leaves and Sand entering the heater intake and hindering performance.

The Terrafirma Snow Cowl is the ultimate accessory for your Land Rover Defender, easy to fit and made to last in all weathers and conditions.

These are available in a left hand and right handed application.



DESCRIPTION	VEHICLE	PART NUMBER
<b>Snorkels and air intakes</b>		
Defender heater intake snow cowl	Left wing	<b>TF150LH</b>
Defender heater intake snow cowl	Right wing	<b>TF150RH</b>
Range Rover P38 snorkel	1994-2002	<b>TF159</b>
Defender Td5 and Tdci Safari SS580HF	1998-2016	<b>GSS017</b>
Defender 300tdi Td5 traditional snorkel	1995-2007	<b>STC50265</b>
Defender 300tdi Td5 plastic snorkel	1995-2007	<b>GMN035</b>
Defender 300tdi Td5 steel snorkel for vehicles with roll cages	1995-2007	<b>GMN037</b>
Defender 300tdi Td5 and Tdci snorkel Mantec	1995-2016	<b>GMN038</b>
Defender Mesh front heater intake ram air cowl	Left wing	<b>GAL177</b>
	Right wing	<b>GAL178</b>
Safari snorkel grill (stainless steel)	Suits all Safari snorkels	<b>TF111</b>
<b>Terrafirma raised transmission breather kits</b>		
90/110/130/D2 Td5 with 4 into 1 connector	1998 to 2007	<b>TF164</b>
90/110/130 2.4 Tdci	2007 on	<b>TF166</b>
90/110/130/D1/D2/RRC V8	1971 to 1998	<b>TF167</b>

# EXTERIOR STYLING



A range of products essential to enhance your Land Rover.

Mammoth manufacture the finest quality and most comprehensive range of Land Rover Defender chequer plate available today. The philosophy is 100% quality and the entire range is ready to enhance even a brand new Defender.



## MAMMOUTH 3MM PREMIUM CHEQUER PLATE

### ✓ FEATURES INCLUDE:

3mm thickness, fully chamfered edges and countersunk mounting holes

Supplied with full fitting kits

Available in black powder coat or silver anodised



All materials are UK sourced and the fully developed range of protection and tread plate products are made to full OE specification.

The Mammoth Premium 3mm product range is leading the market due to excellent levels of manufacturing and superior quality finish, customers truly see a difference as soon as they open the packaging.

The Mammoth chequer plate range includes wing tops with or without gaskets, bonnet plates, sill covers, rear corners, CSW quadrant panels, bumper tread plates and rear cross member covers. All Defender models are catered for from its introduction in 1983 right through to the last production models. In 2007 the introduction of a new shaped bonnet and repositioned radio aerial prompted a new range branded Pumatec. Unique to Mammoth Pumatec is the innovative and stylish 1 piece bonnet protector with wing tops and rear corners receiving subtle changes in design.

What sets Mammoth apart from all others is the attention to detail. All 3mm chequer plate products have fully chamfered edges, countersunk and de-burred holes which line up perfectly with the body and chassis. Premium 3mm chequer plate is supplied in 2 types; silver anodised or black powder coated and all products come supplied as a kit including stainless steel countersunk bolts and nuts.



BCKIT01-DEF/A



BTS-KIT/A



FBKIT01-07/B



SLKIT01-90/A

DESCRIPTION	PART NUMBER
<b>Bonnet protection plate for Defender 1983-2007 (Silver anodised)</b>	<b>BCKIT01-DEF/A</b>
- Black powder coated	<b>BCKIT01-DEF/B</b>
<b>Bonnet protection plate for Defender 2007 onwards (Silver anodised) PUMATEC</b>	<b>FBKIT01-07/A</b>
- Black powder coated	<b>FBKIT01-07/B</b>
<b>Front bumper tread plates for Defender 1983 onwards (Silver anodised)</b>	<b>BTS-KIT/A</b>
- Black powder coated	<b>BTS-KIT/B</b>
<b>Rear body corner protectors Defender 110 1983-2007 (Silver anodised)</b>	<b>CNKIT01-110/A</b>
- Black powder coated	<b>CNKIT01-110/B</b>
<b>Rear body corner protectors Defender 90 1983-2007 (Silver anodised)</b>	<b>CNKIT01-90/A</b>
- Black powder coated	<b>CNKIT01-90/B</b>
<b>Rear body corner protectors Defender 2007 onwards (Silver anodised) PUMATEC</b>	<b>CNKIT02-110/A</b>
- Black powder coated	<b>CNKIT02-110/B</b>
<b>Fuel filler surround plate for Defender 1998 onwards (Silver anodised)</b>	<b>FF-TD5/A</b>
- Black powder coated	<b>FF-TD5/B</b>
<b>Fuel filler surround plate for Defender 1983-1999 (Silver anodised)</b>	<b>FF-TDI/A</b>
- Black powder coated	<b>FF-TDI/B</b>
<b>Rear chassis cross member plate for Defender 1983 onwards (Silver anodised)</b>	<b>RCMKIT01-DEF/A</b>
- (Black powder coated)	<b>RCMKIT01-DEF/B</b>
<b>Defender 110 station wagon body quadrant plates 1983 onwards (Silver anodised)</b>	<b>RQKIT01-110/A</b>
- Black powder coated	<b>RQKIT01-110/B</b>
<b>Side sill protectors for Defender 90 1983 onwards (Silver anodised)</b>	<b>SLKIT01-90/A</b>
- Black powder coated	<b>SLKIT01-90/B</b>
<b>Side sill protectors for Defender 110 Station Wagon 1983 onwards (Silver anodised)</b>	<b>SLKIT01-CSW/A</b>
- Black powder coated	<b>SLKIT01-CSW/B</b>
<b>Side sill protectors for Defender 110 1983 onwards (Silver anodised)</b>	<b>SLKIT01-VAN/A</b>
- Black powder coated	<b>SLKIT01-VAN/B</b>
<b>Wing top protectors for Defender 1983-2007 (Silver anodised) with left-hand aerial hole</b>	<b>WTKIT01-LAH/A</b>
- Black powder coated	<b>WTKIT01-LAH/B</b>
<b>Wing top protectors for Defender 1983-2007 (Silver anodised) without aerial hole</b>	<b>WTKIT01-NH/A</b>
- Black powder coated	<b>WTKIT01-NH/B</b>
<b>Wing top protectors for Defender 1983-2007 (Silver anodised) with right-hand aerial hole</b>	<b>WTKIT01-RAH/A</b>
- Black powder coated	<b>WTKIT01-RAH/B</b>
<b>Wing top protectors for Defender 2007 onwards (Silver anodised) PUMATEC</b>	<b>WTKIT03/A</b>
- Black powder coated	<b>WTKIT03/B</b>
<b>Foam gaskets for 3mm Premium wing top protectors for Defender 1983-2007</b>	<b>WT-GAS</b>
Foam gaskets for 3mm Premium wing top protectors for Defender 2007 on PUMATEC	<b>WT-GAS07</b>







## WIND DEFLECTORS

### FEATURES INCLUDE:

Allows fresh air circulation with no water ingress and reduced air noise

Smoke tinted

Easy to fit



Terraforma wind deflectors are useful in a number of ways: they enable the windows to be open slightly allowing fresh air to circulate even when it is raining without the water coming in. They provide ventilation and help to draw out unwanted odours when moving. For

vehicles fitted with tinted windows they reduce glare when the windows are partially open and significantly reduce wind noise while driving with the windows down. They are easy to fit, in most cases no tools or adhesive is required, they are supplied with self-adhesive strips pre fitted for easy application to the door frame.

DESCRIPTION	VEHICLE	PART NUMBER
Wind deflectors set of 4	D1	<b>TF660</b>
Wind deflectors set of 4	D2	<b>TF661</b>
Wind deflectors set of 4	D3/D4	<b>TF662</b>
Wind deflectors set of 4	RRS 05-13	<b>TF663</b>
Wind deflectors set of 4	F2	<b>TF664</b>
Wind deflectors set of 4	RR L322	<b>TF665</b>
Wind deflectors front pair	Defender	<b>TF666</b>
Wind deflectors rear pair	Defender	<b>TF667</b>



## WIDE WHEEL ARCH KITS



Made from almost indestructible vacuum formed plastic the fantastic looking Terraforma Defender wide wheel arches are a full 2" wider than the original keeping your Land Rover legal when fitted with bigger tyres, not to mention helping to keep the mud off the bodywork.

### FEATURES INCLUDE:

Tough vacuum formed plastic

Contoured for a great fit

Essential when fitting wider wheels and tyres

They are extremely straight forward to fit, simply line up the new wheel arches against the bodywork above where the originals used to be, mark the screw holes then drill and fix. The kit comes complete with all screws, plastic screw caps and edging strips.

To facilitate the fitment of larger diameter tyres to Discovery 1 and Range Rover Classics wide wheel arch kits are available for both 3 and 5 door models that enable the body work to be trimmed behind to open up the original arches providing the clearance needed. These arches are a full 2" wide covering wider tyres.

Cutting the bodywork on a Discovery 2 is far less likely hence Terraforma offers a 2" wide wheel arch protector kit that follows the original bodywork and like the Defender requires no body trimming.

DESCRIPTION	VEHICLE	PART NUMBER
2" wider than standard screw fix no cutting required (x4)	Defender	<b>TF110</b>
2" wheel arches screw fix cutting required (x4)	D1/RRC 3 door	<b>TF113</b>
2" wheel arches screw fix cutting required (x4)	D1/RRC 4 door	<b>TF114</b>
2" wheel arches screw fix no cutting required (x4)	D2	<b>TF115</b>
Replacement standard width GLOSS-finish standard fixing (x4)	Defender	<b>TF280</b>
Replacement standard width MATT-finish standard fixing (x4)	Defender	<b>TF281</b>
Rear eyebrow gloss finish (single)	90/110	<b>ALO710010GF</b>
Front eyebrow LH gloss finish (single)	90/110/130	<b>MRC9377GF</b>
Front eyebrow RH gloss finish (single)	90/110/130	<b>MRC9378GF</b>

# SIDE STEPS AND MUD FLAPS

**FEATURES INCLUDE:**

- Enhances the look
- Eases entry and exit
- Minimises spray of mud and water



Terrafirma offer a range of side steps for Freelander 2, Defender, Discovery 3 and 4, Evoque, Range Rover and Range Rover Sport to both enhance the appearance of your car and aid both getting into and out of it.

To maintain the best possible appearance and keep the dirt off your vehicle, factory fit mud flaps are also available for each model.



TFSD3FM



VPLA0017



LR002773



LR008379



LR008375B



TF1050



TF1059



TFSRRSS



TFSRRVSS



VPLAP0035



VPLDP0068



For further information, fitment advice, images, customer reviews or to find your nearest Terrafirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

DESCRIPTION	VEHICLE	PART NUMBER
Side steps	L322 2002-2009	TFSRRVSS
Side steps	D3/D4	VPLAP0035
Side steps	2005-2013 Range Rover Sport	TFSRRSSS
Side steps	Freelander 2	LR002773
Side steps	Evoque Dynamic & Autobiography	VPLVP0208
Side steps	Evoque Pure, SE & HSE	VPLVP0225
Side steps	Range Rover 2014 onwards	VPLGP0226
Kit side steps	Discovery Sport	VPLCP0210
Deployable side steps	Discovery Sport 2015 onwards	TF1059
Twin tube side steps	Defender 90	VPLDP0068
Twin tube side steps	Defender 110 1983-2007	STC8015AA
Single folding side step	Defender	STC7631
Single rear folding step	Defender	STC7632
Big tube fire and ice style side steps	Defender 90 1998-	LR008379
Big tube fire and ice style in black	Defender 90 1998-	LR008379B
Big tube fire and ice style side steps	Defender 110 1998-	LR008375
Big tube fire and ice style in black	Defender 110 1998-	LR008375B
Kit - mudflap - front	D3 - D4	CAS500010PCL
Kit - mudflap - front	RRS 05-13	CAS500070PCL
Kit - mudflap - rear - unpainted bumper	D3 - d4	CAT500010PCL
Kit - mudflap - rear	RR I322	CAT500070PMA
Kit - mudflap - rear	RRS 05-13	CAT500120PCL
Kit - mudflap - rear	F2	LR003322
Kit - mudflap - front	F2	LR003324
Kit - mudflap - rear - partially painted bumper	D3 - d4	VPLAP0017
Mudflaps - front - set standard	RR Evoque	VPLVP0065
Rear mudflaps	Discovery sport 7 seats with spare wheel	VPLCP0277
Rear mud flaps	Vogue 2005	CAS500060PMA
Rear mud flaps	Vogue 2014	VPLGP0110
Front mud flaps	Range Rover Sport 2014	VPLWP0165
Front mud flaps	Vogue 2014	VPLGP0109
Rear mud flaps	RRS 2014	VPLWP0166
Front mud flaps	Disco Sport 5 and 7 seats	VPLCP0203
Rear mud flaps	Disco Sport 5 and 7 seats no spare wheel	VPLCP0204

## DEPLOYABLE SIDE STEPS



### FEATURES INCLUDE:

Durable plastic with aluminium insert

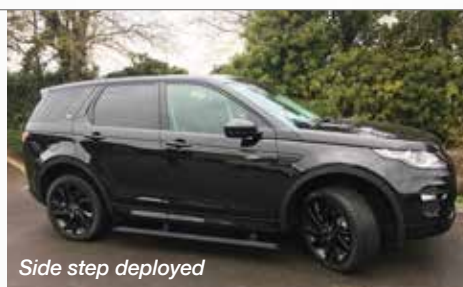
Amazing quality, great value and very stylish

Supplied with all fittings and instructions



Personalising your Discovery Sport with Terrafirma Accessories can really enhance your vehicle, and what better way to add that new level of functionality and luxury than with Deployable Side Steps.

Stylish and practical, these steps make it easier for you and your passengers to climb in and out of the vehicle. Neatly stowed in the sill, they deploy smoothly when the door opens and automatically stow again when the door is closed, with a smart override that can provide useful roof access when the doors are closed.



Side step deployed



Side step stowed away

## ALSO AVAILABLE



VPLCR0132

## ROOF RAILS AND CHROME COVERS

Roof rails and cross bars	RRS 2005-2013	VUB502130
Roof rails	Discovery Sport	VPLCR0132
Chrome upper mirror cover set	RRS/DISCO3/F2/L322	VUB503880MMM



TF278

**TVX GRILL:**

Gloss or satin finish

Utilises original headlamps and side lights

Allows fitment of NAS style indicators

Gives multiple lighting options

**HONEYCOMB GRILL:**

Gloss or satin finish

Paintable to match or contrast with car colour

Distinctive style

**SPORTS GRILLS:**

Range Rover Sport inspired

Ram air effect for heater intake

Helps stop debris falling into the intake

## TVX GRILLS



The TerraFirma TVX replacement front grill kits are a fantastic way to smarten up or just simply update the front of your Defender; they come in either a modern gloss finish or a more traditional satin finish. They are a complete kit with a new grill, headlamp fitting panels, headlamp surround panels and all required fittings. They are designed to utilise the existing 7" round headlamps although they will also take the amazing TerraFirma LED upgraded headlamps (TF710, TF711) for a complete new look front end. The new headlamp surrounds have provision to re-use the smaller 73mm lights at the top, you will need the larger 95mm NAS lights at the bottom so you can personalise the look of your car with either standard coloured, clear, or LED lamps.

**Honeycomb grills**

TerraFirma's "honeycomb" front grills are a great styling upgrade

for your Defender, made from semi rigid, paintable plastic, they are available in either gloss or matt finishes and fit to the standard mounting points so are easy to fit.

**Sport grills**

These great grills are a perfect way to add a stylish modern look to your Defender front wings, the side grills are handed and available individually depending on which side your air intake grill is, they take their design cue from the Range Rover sport and are a direct replacement so are easy to fit. The top grills are supplied in a pair and fit directly to the top of your front wings for the heater intake they are the same stylish design as the side vent. The design incorporates a ram air shape to help air flow into your heater and the shape also helps keep rain, mud, snow any other debris out. These are a direct replacement and super easy to fit.



TF270



TF277

DESCRIPTION	VEHICLE	PART NUMBER
TVX front grill kit gloss finish	90/110/130	<b>TF277</b>
TVX front grill kit satin finish	90/110/130	<b>TF278</b>
Defender AC front grill panel satin finish	90/110/130	<b>TF275</b>
Defender AC front grill panel gloss finish	90/110/130	<b>TF276</b>
Defender Sport front grill and headlight surrounds satin finish	90/110/130	<b>TF270</b>
Defender Sport LH side wing vent grill satin finish	90/110/130	<b>TF271LH</b>
Defender Sport RH side wing vent grill satin finish	90/110/130	<b>TF271RH</b>
Defender Sport wing top grills satin finish	90/110/130	<b>TF272</b>
Defender honeycomb grill black gloss	90/110/130	<b>TF282</b>
Defender honeycomb grill black matt	90/110/130	<b>TF283</b>

# INTERIORS

A range of products to enhance the look and comfort of your Land Rover.

Terrafirma Interior Accessories is a range of products essential to enhance the comfort and usability of your Land Rover. Accessories that are created by demand and designed to improve the vehicle's functionality in areas such as storage as well as improving the interior styling and personality of your vehicle.



**FEATURES INCLUDE:**

Increases front passenger area space and increase driver comfort

Eases access to the rear stowage area

## BULKHEAD REMOVAL KIT



One way of increasing comfort for taller drivers and passengers is to remove the bulkhead behind the seats allowing them to move further

back and recline even more. Removing the bulkhead also provides easier access to the rear of your Defender. The bulkhead is cut away to a convenient structural point and the cut edges are hidden and full strength restored by fitting this kit leaving a factory finish. Defender station wagons built after 2007 do not benefit from this kit.



TF871

## CENTRE DASH CONSOLE



**FEATURES INCLUDE:**

1.5mm aluminium sub frame

Original factory appearance



The Terrafirma centre dash console is suitable for all Defenders up to 2002, providing an effective location for a CD player, radio or CB as well as additional gauges and switches. The

Terrafirma centre dash console has been designed around the popular Carling switches which share common dimensions with many other brands. Located centrally the centre console suits both left and right hand drive vehicles and is constructed using a 1.5mm aluminium sub frame and black vacuum formed textured fascia for an original factory appearance. The alloy sub frame is essential to provide vibration free mounting for your CD radio and the whole kit is simple to fit and comes with full instructions.

*A full switch kit is available separately; TF909.*



TF908



**FEATURES INCLUDE:**

Provides valuable additional storage

Still utilises original rear view mirror and sun visors

**PARCEL SHELVES**



Maximising storage space in the cab of any Defender will increase comfort and convenience. The Terrafirma parcel shelves are ideal for stowing away maps,

note books, pens and odds and ends. The parcel shelf is available in two options; A full width version which secures into the door openings and spans the width of all Defenders which includes provision to add another or relocate the original interior light. The sun visors fit neatly and tidily into recesses moulded into the parcel shelf.

The second option is a two piece parcel shelf designed to be incorporated with the Terrafirma roof console. Two sections attached either side of the roof console maximising even more roof space, again with the recesses to accept the sun visors.

The full width parcel shelf is designed to fit all Defenders with or without sunroofs or even a headlining, the two piece shelf relies on the console so is suitable for all Defenders without sunroofs.

Each parcel shelf is supplied with step by step instructions and fitting kits.



**FEATURES INCLUDE:**

Provides convenient additional storage

Provides additional space for a Radio or CB and space for additional power sockets and a second interior light

**ROOF CONSOLE**



Storage in the cabin area of a Defender is minimal with very few places to put things, any additional space that can be created is a real bonus especially if it doesn't cramp

the driving space. The Terrafirma roof console is the perfect solution for tucking away maps, pens and cigarettes, even small binoculars and a folding saw can be stashed away in the reversible trap door storage tray.

The console has provision for an additional or repositioned original interior light, space for power sockets and a single DIN radio aperture with removable panel which can either be used for additional storage, to house a CB or CD player or even for extra gauges.

The console is cleverly made to fit snugly to the headlining in all hard top and station wagon Defenders (not with sunroofs) and comes with a full fitting kit.



TFDRC



TF909



TFDPS

DESCRIPTION	VEHICLE	PART NUMBER
Defender bulkhead removal kit	1983 on	TF871
Defender Centre Dash Console	1983 to 2002	TF908
Defender Centre Dash Console Switch Kit	1983 to 2002	TF909
Defender front parcel shelf	1983 on	TFDPS
Defender front parcel shelf 2 piece	1983 on	TFDPS2P
Defender roof console (not truck cab)	1983 on	TFDRC
Defender roof console (truck cab)	1983 on	TFDRCTC

## DASH STORE



### FEATURES INCLUDE:

Adds valuable storage

Utilises otherwise wasted space



TF907

This is a really handy storage pocket that makes good use of available passenger side space in 2007 on

Defenders. The Terrafirma dash store suits both left and right hand drive models and fills the void below the top dash panel above the grab rail without compromising any other storage space.

Utilising the original top section of dash board as part of the lid this is probably one of the most sensible upgrades possible on a late model Defender.



TF2440



TF929



TFDCB

DESCRIPTION	VEHICLE	PART NUMBER
Defender security cubby box	1983 on	<b>TFDCB</b>
Defender dash store	2007 on	<b>TF907</b>
Defender seat risers	1983 on	<b>TF872</b>
1kg fire extinguisher powder	Universal	<b>FMP1</b>
Inclinometer	Universal	<b>GLM001</b>
Defender 2 door hinge guard kit	Defender – All vehicles	<b>G1398</b>
Defender 4 door hinge guard kit	Defender – All vehicles	<b>G1399</b>
Alloy gear lever and transfer box lever knobs	Defender 1983 to 1994	<b>TF928</b>
Alloy gear lever and transfer box lever knobs	Defender 1994 to 2007	<b>TF929</b>

Door Cards	<i>Defenders with push button doors up to 2007</i>	
Door card with manual windows	Black right hand front	<b>TF2440</b>
	Black left hand front	<b>TF2441</b>
	Dark grey right hand front	<b>TF2442</b>
	Dark grey left hand front	<b>TF2443</b>
Door card with electric windows	Black right hand front	<b>TF2444</b>
	Black left hand front	<b>TF2445</b>
	Dark grey right hand front	<b>TF2446</b>
	Dark grey left hand front	<b>TF2447</b>
Door card with manual windows	Black right hand rear	<b>TF2480</b>
	Black left hand rear	<b>TF2481</b>
	Dark grey right hand rear	<b>TF2482</b>
	Dark grey left hand rear	<b>TF2483</b>
Door card with electric windows	Black right hand rear	<b>TF2484</b>
	Black left hand rear	<b>TF2485</b>
	Dark grey right hand rear	<b>TF2486</b>
	Dark grey left hand rear	<b>TF2487</b>
Door card with manual windows	Light grey right hand front	<b>TF2490</b>
	Light grey left hand front	<b>TF2491</b>
	Light grey right hand rear	<b>TF2492</b>
	Light grey left hand front	<b>TF2493</b>
Door card with electric windows	Light grey right hand rear	<b>TF2494</b>
	Light grey left hand front	<b>TF2495</b>
	Light grey right hand rear	<b>TF2496</b>
	Light grey left hand front	<b>TF2497</b>
Tail door card	<i>Tail door up to 2002</i>	
	Black	<b>TF2740</b>
	Dark grey	<b>TF2741</b>
	Light grey	<b>TF2742</b>
Rear side and quarter interior trim with windows	<i>Interior rear side trim Defender 90 1983-2016</i>	
	Black	<b>TF2730</b>
	Dark grey	<b>TF2732</b>
	Light grey	<b>TF2731</b>
	Black	<b>TF2733</b>
	Dark grey	<b>TF2735</b>
Rear side and quarter interior trim without windows	Dark grey	<b>TF2735</b>
	Light grey	<b>TF2734</b>



**FEATURES INCLUDE:**

Provides much needed extra space for taller drivers

Both raises and moves the seat back

**DEFENDER SEAT RISERS**

**2** For the taller Defender owner these are an absolute must! The driving position in a Defender is cramped at best but some additional comfort

can be had by fitting these seat risers. Lifting the seat around 1.25" (30mm) and allowing the seat to move back a further 2" (50mm) gives more leg room and straighter arms without effecting head room unnecessarily. The seat risers are tapered to further ease comfort by very slightly tipping the seat forward. The kit bolts into all the original mounting points and includes all nuts and bolts.



TF872



**FEATURES INCLUDE:**

Utilises otherwise wasted space

Stainless steel construction, rubber sealed, flush fit lock and handle

**SIDE STORAGE LOCKERS**

**4** Defender 110 hard tops and pickups have lots of unused space under the bodywork. The perfect way to make the best use of this space and

of the wheel arch cavities is to install one of these beautifully engineered rust resistant stainless steel storage lockers. Perfect for side access to tools, spares and equipment especially on expedition and utility vehicles. Each locker has a slightly raised door allowing for a rubber seal to effectively keep out dust and water to be incorporated. A flush fit lock and handle keep the doors tightly closed.



TF886



TF887

DESCRIPTION	VEHICLE	PART NUMBER
Defender 110 LH rear side quarter storage locker	2007 onwards	TF886
Defender 110 hard top and pickup side storage locker	1983 onwards	TF887
Fitted front floor mats	SERIES 3	GMS050
Contoured front floor mats	90/110/130 up to 2006	GMS051
Contoured front floor mats	D2	GMS054
Fitted second row floor mat	90/110/130 up to 2006	GMS058
Contoured front floor and rear mats	FREELANDER 2	GMS063
Contoured front floor and rear mats	D3 RHD	GMS064
Contoured front floor and rear mats	D3 LHD	GMS066
Seat lap belt fixed	DEF/D1/RRC/SERIES	GSB210
Seat lap belt inertia	DEF/D1/RRC/SERIES	GSB2220
Seat belt lap and diagonal fixed	DEF/SERIES	GSB300/30
Seat belt lap and diagonal inertia	DEF/SERIES	GSB500/30
Mesh type dog guard	90/110 2007 onwards with bulkhead	LR006785
Mesh type dog guard	90/110 1983 to 2007 with bulkhead/ not SW	RTC8095
Mesh type dog guard	D2	STC50323



GMS063



RTC8095



# LIGHTING

A full range of LED lights and lighting upgrades

Terrafirma supply a range of the highest quality replacement lights on the market today. So, whether its replacement Defender light sets, NAS lighting sets, 7" LED headlights or our amazing ultra-bright LED light bars and spot lights you can depend on them in the most challenging conditions including Agriculture, Mining, Forestry and Extreme off road motorsport. Whatever application our lights are used for they will not let you down.



**FEATURES INCLUDE:**

Super stylish, update the look of your car

Brighter and longer lasting

## NAS, LED AND CLEAR LIGHTS



A full range of NAS style LED lights, clear LED and LED replacement lights are available in kits and individually.

These stylish replacement LED lamps provide brighter lighting than the OE style Halogen lights with the added benefit of an incredibly long life span and low energy consumption.



**FEATURES INCLUDE:**

2800 LM@30W on low beam

4450 LM@48W on high beam

Available in 9-36v DC configuration

## 7" LED HEADLIGHTS



Although more expensive than other technologies, LEDs offer a host of benefits that make them a perfect choice for any 4x4.

Advantages to LED lighting include incredible light output, low draw, solid-state electronics, and no bulbs to burn out.



View without TerraFirma auxiliary lighting



View with TerraFirma auxiliary lighting

DESCRIPTION	PART NUMBER
TerraFirma 125mm LED 1800lm spot lights with amber filters (pair)	<b>TF705</b>
TerraFirma 7" 65w mega bright LED spot light (single)	<b>TF709</b>
TerraFirma 18" 10W x 16 CREE led light bar	<b>TF712</b>
TerraFirma 53" 10W x 50 CREE led light bar	<b>TF714</b>
TerraFirma rechargeable adjustable 1000lm work light	<b>TF715</b>
Pair 8" 55W driving lights (requires GDL010)	<b>GDL001</b>
Pair 5.5" 55W driving lights (requires GDL010)	<b>GDL014</b>
Universal spot light wiring kit	<b>GDL010</b>
Round adjustable work lamp c/w on off switch	<b>GWL001</b>
Rectangular adjustable work lamp	<b>GWL002</b>
H3 55W work lamp bulb	<b>GWL003</b>
LED round work lamp	<b>GWL004</b>
7" Halogen headlamp conversion kit RHD RING (pair)	<b>GDL003</b>
7" Halogen headlamp conversion kit RHD WIPAC (pair)	<b>GDL003G</b>
7" Halogen headlamp conversion kit LHD WIPAC (pair)	<b>GDL006</b>
TerraFirma 7" LED headlamp RHD PAIR	<b>TF710</b>
TerraFirma 7" LED headlamp LHD PAIR	<b>TF711</b>
H4 emergency bulb selection kit	<b>GBK001</b>
Pair H4 upgrade bulbs (50% brighter)	<b>GBK002</b>
Pair H4 Xenon upgrade bulbs (90% brighter)	<b>GBK004</b>
Pair H7 Xenon upgrade bulbs (90% brighter)	<b>GBK006</b>
Light guards for standard 73mm diameter Defender lights	<b>TF170</b>
Light guards for NAS 95mm diameter Defender lights	<b>TF171</b>
NAS LED lights upgrade kit	<b>GA1143</b>
Clear lens LED light kit for defender 90/110 and series 3	<b>GA1191</b>
WIPAC LED light kit for defender 90/110 and series 3	<b>GA1192</b>
Plinth	<b>AMR3850</b>
NAS LED stop tail	<b>AMR6526LED</b>
NAS LED indicator	<b>AMR6527LED</b>
LED load device	<b>GDL017</b>
Front LED clear side	<b>LR04189LED</b>
Front LED clear indicator	<b>LR047798LEDCL</b>
Rear LED clear indicator	<b>LR048187LEDCL</b>
LED indicators	<b>LR048188LED</b>
LED side light	<b>LR048189LED</b>
LED stop tail	<b>LR048200LED</b>
Rear LED clear stop tail	<b>LR048200LEDCL</b>
NAS LED fog	<b>LR048201LED</b>
NAS LED clear side	<b>LR048202LED</b>
NAS LED clear reverse	<b>LR048202LED</b>
LED flasher relay	<b>WFL7LED</b>
Land Rover logo puddle lamps	<b>TF680</b>
Front flasher lamp LED	<b>RTC5013LED</b>
Stop/tail lamp LED	<b>RTC5523LED</b>



TF709



GA1191



TF715



GA1192



GA1143



**FEATURES INCLUDE:**

Easy way to mount up to 4 lights

Follows the shape of the roof

### ROOF LIGHT BARS



Mounting spot lights above the windscreen not only looks great but also projects good light to illuminate

a wider path and to show up pot holes ahead. These roof bars attach to the rain gutter and allow for 4 small to medium driving or spot lights to be fitted. The Defender version is obviously straight to follow the roof line above the windscreen whilst the Discovery version is very precisely curved to follow the shape of the windscreen to roof profile.

Finished in black powder coat and supplied with the necessary fittings.



**FEATURES INCLUDE:**

Version for standard or winch bumpers

Designed for spotlights or LED light bars

### BUMPER MOUNTED SPOTLIGHT BARS



These relatively shallow but chunky bars are designed to fit 2, 3

or 4 spot lights depending on their diameter or our 20" LED light bar. There is a winch bumper version that is slightly taller to clear winches with built in solenoids which suits both air con and non air con vehicles and a shallower option for standard and non winch heavy duty bumpers.

Made from 2.5" diameter tube and black powder coated and really looking the part on all Defenders.



**FEATURES INCLUDE:**

Direct replacement

4 super bright quad 3w LED lights

All wiring included

Stylish light weight looks

### SKELETON QUAD LED FRONT BUMPER



An ultra-stylish replacement front bumper for the Defender with a set of oblong holes in the centre and four super bright LED lights.

The four recessed punched holes in the centre give a lightweight, sleek and styled look to your car and at each end of the bumper are a pair of super bright LED lights. Each light has four high quality 3w LED's giving a powerful white light to illuminate the road ahead.

This bumper can be mounted using all the original points so is simple to fit and comes with a complete wiring harness.

TF056



DESCRIPTION	PART NUMBER
Shallow bumper mounted steel light bar for Discovery 2	GAD211
Roof mounted light bar for Defender 90/110/130	GLB001
Roof mounted light bar for Discovery D1/D2	GLB002
Bumper spot light bar for Defender with and without AC (suits TF002ACST, TF002ST, TF002W, TF002ACW, TF006, TF006AC, TF060 and TF060AC)	TF008
Bumper spot light bar for Defender without AC (suits all conventional bumpers for non air con Defenders inc. TF055 and TF055WRP)	TF008SH
Skeleton Quad LED front bumper	TF056
Terrafirma behind number plate light bar universal mount	TF4107

# WILDERNESS LIGHTS



## SCENE DOWNLIGHTER

TF719

### ✓ FEATURES INCLUDE:

3 x 3 watt CREE white LED chips - 9 watts

Massive 600 LM of light produced while drawing only 0.75 Amp

Diffused reflective beam pattern - 65 degrees

Natural white light



The Wilderness Lighting Down Lighter

Scene light produces a 65 degree spread of light to give you extra illumination when needed. The tough alloy housing can be mounted to virtually any surface to allow the light to be projected towards the target area. The 3 x 3w LEDs housed in this light pack a real punch when it

comes to lumen output producing 600 lumens while consuming less than 0.75amp.

The housing of the light is made of weather-resistant and waterproof aluminium and coated with a black UV-resistant paint to prevent chipping and fading for a lasting finish. The diffused lenses used are equally hardwearing as its aluminium housing to ensure a water and dust ingress rating of IP68.



## COMPACT 8

TF716

### ✓ FEATURES INCLUDE:

8 x 5 watt CREE white LED chips - 40 watts

Massive 3000 LM of light produced while drawing only 2.8 Amp

Spot light reflective beam pattern - 10 degrees



Our Compact 8 LED Spot Light belongs

to our range of small LED working lights, these small yet very powerful lights produce a massive 3000 Lumens of light. The Compact 8 features 8 x 5 Watt LED's, 4 LED's facing forward with smooth round reflectors to produce a 10 degree spot beam pattern and an

additional 2 LED's on either side of the light to give a much wider spread of light. The low energy consumption technology means they only consume 2.8 amps of power. Compare these figures to a standard 55 watt halogen light found on many vehicles which produce only 900 lumens of light while drawing 4.6 amps of power.

These lights not only look good but they are also very tough..... with a market leading water and dust ingress rating of both IP68 and IP69K means you can actually wash the lights with a high pressure spray with a temperature of up to 90 degrees - this rating is the highest level achievable and usually found within the food industry for sterilising products. As the lights are fully water and dust proof they would be equally comfortable mounted on a boat and can be fully submersed in water for long periods.



**FEATURES INCLUDE:**

50 inch Solo single row light bar

50 x 5 watt Oslon white LED chips - 250 watts

Massive 27060 LM of light produced while drawing only 17.3 Amps

Combination beam pattern - Flood (20 degrees) spot (10 degrees)

Combination light beam distance - 2180m

**SOLO – 50"**

TF718



Our SOLO - 50" Light belongs to our range of single row light bars, these small yet very powerful lights produce a massive 27060 Lumens of light from 50 x 5 watt OSOLON white LED chips giving visible beam distance of 2180m. The low energy consumption technology means they only consume 17.3 amps of power. Compare these figures to a standard 55 watt halogen light found on many vehicles which produce only 900 lumens of light while drawing 4.6 amps of power.

**SOLO FEATURES INCLUDE:**

50,000+ hour lifespan

5 years continuous use

94% optical reflector efficiency

Unbreakable & scratch resistant lens on both sides

6063 Aluminum housing

Durable UV resistant painting technology

9-36 Volt DC input

Low power consumption

Instant on/off, no warm up

Over/under voltage protection

Sealed waterproof connector

Operating temp -40 ~ +145 deg

IP69K Rating (water & dust proof at high pressure & high temperatures)

CE & Rohs certification

MIL810-STDG vibration certified

Shock proof

Salt & fog certified

Waterproof housing

Off road use only

**FEATURES INCLUDE:**

20 inch Solo single row light bar

20 x 5 watt Oslon white LED chips - 100 watts

Massive 10780 LM of light produced while drawing only 6.7 Amps

Combination beam pattern - Flood (20 degrees) spot (10 degrees)

Combination light beam distance - 1210m

**SOLO – 20"**

TF717



Our SOLO - 20" Light belongs to our range of single row light bars, these small yet very powerful lights produce a massive 10780 Lumens of light from 20 x 5 watt OSOLON white LED chips giving visible beam distance of 1210m. The low energy consumption technology means they only consume 6.7 amps of power. Compare these figures to a standard 55 watt halogen light found on many vehicles which produce only 900 lumens of light while drawing 4.6 amps of power.

DESCRIPTION	PART NUMBER
Terrafirma Wilderness Pair Compact 8 Side Shooters	TF716
Terrafirma Wilderness 20" Solo Led Light Bar	TF717
Terrafirma Wilderness 50" Solo Led Light Bar	TF718
Terrafirma Wilderness Scene Down Lighter	TF719
Pair of bottom Mounting Brackets for TF718 / TF719	TF718A

All our lights come with a water proof Deutsche connector on the light together with a full wiring harness including switch, power surge protection, relay and ring battery connections. The loom can be used to run the lights in a matter of seconds on a temporary basis or the components can be used on existing vehicle wiring for a permanent fix.

The housing of each light is made of weather-resistant and waterproof aluminium and coated with a UV-resistant paint to prevent chipping and fading for a lasting finish. The standard colour is black however we can supply these in a marine white finish or yellow finish usually found within the quarry industries. Custom paint colours can also be done at extra cost. The lenses used are equally hardwearing as its aluminium housing. The 3mm Lexan lens are optically transparent despite being unbreakable and scratch-resistant.

# PERFORMANCE

Enhancements that will greatly improve both on road and off-road performance.

Over the years TerraFirma's continued product development and high engineering standards have produced a range of specific performance enhancing components that make the iconic Land Rover range better than it has ever been.

We have strived to improve the original, and create performance enhancements that will greatly improve both on road and off-road performance.

## TD5 EGR VALVE REMOVAL KIT



### FEATURES INCLUDE:

Ensures a smoother, unrestricted, clean and cool airflow into the engine

Improved engine torque, giving a smoother, more flexible engine



The EGR system fitted to most modern diesel engines re-circulates part of the exhaust gases back in to the air intake on overrun with the intention of improving emissions.

Removing this system actually makes little difference to emissions. The TerraFirma EGR valve

removal kit for Td5 Defender and Discovery 2 allows the EGR valve to be completely removed from the inlet manifold which eliminates the restriction increasing air flow and performance.

The kit comes complete with a new intercooler hose fitting, gasket, bolts and EGR blanking plate and bolts.



TFEGR01

EGR removal kits are also available for 300 tdi Defender and Discovery 1 as well as Discovery 3 Tdv6 pre Euro 4 emission engines up to and including 6A chassis number 2007.

### APPLICATION

90/110/130 and D2 Td5

D3 Tdv6 up to and inc. 6a chassis number

90/110/130 and D1 300tdi

### PART NO.

**TFEGR01**

**TFEGRV6**

**TFEGR300**

## EXHAUST PIPES



### FEATURES INCLUDE:

Increased torque at the bottom end

Engine picks up faster and runs more freely



The Terrafirma range of 'de-cat' down pipes and silencer replacement pipes are intended to improve the performance and economy of diesel Land Rovers.

Save a fortune when your catalytic converter fails by fitting a Terrafirma 'de-cat' down pipe

and enhance the performance and economy by de restricting the exhaust system. These pipes fit directly to the original system and require no modification.

Remove the power restricting and vulnerable centre silencer and fit a Terrafirma free flowing silencer replacement pipe and enjoy the new throaty exhaust sound.

Made from 1.5mm 409 stainless steel these pipes will considerably outlast the life of the original system. 409 is easier to bend and weld and is not prone to cracking due to vibration like other grades of stainless steel.

Material specification; Grade 409 is a ferritic stainless steel. Although regarded as a general-purpose chromium stainless steel the primary application for Grade 409 is automotive exhaust systems. Its applications are where appearance is a secondary to bendability and corrosion resistance and where welding is required. 409 resists atmospheric and exhaust gas corrosion. A light surface rust will form in most atmospheres; this rust prevents further corrosion but makes the surface undesirable for decorative applications.



TF550

TF560

TF558

APPLICATION	PART NO.
<b>Terrafirma 'de cat' down pipes</b>	
Defender/Discovery 1/RRC 300tdi 1994 to 1998	<b>TF560</b>
Defender Td4 2007 onwards	<b>TF561</b>
Defender Td5 1998 to 2007/Discovery 2 1998 to 2004	<b>TF562</b>
Discovery 3 Tdv6	<b>TF564</b>
<b>Terrafirma silencer replacement pipes</b>	
Defender 90 200tdi 1990 to 1994	<b>TF550</b>
Defender 110 200tdi 1990 to 1994	<b>TF563</b>
Defender 90 300tdi 1994 to 1997	<b>TF551</b>
Defender 90 300tdi 1997 to 1998	<b>TF552</b>
Defender 110 300tdi 1994 to 1998	<b>TF553</b>
Defender 90 Td5 1998 to 2007 and Td4 2007 onwards	<b>TF554</b>
Defender 110 Td5 1998 to 2007 and Td4 2007 onwards	<b>TF555</b>
Discovery 1 3.9Efi 3bolt flange type 1991 to 1998	<b>TF556</b>
Discovery 1 300tdi 1994 to 1998	<b>TF558</b>
Discovery 2 Td5 and V8 1998 to 2004	<b>TF559</b>



### FEATURES INCLUDE:

They will perform over a much wider temperature range

They are far less susceptible to heat ageing than organic rubbers

## SILICONE TURBO AND INTERCOOLER HOSES



Terrafirma Silicone turbo and intercooler hoses are designed to survive the high pressures and

extreme temperatures found on high performance engines, as such they will perform better and last longer especially if your Land Rover diesel engine has been given enhanced performance.

Terrafirma hoses are manufactured from high grade silicone polymer, thicker in construction than standard and reinforced with a high strength



4 ply polyester fabric giving an operating temperature range of between -40°C to +180°C.

Styling is all important; enhancing the look of your engine bay is possible by choosing from 3 bright colours including the classic bright blue, orange and lime green as well as black for owners wanting a more 'factory' appearance. All hoses are embossed with the Terrafirma logo and part numbers.

COLOUR	Def 200tdi	Def 300tdi	Def Td5	Def Td4 2.4	Def Td4 2.2	Def Td4 2.2 LATE	Dis 200tdi	Dis 300tdi	Dis Td5	Dis TdV6
Blue	<b>TF720</b>	<b>TF721</b>	<b>TF722</b>	<b>TF724</b>	<b>TF742</b>	<b>TF742LATE</b>	<b>TF721</b>	<b>TF721</b>	<b>TF723</b>	<b>TF740</b>
Green		<b>TF726</b>	<b>TF727</b>				<b>TF726</b>	<b>TF726</b>	<b>TF728</b>	
Orange		<b>TF731</b>	<b>TF732</b>				<b>TF731</b>	<b>TF731</b>	<b>TF734</b>	
Black	<b>TF735</b>	<b>TF736</b>	<b>TF737</b>	<b>TF738</b>	<b>TF745</b>				<b>TF739</b>	<b>TF741</b>

## OFF ROAD FOAM FILTERS BY PIPERCROSS



### FEATURES INCLUDE:

Increased airflow

More power

Noticeable increase in both power and torque

Flows more air for longer

No air restriction due to dirt load



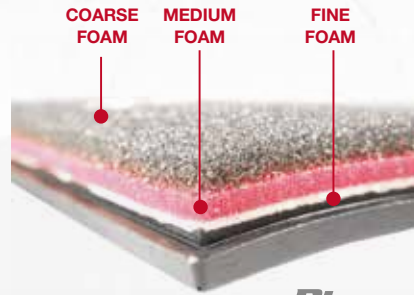
As used by some of the world's top engine builders

TerraFirma foam air filters are produced by Pircross, leaders in foam filter technology. The filters are a direct replacement for the original paper element giving 30% more air flow and a lifetime washable air filter without an increase in induction sound. When airborne dirt particles are trapped by a standard paper or cotton filter there is a reduction in air flow and power, with the high

performance deep foam construction of the TerraFirma foam filter air is able to bypass the trapped dirt.

Independent testing at Mira has proven that Pircross foam has the ability to hold more than twice the dust particles than that held by other types of filters without effecting airflow.

When the TerraFirma foam filter finally reaches its full dust capacity it can easily be cleaned using the cleaning solution and re-oiled as required. Servicing could not be easier. The high performance foam is a specially developed polyurethane foam which acts as the filtration medium, having both a higher performance and life expectancy than paper.



**Pircross**  
Performance Air Filters



The triple layers filter through coarse to fine trapping dirt particles in the outer layers as they enter the filter, the inner layer provides an exceptionally high level of filtration and engine protection. TerraFirma offers off road foam filters for the most popular Land Rover models, service fluids and a unique Snorkel sock to reduce dust intake on raised air intakes.

APPLICATION	MODEL	TerraFirma off road foam filters
Defender 300TDi	1994 to 1998	<b>TF381</b>
Defender TD5 and Discovery TD5/4.0V8	1998 to 2007	<b>TF382</b>
Defender TD4	2007 on	<b>TF383</b>
Discovery 300TDi	1994 to 1998	<b>TF384</b>
Safari snorkel sock	Early type head	<b>TF385</b>
Safari snorkel sock	Late type head	<b>TF387</b>
Foam air filter cleaner and additive kit	Universal	<b>TF380</b>
Freelander 1	Eqv to ESR4103	<b>TF390</b>
D3/D4/RR/RRS	Eqv to PHE000112	<b>TF391</b>
Range Rover Evoque	Eqv to LR029078	<b>TF392</b>
Freelander TD4	Eqv to LR007478	<b>TF393</b>
Range Rover TD6 / TD V6	Eqv to PHE00004	<b>TF394</b>

## INTERCOOLERS BY SERCK MOTORSPORT



### FEATURES INCLUDE:

Custom fit choice for off road or fast on road

Specifically designed custom end cans

Easy fit direct replacement



Intercooler performance is crucial when generating high air temperatures from turbochargers especially following engine management upgrades. Serck Motorsport is unique in developing specific core choices and fin density options to optimise the cooling effect for both fast road and off road applications.

End tanks are also specifically designed, laser cut and carefully welded using flared tubes for maximum efficiency of air flow across the full width of the core.

Available for the Td4 and Td5 Defender and Discovery 2, the TerraFirma intercoolers are an easy to fit replacement intercooler manufactured to the highest standards to Serck's original design to enhance air flow and temperature dissipation. Fast road intercoolers utilise highly efficient 16 fin per inch cores and the off road core uses a coarse 9 fins per inch for easy cleaning and efficient low speed performance.



APPLICATION	MODEL	PART
90/110/130 Td5 and Td4 off road	1998 on	<b>TF181</b>
90/110/130 Td5 and Td4 fast road	1998 on	<b>TF182</b>
D2 manual	1998 - 2004	<b>TF183</b>



## PROPSHAFTS



### FEATURES INCLUDE:

20% stronger than standard Land Rover propshafts

Double seal arrangement on slip coupling

Metal shield greasable universal joints

32 deg. wide angle yoke and joints

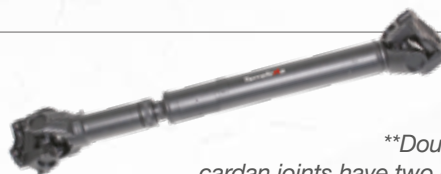


Lifting the vehicle by raising the suspension alters

the propshaft angles which often causes severe vibration. Aggressive mud tyres, noisy engine and transmission and the slower speeds associated with hard core off road vehicles usually masks the vibration and drivers often tolerate the additional drone or rattle from the shafts on overrun.

The most effective way to eliminate vibration is to fit a propshaft with a double cardan joint\*\* at the gearbox end. Even Land Rover found this essential on the Discovery 2.

Double cardan propshafts are a successful vibration cure on vehicles lifted around 2". Beyond 2" even the double cardan joint cannot always accommodate the angle without vibrating.



TFWA610

\*\*Double cardan joints have two universal joints joined by an intermediate shaft, the joints are phased or synchronised with each other which overcomes the speeding up and slowing down of a single joint thus reducing vibration.

It is a common misconception that fitting a wide angle propshaft will cure vibrations caused by raised suspension. The cause of the vibration is the angle of the shaft in relation to its end flanges, fitting a wide angle shaft does not change the angles. The vibration may seem reduced but this will be coincidental with a new heavier shaft in perfect condition.

Wide angle propshafts are necessary for vehicles fitted with very long travel suspension where on full axle drop out the original propshaft yoke will bind up straining the joints and ultimately locking the shaft solid which in extreme cases can literally tear the shaft in half.

A 32 degree yoke and joint will accommodate typical long travel suspension set ups on Land Rover based chassis using around 11" travel shocks.

APPLICATION	90		110		DISCOVERY 1		DISCOVERY 2	
	FRONT	REAR	FRONT	REAR	FRONT	REAR	FRONT	REAR
<b>Terrafirma wide angle propshafts</b>								
300TDI 1994 to 1998	TFWA610	TFWA680	TFWA610	TFWA1050	TFWA610	TFWA850		
V8 1994 to 1998	TFWA610		TFWA610	TFWA1050	TFWA610			TFWA850
TD5 1998 to 2002	TFWA610	TFWA680	TFWA610	TFWA1050				
TD5 2002 to 2007				TFWA1140				
TDCI 2007 on	TFWA680	TFWA630	TFWA680	TFWA1070				
<b>Terrafirma double cardan propshafts</b> (direct replacement and do not require a transfer box flange adaptor)								
300TDI 1994 to 1998								
V8 1994 to 1998	TFDC610		TFDC610		TFDC610			
TD5 1998 to 2002								
TD5 2002 to 2007								
TDCI 2007 on	TFDC680		TFDC680					

## ALSO AVAILABLE

APPLICATION	PART NO.
Diff Flange Kit (4 bolt)	STC4858
3/8 UNF propshaft nuts	NZ606041L
3/8 UNF propshaft bolts	LR045409
WA replacement universal joint	HS163
D3/D4 rear propshaft carrier bearing	TF2395
RRS 05-13 rear propshaft carrier bearing	TF2427
RR I322 rear propshaft carrier bearing	TF2428

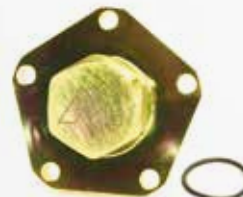
## DRIVE FLANGES



Terrafirma heavy duty drive flanges are made from superior quality steel compared to the originals with increased spline contact area for additional strength and wear resistance. The flanges fit using the original gasket and bolts and are gold zinc plated for lasting good looks with a removable dust cap and O ring seal.



TF5806



TF859

APPLICATION	LAND ROVER PART NO.	TYPE	TERRAFIRMA PART NO.	REPLACEMENT NUT	O RING
90/110/130/D1 up to 1994	FRC5806	Thick type	TF5806	TF5806N	
90/110/130/D1/RRC 1994 on	FTC859/RUC105200	Thin type	TF859	TF859N	TF859O-RING



Differentials Ltd

## The KAM electronic locking differential

# DROP IN LOCKER

Vehicles both 2 and 4 wheel drive, require differentials. The differential allows the outer wheel to rotate faster than the inner wheel during a turn, this is necessary as during the turn the outer wheel travels further and faster than the inner wheel.



### FEATURES INCLUDE:

Precision manufactured and heat treated using high grade materials

Super strong 2 piece housing

4 pinion centre

4 x electronic 12volt hi power solenoids

Industrial grade carbon brushes

Hardened steel slip ring

Neoprene slip ring isolators

9mm of locking gear engagement

4 high grade stainless steel disengagement springs

Illuminated switch and wiring loom

Utilises Land Rover crown wheel bolts, carrier bearings and original spec oil



The speed of the outer wheel is proportionally faster than the inner wheel. Without a differential the transmission would bind up during road driving causing tyre scrubbing and unpredictable steering. The differential assembly also couples the input shaft (usually a prop shaft) to a pinion which in turn drives a crown

wheel which is attached to the differential. The crown wheel and pinion also provides the final drive gear ratio for the vehicle. From the differential half shafts connect the drive to the wheels.

On high traction surfaces such as tarmac, torque is transferred equally through the differential to the wheels, driving the vehicle forward. On low traction surfaces like snow or when a wheel lifts clear of the ground while off road the drive follows the path of least resistance allowing the wheel with the least or even no traction to spin freely as the torque is directed through the differential.

This basic system is known as an open differential and is typically fitted to vehicles as standard. An open differential is ideal for a road going vehicle but has limited capability off road. Four wheel drive transmissions provide twice as much traction, but even the most capable 4x4 vehicle can lose grip or lift a wheel in extreme conditions causing the vehicle to spin to a halt.



## OPERATION

Fitting a KAM electronic locking differential known as the 'Drop in Locker' due to its ease of installation can make all the difference between success and failure when tackling off road obstacles or negotiating very low grip conditions.

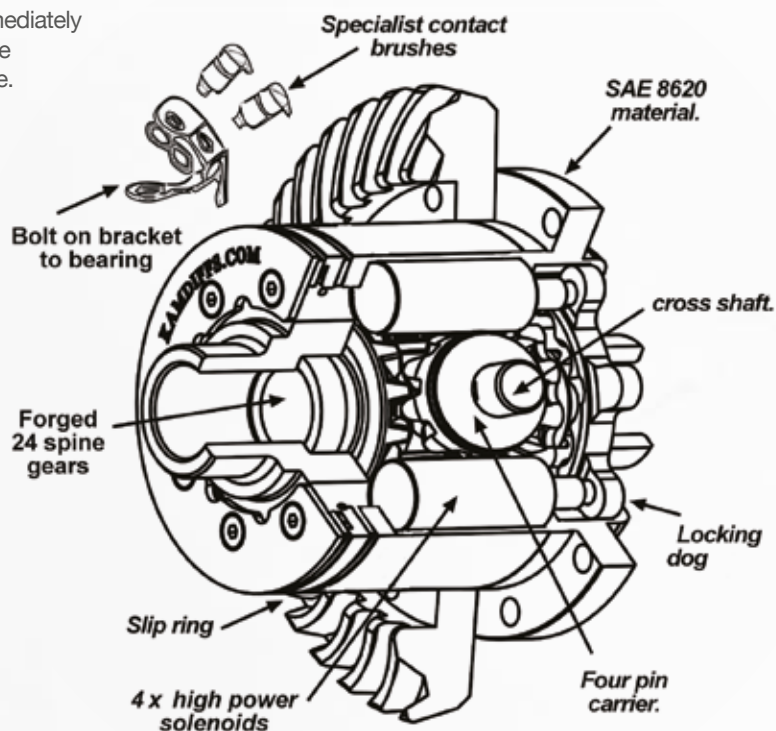
Operating a dash mounted switch sends an electronic current via 2 high grade carbon brushes to 4 high power solenoids inside the differential which when energised, simultaneously pull a locking ring into engagement with the differential sun gear, immediately locking the differential gears and preventing the drive from following the path of least resistance. The unique patented design provides instant traction by transferring drive equally to each wheel. With 'Drop in Lockers' fitted front and rear your 4x4 can be driven in a much slower, more controlled manner reducing the likelihood of damage to the vehicle and the environment.



## ADVANTAGES

A manually operated locking differential means that you the driver has control, enjoy the precise and predictable handling of an 'open' diff on road and then 100% drive 'locked' when you need it most off road, simply engage and disengage the 'Drop in Lockers' as and when you need them.

The KAM 'Drop in Locker' has the simplest operating system of any switchable diff lock, no compressor, complicated wiring loom or air lines. 2 wires and an illuminated dash mounted switch is all that is required. The uncomplicated switch arrangement also means the 'Drop in Locker' is the fastest switchable diff lock to install, no cutting or welding is required. A simple drilled and tapped hole for the electrical cable gland is the only machining operation that is required. A competent DIY mechanic should take no more than a few hours to completely install a KAM 'Drop in Locker' from start to finish. No special oils are required and service parts such as bolts and bearings are all the same as Land Rover original.



APPLICATION	PART NO.
Defender 90 24 spline 1994 on front and rear	KAM450
Defender 90 1983-1994. <i>*will require the half shafts to be changed to 24 spline</i>	KAM450
Defender 110/130 24 spline 1994 on front	KAM450
Defender 110/130 1983-1994. <i>*will require the half shafts to be changed to 24 spline</i>	KAM450
Defender 110 2002 onwards and Wolf (short nose) rear	KAM460
Discovery and Range Rover Classic 24 spline 1994 on front and rear	KAM450
Discovery 1989-1994 and Range Rover Classic 1971-1994 <i>*will require the half shafts to be changed to 24 spline</i>	KAM450
Discovery 2 1998-2004 front and rear	KAM450
P38 Range Rover 1994-2002 front and rear	KAM460
Drop in locker service kit for KAM450	KAM452
Switch kit for KAM450 and KAM460	KAM455
Replacement solenoid kit for KAM450 and KAM460	KAM456
Drop in locker service kit for KAM460	KAM462

**FEATURES INCLUDE:**

2.83 3.8 4.1 and 4.75 available

Reverse cut front option

Up to 70% stronger

43% thicker crown wheel

40% larger tooth profile

**CROWN WHEEL AND PINION GEAR SETS**

KAM offers a range of alternative ratio crown wheel and pinion gear sets. The optimum final drive ratio can be selected to accommodate increased tyre diameter, up rated engine performance and vehicle application.

The increase in strength is measured by using the standard 3.54:1 ratio as a baseline, calculating input torque, produced by the engine power and output torque produced by the feedback into the differential from traction obtained.

Up to 25% gearing reduction coupled with up to 70% increase in strength is possible with KAM lower ratio crown wheels and pinions.

RATIO	TEETH NO.	LAND ROVER	STRENGTH INC %
4.75:1	38/8	-25.47%	50%
4.1:1	41/10	-13.65%	25%
3.8:1	38/10	-7%	70%
2.83:1	51/18	25.08%	28%

APPLICATION	RATIO	AXLE	PART NO.
<b>Long nose differential</b>			
90/110/130/D1/D2/RRC	4.75:1	FRONT	KAM546
90/D1/D2/RRC	4.75:1	REAR	KAM547
90/110/130/D1/D2/RRC	4.1:1	FRONT	KAM541
90/D1/D2/RRC	4.1:1	REAR	KAM542
90/110/130/D1/D2/RRC	3.8:1	FRONT	KAM538
90/D1/D2/RRC	3.8:1	REAR	KAM539
90/D1/D2/RRC	2.83:1	BOTH	KAM528
<b>Short nose differential</b>			
110/130 rear 2002 onwards and P38	4.1:1	BOTH	KAM549
110/130 rear 2002 onwards and P38	4.75:1	BOTH	KAM548

3.54:1 is the standard ratio on all Land Rover Defenders, Discoverys and Range Rover Classics. Lower ratios of 3.8:1, 4.1:1 and 4.75:1 are available. The effect of these lower ratios can be seen in the chart. The 2.83:1 ratio is higher giving 28% increases in overall gearing. It has the effect of either reducing the engine revs or increasing overall road speed. This is generally suited to high-speed roadwork and vehicles that have had engine modifications.

Land Rover fit the same differential assembly to the front and rear axles. As a result the front differential rotates in the opposite direction to the rear with the driving force being applied to the back of the gear teeth. KAM produce ring and pinion sets for the front differential assembly that are 'reverse cut' which ensure the force is applied to the stronger/correct side of the gear teeth.

**4 PIN AND LIMITED SLIP (LSD) DIFFERENTIALS**

KAM620

Another option in the range is the KAM 4 pin differential, this is a much stronger upgraded unit due to the heavy duty cross shaft at its centre and is a direct replacement for the standard 2 pin differential fitted to almost all Land

Rovers. This is not a locking differential but is much stronger than standard so a worthwhile upgrade.

The third option for upgrading your differentials is the KAM limited slip differential (LSD) as with the other KAM differentials the LSD has a heavy duty forged cross shaft which is far stronger. Limited slip differentials are fully automatic and once fitted they require no input from the driver, they increase traction through the use of a pack of clutch plates to allow some slip so your car still handles around corners but provides increased traction both on and off road.



KAM640

DESCRIPTION	APPLICATION	PART NO.
Long nose 4 pin diff	90/110/130 D1 D2 RRC front. 90 D1 D2 RRC rear	KAM610
Short nose 4 pin diff	110/130 rear 2002 on. P38 front and rear	KAM620
Long nose limited slip diff (LSD)	90/110/130 D1 D2 RRC Front. 90 D1 D2 RRC rear	KAM631
Short nose limited slip diff (LSD)	110/130 rear 2002 on. P38 front and rear	KAM640

## RAPTOR CV JOINTS AND SHAFTS



The Raptor HD shafts are made from SAE4340 Nickel Chromoly alloy steel which when heated provides the optimum level of strength and flex, the ability to twist without breaking as well as extremely high fatigue resistance which enables the shafts to tolerate repeated shock loading. This ability to flex without breaking also helps protect other drive train components.

All shafts are 24 spline and primarily suited to post 1994 axles, although they can be fitted to earlier vehicles with additional work.

Raptor shafts replace the KAM shafts that were previously offered in our range, and a simpler one piece Raptor CV joint replaces the KAM 2 piece CV and fitting kit.

5 Year Warranty (vehicles with 35" tyres or less).



TF2005

APPLICATION	PART NO.
Rear shafts 90/D1/RRC up to 1994	TF2001
Rear shafts 90/D1/RRC 1994 on 110/130 2002 onwards	TF2002
Rear shafts 110/130 1994-2002 Salisbury disc brake	TF2003
Heavy duty non abs cv joints 1994 onwards	TF2005
Heavy duty abs cv joints 1994 onwards	TF2006
Front shafts 1994 on 24 spline	TF2008

## iCARSOFT MULTI-SYSTEM SCANNER TF930 FOR LAND ROVER



### FEATURES INCLUDE:

The fastest full colour, 2.8" TFT 320\*240 pixels

USB 2.0 High Speed Upgrade

Support Multi-language

Read & Clear DTCs

Read Date Stream

Silicone keys with great customer experience

Diagnose Single Brand of all Models (OBDII-16 DLC)



TF930 Multi-system Scanner supports full system diagnosis. It's a powerful DIY tool, test modes include: CANBUS, ISO9141, KWP2000, J1850 etc.

### Vehicle coverage:

Freelander  
Freelander 2  
Defender  
Discovery 2  
Discovery 3  
Discovery 4  
Range Rover  
Range Rover Sport  
Range Rover Evoque



TF1810

APPLICATION	PART NUMBER
Fault Code Reader - Land Rover	TF930
Fault Coder Reader - Generic	TF1810

# GAP DIAGNOSTICS IID TOOLS



TFIIIDPRO

## Advanced Programming Functions:

Vehicle control modules software updates (ECU Re-Flashing\*)

Engine tuning, EGR Patching, Speed limiter raising and more (purchased separately)

Key programming (except Range Rover L322 2002-2009 and Defender)

Car Configuration / Personalization (CCF editing)

Height Adjustment (front, rear or all)

Suspension individual sensor calibration (needed after a repair)

Backup of original height and CCF values

3 personalized height profiles

## IOS/Android App Features:

Easy access to all Diagnostic and Programming functions

Email exportation of faults, live data and ECU info

Real time logging of live data

Up to 8 live values displayed simultaneously on graph and numerical views



For the TFIIIDPRO, updates are free for a period of one year after the date of purchase. Afterwards, firmware updates will be available for an annual fee of 500 GBP. The IID PRO firmware will be continually improved through the addition of new service routines, vehicle enhancements options (modified ECU firmware's etc), convenience features, new vehicle coverage and many more items. The annual fee will be adjusted once the product has matured and updates become less frequent. This annual fee is not mandatory; if you decide not to partake in this offer the tool will continue to function normally even without the latest firmware additions.

Flashing of new ECU's and ECU re-flashing is supported. For a list of supported ECU re-flashes, consult the functionality list and user manual. More ECU files will be added and available by purchasing an additional module except for the TFIIIDPRO (included in the yearly subscription).



## FEATURES INCLUDE:

Full Diagnostic Capability

Service routines (including service reminder reset)

Live Data

Manual Components Activation (Output Control)

Calibrations (except suspension)

## ONE TOOL COVERS ALL THESE VEHICLES:

Defender 2007 onwards

Discovery 3/LR3 2004-09

Discovery 4/LR4 2010 onwards

Freelander 2/LR2

Range Rover Evoque 2011 onwards

Range Rover 2002-05

Range Rover 2006-09

Range Rover 2010-12

Range Rover 2013 onwards

Range Rover Sport 2005-09

Range Rover Sport 2010-13

Range Rover Sport 2014 onwards

APPLICATION	PART NO.
IID Tool Bluetooth DIY Diagnostic tool	<b>TFIIDBT</b>
IID Tool Professional DIY Diagnostic tool	<b>TFIIDPRO</b>

## ALSO AVAILABLE



PC1500DT

**ODYSSEY**  
THE EXTREME BATTERY



GFK002

APPLICATION	VEHICLE	PART NO.
14" electric fan (push type) – will not fit TD5 Defender	Universal	<b>GFK002</b>
Thermostatic control kit for GFK002	Universal	<b>GFK003</b>
ODYSSEY battery	Defender	<b>PC1500DT</b>
Battery isolator switch	Universal	<b>GCU001</b>
Terrafrima bluetooth remote tyre pressure monitor kit	Universal	<b>TF308</b>
Metal oil pan – transmission ZF 6HP26	D3/D4/RR L322/RRS05-13	<b>TF2142</b>
Gear – transfer case actuator ZF	D3/D4/RR L322/RRS05-13	<b>GA500040</b>

# PROTECTION

The more serious your adventures the more protection is necessary.

Regardless of your chosen off road activity work or play and despite Land Rovers being built for off road use there is more to be done in terms of protecting the underside of your Land Rover against damage against rocks and ruts etc. The more serious your chosen off road adventures the more protection is necessary.

All TerraFirma under body guards perform important roles and have been designed to protect any part of the Land Rovers under carriage that if damaged could affect the rest of your journey or day's work. Prevention rather than cure is the message here allowing you to drive safely and with confidence.

The range of TerraFirma under body guards protects the steering gear, front and rear differentials, transmission system and fuel tanks.

Many of the steering guards, transmission guards and fuel tank guards are available in a choice of 6mm steel and 8mm aluminium. Aluminium guards are in keeping with modern design and are lighter weight. Steel guards are tougher, less expensive but heavier than the more stylish aluminium. All steel parts are gold or silver zinc passivated for good looks and rust resistance. TerraFirma under body guards mount onto existing pre drilled holes and all necessary fixings are supplied.



## STEERING GUARDS



TerraFirma steering guards are tapered for maximum protection and good looks with a row of laser cut holes for additional styling and to provide air flow to the cooling system. An additional feature is the incorporation of recovery points built into the strong side brackets on some of our guards, designed to accept a common shackle.



TF841R



TF894WB



TF895WB



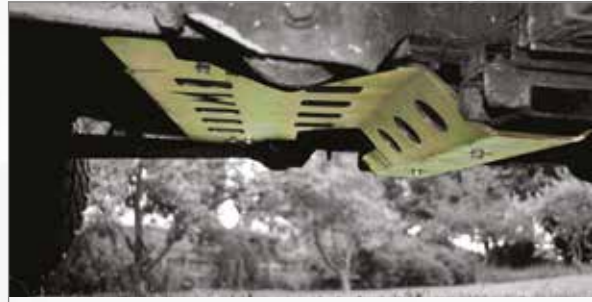
### DIFFERENTIAL GUARDS

TF846



**2** The vertical bulge in the front and rear axle cases allows the crown wheel to rotate inside. The crown wheel is a large gear that transfers the input drive into the differential and along the axle shafts. The bulge is pressed steel and when rammed into immovable objects such as rocks can easily be holed losing valuable lubricating oil. Terrafirma differential guards are easy to fit and offer protection against even the most aggressive attacks on obstacles.

Fuel tanks on Land Rovers are typically under the side or under the rear over hang, both vulnerable when the going gets tough. Terrafirma steel and alloy fuel tank guards provide complete protection against rocks when off road and allow you to drive worry free across difficult terrain. Terrafirma fuel tank guards allow fitment of factory towing kits and rear steps however some trimming may be required if non standard equipment has been fitted.



### TRANSMISSION GUARDS

**3** The bottom of the gearbox, transfer box and handbrake assembly hang slightly below the chassis rails on Land Rover Defenders and Discovery 1s leaving them vulnerable when crossing obstacles. Terrafirma transmission guards not only protect the transmission and handbrake but also act as a skid plate to slide over the ground or rocks reducing the chance of getting stuck.



TF856

### FUEL TANK GUARDS

TF845



**3** Losing fuel due to a punctured fuel tank can have disastrous consequences leaving you stranded miles from home with an unnecessary expense and a major repair task on your hands.



TF864

Fuel tanks on Land Rovers are typically under the side or under the rear over hang, both vulnerable when the going gets tough. Terrafirma steel and alloy fuel tank guards provide complete protection against rocks when off road and allow you to drive worry free across difficult terrain. Terrafirma fuel tank guards allow fitment of factory towing kits and rear steps however some trimming may be required if non standard equipment has been fitted.

APPLICATION	Defender 90						Defender 110/130						D1/RRC		D2		P38	D3
	83-94	94-98	98-02	02-07	07-12	12-	83-94	94-98	98-02	02-07	07-12	12-	89-94	94-98	98-02	02-04	94-02	04-09
Steel steering guard (WB suitable for winch bumper)													TF858		TF894 (TF894WB)			
Alloy steering guard tapered with recovery points							LHD = TF841L RHD = TF841R											
Alloy steering guard (WB suitable for winch bumper)													TF890		TF895 (TF895WB)			TF828
Track rod guards															TF843			
Front differential guards																		
Rear differential guards													TF846					
Clamp on differential guard (not Wolf rear axle)																		
Rear Salisbury axle differential guard																		
Rear Salisbury skeleton diff guard																		
Steel transmission guards													TF856		TF881			
Alloy transmission guards													TF857		TF882			TF830
Steel fuel tank guards																		
Alloy fuel tank guards													TF848		TF850			
Fuel cooler guards															TF880			





**FEATURES INCLUDE:**

Protect the side of your car from rocks and trees

Can also be used as a handy step to aid access

Strong enough to use a high lift jack on

**ROCK SLIDERS**



Rock sliders or side protection bars are a must have for both recreational and serious off roaders. Protecting the sills and sides of your pride and joy is paramount. Keeping the bodywork away from large rocks, earth banks and trees will save a considerable amount of money in the long term.



All fixing hardware is supplied with each pair of Rock sliders.

In most cases Terrafirma rock sliders are made from sturdy steel box section with or without the optional steel tube outrigger 'tree bars' that keep the bodywork away from immovable objects just waiting to damage your doors. Tree bars can also serve as a useful step for both entering the vehicle and accessing the roof rack. For the Discovery 3 Terrafirma rock sliders are carefully folded to match the shape of the sill, again with optional tubular tree bars which also double as effective side steps for easier access.

Terrafirma also offers a roll of non-slip 'grip tape' that can be cut to length and applied to tree bars to help with accessing the vehicle when wet and muddy.

All Rock sliders follow the profile of the original side sill, in the case of Defenders the alloy lower sill below the doors is replaced with the rock slider and the plastic trim sill is removed on all Discoverys and P38 Range Rovers.

Terrafirma Rock sliders are designed to be strong enough to protect the side of your vehicle, this means you can jack up the vehicle on them if required.



TF805

APPLICATION	90	110	130	D1 3DR	D1 5DR	D2	D3	P38
Rock sliders without tree bars	TF803	TF813	TF815			TF808		
Rock sliders with tree bars	TF801	TF810	TF814	TF805	TF807	TF809	TF818	TF816
Rock sliders with tree bars (shorter version when fitting wheel arch kits)					TF807WA			
Galvanised with tree bars	TF801GAL	TF810GAL						
Grip Tape roll 50mm x 5m				TF819				



**FEATURES INCLUDE:**

Aluminium box construction

Pre-drilled for easy fitting

Helps to protect doors and body sides

**BODY BARS**

Body bars are designed to help protect the sides of Defenders in the possible event that the trees close in on you when driving off road. The alloy box sections fit neatly into the recess between

the body capping and body side profile. The box sections are drilled not just to add style but to allow a socket access to tighten the fixings. They are easy to install and include all the necessary nuts and bolts.



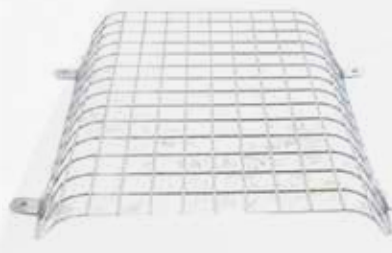
TF962



TF770



TF170



345985



TF574

**DEFENDER REAR BUMPER CORNERS**

**FEATURES INCLUDE:**

Mounts to existing holes in rear cross member

Protects the bottom of the rear wings

Also works as a handy rear step

Departure angle is an off roaders biggest concern,

dropping off a ledge or attacking a steep climb the fragile alloy rear corners of your Defender can easily hit the ground and get damaged, especially on a 110. Terrafirma rear bumper corners not only protect the

underside of the rear corners but also act as rear bumpers keeping the lights from harm and also acting as a step with the useful grip tape applied.



TF570



TF571

DESCRIPTION	PART NUMBER
Light guards for standard 73mm diameter Defender lights	TF170
Light guards for NAS 95mm diameter Defender lights	TF171
Galvanised mesh front light guard (single) 90/110/130/Series	345985
Black powder coated slat type light guards 90/110/130	STC53161
Defender 90 rear bumper corners	TF570
Defender 110 rear bumper corners	TF571
Defender 90 extreme rear body corners	TF574
Defender 90 body bars - door bars	TF960
Defender 90 body bars - rear body bars	TF962
Defender 90 extreme rear bumper corners	TF572
Defender 110 extreme rear bumper corners	TF573
Defender 110 extreme rear lower body corners	TF575
Axle reinforcing kits 90/110/130/D1/RRC long nose front axle	TF775
Axle reinforcing kits 90/D1/RRC long nose rear axle	TF770

# RECOVERY

Built tough and able to take on the rigours of serious off road use.

The TerraFirma range of bumpers and winch mounts has been designed to meet the broad range of winching and off road activities carried out by Land Rover owners and operators.

A combination of performance and practicality has been employed in the development of these bumpers, from recreational and serious off road to commercial and military use. The entire range has been created to accommodate the most popular winches such as our own amazing TerraFirma A12000 Winch as well as the Superwinch LP, Talon and Tiger Shark winch ranges from 8500-18000lbs pulling capacity. Of course with most makes of winch sharing common physical dimensions and traditional 10" x 4.5" bolt patterns the majority will fit quite happily into a TerraFirma winch bumper or mount.

All TerraFirma bumpers are made from steel which are then sand blasted, zinc phosphate washed and powder coated semi-gloss black for a factory quality finish. Bumpers include jacking and recovery points where appropriate and are built tough and able to take on the rigours of serious off road and commercial use. Space is built into the chassis mounting brackets on all Defender bumpers to allow for the fitment of steering guard brackets and spacers are included in the fitting kits to take up the clearance if no guard is to be fitted.



## FEATURES INCLUDE:

Available with or without A bar

Improved approach angle

Available for both A/C and non A/C equipped vehicles

## TUBULAR BUMPERS



Tubular winch bumpers have become very popular with both recreational and competitive off roaders. The A bar is often seen as an important structural part of tubular bumper design. The all

in one construction of the TerraFirma tubular bumper ensures a considerable strength advantage over others, with the integral perforated front plate not only providing the style but also allowing cooling air to the radiators. Tubular winch bumpers are available with or without the A bar to suit your personal preference.

The tubular winch bumper specifically for Defender's without air conditioning is designed primarily for serious off road use. To provide the extreme

approach angle required the bumper is set well back and the grill and lower front panel will need to be cut to facilitate a winch fitment. These items are not structural and do not affect the vehicle's integrity and the improvement in off road ability is always considered to be the priority. The bumper suitable for air conditioned Defenders which has reduced approach angle in order to accommodate the extended front panel simply requires the louvred plastic grill to be modified slightly.

Also available for Defender owners looking for the tubular look but that have no need for a winch is the TerraFirma Tubular non-winch bumper option in both air con and non-air con versions.





## PRO TAPER BUMPERS



### FEATURES INCLUDE:

Improved approach angle

Available for both A/C and non A/C equipped vehicles

Available for both standard and large frame winches



When strength, functionality and good looks are the ultimate goal the Terrafirma Pro Taper bumper range for both air conditioned and non-air conditioned Defenders will be your choice.

With these bumpers the winch is raised above the chassis rails and with

tapered and swept back wings approach angle and styling are optimised even with the air conditioned Defender versions. The Terrafirma

Pro Taper bumpers are available to suit both the conventional 'small chassis' winches with pulling capacities up to 12000lbs as well as the 'Bigger is Better' super strong option for 'large chassis' winches from 12,000-18000lbs pulling capacity.

With large, high capacity winches becoming ever more popular for commercial and recreational use these bumpers for big and powerful winches are unmatched in the market place. Air cooling slots, built in recovery and jacking points complete these superb winch bumpers.

TF006



### FEATURES INCLUDE:

For that discrete look

Peace of mind while retaining a standard looking front end

Ideal for occasional use



## DISCRETE WINCH MOUNTS

For owners who require a winch and wish to retain the original vehicle looks and do not require the additional protection provided by a replacement bumper, a Terrafirma discrete winch mount is the perfect option. For all Discovery models

there is sufficient space behind the original bumper to allow a winch to be fitted into a chassis mounted bracket. The only evidence that a winch is fitted is the fairlead protruding through the front bumper which can be hidden by the licence plate when not in use.

The kit for Discovery 2 offers a straight forward solution to mounting a winch behind the original bumper, whereas the significantly more sophisticated Discovery 3, 4 and Range Rover sport all require a much more elaborate kit to take into consideration the relocation of certain parts in order to create the space to be occupied by the winch. All components necessary are included in the kit as well as comprehensive instructions and templates that are required to correctly cut and remove plastic trim parts and accurately locate the fairlead into the front bumper.



#### FEATURES INCLUDE:

Available for both A/C and non A/C equipped vehicles

New tapered design

Integrated recovery points

## COMMERCIAL BUMPERS



Terraforma Defender commercial winch bumpers are designed to accommodate the most popular mid-range winches, in particular the Terraforma winch as well as those from Superwinch and Warn.

The bolt pattern dimensions of 10" x 4.5" are common for almost every brand of winch constructed with inline motor-drum-gearbox configuration. Regarded as a standard type, the Commercial winch bumper is ideal for the user looking for additional protection and conventional winch mounting without the increased off road performance provided by the Tubular and Pro Taper bumpers.

The bumpers are made from 5mm steel and are very strong in their construction. Each bumper incorporates 2 jacking points that will accept the standard Land Rover jack or a Hi-lift jack as well as 2 recovery points and are tapered at each end.



## FRONT AND REAR BUMPERS FOR DISCOVERY 1, 2 AND P38 RANGE ROVER



Terraforma has adopted the same philosophy for the creation of these bumpers. The whole range has been designed to replicate the original bumper profiles as closely as possible while allowing for winch fitment and increased protection. Angles, radius's, corners and contours are carefully engineered to compliment the original shape and lines of the vehicle so as not to stand out or appear miss-matched. Sufficient chassis fixing points have been incorporated to ensure the stresses of winching and recovery or off road impacts do not move the bumper on its mountings for guaranteed long lasting strength and reliability.

All Terraforma bumpers are designed so that no exterior bodywork needs to be cut or trimmed. However some trimming of non-critical 'behind the bumper' material may be required to make space for the winch installation. Front bumpers incorporate jacking points and optional swivel recovery eyes.

Rear bumpers are made to allow the fitment of standard towing equipment, receiver hitches, fuel tank guards and detachable hitch kits and incorporate jacking points and optional swivel recovery eyes.

As Terraforma front and rear bumpers are designed primarily for off road use priority has been given to winch location, jacking and recovery points over bumper mounted lights, headlamp washer jets and parking sensors. It is however possible in many cases for competent technicians to reinstall these items if specifically required.



# HEAVY DUTY TAPERED BUMPERS

## FEATURES INCLUDE:

Available with or without centre recovery point

Far stronger than standard

Tapered ends for good looks and improved off road characteristics



Terrafirma heavy duty tapered

bumpers are the perfect replacement for the standard Defender bumper if the original is not up to the job or if additional towing or recovery points are required.

Made from heavy duty 5mm steel and tapered at each end for improved looks there are 2 options available; a no frills heavy duty tapered replacement and a superior version including 2 chassis mounted recovery eyes as well as a centre towing pin.



TF055WRP

APPLICATION	90/110/130		D1	D2	P38	D3/D4/RRS-'10
	Without AC	With AC				
Heavy duty tapered bumper	TF055					
Heavy duty tapered bumper with centre towing pin and recovery points	TF055WRP					
Skeleton 4 LED front bumper	TF056					
Commercial winch bumper Superwinch	TF002ST	TF002ACST				
Commercial winch bumper Warn	TF002W	TF002ACW				
Spot light and LED 20" light bar mounting bar (suit TF002 bumpers)	TF008					
Spot light & LED 20" light bar mounting bar (suit standard bumpers)	TF008SH					
Commercial winch bumper to suit Superwinch Husky 8 and 10	TF004					
Tubular winch bumper with A bar	TF001	TF001AC				
Tubular winch bumper without A bar	TF003	TF003AC				
Tubular non winch bumper	TF005	TF005AC				
Pro Taper winch bumper suits small chassis winches	TF006	TF006AC				
Pro Taper winch bumper suits large chassis winches	TF060	TF060AC				
Winch bumper with swivel recovery points			TF095	TF009		
Winch bumper without swivel recovery points			TF095A	TF009A	TF007A	
Rear bumper with swivel recovery points				TF090		
Rear bumper without swivel recovery points				TF090A	TF070A	
Discrete winch mount				TF078		TF097
Swivel recovery points				TFSRP		
Number plate mounting plinth				TF155		



TF056

# TERRAFIRMA A12000 ELECTRIC WINCH



## FEATURES INCLUDE:

12000lbs (5443kg)  
rated line pull

6hp series wound motor  
for high performance  
and fast line speed

80' (25m) Dyneema  
synthetic rope with rock  
guard and safety hook

Alloy hawse fairlead

Wireless remote control (cable  
remote control included)

Automatic in the drum brake

Multiple mounting options  
for solenoid pack

Easy to operate free  
spool control

High efficiency low noise 3  
stage planetary gearbox

Modern 'stealthy' design

Heavy duty stylish  
textured black coating for  
corrosion resistance

Double green LED 'winch  
live' illumination feature

IP67 Rated



TF3301

The A12000 incorporates all the features requested by commercial users, as well as recreational & competition off roaders. The new TerraFirma winch combines 12000lb of pulling performance and modern styling with high quality synthetic rope and wireless remote control as well as the standard cable remote.

A powerful 6hp 12v motor and low noise 3 stage planetary gearbox produces 12000lbs of power pulled through a silver-grey synthetic rope and rated safety hook, of course with the synthetic rope comes a cool black alloy hawse fairlead. The winch is designed with a modern look and finished in stealthy matt black with matching compact solenoid pack with 2 green LEDs to indicate 'winch live' and ready for work. The solenoid pack has the added benefit of being able to be mounted in multiple mounting positions.

The TerraFirma A12000 winch is built on the standard frame size of 10x4.5" to allow fitment to most popular mounts and bumpers.



## APPLICATION

TerraFirma Winch 12000lbs	<b>TF3301</b>
Synthetic rope 11x24m – silver grey	<b>TF3302</b>
Hawse fairlead center – black	<b>TF3303</b>
Solenoid box	<b>TF3306</b>
Wireless remote control	<b>TF3307</b>
Remote control	<b>TF3308</b>
Extended winch cables 4m and isolator switch	<b>TF3309</b>

## PART NO.

**TF3301**  
**TF3302**  
**TF3303**  
**TF3306**  
**TF3307**  
**TF3308**  
**TF3309**

## Line speed and motor current (first layer)

Line pull	lbs	0	4000	6000	10000	12000
	kgs	0	1814	2722	4536	5443
Line speed	FPM 12V	22	12.5	9.8	6.9	5.6
	MPM 12V	6.8	3.8	3	2.1	1.7
Motor current	Amps 12V	80	170	210	310	360

## A12000 Specifications

Rated line pull:	12000lbs (5443kgs) single line
Motor:	Series wound 6.0hp/4.4kw, 12V DC
Gear train:	3stage planetary
Gear ratio:	265:01:00
Clutch:	Sliding ring gear
Braking action:	Automatic in the drum
Fairlead:	Alloy fairlead
Synthetic rope:	7/16"x79 (11mmx24m)
Drum size:	2.5"x8.9" (63mmx226mm)
Dimensions:	21.5"x6.3"x7.6" (545mmx160mmx194mm)
Mounting hole pattern:	10"x4.5" (254mmx114.3mm)
Battery:	650 CCA minimum for winching 25 square mm, 72"(1.83m)
N.W:	82lbs(37.5kgs)
Packing:	620mmx360mmx260mm

## Line pull and cable capacity

Layer of Cable		1	2	3	4
Rated line pull per layer	lbs	12000	9900	8300	7000
	kgs	5443	4490	3765	3175
Cable capacity per layer	ft	19.6	42.6	72	79
	m	6	13	22	24



## RECOVERY EQUIPMENT



Recovery equipment is essential off road kit. All 4x4 vehicles should have at least a tow rope, a shackle and a pair of gloves on board. Winch equipped vehicles should carry more to make the best use of the winch and of course recreational and competitive 'winchers' will have selected a whole range of useful items such as different length straps, various shackles and snatch (pulley) blocks.

Only the best performing recovery equipment is considered to support TerraFirma 4x4 accessories.

TerraFirma offers a range of products to ensure your

off road activities are carried out with safety and performance in mind.

TerraFirma has its own range of recovery kit selected from high quality manufacturers.

Everything is tested and rated and is fit for both commercial and recreational use.

The TerraFirma range includes: Rated shackles and snatch blocks, tow ropes and recovery ropes, tree strop, winch extension strap and a 20% stretch recovery strap.



TF3314

APPLICATION	PART NO.
<b>Soft Shackle</b>	
TerraFirma 11mm soft recovery shackle 8000kgs	TF3310
<b>Green Pin® Hi-load Shackles</b>	
WII 4.75 T green pin bow shackle - 22mm pin [28.5t Mbl]	GPABSA19
<b>Standard Hi-load Shackles - [silver/yellow Pin]</b>	
WII 3.25 T bow shackle - 19mm Pin [19.5t Mbl]	RBS3
WII 4.75 T bow shackle - 22mm Pin [28.5t Mbl]	RBS4
<b>Swing Away Snatch Blocks</b>	
16000 Lb 3 3/4" diameter sheave medium duty	RSSB16
Snatch block with grease fitting - red	TF3305
<b>Miscellaneous</b>	
Recovery gloves - Large	TF3312L
Recovery gloves - Medium	TF3312M
Ratchet cargo strap 4.5M	TF3313
18T MBS snatch ring	TF3314
Recovery rope 22mm 30ft 13000kgs	TF3311
<b>Kinetic Recovery Ropes</b>	
Bow shackle 4.75t 22mm Pin	TF3304
<b>Hi-Lift Jacks</b>	
Flat-surface mounting kit for all Hi-Lift Jacks	GHL2
Loc-Rac - simple installation and designed to fix and lock a Hi-Lift Jack	GHL3
48" Hi-Lift All-Cast Jack	GHL4
48" Hi-Lift X-TREME Jack	GHL4XT
60" Hi-Lift All-Cast Jack	GHL5
Adaptor for safe use on Defenders	GHL4/5A
Hi-Lift bag	GHL4/5BAG
Hi-Lift base plate	GHL4/5BASE
Hi-Lift Jack Handle Keeper red / black	GHL6 / GHL7



This super flexible easy to handle 9m long, 22mm diameter double braided nylon rope is the most advanced snatch recovery

TF3311

rope on the 4x4 market. Bright red UV, water and abrasion resistant with black nylon reinforced eyes this new rope comes in a mesh storage bag for easy cleaning and has whopping 13,000kg load rating. 30% stretch with quick recovery makes this one of the most effective kinetic or snatch recovery ropes for off road 4x4 vehicle recovery.



TerraFirma recovery gloves are manufactured tough to handle the rigours of handling 4x4 winching and recovery

TF3312

equipment but also supple enough to be used for general tasks to protect and keep your hands clean. The palms and finger reinforcements are made from tough, hard wearing, shrink resistant synthetic leather and the backs are breathable spandex for snug fitting flexibility with an elasticated cuff to keep debris out. These super comfortable bright red and black gloves are ideal for technical jobs in harsh conditions.





## RECOVERY STRAPS



### FEATURES INCLUDE:

Reinforced eyes and protective sleeves

Bright distinctive colours, easy to find and identify



Recovery straps of varying lengths are a vital part of any off roader's kit. TerraFirma recovery straps will suit all recovery situations involving light to heavy 4x4 vehicles.

TerraFirma snatch straps are constructed from a complex bright orange material designed to stretch up to 20%, which when used to recover a stuck vehicle uses the kinetic energy stored in the strap under tension to help extract the vehicle from its bogged situation. A snatch strap should be used in all vehicle to vehicle recovery and towing situations as the stretch provides a much more forgiving and less jarring connection between the vehicles.

TerraFirma tree straps are wider than other recovery straps, this is important to prevent ring barking or damage to trees when using them as a suitable anchor point when winching. Tree straps are produced in a bright green colour to clearly identify them from other recovery straps.

TerraFirma extension straps can be used for towing but as they do not stretch they give a hard connection between the two vehicles, the most suitable and common use is to extend the length of the winch cable in situations when the recovery vehicle or the only tree in sight is out of reach. TerraFirma extension straps are made in bright purple to clearly distinguish them from other straps in your kit bag.

TerraFirma recovery straps all come with reinforced eyes and are sleeved to protect the stitching. The capacity and length of each strap should be carefully considered when selecting to suit the weight of the vehicle and circumstances in which they are to be used.

### APPLICATION

TerraFirma 11000kg 9m x 80mm Snatch Strap

TerraFirma 12000kg 5m x 80mm Tree Strap

TerraFirma 11000kg 20m x 80mm Extension Strap

### PART NO.

**TFSS11000**

**TFTS5M**

**TFES11000**



### FEATURES INCLUDE:

4.3" colour TFT monitor

1/4" Colour CMOS image sensor

Digital wireless video

12/24V cigarette plug power cable (8-30V DC)

Parking guidelines

6 x Infra-red LED night vision

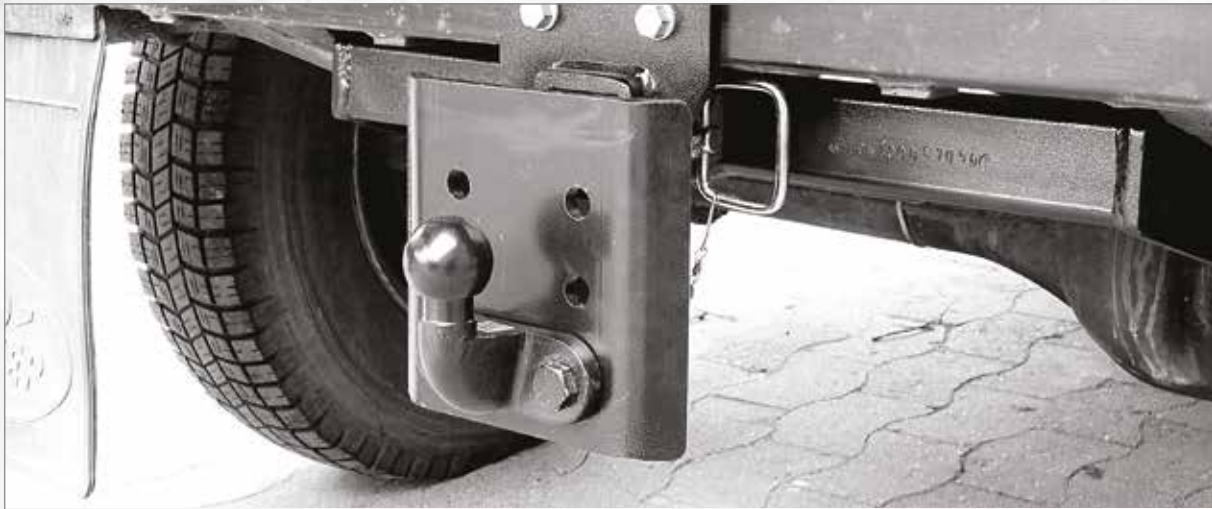


## DIGITAL WIRELESS REVERSING CAMERA

Great rear view camera kit for any application where rear view is limited. With a 4.3" full colour monitor it is easy to see what is going on behind you.

The camera and monitor have a wireless digital connection that makes installation easy. The camera just needs a 12v power source from your reversing lights, this means the camera is only activated when reverse is selected, the screen is powered from a 12/24v power socket.

TF935


**FEATURES  
INCLUDE:**

Helps to maintain  
rear departure angle

Quick and easy  
to fit and remove  
attachments

## RECEIVER HITCHES



Land Rover  
tow bars are  
often one of the lowest  
points of a Land Rover  
significantly reducing  
the departure angle  
and frequently getting

hung up while driving off road. Due to the dual purpose nature of most people's vehicles, removing the tow bar altogether is not an option. TerraFirma Receiver Hitches help to maintain 100% versatility by providing a 'female' box section mounting point known as a 'receiver' fitted high up, close to the chassis out of harms way.

The Receiver Hitch allows a variety of 'male' attachments to be connected to your Land Rover including drop plates, recovery points and demountable winch cradles in fact the options are almost limitless.

The TerraFirma Receiver hitch has a 2" internal bore with enough tolerance to allow a snug fitting 2" external square section to be inserted and retained by a heavy pin and security clip.

TerraFirma Receiver hitches are available for a range of Land Rovers and include the necessary fitting kit and retaining pin. The drop plate provides three levels of height adjustment and the recovery point is machined to accept a common bow shackle.

APPLICATION	PART NO.
Defender 90/110/130 up to 1998	<b>TF873</b>
Defender 90 1998 onwards	<b>TF876</b>
Defender 110/130 1998 onwards	<b>TF877</b>
Discovery 1	<b>TF874</b>
Discovery 2	<b>TF875</b>
Drop plate up to 1998	<b>TF879</b>
Drop plate 1998 onwards	<b>TF879A</b>
Recovery point	<b>TF878</b>
Spare retaining pin	<b>TFHPIN</b>



TF873



TF876



TF877



TF874



TF879



TF878



**FEATURES INCLUDE:**

Provides easy access to rear of car

Built in jacking points

Choice of heights for tow ball

### NAS REAR STEP TOW BAR

**3** This classic accessory was first made in the mid 90s for the Land Rover Defenders exported to the US. The

NAS rear step is also a tow bar and is securely bolted to the rear cross member of all Defender models.

Made from black powder coated steel tube and very stylishly fabricated including an alloy tread plate step the rear step nicely breaks up the traditional flat rear end of a Defender. The position of the towing bracket also allows easier hitching of a caravan or trailer as it is less obscured by the door mounted spare wheel.

APPLICATION	PART NO.
Defender 90	TF883KIT90
Defender 110	TF883KIT110

### TOWING AND RECOVERY POINTS

**FEATURES INCLUDE:**

Both front and rear recovery points available

Bolt on and weld on available

Chassis mounted

Swivel recovery points can turn as the angle of pull changes

**2** Terrafirma provides a range of fixed and swivel towing and recovery points. The Defender specific ones are designed to bolt to original chassis locations front and rear for maximum strength. Also available are swivel recovery points suitable for a range of Terrafirma bumpers as well as a universal weld on recovery point and a bumper mounted swivel recovery point for Defenders with air conditioning.

Jate rings are designed to replace the original chassis lashing down eyes and are intended to be used as



recovery points and used extensively by the MOD. Depending on equipment already fitted it is possible they will fit in conjunction with steering guards and winch bumpers but don't normally fit the rear with original towing equipment.

APPLICATION	VEHICLE	PART NO.
Defender rear cross member centre recovery point	90/110/130	TF750
Defender front bumper swivel recovery point	90/110/130	TFBRP
Jate rings	90/110/130/D2 1998 on	TF870
Universal weld on swivel recovery point		TFWSRP
Swivel recovery point		TFSRP



TFSRP



TFWSRP



TF870



LR070497



KNK500060



#### FEATURES INCLUDE:

Rated to the same specification as the car

Full kit with either two bolt tow ball or completely removable swan neck

Complete with full electrics kit

## TOW BARS



All our towbars are manufactured by **TowCar** using high strength structural steel to ensure peace of mind for all of our customers. Utilising the latest 3D CAD systems to design towbars that fit all the vehicle manufacturers

specified attachment points to ensure the widest variety of towbars possible. Towbars are ideal for those who want to make the most of the Great outdoors, while adding versatility and value to their vehicle. Our towbars can be used to pull everything from a simple trailer right up to a substantial caravan or horsebox. So whether you want to get away with the caravan for the weekend or require a trailer for leisure or business reasons we will have a towbar to help you get there.



CAR MODEL	PART NUMBER	YEAR	CUTTING	ELECTRICS
Defender 110	<b>VPLDT0085</b>	1998 -	No Cutting	13 Pin
Defender 90	<b>VPLDT0084</b>	1998 -	No Cutting	13 Pin
Discovery 2	<b>STC50319</b>	1998 - 2005	No Cutting	13 Pin
Discovery Sport	<b>VPLCT0147</b>	2015 -	No Visible Cutting	13 Pin
Freelander 1	<b>KNK500060</b>	2004 - 2008	No Cutting	7 Pin
Freelander 2	<b>VPLFT0119E</b>	2007 - 2012 (Sept)	Visible Cutting	13 Pin
Freelander 2	<b>VPLFT0119L</b>	2012 (Oct) -	Visible Cutting	13 Pin
Range Rover Evoque	<b>VPLVT0166</b>	2011 -	No Visible Cutting	13 Pin
Range Rover Sport	<b>LR070497</b>	2013 (Aug) -	No Cutting	13 Pin



# STEERING DAMPERS

TerraFirma steering dampers improve driver comfort and reduce fatigue.

A steering damper is a shock absorber for your steering; all live axle Land Rovers are fitted with a steering damper to control vibrations and feedback caused by large diameter tyres. The larger the tyres the more work the steering damper has to do.



## FEATURES INCLUDE:

35mm internal bore and piston

54mm big bore twin tube design

16mm double chromed shaft

50/50 damping

## STEERING DAMPER

TF832



TerraFirma Steering Dampers are considerably larger with almost twice the fluid capacity than the original Land Rover units and significantly reduce shimmy on rough

surfaces as well as the likelihood of the steering wheel being jerked out your hands off road. TerraFirma steering dampers also smooth out the steering action from lock to lock without restricting steering return.

All TerraFirma steering dampers have multi stage damping and use the latest cellular foam technology for superior performance.

Painted in the traditional TerraFirma silver metallic finish with a blue dust shield.



TF832



## FEATURES INCLUDE:

35mm internal bore and piston

54mm big bore twin tube design

18mm double chromed shaft

Multi stage damping adjustment

## 4 STAGE ADJUSTABLE STEERING DAMPER

TF833



Handling characteristics are a personal choice; the amount of feedback you can feel or the speed of steering lock to lock is no longer a compromise. The TerraFirma Adjustable steering damper provides

multiple options of damping force allowing the driver to select the setting that feels best. Terrain conditions, larger or smaller tyres, different tread types and pressures, driving styles and vehicle load will all have an effect on how the vehicle handles and reacts. An easy to rotate 4 position adjuster knob is built into the shock to alter the internal valving.

Painted in the traditional TerraFirma silver metallic finish with a distinctive red dust shield.





## RETURN TO CENTRE (RTC) STEERING DAMPER



### FEATURES INCLUDE:

30mm internal bore

Mono tube design

12.5mm double chromed shaft

50/50 damping

Coil-over design



Want to make a steering damper more effective without hampering the smooth lock to lock movement? How about increasing the damping ratio and adding a coil-over spring? This amazing steering damper is a revelation, quite simply the TerraFirma RTC steering damper out performs all conventional steering dampers hands down!

The fact is when very large tyres are fitted or when you run consistently low tyre pressures even the best steering dampers fail to cope, feedback through the steering wheel increases and returning the steering wheel to centre becomes hard work. Not to mention the effort required to make quick direction changes.



Fit a TerraFirma RTC steering damper and feel the difference instantly, the coil-over spring compresses and stretches from lock to lock dramatically reducing the return to centre effort, the spring also works in harmony with the damper eliminating shimmy and vibration.

Finished in silver metallic with stylish TerraFirma RTC logo and bright blue coil-over spring this steering damper looks as good as it works.

For vehicles fitted with more standard size tyres drivers will experience the benefit of quick and effortless steering.



TF527



TF835

APPLICATION	90/110/130	D1/RRC	D2	P38
Steering damper	<b>TF832</b>	<b>TF811</b>	<b>TF802</b>	<b>TF834</b>
4 Stage Adjustable steering damper	<b>TF833</b>	<b>TF833</b>	<b>TF837</b>	
Return to Centre steering damper	<b>TF835</b>	<b>TF835</b>		
Fitting kit for TF833 and TF835		<b>TF527</b>		

# STEERING RODS

Even slightly bent steering rods can cause excessive tyre wear and poor handling.

Ground clearance is an important factor for successful off road driving. The lowest points of the vehicle will inevitably make contact with the ground at some stage while driving in ruts or negotiating rocks and tree stumps.



The steering rods on live axle Land Rovers are particularly vulnerable and can easily get bent seriously affecting front wheel alignment and steering ability.

When Land Rovers are fitted with very large tyres the forces acting on the steering gear are far greater especially when attacking obstacles off road, hard impacts on the wheels can also bend or kink the steering rods causing serious steering problems.

The problem is not just for recreational and competitive off roaders, for example contractors and farmers driving in ruts can easily bend the track rod effecting the safe steering of the Land Rover.

Terrafirma Steering Rods are made from solid 30mm diameter steel and are supplied with precisely machined left and right hand threads, locking nuts and quality greaseable track rod ends. For Discovery's a steering damper bracket is also included.



TF251



VEHICLE	PART NO
90/110/130	<b>TF250</b>
D1 early type with 3 track rod ends	<b>TF251</b>
D1 late type with 4 track rod ends	<b>TF252</b>
D2 with 4 track rod ends	<b>TF255</b>
LH thread lock nut	<b>TFSRNUTLH</b>
RH thread lock nut	<b>TFSRNUTRH</b>
Replacement Ball Joint (RH thread)	<b>RTC5869</b>
Replacement Ball Joint (LH thread)	<b>RTC5870</b>

# STEERING WHEELS



DESCRIPTION	APPLICATION	PART NO
36 spline steering wheel boss	DEF/D1/RRC	<b>GSW002</b>
48 spline steering wheel boss	DEFENDER	<b>GSW003</b>
Mountney 14" 3 spoke steering wheel	DEF/D1/RRC	<b>GSW004</b>
Mountney 15" 3 spoke steering wheel	DEF/D1/RRC	<b>GSW005</b>



For further information, fitment advice, images, customer reviews or to find your nearest Terrafirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

# SHOCK ABSORBERS

Critical in maintaining or improving your Land Rover's suspension.

TerraFirma offers a wide range of shock absorbers for Land Rovers including the All-Terrain, Pro Sport, 4 Stage Adjustable, Big Bore Expedition, Commercial HD and 8 Stage Adjustable Remote Reservoir as well as the universal fit Mega Sport which require special TerraFirma or custom made mounting kits. The selection of the most suitable shocks for your application is simplified using the following descriptions and data.

It's worth remembering a shock absorber, even when charged with Nitrogen gas does not help support the vehicle. However TerraFirma shocks significantly improve stability and handling especially with the high spring rates required for heavily loaded vehicles.

The attributes required for a shock to perform well carrying heavy loads on corrugated roads or to withstand continual high impacts and still allow extreme articulation will all contribute to safer and better road manners.

Correct selection of replacement shock absorbers is critical in maintaining or improving your Land Rover's suspension. Shocks provide stability when cornering and braking, they maintain safe handling characteristics when driven hard, while towing and when heavily loaded. They also eliminate bounce and vibration improving driver and passenger comfort. Extended travel shocks allow for greater axle movement making sure the tyres stay in contact with the ground for maximum traction and control.

From heavy load carrying and towing to extreme rock crawling, from fast trail and

winding roads to long distance endurance rallies, TerraFirma has a shock to suit all applications ranging from standard length to as much as 5" (125mm) longer.

TerraFirma shock absorbers are designed to increase the performance of your Land Rover in all conditions by improving damping ratios, dimensions and specifications as well as shock travel. TerraFirma shocks are guaranteed to be stronger and better performing, keeping wheels on the ground even in extreme terrain.

TerraFirma shocks are proven in extremes, with temperatures from -30 in Russia to +40 in Africa, from occasional off road to punishing hard core competitions, fast tar roads to suspension battering dirt roads and from un-laden to over laden. TerraFirma has the shock for any use in any conditions.





# ALL TERRAIN SHOCKS

A great all rounder, the Terrafirma All Terrain shock is a favourite in any conditions and any environment. From the construction site to the motorway, running light or fully loaded, simply replacing tired old shocks or heading off road, you can't go wrong.

## ✓ FEATURES INCLUDE:

35mm diameter sintered and Teflon coated piston

16mm diameter induction hardened, hard chromed steel shaft

54mm diameter twin tube body for increased oil capacity

Low pressure Nitrogen eliminates cavitation and fade

Dual oil and dust shaft seals

Fully welded pins and eyes

High quality paint with new extensive 240 hr salt spray testing

Unique silver and black colour combination with rigid plastic dust shield

OEM style bushes and mountings for ease of servicing



The All Terrain shock offers great value without compromising performance and reliability.



The All Terrain shocks are a tough twin tube design which allows for a large volume of oil for cooler internals and improved protection of working parts. Low pressure nitrogen keeps the oil under pressure which prevents it from foaming and creating cavitation which eventually results in heat build-up and shock fade.

Terrafirma All Terrain shocks are built with the largest possible fully welded mounting pins and rubber bushes for maximum strength and durability. Tough enough to handle the punishment of recreational off-roading yet refined to provide a comfortable, well balanced and controlled ride on road.

Finished with a high quality deep silver paint to resist corrosion and including the smart Terrafirma All Terrain shock absorber logo,

a black rigid plastic dust shield with embossed Terrafirma logo protects the hard chromed steel shaft.

Terrafirma All Terrain shocks are produced slightly longer and are the perfect replacement for existing shocks and in many cases can also accommodate up to 2" (50mm) of lift using Terrafirma coil springs.



APPLICATION	90/110/130D1/RRC	D2	P38
Front	<b>TF116</b>	<b>TF118</b>	<b>TF125</b>
Rear	<b>TF117</b>	<b>TF119</b>	<b>TF126</b>



## PRO SPORT SHOCKS

The most popular shock for serious off-roading, the TerraFirma Pro Sport goes to the next level by optimising all the key features of 4x4 shock design, maximising performance, handling, strength and reliability yet still remaining great value for money, Pro Sport shocks are regarded by many as the benchmark 4x4 shock.



### FEATURES INCLUDE:

40mm diameter sintered and Teflon coated piston

20mm diameter induction hardened, hard chromed steel shaft

57mm diameter twin tube body for increased oil capacity

Low pressure Nitrogen eliminates cavitation and fade

Dual oil and dust shaft seals

Fully welded pins and eyes

High quality paint with new extensive 240 hr salt spray testing

Unique silver and blue colour combination with rigid plastic dust shield

OEM style bushes and mountings for ease of servicing



The advantages when driving off road are remarkable as these shocks are built with hard core use in mind. Fitted with velocity sensitive valving means the shock will automatically adjust its internal damping to suit driving conditions, the harder you punish them the better they work. When it comes to the drive home you'll really notice the superior ride quality and handling.

Available in standard travel and +2" (50mm) the Pro Sport shocks are a super tough twin tube design with a massive 20mm shaft and 40mm piston. Low pressure nitrogen keeps the oil under pressure which prevents it from cavitating which causes shock fade, something the Pro Sport is never troubled with. Common with all TerraFirma shocks, Pro Sports are built with the largest possible fully welded mounting pins and rubber bushes for maximum strength and durability.

Visually these shocks are striking and stylish, finished with a high quality deep silver paint to resist corrosion and including the smart TerraFirma Pro Sport shock absorber logo, a bright blue rigid plastic dust shield with embossed TerraFirma logo protects the double chromed shaft from stone damage.

TerraFirma Pro Sport shocks are a big step up in performance and quality and are perfect when combined with TerraFirma coil springs to give a 2" (50mm) lift with a corresponding increase in wheel travel.



APPLICATION	90/110/130D1/RRC	D2	P38
Front	<b>TF131</b>		
Rear	<b>TF132</b>		
Front +2"	<b>TF120</b>	<b>TF146</b>	<b>TF144</b>
Rear +2"	<b>TF121</b>	<b>TF147</b>	<b>TF145</b>



### ✓ FEATURES INCLUDE:

Standard length and 2" (50mm) longer than standard

76mm body, twin tube design

50mm internal bore and piston

20mm double chromed shaft

High temperature oil filled

2.5mm outer shock tube wall thickness

14mm mounting pins

## BIG BORE EXPEDITION SHOCKS

**2** Heavy trucks need heavy suspension, TerraFirma has developed the Big Bore Expedition shock specifically for fully laden Land Rovers such as overland and utility vehicles. The Big Bore Expedition shocks are designed to handle the battering experienced when travelling over rough terrain while providing stability and control with top heavy vehicles at both low and high speed.

The Big Bore Expedition shock is built for strength and reliability; it is true what they say that 'size does matter!' Everything about The Big Bore Expedition shock is massive with its 76mm diameter body, 50mm piston and of course TerraFirma's super strong 20mm double chromed shaft. The fully welded mounting points and the natural rubber bushes are the largest possible to fit Land Rover's original mounting points. To ensure the largest diameter shock body could be used the front shock absorber is built without a dust shield and they are available in standard travel and +2"(50mm) to suit the widest range of applications for this shock.

The massive 76mm shock body provides ample capacity for the high performance oil necessary to keep the internal workings cool while maintaining high damping performance even when combined with the high spring rates required to carry very heavy loads.

Coincidentally fitting the Big Bore Expedition shocks to a light or un-laden Land Rover gives a firm, sporty handling characteristic often sought after by the more performance orientated driver.

APPLICATION	90/110/130D1/RRC
Front	<b>TF129</b>
Rear	<b>TF130</b>
Front +2"	<b>TF123</b>
Rear + 2"	<b>TF124</b>



### ✓ FEATURES INCLUDE:

Military grey paint scheme

46mm internal bore and piston

20mm double chromed shaft

Velocity sensitive valving

Nitrogen charged

High temperature fluid

1.5mm outer shock tube wall thickness

14mm mounting pins

## COMMERCIAL HD SHOCK ABSORBER

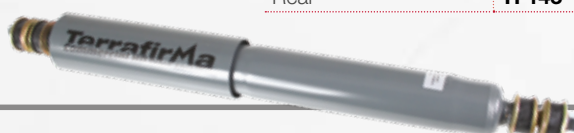
**2** The TerraFirma Pro Sport is a true performer and the Big Bore expedition shock is unquestionably tough so combining the best specifications of both should make the "perfect" shock. Well this is true, so how to improve on what are already awesome shocks and who could possibly want more from a shock absorber? The Military of course! Everything about the Commercial HD (Heavy Duty) is tough, thicker steel, bigger piston, stronger internals and more oil & Nitrogen capacity all combined to make this the toughest shock in the range.

Incorporating the ride and handling characteristics of the Pro Sport with the brute strength of the Big Bore Expedition shock result in a standard travel shock perfectly fit for military service. Painted in a deep coat of grey with stealthy black TerraFirma logo this shock goes against the striking colour trend of the rest of the range to best suit its heavy duty military and commercial applications.

The Commercial HD shock is a super tough thick wall steel, twin tube design with our massive 20mm shaft and new 46mm piston. Low pressure nitrogen keeps the oil under pressure which prevents it from cavitation which causes shock fade, something the Commercial HD shock is never troubled with.

It goes without saying and as with all TerraFirma shocks, the largest possible fully welded mounting pins and rubber bushes are used for maximum strength and durability.

APPLICATION	90/110/130D1/RRC
Front	<b>TF142</b>
Rear	<b>TF143</b>





4 ride styles from super soft for tricky off road to extra firm for those sweeping bends.

## 4 STAGE ADJUSTABLE SHOCKS



### FEATURES INCLUDE:

4 stages of adjustment

35mm diameter sintered and Teflon coated piston

18mm diameter induction hardened, hard chromed steel shaft

57mm diameter twin tube body for increased oil capacity

Low pressure Nitrogen eliminates cavitation and fade

Dual oil and dust shaft seals

Fully welded pins and eyes

High quality paint with new extensive 240 hr salt spray testing

Unique silver and red colour combination with rigid plastic dust shield

OEM style bushes and mountings for ease of servicing



Sharing all the features of the Pro Sport shock the 4 Stage adjustable includes 4 stages of damping adjustment; Comfort, Standard, Firm and Sport giving the driver the opportunity to match the damping performance with the coil spring rate, gross vehicle weight and desired handling characteristics to optimise performance and handling with the already acknowledged strength and reliability of the Pro Sport.

The advantages when driving off road are remarkable as these shocks are built with hard core use in mind. Simply turn the easy to rotate knob on the body of the shock to adjust the shock to you preferred setting, Standard offers the same damping ratio as the Pro Sport, Comfort offers a softer ride and Firm and Sport really stiffen things up.

Available from standard travel up to +5" (75mm) the 4 Stage shocks are a super tough twin tube design with a large 18mm shaft and 35mm piston. Low pressure nitrogen keeps the oil under pressure which prevents it from cavitation which causes shock fade, something the 4 Stage is never troubled with.

In keeping with all TerraFirma shocks these shocks are striking and stylish, finished with a high quality deep silver paint to resist corrosion and including the smart TerraFirma 4 Stage Adjustable shock absorber logo, a bright red rigid plastic dust shield with embossed TerraFirma logo protects the double chromed shaft from stone damage.

TerraFirma 4 Stage adjustable shocks are perfect when combined with TerraFirma coil springs to give a 2" (50mm) lift with a corresponding increase in wheel travel.

The TerraFirma 4 Stage adjustable +5" shock for Defenders, Discovery 1 and Range Rover Classics is made with pin mountings top and bottom which directly replaces the original front shock. The traditional rear top eye mount on the All Terrain and Pro Sport shocks however will not accommodate the extreme articulation achieved with the Extreme shocks. To enable a rear pin top mount shock to be fitted requires a special mounting kit TF519. The kit comprises a pair of brackets and all necessary nuts and bolts.



APPLICATION	90/110/130D1/RRC	D2	P38
Front	TF172		
Rear	TF173		
Front +2"	TF174		TF176
Rear +2"	TF175		TF177
Front +3"		TF178	
Rear +3"		TF179	
Front and rear +5" (pin pin mount) **	TF169		

\*\*Requires TF519 mounts to enable fitment on the Rear. Also recommended is TF522 +2" Turret on the Front.

# TYPICAL SHOCK SPECIFICATIONS

## SHAFT

With shaft sizes of 16 and 20mm diameter, Terrafirma shocks are designed for maximum strength and durability in both standard and long travel applications way beyond OE standards. The shaft material is induction hardened ground alloy steel bar, which has a deep hard outer skin and a tough resilient core which reduces bending in even the toughest conditions. The shaft is also hard chromed to provide a smooth, wear resistant outer coating to reduce friction and seal wear for maximum operating life.

## SHAFT GUIDE & SEALS

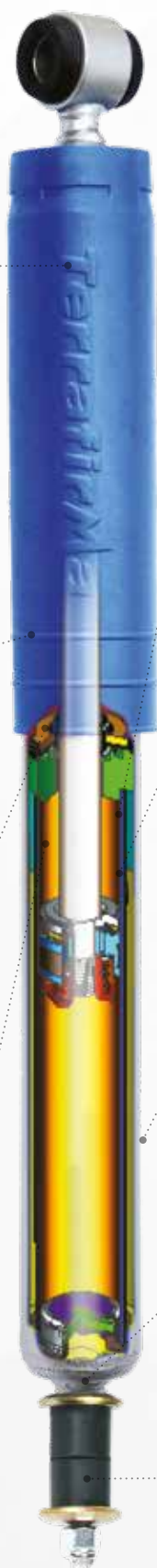
The end of the shock houses the shaft guide which used a Teflon coated bronze bush for reduced friction between the shaft and the guide. The Teflon bush has excellent endurance properties for minimizing friction temperatures and preventing the contact surfaces from scratching when shock is working at high speeds. High quality hydraulic seals are used to provide maintenance free long life. The outer seal is a triple lip check valve seal which helps protect against the build up of dirt on the shaft. The main seal provides a high pressure boundary for the oil, allowing the valving to control all the shock forces.

## INNER SHOCK TUBE

The shock bore tube is made from cold drawn high tensile tubing, to provide a smooth precise main section for the shock absorber.

## SHOCK PISTON & TEFLON WEAR BAND

The hardened main piston is combined with a wide Teflon wear band to reduce the friction between the piston and main shock tube. This reduction in friction reduces heat build up in high frequency operation like corrugated roads and rough off-road conditions. Another main purpose of the wide wear band is to eliminate contact between the piston and the main shock tube under side loading during full shock extension. Many OE and aftermarket shocks do not have a wear band on the main piston and rely solely on the lubrication of a soft piston and metal to metal contact. Terrafirma shock pistons are up to 46mm diameter providing maximum performance and shock life.



## MULTI STAGE VALVING

Large, high flow, multi stage valving, controls the rebound and compression forces which automatically tune and compensate for differing conditions. High quality valving components are endurance tested for more than 3,000,000 cycles to ensure long and durable shock life.

## SHOCK ABSORBER HYDRAULIC OIL

Large, high flow, multi stage valving, controls the rebound and compression forces which automatically tune and compensate for differing conditions. High quality valving components are endurance tested for more than 3,000,000 cycles to ensure long and durable shock life.

## SHOCK OUTER BODY

Large diameter outer tubes allow for increased oil volume and heat dissipation, keeping the shock operating cooler for longer and increasing life. The outer tube also helps increase overall strength and provides a durable outer skin, protecting the main internal shock components.

## SHOCK MOUNTINGS

All mountings are 360 degree fully welded for maximum strength and performance.

## RUBBER BUSHES

Mounting bushes are made from high quality rubber providing durability, long life, increased flexibility and impact strength.

# 8 STAGE ADJUSTABLE REMOTE RESERVOIR SHOCKS

8 stage adjustable Remote Reservoir shocks from TerraFirma incorporate all the virtues of the original Remote Reservoir such as its massive 20mm double chromed shaft, Viton oil seal, swivel hose fittings and silicone dust shield.



## FEATURES INCLUDE:

52mm diameter polished zinc plated shock and reservoir body

20mm diameter double chromed shaft

46mm diameter piston

Front 605mm open and 360mm closed length (+2")

Rear 613mm open and 383mm closed length (+2")

Fully welded pin and eye mountings

High pressure nitrogen charged

Multi stage valving

Hi temperature fluid

Land Rover OE style bushes for easy servicing

Blue and gold anodised alloy fittings complete the good looks



Originally only seen on mega budget custom-built off road racers, adjustable remote reservoir shocks carried a price tag out of reach to all but factory supported teams. TerraFirma 8 Stage Adjustable Remote Reservoir shocks offer a new level of performance for recreational and hard core off roaders alike. TerraFirma 8 Stage Adjustable Remote Reservoir shocks fit directly onto original Land Rover mountings for easy installation and can be adjusted to suit different terrain and activities.

Why remote reservoir? The harder and faster you drive off road the more heat is generated in your shocks, the temperature increase and the speed at which the shocks are trying to operate causes aeration (foaming) in the oil which leads to the deterioration in the performance of shock absorbers known as fade.

TerraFirma 8 Stage Adjustable Remote Reservoir shocks have increased oil and nitrogen capacity separated by a floating piston within the remote canister. This prevents the gas mixing with the oil at high temperatures significantly improving performance compared to conventional shocks, massively reducing fade and loss of performance.

The new larger capacity remote canister now has an 8 stage damping adjuster to allow the driver to adjust the damping characteristics of the shocks according to driving style and vehicle load, The nitrogen pressure is now fixed to suit the high performance of the shocks (no complicated nitrogen valve).

Visually these shocks are seriously impressive, mounted to the vehicle effectively upside down, and designed specifically to allow reliable routing of the hose and reservoir. As always with TerraFirma the largest possible fully welded pins and eyes are used with natural rubber bushes. Finished with high quality deep silver paint to resist corrosion and including the smart TerraFirma 8 Stage Adjustable Remote Reservoir shock absorber logo, a bright blue flexible polyurethane gaiter protects the double chromed shaft from stone damage.

Built using race bred valving and similar specifications to the Pro Sport and Extreme shocks including TerraFirma's massive 20mm double chromed shaft, 46mm piston and 52mm large capacity shock body.

*This is a super high performance shock designed to fit directly to Land Rover Defender, Discovery 1 and Range Rover Classic suspension mounts.*



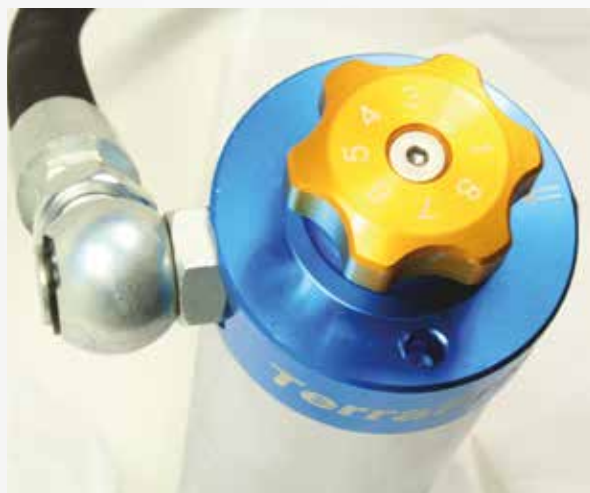
A new level of performance for recreational and hard core off-roaders alike.



Available 2" (50mm) longer than standard as well as the new super long travel +5" (125mm) option for extreme off road use.

As with the TerraFirma 4 Stage Adjustable Shock the +5" (125mm) longer 8 Stage Adjustable Remote Reservoir shock is constructed with pin mountings top and bottom which directly replaces the original front shock. The traditional rear top eye mount on conventional shocks will not accommodate the extreme articulation achieved with the +5" (125mm) longer shocks. To enable a rear pin top mount shock to be fitted requires a special mounting kit TF519. The kit comprises a pair of brackets and all necessary nuts and bolts.

The TerraFirma Remote Reservoir shocks are ideal for vehicles who's owners drive on 'full attack' mode at all times. Adjustable for rock crawling, cross country and fast road simply by adjusting the 8 stage damping adjuster.



APPLICATION	90/110/130D1/RRC
Front +2"	TF481
Rear +2"	TF482
**Front and rear +5" (pin pin mount)	TF483

\*\*Requires TF519 mounts to enable fitment on the rear.

Also recommended is TF522 +2" Turrets on the front to prevent the need for modification of front suspension turrets.

# 4" HYDRAULIC BUMP STOPS

Precision engineered from 2" (52mm) diameter aluminium with a super tough hard chrome 32mm diameter piston rod. Classic TerraFirma blue and silver styling is retained with machined anodised fittings and a nylon contact pad keeps noise during operation to a minimum.



The perfect solution to control suspension bottoming out in extreme conditions.



## FEATURES INCLUDE:

4" (100mm) travel

Zinc plated for bright long lasting finish with striking blue anodised fittings

High pressure Nitrogen charged

High temperature 5W premium quality shock fluid

Adjustable between 100 and 400psi, factory set at 150psi for immediate fitment



Mounting TerraFirma hydraulic bumps stops to Land Rovers is made possible with specific TerraFirma mounting kits. They can be mounted with any shock absorber option and are adjustable to limit compression movement as required.

Take a look at the suspension hardware section for full details. Weld on mounting tubes are also available

for custom vehicle builders who wish to incorporate TerraFirma hydraulic bumps stops into their chassis design.

The bump stops are adjustable between 150 and 400psi and come factory set at 150psi. The length of travel and specification of the TerraFirma bump stops is ideally suited to Land Rover type 4x4 and weight applications.

APPLICATION	90/D1/RRC	110/130
4" travel Hydraulic Bumpstop	<b>TF140</b>	<b>TF140</b>
Universal weld on mounting can long	<b>TF139</b>	<b>TF139</b>
Universal weld on mounting can short	<b>TF139A</b>	<b>TF139A</b>
Hydraulic bump stop spacer	<b>TF139B</b>	<b>TF139B</b>
Hydraulic bump stop nylon pad	<b>TF140PAD</b>	<b>TF140PAD</b>
Hydraulic bump stop valve	<b>TF140VALVE</b>	<b>TF140VALVE</b>
Seal Kit	<b>TF140SEALS</b>	<b>TF140SEALS</b>
Front fitting kit	<b>TF542</b>	<b>TF542</b>
Rear fitting kit	<b>TF543</b>	<b>TF544</b>





# MEGA SPORT SHOCKS

The ultimate 4x4 shock absorber, previously only associated with custom built off road competition vehicles.

A new level of performance for recreational and hard core off-roaders alike.



## FEATURES INCLUDE:

11" travel

Suitable for front and rear application

Zinc plated for bright long lasting finish with striking blue anodised machined alloy fittings

5/8 (16mm) diameter 1.5" (38mm) wide spherical bearing mounting eyes

Multi stage valving

High pressure Nitrogen charged

High temperature fluid

Adjustable between 100 and 200psi, factory set at 150psi for immediate fitment

Factory set oil quantity: 11" travel 790ml

3mm wall thickness



The Terrafirma Mega Sport shock combines the finest quality machining, specialist components and design features and is built to stand up to the punishment encountered in the harshest off road conditions.

Multi stage damping provides outstanding control and the high volume of oil contained within the huge remote reservoir dissipates heat ensuring consistent performance for long periods regardless of the terrain.

Constructed from bright zinc plated 52mm diameter steel tube machined to extremely high tolerances with a 46mm piston in a monotube design with Terrafirma's customary super strong 20mm hard chromed shaft. Blue anodised machined alloy fittings complete the impressive looks.

Terrafirma Mega Sport shocks can be adjusted by varying the nitrogen pressure using a gassing kit such as TFGASKIT. The shocks are factory set at 150psi for immediate fitment and can be adjusted between 100

and 200psi to suit conditions and driving style. Higher nitrogen pressure will result in increased damping giving a firmer more controlled ride.

Terrafirma Mega Sport shocks can be fitted to Land Rovers using dedicated Terrafirma mounting systems and can be adjusted to suit different terrain and activities.

Although the Mega Sport shock is not vehicle specific and as such will suit custom vehicle builders, unique Terrafirma mounting systems have been produced to fit these amazing shocks to Land Rover Defenders, it is also possible to fit them to Discovery 1 and Range Rover Classics with some minor modifications needed to the inner wings and panel work.

The adjustable shock mounting kits are designed to allow the 11" shocks to be fitted to provide several options on wheel travel from standard to extreme!

These mounting kits are available as part of a comprehensive kit or separately, take a look in the suspension kit section and suspension hardware sections of this catalogue.

## APPLICATION

11" travel front and rear

Front fitting kit

Rear fitting kit

Seal Kit

Replacement ball joint

90/110/130D1/RRC

TF137

TF540

TF541

TF137SEALS

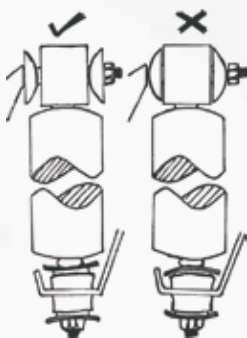
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TF137

## SHOCK DATA

TYPE	APPLICATION	OPEN	CLOSED	CONSTRUCTION	Shaft dia.	Piston dia.	Body dia.	Part No.
All Terrain	90/110/130/D1/RRC	585mm	345mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF116</b>
All Terrain	90/110/130/D1/RRC	585mm	360mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF117</b>
All Terrain	D2	590mm	365mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF118</b>
All Terrain	D2	595mm	370mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF119</b>
Pro Sport	90/110/130/D1/RRC	605mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF120</b>
Pro Sport	90/110/130/D1/RRC	613mm	383mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF121</b>
Big Bore Expedition	90/110/130/D1/RRC	610mm	370mm	Twin tube oil	20mm	50mm	76mm	<b>TF123</b>
Big Bore Expedition	90/110/130/D1/RRC	610mm	395mm	Twin tube oil	20mm	50mm	76mm	<b>TF124</b>
All Terrain	P38	535mm	330mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF125</b>
All Terrain	P38	485mm	305mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	<b>TF126</b>
Big Bore Expedition	90/110/130/D1/RRC	550mm	340mm	Twin tube oil	20mm	50mm	76mm	<b>TF129</b>
Big Bore Expedition	90/110/130/D1/RRC	560mm	370mm	Twin tube oil	20mm	50mm	76mm	<b>TF130</b>
Pro Sport	90/110/130/D1/RRC	555mm	340mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF131</b>
Pro Sport	90/110/130/D1/RRC	565mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF132</b>
Mega Sport	Universal	810mm	530mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	<b>TF137</b>
Air Shock	Universal	1100mm	690mm	Mono tube high pressure nitrogen/oil	40mm	60mm	66mm	<b>TF141</b>
Commercial HD	90/110/130/D1/RRC	555mm	335mm	Twin tube low pressure nitrogen/oil	20mm	46mm	60mm	<b>TF142</b>
Commercial HD	90/110/130/D1/RRC	565mm	350mm	Twin tube low pressure nitrogen/oil	20mm	46mm	60mm	<b>TF143</b>
Pro Sport	P38	585mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF144</b>
Pro Sport	P38	535mm	335mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	<b>TF145</b>
4 Stage Adjustable	90/110/130/D1/RRC	673mm	393mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF169</b>
4 Stage Adjustable	90/110/130/D1/RRC	555mm	340mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF172</b>
4 Stage Adjustable	90/110/130/D1/RRC	565mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF173</b>
4 Stage Adjustable	90/110/130/D1/RRC	605mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF174</b>
4 Stage Adjustable	90/110/130/D1/RRC	613mm	383mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF175</b>
4 Stage Adjustable	P38	585mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF176</b>
4 Stage Adjustable	P38	535mm	335mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF177</b>
4 Stage Adjustable	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF178</b>
4 Stage Adjustable	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	<b>TF179</b>
8 Stage Remote Reservoir	90/110/130/D1/RRC	605mm	368mm	Twin tube high pressure nitrogen/oil	20mm	46mm	52mm	<b>TF481</b>
8 Stage Remote Reservoir	90/110/130/D1/RRC	610mm	380mm	Twin tube high pressure nitrogen/oil	20mm	46mm	52mm	<b>TF482</b>
8 Stage Remote Reservoir	90/110/130/D1/RRC	675mm	400mm	Twin tube high pressure nitrogen/oil	20mm	46mm	52mm	<b>TF483</b>

SHOCK ABSORBER FITTING  
ADVICE AND INFORMATION

The correct selection of shock absorbers to suit your Land Rover is crucial to ensure the best performance is achieved. Just as important is to make sure they are fitted correctly.

Your Land Rover's suspension has to work hard and can be subject

to considerable strain and vibration. Terrafirma shocks allow increased wheel movement which can put stress on mounting points and suspension components. There are a few points to consider when fitting long travel shocks.

*N.B Gas shocks do not raise the suspension of your vehicle.*

Make sure there is no metal to metal contact throughout the full stroke of the shock when fitted to the vehicle.

Check that bush mounting washers are fitted as per the diagram. In particular the dished top washers found on Defenders, Discovery 1 and Range Rover Classic rear top shock brackets must be fitted with the curved face towards the bush.

For long travel (+2" and longer) shocks it is advised to remove the metal bush cups found on post 1994 Defenders and Discovery rear axles, this will allow unrestricted movement of the lower shock mount. Allowing the shock bush washers to contact the bush cup can cause premature shock failure and invalidate warranty.

When long travel shock absorbers are fitted make sure that the axle will contact the bump stop before the shock is fully compressed (bottomed out), failure to do this will damage the shock.

Also make sure that brake hoses are long enough to allow full shock absorber extension.

Make sure all fixings are checked for tightness within 100 miles of installation.

## HYDRAULIC BUMP STOP AND MEGA SPORT SHOCK ABSORBER INSTRUCTIONS

**Important notice: Only Nitrogen gas must be used with Terrafirma Shock Absorbers and bump stops.**



### FITTING INSTRUCTIONS

Fit Terrafirma Mega Sport shocks with the shaft at the bottom, shock body at the top, this is primarily so that the hose and reservoir is attached to the fixed end of the shock.

Hydraulic bump stops should be mounted vertically for best results again with the body at the top.

Make sure the remote canisters are mounted securely and will not foul during steering or suspension movement.

If the original front shock turrets are to be used to mount Terrafirma Remote Reservoir shocks a keyhole shaped cut out will be required to allow the hose to pass through. Alternatively use tubular turrets allowing the remote reservoir and hose to pass through the legs, it may be necessary to cut a section from the turret mounting plate to allow the hose to pass through. Do not separate the reservoir from the shock as oil and Nitrogen will be lost.

Terrafirma mounting kits are required for Mega Sport shocks and Hydraulic bump stops.

### GASSING INSTRUCTIONS

The correct gassing system is required to set up Terrafirma Hydraulic bump stops, Air shocks, Remote Reservoir and Mega Sport shocks.

The only gas to use in all shock absorbers and bump stops is Nitrogen. Under no circumstances must any other gas be used. Do not use compressed air.

When setting the Nitrogen pressure ensure that the shock is fully extended, if re-gassing is to be carried out while shocks are fitted ensure the vehicle is jacked up.

Prior to gassing make sure the valve on the reservoir/shock is tight and that there are no leaks.

The nitrogen pressure on Mega Sport shocks is factory set at 100-150psi for recreational use. The pressure can be adjusted between 60 and 200psi. High gas pressures will result in a firm ride; low pressures give a softer ride.

Hydraulic bumps stops are factory set at 150psi and can be adjusted between 100 and 400psi to suit ride characteristics and application.

Hold gas pressure for 30 seconds to ensure correct pressure is achieved.

Rapidly remove the filler valve from the reservoir or shock after gassing to ensure no gas is lost.

Gas pressure can vary between front and rear shocks and bump stops but should be the same side to side.

Ensure the reservoir valve cap is refitted to protect from dust and dirt.

For optimum performance check Nitrogen pressure every 10,000 miles.

APPLICATION	PART NUMBER
Terrafirma nitrogen gassing kit (requires bottle and regulator)	TFGASKIT

*Do not be tempted to check the pressure with a tyre gauge or any other method, the small volume of Nitrogen required to operate these shocks can be altered by using a gassing kit to check or adjust pressures.*



# COIL SPRINGS

The purpose of a vehicle's suspension is to support the weight of the vehicle and absorb impacts, maximising the tyre's contact with the ground while maintaining stability and control.



When using a Land Rover off road the limits of the standard suspension are quickly realised when the lack of wheel travel affects traction and ultimately the vehicle's ability to maintain forward motion.

The added benefits of long travel suspension are exponential. Taller suspension allows larger tyres to be fitted as well as allowing greater suspension movement. Raising the suspension will also increase approach, departure and ramp over angles allowing your Land Rover to overcome larger obstacles.

The majority of TerraFirma Coil Springs are designed to lift the vehicle by approximately 2" (50mm). This is the optimum increase in ride height before the mechanical limitations of the suspension design become an issue requiring further modifications. Safety has to be a consideration, raising the centre of gravity too high increases the risk of a roll over.

A vehicle lifted by 2" (50mm) using correctly matched TerraFirma Coil Springs and shocks will also improve on road handling, comfort and stability from the original set up.

To cover the widest range of applications TerraFirma provides a selection of Heavy Load standard ride height springs specifically for Land Rover Defenders and also to cater for the latest trend of fast road styling a range of standard rate lowered coil springs are also available. These combined with any of the standard travel TerraFirma shocks give a 'squat' appearance and remarkable road manners with suitable road biased tyres.

TerraFirma Coil Springs are produced by a hi-tech, ISO approved Australian manufacturer from the highest quality steel. The springs are made to a strictly controlled design, manufacturing and testing process to exact tolerances that guarantees consistent sag free performance.

High quality coil spring manufacturing requires stringent key procedures to be followed and every single TerraFirma spring (not batch) has been through these processes;

Coil springs offer fantastic amounts of off road travel while keeping smooth on road ride and handling.



## Precise heat treatment and hot forming



The precise heating of the correct length and diameter superior quality steel rods, followed by hot forming on computer controlled precision mandrels, to ensure consistency.

## Oil quenching

Quenching in oil controls the cooling process to ensure the correct hardness & strength.

## Furnace tempering

Heat treating eliminates hot spots and brittleness and improves elasticity which could otherwise cause failures in lesser quality springs.

## Shot peening

Shot peening with hardened steel shot stress relieves the surface of the steel wire making it more durable and less susceptible to fatigue. An added benefit is a textured surface that acts as the perfect key for the powder coating.

## Scragging

Compressing every spring to the coil bound state to ensure it returns to its specified free length to prevent sagging and height loss.

## Load and Rate testing

All TerraFirma coil springs are 100% load tested to ensure the spring conforms to the correct height with the specified load for that particular application.

## Powder coating and packaging

TerraFirma coil springs are powder coated in a durable and protective quality grey finish then packed in sturdy anti rattle branded boxes for distribution and display.

**2 year, 24,000 mile (40,000km) warranty against rust, sagging and breakage. (Conditions apply).**

## 90/110/130/D1/RRC LIGHT LOAD FRONT SPRINGS

### TF014

Light load front coil springs will give around 2" of lift on standard vehicles with less than 50kg of additional equipment fitted such as a heavy duty non winch bumper. TF014 springs should only be used when there are no plans to fit heavy equipment to the front of the vehicle in the future. Light load front springs are typically combined with light or medium load rear springs.

## 90/110/130/D1/RRC MEDIUM LOAD FRONT SPRINGS

### TF018



Medium load front coil springs will provide 2" of lift when fitted to vehicles with up to 100kg of additional equipment, such as a winch and bumper. TF018 is a hugely popular spring for all front medium load applications. More than

2" of lift may be achieved when less than 50kg of additional equipment is fitted. No additional equipment fitted will lead to a much greater lift possibly requiring attention to driveshaft angles and steering geometry.

## 90/110/130/D1/RRC HEAVY LOAD FRONT SPRINGS

### TF015

Heavy load front coil springs are designed to provide 2" of lift on vehicles with around 100kg of additional equipment such as a heavy-duty winch & bumper and other equipment. For example use TF015 springs on Defenders fitted with a Heavy duty winch, bumper and bull bar. More than 2" of lift will be achieved when less than 100kg of additional equipment is fitted. No additional equipment fitted will lead to a much greater lift possibly requiring attention to driveshaft angles and steering geometry.

## 90/D1/RRC LIGHT LOAD REAR SPRINGS

### TF015

Light load rear coil springs. This spring is also suitable for the rear of a standard Defender 90 with little or no additional equipment fitted, certainly no more than 100kg and will give approx 2" lift. It should only be used on the rear of Discovery 1 and Range Rover Classic where no additional equipment is fitted and where less than a 2" lift is acceptable. In most cases the TF018 is more suitable for a Discovery 1 and Range Rover Classic. This spring would most likely be combined with TF014.

## 90/D1/D2/RRC MEDIUM LOAD REAR SPRINGS

### TF023V

Medium load rear coil springs. This spring is suitable for the rear of a Defender 90, Discovery 1 and Range Rover Classic carrying up to 200kg of additional equipment and will provide around 2" of lift. This equates to a well equipped off road or expedition vehicle, and those used to carry a constant medium to heavy load in the rear. It can also be used on the rear of a Discovery 2 but will not carry the same load and may not achieve 2" of lift. This is also one of the most popular springs when combined with TF014 light load and TF018 medium load front springs.

## 90/D1/D2/RRC HEAVY LOAD REAR SPRINGS

### TF027V

Heavy load rear coil springs will provide 2" of lift on heavily laden vehicles for commercial and expedition use. The TF027 fits the rear of Discovery 1, Discovery 2, Range Rover Classic, and Defender 90s carrying a constant load or additional equipment weighing more than 300kg. The TF023V is usually suitable for most Defender 90s however the TF027V is particularly good for people who want more constant heavy load-carrying ability.

## 110/130 LIGHT LOAD REAR SPRINGS

### TF010

Light load rear coil springs are designed to provide 2" of lift on a standard 110 Defender with no additional equipment fitted, they will carry light to moderate loads but may not maintain a 2" lift. These springs could be fitted to a 130 and would carry more load than standard but only if no lift was required. They can be fitted in conjunction with TF014 to give a comfortable ride and a 2" lift to an unladen 110.

## 110/130 MEDIUM LOAD REAR SPRINGS

### TF019

Medium load rear coil springs. These springs are suitable for the rear of a Defender 110/130 with around 300kg of additional equipment fitted and will provide around 2" of lift. This equates to a moderately equipped off road or expedition vehicle, and vehicles used to carry a constant medium to heavy load in the rear. The most popular 110/130 rear springs when combined with TF018 medium load front springs. Avoid fitting these springs if you are not carrying the load as the lift may be too great and could cause over extension of the rear shocks.



For further information, fitment advice, images, customer reviews or to find your nearest TerraFirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

When fitted with the relevant coil springs, significantly increased load carrying can be achieved.

## 110/130 HEAVY LOAD REAR SPRINGS

### TF011

Heavy load rear coil springs will give 2" of lift on heavily laden 110s and 130s for commercial and expedition use. The TF011 is suitable for the rear of 110/130s carrying a constant load and additional equipment weighing more than 500kg. The TF019 is fine for most Defender 110/130 however the TF011 is particularly good for people who want more constant heavy load-carrying ability. Do not fit this spring if you are not carrying the load as the lift may be too great and could cause over extension of the rear shocks.

## D2/P38 MEDIUM LOAD FRONT SPRINGS

### TF042



Medium load front coil springs are designed to provide 2" of lift on a Discovery 2 with a light to medium load up to around 50kg of additional equipment fitted, such as a discrete winch mount and

winch. The TF042 only fits the front of Discovery 2.

## D2 HEAVY LOAD FRONT COIL SPRINGS

### TF052

Heavy load front coil springs will provide 2" of lift on a heavily loaded Discovery 2 for commercial and expedition use. The TF052 only fits the front of Discovery 2 and should only be used when carrying a constant load or additional equipment weighing up to 100kg. More than 2" of lift will be achieved when less than 100kg of additional equipment which may lead to too much lift possibly causing drive shaft vibration and steering geometry problems.

## P38 STANDARD RIDE HEIGHT AIR TO COIL FRONT CONVERSION SPRINGS

### TF030

Light load front springs, standard right height coil springs, specifically designed to replace the air spring (air suspension bag) on a P38 Range Rover and are included in the TF222 conversion kit. This spring has moderate load carrying capability and is intended to maintain the normal running height of the original air suspension.

## P38 STANDARD RIDE HEIGHT AIR TO COIL REAR CONVERSION SPRINGS

### TF031

Light load front springs, standard right height coil springs, specifically designed to replace the air spring (air suspension bag) on a P38 Range Rover and are included in the TF222 conversion kit. This spring has moderate load carrying capability and is intended to maintain the normal running height of the original air suspension.

## 90/110 LOWERED FRONT SPRINGS

### TF032

Standard rate lowered coil springs are designed to reduce the ride height of the front of a Defender by 1". These springs are not designed to carry additional load and closely match the original Land Rover spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

## 90 LOWERED REAR SPRINGS

### TF033

Standard rate lowered coil springs are designed to reduce the ride height of the rear a Defender 90 by 1". These springs are not designed to carry additional load and closely match the original Land Rover spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

## 110 LOWERED REAR SPRINGS

### TF034

Standard rate lowered coil springs are designed to reduce the ride height of the rear of a Defender 110 by 1" and TF035 will reduce the ride height by 2". TF035 springs are not designed to carry additional load, TF034 can carry additional load such as luggage and passenger and achieve the appearance and characteristics of TF035. Both closely match the original Land Rover spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

## 90/110/130 HEAVY LOAD STANDARD RIDE HEIGHT SPRINGS

### TF036 / TF037 / TF038

It is not possible to fit a heavier load spring and not to achieve some degree of lift however these heavy load springs will carry moderate additional load and maintain close to standard ride height. A harder ride will almost certainly be experienced as a result of the higher spring rate.



## CORRECT COIL SPRING SELECTION

It is important to understand that the Terrafirma Coil Springs that are intended to lift the vehicle provide approximately 2" (50mm) of lift while carrying light, medium or heavy loads.

Minimal mechanical changes are required when lifting by this amount, however the Terrafirma Suspension Hardware range of accessories does allow for greater lift and significantly increased wheel travel, further enhancing off road ability.




Selecting the most suitable springs for a Land Rover may be with some compromise. A heavy load spring needed when fully loaded may ride too high and too hard when unloaded.

Likewise a light load spring that is comfortable and flexible will not achieve the desired lift or carry the heavy loads associated with expedition vehicles.

Load carrying coil springs are often progressive or variable (V) this provides a combination of comfort and load carrying in one spring.

It is worth noting that Terrafirma coil springs are sold in pairs, in many cases one spring is 10mm longer than the other, the longer spring should always be fitted to the driver's side.

By considering the three Defender images and combining the Terrafirma Coil Spring application guide and specifications it should be possible to select suitable coil springs or a suspension kit for your vehicle. Use the detailed spring descriptions by part number to help accurately fine tune the spring requirements for your specific application.

LIGHT LOAD	MEDIUM LOAD	HEAVY LOAD
		
Vehicles with no additional equipment fitted	Vehicles fitted with some additional weight such as a roof rack and winch and bumper	Vehicles fitted with significant off road equipment such as a heavy winch and bumper, loaded roof rack, storage equipment and spare wheel carrier


APPLICATION	LIGHT LOAD	MEDIUM LOAD	HEAVY LOAD	LOWERED 1"	LOWERED 2"	STD HEIGHT HEAVY LOAD
<b>Defender 90</b>						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF015	TF023V	TF027V	TF033		TF037
<b>Defender 110/130</b>						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF010	TF019	TF011	TF034	TF035	TF038
<b>Discovery 1/RRC</b>						
Front	TF014	TF018	TF015			
Rear	TF015	TF023V	TF027V			
<b>Discovery 2</b>						
Front	N/A	TF042	TF052			
Rear	N/A	TF023V	TF027V			
<b>P38 Air to Coil conversion</b>						
Front	TF030	TF031				
Rear	TF031	TF018				

## 2" LIFT COIL SPRING SPECIFICATIONS

WIRE DIAMETER MM	SPRING ID MM +/- 1.5MM	LOADED HEIGHT KG	LOADED HEIGHT MM +/- 5MM	TESTED SPRING RATE	PART NO.
18	134	415	350	251 lb/in	TF010
21	135	415	385	447 lb/in	TF011
16	119	400	300	200 lb/in	TF014-DS
16	119	400	290	200 lb/in	TF014-PS
16	119	450	300	*240 lb/in	TF015-DS
16	119	450	290	*240 lb/in	TF015-PS
16	119	400	315	240 lb/in	TF018-DS
16	119	400	305	240 lb/in	TF018-PS
19	135	415	360	315 lb/in	TF019
18	120	400	345	297-435 lb	TF023V-DS
18	120	400	335	297-435 lb	TF023V-PS
18	120	450	355	297-447 lb	TF027V-DS
18	120	450	345	297-447 lb	TF027V-PS
16	120	400	295	220 lb/in	TF036-DS
16	120	400	275	220 lb/in	TF036-PS
16.6	120	400	290	225-308 lb/in	TF037V-DS
16.6	120	400	280	225-308 lb/in	TF037V-PS
19	135	415	330	319 lb/in	TF038-DS
19	135	415	320	319 lb/in	TF038-PS

# AIR TO COIL CONVERSION KITS

The EAS or Electronic Air Suspension systems fitted to P38 Range Rovers, Discovery 2s and 3s can be expensive to repair and not especially reliable when heavily laden.

 Eliminating costly electronic component, air spring and compressor replacements coil spring conversions offer a reliable and economical repair or upgrade. When fitted with the relevant coil springs significantly increased load carrying can be achieved.

All P38 Range Rovers manufactured between 1995 and 2002 were fitted with air suspension, at the time this system was regarded as state of the art and offered high levels of comfort and the ability to self-level when loaded or when towing. The P38 has generally stood the test of time and as with all Land Rovers has a loyal band of supporters keeping them roadworthy and in good shape. The cost of repairing sophisticated systems can sometimes become not viable but with the TerraFirma Air to Coil conversion kit all the potential expense is dealt with in one go. The coil springs have been developed to match the standard ride height and load carrying characteristics of the air suspension in standard mode, also available is an HD package giving a 1" lift and a greater capacity for increased load.

The kit includes fitting instructions, everything necessary to isolate the electronics, eliminate



TF222

unwanted dash lights and all the hardware required to convert from air springs to coil springs.

It is recommended that new TerraFirma shocks are also fitted for best results so for your convenience additional part numbers have been produced that include shock absorbers.

The Discovery 2 only has air suspension fitted to the rear, primarily to provide self-levelling for carrying additional load and for towing. Its limitations are easily reached when heavily loaded hitting bumps and pot holes. Air bags can burst leaving the vehicle sitting on its bump stops miles from home. It is standard practice to remove the air suspension and fit heavy load coil springs when preparing Discovery 2s for expedition purposes.

The TerraFirma Discovery 2 Air to Coil conversion kits are simpler than the P38 and several load carrying options are available to suit different applications.

APPLICATION	PART NUMBER
<b>Range Rover P38</b>	
Air to coil conversion kit standard ride height	TF222
Air to coil conversion kit medium load 1" lift	TF222HD
Air to coil conversion kit standard ride height including standard travel All Terrain shocks	TF223
Air to coil conversion kit medium load 1" lift including standard travel All Terrain shocks	TF223HD
<b>Discovery 2</b>	
Air to coil conversion kit standard ride height (with rear springs)	TF225
Air to coil conversion kit 2" lift includes front springs	TF226
Air to coil conversion kit 2" lift inc front & rear medium load springs & standard travel All Terrain shocks	TF227
Air to coil conversion kit 2" lift inc front & rear heavy load springs & standard travel All Terrain shocks	TF228
Air to coil conversion kit 2" lift inc front & rear medium load springs & +2" travel Pro-Sport shocks	TF229
Air to coil conversion kit 2" lift inc front & rear heavy load springs & +2" travel Pro-Sport shocks	TF230
Air to coil conversion kit 2" lift inc front & rear medium load springs & +3" 4 Stage Adjustable shocks	TF259
Air to coil conversion kit 2" lift inc front & rear heavy load springs & +3" 4 Stage Adjustable shocks	TF260
<b>Discovery 3 2004-2009/Range Rover Sport 2005-2010</b>	
Air to coil conversion kit standard ride height (Dunlop)	TF261







TF211



TF201

## SUSPENSION KITS

  Terraforma products can be bought individually to enable total customisation of the suspension system allowing you to upgrade and tune the suspension ride height, load carrying and wheel travel to meet your exact requirements. However in some cases popular items can be combined to make an ideal upgrade package.

Popular combinations of Terraforma springs and shocks are available in standard and +2" travel kits which include 4 All Terrain or Pro Sport shock absorbers and 4 coil springs in light, medium and heavy load options. Additional equipment may be required to complete your suspension upgrade to the required specification.

It is important when selecting a spring and shock kit that it suits the weight of the vehicle and the load that is to be carried. If you require different load springs front and rear the individual components must be selected from their respective ranges.

Terraforma Suspension Kits have been created for convenience, ensuring correct parts are matched and making ordering easier. These kits are not intended as a fully engineered solution for your entire requirement but will take care of the major element of common parts needed. Depending on the final specification of the vehicle additional

products may be required such as extended bump stops and brake hoses to prepare your vehicle to a certain specification. The more comprehensive suspension kits do not include coil springs as it is envisaged that a greater degree of tuning will require specific springs to be selected from our range.

Terraforma offers a huge selection of shock absorbers, coil springs and suspension hardware which allows for an infinite range of combinations to enhance the performance of your Land Rover. This catalogue along with your Terraforma Distributor will advise you on the correct selection for your application.



TF213

APPLICATION	90/D1/RRC			110/130		
	LIGHT	MEDIUM	HEAVY	LIGHT	MEDIUM	HEAVY
<b>Terraforma Spring and Shock Kits (4 springs and 4 shocks)</b>						
All Terrain std travel shocks 2" lift	TF201	TF202	TF204	TF206	TF203	TF205
Pro Sport 2" longer travel shocks 2" lift	TF207	TF208	TF210	TF212	TF209	TF211
Pro Sport std travel shocks 2" lift	TF213	TF214			TF215	TF217
All Terrain std travel shocks, standard ride height heavy load		TF197			TF199	
Pro Sport std travel shocks, standard ride height heavy load		TF198				

APPLICATION	90/D1/RRC		110/130	
	FRONT	REAR	FRONT	REAR
<b>2" Pro Sport Mini Dislocation Kit</b>				
<b>Kit part number</b>	<b>TF231</b>		<b>TF232</b>	
2" longer Pro Sport shock absorbers x2	TF120	TF121	TF120	TF121
Dislocation cones	TF501	TF510	TF501	TF511
Front shock turret securing rings	TF502		TF502	
Coil spring retaining plates	TF505	TF506	TF505	TF507
<b>2" Pro Sport Maxi Dislocation Kit</b>				
<b>Kit part number</b>	<b>TF233</b>		<b>TF234</b>	
2" longer Pro Sport shock absorbers x2	TF120	TF121	TF120	TF121
Dislocation cones	TF501	TF510	TF501	TF511
Front shock turret securing rings	TF502		TF502	
Tubular shock turrets	TF504		TF504	
Coil spring retaining plates	TF505	TF506	TF505	TF507
Caster corrected front radius arms 3 degree	TF508		TF508	
Cranked rear radius arms		TF509		TF509
<b>5" Extreme 4-stage Adjustable Dislocation Kit</b>				
<b>Kit part number</b>	<b>TF235</b>		<b>TF236</b>	
5" longer 4 Stage Adjustable shock absorbers x4	TF169		TF169	
Dislocation cones	TF501		TF501	TF511
Front shock turret securing rings	TF502		TF502	
Skeleton 2" taller front shock turrets	TF522		TF522	
Coil spring retaining plates	TF505		TF505	TF507
Caster corrected front radius arms 3 degree	TF508		TF508	
Rose jointed rear radius arms		TF532		TF532
Rear axle mounted inverse relocation cones		TF521		
Bump stop spacers	TF515	TF515	TF515	TF515
Extreme long travel rear top shock mounts		TF519		TF519
<b>Mega Sport 11" travel shocks and mounting kit</b>				
<b>Kit part number</b>	<b>TF238</b>			
Mega Sport 11" travel shock x4	TF137			
Mega Sport shock mounting kit	TF540		TF541	
<b>Hydraulic Bump Stop and mounting kit</b>				
<b>Kit part number</b>	<b>TF241</b>		<b>TF242</b>	
Hydraulic bump stop x4	TF140		TF169	
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF544
<b>Mega Sport Competition Kit 11" travel</b>				
<b>Kit part number</b>	<b>TF247</b>		<b>TF248</b>	
Mega Sport 11" travel shock x4	TF137		TF137	
Mega Sport shock mounting kit	TF540	TF541	TF540	TF541
Hydraulic bump stop x4	TF140		TF140	
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF544
Dislocation cones	TF501		TF501	
Caster corrected front radius arms 3 degree	TF508		TF508	
Rose jointed rear radius arms		TF532		TF532

*Appropriate springs should be selected subject to application and load from page 67.*

*Extended brake hoses should be fitted with all 2" and longer travel suspension kits, select appropriate hose kit for your vehicle from page 9.*



TF235



TF247



TF231



## SUSPENSION HARDWARE

There is one thing that is paramount to safe and successful off road driving... Traction! Keeping the tyres in contact with the ground is essential to maintain forward motion.

While Land Rover can claim class leading off road suspension straight out of the box even keen amateur off roaders quickly reach the limits of wheel travel and lose momentum with wheels in the air fighting for grip.

TerraFirma Suspension Hardware is a range of chassis and suspension accessories designed to considerably improve your off road driving experience. Increasing wheel travel or axle articulation with stability and balance is the key moving forward in really rough terrain.

Momentum can carry you through in some instances but when the rocks get bigger and ruts get deeper you simply can't always go faster to keep going forward.

The logical first step to increasing wheel travel is fit longer springs and shock absorbers but there are implications that can affect safety, performance and reliability. Within the TerraFirma Suspension hardware range there are accessories specifically designed to tackle problems such

as tyre to body clearance, shocks topping and bottoming out, dislocating coil springs, steering geometry and driveline angles etc to ensure your Land Rover performs beyond expectation.

TerraFirma Suspension Hardware allows you to customise the performance of your Land Rover's suspension. Constant development, testing and customer feedback ensures every product is 'fit for purpose' allowing you to drive further in all conditions on all types of terrain, from recreational off road to hard core competitions.

All items are supplied in pairs or as a kit with nuts, bolts and washers as required and can be fitted by a workshop technician or competent DIY mechanic.

Bushes are not generally supplied to allow for personal preferences.

Care must be taken when customising your suspension to make sure the suspension works freely throughout full articulation, check that brake lines are long enough and that steering geometry and driveline angles are not adversely affected.



TF532



TF946



TF540

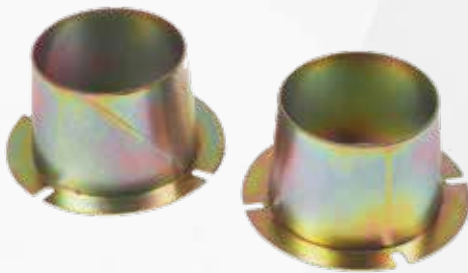
APPLICATION	90		110/130		D1/RRC		D2		
	FRONT	REAR	FRONT	REAR	FRONT	REAR	FRONT	COIL REAR	AIR REAR
Dislocation cones	TF501	TF510	TF501	TF511	TF501	TF510	TF501		
Front shock turret securing rings	TF502		TF502		TF502				
Tubular 2" lowered height front shock turrets	TF503		TF503		TF503				
Tubular standard height front shock turrets	TF504		TF504		TF504				
Skeleton shock turrets							TF534		
Skeleton 2" taller front shock turrets	TF522		TF522		TF522				
Coil spring retaining plates	TF505	TF506	TF505	TF507	TF505	TF506	TF524	TF506	
Caster corrected front radius arms 3 degree	TF508		TF508		TF508		TF529		
Caster corrected front radius arms 6 degree	TF528		TF528		TF528				
Steering damper relocation kit					TF527				
Cranked rear radius arms		TF509		TF509		TF509			
Rose jointed rear radius arms		TF532		TF532		TF532			
Rose joint		TF532RJ		TF532RJ		TF532RJ			
Rear axle mounted inverse relocation cones		TF521						TF521	
Lowered rear top shock mounts		TF512		TF512		TF512			
Twin shock mount kits	TF514	TF513	TF514	TF513	TF514	TF513			
Bump stop spacers	TF515	TF515	TF515	TF515	TF515	TF515			
Spring spacers 2"	TF516	TF517	TF516	TF517	TF516	TF517	TF525	TF517	TF526
Rear top shock mount re-locators		TF518		TF518		TF518			
Extreme long travel rear top shock mounts		TF519		TF519		TF519			
Fuel filter relocater when TF519 used. 1998 on			TFFRK						
Long travel rear coil spring re-locators		TF520					TF520		
Caster correction bushes (44mm)	GAL254		GAL254		GAL254				
Mega Sport shock mounting kit	TF540	TF541	TF540	TF541	TF540	TF541			
A Frame ball joint and bracket		TF1129		TF1129		TF1129			
A Frame ball joint and bracket hi articulation		TF1129 ULTRA		TF1129 ULTRA		TF1129 ULTRA			
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF544	TF542	TF543			
Hydraulic bump stop universal mounting tube long					TF139				
Hydraulic bump stop universal mounting tube short					TF139A				
Hydraulic bump stop spacer					TF139B				

## FRONT COIL SPRING DISLOCATION CONES

### TF501



When longer than standard front shocks are fitted the coil spring can move around becoming dislodged on full suspension drop out, sometimes failing to relocate correctly when the suspension compresses again. Fitting dislocation cones in conjunction with spring retaining plates will ensure the spring re-seats correctly every time. TF501 suits 90/110/130/D1 and RRC.



TF501

## FRONT SHOCK TURRET SECURING RINGS

### TF502



The original front shock turret securing rings are somewhat frail and the threaded studs are often not long enough to adequately secure heavy duty or tubular front shock turrets such as TF503 & TF504. Terrafirma front shock turret securing rings are much stronger and use longer high tensile studs to reliably attach replacement turrets including Terrafirma front twin shock turrets TF514




TF502



For additional information, fitment advice, images, customer reviews, or to find your nearest Terrafirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

## TUBULAR FRONT SHOCK TURRETS

TF503 / TF504


 Tubular front shock turrets are stylish, much stronger and less liable to rusting through than the original pressed steel cone type and they also allow you to show off your Terrafirma shocks! Available in standard height TF504 or lowered height -2" (-50mm) TF503 which allow more suspension drop out with standard length shocks. Lowering your shocks can reduce the amount of upward or compression movement and may require the fitment of bump stop spacers TF515 and/or extended bump stops.



TF503 / TF504

## EXTREME LONG TRAVEL SKELETON FRONT SHOCK TURRETS

TF522 +2"


 These strong and stylish fabricated front shock turrets are ideally suited to the TF169 Terrafirma 4 stage adjustable long travel shock absorbers and are necessary to prevent the +5" travel shock from bottoming out on full compression and making the most of these amazing adjustable shocks.



TF522

## SKELETON FRONT SHOCK TURRETS

TF534


 A great way to show off your Terrafirma shock absorbers, Terrafirma skeleton front shock turrets are stronger than original and not prone to rusting, specifically made for the Discovery 2.



TF534

## COIL SPRING RETAINING PLATES

TF505 / TF506 / TF507 / TF524


 Coil springs can part company and become dislodged from their mounts when long travel shocks are at full extension. Heavy duty spring retaining plates are used to hold the coil spring in place on the axle and when combined with dislocation cones TF501, TF510, TF511 and relocation cones TF520 ensure they relocate properly when the suspension compresses again.



TF505 / TF506 / TF507

## CASTER CORRECTED FRONT RADIUS ARMS

TF508 (3 degree) / TF528 (6 degree) / TF529 (3 degree)


 When coil sprung Land Rovers are lifted the caster angle is changed (see diagram). This can lead to vagueness and a lack of self-centering of the steering. Fitting 3 degree caster corrected radius arms re introduces positive caster angle to return the steering to the correct geometry on vehicles lifted 2-3" (50-75mm), for vehicles lifted more than 2-3" 6 degree caster corrected radius arms should be used. The TF508 and TF528 radius arms are designed to accept the 44mm wide bushes that have been fitted to 90/110/130/D1 and RRC from around 1992 and the TF529 radius arms are designed to fit Discovery 2.



TF508

## CRANKED REAR RADIUS ARMS

TF509


 When Land Rovers are lifted the rear radius arm to chassis bushes become strained, further suspension drop out can be restricted by the lack of movement in the bush. To relieve the strain and to improve suspension flex fit Cranked rear radius arms. Terrafirma rear radius arms are made from super tough 1 3/8" diameter x 3/16" wall thickness CDS tubing.



TF509

## CREEPER JOINT REAR RADIUS ARMS

TF532

 These heavy duty rod ends are ideal for today's flexible suspension systems. Super strong, Creeper Joints will take years of punishment. The outer shell is a single forged piece. The inner flex ball is made from 8620 tool steel and rides on high quality polyurethane bushings. Heavy-duty, hardened steel washers hold the joint together. Creeper Joints are super flexible and allow for up to 40 degrees of movement. A threaded grease fitting is provided on top for lubrication. The flex ball is drilled for cross lubrication flow from the shell to the link mount bolt. The TF529 rear radius arms are designed to allow massive unrestricted, stress free rear axle movement. Made from super strong 1 1/2" diameter x 5/16" wall thickness CDS tubing with a double crank to provide maximum clearance.




TF532

## REAR COIL SPRING DISLOCATION CONES

TF510 / TF511



What can happen when not using dislocation cones

 When longer than standard rear shocks are fitted the coil spring can part company with the chassis becoming dislodged on full suspension drop out, sometimes failing to relocate correctly when the suspension compresses again. Fitting dislocation cones in conjunction with coil spring retaining plates TF506 or TF507 will ensure the spring re-seats correctly every time.


TF510 / TF511



TerraFirma Suspension Hardware allows you to customise the performance of your Land Rover's suspension.

## REAR AXLE INVERSE RELOCATION CONES

TF521


 An alternative to the dislocation cones, these relocation cones are the now essential method of locating coil springs on extreme long travel suspension. It is possible with massive drop out rear suspension that even conventional cones fail to relocate coil springs, especially when working at speed. Restraining the coil at the top as opposed to the bottom allows for a shorter cone to be used providing reliable location regardless of shock travel.

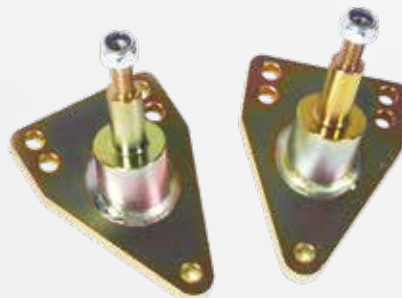


TF521

## LOWERED REAR TOP SHOCK MOUNTS

TF512

 It is possible to gain an additional 2" (50mm) of rear suspension drop out with replacement lowered rear top shock mounts. Attaching the shock lower on the chassis allows greater axle articulation. Lowering your shocks can reduce the amount of upward or compression movement and may require the fitment of bump stop spacers TF515 and/or extended bump stops GAL146R or GAL147R.




TF512



For additional information, fitment advice, images, customer reviews, or to find your nearest TerraFirma stockist, please visit [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

## REAR TWIN SHOCK MOUNT KIT

TF513


 Heavily laden expedition vehicles and fast off road vehicles benefit from fitting twin shocks as it reduces stress and heat build up within the shock absorbers allowing them to perform better for longer. The Terrafirma rear twin shock mount kit allows 2 shocks to run parallel using existing mounting points. Suitable for all Terrafirma shocks except Big Bore Expedition shocks and +5" longer shocks. Care must be taken to make sure the lower shock mounting bracket does not interfere with the inner edge of the rear wheels. TF301 wheel spacers may be required.



TF513

## FRONT TWIN SHOCK MOUNT KIT

TF514


 As with TF513 heavy expedition vehicles and fast off road vehicles will benefit from fitting twin shocks as it reduces stress and heat build up within the shock absorbers allowing them to perform better for longer. The Terrafirma front twin shock mount kit allows 4 shocks to be fitted to handle the punishment driving at speed over rough terrain. Suitable for all Terrafirma shocks except Big Bore Expedition shocks. Some trimming is required to fit this kit to Discovery 1 and Range Rover Classics.

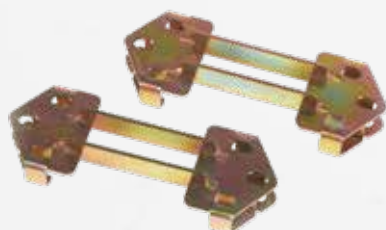


TF514

## BUMP STOP SPACERS

TF515


 Increasing the size of the original bump stops by 1" (25mm) will help prevent larger tyres from touching the bodywork on full suspension compression. They are commonly used in conjunction with lowered turrets and rear top shock mounts to help prevent damaging the shocks from bottoming out.



TF515

## SPRING SPACERS

TF516 and TF517


 Increase the body clearance to allow the fitment of really big tyres as well as provide an additional 2" (50mm) of lift to your suspension. These simple spacers bolt between the coil spring and the axle and can be the perfect way to lift the vehicle to the desired ride height when the load or equipment carried exceeds even the heaviest rated coil springs. It must be noted that bump stop spacers TF515 or extended bump stops may be required to prevent the coil spring from becoming coil bound (fully compressed) on full compression.



TF516 / TF517

## DISCOVERY 2 FRONT COIL SPRING AND REAR AIR SPRING SPACERS

TF525 / TF526


 For Discovery 2s with rear air suspension this simple lift kit will increase ground clearance and tyre to body clearance. If the rear air springs are to be retained to maintain the self-levelling facility these spacer kits are the perfect solution for achieving a 2" lift. The front kit compliments the rear perfectly and both kits come complete and ready to fit and require no resetting of the air suspension. For Discovery 2s with rear coil suspension combine TF525 with TF517 for the same effect.

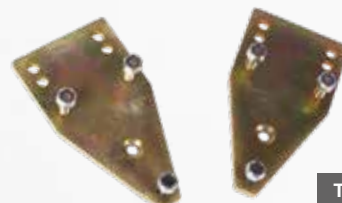


TF525 / TF526

## REAR TOP SHOCK MOUNT RE-LOCATORS

TF518

 This is an alternative kit to TF512 allowing the original rear top shock mount to be bolted 2" (50mm) lower on the chassis. The mounting bracket is lowered to give greater axle articulation. Attaching the shock lower on the chassis allows greater axle articulation. Lowering your shocks can reduce the amount of upward or compression movement and may require the fitment of bump stop spacers TF515 and/or extended bump stops.



TF518



## EXTREME LONG TRAVEL REAR TOP SHOCK MOUNTS

**TF519**



TerraFirma TF169 and TF483 +5" (125mm) longer shocks have pin top mounts instead of the conventional ring, this is to allow unrestricted articulation and movement of the mounting point on these extreme travel shocks. To allow these shocks to be fitted these unique rear top shock mounts that can be bolted to the original mounting points are required. It is possible that bump stop spacers TF515 and/or extended bump stops will be required to prevent the shocks from bottoming out on full compression.

**TF519**



## STEERING DAMPER RELOCATION KIT

**TF527**



The steering damper is very liable to get damaged on a Discovery 1 or Range Rover Classic when used off road due to the track rod mounted location. It is possible to discard this set up and convert to the far less vulnerable Defender drag link location and fit any Defender steering damper using this kit. TerraFirma also offers 2 unique steering dampers, the Return to Centre steering damper and the Adjustable steering damper are specifically designed for Defenders. However with this kit it is possible to fit these amazing steering dampers to your D1 or RRC. Suits both left and right hand drive.

**TF527**



## FUEL FILTER RELOCATION KIT

**TFFRK**



When fitting TF519 Extreme long travel rear top shock brackets it is sometimes necessary to relocate the fuel filter. To make this straightforward TerraFirma has produced a simple fuel filter relocation bracket which eases the fuel pipe routing and filter position on all 1998 on Td5 and Td4 Defenders.

**TFFRK**



## LONG TRAVEL REAR COIL SPRING RE-LOCATOR

**TF520**



When fitting TF169 and TF483 +5" (125mm) longer shocks the suspension drop out is so great it is possible for the rear coil springs to fall below conventional dislocation cones, then miss the cone on compression movement causing the spring to be forced up the outside of the cone. To prevent this from happening use TF520 spring re-locator which is designed to catch the last coil of the spring before it leaves the end of the cone ensuring it locates properly every time.



# SUSPENSION BUSH KITS

## FEATURES INCLUDE:

Outstanding abrasion resistance

High load bearing capability (4WD's, utes and towing)

Flexibility

Increased tensile strength

Chemical resistance to oil, grease, ozone and weathering

## THE BENEFITS INCLUDE:

Enhanced road holding, steering and performance

Less change in suspension geometry under load, braking and through corners

Longer suspension life and less repair time

Longer tyre life

**3** Suspension bushings are the link between your vehicle and its springs, struts and shock absorbers. Suspension bushings provide the movement and/or mounting points in your vehicle's suspension system. Hence these suspension components can influence both the ride quality, steering feel, as well as the grip of the tyres, performance of the brakes, and stability of the shock absorbers. Should these suspension components be worn, an unpredictable and more to the point unsafe motor vehicle can be the result.

Unlike rubber, Terrafirma polyurethane suspension bushings are not bonded by compression. Terrafirma bushings are mechanically fitted with minimal crush of the urethane material, and the centre pin is lubricated



so the component freely pivots without restriction. Combined with the Terrafirma bushings ability to maintain the bush shape, this free pivoting provides sharper handling response and greatly increased suspension control. Technical developments in suspension design have provided many of today's vehicles much improved on-road handling. Using Terrafirma suspension bushings ensures there is no weakness in the suspension and therefore maintains steering control.

Available as kits but also as individual bushings, our range offers solutions for all performance bushing requirements.


KIT NO	DESCRIPTION	PART NUMBER
<b>TF940</b>	<b>Defender 95 - 2001, Defender 2002 - 2016, Classic R/R 86 - 95, Discovery 1 89 - 98</b>	
	Rear upper a frame suspension link bush chassis end (NTC1773)	TF1000
	Rear lower suspension trailing arm bush kit axle end (NTC1772)	TF1001
	Front radius arm bush kit axle end (NTC6781)	TF1002
	Front radius arm bush kit chassis end (NRC4514)	TF1003
	Rear lower suspension trailing arm bush kit chassis end (STC618)	TF1004
	Front panhard rod bush late type (RBX101340)	TF1005
	Front panhard rod bush kit early type (ANR3410)	TF1006
<b>TF942</b>	<b>Defender up to 94</b>	
	Front panhard rod bush kit early type (ANR3410)	TF1006
	Rear upper a frame suspension link bush chassis end (NTC1773)	TF1000
	Front radius arm bush kit axle end (NTC7307)	TF1007
	Rear lower suspension trailing arm bush kit axle end (NTC1772)	TF1001
	Front radius arm bush kit chassis end (NRC4514)	TF1003
	Rear lower suspension trailing arm bush kit chassis end (STC618)	TF1004
<b>TF945</b>	<b>Discovery 2</b>	
	Front panhard rod bush late type (RBX101340)	TF1005
	Front radius arm bush kit (RBX101730)	TF1011
	Front radius arm bush kit axle end (RBX101680)	TF1009
	Rear anti roll bar bush coil suspension (RBX101710)	TF1010
	Rear anti roll bar air suspension (RBX101700)	TF1019
	Rear radius arm bush kit axle end (ANR6947)	TF1008
<b>TF946</b>	<b>Discovery 3 2005 - 2009, Discovery 4 2010 - 2016, Range Rover sport 2005 - 2013</b>	
	Front/rear lower suspension arm bush (LR073366)	TF1012
	Upper suspension arm bush front (LR056964)	TF1013
	Lower suspension arm bush front (LR051585)	TF1014
	Rear rear suspension arm bush (LR054831)	TF1015
	Rear upper suspension arm bush rear (LR51616)	TF1016
	Rear lower suspension arm bush front (LR051611)	TF1017
	Rear upper suspension arm bush front (LR51621)	TF1018

Improve steering control, ride quality, tyre grip and stability of shock absorbers with Terrafirma bushings.




## TERRAFIRMA HYDRAULIC BUMP STOP MOUNTING KITS

TF542 / TF543 / TF544

 The new 4" travel TerraFirma Hydraulic bump stops require a serious mounting kit. To withstand the punishment associated with hammering over bumps and jumps considerable work has been involved in the production of these mounting kits. Designed as a bolt on kit to fit 90/110/130/D1 and RRCs with no modifications. Included in the bump stop mounting kits are spacers to allow for long travel shocks that require the compression movement to be restricted to avoid the shock bottoming out. The front kit operates in front of the front shock tower and utilises mostly Land Rover's original fixings with some drilling required. The rear kit mounts within the rear coil spring and also acts as a relocation device for the spring and the lower contact pad incorporates a spring retainer. The TerraFirma hydraulic bump stop kit is designed to fit with any spring and shock combination.

## UNIVERSAL WELD ON HYDRAULIC BUMP STOP MOUNTING TUBES

TF139 / TF139A

 For those custom vehicle builders out there that like to make their own hardware these bump stop tubes are designed to take the TerraFirma 4" travel hydraulic bump stop and can be welded directly into chassis fabrication or to any suitable bracketry.

## MEGA SPORT SHOCK ABSORBER MOUNTING KITS

TF540 / TF541

 The new Mega Sport shock absorber uses race bred 'rose' joint mountings top and bottom and as such requires a specific mounting kit. These fantastically well engineered front and rear mounting systems are custom designed for the 11" travel shock option. Both front and rear kits are fully adjustable. Fit the 11" travel option in either the upper or lower positions for extreme axle articulation and wheel movement. Adjustability of the mounting system and tenability of the shock performance makes this kit one of the most versatile Land Rover shock and mounting kits in the World. Designed as a bolt on kit to mount directly to Land Rover Defenders these kits will bolt to the chassis and axles of D1 and RRC but will require body alterations.



TF542



TF543



TF139A



TF540



TF541

# ANTIROLL BARS

Terrafirma produce a range of uprated antiroll bars that can be fitted as an upgrade replacement of an existing standard antiroll bar or as a kit where the vehicle was not fitted with them from the factory.



An antiroll bar is designed to reduce body roll and improve stability when cornering. They are most commonly used on lifted, heavily laden expedition or armoured vehicles but will also provide considerable benefit to vehicles where fast changes of direction can unsettle the vehicle as well as for vehicles used for towing. More recently the new trend of lowered road biased Defenders see great benefit from upgraded antiroll bars which help considerably with the lack of spring movement and close axle to bump stop clearance.

Antiroll bars are made of spring steel and constructed in a U shape fixed at the left and right hand side of the chassis and at the left and right of the axle, connected with links to allow articulation. The stiffness is created by the length of the arms from the fixed point to the axle and of course the thickness and strength of the antiroll bar.



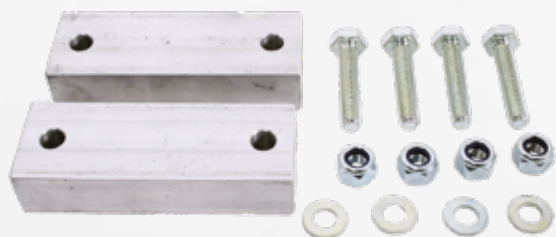
Fitting an anti roll bar will help to reduce body roll and increase stability.

To provide better control Terrafirma rear anti roll bars are not just thicker but also wider than standard designed to fit outside the original fixings, this is done by simply reversing the links in their mounts. The front is a stronger version to the original shape and design.

To ensure correct fitment and reliable operation of the Terrafirma antiroll bars, link kits, spacer kits and spare bushes are available. The link kits should be used when there is no other antiroll bar fitted and the spacer kits are intended for use on lifted vehicles to make sure the links do not rotate over centre on suspension drop out. Typically 1" of spacer will be sufficient for 2" of suspension lift.

*\*Terrafirma antiroll bars are suitable for vehicles fitted with chassis brackets as standard.*

APPLICATION	DIAMETER	PART NUMBER
Discovery II set of 4 longer anti roll bar links suitable for fitting with lifted springs		<b>TF220</b>
Front heavy duty anti roll bar	25.4mm	<b>TF289</b>
Rear heavy duty anti roll bar	25.4mm	<b>TF288</b>
Rear super duty anti roll bar	28mm	<b>TF290</b>
Front anti roll bar fitting kit		<b>TFARBKF</b>
Rear anti roll bar fitting kit		<b>TFARBKR</b>
Polyurethane bushes front (pair)	25.4mm	<b>TF291</b>
Polyurethane bushes rear (pair) 110/130	25.4mm	<b>TF292</b>
Polyurethane bushes rear (pair) 110/130	28mm	<b>TF295</b>
2 hole anti roll bar spacer kit		<b>TFARSK2</b>
4 hole anti roll bar spacer kit		<b>TFARSK4</b>



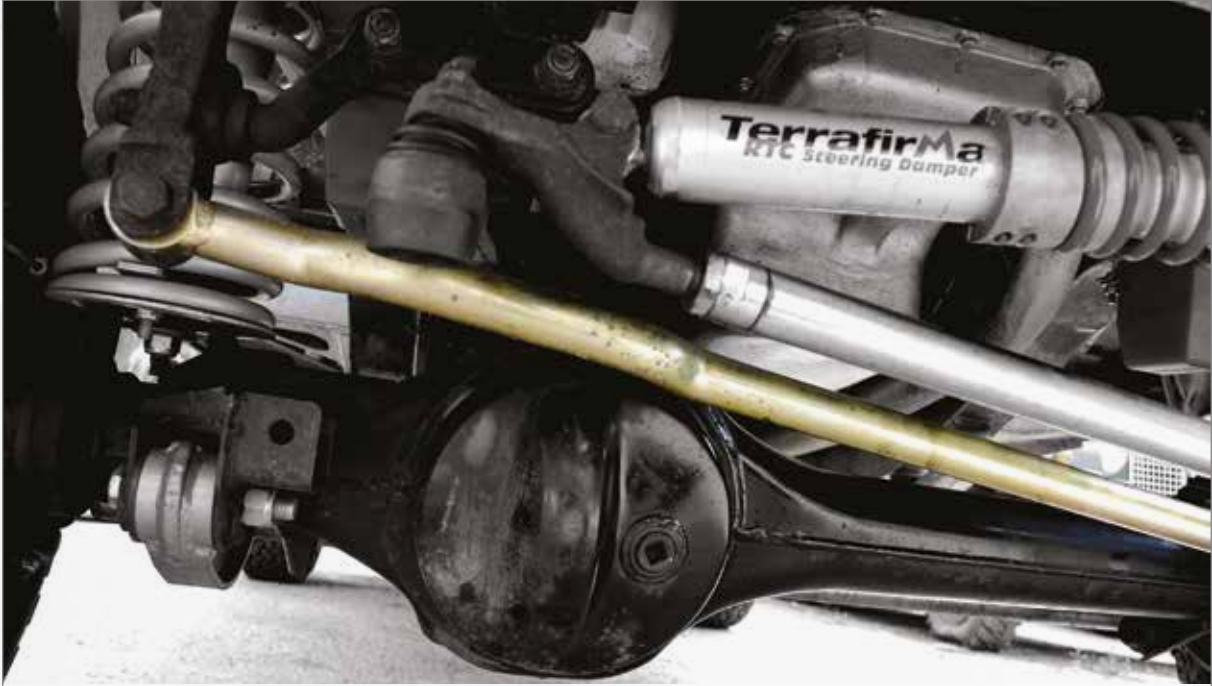
TFARSK2



TF289



TF290



## ADJUSTABLE PANHARD RODS

An adjustable Panhard rod allows you to re-centralise the axle after the car has had the suspension lifted.



TF253



3 Lateral stability on the front end of coil sprung Land Rovers fitted with live axles is controlled by a tie rod called a Panhard rod which is fitted between the front axle and the chassis, typically mounted in parallel with the drag link connecting the steering box to the axle.

When live axle vehicles such as these are lifted the axle is pulled off centre due to the fixed length of the Panhard rod. TerraFirma Adjustable Panhard Rods allow the axle to be adjusted back to centre restoring the steering geometry.

TerraFirma Adjustable Panhard rods are made from 30mm diameter 5mm wall thickness high tensile steel tube with a 20mm precision machined threaded adjuster with lock nut part way along its length. TerraFirma Panhard Rods are supplied complete with polyurethane bushes ready to fit. There are 4 options available for 90/110/130/D1/D2/RRC suiting both left and right hand drive vehicles.

APPLICATION	PART NUMBER
90/110/130 up to 2007 & D1/RRC up to 1998	TF253
90/110/130 2007 onwards	TF254
D2 up to VIN number 2A999999 – Longer version	TF254
D2 VIN number 3A000001 onwards – Shorter version	TF256

# Terrafirma

FACTORY RACING

Terrafirma Factory Racing (TFFR) was born in 2016, as a result of the close relationship between the Ultra 4 Moose Offroad Race Team and Terrafirma 4x4 Accessories.

**Having worked closely together for many years developing tuneable suspension systems for off-road Land Rovers, a gap in the market was seen to bring a new high-end range of bespoke products to users competing in top-level International competitions – on a clubman budget.**

Whilst Terrafirma are synonymous with designing and producing accessories and suspension for Land Rover based vehicles, which still outnumber many other brands of production-based competition 4x4s, there are increasingly new individual projects and chassis builders developing their own frames, which push the boundaries of off-road performance.

Influence from American events such as the now legendary “King of the Hammers”, has encouraged new designs of both beam axle and independent suspension race trucks. This has brought along demand for increased suspension travel and multiple bypass tube dampers capable of fine-tuning both bump and rebound movement throughout the entire range of shock travel.

Paul Acketts and James Lumley have taken their experience gained racing in Ultra 4 Europe, endurance events such as the Croatia and Transylvania Trophies and National level rallying to bring this great range of new products to market. Their ethos is to offer a fully tuneable and rebuildable suspension package that is great quality and yet still affordable.

You will find our latest products fitted to their own competition vehicles, regularly pushing them to their design limits and beyond in truly gruelling conditions. They also support a number of “clubman” race teams across a variety of off-road disciplines, using this knowledgeable feedback gained to constantly improve our products.



# AIR SHOCKS



**FEATURES INCLUDE:**

Zinc plated for bright long lasting finish with striking blue anodised machined alloy fittings

5/8 (16mm) diameter 1.5" (38mm) wide spherical bearing mounting eyes

Multi stage valving

High pressure Nitrogen charged

High temperature 5W premium quality shock fluid

Adjustable between 100 and 400psi, factory set at 150psi for immediate fitment

Factory set oil level at 650ml

Developed originally for competitive rock crawling buggies where extreme axle articulation means everything. Terrafirma's new 2.5" Air shocks support the weight of the vehicle, provide infinite ride height adjustability and allow massive articulation for custom vehicle builders. No more problems with coil springs dislocating or becoming coil bound restricting wheel movement. With up to 16" of travel the Terrafirma Air shock provides ample axle movement even for the most extreme off road competitors. The ride quality experienced with



air shocks is exceptional, combined with Terrafirma hydraulic bump stops obstacles and extreme terrain can be attacked like never before.

The Terrafirma Air shock is super strong 2.5" (66mm) diameter and uses a massive 1.625" (40mm) hard chromed highly polished piston shaft with the latest technology valving and seals. Air shocks are charged with high pressure Nitrogen, factory set at 150psi and adjustable between 100 and 400psi depending on the weight of the vehicle and preferred ride height.

Adjustable between 100 and 400psi and factory set ready to fit 150psi. Terrafirma Air shocks are designed to be mounted vertically with the shaft at the bottom for optimum performance.

It is possible to fine tune the air shocks performance to very precisely suit a given application by adjusting the oil volume and the Nitrogen pressure. For the Terrafirma air shock we have assumed an average setting based on vehicles ranging between 2000 and 3000kg.

DESCRIPTION	PART NUMBER
16" travel	TF141
14" travel	TF154
12" travel	TF153
Seal Kit for all air shocks	TF141SEALS

# BYPASS AIR SHOCKS



**FEATURES INCLUDE:**

40mm shaft

High-quality shim valve

5/8 (16mm) diameter 1.5" (38mm) wide spherical bearing mounting eyes

Fully rebuildable

2 compression damping adjuster tubes

1 rebound damping adjuster tube

A new unique high performance product from Terrafirma Factory Racing is the 2.5" Bypass air shock; this shock is both light weight and heavy duty. It is made of highest specification materials. Like our non-Bypass air shocks It has a huge shaft measuring 40mm and uses the same base internals but with the addition of 3 external bypass tubes this gives the ultimate in adjustability and custom tuning.

Two of the external bypass tubes are used to adjust the compression damping of the bypass air shock, the third external bypass tube is used to adjust the rebound damping. The Terrafirma Factory Racing 2.5" Bypass air shocks also come with a massive remote reservoir to help them run cooler, fitted in the remote reservoir is a shraeder valve to allow the custom adjustment of the shocks nitrogen pressure to give even more "tuneability".

The Terrafirma Factory Racing 2.5" Bypass air shock should be installed as close to vertical as possible to experience the best performance. This product is highly recommended alternative to Coil Over Suspension.



DESCRIPTION	PART NUMBER
<b>Terrafirma Bypass remote reservoir air shock absorber</b>	
12" travel left	TF148L12
12" travel right	TF148R12
14" travel left	TF148L14
14" travel right	TF148R14
16" travel left	TF148L16
16" travel right	TF148R16



## BYPASS SHOCKS



### FEATURES INCLUDE:

High quality shim valve

Fully rebuildable

2 compression damping adjuster tubes

1 rebound damping adjuster tube

Another new unique high performance product from TerraFirma Factory Racing is the 2.5" Bypass shock; this super smooth damper uses 3 external bypass tubes to give the ultimate in adjustability and custom tuning.

Two of the external bypass tubes are used to adjust the compression damping of the bypass shock, the third external bypass tube is used to adjust the rebound damping. The TerraFirma Factory Racing 2.5" Bypass shocks also come with a massive remote reservoir to help them run cooler, fitted in the remote reservoir is a shraeder valve to allow the custom adjustment of the shocks nitrogen pressure to give even more tuneability.

The TerraFirma Factory Racing 2.5" Bypass air shock should be used either alongside a coilover unit being used to carry the spring or with more standard setup coil spring.



### DESCRIPTION

### PART NO.

#### TerraFirma Bypass remote reservoir shock absorber

12" travel left	<b>TF151L12</b>
12" travel right	<b>TF151R12</b>
14" travel left	<b>TF151L14</b>
14" travel right	<b>TF151R14</b>
16" travel left	<b>TF151L16</b>
16" travel right	<b>TF151R16</b>

## MEGA SPORT SHOCKS

Multi stage damping provides outstanding control and the high volume of oil contained within the huge remote reservoir dissipates heat ensuring consistent performance for long periods regardless of the terrain.

Constructed from bright zinc plated 52mm diameter steel tube machined to extremely high tolerances with a 46mm piston in a monotube design with TerraFirma's customary super strong 20mm hard chromed shaft.

### DESCRIPTION

### VEHICLE

### PART NUMBER

11" travel front and rear	90/110/130/D1/RRC	<b>TF137</b>
Front fitting kit	90/110/130/D1/RRC	<b>TF540</b>
Rear fitting kit	90/110/130/D1/RRC	<b>TF541</b>
Seal kit for all Mega Sport shocks	90/110/130/D1/RRC	<b>TF137SEALS</b>
Replacement ball joint for all shocks	90/110/130/D1/RRC	<b>TFSBJ</b>



TF137SEALS

# HYDRAULIC BUMP STOPS

**FEATURES INCLUDE:**

- Piston 46mm
- Shaft 32mm
- Outer body 52mm
- Adjustable pressures
- Prevents 'bottoming'
- 4" travel

With 4" of travel, Terrafirma hydraulic bump stops progressively absorb the last few inches of suspension movement dramatically smoothing landings and massive bumps.

Terrafirma hydraulic bump stops reduce driver fatigue and possible chassis/axle damage by controlling shock absorber travel close to full compression. Precision engineered from 2" (52mm) diameter aluminium with a super tough hard chrome 32mm diameter piston rod. Classic Terrafirma blue and silver styling is retained with machined anodised fittings and a nylon contact pad keeps noise during operation to a minimum.



TF140

TF139

**FEATURES INCLUDE:**

- Piston 46mm
- Shaft 32mm
- Outer body 52mm
- Adjustable Pressure Min 100 Psi, Max 400 psi
- Extended length 10; collapsed length 8"
- 2" travel
- Mounting can included



# HYDRAULIC THREADED BUMP STOPS

The unique Terrafirma Factory Racing 2" travel threaded hydraulic bump stops share all the amazing features of the 4" travel smooth body hydraulic bump stops just with a shorter amount of travel meaning the whole unit is more compact making them great to mount in applications where space is at a premium.

The threaded body allows masses of fine tuning adjustment and they are supplied complete with a threaded weld-on mounting can and two locking rings.



TF149

DESCRIPTION	VEHICLE	PART NUMBER
<b>Hydraulic Bump Stops</b>		
4" travel		TF140
Universal weld on mounting can pinch bolt top and bottom		TF139
Universal weld on mounting can double top pinch bolt		TF139A
Hydraulic bump stop spacer		TF139B
Hydraulic bump stop nylon pad		TF140PAD
Hydraulic bump stop valve		TF140VALVE
Seal Kit for all hydraulic bump stops		TF140SEALS
Front fitting kit	90/110/130/D1/RRC	TF542
Rear fitting kit	90/110/130/D1/RRC	TF543
Rear fitting kit	110/130	TF544
<b>Threaded Bump Stops</b>		
2" travel		TF149



TF139A



TF140PAD



# WHEELS

Rock crawling, desert racing or simply enhancing the look of your Land Rover.

Whether you want your wheels for full on off road racing, recreational use or just to enhance the look of your Land Rover Terrafirma has a wheel for you on our range. We have some of the toughest Alloy wheels with heavy duty load ratings, Alloy beadlock wheels, steel 8-spokes and modular and the firm favourite Military spec Wolf wheel.



## FEATURES INCLUDE:

Available in silver and black

Load rated to 1450kg

Super strong and super stylish

## DAKAR WHEELS



Influenced by the rugged and stylish wheels used on Dakar rally raid vehicles the new Terrafirma Dakar wheel looks amazing in either satin black or silver and is super strong with a massive 1450kg load rating. Available in 7x16" and with 5x165 33mm off set and 5x120 45mm off set using original Land Rover alloy wheel

nuts. The Dakar wheel is a 12 spoke wheel with built in valve protection against rocks and ruts and is suitable for the heaviest off road use when fitted to Land Rover Defender, Discovery 1 and 2 and Range Rover Classic and P38.

Unquestionably one of the toughest best looking Land Rover wheels on the market.



STC8843AA



TF105



TF104

APPLICATION	90/110/130	D1/RRC	D2/P38	D3/D4/RRS
Silver	TF104 – 7x16 ET33			
Satin black	TF105 – 7x16 ET33		TF108 – 7x16 ET45	
Locking wheel nuts	STC8843AA (set of 5 nuts and 1 key)		RRB100510 (1 lock nut and key)	



## ALLOY BEADLOCK WHEELS



Rock crawling, desert racing or simply enhancing the look of your Land Rover. Terrafirma alloy wheels do all three. This amazing wheel looks fantastic in either stealthy matt black or classy anthracite grey. This super strong and very stylish 6 spoke alloy wheel is rated at 1300kg per wheel and with the unique 'bead lock ready' outer rim provides incredible rock damage resistance and protection for the valve core. Each wheel is supplied with a full set of cap head screws for the rim and a new set of wheel nuts.

The unique bead lock ready outer rim allows the tyre to be fitted conventionally for normal on road, recreational off road and other activities where normal inflation pressures would be used. When low tyre pressures are needed and high side loads such as hard-core off roading and rock crawling are experienced the tyre can be mounted on the outside of the bead lock ready rim and clamped in place using the Terrafirma bead lock kit.

The Terrafirma bead lock kit is a set of 4 specially machined alloy rings designed to clamp the tyre in place preventing it from being pushed off the rim at

very low inflation pressures. The ring is machined in such a way that it centralises the tyre on the wheel so that balancing is possible, something not easily achievable with other bead lock systems. The bead lock ring kit also includes alignment dowels and a full set of bolts and lock nuts. The bead lock ring is recessed reducing rock damage to the bolt heads. The bead lock rings are powder coated anthracite grey with discrete Terrafirma logos.

The Terrafirma bead lock alloy wheel is available in two bolt patterns; 5x165 PCD which fits Land Rover Defender, Discovery 1 and Range Rover Classic with a 10mm off set as well as 5x120 PCD which fits Discovery 2 and P38 Range Rover with a 25mm off set. The rim width is 7"x16" which allows the fitment of up to 12" (300mm) wide tyres. When the tyre is fitted to the outside of the rim and retained with the bead lock rings then it becomes an 8" wide rim allowing for slightly wider tyres.

These innovative wheels allow the bead locks to be retro fitted so that as your off roading goes further so does your equipment.



TF102



TF100



TF103



TF113DEF

APPLICATION	90/110/130	D1/RRC	D2/P38
Anthracite	<b>TF100 – 7x16 ET10</b>		<b>TF107 – 7x16 ET20</b>
Matt black	<b>TF102 – 7x16 ET10</b>		<b>TF106 – 7x16 ET20</b>
Locking wheel nuts	<b>TF113DEF (set of 5 nuts and 1 key)</b>		
Wheel nuts	<b>TFRVSNUT</b>		<b>TFRVSNUTD2</b>
Beadlock kit (set of 4)	<b>TF103</b>		
Beadlock kit (1 set)	<b>TF103A</b>		



### STEEL WHEELS

**2** No wheel range would be complete without the good old favourites, the steel 8 spoke and modular wheels are as popular as ever for upgrading from the standard wheels or as a good value alternative for off road or winter use leaving your expensive style wheels and low profiles in the garage. Available in a variety of sizes and colours.



### WOLF WHEELS

**✓ FEATURES INCLUDE:**

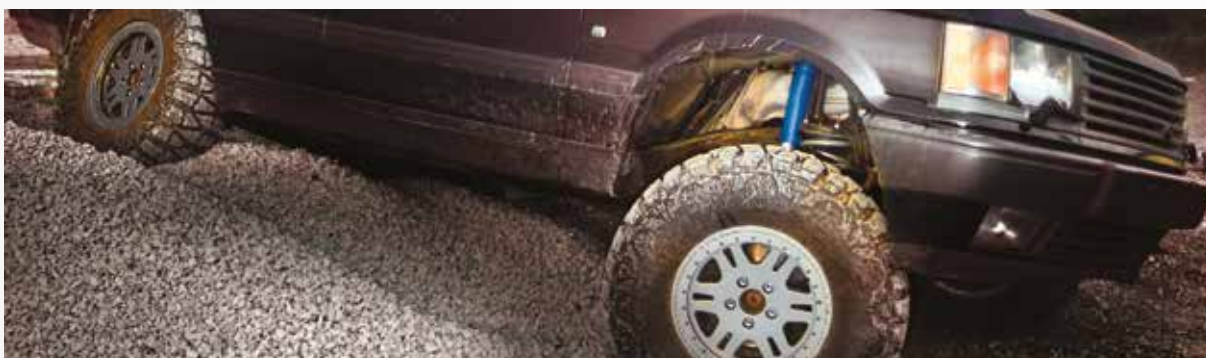
**Military specification**

**Load rated to 1500kg**

**Strong, tough no nonsense wheel**

**2** This military specification wheel has proven itself over and over and is supplied as Land Rover's heavy duty option for the Defender. It is used

by armed forces and utility companies all around the World and is the strongest steel wheel on the market at 1500kg load rating, supplied black ready to fit in 6.5x16" and 5x165 bolt pattern.



APPLICATION	90/110/130	D1/RRC	D2/P38	D3/D4/RRS
<b>Wolf Wheel</b>				
Wolf wheel black	<b>ANR4583PM – 6.5x16 ET21</b>			
<b>Steel Wheel</b>				
8 spoke white	<b>GRW001 – 7x16 ET00</b>			
8 spoke silver	<b>GRW002 – 7x16 ET00</b>			
8 spoke black	<b>GRW003 – 7x16 ET00</b>			
Modular white	<b>GRW004 – 7x16 ET08</b>			
Modular silver	<b>GRW005 – 7x16 ET08</b>			
Modular black	<b>GRW006 – 7x16 ET08</b>			
Wheel nuts			<b>GRW012 – 8x16 ET25</b>	<b>TF152*</b>
Locking wheel nuts	<b>RTC9535 (set of 5 nuts and 1 key)</b>			<b>TF152NUTBLACK</b>

\*Please note TF152 is not compatible with Brembo brakes



GRW002



TF152



GRW012



ANR4583PM



## STEEL BEAD LOCK WHEELS AND WELD ON KITS



Built onto the popular 7x16 black modular steel wheel the TerraFirma bead lock Kit is available ready-made or as a weld on kit. These traditionally robust wheels are made rock ready and come complete with a silver steel bead

lock rim and full nut and bolt kit. Clamping the outer bead of the tyre will prevent the tyre from being pushed off the rim when operating at very low tyre pressures while driving off road.

The TerraFirma weld on bead lock kit is supplied with full instructions for self-build and can be welded on to most 16" steel wheels.

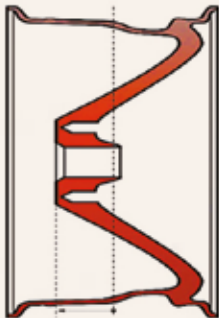
DESCRIPTION	PART NUMBER
Black modular beadlock wheel	<b>TF112 - 7x16 ET08+BL</b>
Weld on beadlock kit (set of 4) suits most 16" steel wheels	<b>TF112KIT</b>
Weld on beadlock kit (1 set) suits most 16" steel wheels	<b>TF112KITA</b>

### Offset...explained

The offset of a wheel is the distance between the centreline of the wheel and the hub-mounting surface.

It can be either positive or negative and is typically measured in millimetres. Offset affects suspension geometry, clearance between the tire and suspension or bodywork, the steering system and of course visually with regards to the position of the wheel in relation to the outside of the vehicle.

The offset measurement is often referred to as ET which means Einpresstiefe or translated means literally Press Depth e.g. ET45 is a 45mm offset. So 7x16" wheels fitted to a Land Rover Defender with an ET10 offset will have a wider track width than wheels with an ET25 offset.



**Negative Offset**

The centreline of the wheel is outside the hub mounting surface. A wheel with reduced offset or more negative offset increases the track width.



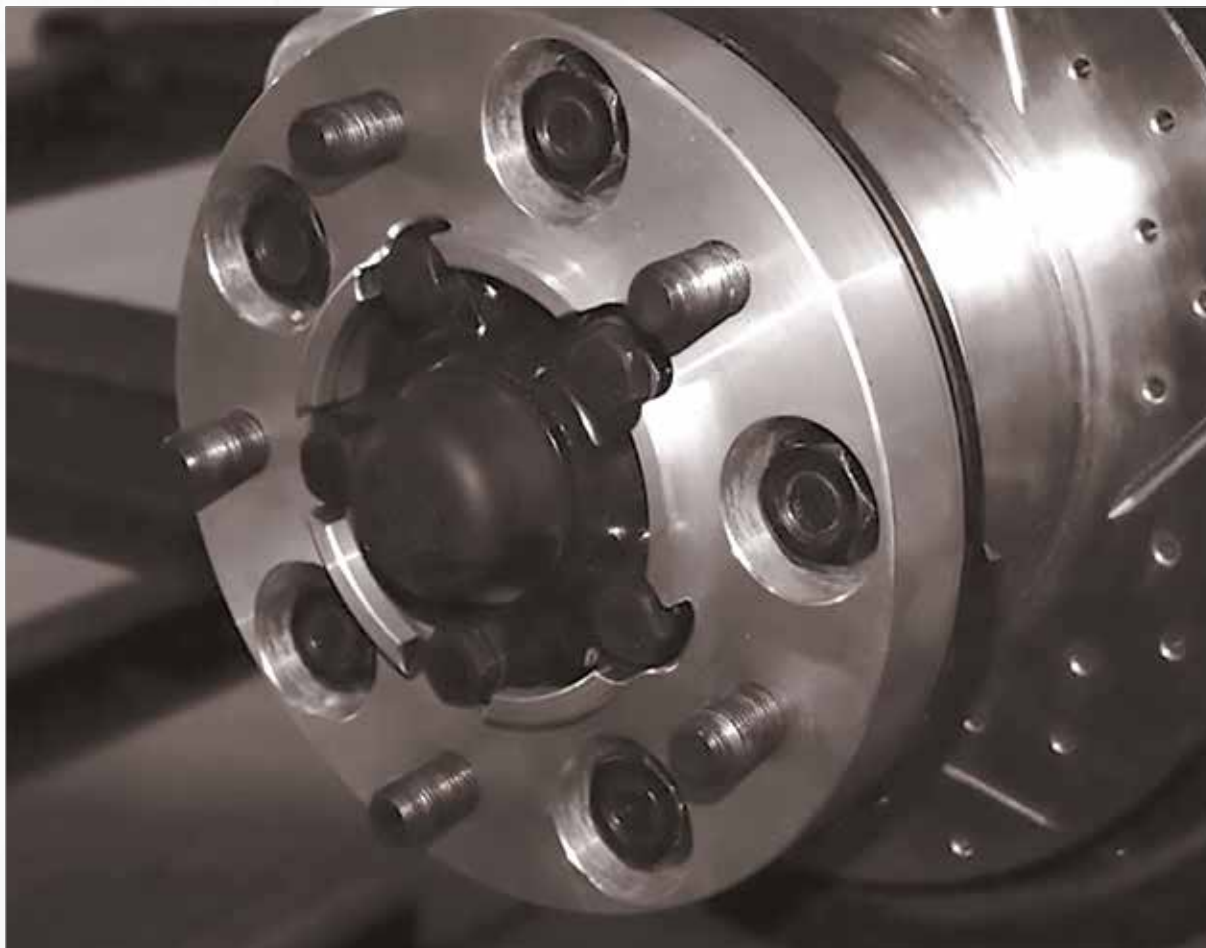
**Zero Offset**

The centreline of the wheel is in line with the hub mounting surface.



**Positive Offset**

The centreline of the wheel is inside the hub mounting surface. A wheel with increased offset or more positive offset reduces the track width.



#### FEATURES INCLUDE:

Improved stability, cornering and handling

Increased track improves steering lock

Machined from Billet aluminium

## WHEEL SPACERS AND ADAPTORS



Terraforma 30mm alloy wheel spacers give an additional 60mm track width to all Land Rovers. The benefits are improved handling, cornering and stability as well as increased steering lock.



TF301

The opportunity to fit larger tyres due to the increased steering lock is a bonus not to mention the improved 'stocky or more planted' look to the vehicle.

These spacers are made from billet aluminium to the highest standards with high tensile studs and include a complete set of wheel nuts to ensure they are secured correctly.

Terraforma adaptors facilitate the fitment of larger diameter wheels typically to Defenders, often from the popular Discovery 3 and 4 and Range Rover

Sport. These stylish wheels are not available in the Defender bolt pattern and have large positive offsets requiring spacers. Terraforma adaptors provide the conversion between 5x165 and 5x120 bolt patterns and also space out the wheels by 54mm to give the desired 'fast road' sports look. Wheels over 22" diameter with appropriate tires can be fitted with these high quality alloy adaptors.

Wheel nuts and spacer nuts should be tightened to the factory torque settings.

DESCRIPTION	PART NUMBER
Defender wheel spacer set (x4)	TF301
Discovery 1 / RRC wheel spacer set (x4)	TF301
Discovery 2 / RR P38 wheel spacer set (x4)	TF302
Discovery 3 / RR Sport / RR L322 wheel spacer set (x4)	TF303
Defender 5x165 hub to 5x120 72.6mm ID D3 / RRS wheel adaptor set (54mm thick) (x4)	TF305

# BRITISH ARMED FORCES RALLY TEAM

TerraFirma has been sponsoring the British Armed Forces Rally Team (AFRT) since 2012 and has supplied a host of products for testing and race use in the rally.

The AFRT has existed for over 50 years, the gravel tracks and forestry blocks all across the country have, at some point, been visited by a Land Rover driven by an enthusiastic member of the British Military. As a Tri-Service team the AFRT offers its members the opportunity to develop not only their core military skills of team work, navigation, leadership and the ability to operate in arduous conditions but also those specialist skills such as precision driving and rapid vehicle repair. The team is open to all members of the British Forces and currently have members from all three services and are always on the lookout for new members.

So what makes the AFRT Land Rovers special? Well nothing really, they are as close to the standard issued Land Rover "Wolf" as possible. The main changes involve the fitting of an uprated Roll Cage and other associated equipment to make each vehicle fully compliant with the FIA and MSA regulations (seats, fire extinguishers, belts, intercom etc).

Additionally the Land Rovers have benefited from uprated suspension modifications including TerraFirma springs and dampers, uprated brake discs and pads and all bushes replaced with Polybush items. Most recently the introduction of the TerraFirma Bumper Spotlight Bar (TF008SH) has proven an effective lighting upgrade and was immediately introduced on all 6 vehicles in the "Wolfpack".

These modifications have been made by the team to increase the safety of the crews when 'on stage'. The over-riding aim is to maintain the vehicles as close to Military standard as possible, the skill of the crews is what makes these vehicles fly!



## TERRAFIRMA WARRANTY

TerraFirma products are warranted free from defects in materials and workmanship for a period of 1 year (12 months) from the date of retail invoice.

TerraFirma does not warrant that the products manufactured or marketed by it comply with the laws of the country where those goods are purchased or used. It is the sole responsibility of the purchaser to ascertain whether products being purchased, or the fitting of those products to any other object, comply with local laws.

This warranty covers structural defect and workmanship but does not cover finishes, labour charges for removal or refitting, freight costs, accident damage, misuse or abuse, damage due to incorrect or improper fitment or application, modified product, faulty design or consequential damage of any kind.

Damage or defects caused by collision, alteration, improper installation, road hazards, adverse conditions or usage for any other purpose other than normal private usage are not covered by this warranty.

TerraFirma shall not be liable for any other claim relating to the use of the product and any indirect special or consequential damage or injury to any person, company or other entity.

All claims must be accompanied by the original retail invoice. This warranty covers only the replacement of the product or part concerned. The decision remains solely at the discretion of Allmakes 4x4 Ltd.

The information contained in this catalogue was correct at the time of going to press. Allmakes/TerraFirma and its associated companies reserve the right to alter the range and any product specifications without notice. Always consult your Allmakes/TerraFirma distributor for the latest product information and specifications.

The TerraFirma range of products is constantly being evaluated for enhancement and improvement to make sure the level of quality and performance is as expected. Pictures and descriptions in this catalogue should be used for reference and are intended as a guide to the style, type and colour of product you have selected.

For the latest information on specific products refer to [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

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For more information: [www.terrafirma4x4.com](http://www.terrafirma4x4.com)

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*Quality, Value and Performance*

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