# TerrafirMa

Serious 4x4 Accessories





#### **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** – No previous experience required. 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.

Please note product information is correct at the time of publication (January 2022). Product images are for illustration purposes only and are not reflective of actual size. Terrafirma supplies products to fit vehicles either currently or historically manufactured by Jaguar Land Rover. Unless expressly stated these are not manufactured nor supplied by Land Rover or its agents.

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### **CONTENTS**

SUSPENSION	8
SHOCK ABSORBERS	9
COIL SPRINGS	26
SPRING & SHOCK KITS	32
AIR TO COIL CONVERSION KITS	34
SUSPENSION HARDWARE	36
FULL SUSPENSION KITS	44
SUSPENSION BUSH KITS	48
ANTIROLL BARS	50
POLYURETHANE BUSHED SUSPENSION ARMS	51
STEERING	52
STEERING DAMPERS	53
STEERING RODS	55
BRAKING	56
BRAKE DISCS	57
BRAKE PADS	59
STAINLESS STEEL BRAKE HOSES	61
BRAKE UPGRADE KITS	62
DISC BRAKE HANDBRAKE KIT	63
PROTECTION	64
UNDERBODY GUARDS	66
ROCK SLIDERS	68
REAR BUMPER CORNERS	71
REAR STEP TOW BARS	72
RECOVERY	74
BUMPERS	75
RAID WINCH BUMPERS	79
TOWING AND RECOVERY POINTS	81
RECEIVER HITCHES	82
ELECTRIC WINCHES	83
WINCHING AND RECOVERY ACCESSORIES	86
HI-LIFT JACKS	90
TERRAFIDMA FACTORY BACING	
TERRAFIRMA FACTORY RACING	92
COILOVERS	93
SHOCKS	94
BUMP STOPS	96
WHEELS	-
	98
DAKAR WHEELS	99
COMPOMOTIVE WHEELS	99
WINRACE WHEELS	100
STEEL WHEELS	101
BEADLOCK WHEELS	102
SPACERS AND ADAPTORS	104
SPARE WHEEL COVERS	105
PERFORMANCE	106
TERRAFIRMA E LOCKER	107
CROWN WHEEL & PINIONS	108
DRIVE FLANGES	109
HD HALF SHAFTS AND CV JOINTS	109
PROPSHAFTS	110

DUAL MASS FLYWHEEL CONVERSION KITS		111
RED BOOSTER CLUTCH SERVOS		111
GEARBOX UPGRADES		112
EGR REMOVAL KITS		113
EXHAUST PIPES	1	114
NTERCOOLERS		115
SILICONE TURBO AND INTERCOOLER HOSES		115
FOAM AIR FILTERS		116
GAP DIAGNOSTICS IID TOOLS		117
SCANNER		118
MAGNETIC FINGER		118
EXPEDITION		119
ROOF RACKS & LADDERS		120
ROOF TENT AND AWNINGS		121
RAISED AIR INTAKES		122
SPARE WHEEL CARRIER		124
EXPEDITION ACCESSORIES		125
CAMPING ACCESSORIES		128
INTERIORS		130
DASH & TRIM		131
SEATING ESSENTIALS		134
STORAGE		136
PET RAMP & GUARDS		137
FLOOR MATS AND BOOT LINERS		138
DOOR CARDS AND WINDOW TRIMS		140
AIR CONDITIONING KITS		141
ELECTRIC WINDOWS	_	141
REVERSING CAMERA		141
EXTERIOR		142
MAMMOUTH CHEQUER PLATE		143
EXTENDED WHEEL ARCHES	- 41	144
SNOW COWL		145
SIDE STORAGE LOCKERS		145
MUD DEFLECTORS		145
MUD FLAPS		146
WIND DEFLECTORS		147
GRILLES, VENTS AND HEADLIGHT PANELS		148
SIDE AND REAR STEPS		150
WINDSCREEN HINGE BLOCKS		152
ROOF RAILS		152
RAPTOR COATINGS		153
LOTHUNG		
LIGHTING		154
LIGHTING		155
OSRAM LED DRIVING AND WORK LAMPS		158
WILDERNESS LIGHTING		160
LIGHT GUARDS		161
LIGHT MOUNTS		162
REPLACEMENT & LED UPGRADE KITS		164
REPLACEMENT LIGHTS		165
HEROII ANDIOT		
MERCHANDISE		166
HATS AND CLOTHING		166



Established in 2007, Terrafirma has become one of the most recognised 4x4 and off-road accessory brands in the world.

Fuelled by the enthusiasm and demand from 4-wheel drive owners everywhere; Terrafirma Serious 4x4 Accessories are available in more than 100 countries around the globe, satisfying the diverse requirements for both on and off-road use by providing products that properly serve their purpose.





# **ABOUT TERRAFIRMA**

Did you know the name Terrafifmanin Latin translates as Solid Earth

Combining decades of industry knowledge, practical experience and engineering capability Terrafirma accessories are designed and produced to maximise the performance and capability of your vehicle, not only for recreational and competition off-road but also for expedition, commercial and military applications too.

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

Studying this catalogue will enable workshops, vehicle builders and enthusiasts to prepare and equip their 4x4 to have more fun, to safely carry more load, tackle greater obstacles over harsher terrain while protecting their pride and joy for many more adventures to come.

Quality, performance and value is at the heart of what we do; We strive to ensure that the quality of the accessory you receive meets or exceeds that of the vehicle you are fitting it to, we want Terrafirma owners to be proud of their purchase. Each Terrafirma product is designed and specified to enhance the performance of your 4-wheel drive without compromise. Good value is achieved when the quality and performance of a product exceeds the price paid.

Terrafirma 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.







# TerrafirMa

# Production Part and Approval Process +



# CERTIFICATE OF CONFORMANCE



The purpose of the Terrafirma Production Part and Approval Process (PPAP) is to ensure that products are manufactured and supplied to the correct quality, to the appropriate drawings, master sample and or specifications. Products that have been manufactured and supplied according to PPAP, and that pass Q6 inspection, qualify for a batch controlled Terrafirma Certificate of Conformance (CofC).

It is important that vehicle owners, workshops and vehicle testing stations have the confidence to fit Terrafirma products that could be different to those of the original manufacturer.

A Certificate of Conformance (CofC) can only be granted to a product that meets a minimum set of standards and is often required for a product to be sold or fitted in certain countries. The CofC is confirmation that a product has been 'manufactured to print' which means written instructions, specifications and drawings through the PPAP process.

PPAP the Production Part Approval Process is a detailed process that includes all the necessary documentation to ensure that the product has been produced to the correct quality and specification and that it is suitable for the intended application. This guarantees that only high-quality products will be supplied to the consumer.



### The seven stages of the Production Part and Approval Process:

### 01

#### SUPPLIER AUDIT

Manufacturers and Suppliers are audited to ensure they are capable of conforming to the PPAP process.





### MANUFACTURING PROCESS FLOW

A detailed manufacturing process is produced to guarantee that consistent methods of production are followed.





#### SAMPLE APPROVAL

Drawings, material specifications and prototypes are inspected and tested to prove the product is fit for service.





#### PACKAGING SPECIFICATION

Packing material, kit contents and fitting instructions. Making sure the customer receives what they need in perfect condition.





### PART SUBMISSION WARRANT

Final sign off that all parts of the PPAP process have been followed during manufacturing.





### STOCK QUALITY CONTROL

A thorough and detailed quality check is carried out on every delivery to ensure the PPAP process has been followed on every batch. Critical information is recorded for traceability purposes.





#### CERTIFICATE OF CONFORMANCE

The ultimate statement of quality, a Certificate of Conformance guarantees every batch of products is manufactured to specification and satisfies international transport authorities.





Serious 4x4 Accessories

Terrafirma Certificates of Conformance are available to download using the web address that is printed on the CofC label applied to the product.

Terrafirma 4x4 Accessories are available through an extensive network of stockists and dealers around the world. Experts are available to give advice on product selection and to assist with any enquiries.



As good as any 4x4 vehicle is supplied from the factory, they are not without compromise as manufacturers must produce 4x4s to suit all applications. Terrafirma allows you to customise your vehicle's suspension to suit more specific requirements, whether that's improving the load carrying, accommodating additional equipment, increasing the wheel travel, or enhancing the road handling.



Terrafirma shock absorbers, coil springs and suspension products are fitted for recreational, expedition and competitive off-road use, commercial, utility, towing and military applications as well as upgrading tired and worn original components.

The range of choice and combinations is so extensive that by fitting a Terrafirma suspension upgrade it is possible to eliminate the compromises associated with standard suspension almost entirely, tuning your suspension system to perform exactly as you want it to.



SHOCK ABSORBERS

Critical in maintaining or improving your vehicle's suspension.

Terrafirma offers a wide range of upgrade shock absorbers 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. It is a myth that a shock designed in a certain way will be better off-road than on road, not entirely so. Typically, a better shock is a better shock. 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 vehicle'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 vehicle 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 unladen 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 all 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. The All Terrain shock offers great value without compromising performance and reliability.

#### **FEATURES:**

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

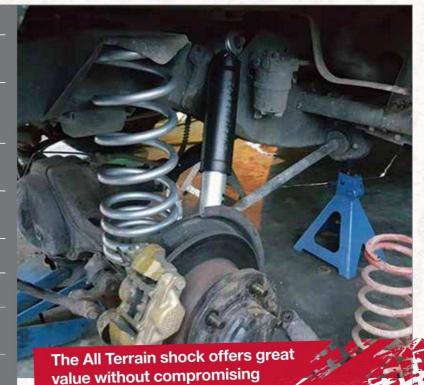
**Dual oil and dust** shaft seals

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

OE style bushes and mountings for ease of servicing





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.

performance and reliability.

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 semi rigid plastic dust shield with embossed Terrafirma logo protects the hard-chromed steel shaft.

Terrafirma All Terrain shocks 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	90/110/130/D1/RRC	D2	P38
Front	TF116	TF118	TF125
Rear	TF117	TF119	TF126



### 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 and is regarded by many as the benchmark 4x4 shock.

#### **FEATURES:**

40mm diameter sintered and Teflon

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

OE style bushes and mountings for ease of servicing



superior ride quality, strength and performance.

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



# **4 STAGE ADJUSTABLE SHOCKS**



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.

#### **FEATURES:**

adjustment; Comfort-Standard-Firm-Sport

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

OE style bushes and mountings for ease of servicing

### The 4 Stage Adjustable shocks offer 4 ride styles from comfort to 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. For vehicle owners who want one shock to handle additional load at the weekend and another to cruise to work with then this the shock for you. Available from standard travel up to +5"(125mm) longer travel, 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 cavitating 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 semi 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.

Application	90/110/130/D1/RRC	D2	P38
Front	TF172	TF190	
Rear	TF173	TF191	
Front +2"	TF174		TF176
Rear +2"	TF175		TF177





#### **FEATURES:**

4 stages of adjustment; Comfort-Standard-Firm-Sport

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

OE style bushes and mountings for ease of servicing

### TERRAFIRMA 4 STAGE ADJUSTABLE +3 & 5" LONG TRAVEL SHOCKS

The challenge to conquer the largest rocks and deepest ruts is hugely appealing to hard-core off-road drivers.

Whether you're in competition or just driving for fun, keeping the tyres in contact with the ground and the vehicle stable is crucial to successfully mastering the roughest terrain. Long travel suspension is not new, however achieving great performance, control and reliability is more than just fitting any old long travel shocks. To maximise performance across the range of spring rates and vehicle loads the 4 Stage Adjustable shocks are used in all our long travel applications up to +5" (125mm) longer than standard.

The Terrafirma 4 Stage Adjustable +5" long travel 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.

For the Discovery 2 the +3" longer travel 4 Stage Adjustable shock is ideal, the standard suspension system is 'tight' and will not allow enough flex to use a longer shock. When combined with +2" coil springs the +3" shocks ad significant axle travel keeping the wheels of your D2 on the ground.

Application	90/110/130/D1/RRC	D2
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.





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 give us 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!

> For military, fleet and utility.

Military grey paint scheme

46mm internal bore and piston

20mm double chromed shaft

2.5mm outer shock tube wall thickness

14mm mounting pins

Velocity sensitive valving

Low pressure Nitrogen eliminates cavitation and fade

High temperature fluid

OE style bushes and mountings for ease of servicing

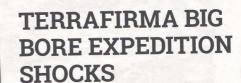
Everything about the Commercial HD (Heavy Duty) is tough, thicker steel, bigger piston, stronger internals and more oil & Nitrogen capacity all combined to make this the toughest shock in the range.

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 saving and as with all Terrafirma shocks. the largest possible fully welded mounting pins and rubber bushes are used for maximum strength and durability.

Application	90/110/130/D1/RRC
Front	TF142
Rear	TF143



Heavy trucks need heavy suspension, Terrafirma has developed the Big Bore Expedition shock specifically for fully laden 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.

### Big loads require big shocks!

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

76mm body, twin tube design

50mm internal bore and piston

20mm double chromed shaft

2.5mm outer shock tube wall thickness

14mm mounting pins

High temperature fluid

OE style bushes and mountings for ease of servicing

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 the vehicle'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.

Application	90/110/130/D1/RRC
Front	TF129
Rear	TF130
Front +2"	// TF123
Rear + 2"	TF124

# TerrafirM

# TYPICAL SHOCK SPECIFICATIONS

#### SHAFT

With shaft sizes of 16, 18 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.





## TWIN TUBE VS MONOTUBE SHOCK ABSORBERS



The objective of a shock absorber is to control the shocks and vibrations transmitted through the suspension from bumps and uneven terrain and to provide safe and predicable handling, with a smooth and comfortable ride. Shock absorbers are without doubt one of the most important components of your vehicle.

#### TWIN TUBE SHOCKS

The popular twin tube shock absorber has been around for decades, this great value design incorporates and inner and outer chamber with fluid flowing from the inner piston chamber to the outer reservoir chamber through several valves which provide the damping. The outer reservoir tube has the benefit of being able to tolerate a certain amount of damage, ideal for an off-road vehicle, without effecting the inner piston tube operation, however when worked hard and fast the oil has a tendency to overheat and foam (aerate) which has a detrimental effect on performance. Most Terrafirma twin tube shocks also include Nitrogen mixed with the oil which goes a long way to reduce aeration and maintain performance in most applications.

For a shock absorber to perform at its best it must respond quickly to bumps and variations in terrain, not just once or twice but continually for hours on end. Twin tube shocks have a series of valves that work independently to cover the range of action and movement.



#### MONOTUBE SHOCKS

Monotube shocks feature a single chamber, the top section containing the fluid and the bottom section filled with Nitrogen, the gas and fluid are separated by an independent piston that eliminates aeration all together. Monotube shocks also have a single valve assembly that evenly distributes the movement of fluid over a greater surface area allowing for a more responsive damper.

Although Monotubes are typically more expensive, the more sophisticated design, larger surface areas and volumes within the shock body allows for more refined valving giving a higher performance shock absorber. In extreme conditions Monotube off-road shocks will perform better than Twin Tubes.



- + Lower nitrogen pressure results in a more comfortable ride
- + Nitrogen gas charge reduces aeration and eliminates cavitation
- + Large bodies allow for a wide range of valving for different applications
- + Ideal for all round use
- + Longer travel than the equivalent monotube
- + Damage to the shock body does not affect piston operation
- + Less expensive to manufacture than monotube
- -- Must be mounted close to vertical
- -- Twin tube shock pistons are usually smaller than monotube
- -- Reduced heat dissipation

- + Larger piston diameter
- + More precise valving for competition use
- + Separate nitrogen and oil chambers eliminate aeration
- + Greater heat dissipation
- + Can be installed at any angle
- -- More expensive to manufacture than twin tube
- High pressure nitrogen results in a stiffer ride
- Travel is limited because the oil and gas chambers are in line (the remote reservoir corrects this)
- -- Damage to the shock body can affect piston performance

#### THE TERRAFIRMA CONCLUSION

Most vehicles are designed for quite specific uses; sports cars are not intended to be used off-road! 4-wheel drive vehicles are expected to perform in a wide range of environments and applications, they might also be fully loaded one day and empty the next. Terrafirma's twin tube shock absorbers are produced with specifications designed to maximise 'all round' performance and ride quality in any conditions which includes large diameter shafts and pistons, high-capacity shock bodies and velocity sensitive valving. For those looking for something extra go for the 8 Stage Remote Reservoir or Mega Sport.



# TERRAFIRMA 8 STAGE ADJUSTABLE REMOTE RESERVOIR MONOTUBE SHOCKS

8 Stage Adjustable Remote Reservoir shocks from Terrafirma incorporate features such as the massive 20mm double chromed shaft, Monotube construction, Viton oil seal, swivel hose fittings and silicone dust shield.



#### **FEATURES:**

polished zinc plated Monotube shock and reservoir body

20mm diameter double chromed shaft

46mm diameter piston

Fully welded pin and eye mountings

High pressure nitrogen charged

Multi stage valving

Hi temperature fluid

Blue and gold anodised alloy fittings complete the good looks

OE style bushes and mountings for ease of servicing

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 the 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 mountings for easy installation and can be adjusted to suit different terrain and

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.

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

Application	90/110/130/D1/RRC
Front +2"	TF481
Rear +2"	TF482





### TERRAFIRMA 8 STAGE **ADJUSTABLE +5" LONG TRAVEL** SHOCKS

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.

#### **FEATURES:**

52mm diameter polished zinc plated Monotube shock and reservoir body

20mm diameter double chromed shaft

46mm diameter piston

Fully welded pin and eye mountings

High pressure nitrogen charged

Multi stage valving

Hi temperature fluid

Blue and gold anodised alloy fittings complete the good looks

OE style bushes and mountings for ease of servicing



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 8 Stage Adjustable +5" Remote Reservoir shocks for the Discovery 2 have been specifically designed for fitment on the front with the hose neatly passing between the TF534 turret sides allowing the reservoir to be mounted under the footwells. The rear shocks are a piggy back reservoir design to ensure the reservoir is correctly positioned when mounted and are LH and RH specific.

The Terrafirma Remote Reservoir shocks are ideal for vehicles whose owners always drive on 'full attack' mode. Adjustable for rock crawling, cross country and fast road simply by adjusting the 8 STAGE damping adjuster.

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





# TERRAFIRMA MEGA SPORT **MONOTUBE SHOCKS**

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

#### FEATURES:

#### 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

Multistage 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

Long travel, nitrogen adjustable off-road race thoroughbreds.

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. Multistage 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

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 using dedicated Terrafirma mounting systems and can be adjusted to suit different terrain and activities.

The Mega Sport shock is not vehicle specific and as such will suit custom vehicle builders, However

a Terrafirma mounting system has been produced to enable these amazing shocks to be fitted to Defenders, Discovery 1s and Range Rover Classics with some modifications possibly required depending on the installation.

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.

Application	90/110/130/D1/RRC
11" travel front and rear	TF137
Seal kit	TF137SEALS
Replacement ball joint	TFSBJ















#### **FEATURES:**

4" (100mm) travel

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

High pressure Nitrogen charged

High temperature 5W premium quality shock fluid

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

3mm wall thickness

### **TERRAFIRMA 4"** HYDRAULIC BUMP STOPS

Precision engineered from 2" (52mm) diameter steel tube 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.

Mounting Terrafirma hydraulic bumps stops 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 on page 36 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 popular 4x4 applications.

Application	90/D1/RRC and 110/130
4" travel	TF140
Universal weld on mounting can long	TF139
Universal weld on mounting can short	TF139A
Hydraulic bump stop spacer	TF139B
Hydraulic bump stop nylon pad	TF140PAD
Hydraulic bump stop valve	TF140VALVE
Seal kit	TF140SEALS



















# MEGA SPORT MONOTUBE SHOCK MOUNTING KIT

The 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 tunability of the shock performance makes this kit one of the most versatile shock mounting kits available.

Designed as a bolt on kit to mount directly to the chassis and axles of D1 and RRC, modifications may be required to complete the installation on some vehicles.

Application	90/110/130/D1/RRC
Front fitting kit	TF540
Rear fitting kit	TF541

Modifications may be required to fit this kit to 2011 on Defenders







# HYDRAULIC BUMP STOP MOUNTING KITS

Designed to fit with any spring and shock combination.

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 few modifications. Included in the bump stop mounting kits are spacers to allow the compression movement to be restricted to avoid the shock bottoming out or for the bump stop to contact sooner depending on your chosen set up.

The front kit operates in front of the front shock tower and utilises mostly 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.

Hydraulic bump stop mounting kits are also available for the front and rear of the Discovery 2, again designed to be a bolt on kit with minimal modification, the D2 kits use 2" travel adjustable threaded bump stops and allow for a much more aggressive high speed approach to off-roading.

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

Application	90/D1/RRC	110/130	D2	
Front fitting kit		TF542	TF494	
Rear fitting kit	TF543	TF544	TF495	

TF494 and TF495 include Hydraulic Bump Stops





TF542



**TF543** 



### SHOCK ABSORBER FITTING ADVICE AND INFORMATION

The correct shock absorber selection is crucial to ensure that the best performance is achieved. Just as important is to make sure they are fitted correctly. Your 4x4's suspension has to work hard and can be subject to considerable strain and shock loads. 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.



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 diagrams. 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. Shocks for Defender, Discovery 1 and RRC are supplied with 2 sets of bushes to allow fitment to both early and late type rear axles. For long travel (+2" and longer) shocks it may be necessary to remove the metal bush cups found on post 1994 Defenders and Discovery rear axles to 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.

#### 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 regassing 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.



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



# TERRAFIRMA SHOCK DATA

Туре	Application	Open	Closed	Construction	Shaft dia.	Piston dia.	Body dia.	Part number
All Terrain	90/110/130/D1/RRC	585mm	345mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF116
All Terrain	90/110/130/D1/RRC	585mm	360mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF117
All Terrain	D2	590mm	365mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF118
All Terrain	D2	595mm	370mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF119
All Terrain	P38	535mm	330mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF125
All Terrain	P38	485mm	305mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm	TF126
Pro Sport	90/110/130/D1/RRC	605mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF120
Pro Sport	90/110/130/D1/RRC	613mm	383mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF121
Pro Sport	90/110/130/D1/RRC	555mm	340mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF131
Pro Sport	90/110/130/D1/RRC	565mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF132
Pro Sport	D2	645mm	400mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF146
Pro Sport	D2	645mm	400mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF147
Pro Sport	P38	585mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF144
Pro Sport	P38	535mm	335mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm	TF145
4 Stage Adjustable	90/110/130/D1/RRC	673mm	393mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF169
4 Stage Adjustable	90/110/130/D1/RRC	555mm	340mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF172
4 Stage Adjustable	90/110/130/D1/RRC	565mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF173
4 Stage Adjustable	90/110/130/D1/RRC	605mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF174
4 Stage Adjustable	90/110/130/D1/RRC	613mm	383mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF175
4 Stage Adjustable	P38	585mm	360mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF176
4 Stage Adjustable	P38	535mm	335mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF177
4 Stage Adjustable	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF178
4 Stage Adjustable	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF179
4 Stage Adjustable	D2	590mm	365mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF190
4 Stage Adjustable	D2	595mm	370mm	Twin tube low pressure nitrogen/oil	18mm	35mm	57mm	TF191
Big Bore Expedition	90/110/130/D1/RRC	610mm	370mm	Twin tube oil	20mm	50mm	76mm	TF123
Big Bore Expedition	90/110/130/D1/RRC	610mm	395mm	Twin tube oil	20mm	50mm	76mm	TF124
Big Bore Expedition	90/110/130/D1/RRC	550mm	340mm	Twin tube oil	20mm	50mm	76mm	TF129
Big Bore Expedition	90/110/130/D1/RRC	560mm	370mm	Twin tube oil	20mm	50mm	76mm	TF130
Commercial HD	90/110/130/D1/RRC	555mm	335mm	Twin tube low pressure nitrogen/oil	20mm	46mm	60mm	TF142
Commercial HD	90/110/130/D1/RRC	565mm	350mm	Twin tube low pressure nitrogen/oil	20mm	46mm	60mm	TF143
8 Stage Remote Reservoir	90/110/130/D1/RRC	605mm	368mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF481
8 Stage Remote Reservoir	90/110/130/D1/RRC	610mm	380mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF482
8 Stage Remote Reservoir	90/110/130/D1/RRC	675mm	400mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF483
8 Stage Remote Reservoir	D2	705mm	430mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF484
8 Stage Remote Reservoir	D2	705mm	430mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF485 LH&RH
Mega Sport	Universal	810mm	530mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm	TF137





"I tested the rest now I fit the best... If you want 1st place, fit Terrafirma."

Adonis Michaelides, Cyprus

#### **TERRAFIRMA EQUIPPED**

Defender 110 Double Cab Spectre replica fitted with TF236 5" Extreme 4-Stage Adjustable Dislocation kit, TF018 and TF019 coil springs, TF644GD stainless steel brake hoses, TF250 heavy duty steering rods, TF254 adjustable panhard rod, TF571 rear bumper corners, TF843 track rod guard, TF841L steering guard and TF1120 wheel arches



# COIL SPRINGS

Fantastic off-road travel while keeping smooth on road ride and handling.

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 any 4x4 vehicle 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 vehicle 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 must 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 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's coil springs are produced by a hi-tech, ISO approved manufacturer using 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 the following processes:

#### 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 and 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 (Scragging).

#### 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.

See specification guide on page 28

# 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 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 below and combining the Terrafirma Coil Spring application guide and specifications (on page 28) 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**



Vehicles with no additional equipment fitted.

#### **MEDIUM LOAD**



Vehicles fitted with some additional weight such as a roof rack and winch and bumper.

#### **HEAVY LOAD**



Vehicles fitted with significant off-road equipment such as a heavy winch and bumper, loaded roof rack, storage equipment and spare wheel carrier.



### **COIL SPRING SPECIFICATIONS**

Please see below all the coil spring specifications available. More details about each of the springs can be found on the following pages.



Application	Light load	Medium load	Heavy load	Lowered 1"	Lowered 2"	Std height heavy load
Defender 90						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF015	TF023V	TF027V	TF033		TF037
Defender 110/130						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF010	TF019	TF011	TF034	TF035	TF038
Discovery 1/RRC						
Front	TF014	TF018	TF015		-	
Rear	TF015	TF023V	TF027V		The same	
Discovery 2					CAN !	
Front		TF042	TF052		4 118	
Rear		TF023V	TF027V		1100	100
Discovery 3 & 4 air t	o coil springs			CA.	No.	100
Front 2" lift		TF040		2011		ACIA
Rear 2" lift		TF041		-1110	DIE	70
P38 Air to Coil conve	ersion			WILL	13	1
	TF030	TF031		11111	10 16	3/2
Front	11030					and the second second second

#### 2" LIFT COIL SPRING SPECIFICATIONS

Spring rate	pring rate Wire Diameter		Length (DS/PS)		Load kg	E CONTROL OF THE
lbf/in mm	mm	Coils	mm	Front	Rear	Part Number
270	18	8	435/435 mm		150	TF010
440	21	9	435/435 mm		500	TF011
200	16	9	400/390 mm	0-50		TF014
240	16	7.75	405/395 mm	150	100	TF015
240	16	7.5	410/400 mm	50-100		TF018
315	19	8	435/435 mm		300	TF019
300-340	18	9	420/410 mm		200	TF023V
300-360	18	9	430/420 mm		300	TF027V
200	15	7.75	385/375 mm	0-50		TF042
250	16	7.75	385/375 mm	75-150		TF052





#### **COIL SPRING APPLICATIONS**

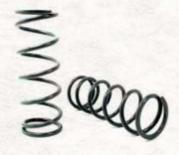
### 90/110/130/D1/RRC LIGHT LOAD FRONT SPRINGS

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**

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

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

### 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**

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.





#### 110/130 **HEAVY LOAD REAR SPRINGS**

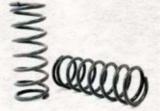
Heavy load rear coil springs will give 2" of lift on heavily laden 110s and 130s for commercial and expedition use. The TF011 is suitable for the rear of 110/130s carrying a constant load and additional equipment weighing more than 500kg. The TF019 is fine for most Defender 110/130 however the TF011 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

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. They are also ideally suited to the front of the P38 Range Rover and are included in the TF222HD Terrafirma air to coil conversion kit and provide approximately 1" of lift.



#### D2

#### **HEAVY LOAD FRONT SPRINGS**

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. These springs are also ideally suited to the rear of the P38 Range Rover and are included in the TF222HD Terrafirma air to coil conversion kit and provide approximately 1" of lift.

### 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

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

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 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 spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

#### 110 LOWERED REAR SPRINGS

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 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.





# **SPRING & SHOCK KITS**

These kits are created for convenience and ease of orderin

Terrafirma 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 vehicle.





The Discovery 2 has often been overlooked for recreational off-road in favour of a Defender but a new league of suspension upgrade kits

will enable you to take on the most extreme terrain as well as enjoy the motorway drive on the way home. As usual Terrafirma springs, shocks and suspension components are available individually for owners to customise their D2s just how they want to, for convenience we have put together a range of kits for the serious off-roader ensuring everything is fully compatible.

Terrafirma coil springs and shock absorbers 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.

Popular combinations of Terrafirma 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 maybe 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.

Terrafirma spring and shock kits have been created for convenience, ensuring correct parts are matched and making ordering easier. 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.







Application	90/D1/RRC			110/130		
Application	Light	Medium	Heavy	Light	Medium	Heavy
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	TF216	TF218	TF215	TF217
All Terrain std travel shocks, standard height heavy load		TF197			TF199	
Pro Sport std travel shocks, standard height heavy load	TF198		TF200			





# AIR TO COIL CONVERSION KITS

The EAS or Electronic Air Suspension systems fitted to Discovery 3 & 4, P38 Range Rovers and the rear of the Discovery 2 can be expensive to repair and not especially reliable when heavily laden.

Eliminating the potentially costly electronic components, air springs and compressor replacement, 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.



### **RR P38**

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 has a loyal band of supporters keeping them roadworthy and in good shape.

The cost of repairing sophisticated systems can sometimes become unviable 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 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.

#### **D2**

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 potholes. 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.

### D3 & D4

In addition to the well-established air to coil conversion kit for the Discovery 3 and with the support of Terrafirma, Dunlop has also developed an air to coil conversion kit for the Discovery 4 which like the D3 kit reduces the likelihood of expensive air suspension repairs and eliminate the potential for suspension failure in remote operating conditions.

The kits are designed to give the same ride height as standard with good load carrying characteristics. Comprising 4 pre-assembled strut assemblies and a sophisticated EAS override module that retains all the original functions such as terrain response, headlight levelling and information screen functions.

In addition to the standard ride height air to coil conversion kits, Terrafirma also offers lifted options for the Discovery 3 and 4 giving 2" (50mm) of increased ride height with the ability to carry a healthy payload.



Standard height vehicle vs vehicle fitted with conversion kit TF263/TF264



# AIR TO COIL CONVERSION KITS



















Application	Part number
Range Rover P38	
Air to coil conversion kit standard ride height	TF222
Air to coil conversion kit medium load 1" lift	TF222HD
Front spring perch conversion kit	TF222KD
Air to coil conversion kit standard ride height including std travel All Terrain shocks	TF223
Air to coil conversion kit medium load 1" lift including standard travel All Terrain shocks	TF223HD
Discovery 2	
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 & std travel All Terrain shocks	TF227
Air to coil conversion kit 2" lift inc front & rear heavy load springs & std 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
Discovery 3 2004-2009/Discovery 4/Range Rover Sport 2005-2010	
Air suspension +2" lift rod kit Discovery 3 2004-2009/Discovery 4/Range Rover Sport 2005-2010	TF221
Air to coil conversion kit standard ride height Discovery 3	TF261
Air to coil conversion kit standard ride height Discovery 4	TF262
Air to coil conversion kit +2" ride height (replacement coil springs TF040 & TF041) Discovery 3	TF263
Air to coil conversion kit +2" ride height (replacement coil springs TF040 & TF041) Discovery 4	TF264



# 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.

Often despite class leading off-road suspension straight from the factory even keen amateur off-roaders quickly reach the limits of wheel travel on standard 4x4s, losing 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 vehicle performs beyond expectation.

Terrafirma Suspension Hardware allows you to customise the performance of your 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.

NB. Bushes are not generally supplied to allow for personal

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.





### FRONT COIL SPRING **DISLOCATION CONES**

#### TF501 / TF490

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. Due to extreme movement of the front shock on a Discovery 2 the TF490 dislocation cones have a unique scalloped design to allow the shock to move without fouling the cone.





#### FRONT SHOCK TURRET SECURING RINGS

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.



#### 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. Terrafirma tubular shock turrets also allow sufficient clearance for the hose and reservoir to pass through when fitting the 8 Stage Adjustable Remote Reservoir shocks.



### +2" EXTREME LONG TRAVEL SKELETON FRONT SHOCK TURRETS

#### **TF522**

These strong and stylish fabricated front shock turrets are ideal when fitting the +5" (125mm) Terrafirma TF169 and TF483 +5" long travel shocks and are necessary to prevent the shock from bottoming out on full compression and making the most of these amazing adjustable long travel shocks. They also allow sufficient clearance for the hose and reservoir to pass through when fitting the 8 Stage Adjustable Remote Reservoir shocks.



#### SKELETON FRONT SHOCK TURRETS

#### TF534 / TF535 (+30mm)



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. TF535 is +30mm.



### **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.

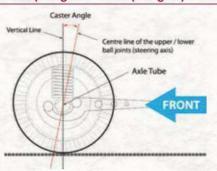






#### CASTER CORRECTED FRONT RADIUS ARMS

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

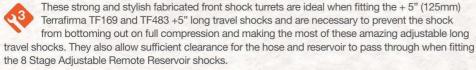


When coil sprung, live axle vehicles are lifted the caster angle is changed (see diagram). This can lead to vagueness and a lack of self-centering of the steering. Fitting 3-degree caster corrected radius arms re introduces positive caster angle to return the steering to the correct geometry on vehicles 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.





#### CRANKED REAR RADIUS ARMS



## CREEPER JOINT REAR RADIUS ARMS

#### **TF532**

These heavy-duty spherical rod ends are ideal for today's flexible suspension systems. Super strong, Creeper Joints will stand up to years of punishment. The outer shell is a single forged piece. The inner ball is made from 8620 tool steel and rides on high quality polyurethane bushings. Heavy-duty, hardened steel washers and circlips hold the joint together. Creeper Joints are super flexible and allow for up to 40 degrees of articulation. A grease nipple is provided for lubrication and the ball is drilled for cross lubrication flow from the outer shell to the mounting bolt. These 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 offset axle end mounts to provide maximum clearance



#### REAR COIL SPRING DISLOCATION CONES

These strong and stylish fabricated front shock turrets are ideal when fitting the + 5" (125mm) Terrafirma TF169 and TF483 +5" long travel shocks and are necessary to prevent the shock from bottoming out on full compression and making the most of these amazing adjustable long travel shocks. They also allow sufficient clearance for the hose and reservoir to pass through when fitting the 8 Stage Adjustable Remote Reservoir shocks.



### **REAR AXLE INVERSE RELOCATION CONES**

#### TF521 / TF5210

An alternative to the dislocation cones, these relocation cones are the ideal method of relocating 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 relocation regardless of shock travel.





### LOWERED REAR TOP SHOCK MOUNTS

#### **TF512**

It is possible to gain and 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.





#### 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.



#### FRONT TWIN SHOCK MOUNT KIT

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.



#### **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 & rear top shock mounts, they may also be required with longer than standard shocks to help prevent damage if the shocks bottom out.



### POLYURETHANE EXTENDED **BUMP STOPS**

#### TF1020 / TF1023



Protect your long travel shock absorbers from damage by restricting the compression movement of the suspension, fitting extended bump stops also allows larger diameter tyres to be fitted without them hitting the wheel arches and bodywork on full compression. Bright red polyurethane bonded to vehicle specific mounting plates make this a simple fitment.





#### SPRING SPACERS

#### TF516 / TF517



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 & rear top shock mounts, they may also be required with longer than standard shocks to help prevent damage if the shocks bottom out.



### D2 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 D2s with rear coil suspension combine TF525 with TF517 for the same effect.

#### 5MM COIL SPRING TRIM SPACERS

#### **TF537**



These simple but effective coil spring trim spacers allow you to adjust the trim of your Defender, D1, D2 and RRC by simply stacking 5mm spacers between the lower spring mount plate and the axle. Correct lean or lift the front or rear to fine tune the suspension to your liking. Sold as a set of 4 plates with nuts and bolts.





#### **D2 EXTENDED ANTI ROLL BAR LINKS**

#### **TF220**

For Discovery 2s lifted 2 or more inches (>50mm) these extended anti roll bare links maintain stability and the correct operation on the front and rear anti

roll bars, ideal for expedition equipped D2s or for owners wanting to retain good road manners on lifted vehicles.





### REAR TOP SHOCK MOUNT RELOCATORS

#### **TF518**



This is an alternative kit to TF512 allowing the original rear top shock mount to be bolted 2"(50mm) lower on the chassis. Attaching the shock mount 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.



#### **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 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



#### 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 drop below conventional dislocation cones, to then miss the cone when the suspension compresses 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.



#### **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 1998 on Td5 and Td4 Defenders.



#### 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 its 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 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.





### RETURN TO CENTRE STEERING DAMPER MOUNTING KIT

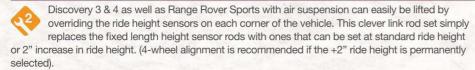
**TF498** 



TF498 has been developed to enable Discovery 2 owners to fit the brilliant RTC steering damper. The kit is designed to be used in conjunction with TF255 heavy duty steering rods or by modifying the original steering rod.



#### HEIGHT SENSOR LIFT RODS





#### LONG TRAVEL WATTS LINK RODS

**TF497** 



Lateral stability on the rear axle of a Discovery 2 is controlled by a WATTS linkage, a pair of panhard rods connected to a pivot link attached to the centre of the rear axle. The WATTS linkage has its limitations when suspension travel is increased which results in damage to the linkage. The TF497 link rods are extended and curved to work within the confines of the back end of the D2 allow for much great axle drop out without restriction and binding.



#### D2 FRONT CROSS MEMBER SPACER KIT

**TF491** 



Fitting long travel shocks to a Discovery 2 can cause the front propshaft to foul on the bolt-on chassis cross member, this alloy spacer kit allows for up to +5" longer travel shocks to be fitted.



### A FRAME BALL JOINTS

TF1129 / TF1129ULTRA

#### **FEATURES:**

Time saving pre-assembled wearing part

Much simpler to replace

Wide angle, adjustable and greaseable option



These A frame ball joints are assembled complete with their A frame mounting bracket, now making it a much simpler job to replace the ball joint.

The ball joints are quality replacement parts equivalent to LR Part No. ANR1799 and RHF500110 fitted into a new A frame or fulcrum bracket. Increasing axle articulation and suspension movement can strain or even break the standard A frame ball joint as its movement was only designed to accommodate the standard wheel travel.



TF1129ULTRA allows 45 degrees of movement which will not restrict even the most radical suspension set up. To prolong service life the TF1129ULTRA joint is fully adjustable and greaseable for maintenance. Suitable for Defender, Discovery 1 and Range Rover Classic.

Acceptance	90			110/130		D1/RRC
Application	Front	Rear	Front	Rear	Front	Rear
A Frame ball joint and bracket				TF1129		
A Frame ball joint and bracket hi articulation			TF	1129ULTRA		



# SUSPENSION HARDWARE

Application	1	90	11	0/130	D1/	RRC		D2		D3	/D4
Application	Front	Rear	Front	Rear	Front	Rear	Front	Coil rear	Air rear	Front	Rea
Dislocation cones	TF501	TF510	TF501	TF511	TF501	TF510	TF490				
Front shock turret securing rings			Т	F502							
Tubular 2" lowered height front shock turrets			Т	F503							
Tubular standard height front shock turrets			Т	F504							
Skeleton shock turrets					***************************************		TF534				
Skeleton 2" taller front shock turrets			T	F522							
Coil spring retaining plates	TF505	TF506	TF505	TF507	TF505	TF506	TF524	TF506			
Caster corrected front radius arms 3 degree			Т	F508			TF529				
Caster corrected front radius arms 6 degree			Т	F528							
Steering damper relocation kit					TF527						
RTC steering damper mounting kit (TF255 required)							TF498				
Cranked rear radius arms			Т	F509							
Creeper joint rear radius arms		**********************	Т	F532		OK/110+0011(C-00010-01					
Creeper joint		•	TF	532RJ							
Rear axle mounted inverse relocation cones	TF	521	TF	5210	TF	521		TF521			
Lowered rear top shock mounts			T	F512							
Twin shock mount kits	TF514	TF513	TF514	TF513	TF514	TF513					
Cross member spacer kit								TF491			
Bump stop spacers			Т	F515							
Extended polyurethane bump stops			TF102	0 (PAIR)				TF10	23 (SET)	A	
Coil spring trim spacers 5mm (set of 4)					***************************************	TF5	37			•••••	
Spring spacers 2"	TF516	TF517	TF516	TF517	TF516	TF517	TF525	TF517	TF526		
Rear top shock mount relocators			T	F518							
Extreme long travel rear top shock mounts			Т	F519							
Fuel filter relocator when TF519 used. 1998 on		•••••	T	FFRK							
Long travel rear coil spring re-locators			Т	F520							
A Frame ball joint and bracket		••••••••••	TI	F1129							
A Frame ball joint and bracket hi articulation			TF11:	29ULTRA							
Extended antiroll bar links				***************************************				TF220			
Air suspension height sensor lift rod kit										TF	221
Long travel WATTS link rods								TF	497		



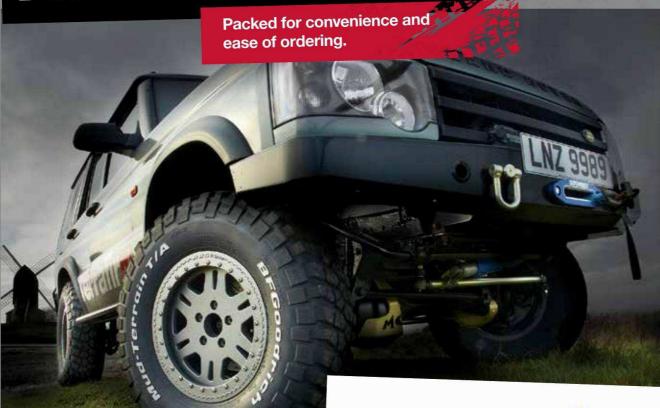


For further information, fitment advice, images, customer reviews please visit www.terrafirma4x4.com





# **FULL SUSPENSION KITS**



Terrafirma Suspension Kits have been created for convenience, ensuring correct parts are matched and making ordering easier.

All Terrafirma suspension products can be bought individually enabling 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, the considerable range of products with all its options and variations can make it seem complicated to select the complete package to suit your vehicle and activity.

For your convenience and ease of ordering we have combined selected products to make a range of upgrade packages.

To cover the widest range of vehicle models and where there hoses, propshafts, bushes and coil springs, these should be selected based on vehicle specification, model year and

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.

Terrafirma 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 vehicle. This catalogue along with your Terrafirma Distributor will advise you on the correct selection for your



## 2" PRO SPORT MINI **DISLOCATION KIT**

#### TF231 / TF232



A II4I	90/D1/I	RRC	110/13	)
Application	Front	Rear	Front	Rear
Kit part number	TF	231	TF	232
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

## 2" PRO SPORT MAXI **DISLOCATION KIT**

#### TF233 / TF234

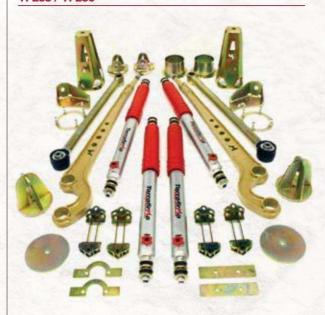


A li 4i	90/D1/I	RRC	110/130		
Application	Front	Rear	Front	Rear	
Kit part number	TF	233	TF	234	
2" longer Pro Sport shock absorbers x2	TF120	TF121	TF120	TF121	
Dislocation cones	TF501	TF510	TF501	TF511	
Front shock turret securing rings	TF502		TF502		
Tubular shock turrets	TF504		TF504		
Coil spring retaining plates	TF505	TF506	TF505	TF507	
Caster corrected front radius arms 3 degree	TF508		TF508		
Cranked rear radius arms		TF509		TF509	



### 5" EXTREME 4 STAGE ADJUSTABLE **DISLOCATION KIT**

TF235 / TF236



Augliantian	90/D1/	RRC	110/130		
Application	Front	Rear	Front	Rear	
Kit part number	TF	235	TF	236	
5" longer 4 Stage Adjustable shock absorbers x4	TF	169	TF	169	
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	



### **MEGA SPORT 11"** TRAVEL SHOCKS AND **MOUNTING KIT**

#### **TF238**



A SALE DATE OF THE SALE OF THE	90/D	1/RRC	110	0/130
Application	Front	Rear	Front	Rear
Kit part number		Т	F238	
Mega Sport 11" travel shock x4		Т	F137	
Mega Sport shock mounting kit	TF540			TF54

### **MEGA SPORT 11"** TRAVEL SHOCK **COMPETITION KIT**

TF247 / TF248



A II II	90/D	1/RRC	110/130		
Application	Front	Rear	Front	Rear	
Kit part number	TF	247	TF	248	
Mega Sport 11" travel shock x4		TF	137		
Mega Sport shock mounting kit	TF540	TF541	TF540	TF541	
Hydraulic bump stop x4		TF	140		
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF543	
Dislocation cones	TF501		TF501		
Caster corrected front radius arms 3 degree	TF508	55.	TF508		
Rose jointed rear radius arms		TF532		TF532	

## HYDRAULIC BUMP STOP AND MOUNTING KIT

#### TF241 / TF242

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/D2 and RRCs with few modifications.

NB. TF494 & TF495 include 2" threaded hydraulic bump stops.



Amelianation	90	)/D1/RRC	1	110/130		D2
Application	Front	Rear	Front	Rear	Front	Rear
Kit part number		TF241		TF242		
Hydraulic bump stop x4	TF140		TF140		TF494	TF495
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF544		



## +5" TRAVEL EXTREME DISLOCATION KIT **FOR DISCOVERY 2**



Application	D2
Kit part number	TF580
Front +5" 8 Stage Remote Resevoir shocks	TF484
Rear RH +5" 8 Stage Remote Reservoir shock	TF485RH
Rear LH +5" 8 Stage Remote Reservoir shock	TF485LH
Front hydraulic bump stops and mounting kit	TF494
Rear hydraulic bump stops and mounting kit	TF495
Front dislocation cones	TF490
Front shock turret securing rings	TF502
Front spring retaining plates	TF524
Skeleton front shock turrets	TF535
3 degree caster corrected front radius arms	TF529
Front cross member spacer kit	TF491
Stainless steel +5" XL extended brake hoses	TF650GDXL
Long travel rear axle watts links	TF497

## +3" TRAVEL MINI **DISLOCATION KIT FOR DISCOVERY 2**

#### TF580



Application	D2
Kit part number	TF580
Front +3" 4 Stage Adjustable shocks (set of 2)	TF178
Rear +3" 4 Stage Adjustable shocks (set of 2)	TF179
Rear axle inverse spring relocators	TF521
Front dislocation cones	TF490
Front shock turret securing rings	TF502
Front spring retaining plates	TF524
Caster correction bushes	TF1009CC
Stainless steel +2" extended brake hoses	TF650GD

### +3" TRAVEL MAXI **DISLOCATION KIT FOR DISCOVERY 2**

#### TF581



Application	D2
Kit part number	TF581
Front +3" 4 Stage Adjustable shocks (set of 2)	TF178
Rear +3" 4 Stage Adjustable shocks (set of 2)	TF179
Rear axle inverse spring relocators	TF521
Front dislocation cones	TF490
Front shock turret securing rings	TF502
Front spring retaining plates	TF524
Skeleton front shock turrets	TF534
3 degree caster corrected front radius arms	TF529
Extended bump stops set of 4	TF1023
Stainless steel +2" extended brake hoses	TF650GD
Long travel rear axle watts links	TF497



# SUSPENSION BUSH KITS

Improve steering control, tyre grip and stability with Terrafirma bushings.

Suspension bushes are the link between your vehicle and its springs, struts, shock absorbers and they provide the flexibility that allows the suspension to operate and maintain alignment.

#### **FEATURES:**

Outstanding abrasion resistance

High load bearing capacity

**Flexibility** 

Increased tensile strength

Chemical resistance to oil, grease, ozone and weathering

Enhanced road holding, steering and performance

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

Longer suspension life and less repair time

Longer tyre life

These components can influence the ride and quality, steering feel, as well as the grip of the tyres, performance of the brakes and vehicle stability. Wear or failure of suspension bushes can cause an unpredictable or ultimately unsafe vehicle.

Unlike rubber, Terrafirma polyurethane suspension bushes are not bonded by compression. Terrafirma bushes 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 bushes ability to maintain its shape, this free pivoting provides sharper handling response and greatly increased suspension control.

A specialist grade of polyurethane is used to ensure maximum resistance to wear and fatigue with optimum flexibility and long life.

Terrafirma suspension bushes are produced in bright red and come with high quality zinc plated steel hardware and assembly grease.



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



# SUSPENSION BUSH KITS

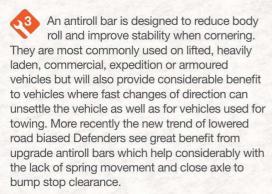
Suspension Bush Kit	Kit number	Kit parts
Defender 95–2001, Defender 2002–2016, Classic R/R 86–95, Discovery 1 86–98		
Rear upper A frame suspension link bush chassis end (NTC1773) set of 2		TF1000
Rear lower suspension trailing arm bush kit axle end (NTC1772) set of 2		TF1001
Front radius arm bush kit axle end (NTC6781) set of 4		TF1002
Front radius arm bush kit chassis end (NRC4514) set of 4	TF940	TF1003
Rear lower suspension trailing arm bush kit chassis end (STC618) set of 2		TF1004
Front panhard rod bush late type (RBX101340) set of 2		TF1005
Front panhard rod bush kit early type (ANR3410) set of 2		TF1006
Optional extras		
Bump stops (ANR4188 & ANR4189) set of 2	TF1021	
Extended bump stops (ANR4188 & ANR4189) set of 2	TF1020	
Shock absorber bush (552819) set of 4	TF1032	
Anti roll bar bush kit (NTC6828) set of 2	TF1024	
Anti roll bar bush kit (NTC7394) set of 2	TF1025	
Defender up to 94		
Front panhard rod bush kit early type (ANR3410) set of 2		TF1006
Rear upper a frame suspension link bush chassis end (NTC1773) set of 2		TF1000
Front radius arm bush kit axle end (NTC7307) set of 4	TF942	TF1007
Rear lower suspension trailing arm bush kit axle end (NTC1772) set of 2	11 0-72	TF1001
Front radius arm bush kit chassis end (NRC4514) set of 4		TF1003
Rear lower suspension trailing arm bush kit chassis end (STC618) set of 2		TF1004
Optional extras		
Bump stops (ANR4188 & ANR4189) set of 2	TF1021	
Extended bump stops (ANR4188 & ANR4189) set of 2	TF1020	
Shock absorber bush (552819) set of 4	TF1032	
Anti roll bar bush kit (NTC6828) set of 2	TF1024	
Anti roll bar bush kit (NTC7394) set of 2	TF1025	
Discovery 2		
Front panhard rod bush late type (RBX101340) set of 2		TF1005
Front radius arm bush kit (RBX101730) set of 2		TF1011
Front radius arm bush kit axle end (RBX101680) set of 4		TF1009
Front anti roll bar bush no ACE (RBX101690) set of 2		TF1036
Front anti roll bar bush with ACE (RBX101181) set of 2		TF1037
Rear anti roll bar bush coil suspension (RBX101710) set of 2		TF1037
	TF945	
Rear anti roll bar air suspension (RBX101700) set of 2		TF1019
Rear radius arm bush kit axle end (ANR6947) set of 4		TF1008
Lower front shock bush (ROA100040) set of 2		TF1042
Rear shock top and bottom bush & front shock top bush (ROA100050) set of 2		TF1043
Front radius arm caster correction bushes (RBX101680)		TF1009CC
Watts linkage complete bush kit		TF1035
Optional extras		***************************************
Bump stops (RNV100060) set of 4	TF1022	
Extended bump stops (RNV100060) set of 4	TF1023	
Discovery 3 2005–2009, Discovery 4 2010–2016, Range Rover Sport 2005–2013		
Front lower suspension arm rear bush (LR073366) set of 2		TF1012
Front upper suspension arm bushes (LR056964) set of 4		TF1013
Front lower suspension arm front bush (LR051585) set of 2		TF1014
Rear lower suspension arm rear bush (LR054831) set of 2	TF946	TF1015
Rear upper suspension arm rear bush (LR51616) set of 2		TF1016
Rear lower suspension arm front bush (LR051611) set of 2		TF1017
Rear upper suspension arm front bush (LR51621) set of 2		TF1018
Optional extras		1010
Front stabiliser bush (RVU500011) set of 2	TF1026	
	TF1026	
Front stabiliser bush (LR015339) set of 2	<del> </del>	
Front stabiliser bush (LR018347) set of 2	TF1030	
Rear stabiliser bush (LR015336) set of 2	TF1028	
Rear stabiliser bush (RVU000022) set of 2	TF1029	
Rear stabiliser link bush (LR018354) set of 2	TF1031	



# ANTIROLL BARS

An antiroll bar helps reduce body roll and increase stability.

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



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/spring rate of the antiroll bar.

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 fitting with lifted springs	suitable for	TF220
Front heavy duty anti roll bar	25.4mm	TF289
Rear heavy duty anti roll bar	25.4mm	TF288
Rear super duty anti roll bar	28mm	TF290
Front anti roll bar fitting kit	TFARBKF	
Rear anti roll bar fitting kit	TFARBKR	
Polyurethane bushes front (pair)	25.4mm	TF291
Polyurethane bushes rear (pair) 110/130	25.4mm	TF292
Polyurethane bushes rear (pair) 110/130	28mm	TF295
2 hole anti roll bar spacer kit		TFARSK2
4 hole anti roll bar spacer kit		TFARSK4





# POLYURETHANE BUSHED SUSPENSION ARMS

Easier servicing with suspension arms pre-fitt with polyurethane bushe

Improved feel and responsiveness, polyurethane bushes provide an excellent balance between stiffness and pliability which results in a more precise feel whilst maintaining ride comfort.

Our pre-assembled replacement polyurethane bushed suspension arms provide an easy to fit solution which will transform the ride quality of your Discovery 3, 4 and Range Rover Sport. It is not uncommon for the original bolts to be corroded and seized, as such bolt kits are available for each suspension arm.













Application	Description	Available part numbers	Bolt kit	
D3/D4 RRS 05-13	Front Lower LH Arm	LR029306TF LR075995TF LR073369TF LR029305TF LR029302TF	TF7205	
D3/D4 RRS 05-13	Front Lower RH Arm	LR029304TF LR075993TF LR073367TF LR029303TF LR029301TF	TF/205	
D3/D4	Front Upper LH Arm	RBJ500232TF LR051615TF		
D3/D4	Front Upper RH Arm	RBJ500222TF LR051614TF	TF7208	
RRS 05-13	Front Upper LH Arm	LR074838TF LR063688TF		
RRS 05-13	Front Upper RH Arm	LR051617TF LR063711TF	TF7208	
D3/D4 RRS 05-13	Rear Lower LH Arm	LR019978TF LR051594TF	<b>TE7000</b>	
D3/D4 RRS 05-13	Rear Lower RH Arm	LR019977TF LR051592TF	TF7206	
D3/D4 RRS 05-13	Rear Upper LH Arm	LR063718TF LR051623TF	<b>TETON</b>	
D3/D4 RRS 05-13	Rear Upper RH Arm	LR063719TF LR051622TF	TF7207	



If you've upgraded or tuned your suspension to suit your off-road activity the chances are you will want to uprate your steering too. Keeping your steering in tip top condition is paramount for safe driving both off and on road, preventing damage while off-road, reducing feedback and vibration from uneven terrain and keeping control with larger tyres is possible with a combination of Terrafirma's steering upgrades.





# STEERING DAMPERS

90/110/130

TF832

Steering dampers improve driver comfort and reduce fatigue.

#### **FEATURES:**

35mm internal bore and piston

54mm big bore twin tube design

16mm double chromed shaft

50/50 damping

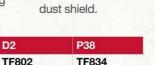
Application

Steering damper

Terrafirma Steering Dampers are considerably larger with almost twice the fluid capacity than the original units and significantly reduce shimmy on rough surfaces as well as the likelihood of the steering wheel being jerked out your handsoff-road. Terrafirma steering dampers also smooth out the steering action from lock to lock without restricting steering return.

D1/RRC

TF811







# **4 STAGE ADJUSTABLE** STEERING DAMPER

#### **FEATURES:**

35mm internal bore and piston

54mm big bore twin tube design

18mm double chromed shaft

Multistage damping adjustment

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 influence 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.

Application	90/110/130	D1/RRC	D2
4 Stage Adjustable steering damper	TF	833	TF837
Fitting kit for TF833 (required)		TF527	







# RETURN TO CENTRE (RTC) STEERING DAMPER

#### **FEATURES:**

30mm internal bore

Mono tube design

12.5mm double chromed shaft

50/50 damping

Coil-over design

The RTC steering damper is more effective than a standard steering damper as the damping ratio has been increased and the addition of a coil-over spring assists movement from lock to lock. This amazing steering damper is a revelation, quite simply the Terrafirma RTC steering damper out-performs all conventional steering dampers hands

When very large tyres are fitted or when you

run consistently low tyre pressures even the best steering dampers struggle 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 looks as good as it works.

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





Application	90/110/130	D1/RRC	D2
Return to Centre steering damper		TF835	
Fitting kit for TF835 (required)		TF527	TF498

# STEERING RODS



# **HEAVY DUTY** STEERING RODS

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 vehicles are particularly vulnerable and can easily get bent seriously affecting front wheel alignment and steering ability. Even slightly bent steering rods can cause excessive tyre wear and poor handling.

When very large tyres are fitted 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 adversely affecting safe steering.

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

The original steering rods fitted to Discovery 2s include a non-serviceable crimped track rod end. For ease of servicing all Terrafirma steering rods use the same track rod ends, see application guide.



Vehicle	Description	Part No.
90/110/130	Steering Rods	TF250
D1	Early type with 3 track rod ends	TF251
D1	Late type with 4 track rod ends	TF252
D2	With 4 track rod ends	TF255
DEF/D1/D2	LH thread lock nut	TFSRNUTLH
DEF/D1/D2	RH thread lock nut	TFSRNUTRH
DEF/D1/RRC	Replacement track rod end (RH thread)	RTC5869
DEF/D1/RRC	Replacement track rod end (LH thread)	RTC5870



# **ADJUSTABLE** PANHARD RODS

Lateral stability on the front end of coil sprung vehicles 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.



Vehicle	Part No
90/110/130 up to 2007 & D1/RRC up to 1998	TF253
90/110/130 2007 on	TF254
D2 up to VIN number 2A999999 – Longer version	TF254
D2 VIN number 3A000001 on – Shorter version	TF256
Replacement bush kit	TF1034







Fitting a brake upgrade can bring a variety of benefits, Terrafirma has teamed up with some leading manufacturers to give you more than just reduced stopping distance. We can even upgrade the hand brake on your Defender! The Terrafirma brake upgrade ranges that follow prioritise the practical benefits as well as the aesthetic features.



Higher quality brake parts can also last longer and perform better under extreme conditions, which of course improves safety. Not only that but you can now follow the trend of some of the most fashionable vehicles with cool looking brake discs and bright coloured pads.

Whether you expect more from your brakes from cold, want improved pedal feel, suffer from brake fade when towing or fully laden or simply want to balance that performance upgrade by being able to stop quicker...



# TerrafirMa

# **WAVY CROSS DRILLED** AND GROOVED **BRAKE DISCS**







It's not just the Audi R8 that has these awesome looking front brake discs! You can have them on your Defender too.

Exclusively from Terrafirma are these wavy edge cross drilled and grooved vented front brake discs suitable for all Defenders (with vented front discs) and Discovery 2s. They can also be fitted to non-vented braked Defenders with a simple caliper change if required.

Terrafirma wavy cross drilled and grooved brake discs are made to the same high standards as the CDG brake discs. Wavy edges clear mud and debris from within the caliper and they look awesome too! Cross drilling and grooves offer increased bite from cold and help force gasses and dust out from between the pad and disc. The Terrafirma WCDG discs are painted black on all non-friction surfaces for corrosion resistance when fitted to the vehicle.

Vehicle	Туре	Part number
DEF, D1 & RRC-FRONT	Vented	LR017952WCDG
DEF, D1 & RRC-REAR	Solid	LR017953WCDG
DEF 110/130-REAR	Solid	LR018026WCDG
D2 FRONT	Vented	SDB000380WCDG
D2 REAR	Solid	SDB000470WCDG

#### **FEATURES:**

Run cooler and minimise fade

Eject gasses and water to stop pads from hydroplaning

Make sure they are fitted with Terrafirma performance brake pads or other quality brake pads.

See performance brake pads on page 59





# **CROSS DRILLED** AND GROOVED **BRAKE DISCS**

Terrafirma brakes discs offer increased bite from cold and excellent fade resistance in most 4WD braking applications.



#### **FEATURES:**

Run cooler and minimise fade

Eject gasses and water to stop pads from hydroplaning

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. 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. The cross drillings contribute to cooling and heat dissipation and also allow the gasses to escape. Of course, they can fill with mud when off-road, cleaning them out afterwards when washing the vehicle will help prolong performance and pad life, with the angled grooves it is found that they selfclean in most cases. 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 needs to be generated for the pads to really work. Even some well-known brands require the temperature to build up before they start to work effectively.

Vehicle front	Туре	Part number
DEF 90/110/130, D1, RRC	Solid	LR017951CDG
DEF 90/110/130, D1, RRC	Vented	LR017952CDG
FL1 96-06 TO YA999999	Solid	SDB100830CDG
FL1 96-06 FROM 1A000001	Vented	SDB101070CDG
FL2 & EVOQUE 2.2D	Vented	LR007055CDG
FL2 PETROL	Vented	LR027107CDG
EVOQUE 2012>, DISCO SPORT 2015>	Vented	LR059122CDG
D2 98-04	Vented	SDB000380CDG
D3, D4, RRS 05-09 TDV6	Vented	SDB000604CDG
D3 05-09, RRS 05-09 4.4 FROM 6A953689	Vented	SDB000614CDG
RR P38	Vented	NTC8780CDG
RR L322 02-09 TO 5A999999	Vented	SDB000201CDG
RR L322 02-09 TO 5A999999, RR L105 10-12 FROM AA0000001	Vented	LR031843CDG
RR L322 02-09 FROM 6A000001 TO 9A999999	Vented	SDB500182CDG
D4, RRS 05-09 FROM 6A953689, RRS 10-13 FROM AA000001	Vented	SDB000624CDG
RRS 10-13 5.0P, RRS 2014>, RR L405 2013>, RR L405	Vented	LR016176CDG
RR L322	Vented	LR031845CDG
RRS 2014>, RR L405	Vented	LR038934CDG
RR L322 2010-2012	Vented	LR011591CDG

Vehicle rear	Туре	Part number
DEF 90/110/130, D1, RRC	Solid	LR017953CDG
DEF 110 & 130 2002>	Solid	LR018026CDG
FL2 2.2D	Solid	LR001018CDG
FL2 2.2D	Solid	LR039935CDG
FL2 PETROL	Vented	LR001019CDG
EVOQUE	Solid	LR027123CDG
DISCO SPORT 2015>	Solid	LR061388CDG
D2 98-04, RR P38	Solid	SDB000470CDG
D3 4.4P TO 9A999999, D4 FROM AA000001 TO CA999999, RRS 05-09 TO 9A999999, RRS 2010-2013	Vented	SDB000646CDG
RR L322 2002-2009	Solid	SDB000211CDG
RR L322 2010-2012	Vented	LR031844CDG
RRS 05-09 FROM 9A999999, D3 2.7D & 4.0 P FROM 5A341770 TO 9A999999, D4 2.7 FROM AA000001 & 4.0P DA000001 TO CA999999	Vented	SDB000636CDG
RRS 2104>, RR L405 2013>	Vented	LR033303CDG
RRS 2010-2013	Vented	LR016192CDG
RRS 2014>, RR L405, D5	Vented	LR033302CDG
RR L322 2010-2012	Vented	LR031846CDG

For Terrafirma brake discs part numbers it is possible to simply apply CDG suffix to the original part numbers.

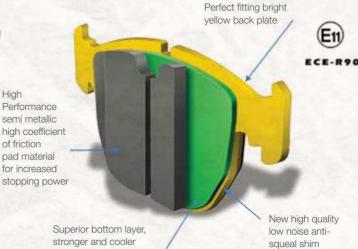
To get the best from Terrafirma cross drilled and grooved brake discs we recommend the use of Terrafirma Performance or Premium Ceramic Brake Pads.

# **BRAKE PADS**

# TerrafirMa

# **PERFORMANCE BRAKE PADS**

For overweight 4-wheel drive vehicles with oversize tyres it's important to find a set of brake pads that really do perform.



#### **FEATURES:**

Increased stopping power Reduced pedal pressure Improved braking hot and cold

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 work within their optimum performance window. This is not always possible on a 4-wheel drive vehicle.

To get the best from Terrafirma Cross Drilled and Grooved (CDG) brake discs we recommend the use of our Terrafirma Ceramic brake pads. These pads give good bite from cold, work well off-road especially in low range with high torque engines and transmissions driving against the brakes. They have high wear resistance, low noise and above all when combined with Terrafirma CDG brake discs give a much-improved braking Performance. Terrafirma Performance Brake Pads in unmistakeable

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 and 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.



Vehicle Front	Part number
DEF 87-06 & DEF07- (vented discs)	SFP000260P
DEF 83-06 & D1 (Solid discs, no sensors)	SFP500160P
DISCO SPORT, EVOQUE 15-	LR072681P
EVOQUE 12-15	LR027309P
D1 & RRC	SFP500220P
D2	SFP500150P
D3, D4 & RRS 2.7 & 4.0, D4 with coils, RR 02-09 & RRS 4.4 with 17" wheels	LR019618P
D4, RRS 10-13 3.6 3.0 & 5.0, RR 10- & RRS 2014-, RR 13-	LR051626P
RR 10-12 5.0 NA & 3.6 RRS 10-13	LR026221P
RR 02-09 4.2 & 3.6 RRS 05-09	SFP500070P
RRS 10-13, RR 10-12, RR 13-	LR064181P
RR 02-09	SFC500080P

Vehicle Rear	Part number
DEF 83-06 & DEF 07-	SFP000250P
DEF 90	SFP000280P
DISCO SPORT, EVOQUE 15-	LR061385P
EVOQUE 12-15	LR043714P
D1 & RRC	SFP500190P
D3, D4 with coils & RR 02-09	LR055454P
D4	LR055455P
D4, RR L322 & RRS 10-13	LR015519P
RR 95-02 & D2	SFP500130P
RR 02-09	SFP500210P
D3, D4 & RRS 05-09	LR021316P
RRS 10-13, RR 10-12	LR025739P
RRS 2014-, RR 13-	LR108260P

For best results combine with Terrafirma Crossed Drilled and Grooved Brake Discs.



# TerrafirMa

PREMIUM CERAMIC **BRAKE PADS** 

#### **FEATURES:**

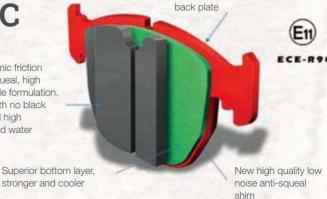
Quieter than semi-metallic pads – emit noises that are above the range of human hearing

Produce finer, lightercoloured 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

Premium Ceramic friction material. No squeal, high friction, anti-fade formulation. Long lasting with no black dust. Increased high temperature and water resistant.



Perfect fitting bright red

Terrafirma Premium Ceramic Brake Pads in unmistakeable bright red are composed of a friction material that includes ceramic and Kevlar fibres. Ceramic pads have been designed to significantly reduce brake dust and noise and extend brake disc life. Terrafirma Premium Ceramic friction material is also kinder on your alloys, producing no corrosive black dust and generally lasting longer than semi metallic pads with no squeal.

Vehicle Front	Part number
DEF 87-06 & DEF07- (vented discs)	SFP000260TF
DEF 83-06 & D1 (Solid discs, no sensors)	SFP500160TF
DISCO SPORT, EVOQUE 15-	LR072681TF
EVOQUE 12-15	LR027309TF
D1 & RRC	SFP500220TF
D2	SFP500150TF
D3, D4 & RRS 2.7 & 4.0, D4 with coils, RR 02-09 & RRS 4.4 with 17" wheels	LR019618TF
D4, RRS 10-13 3.6 3.0 & 5.0, RR 10- & RRS 2014-, RR 13-	LR051626TF
RR 10-12 5.0 NA & 3.6 RRS 10-13	SFP500070TF
RR 02-09 4.2 & 3.6 RRS 05-09	LR026221TF
RRS 10-13, RR 10-12, RR 13-	LR064181TF
RR 02-09	SFC500080TF

Vehicle Rear	Part number		
DEF 83-06 & DEF 07-	SFP000250TF		
DEF 90	SFP000280TF		
DISCO SPORT, EVOQUE 15-	LR061385TF		
EVOQUE 12-15	LR043714TF		
D1 & RRC	SFP500190TF		
D3, D4 with coils & RR 02-09	LR055454TF		
D4	LR055455TF		
D4, RR L322 & RRS 10-13	LR015519TF		
RR 95-02 & D2	SFP500130TF		
RR 02-09	SFP500210TF		
D3, D4 & RRS 05-09	LR021316TF		
RRS 10-13, RR 10-12	LR025739TF		
RRS 2014-, RR 13-	LR108260TF		



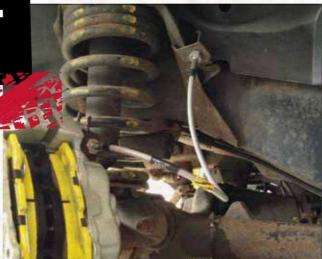


**Terrafirma Premium Ceramic Brake Pads** are suitable for all types of brake discs including Terrafirma Crossed Drilled and Grooved brake discs.

# STAINLESS STEEL **BRAKE HOSES**

Stainless steel hoses significantly increase braking efficiency.

Replacing the standard original rubber brake hoses with stainless steel braided hoses will significantly improve brake pedal feel, reduce sponginess and increase braking efficiency.



#### **FEATURES:**

Each hose has a PVC protective covering.

**OEM Specification fitting plating with** 968-hour salt spray protection.

UK manufactured and assembled product.

Eliminates spongey 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

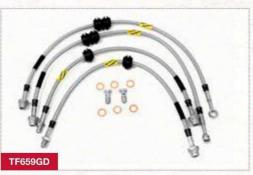
Stainless steel brake hoses can also be entirely corrosion resistant especially with stainless steel fittings. Developed for motorsport applications where braking performance must be maintained in harsh conditions and at extreme temperatures, stainless steel braided hoses are more durable and considerably stronger. For on road or off-road, the benefits will be instant with more precise and confident braking, reliability and longer life.

Terrafirma has partnered with Goodridge who set the standard in professional motorsport brake hoses to provide you the finest stainless steel brake hose kits on the market. Featuring top quality stainless steel braided hose with a PTFE liner and hose end fittings are also stainless steel as standard, with a clear PVC cover to maintain appearance. All Terrafirma Goodridge brake hoses



are 2 inches longer than standard which are suitable to replace the rubber brake hoses on standard vehicles as well as accommodate most suspension lifts of around 2".





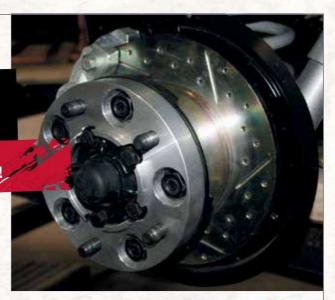
Vehicle	Туре	Part number
DEF 90 TO 1999	3 Line kit	TF640GD
DEF 1999 2004	4 Line kit	TF641GD
DEF 110/130 up to 1999	3 Line kit	TF642GD
DEF ABS 1999 to 2004	4 Line kit	TF643GD
DEF ABS 2004 on	4 Line kit	TF644GD
DEF no ABS 2004	3 Line kit	TF645GD
D1 1989 to 1992	5 Line kit	TF646GD
D1 1992–1994	5 Line kit	TF647GD
D1 ABS 1994 to 1998	4 Line kit	TF648GD
O1 no ABS 1994 to 1998	3 Line kit	TF649GD
D2 1998 to 2004	4 Line kit	TF650GD
D2 1998 to 2004 +5" Extreme	4 Line kit	TF650GDXL
D3	6 Line kit	TF651GD
04	6 Line kit	TF652GD
RRC ABS 1990 to 1992	6 Line kit	TF653GD
RR P38 94-02	6 Line kit	TF654GD
RR L322 02-2012 std length	4 Line kit	TF655GD
RR Sport L320 std length	6 Line kit	TF639GD
FL1 1997-2006	4 Line kit	TF657GD
FL2 2006-2014	4 Line kit	TF658GD
EVOQUE	4 Line kit	TF659GD

# TerrafirMa

# **BRAKE UPGRADE KITS**

Increase your stopping power with these big brake upgrades!

Upgrade kits for Discovery 3, Discovery 4 and Range Rover Sport.



#### **FEATURES:**

More stopping power

#### Easy to fit

Choice of kit to suit budget/ brand preference

These great value upgrades provide a significant increase in braking performance simply by fitting new caliper brackets, brake pads and 340mm diameter discs. The original brake caliper is retained and no brake bleeding is required. Choose your pad type and upgrade the old 320mm brake discs with one of the following options. NB. Suitable for vehicles with 320mm brake discs which is most 2.7tdv6 and 4.0P D3 and RRS 09-09

It is also possible to upgrade to the even bigger 360mm brake discs, this kit is more comprehensive as it requires, discs, pads, calipers and caliper mounting brackets. It is essential that this kit is only fitted to vehicles with 19" diameter wheels.









Description	Part number
Allmakes Brake Upgrade using Uni-Brakes pads and Allmakes discs	TF630
Allmakes Brake Upgrade using Ferodo pads and Delphi discs	TF632
Terrafirma Brake Upgrade using Ferodo pads and Terrafirma cross drilled and grooved discs	TF634
Terrafirma Brake Upgrade using Terrafirma Premium Ceramic brake pads, Terrafirma cross drilled and grooved discs	TF636
Terrafirma Brake Upgrade using Terrafirma Performance brake pads, Terrafirma cross drilled and grooved discs	TF638





# **DISC BRAKE** HANDBRAKE KIT

#### **FEATURES:**

maintenance free

More reliable

**Better holding** power

The original transmission brake on a 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 off which can then lead to vibration, overheating and

accelerated wear. All 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



Description	Part number
Disc brake handbrake kit	TFDBHBK
Replacement brake pads	TFDBHBK PADS

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. Suitable for all Defenders up to 2007. For 2007 on Defenders cross member alteration may be required.



Regardless of your chosen off-road activity work or play and despite 4x4s being built for off-road use there is more to be done in terms of protecting the underside and bodywork of your vehicle against damage against rocks and ruts etc. The more serious your chosen off-road adventures the more protection is necessary.

All Terrafirma under bodyguards perform important roles and have been designed to protect any part of the 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.

\*\*\*

Terrafirma guards protect the steering gear, front and rear differentials, transmission system and fuel tanks as well as vulnerable areas of bodywork such as the sills and rear corners. Typically, guards are made from

guards are made from 5-6mm steel and 6-8mm 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 zinc passivated or powder coated for good looks and rust resistance. Terrafirma guards often mount onto existing pre-drilled holes requiring minimal drilling and all necessary fixings are supplied.





# **UNDERBODY GUARDS**



### STEERING GUARDS

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

The Terrafirma Skeleton lightweight steering guard is designed to complement the Skeleton Range of Bumpers and Rock Sliders. Stylish and effective this 6mm slotted alloy guard with 6mm steel side plates also has bolt on red recovery points and really stands out from the crowd. Defender steering guards are available in black or natural allov.



## TRANSMISSION GUARDS

The bottom of the gearbox, transfer box and handbrake assembly hang slightly below the chassis rails on Defenders and Discoverys 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.



### DIFFERENTIAL GUARDS

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 TANK GUARDS**

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.

Fuel tanks are typically under the side or under the rear overhang, both vulnerable when the going gets tough. Terrafirma steel and alloy fuel tank guards provide complete protection against rocks etc 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 nonstandard equipment has been fitted.



## DEFENDER FUEL COOLER GUARD

All 2007 on 2.4 and some 2.2 Defenders have a fuel cooler located inside the chassis rail behind the front axle. Damage to the cooler or pipework in this area could spell disaster. This simple and easy to fit guard provides just the right amount of protection.



# The more serious your adventures the more protection is necessary

## **UNDERBODY GUARDS**



Differential guard



Alloy steering guard tapered with recovery points



Skeleton alloy steering guard with recovery



Alloy steering guard



Track rod guard



Differential guard



Clamp on differential guard



Salisbury axle differential guard



Salisbury Skeleton differential guard



Steel transmission guard



Steel transmission guard



Steering and sump guard



Alloy transmission guard



Alloy fuel tank guard



Alloy fuel tank guard



Fuel cooler guard

A section of	Defende	er 90	Defende	er 110/130	D1/RR	C D2	P38	D3	D,
Application	83-94 94-98 98-02 02	-07 07-12 12-	83-94 94-98 98-0	02-07 07-12	12- 89-94 94-	98 98-02 02-04	94-02	04-09	
steel steering guard (WB suitable for vinch bumper)					TF858	TF894 (TF894WB			
alloy steering guard tapered with		LHD =	TF841L	(TF841LB)					
ecovery points (BLACK)		RHD =	TF841R	(TF841RB)					
keleton alloy steering guard with ecovery brackets (BLACK)		TF0016	(TF0017)						
lloy steering guard (WB suitable for vinch bumper)					TF890	TF895 (TF895WB		TF828	
rack rod guards	TF	843		TF843					
ront differential guards	# (		TF844			TF838	TF898		
ear differential guards	TF84	6		TF854	TF846	TF839			
lamp on diff guard (not Wolf rear axle)				TF80-	49				
lear Salisbury axle differential guard			TF853						
ear Salisbury skeleton diff guard			TF891						
teel transmission guards	TF856	TF881	TF856	TF8	81	TF868 (TF868V8)			
teering and sump guard									TF8
lloy transmission guards	TF857	TF882	TF857	TF8	82			TF8	330
teel fuel tank guards						TF864			
lloy fuel tank guards	TF848	TF850	TF855	TF845	TF863	TF865			
uel Cooler guards		TF880		TF8	80				





Rock sliders or side protection bars are a must have for both recreational

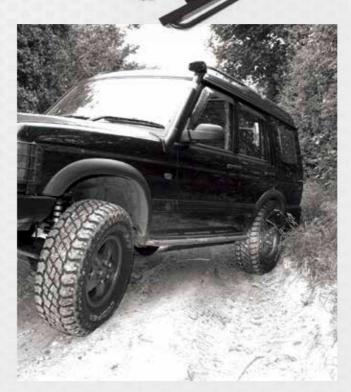
and serious off-roaders. Protecting the sills and sides of your pride and joy is paramount. Keeping the bodywork away from large rocks, earth banks and trees will save a considerable amount of money in the long term.

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 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 when 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 strong enough to protect the side of your vehicle, this means you can jack up the vehicle on them if required.

Terrafirma Skeleton rock sliders for Defenders are made from 3mm mild steel with punched and swaged slotted holes for weight reduction and unique styling, these are the latest evolution in design and function, finished in lustrous satin black powder coat these rock sliders are chassis mounted and fully adjustable to ensure the perfect fit.



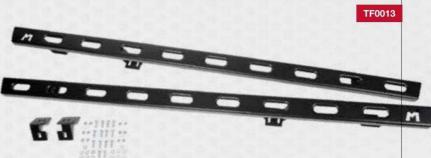


# **DEFENDER SKELETON ROCK SLIDERS**



These tube construction Raid Style rock sliders have a swollen tree bar beneath the second row doors with a cool perforated infill panel designed to kick obstacles away from the rear body and wheel arch.

Application 110 Skeleton Rock Sliders TF0012 TF0013



# **BAJA RAID ROCK SLIDERS**



These tube construction Raid Style rock sliders have a swollen tree bar beneath the second row doors with a cool perforated infill panel designed to kick obstacles away from the rear body and wheel arch.

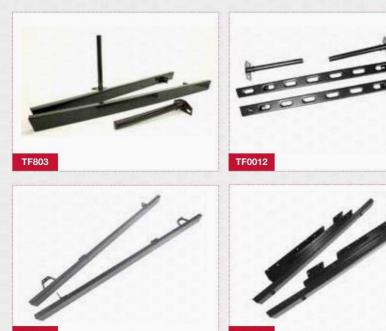
Application	D2
Baja Raid Rock Slider	TF493



See more rock sliders on the next



# **ROCK SLIDERS**











TF809







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

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 (shorte	r version when fitt	ing wheel arch	kits)		TF807WA			
Skeleton Rock Sliders	TF0012	TF0013						
Baja Raid Rock Sliders						TF493		
Galvanised with tree bars	TF801GAL	TF810GAL						
Grip tape roll 50mm x 5m				TF8	19			





**FEATURES:** 

Mounts to existing holes in new 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 rear corners but also keep the rear lights from harm as well as acting as a step with the useful grip tape or chequer plate applied. Two options are available for both 90 and 110. Version one bolts directly onto the rear cross member and requires no modifications, for vehicles fitted with a spare wheel carrier the WC option is compatible. Version two is the Extreme rear bumper corner and body corner combination, installation requires the lower edge of the body to be removed (ideal if it has already been damaged), the replacement body corner fitted which allows the improved departure angle tubular rear bumper corner to be fitted (no spare wheel carrier option).







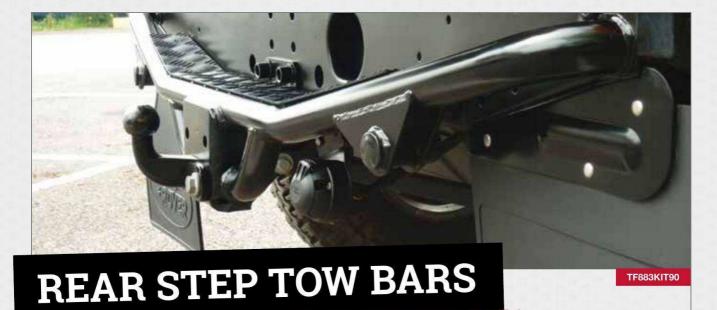






Application	90	110
Rear bumper corners without spare wheel carrier	TF570	TF571
Rear bumper corners with spare wheel carrier	TF570WC	TF571WC
Extreme Rear Bumper Corners	TF572	TF573
Terrafirma extreme rear body corners	TF574	TF575
Skeleton rear step corner bumpers		TF0018





Terrafirma rear step tow bars are certificated for towing.

#### **FEATURES:**

Easier access to the rear of a Defender

**Built in jacking points** 

Choice of tow bar height

TF883WB

This classic accessory was first manufactured in the mid-90s for the Defenders exported to the US. The NAS or 'North American Spec' rear step is also a tow bar and is securely bolted to the rear cross member of all Defender models. It is made from black powder coated steel tube and very stylishly fabricated and includes an alloy tread plate step, jacking points and trailer lighting socket mount plate.

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 number
Defender 90 Certificated	TF883KIT90
Defender 90 Certificated	TF883KIT90TDI
Defender 110 Certificated	TF883KIT110
Defender 90/110 winch bumper tow bar	TF883WB



# **AXLE REINFORCING KIT**

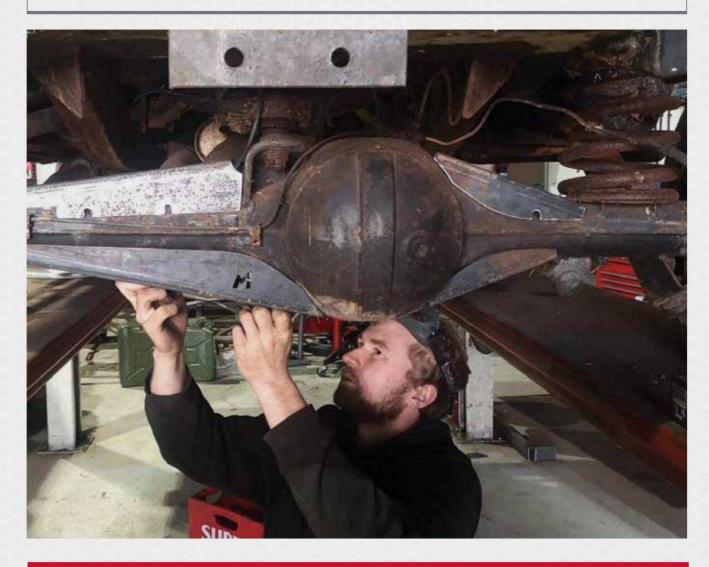
#### **FEATURES:**

Pre cut weld on reinforcing sections

Ideal for extreme load conditions

Constant heavy impacts, jumping and extreme loads can in fact bend a Defender axle case, even a slight bend can cause wheel alignment problems, irregular tyre wear, poor handling and premature internal component failure! If you think you use your vehicle beyond its realistic capabilities, then maybe these weld on reinforcing kits are for you.

Vehicle	Description	Part number
90/110/130/D1/RRC	Axle reinforcing kit long nose front axle	TF770
90/D1/RRC	Axle reinforcing kit long nose rear axle	TF775
D2	Axle reinforcing kit front axle	TF771
D2	Axle reinforcing kit rear axle	TF776





For further information, fitment advice, images, customer reviews please visit www.terrafirma4x4.com



In this section we look at accessories that are associated with the recovery or self-recovery of your off-roader, whether they are fixed to the vehicle like a bumper or part of the equipment required to perform a safe recovery.

The Terrafirma range of bumpers and winch mounts has been designed to meet the broad range of winching and offroad activities carried out by owners and operators. A combination of performance, practicality and style has been employed in the development of these bumpers, from recreational & serious off-road to commercial & military use. The entire range has been created to accommodate the most popular winches such as our amazing Terrafirma A12000 Winch as well as popular models from other winch manufacturers. 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 steering guard brackets to fit between and spacers are included in the fitting kits to take up the clearance if no guard is to be fitted.



### **TUBULAR BUMPERS**

#### **FEATURES:**

Available with or without A bar

A bar spotlight and light bar mounts

**Improved** approach angle\*

Available for both AC and Non-AC equipped vehicles Tubular winch bumpers are very popular with both recreational and competitive offroaders.

The A bar is often seen as an important structural part of tubular bumper design and also includes mounting points for

spotlights and light bars. 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. Defender owners looking for the tubular look but do not have need for a winch can choose the Terrafirma Tubular non-winch bumper option in both air con and nonair con versions.











Application	90/110/130	
Application	Without AC	With AC
Tubular winch bumper with A bar (Terrafirma and most popular winches)	TF001*	TF001AC
Tubular winch bumper without A bar (Terrafirma and most popular winches)	TF003*	TF003AC
Tubular non winch bumper	TF005	TF005AC

\*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.



# errafirMa SKELETON BUMPERS

#### **FEATURES:**

Modern design

AC and Non-AC winch bumpers

Stylish and lightweight

Accepts DPT100070 end caps

Skeleton bumpers combine striking rally raid race styling, lightweight construction and unique manufacturing processes to give Defender owners the 'Best of all Worlds'.

Made from a combination of 3 and 5mm mild steel with punched and swaged holes for weight reduction and styling, finished

in lustrous satin black powder coat. These bumpers are designed to accept TFSRP swivel recovery points, enable fitment of DPT100070 moulded end caps, accommodate steering guards and accept all popular winch models using the traditional 10" x 4.5" bolt pattern. They do not require any body modifications and as you would expect they are available for both AC and Non-AC equipped Defenders.

Also available in the Skeleton range are a couple of non-winch bumpers carrying the same theme, a straight front bumper made from 3mm mild steel with 9 punched and swaged holes for weight reduction and styling and a cranked version with 18 holes, the cranked ends allow for significantly increased approach angle, showing more of the tyre and giving that rally raid appearance to your Defender, both are finished in the same black powder coat and also accept DPT100070 moulded rubber end caps.

For Defender owners looking to illuminate the way one further option is our Skeleton front bumper that incorporates 4x 70mm round, 4W, 7000K, IP67 LED lights, each neatly mounted in neat bezels. Fabricated in steel with 4 elongated punched and swaged holes. Supplied with a wiring kit and as usual drilled to accept DPT100070 moulded end caps.





TF0014 TF0015









Annibodies	90/110/130		
Application	Without AC	With AC	
Skeleton cranked winch bumper (Terrafirma and most popular winches)	TF0014	TF0015	
Skeleton cranked non winch bumper		TF0011	
Skeleton straight non winch bumper	TF0010		
Skeleton LED front bumper (4 lights) Replacement lights TF056L (pair)		TF056	



### **PRO TAPER BUMPERS**

#### **FEATURES:**

**Improved** approach angle

Available for both AC and Non-AC equipped vehicle

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-airconditioned 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 marketplace. Air cooling slots plus built-in recovery and jacking points complete these superb winch bumpers.





Application	90/110/130	
Application	Without AC	With AC
Pro Taper winch bumper suits small chassis winches (Terrafirma and most popular winches)	TF006	TF006AC
Pro Taper winch bumper suits large chassis winches (14000+ lbs winches)	TF060	TF060AC

### COMMERCIAL **BUMPERS**



#### FEATURES:

Available for both AC and Non-AC equipped vehicles

New tapered design

Integrated recovery points

Terrafirma Defender commercial winch bumpers are designed to accommodate the most popular mid-range winches, especially the Terrafirma A12000 winch as well as those from other popular brands. The winch mount bolt pattern dimensions of 10" x 4.5" are common for almost every brand of winch constructed with inline motor-drum-gearbox configuration. The

Commercial winch bumper could be regarded as a standard winch bumper and is perfect for the user looking for a winch mount with additional protection, ideal for builders, tree surgeons and farmers etc. Commercial bumpers are made from 5mm steel and are very strong in their construction. Each bumper incorporates 2 jacking points that will accept the standard jack or a Hi-lift jack adaptor as well as 2 recovery points and have tapered ends for a touch of style.

Analization	90/110/130		
Application	Without AC	With AC	
Commercial winch bumper (Terrafirma, Superwinch and most popular winches)	TF002ST	TF002ACST	
Commercial winch bumper (Terrafirma and most WARN winches)	TF002W	TF002ACW	



### **HEAVY DUTY TAPERED BUMPERS**

TF055

#### **FEATURES:**

Available with or 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.



Application	90/110/130	
Application	Without AC	With AC
Heavy duty tapered bumper	TF055	
Heavy duty tapered bumper with centre towing pin and recovery points	TF055WRP	

### **DISCREET WINCH MOUNTS**

#### **FEATURES:**

Discreet appearance

Winch mount solution with original bumper

**Economical** 

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 discreet winch mount is the perfect option. For all Discovery models there is enough 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. See our winch fitting guide to identify which winch fits your bumper choice.

Application	D2	D3/D4/RRS-'10
Discrete winch mount (Terrafirma and most popular winches with removable solenoid pack)	TF078	TF097







Bumpers inspired by the space frame designs used in Rally Raid competitions

A huge amount of work has gone into developing the 'Raid' style winch bumper with improved approach angle, good protection and light weight.

The tubular construction and infill panels with swaged holes are inspired by the Baja and rally raid space frame designs that have evolved to be lightweight and super strong. No exterior painted bodywork needs to be cut or trimmed, however some trimming of non-critical behind the bumper material is required to make space for the winch installation. The bumper is 6 point mounted to the chassis for maximum strength and the winch mounting area is designed to take Terrafirma and most other popular winch models. There is provision for a pair of TFSRP swivel recovery eyes and the original fog lights can be replaced with TF713 spot lights neatly located within the curves of the front bumper.

The matching 'Raid' style rear bumper is pre drilled for TFSRP swivel recovery points, will accept the original tail lights and can incorporate standard towing equipment as well as Terrafirma receiver hitches. There is also provision for a swing away spare wheel carrier on one side and a swing away jerry can/shovel and hi lift jack carrier on the other.

Application	Part number
Discovery 2 Raid Style winch bumper	TF492
Discovery 2 Raid Style rear bumper	TF486







### Discovery 1, 2 and P38 Range Rover

### FRONT AND REAR BUMPERS

#### **FEATURES:**

No cutting to painted bodywork

Designed to complement original body design

Jacking points and swivel recovery eyes

This range of bumpers has been designed to replicate the original bumper profiles as closely as possible while allowing for winch fitment and increased protection.

Angles, radiuses, 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 & recovery or off-road impacts do not shift the bumper on its mountings for guaranteed long lasting strength and reliability.

These Terrafirma bumpers are designed so that no exterior painted 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 TFSRP 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 TFSRP swivel recovery eyes.

As Terrafirma 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.











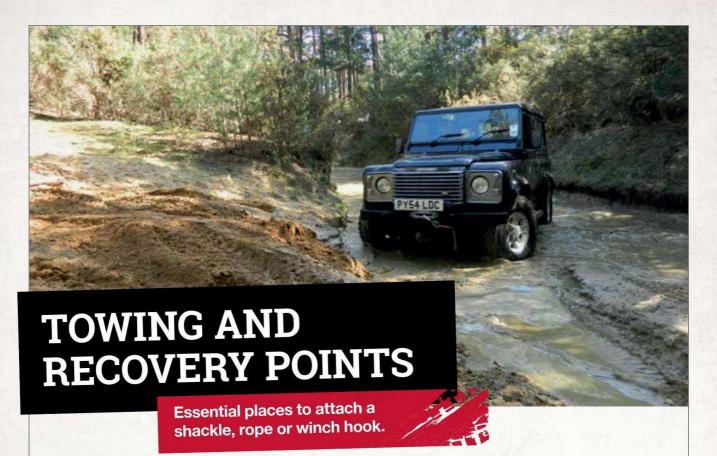








Application	D1	D2	P38
Winch bumper with swivel recovery points (Terrafirma and most popular winches)	TF095	TF009	
Winch bumper without swivel recovery points (Terrafirma and most popular winches)	TF095A	TF009A	TF007A
Rear bumper with swivel recovery points		TF090	
Rear bumper without swivel recovery points		TF090A	TF070A



#### **FEATURES:**

Both front and rear recovery points available

Bolt on and weld on available

**Chassis mounted** 

Swivel recovery points can turn as the angle of the pull changes

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 number
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	ALL	TFWSRP
Swivel recovery point	ALL	TFSRP





# RECEIVER HITCHES

Versatile removable hitch options.



#### **FEATURES:**

Helps to maintain rear departure angle

Quick and easy to fit and remove attachments

Tow bars are often one of the lowest points of a 4x4, significantly reducing the departure 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 and a 'receiver' fitted high up, close to the chassis out of harm's way.

The Receiver Hitch allows a variety of 'male' attachments to be connected to the vehicle 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 models 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 number	
Defender 90/110/130 up to 1998	TF873	
Defender 90 1998 on	TF876	
Defender 110/130 1998 on	TF877	
Discovery 1	TF874	
Discovery 2	TF875	
Drop plate up to 1998	TF879	
Drop plate 1998 on	TF879A	
Recovery point	TF878	
Spare retaining pin	TFHPIN	















# **ELECTRIC WINCHES**

Terrafirma winches are spec'd to the max!



### A12000 ELECTRIC WINCH

#### 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 a 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.



12000lbs (5443kg) rated line pull

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

80' (25m) 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** 

The Terrafirma A12000 winch is built on the standard frame size of 10x4.5" to allow fitment to most popular mounts and bumpers. Also available for the A12000 winch is a full range of spares and winching accessories



Rated line pull:	12000lbs (5443kgs) single line
Motor:	Series wound 6.0hp/4.4kw,12V DC
Gear train:	3 stage planetary
Gear ratio:	265:1
Clutch:	Sliding ring gear
Braking action:	Automatic in the drum
Fairlead:	Alloy fairlead
Synthetic rope:	7/16"×79 (11mm×24m)
Drum size:	2.5"×8.9" (63mm×226mm)
Dimensions:	21.5"×6.3"×7.6" (545mm×160mm×194mm)
Mounting hole pattern:	10"×4.5" (254mm×114.3mm)
Battery:	650 CCA minimum for winching 25 square mm,72"(1.83m)
N.W:	82lbs(37.5kgs)



# TerrafirMa

### M12.5S ELECTRIC WINCH

#### TF3320

The M12.5S 12v electric self-recovery winch, yet again combining fantastic looks with the latest trends and packed with NOW standard features this winch stands perfectly alongside the ever popular and reliable Terrafirma A12000.



Powerful 6.6hp motor, fast line speed on & off load and lightweight at 37.5kg, this amazing winch includes not only a cable remote control but 2 wireless remote controls, so both the driver and co-driver have complete control. Also, as standard the bright red 25m synthetic rope is fitted with an alloy safety thimble as standard. The drum is illuminated with 3 LEDs during operation for safe winching during low light. Super long 3m battery leads ensure that there are no risky connections from the power supply, long enough to reach the batteries under the seat of a Defender!

#### **FEATURES:**

M12.5S 12v Electric Winch

Compact 'futuristic' design

Heavy duty gunmetal grey powder coating for corrosion resistance

Easy to operate free spool control

High efficiency low noise 3 stage planetary gearbox

Integrated solenoid pack with triple LED cable drum illumination

12500lbs (5670kg) rated line pull Off-road - Utility winch

6.6hp series wound motor for high performance and fast line speed

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

**NEW** alloy safety thimble and shackle

Alloy hawse fairlead

TWO wireless remote controls (cable remote control included)

Extra-long (Defender length) power cables

Automatic in the drum brake

LED 'winch live' illumination feature

IP67 Rated



M12.5S winch specifica	tions
Rated line pull:	12500lbs (5670kgs) single line
Motor:	Series wound 6.6hp/4.9kw,12V DC
Gear train:	3 stage planetary
Gear ratio:	216:1
Clutch:	Sliding ring gear
Braking action:	Automatic in the drum
Fairlead:	Alloy fairlead
Synthetic rope:	13/32"×89' (10mm×27m)
Drum size:	2.5"×8.9" (63mm×226mm)
Dimensions:	22.17"×6.38"×7.62" (563mm×162mm×196mm)
Mounting hole pattern:	10"×4.5" (254mm×114.3mm)
Battery:	650 CCA minimum for winching 25 square mm, 130"(3.3m)
N.W:	82lbs(37.5kgs)



# TerrafirMa

## X4000 ELECTRIC WINCH

#### **TF3340**

The X4000 12v electric winch is perfect for mounting in the load space of pick-ups, trailer beds, utility vehicles as well as side by sides and quad bikes etc.



It is compact and powerful, pulling 4000lbs through 10m of synthetic rope. A fully automatic in drum

brake prevents 'roll back'. Supplied with an alloy fairlead and both wireless and cable remote controls just like its bigger brothers the A12000 and M12.5S.

#### **FEATURES:**

High efficiency 1.6hp motor draws low current for minimal battery drain

O ring seals reduce water ingress

Matched drum and gear set ensures quiet operation

All metal gearbox for long life

Large and easy to operate free spool control

String, efficient and reliable 3 stage gearbox

10m of 6mm synthetic rope

Aluminium hawse fairlead

Mounting plate included

Handlebar switch and wireless remote controls

16'/min no load line speed



Rated line pull:	4000lbs (1814kgs) single line		
Motor:	Permanent magnetic motor DC14V		
Gear train:	3 stage planetary		
Gear ratio:	198:1		
Clutch:	Sliding ring gear		
Braking action:	Automatic in the drum, independent mechanical brake		
Fairlead:	Alloy fairlead		
Synthetic rope:	33' (10.5m)		
Mounting hole pattern:	3" × 4.875" (125mm×76mm)		
Battery:	650 CCA minimum for winching 25 square mm, 130"(3.3m)		
N.W:	19LBS (8.6KGS)		



# WINCHING AND RECOVERY ACCESSORIES Recovery equipment is essential to any off-road kit!

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.

For safety and performance sake only the best performing recovery equipment is considered suitable as part of the Terrafirma accessory range and everything is tested and rated and is fit for both commercial and recreational use.

#### TERRAFIRMA EXTENDED WINCH CABLES

#### **TF3309**

The location of your winch and battery may not be ideal or the cabling route uses all the cable provided with the winch. Terrafirma TF3309 is the solution. 4m of red and black cables with swaged ring terminal ends, an isolator switch with removable key and a short length of cable to connect the switch to the battery. These high-quality leads are ideal for all 4x4 vehicle winches.



#### TERRAFIRMA KINETIC RECOVERY ROPE

#### **TF3311**

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

#### TF3312L / TF3312M

Terrafirma recovery gloves are manufactured tough to handle the rigours of handling 4x4 winching and recovery 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. Available in sizes Medium TF3312M and Large TF3312L.

#### TERRAFIRMA SNATCH RING

Our Terrafirma RED Winch "Snatch Ring" offers a strong, lightweight and safe alternative to the traditional metal snatch block. The "Snatch Ring" fits perfectly into a pocket or glove box. This makes it an ideal accessory to have in your truck for overlanding expeditions or in competition when your co-driver is having to climb steep slopes.





#### TERRAFIRMA SOFT SHACKLE

#### **TF3310**

Soft shackles are safer, lighter-weight and more manageable than metal alternatives when towing or winching and are fast becoming the preferred choice in recreational and competition off-roading. These shackles are made of 11mm synthetic rope and rated to 9 tonnes of load.





#### TERRAFIRMA WINCH ROPE SAFETY THIMBLE

#### **TF3325**

Conventional winch hooks are not large enough to accept both ends of a recovery strap, hooks are also prone to opening out and braking, winch safer with the Terrafirma winch rope safety thimble. Securely attach the winch rope via a shackle to another vehicle, ground anchor or recovery strap. The thimble is simple to attach to most rope eyelets and incorporates an EPDM buffer to protect the fairlead.



#### **EXTREME SHACKLE**

#### TF3330

This cool looking extreme duty bow shackle is similar in size to the traditional 4.75t bow shackle but almost twice as strong at an incredible 8t load rating.







# TerrafirMa

### WINCHING AND RECOVERY SPARES AND ACCESSORIES



















Replacement winch rope hook Winch rope safety thimble



TF3319

TF3325

TF3329

















Cargo net

### **RECOVERY STRAPS**

Recovery straps of varying lengths are a vital part of any offroader's kit. Terrafirma recovery straps will suit all recovery situations involving light to heavy 4x4 vehicles. Each strap is rated and comes with reinforced eyes and are sleeved to protect the stitching.





#### WINCH EXTENSION STRAP

11000kgs 20m x 80mm

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.

TFES11000



#### SNATCH STRAP

11000kgs 9m x 80mm

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.

TFSS11000



#### TREE STRAP

12000kgs 5m x 80mm

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.

TFTS5M



### **WINCHING AND** RECOVERY KITS

Terrafirma offer only the best recovery equipment so for your convenience we have put together the following kits.



#### KIT BAG

Made from tough 1000 denier Cordura nylon with built in pockets for all your kit, strong handles and a zip closure.

TF3315



#### **WINCH KIT**

Tree strap, snatch block, 2 bow shackles and gloves all packed into a Terrafirma kit bag.

TF3316





#### WINCH KIT PRO

Tree strap, synthetic winch rope snatch ring, 2 synthetic soft shackles and gloves all packed into a Terrafirma kit bag.

TF3317



#### **RECOVERY KIT**

Tree strap, synthetic 13000kg recovery rope, 2 bow shackles and gloves all packed into a Terrafirma kit bag.

TF3318





GHL4

#### **FEATURES:**

**All-Cast Construction** 

7000lb (3175.14kg) **Tested Capacity** 

Lifts, Winches, Clamps, & More With over 100 years of quality, the Hi-Lift Jack is a rugged, highly versatile jack that puts you in command of situations requiring lifting, pushing, pulling, winching, and clamping. Although light in weight and easy to manoeuvre, the Hi-Lift Jack offers a rated capacity of 4,660 lbs (2114 kg) and a tested capacity of 7,000 lbs (3175 kg).

Only Hi-Lift Jacks are made with a two-piece handle and socket design that is built for extended life. Cheaper imitations use a one-piece design that bends easily if lateral pressure is applied while lifting a load. Hi-Lift jacks are designed to help you survive in the most demanding situations - whether you are on the farm, in the woods, off-road or in the yard, with its range of accessories, the Hi-Lift jack is just about the most versatile piece of off-roading/farm/auto recovery equipment you can buy.



















TF3328

Application	Part number
4ft Hi-Lift jack	GHL4
5ft Hi-Lift jack	GHL5
4ft XTREME Hi-Lift jack	GHL4XT
Flat surface mounting kit for all Hi-Lift jacks	GHL2
Lockable truck bed of flat surface mounting kit for all Hi-Lift jacks	GHL3
Hi-Lift jack adaptor for Defenders & others with a suitable jacking point	GHL4/5A
Jack storage bag	GHL4/5BAG
Black jack handle keeper	GHL7
Red jack handle keeper	GHL6
Terrafirma off-road jack base	TF3328







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 vehicles, 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 aftermarket accessories and suspension for vehicles originally manufactured by Land Rover, 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.



sales@terrafirmafactoryracing.com www.terrafirmafactoryracing.com





The ultimate spring and shock combination in one.



Terrafirma Factory Racing Profender Coilovers deliver high performance suspension control at an affordable price. Coilovers offer an efficient all in one package combining shock and coil springs to work as a single element.

#### **FEATURES:**

Coilovers offer more adjustability in ride height, ride quality, spring rates, and shock valving than other suspension set ups

Regardless of whether you are flying high over fast-track whoops or running a flexible winch challenge/rock crawler setup our coil-overs will give you the comfortable and predictable damping performance you need to get the job done. They come in several rock-solid configurations that will fit your application perfectly. Our

race proven coilovers are now on many of the top race and winch challenge cars here in the UK and across Europe.

All our Coilovers benefit from large 16mm Upper and Lower mounting bearings and there are 2.0" and 2.5" diameter shock bodies.

- 2.0" remote reservoir Coilovers represent great performance to value ratio in a compact package, supplied with a fin tube remote reservoir to increase oil volume.
- 2.5" Coilovers not only have more oil volume for better heat dissipation but also include "click adjusters". There is a single 8 stage compression adjuster on the remote reservoir, which, depending on the setting, will allow simple easy quick adjustment in order to firm up the compression travel.
- 2.5" Internal Bypass Coilovers: For the Racer that wants it all, These have all the benefits of the normal 2.5" coilover but there is also a second 8-stage click adjuster on the bottom end of the shock shaft which controls the rebound travel.





Application	90/110/130/D1/RRC		
2.0" Remote reservoir o	oilover		
Travel 12"	TFR2012		
Travel 14"	TFR2014		
Travel 16"	TFR2016		
2.5" Remote reservoir 8	-stage adjustable coilover		
Travel 12"	TFR2512		
Travel 14"	TFR2514		
Travel 16"	TFR2516		
2.5" Remote reservoir 2	2-WAY 8-stage adjustable coilover		
Travel 12"	TFR2512DUAL		
Travel 14"	TFR2514DUAL		
Travel 16"	TFR2516DUAL		

TFR2012

### SHOCKS



### AIR SHOCK

#### **FEATURES:**

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 650

**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:**

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	
12" travel left	TF148L12	
12" travel right	TF148R12	
14" travel left	TF148L14	
14" travel right	TF148R14	
16" travel left	TF148L16	
16" travel right	TF148R16	





### MEGA SPORT SHOCKS

#### **FEATURES:**

11" travel

Suitable for front and rear application

High pressure monotube

Adjustable between 100 and 200psi

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.



#### **FEATURES:**

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 number	
12" travel left	TF151L12	
12" travel right	TF151R12	
14" travel left	TF151L14	
14" travel right	TF151R14	
16" travel left	TF151L16	
16" travel right	TF151R16	







Description	90/110/130/D1/RRC	
11" travel front and rear	TF137	
Front fitting kit	TF540	
Rear fitting kit	TF541	
Seal Kit for all megasport shocks	TF137SEALS	
Replacement ball joint for all shocks	TFSBJ	

### **BUMP STOPS**

### HYDRAULIC BUMP STOPS

#### **FEATURES:**

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.













Application	Part number
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

Application	90/110/130/D1/RRC	110/130
Front fitting kit	TF542	
Rear fitting kit	TF543	TF544



# HYDRAULIC

#### **FEATURES:**

Piston 46mm

Shaft 32mm

Outer body 52mm

Adjustable Pressure Min 100 Psi. Max 400 psi

Extended length 10; collapsed length 8'

Mounting can included



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

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.

Description	Part number
2" travel	TF149
Replacement weld-on threaded mounting can	TF149A





### **TERRAFIRMA AND TFFR ARE PROUD SPONSORS OF ULTRA 4 EUROPE**



Terrafirma Serious 4x4 Accessories & Terrafirma Factory Racing is delighted to team up with Ultra 4 Europe as partner for the European Unlimited 4 Wheel Drive **Racing Championship** 

Ultra 4 could be regarded as the pinnacle of off-road motor sport combining racing, high speed winching and rock crawling in the same event, designed to test the driver and co-driver as well as the vehicle's strength and capability to the limit. The European Championship is designed to replicate the ultimate King of the Hammers event held in the USA with rounds in Spain, UK, France and Poland.

This is the ideal proving ground for Terrafirma products where it's definitely a case of survival of the fittest, Terrafirma products are chosen for their quality and performance as dependability is essential if teams are going to succeed.



# WHEELS

Whether you want your wheels for full on off-road racing, recreational use or just to enhance the look of your Defender Terrafirma has a wheel for you. We have some of the toughest wheels exclusive to Terrafirma available in both alloy and steel as well as spacers, adaptors and wheel nuts.



If you have a Discovery 3, 4 or 5, Range Rover Sport or L322 and are looking for 18" alloy wheels to fit over the 365mm brake discs to give you a wider range of off-road tyres, we now have some options with The Compomotive and WINRACE 8x18 in black or grey.

Large diameter semi rigid spare wheel covers with a choice of infill stickers to stylise your rear end!

See page 105 >>



# DAKAR WHEELS

Rock crawling, desert racing or just to enhance the look of your vehicle

#### **FEATURES:**

Available in silver and black

Load rated to 1450kg

Super strong and super stylish



Influenced by the rugged and stylish wheels used on Dakar rally raid vehicles the 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 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 Defender, Discovery 1 & 2 and Range Rover Classic & P38.

Unquestionably one of the toughest best-looking wheels on the market.







Application	90/110/130	D1/RRC	1/RRC D2/P38	
Silver	TF	104 7x16 ET33		
Satin black	TF105 7x16 ET33		TF108	3 – 7x16 ET45
Locking wheel nuts	STC8843AA	(set of 5 nuts and 1 key)	RRB100510	(1 lock nut and key)

## COMPOMOTIVE **WHEELS**

#### **FEATURES:**

Rally raid inspired design

Suits vehicles with 365mm brake discs

Direct fit for D4 and RRS (not Brembo)

The ultimate 18" aluminium rally raid wheel. Heat treated material and reinforced rim edges give you stage winning capability for your Discovery 3 & 4 and most Range Rovers. Available in satin black and metallic grey.



#### **Application** Compomotive BLACK 8x18 ET45 multi spoke alloy wheel (requires TF303/303B) for vehicles with 360mm brake discs

Compomotive GREY 8x18 ET45 multi spoke alloy wheel (requires TF303/303B) for vehicles with 360mm brake discs

#### D3/D4/RRS/L322/2020 DEF

PD1881BLACK

PD1881GREY





PD1881GREY

## WINRACE WHEELS

#### **FEATURES:**

Serious crosscountry design

1200kg load rating

Anthracite or satin black

Includes centre cap

The Winrace T 8x18" is meticulously designed and manufactured using high quality aluminium alloy to withstand the most demanding terrain. Heat treated for maximum rigidity, with reinforced inner and outer edges and super-reinforced inner rim. These wheels are designed for Baia, Dakar and serious crosscountry driving.

D3/D4/RRS/L322/2020 DEF







#### Application

Winrace BLACK 8x18 ET42 multi spoke alloy wheel (requires TF303/303B) for vehicles with 360mm brake discs

Winrace GREY 8x18 ET42 multi spoke alloy wheel (requires TF303/303B) for vehicles with 360mm brake discs

TF160G

**TF160B** 

### 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 Defender with an ET10 offset will have a wider track width than wheels with an ET25 offset.



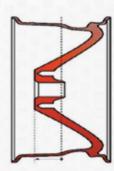
#### **ZERO OFFSET**

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



#### **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



# STEEL WHEELS

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.

#### **FEATURES:**

**Civilian and Military Specifications** 

Load ratings up to 1500kg

Strong, tough no nonsense wheels

Ever popular is the military 'Wolf' wheel, this military specification wheel has proven itself over and over and is supplied as a heavy-duty tubeless

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 or silver ready to fit in 6.5x16" and 5x165 bolt pattern.

For Discovery 3, 4 and RRS our 8x18 steel wheel gives plenty of off-road tyre choice and will fit straight onto vehicles with 320 and 340mm brake discs, for vehicles with 360mm brake discs you will need TF303/TF303B wheel spacers for brake caliper clearance.





ANR4583PM



GRW001



**GRW002** 







GRW005

**GRW012** 



ANR4583SILVER





RTC9535

Application	90/110/130/D1/RRC	
Wolf Wheel		
Wolf wheel black	ANR4583PM	6.5x16 ET21
Wolf wheel silver	ANR4583SILVER	6.5x16 ET21
Steel Wheel		
8 spoke white	GRW001	7x16 ET00
8 spoke silver	GRW002	7x16 ET00
8 spoke black	GRW003	7x16 ET00
Modular white	GRW004	7x16 ET08
Modular silver	GRW005	7x16 ET08
Modular black	GRW006	7x16 ET08
Wheel nuts	RRD500010	
Locking wheel nuts	RTC9535	

D2/P38		D3/D4/RRS	
GRW012	8x16 ET25	TF152	18x8 ET45
	TF152NU	TBLACK	

D4 & RRS require TF303





FEATURES:

Reduce tyre roll off at very low pressures

Perfect for extreme off-road use

Ready to go or DIY options

Alloy wheels with or without beadlock option

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

in either stealthy matt black or classy anthracite grey.

The unique bead lock ready e fitted conventionally for norma

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 alloy beadlock ring 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 beadlock ring kit also includes alignment

dowels and a full set of bolts and lock nuts. The beadlock ring is recessed reducing rock damage to the bolt heads. The rings are powder coated anthracite grey with discrete Terrafirma logos.

The Terrafirma beadlock alloy wheel is available in two bolt patterns; 5x165 PCD which fits 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.

Also available from Terrafirma is a 7x16 steel modular beadlock wheel in black ready-made or as a weld on beadlock ring 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.



### **BEADLOCK WHEELS**

















Application	90/110/130/D1/	'RRC	D2/RR P38	
Anthracite	TF100	7x16 ET10	TF107	7x16 ET20
Matt Black	TF102	7x16 ET10	TF106	7x16 ET20
Locking wheel nuts (set of 5 nuts and 1 key)	TF113DEF			
Wheel nuts	TFRVSNUT	TFRVSNUTBLACK	TFRVSNUTD2	TFRVSNUTD2BLACK
Beadlock kit (set of 4)	TF103			
Beadlock kit (1 set)	TF103A			

### **BEADLOCK STEEL WHEELS**







Application	90/110/130/D1/RRC	
Black modular wheel	TF112	7x16 ET08+BL
Weld on beadlock kit set of 4 suits most 16" steel wheels	TF112KIT	
Weld on beadlock kit set of 1 suits most 16" steel wheels	TF112KITA	





#### **FEATURES:**

Improved stability, cornering and handling

Increased track improves steering lock

**Machined from** billet aluminium

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



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.

Terrafirma adaptors facilitate the fitment of larger diameter wheels typically to Defenders, often from the popular Discovery 3 & 4 and Range Rover Sport. These stylish wheels are not available in the Defender bolt pattern and have large positive offsets requiring spacers.

Terrafirma adaptors provide the conversion between 5x165 and 5x120 bolt patterns and 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.







Description	90/110/130/D1/RRC	D2/P38	D3/D4/D5/RRS/L322/L405
30mm alloy wheel spacers (SILVER)	TF301 (5x165)	TF302 (5x120)	TF303 (5x120)
30mm alloy wheel spacers (BLACK)	TF301B (5x165)	TF302B (5x120)	TF303B (5x120)

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



# TerrafirMa

# SPARE WHEEL **COVERS**



Ads a touch of style to the rear of your vehicle

Keeps the spare wheel clean

Optional sticker choice for additional style

Ever popular and great value the Terrafirma branded vinyl spare wheel covers ad a touch of style and keep the spare wheel clean on **Defenders and Discovery 1** 

This new semi rigid spare wheel cover is specifically

designed for the 2020 Defender but will also fit other 32-33" diameter spare wheels. Available in a choice of colours and a selection of stickers to further personalise your rear end.











TFSWC01/02







Description	Part number
Black vinyl Terrafirma spare wheel cover to suit 235 85 R16 tyres (Defender)	TFSWC01
Black vinyl Terrafirma spare wheel cover to suit 235 70 R16 tyres (Discovery)	TFSWC02
Gloss black and silver semi rigid spare wheel cover 2020 Defender	GA2891
Matt black and silver semi rigid spare wheel cover 2020 Defender	GA2892
Gloss black semi rigid spare wheel cover 2020 Defender	GA2893
Terrafirma sticker for spare wheel cover for 2020 Defender	STICKER-TERR
Monochrome Union Jack sticker for spare wheel cover for 2020 Defender	STICKER-UNION-FG
Colour Union Jack sticker for spare wheel cover for 2020 Defender	STICKER-UNION-F
Tyre track sticker for spare wheel cover for 2020 Defender	STICKER-TRACK
Compass sticker for spare wheel cover for 2020 Defender	STICKER-COMPASS



Over the years Terrafirma's continued product development and high engineering standards have produced a range of specific performance enhancing components that make your vehicle 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.



The Terrafirma E locker provides 100% drive at the flick of a switch, easy installation, no compressor required.

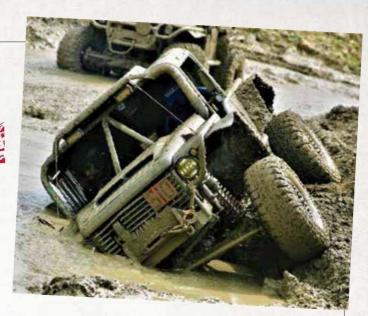
Diagnostic tools for the Amateur and **Professional** See page 117 >>



# **TERRAFIRMA E LOCKER**

### 100% drive at the flick of a switch!

Fitting a Terrafirma electronic locking differential or 'E Locker' can make the difference between success and failure when tackling off-road obstacles or negotiating very low grip conditions. When the switch is activated, power is supplied to an electromagnet that acts on a locking mechanism within the differential. Deactivating the switch causes a series of return springs to force the mechanism to disengage and the E Locker again operates as an open differential.



#### **FEATURES:**

Silent operation

Super strong 4 pinion design

Precision manufactured from high grade materials

Fast and straightforward installation, no special tools or fluids required

Complete wiring harness and illuminated dash mounted switch

**CE and UKCA approved** 

The Terrafirma E Locker provides instant traction by transferring drive equally to each wheel. With E Lockers fitted front and rear your 4x4 can be driven in a much slower, more controlled manner reducing the likelihood of damage to the

The Terrafirma E 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.

vehicle and the environment.





The uncomplicated switch arrangement also means the E Locker is the fastest switchable diff lock to install, no cutting or welding is required. A simple drilled hole for the electrical cable gland is the only machining operation that is required. A competent mechanic should take no more than a few hours to completely install a Terrafirma E Locker from start to finish.

NB. The Terrafirma E Locker can be fitted into 1983-1994 Defender 90s. 1989-1994 Discovery 1s & 1971-1994 Range Rover Classics and will require the half shafts to be changed to 24

Application	Part number
Defender 90, Discovery 1 & Range Rover Classic 24 spline front & rear, Defender 110/130 front and Discovery 2 front & rear	TF450
Defender 110 2002 on (Wolf/short nose) rear and Range Rover P38	TF460

#### **BENEFITS**



Vastly improved traction with less need for momentum, reducing the potential of vehicle damage and environmental impact.

Less strain on the vehicle's driveline, reducing wear and tear.

Incredibly simple yet effective design with minimal moving parts, resulting in maximum reliability.

Suitable for both front and rear axles





CROWN WHEEL & PINIONS

Terrafirma offers a range of alternative ratio crown wheel and pinion gear sets originally developed by renowned engineering company, KAM Differentials.

#### **FEATURES:**

4.1 & 4.75 available

Reverse cut front option

Up to 70% stronger

43% thicker crown wheel

40% larger tooth profile

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 Terrafirma lower ratio crown wheels and pinions.

3.54:1 is the standard ratio on all Defenders, Discoverys and Range Rover Classics. Lower ratios of 4.1:1 and 4.75:1 are available. The effect of these lower ratios can be seen in the chart.

For convenience the same ratio differential assembly was fitted to the front and rear axles. As a result, the front differential rotates in the opposite direction to the rear with the driving

Ratio	Teeth number	Original	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	Part number
Long nose differential	
KAM 4.75 Crown wheel and pinion reverse cut (FRONT)	KAM546
KAM 4.75 Crown wheel and pinion standard cut (REAR)	KAM547
KAM 4.1 Crown wheel and pinion reverse cut (FRONT)	KAM541
KAM 4.1 Crown wheel and pinion standard cut (REAR)	KAM542
Short Nose (P38/WOLF) Differential	
KAM 4.1 Crown wheel and pinion standard cut (FRONT & REAR)	KAM549
KAM 4.75 Crown wheel and pinion standard cut (FRONT & REAR)	KAM548

force being applied to the back of the gear teeth significantly weakening the meshing of the gear teeth. Terrafirma 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.





# 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. For those looking for a little extra 'something' for their axles we also offer a super duty 10 bolt drive flange, originally developed by KAM differentials as a super strong flange suitable to replace both early wide and later narrow flanges with slightly their different bolt centres. By drilling and tapping your hubs an extra 5 bolts can be fitted for a super strong military appearance.









Application	LR Ref.		Part number	Replacement nut	O ring	
90/110/130/D1 up to 1994 (THICK TYPE)	FRC5806		TF5806	TF5806N	TEOFOO DING	
90/110/130/D1/RRC 1994 on (THIN TYPE)	FTC859	RUC105200	TF859	TF859N	TF859O-RING	
90/110/130/D1/RRC 94 on SUPER DUTY 10 bolt flange (THIN TYPE)	FTC859	RUC105200	KAM101			

NB TF859 and TF5809 will allow the fitment of alloy wheels and wheel spacers, KAM101 will not allow the fitment of wheel spacers and some alloy wheels.

# HD HALF SHAFTS AND CV JOINTS



Terrafirma halfshafts have been developed from an alloy steel with a high percentage of nickel-chromoly-molybdenum SAE4340 to be both heavy duty and give a high degree of elasticity when passed through a 3-stage heat treatment process. These properties mean the halfshafts are far stronger and kinder to the rest of the drive line particularly the differentials and transfer box.

CV Joints have always been the most critical component of all the drive train, and one of the most difficult to replace; Terrafirma CV joints have been developed to incorporate a larger 30mm centre with 23 splines also machined from the SAE3430 chromoly material. Terrafirma HD shafts and CV joints are designed to work together and will fit later 24 spline differentials.

Terrafirma HD half shafts and CV joints, developed by Raptor are covered by a 5yr limited warranty. Max tyre diameter 35".



Application	Part number
Front	
90/110/130/D1/RRC 1994 on 24 spline Heavy Duty Front half shafts (PAIR)	TF2008
90/110/130/D1/RRC 1994 on Heavy Duty non ABS CV Joints (PAIR)	TF2005
90/110/130/D1/RRC 1994 on Heavy Duty ABS CV Joints (PAIR)	TF2006
Rear	
90/D1/RRC up to 1994 24 spline Heavy Duty rear half shafts (PAIR)	TF2001
90/D1/RRC 1994 on & 110/130 2002 on 24 spline Heavy Duty rear half shafts (PAIR)	TF2002
110/130 1994-2002 Salisbury disc brake axle 24 spline Heavy Duty rear half shafts (PAIR)	TF2003



# **TerrafirMa**

# **PROPSHAFTS**

When a 4x4 is produced the angle of the propshaft in relation to the two end flanges is carefully calculated in order that the vibration inherent with universal joints\* is undetectable. The universal joints at each end of a propshaft are also set out of line, out of synchronisation to control this vibration, this is known as phasing.

TFWA680

#### FEATURES:

20% stronger than standard propshafts

Double seal arrangement on slip coupling

RILSAN coated 100mm spline slip coupling for smoother operation

Metal shield greaseable universal joints.

32 degree wide angle yoke and joints

Unique gun metal grey paint

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 hardcore off-road vehicles usually masks the vibration and drivers often tolerate the additional drone or rattle from the shafts on overrun. A more road biased lifted vehicle will most likely find the noise and vibration too obtrusive and will be keen to rectify it. The most effective way to eliminate vibration is to fit a propshaft with a double cardan joint\*\* at the gearbox end. This was found to be 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. 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 chassis using around 11" travel shocks.



- \* Universal joints working at an angle speed up and slow down during rotation.
- \*\* Double cardan joints have two universal joints joined by and 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.

Ameliantina	9	90		110	Discovery 1		Discovery 2			
Application	Front	Rear	Front	Rear	Front	Rear*	Front	Rear*		
Terrafirma wide angle	e propshafts									
300TDI 1994 to 1998	TFWA610	TFWA680	TFWA610		TFWA610	TFWA850				
V8 1994 to 1998	TFWA610					TFWA1050	IFWAGIU			TFWA850
TD5 1998 to 2002	TEMA 040	TEMACOO								
TD5 2002 to 2007	TFWA610	TFWA680		TFWA1140						
TDCI 2007 on	TFWA680	TFWA630	TFWA680							
Terrafirma double car	rdan propshat	fts (direct repla	acement and	do not require	a transfer box	k flange adap	tor)			
300TDI 1994 to 1998										
V8 1994 to 1998		TED0040	TEDOCAO							
TD5 1998 to 2002	TFDC610	0	TFDC610		TFDC610		TFDCWA000110	)		
TD5 2002 to 2007										
TDCI 2007 on	TFDC680		TFDC680							

\*Terrafirma double cardan propshafts are a direct replacement and do not require a transfer box flange adaptor.



Propshaft Accessories	Part number
Diff Flange Kit (4 bolt)**	STC4858
3/8 UNF propshaft nuts	NZ606041L
3/8 UNF propshaft bolts	LR045409
WA Replacement Universal Joint	HS163





# **DUAL MASS FLYWHEEL CONVERSION KITS**

#### **FEATURES:**

Note prone to failure

Cheaper to replace

More reliable for aggressive driving

**Defenders and Discoverys** fitted with Td5 engines and manual transmissions have a dual mass flywheel, intended to dampen engine vibrations and soften take up when engaging the clutch.

A dual mass flywheel is basically a 2-piece flywheel with a degree of flex between the section bolted to the crankshaft and the section that the clutch bites on. Replacement is often required at the same time as the clutch needs changing, however aggressive off-road driving with larger tyres or tuned engines can cause premature dual mass flywheel and clutch failure.

Symptoms of failure are excessive vibration and heavy rattling noise and clutch slipping. Replacing the dual mass flywheel with a solid flywheel is a more economical swap and a much more reliable alternative for off-road use and towing. It is recommended that a heavy-duty clutch is also fitted to cope with the increase in shock load when engaging the clutch.



Application	Part number
Defender Td5 with Borg and Beck clutch kit	TF2357HD
Defender Td5 with Valeo clutch kit	TF2357HDG

# RED BOOSTER **CLUTCH SERVOS**

The next best thing to an automatic!



#### **FEATURES:**

Comprehensive well engineered kit

Considerably lighter clutch operation

Reduced driver fatigue

The clutch pedal has always been heavy to depress on Defenders, various alterations seem to have made some models easier than others but even the best versions are tiresome in traffic leaving drivers fatigued and frustrated.

The Red Booster servo clutch kit makes the clutch on your Defenders much easier to depress making your driving a more pleasurable experience and reducing the effort required particularly when manoeuvring or stop starting in traffic.

Working in a similar way to the braking system with a servo-assisted system, it is mounted between the pedal and master cylinder and uses a vacuum from the inlet manifold to reduce the amount of pressure needed on the pedal to operate the clutch.



Application	Part number
Defender 2007 on RHD	TF1683
Defender Td5 RHD	TF1684
Defender 2007 on LHD	TF1687
Defender Td5 LHD	TF1688



# GEARBOX UPGRADES

The MT82 6 speed gearbox fitted to all 2007-2016 Defenders has a dry main shaft to transfer box spline which is prone to wear prematurely. This repair kit provides the components to carry out an economical repair.

The kit includes: Coupling flange, input shaft, retaining ring, special bolt, oil seals, seal retaining clip and anti-seize grease.

Application Part number

Defender 2007 on MT85 6 speed gearbox repair kit **TF2720** 



# DEFENDER ROAMERDRIVE OVERDRIVE

#### **FEATURES:**

**Quieter cruising** 

Increased fuel economy

Reduced drivetrain wear

This rugged, bolt on accessory has been proven in hundreds of installations and tested under the most demanding expedition conditions. No other modification improves the performance and economy of your Defender like a Roamerdrive.

The DS model overdrive is an auxiliary gearbox that is easily fitted to a Defender 90 or 110 with standard five speed LT77 or R380 transmission 1983-2007. The unit adds an optional 28% to the ratio of the drive train giving improved fuel economy. Reduced engine speed contributes to quieter more comfortable travel under motorway conditions and reduces wear and tear on mechanical components.

The Roamerdrive is a completely mechanical device built in the tradition of rugged dependability that has made the Defender the world's favourite expedition vehicle. These overdrives have no electronic or hydraulic components. They are controlled by moving the convenient hand lever.

Unlike a high ratio transfer case that will permanently detract from the versatility of the gearbox, the Roamerdrive does not alter the vehicle's designed gear ratios. Off-road performance is enhanced as the overdrive ratio can be added to any gear in high or low range.



The Roamerdrive uses the same epicyclical gear technology as a modern automatic transmission and runs quietly. This is particularly evident at high speeds and makes driving a Defender for long distances a pleasurable experience. On long journeys Roamerdrive users have reported fuel savings of up to 18% - not surprising when you consider that the engine lopes along the highway at about 2000 R.P.M. - a favourable spot on the diesel torque band. Although precise fuel savings will depend on your driving habits.

Application	Part number
Defender up to 2007 Overdrive	TF9017

ALLOY HEAVY DUTY HIGH CAPACITY LT230 TRANSFER BOX SUMP

This LT230 transfer box sump is significantly stronger than the original and adds about 1/2 litre of oil capacity. Extensive finning keeps the oil cooler and ground clearance is not compromised.

The sump is supplied with a new gasket, the existing bolts are used for installation.

 Application
 Part number

 LT230 heavy-duty high-capacity sump
 GA9018





# EGR REMOVAL KITS

#### **FEATURES:**

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 into the air intake on overrun with the intention of improving 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. 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	Part number
DEF & D2 TD5	TFEGR01
D3, RRS TDV6 PRE 2007	TFEGRV6
D3 TDV6 up to and incl 6a VIN	TFEGR06
DEF, RRC, D1 300TDI	TFEGR300

\*\* Check local regulations before installing









# EXHAUST PIPES

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



#### **FEATURES:**

Increased torque at the bottom end

Engine picks up faster and runs more freely

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 retards further corrosion but makes the surface undesirable for decorative applications.

Application	Part numbe
Terrafirma 'de cat' down pipes	
Defender/Discovery 1/RRC 300tdi 1994 to 1998	TF560
Defender Td4 2007 on	TF561
Defender Td5 1998 to 2007/Discovery 2 1998 to 2004	TF562
Discovery 3 Tdv6	TF564
Terrafirma silencer replacement pipes	
Defender 90 200tdi 1990 to 1994	TF550
Defender 110 200tdi 1990-1994	TF563
Defender 90 300tdi 1994 to 1997	TF551
Defender 90 300tdi 1997 to 1998	TF552
Defender 110 300tdi 1994 to 1998	TF553
Defender 90 Td5 1998 to 2007 and Td4 2007 on	TF554
Defender 110 Td5 1998 to 2007 and Td4 2007 on	TF555
Discovery 1 3.9Efi 3bolt flange type 1991 to 1998	TF556
Discovery 1 300tdi 1994 to 1998	TF558
Discovery 2 Td5 and V8 1998 to 2004	TF559
Big Bore 3" tailpipe	
Defender 90 Td5 1998 to 2007 and Td4 2007 on	GA568
Defender 110 Td5 1998 to 2007 and Td4 2007 on stainless steel	GA569













# SILICONE TURBO AND INTERCOOLER HOSES

#### **FEATURES:**

Perform over a much wider temperature range

Far less susceptible to heat ageing than organic rubber

More stylish

Terrafirma Silicone turbo and intercooler hoses are hand wrapped and 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 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 our design of Blue with a striking red lining. All hoses are embossed with the Terrafirma logo and part numbers.

1	( to
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	7

Application	Part number		
Application	Blue	Black	
DEF 90/110/130 TD5	TF722	TF737	
DEF 90/110/130 TD4 LATE 2.2	TF742LATE	TF746	
DEF 90/110/130 TD4 2.2	TF742	TF745	
DEF 90/110/130 & TD4 2.4	TF724	TF738	
DEF 90/110/130 200TDI	TF720	TF735	
DEF 90/110/130, D1 & RRC 300TDI	TF721	TF736	
D2 TD5	TF723	TF739	
D3 TDV6	TF740		

# INTERCOOLERS

#### **FEATURES:**

Custom fit for offroad 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.

Our intercoolers have specific core choices and fin density options developed 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 Td4 Defender and Td5 Defender & Discovery 2, the Terrafirma intercoolers are an easy to fit replacement intercooler manufactured to the highest standards and designed to enhance air flow and temperature dissipation. Off-road cores use coarse fins for easy cleaning and efficient low speed performance.

Description	Vehicle	Part number	
Off-road intercooler course fins	DEF 90/110/130 Td4 & Td5	TF181	
Fast road intercooler fine fins	DEF 90/110/130 Td4 & Td5	TF182	
Performance intercooler	D2 Td5 manual	TF183	***************************************
Performance intercooler	D2 Td5 automatic	TF184	





# TerrafirMa

# FOAM AIR FILTERS

Pipercross
Performance Air Filters

**FINE FOAM** 

**MEDIUM FOAM** 

**COARSE FOAM** 

Foam air filters and fully serviceable and provide maximum airflow.

As used by some of the

world's top engine builders, Terrafirma foam air filters are produced by Pipercross, leaders in foam filter technology.



Maximum airflow and engine protection

**Increased airflow:** 30% more air flow than a paper filter

More power: noticeable increase in both power & torque

Flows more air for longer: no air restriction due to dirt load

**Easy to fit:** drops straight into your air box

Reduced service costs - easy to clean and refit

Motorsport pedigree



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 Pipercross foam has the ability to hold more than twice the dust particles than that held by other types of filters without effecting air flow.

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. The triple layers filter through course 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.







Vehicle	Equivalent part number	Part number
ALL	Cleaner and additive	TF380
DEF 300TDI	ESR2623	TF381
DEF & D2 TD5	ESR4238	TF382
DEF TD4 07	PHE500060	TF383
DISCO/RRC 300TDI	ESR1445	TF384
FL1	ESR4103	TF390
D3, D4, RR & RRS	PHE000112	TF391
EVOQUE 2012 & FL2 06-14 2.0I PETROL 2.2L DIESEL	LR029078	TF392
FL2 TD4	LR007478	TF393
RR TD6/TdV6	PHE00004	TF394







# GAP DIAGNOSTICS IID TOOLS

The perfect diagnostic tool for DIY and workship (TFIIDBT) and professional (TFIIDPRO) use.



One tool covers all these vehicles; Defender 2007 on, Discovery 3/LR3 2004-09, Discovery 4/LR4 2010 on, Freelander 2/LR2, Range Rover Evoque 2011 on, Range Rover 2002-05, Range Rover 2006-09, Range Rover 2010-12, Range Rover 2013 on, Range Rover Sport 2005-09, Range Rover Sport 2010-13, Range Rover Sport 2014 on

#### **FULL DIAGNOSTIC CAPABILITY**

Faults read / Clear of all vehicle systems

Service routines (including service reminder reset)

**Live Data** 

**Manual Components Activation (Output Control)** 

Calibrations (except suspension)



Capability	TFIIDBT	TFIIDPRO
Full Diagnostic Capability	Yes	Yes
Advanced Programming Functions	Vin locked	Yes
Multi-Vehicle Support	Yes	Yes
Integrated Interface	Yes	Yes
iOS/Android App	Yes	Yes
Engine Tuning, EGR Patching and more (Purchased separately)	Yes	Yes
Updates	Free	£500/Yr

#### 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 / Personalisation (CCF editing)

Height adjustment (front, rear or all)

Suspension individual sensor calibration (needed after a repair)

Backup of original height and CCF values

3 personalised 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

- **IIDControl Faults** https://www.youtu.be/x0kag9elchm
- **IIDControl Live Values** https://www.youtu.be/6bczlidapve
- **RRS** Lowering https://www.youtu.be/vxzfdaismhm
- https://www.youtu.be/hztm1 kesdk
- DControl 2.0 on IPad CCF Editing https://www.youtu.be/vyeerq0jp4c

For the TFIIDPRO, 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 TFIIDPRO (included in the yearly subscription).

These really are exceptional diagnostic tools for the modern 4x4 owner/ workshop. Simply plug it in, connect via Bluetooth to your tablet or phone and get full access to your vehicle's brain, diagnose and clear faults, reset functions and personalise settings.

Description	Part number
IID TOOL Bluetooth DIY diagnostic tool	TFIIDBT
IID TOOL Professional diagnostic tool	TFIIDPRO



# **SCANNER**

#### **FEATURES**

The fastest full colour, 2,8" FT 320'240 pixels

USB 2.0 High speed upgrade

Support multi language

Read & clear DTC's

**Read Date Stream** 

Silicone keys with great customer experience

Diagnose single brand of all models (OBDII-16 DLC) The perfect glove box fault code scanning tool.

(2)

**TF930** is the perfect ODB II scanner for LR owners who want to be in control. Suitable

for Freelander, Freelander 2, Defender, Discovery II, Discovery III, Discovery 4, Range Rover Sport, Range Rover, Range Rover Evoque plus also Jaguar vehicles. Test modes include CANBUS, ISO9141, KWP2000 and J1850 and includes free updates.

**TF950** is version 3 of the popular iCarsoft scanner range. It now has a 4" screen and performs all the code reading and diagnostic functions, with new advance functions including; Auto VIN self-identification, actuator test,

suspension adjustments, steering angle sensor calibration, ABS purge and gearbox adaptation and more. FREE updates are also available.

Description	Part number
LR Scanner/code reader	TF930
LR Scanner/code reader Version 3	TF950
Multi vehicle scanner/code reader	TFI810





# MAGNETIC FINGER

#### **FEATURES**

Pick up small objects

Ideal for hard to reach places

Anytime you need a grip on things, you need the Magnetic Finger.

The powerful magnet on your fingertip allows you to hold or retrieve any small ferrous metal object with precise control. Ideal for use in tight spots and hard to reach places - and when you can't afford to drop it..



Watch the Terrafirma Magic Finger in action! https://www.youtube.com/watch?v=HkOqGX9a-z0

Description	Part number	
Terrafirma magnetic finger	TF400	
Terrafirma magnetic finger - 24 piece box set	TF4001	
Terrafirma magnetic finger - strip of 12	TF4002	









For further information, fitment advice, images, customer reviews or to find your nearest Terrafirma stockist, please visit **www.terrafirma4x4.com** 



Whether your idea of an expedition is an afternoon driving some local trails, a weekend off-road and wild camping or a full-on trip across Africa, 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 expedition accessories.



A wild weekend camping or an overseas adventure you can equip your vehicle with **Terrafirma Expedition** equipment.

Take a look at the Terrafirma inflatable roof tent, spacious yet light weight and compact when packed away, fast to erect and built tough for expedition use.

See page 121 >>





# ROOF RACKS & LADDERS

& LADDERS

Terrafirma offers a range of alloy expedition roof racks with features such as low noise, stylish contouring to match the roof profile of your vehicle.

TF972

#### **FEATURES:**

Low noise

Lightweight extruded aluminium construction

Adjustable slot mounting system

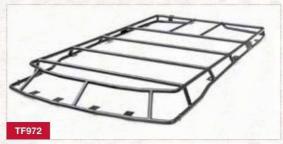
Alloy roof racks are made of heat-treated aluminium extrusion to ensure the correct degree of flexibility and rigidity. The longitudinal bars incorporate a groove system where bolts can be located and positioned to easily attach roof tents, equipment accessories and spotlights etc. The high-quality black powder coating gives a long-lasting finish

Each alloy 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 & 2.

The Discovery 3 & 4 **tubular roof** rack is stylishly contoured to match the roof profile of the vehicle and provide ample carrying capacity. This unique design also incorporates 2 spotlight mounts, side 'scene' light mounts as well as a rear antenna or work light mount. This rack is supplied with fitting kits to enable it to be fitted to vehicles with or without factory alloy roof tracks. To complete the unique styling a moulded plastic spoiler is available to be fitted either with or without spotlights.



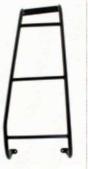












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Vehicle Description		Part number
D3 & D4	Steel tubular rood rack 1.95m x 1.15m	TF972
D3 & D4	Front spoiler for TF972	TF972SP
DEF 110	Alloy expedition roof rack 2.8m x 1.5m	TF975
DEF 90	Alloy expedition roof rack 1.8m x 1.5m	TF976
D1 & D2	Alloy expedition rood rack 2.05m x 1.5m	TF977
DEF	Rear access ladder	TF980
D1 & D2	Rear door access ladder	TF981
D3 & D4	Rear door access ladder	TF973



A ladder is required to gain safe access to your roof rack, made from steel hollow box section or tube, Terrafirma ladders perfectly compliment the range of roof racks available.





## INFLATABLE ROOF TENT

FEATURES:

Lightweight

Easy to erect and pack away

Smallest roof space

Terrafirma's innovative 2.2m x 1.45m inflatable roof tent occupies the smallest roof space as the base folds into 3 sections (folded size is 150cm x 80cm x 26cm). It is also lightweight at only 62kg. The tent is expedition ready with 420D PU coated Oxford fabric in grey with black trim with mesh and clear PVC windows. Erected with a high-

performance pump in under 2 minutes, the 90mm inflatable tubes giving a sturdy wind resistant framework. Inside the mattress is also inflatable up to 3.5cm for additional comfort. Access is from a 2.3m extendible ladder, just right for lifted 4x4s. Interior storage pockets and an exterior shoe storage pocket are useful features. The tent is supplied with a roof rail/rack mounting kit and when folded is protected by a heavy-duty vinyl cover.

Description	Part number
Inflatable expedition roof tent	TF1710



### **AWNINGS**

**FEATURES:** 

Easy to erect and pack away

Simple to attach to the vehicle

Excellent weather resistance

Terrafirma 2.5m and 2.0m awnings are easy to mount to a roof rack or other solid structure, either direct from the integral mounting extrusion or using the mounting breakets provided.

the mounting brackets provided. Set up takes just a few minutes, ideally with 2 people.

The grey 400D water resistant ripstop fabric extends 2.1m away from the vehicle and is tensioned

using extendible alloy beams and supported by 2 alloy twist & lock poles. Strong guy ropes keep the awning in place once set up. When stowed away the awning and poles all fit perfectly into its own built-in heavy-duty PVC coated nylon cover.

Description	Part number
2.5m expedition awning (universal fit)	TF1700
2.0m expedition awning (universal fit)	TF1701



# RAISED AIR INTAKES

### Fresh air for your engine.

Terrafirma raised air intakes or 'snorkels' incorporate modern styling & aerodynamic features and fit the body contours perfectly, designed not to obscure the driver's view and the low noise 'clean air' intake draws air from as high on the vehicle as possible through stainless steel vents, without restricting engine performance. Manufactured from extremely durable, rotational moulded, impact resistant MDPE (medium density polyethylene) and LLDPE (linear low-density polyethylene) plastics which are ideal for this application as they will not discolour and are UV & temperature stable.





**TF1038** is for Defenders with right hand wing vents, typically 1994-2016 fitted with 300tdi, td5, 2.4 and 2.2 Puma engines.



**TF1040** is for the Discovery 3 and 4 2004-2016 fitted with 2.7 and 3.0 TdV6 and 4.0P engines.

TF1040



TF1038



**TF1039** is specifically for the Discovery 2 V8 petrol and Td5 and is supplied as a 3 piece high grade moulded plastic unit mounted to the LH wing and A post.

TF1039



#### **XD VENT FRESH AIR INTAKE**

The Terrafirma XD Vent is inspired by the pre-filter fitted to the air intake on XD, WOLF and WIMK Defenders. Carefully sculpted to match the look of the original the XD vent is supplied in smooth paintable plastic and is mounted on a pressed steel subframe that requires no drilling and can be fitted in minutes.

TF104



# RAISED AIR INTAKES AND TRANSMISSION BREATHER KITS

Possibly one of the most important but least considered upgrades you could give your off-roader.

#### FEATURES:

Raises all breathers to a safe height

Reduces the risk of water ingress

If fitting a snorkel is high up on your list of 'must haves' then a raised transmission breather kit should be higher. The real likelihood of the flood or river crossing being deep enough to

require a snorkel is far less than the 18" of water that could potentially cause lots of your 'hard earned' to have to be spent rebuilding differentials. Almost all gearbox casings and fluid containers on a vehicle that heat up and cool down in operation will require a breather to accommodate the fluid expansion and contraction. Dunking a hot axle into cold water causes it to quench and suddenly contract and like taking a breath the axle casing sucks in air, if the axle is submerged it will almost certainly suck water passed the seals (designed to keep oil in not water out) which will mix with the oil, dirty water of course will quickly wear seals, bearings and gears and in no time cause failures.

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 to cover all the common casings such as, front and rear axle, gearbox & 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. However, it has been proven to significantly reduce the possibility and should rank as one of the most important off-road accessories to be fitted.





STC50265



TF385







Vehicle	Description	Part number
Defender 1994-2016	XD vent fresh air intake RH fitment	TF1041
Defender 1994-2016	Plastic raised air intake RH fitment	TF1038
Defender 1994-2016	Traditional steel raised air intake RH fitment	STC50265
D3/D4 Diesel and V6 Petrol	Plastic raised air intake RH fitment	TF1040
D3/D4 Diesel and V6 Petrol	Plastic raised air intake replacement top	TF1040TOP
P38	P38 plastic raised air intake LH fitment	TF159
D2	Plastic raised air intake LH fitment	TF1039
Defender Tdci 2007-2016	Multi hose breather kit	TF166
Defender V8	Multi hose breather kit	TF167
Defender and D2 Td5	4 into 1 breather kit	TF164
Safari snorkel	Stainless steel intake grill	TF111
Safari snorkel	Early tapered ram air intake foam sock	TF385
Safari snorkel	Later rounded ram air intake foam sock	TF387



NB. A raised air intake does not turn your vehicle into a submarine! considerable additional work is required to fully waterproof your vehicle for extended wading.



# SPARE WHEEL CARRIER

Originally the spare wheel was mounted on the bonnet of early vehicles.



#### **FEATURES:**

Reduce the load on the rear door

Eliminates body/ door damage

Allows for larger tyres to fitted/carried

Easy to operate

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 door. Ever since then Defender owners have suffered with rattling, cracked and broken rear doors, the larger the wheel & tyre and the rougher the conditions the worse the situation. Terrafirma Defender swing away spare wheel carrier suitable for 90 and 110 Station Wagons and Hard Tops. Suits all models from 1985 - 2016.

The Defender 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.

Contrary to the early trend of mounting the spare wheel on the rear door of the Discovery, the Discovery 3 & 4 was built with

its spare wheel underneath the rear of the car. This caused uproar with fans as externally mounted spare wheels have been a recognisable feature for decades. The prospect of having to wrestle the heavy spare wheel out from underneath a stuck Discovery with a flat tyre filled buyers with dread, it also limited the size of the tyres that could be fitted due to the specific size space.

The Discovery 3 & 4 has a drop-down tailgate and as such requires a swing away wheel carrier if the wheel is to be fitted on the rear of the vehicle, especially if the tyre size has been increased over standard. The Terrafirma spare wheel carrier attaches to the heavy rear chassis member close behind the plastic rear bumper. It is held closed with a clever over centre lockable lever arrangement and is held and assisted open with a gas strut, essential on a side slope and to prevent the carrier from trying to close under its own weight. This easy to operate spare wheel carrier also makes the space under the vehicle ideal for an extra fuel tank.

Both spare wheel carriers are finished in a heavy satin black powder coating and are supplied with fitting kits and comprehensive instructions.











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Vehicle	Description	Part No
Defender	Swing away spare wheel carrier suits hard tops and station wagons	TF051
Discovery 3 & 4	Swing away spare wheel carrier	TF053
	Replacement strut for TF053	TF053STRUT
Discovery 2	Extreme spare wheel mounting bracket to allow 35" tyres to be mounted on the rear door	TF499

The spare wheel mounting bracket on the rear door of a Discovery 2 will only accommodate a modest increase in tyre diameter, as more Discovery 2s are being used off-road fitting larger tyres is a must, TF499 Extreme spare wheel mounting bracket allows tyres up to 35" diameter without fouling on the rear bumper.

# **EXPEDITION ACCESSORIES**



# **JERRY CANS**

#### **FEATURES:**

Available in 5, 10 and 20 litre sizes

Full range of accessories available

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: first 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.

Available in 5, 10 and 20 litre capacity and accessories include a selection of spouts and holders that can be bolted together or attached to the vehicles structure.

\*\* Suitable for E10 Petrol





Description	Part number
5 litre Jerry can	GE005
10 litre green Jerry can	GE1010
20 litre green Jerry can	GE020G
20 litre red Jerry can	GE1020R
20 litre black Jerry can	GJC20BLK
Fixed pouring spout for all Jerry cans	GE1001
Semi flexible pouring spout for all Jerry cans	GE1002
Long flexible pouring spout for all Jerry cans	GE1007
Jerry can holder for 20 litre Jerry cans	GE1003
Jerry can holder for 10 litre Jerry cans	GE1004
Jerry can cap rubber seal	GE1099

# **ODYSSEY** BATTERY



#### **FEATURES:**

1500 cranking amps

68Ah capacity

Standard automotive terminals and additional side terminals

W275.6 x 171.7H x 198.6mm

22.4Kq

Whether for everyday or emergency use, today's vehicles are loaded with more electronics than would have been imaginable just a few years ago.

ODYSSEY batteries have been designed to keep up with the changes. Because their plates are made of pure virgin lead (unlike the lead alloy in most batteries), we can pack in more plates. And more plates

mean more plate surface area, and much more power, twice the overall power and three times the life of conventional batteries. up to 400 cycles at 80% depth of discharge!

Application	Part No
Odyssey battery PC1500DT	PC1500DT
12V-1000AMP Key operated battery cut off switch	GE001



# AIR COMPRESSOR

#### **FEATURES:**

Heavy duty air compressor

40mm cylinder

Voltage 12V DC

Max pressure: 150PSI

Rated current:3A

Air flow: 72L/min

3M cord with battery clips

10M PA Hose

3nozzle adaptors

This Double Pump Portable Air Compressor is ideal for rapid tyre inflation after a puncture or reinflation after off-roading with reduced tyre pressures. The twin piston compressor offers great value and includes a 10m flexible inflation hose with a pressure gauge which is long enough to reach all round your 4x4. Positive and Negative heavy-duty crocodile clips power the compressor when connected directly to the vehicle or other 12v battery and clean air is drawn into the twin cylinders through serviceable filters, always useful if it's used in dusty conditions. For ease of carrying and storage

the compressor and hose are neatly packed in a compact and tough plastic carry case.

Description	Part number
Double pump portable air compressor	GE2392



# PORTABLE FRIDGE **FREEZER**

FEATURES:

45 Litre Capacity

Stainless steel liner

**Tough impact** resistant plastic casing 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 temper 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 12V and 24V 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 cleaning and to protect and ad additional insulation a snug fitting protection jacket is available as an optional extra.

Description	Part number
45 litre 12/24/240v portable fridge freezer	TFFR01
Power adaptor	TFFR02
Protective jacket	TFFR03





# SAND TRACKS AND RECOVERY BOARDS

Perfect for your overland adventure or desert crossing.

Sand tracks are a basic requirement if your adventure includes crossing soft or lose ground.

**FEATURES:** 

Lightweight

Easy to handle

Reduce sinking on soft ground

**Provides** additional traction

These alloy sand tracks are 1.5mm long and 4mm thick, perforated, high-grade, lightweight aluminium and are perfect for preventing your vehicle sinking when crossing soft ground and sand. They are ridged for strength and perforated for traction.

Semi rigid nylon recovery boards are easy to handle and store on or in your 4x4, they are extremely tough and resistant to damage, also known as traction ladders these treaded boards reduce sinking and provide the increased grip that can often be all that's needed to recover a stuck 4x4. 1210mm long, 325mm wide and 60mm deep with deep moulded slots and ridges with a textured surface, grab handle recesses on each side also allow the boards to be used to shovel away loose material such as sand and snow.

Description	Part number
Alloy sand tracks 1.5m x 0.37m x 4mm thick (PAIR)	TF888
Nylon recovery boards 1.21m x 0.32m x 60mm thick (PAIR)	TF999











## **BLUETOOTH REMOTE TYRE** PRESSURE MONITOR KIT

#### **FEATURES:**

Free TMPS app

Monitors tyre pressure remotely

Keeps you driving safely

Battery life: >5 years

Working voltage: 2.1V-3.6V

Storage temperature: -45°C-125°C

Working temperature: -40°C-120°C

Temperature accuracy: ±2°C (25)°C

Working pressure: 0-99Psi

Pressure accuracy: ±1.5Psi

Transmit power: <10dBm

Transmit frequency: 433.92 MHz

Weight: ≤30g (weight exclude valve 16g)

A universal, easy to fit Tyre Pressure **Monitoring System** (TPMS) that displays all your tyre information on your smart phone.



Simply download the app, screw the TPMS valve caps onto all 4-wheel valve stems and follow

the step by step instructions to pair the TPMS valve caps to your phone via Bluetooth.

Multiple screens show everything you need to know about your tyre performance to keep you driving safely including fast leaks, slow leaks, high pressure or low pressure.

#### Description Part number Bluetooth remote tyre **TF308** pressure monitoring kit



### CARGO STRAPS

**FEATURES:** 

Pulls up to 1.5T

4.5M length

25MM width

Cargo or ratchet straps are essential kit for off-road and expedition drivers, securing equipment inside and outside the

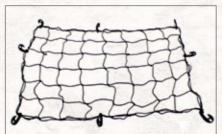
vehicle, strapping down firewood or even holding together repairs on the trail. These straps are the ideal size.

Description

Part No

4.5m ratchet cargo strap

TF3313



### **CARGO NET**

1m x 1m (unstretched) 8 hook elastic cargo net is ideal for securing loads on the roof rack, load space or trailer.

#### Description

Part No

1m x 1m (unstretched) 8 hook elastic cargo net

TF3329

### LANDMETER INCLINOMETER

#### **FEATURES:**

Angle of climb

Angle of descent

Angle of side Slope

You can set your indicators to show the maximum angle the vehicle has achieve or more likely the point at which your nerves got the better of you!

This inclinometer is mounted with double sided tape, so no screws are required and includes wiring for back lighting.











Description

Bamboo cutlery set



### **CAMPING CHAIR**

#### **FEATURES:**

Heavy duty, designed for regular use

Stows in a compact branded carry bag

Heavy duty, sturdy aluminium frame, Terrafirma branded director's style folding camping chair with padded arms and cup holder.

Description	Part number
Expedition folding chair	TF1720

### **DRY BAGS**

Terrafirma dry bags are available in 2 sizes and 2 colours. Black or red and 10 litre (50cm x 30cm flat) & 80 litre (90cm x 50cm) capacity. Both bags are fully waterproof when the tops are tightly rolled and clipped together. The handy smaller 10 litre bag has a single shoulder strap and the giant cavernous 80 litre bag has a carry handle and a pair of ruck sack straps. Both bags are made from heavy duty 500d flexible PVC and can be used to keep contents dry in the wettest conditions and can even be used as flotation devices if necessary.

Description	Part number	
10L black dry bag	TF794B	
10L red dry bag	TF794R	
80L black dry bag	TF795B	
80L red dry bag	TF795R	



Part number

TF1725



### **CAMPING LIGHTS**

This 1.3m long, flexible, 72 LED strip light is ideal for camping, vehicle repairs, illuminating the interior of a vehicle or your tent. It can be connected straight to a battery or powered from a cigar lighter socket and is controlled with a one touch dimmer switch. The light strip rolls up neatly into a small storage bag for storage.

Also in our camping light range is this set of 4, 50cm aluminium mini light bars each with 30 LED lights, again dimmable with a one touch switch with 3x 1.5m plug together extension leads all packed safely away in a sturdy storage bag.

Description	Part No
Flexible 1.3m LED camping light strips	TF7012
4 x 50cm alloy LED camping strip lights	TF7013



### STORAGE BOXES

Terrafirma storage boxes were originally designed to store ammo. They are conveniently sized, stackable and the perfect storage solution for your 4x4.

Made from super tough black high density polyethylene plastic, they are vertical sided to save packing space with integrated grab handles for easy carrying and are available in low and high lid options. The lids are secured with simple to operate catches and are ribbed for strength as well as to provide the location for the box above it.

**External dimensions;** L510mm x W400mm x H230mm (low lid) & 295mm (high lid). **Internal dimensions;** L450mm x W340mm x H205mm (low lid) & 293.5mm (high lid)

Description	Part No
Low lid storage box	TF892
High lid storage box	TF893



### TACTICAL SEAT COVER

The Terrafirma tactical seat cover provides the perfect storage solution for any 4x4, van or car.

#### **FEATURES:**

Keep your car organized

Maximize storage space

Made from superior quality 600d lightweight ballistic polyester and fully adjustable this military inspired webbing pouch system is expandable to accommodate all sorts of kit and equipment to keep your car organized.

Included in the kit is the seat cover with front, side and extensive rear webbing positions that allow the all the 7 varied pouches to be attached in positions to suit your preference.

to suit your preference.	
Description	Part number
Tactical seat cover with 7 pouches (UNIVERSAL FIT)	TF1200







The Terrafirma Interior Accessories is a range of products essential to enhance the practicality and usability of your vehicle. 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.

Keeping your belongings tidy, secure and yet easily accessible particularly when being shaken around off-road means making the most of cabin storage spaces.

>> See page 136.

Protect the interior of your 4x4 from mud and snow with our tailored floor mats and boot liners.

>> See page 138







# **DASH & TRIM**

Enhanced the comfort and functionality.

# **ROOF CONSOLE AND** PARCEL SHELVES



TEDPS2P

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.

#### **FEATURES:**

**Provides convenient** additional storage

Space for Radio or CB, additional power sockets or an interior light

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.

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







Vehicle	Description	Part number
DEF all models	Front parcel shelf (one piece)	TFDPS
DEF all models to be fitted with a roof console	Front parcel shelf (two piece)	TFDPS2P
DEF hard top without sunroof	Roof console	TFDRC
DEF single cab pick up	Truck can roof console	TFDRCTC





### DASH STORE

FEATURES:

Adds valuable storage space

Utilises otherwise wasted space This really handy storage pocket makes better use of the empty space within the passenger

side of the 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 dashboard as part of the lid this is probably one of the most sensible upgrades possible on a late model Defender.

Vehicle	Description	Part No	
DEF 07 on	DASH	TF907	
DEI 07 OII	STORE	11 307	



# CENTRE DASH CONSOLE

**FEATURES:** 

Strong aluminium sub frame

Original factory appearance

Multiple application switches The Terrafirma centre dash console is suitable for all Defenders up to 2007, 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 hand 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. Switches and gauges are not included. A full switch kit is available separately.

Carling switch kit: Carling switches are well known for their cutting edge, high quality and reliable products, they are the 'go to' switch for marine and commercial industries for their waterproof, vibration proof and corrosion resistant properties. In this kit we have included 6 switches and a sheet of self-adhesive legends for you to apply that will relate to the switch operation as well as a pack of terminals.



Vehicle	Description	Part No	
Defender up to 2007	Centre dash console	TF908	
For TF908	Terrafirma switch kit	TF909	

### **CUBBY BOXES**

FEATURES:

Optimum storage
Built in arm rest

Matches standard trim

Ensure your vehicle stays clutter free with a Terrafirma Cubby box in your Defender. These high-quality Cubby boxes are suitable for Series 3 and Defenders and are crafted with precision tools using hard wearing faux leather material, with a padded lid and double cup holder as standard. No more spilt drinks! Complete with fixings and is available in Black or Grey. Approximate dimensions – H:26cm x W:27cm x D:49cm

**Security cubby box:** Designed to keep your valuables locked up and safe but still accessible. This steel cubby box comes complete with elbow pad, drinks holder, pen tray and rear accessory net.

Vehicle	Part number
Black cubby box	TF2662B
Grey cubby box	TF2662G
Security steel deluxe cubby box	TFDCB
Security steel standard cubby box	TF2662SEC





TF2662B





**STEERING** WHEELS

#### **FEATURES:**

Improved driver comfort

Semi dished black anodised alloy

3 spoke design

Mountney 3 spoke steering wheels and adaptor bosses are the Defender off-roaders choice.

Semi dished in black vinyl with black anodised alloy centre. They are smaller in diameter, comfortable, easy to clean and super strong. Available in 14" and 15" diameter.

It is necessary to identify the number

of splines on your steering column to confirm the boss part number before ordering.





Vehicle	Description	Part
DEF, D1 & RRC	Steering wheel boss with 36 splines	GI002
DEF	Steering wheel boss with 48 splines	G1003
DEF, D1 & RRC	Mountney 14" 3 spoke vinyl replacement steering wheel (without boss)	GI004
DEF, D1 & RRC	Mountney 15" 3 spoke vinyl replacement steering wheel (without boss)	GI005



# **ALLOY GEAR** LEVER KNOBS

#### **FEATURES:**

All gearbox options

Durable silver anodised

Polished alloy

Leather and alloy

Smarten up your Defender with these upgrade gear lever knobs. Stylish and super cool silver anodised for 5 speed LT77 and R380 gearboxes from 1983 to 2007 or polished alloy and smart leather & alloy gear levers suitable for Defenders from 2007 to 2016.



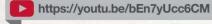






Vehicle	Description	Part
DEF 83-94	LT77 anodised alloy gearbox and transfer box level knobs	TF928
DEF 94-07	R380 anodised alloy gearbox and transfer box lever knobs	TF929
DEF 2007 on	Leather covered gearbox and transfer box levers	TF1472
DEF 2007 on	Polished alloy gearbox and transfer box levers	TF5051

# **BOMBPROOF HINGE GUARDS**





#### **FEATURES:**

2mm thick Stainless Steel

Fits around the padding without compromising the security

Lower and rear hinges profiles to fit across all variants

Measured to allow it to close without tearing the door seal

Terrafirma Bombproof Hinge Guards are designed to be fitted in under 30 minutes per door and prevent the door being removed by undoing the bulkhead bolts. In recent years the Defender has increased in popularity. Along with it, so too has the demand for black market parts. Consequently, thefts of Defender doors are increasingly common. Even the police have been targeted. Don't be another victim - protect your Defender.

Vehicle	Description	Part number
Def	Terrafirma bombproof 2 door hinge guard kit	G1398
Def	Terrafirma bombproof 4 door hinge guard kit	G1399

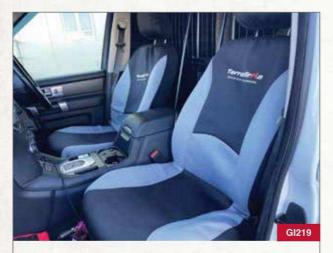




# errafirM

# **SEATING ESSENTIALS**

Make your Defender that bit more comfortable!



## **SEAT COVERS**

**FEATURES:** 

Waterproof

Easy to fit and remove

Protect your Defender seats with Terrafirma waterproof covers. Available in two sizes, Defender specific

and a larger universal cover to fit other vehicle models. Made from black and grey polyester and EVA with a bold Terrafirma logo, they are easy to fit and remove.



Vehicle	Part No
Waterproof seat covers, universal fit (PAIR)	GI219
Waterproof seat covers, Defender 83-2007 (PAIR)	GI220



### **BULKHEAD REMOVAL KITS**

#### **FEATURES:**

Increases front passenger area space and increases driver comfort

Improve access to the rear stowage area

No compromise in body strength

A way of increasing comfort for taller drivers and passengers of Defenders 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 vehicle. The

bulkhead is cut away to a convenient structural point and the cut edges are hidden and full strength restored by fitting this kit with its perfectly formed, black powder-coated steel sections,

leaving a factory finish. Defender station wagons built after 2007 do not benefit from this kit.



alternative is to install a bulkhead removal bar, in this case the bulkhead is removed to the floor completely,

a nicely sculpted tube sweeps from side to side from the door latch points to the floor restoring structural rigidity to the body tub and giving full access to the rear and maximum seat movement.

Description	Part number	
Defender bulkhead removal kit	TF871	
Defender bulkhead removal bar	TF1810	

# SEAT BOX PROTECTORS

**FEATURES:** 

Restores or . seat box cover The front corners of your Defender seat box are prone to damage. This pair of clever corner pieces provide protection from wear and scuffing or restore an already damaged seat box cover. Made from 3mm plastic and fitted in minutes with the self-drill screws provided.

Vehicle	Part number
Defender seat box protectors (PAIR)	GA1435









## **SEAT RISERS**

#### **FEATURES:**

Provides much needed extra space for taller drivers

**Both raises** and moves the seat back 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.

Description	Part number	
Defender seat rises	TF872	
(PAIR one seat)		

### **SEATBELTS**

#### **FEATURES:**

Manufactured to **British Standard** 

Direct fit

Fixed and inertia reel option

Securon is an industry leading seat belt manufacturer that has served the 4x4 market for years.



For decades Defender owners have been

converting, refitting and

replacing seat belts in their vehicles, damaged and worn seat belts are a strict MOT failure. Securon seat belts are made to British Standard from thousands of polyester strands woven into 50mm wide webbing designed to absorb energy by stretching up to 15% in the event of an accident. Belts are available in fixed lap belts and inertia reel lad and diagonal designs and are supplied with the associated British Standard stalks, buckles and fastenings.





Vehicle	Description	Part number
DEF	Seat belt extension 500mm	7102-009-004
DEF 83-06, D1, RRC & S3	SECURON BS approved seat mounted static lap belt front and rear	GSB210
DEF, D1, RRC & S3	SECURON BS approved seat mounted automatic lap belt front and rear	GSB2220
DEF & S3	SECURON BS approved static lap and diagonal front seat belt	GSB300/30
DEF & S3	SECURON BS approved inertia lap and diagonal front seat belt	GSB500/30

### **RED SEAT BELTS**





Vehicle	Part number
Defender truck cab RHS (BTR6561)	GA5055
Defender truck cab RHS (BTR6562)	GA5056
Defender station wagon (BTR6563) front	GA5057
Defender station wagon TD5 on RHS front	GA5079
Defender station wagon TD5 on LHS front	GA5080
Defender station wagon (EVL501580) rear	GA5058
Defender 110 crew cab pick up 2007 on (EVL501600PMAG) RHS rear	GA5059RH
Defender 110 crew cab pick up 2007 on (EVL501610PMAG) LHS rear	GA5059LH
Defender 110 crew cab pick up from YA183533-2007 (EVL000080PMAG) RHS rear	GA5060RH
Defender 110 crew cab pick up from YA183533-2007 (EVL000090PMAG) LHS rear	GA5060LH

### **SEAT BELT SHOULDER PROTECTORS**

#### TF2000

Terrafirma padded carbon fibre effect seat belt shoulder protectors, supplied as a pair, simple to install, these great value stylish shoulder protectors

add a bit of much needed additional comfort for long journeys. Suitable for all 4x4 vehicles.









Keep your floor space free and store things safely in the roof space instead!

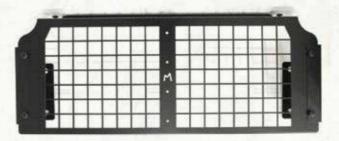


## D3 & D4 LOAD SPACE PARCEL SHELF STORAGE



Discovery 3s and 4s have huge carrying capacity but its not easy to make the most of the height of the load space in the rear.

Our parcel shelf storage basket allows you to store items in the roof space of the D3 and 4 without compromising the floor storage area. Simple to install, no drilling is required, simply secure the 2 mounting brackets behind the rear passenger grab rails and attach the basket with 6 thumb screws for easy removal.



Vehicle	Part No
Discovery 3 & 4 load space parcel shelf storage system	TF2020

### **DRAWERS**

#### FEATURES:

Extendible to almost the full length of the load bed

80kg capacity
Lockable

The rear load space of a Defender is virtually impossible to reach all the way into. There is never an easy way to get to the items stored far into the vehicle and it's almost always necessary to completely unload the car to get at what you need.

The solution is a drawer! Load all the items that are needed more frequently into the drawer then load the vehicle as required. Simply pull the drawer open to gain access to all your necessary equipment.

The drawer is lockable and secure, easy to open even loaded with 80kgs of gear. The top deck is carpeted in a high grade automotive/marine carpet and the inside is lined with an anti-slip mat.

Load space drawers are standard kit for expedition vehicles providing quick access to essentials while leaving the vehicle fully loaded. They are also Ideal for shooters, fishermen, cameramen, vets, mobile mechanics and farmers etc.



Vehicle	Part No
Defender 90 950mm x 700mm x 170mm	TF1470
Defender 110 1010mm x 700mm x 170mm	TF1471



# PET RAMP & GUARDS

Keep your pets safe and secure with fitted dog guard.



#### **FEATURES:**

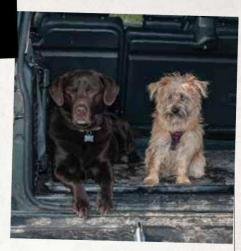
Easy to fit using existing mounting points

Designed to fit neatly to the interior contours

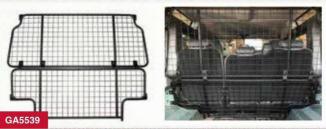
Velar

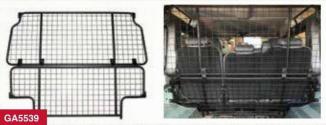
Universal

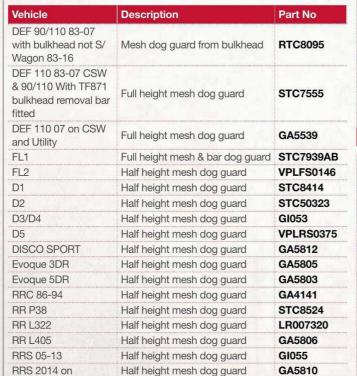
Typically these guards use existing mounting points within the rear of the vehicle, so no drilling or specialist tools are required to fit them. Depending on your vehicle they can be quickly removed by unscrewing a couple of thumb screws. Dog guards or load space guards are also a great option for keeping tools, equipment and luggage in the rear of your vehicle where it belongs when on expedition or off-roading.











Half height mesh dog guard

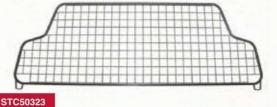
Pet Ramp

GA5813

**GA1631** 











# FLOOR MATS AND BOOT LINERS Protection

Protects your carpets from mud and snow!



Most 4x4s these days are carpeted and are impossible to remove, keep them clean with tailored floor mats and boot liners. Contoured to fit neatly into their respective positions in the vehicle they are quickly removable for washing.

### FLOOR MATS



There's no doubting the strength of these hard-wearing Rubber Mats and their proven capability to significantly reduce wear and tear in your car. They're lightweight, very flexible and they're custom-made. With a raised outer lip to retain any spills, they'll do a fantastic job of keeping the interior of your vehicle in the best possible condition, while covering up any existing damage.

Vehicle	Description	Part No
DEF from XA159807	RHD front (PAIR)	STC50172
DEF 110 87-2006	2nd row	STC50173
DEF up to BA999999	RHD front (PAIR)	LR005039
DEF 110 2007 on	2nd row	LR005041
DEF from CA000001	RHD front (PAIR)	VPLDS0147
D1	RHD front (PAIR)	GA4426
D1	2nd row	GA4427
D2	RHD front (PAIR)	GA4424
D2	2nd row	GA4425
D3 & D4	RHD front & rear (SET)	GA4802
D3 & D4	LHD front & rear (SET)	GA4803
D3 & D4	3rd row contour mat	GA4819
D5	RHD front & rear (SET)	GA4858
D5	LHD front & rear (SET)	GA4859
DISCO SPORT	RHD front & rear (SET)	GA4827
DISCO SPORT	LHD front & rear (SET)	GA4828
DISCO SPORT	3rd row contour mat	GA4832
FL2	RHD front & rear (SET)	GA4800
FL2	LHD front & rear (SET)	GA4801
Evoque	RHD front & rear (SET)	GA4812
Evoque	LHD front & rear (SET)	GA4813
P38	RHD front (PAIR)	GA4430
P38	2nd row	GA4431
L322 up to 6A999999	RHD front & rear (SET)	GA4806
L322 up to 6A999999	LHD front & rear (SET)	GA4807
L322 up to 7A000001	RHD front & rear (SET)	GA4808
L322 up to 7A000001	LHD front & rear (SET)	GA4809
L405	RHD front & rear (SET)	GA4820
L405	LHD front & rear (SET)	GA4821
RRS 2005-2013	RHD front & rear (SET)	GA4804
RRS 2005-2013	LHD front & rear (SET)	GA4805
RRS 2014 on	RHD front & rear (SET)	GA4823
RRS 2014 on	LHD front & rear (SET)	GA4824
Velar	RHD front & rear (SET)	GA4860
Velar	LHD front & rear (SET)	GA4861









## **RUBBER MATS**

Vehicle	Description	Part No	
S3 Rubber mats front - pair		GI050	
ALL DEF 83-06	Contoured rubber mats front	GI051	
D2	Contoured rubber mats front	GI054	
DEF	Contoured rubber mats rear	GI058	
D3	Front and rear winter mat set rubber rhd	GI064	
RRS 2013>	Floor mats (rhd) 4 piece - rubber version of vplgs0149	GI200	
D4 2015>	Floor mats (rhd) 4 piece - rubber version of lr026384	GI201	
DISCO SPORT 2015>			
EVOQUE 2011>	Floor mats (rhd) 4 piece	LR045096	
FL2 06-14	Floor mats (rhd) 4 piece	VPLFS0233	

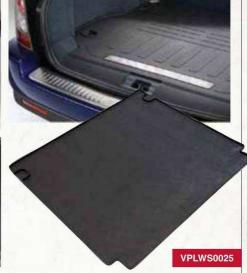


## **BOOT LINERS**

Vehicle	Part No	
D3 & D4 2004-2016	LR006401	
DISCO SPORT (7 SEAT) 2015>	VPLCS0279	
EVOQUE 2011>	VPLVS0089	
FL2 06-14	LR002516	
RR 2002-2012	LR003894	
RR 2012>	VPLGS0260	
RRS 2005-2013	VPLSS0043	
RRS 2013>	VPLWS0225	







# LOAD SPACE LINERS

Vehicle	Description	Part No
DEF 90	Rubber moulded mat	LR005615
DEF 90 2007 on	Rubber floor mat 4 seat version	EAH500530
DEF 110 Hard top	Foam backed rubber mat	GA4503
	Rubber moulded floor mat 5 seat version	LR005613
DEF 110 2007 on	Rubber moulded floor mat 7 seat version	LR005040
DEF 110 2007 On	Ribbed rubber floor mat 5 seat version	EAH500520
	Ribbed rubber floor mat 7 seat version	EAH500540
D2	Rubber mat half length	STC50052AA
D2	Rubber mat full length	STC50053AA
D3 & D4	Rubber mat	LR006401
FL2	Rubber mat	LR002516
Evoque	Rubber mat	VPLVS0091
L322	Rubber mat	LR003894
L405	Rubber mat	VPLGS0151
RRS 2005-2013	Rubber mat	VPLSS0043
RRS 2014 on	Rubber mat	VPLWS0225







# DOOR CARDS AND WINDOW TRIMS

# For Defenders

Scruffy or damaged Defender door cards?

**FEATURES:** 

Original appearance

Wipe down cleaning

Uses standard fixings

There is no need to go to the expense of Genuine door cards when these excellent replica plastic versions are a great alternative, easy to keep clean, not susceptible to the damp (useful in a Defender) and simple to install. Suitable for all Defenders with push button doors and electric or manual windows up to 2007. They are available in black, dark grey and light grey to match the original interior and use standard fixings.

The original rear window trims are also susceptible to damp and wear and tear, once again these fantastic value replicas will restore your Defender's interior to as good as new. Available for vehicles with and without windows these trims are perfect for hiding soundproofing materials too.













-





Fasteners required MWC1474 x1 (pack of 20) per door card

Window trims: Fasteners required; BTR6682 x4, MWC5763LOY x2 & EZM100340LOY x2



TF2732

TF2480

# AIR CONDITIONING KITS



#### **FEATURES:**

No drilling required

Indistinguishable from factory fitted units

Plugs straight into the existing wiring loom and fuse board

Easy to install as components are pre-assembled

Parts interchangeable with original parts



Air conditioning has become standard spec in modern vehicles and so being able to retro fit it into a Defender makes complete sense. These fully comprehensive kits are identical to the original fitment, they require no drilling, everything plugs or connects to the existing



Vehicle	Right hand drive	Left hand drive
300 tdi	TF2343R	TF2343L
Td5	TF2342R	TF2342L
Tdci	TF2344	



#### **FEATURES:**

4.3" colour TFT monitor

1/4" Colour CMOS image sensor

Digital wireless video

Suction cup mounting bracket

Camera bracket

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

Parking guidelines

Optional second camera (sold separately)

6 x Infra-red LED night vision

Camera power is taken from reverse lights on vehicle

Great rear view camera kit for any application where rear view is limited. With a 4.3" 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 and no cables cluttering up your vehicle. 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.

Description	Part No.	
RING Wireless digital reversing camera	TF935	

# **ELECTRIC WINDOWS**

#### **FEATURES:**

Straightforward to fit Safer, easier driving

With the Defender seating position best described as 'snug' one of the hardest things to do while driving is in fact wind the window up and down! Whilst the manufacturer eventually fitted electric windows to many Defenders there are still

plenty with manual windows, so give yourself a bit of driving luxury with this comprehensive electric widow kit for both front doors.

Description	Part number
Electric front window kit 2002 on (PAIR)	TF4664





Accessories to personalise and enhance the performance & functionality of your vehicle, to protect the bodywork and lighting from damage both on and off-road simply improve the rugged appearance.



Also included here are accessories to improve the accessibility and usability of your 4x4 and add a bit of style and personality, whether its your family vehicle, used for work or iust for fun.



BCKIT01-DEF/A

MAMMOUTH CHEQUER PLATE

Nothing else compares in quality.

Get ready to enhance your Defender!

Mammouth is the name synonymous with the finest quality and most comprehensive range of Defender chequer plate on the market. The philosophy is 100% quality and the entire range is ready to enhance your Defender.

#### FEATURES:

3mm thick, fully chamfered edges and countersunk mounting holes

Supplied with full fitting kits

Available in black powder coat or silver anodised

All Mammouth chequer plate products are manufactured from high quality 3mm 5 bar material, perfectly formed with fully chamfered edges, countersunk and de-burred holes which line up perfectly with the body contours. Supplied silver anodised or black powder coated, all products come supplied as a

kit including stainless steel countersunk bolts & nuts.

The 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 1983 to 2016. In 2007 the introduction of a new shaped bonnet and repositioned radio aerial prompted the range branded Pumatec. Unique to Mammouth is the innovative and stylish 1-piece bonnet protector with wing tops and rear corners receiving subtle changes in design.















WTKIT03/B

Vehicle	Documents of the second of the	Silver anodised		Black powder coated	
venicie	Description	90	110	90	110
Defender 1983-2007	3mm Premium wing top protectors (left hand aerial hole)	WTKIT	D1-LAH/A	WTKIT	01-LAH/B
Defender 1983-2007	3mm Premium wing top protectors (right hand aerial hole)	WTKIT	01-RAH/A	WTKIT	01-RAH/B
Defender 1983-2007	3mm Premium wing top protectors (no aerial hole)	WTKIT01-NH/A WTKIT01-NH/B		01-NH/B	
Defender 2007 on	3mm Pumatec wing top protectors	WTK	IT03/A	WTK	(IT03/B
Defender 1983-2007	Foam gaskets for 3mm Premium wing top protectors		WT-	GAS	
Defender 2007 on	Foam gaskets for 3mm Pumatec wing top protectors	WT-GAS07  BCKIT01-DEF/A  BCKIT01-DEF/B			
Defender 1983-2007	3mm Premium bonnet protection plate	BCKIT	01-DEF/A	BCKIT	01-DEF/B
Defender 2007 on	3mm Pumatec bonnet protection plate	FBKIT	01-07/A	FBKIT	01-07/B
Defender 1983 on	3mm Premium side sill protectors	SLKIT01-90/A		SLKIT01-90/B	
Defender 1983 on CSW and UTILITY	3mm Premium side sill protectors		SLKIT01-CSW/A		SLKIT01-CSW/B
Defender 1983 on HARD TOP	3mm Premium side sill protectors		SLKIT01-VAN/A		SLKIT01-VAN/B
Defender 1983-2007	3mm Premium rear body corner protectors	CNKIT01-90/A	CNKIT01-110/A	CNKIT01-90/B	CNKIT01-110/B
Defender 2007 on	3mm Pumatec rear body corner protectors		CNKIT02-110/A		CNKIT02-110/B
Defender 1998 on	3mm Premium fuel filler surround plate	FF-	TD5/A	FF-	TD5/B
Defender 1983-1998	3mm Premium fuel filler surround plate	FF-	TDI/A	FF-	TDI/B
Defender 1983 on	3mm Premium front bumper tread plates	BTS	-KIT/A	BTS	-KIT/B
Defender 1983 on	3mm Premium rear chassis cross member plate	RCMKIT	01-DEF/A	RCMKIT	T01-DEF/B
Defender 1983 on	3mm Premium Quadrant plate		RQKIT01-110/A		RQKIT01-110/B

EXTENDED
WHEEL ARCHES

Made from almost indestructible vacuum formed or moulded plastic the fantastic looking Terrafirma Defender and Discovery wide wheel arches are a full 2" (50mm) wider than the original keeping your vehicle legal when fitted with bigger tyres, not to mention helping to keep the mud off the bodywork.



Tough vacuum formed or OE spec plastic

Contoured for 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" (50mm) wide covering wider tyres.

Cutting the bodywork on a Discovery 2 is far less likely hence Terrafirma offers a 2" (50mm) wide wheel arch protector kit that follows the original bodywork and like the Defender requires no body trimming.

For Defender owners who want a wider wheel arch to improve looks and to cover those bigger tyres but do not want to drill the bodywork or change the side profile of the vehicle these 1 1/4" (30mm) wider wheel arches are the perfect choice. Fitted exactly as the originals with the same rivets and made from a similar semi flexible material these arches are perfect for the majority of wheel and tyre upgrade and will keep you legal. (These require a section of the original inner wheel arch to fully enclose the inner wing)

The James Bond film 'Spectre' sparked a whole new trend in Defender styling with huge tyres on beadlock wheels which needed extra wide wheel arches to cover them. These arches have become a key element in preparing lookalikes or stylized Defenders. These arches are semi rigid and require drilling to fit and when accompanied with giant wheels and tyres really make a statement.















**TF110** 





Vehicle	Description	Part number
DEF 90/110	2" (50mm) extra wide wheel arch kit	TF110
DEF 90/110	30mm wide rear wheel arch kit	TF1978
DEF 90/110	30mm wide front wheel arch kit	TF1979
DEF 90/110	Super wide Spectre style wheel arch kit	TF1120
D1 3 DR & RRC	2" (50mm) extra wide wheel arch kit	TF113
D1 5 DR & RRC	2" (50mm) extra wide wheel arch kit	TF114
D2 98-04	2" (50mm) extra wide wheel arch kit	TF115
DEF 90/110	Standard wheel arch kit (gloss black)	TF280
DEF 90/110	Standard wheel arch kit (matt black)	TF281
DEF 90/110/130	Left front wheel arch (gloss black)	MRC9377GF
DEF 90/110/130	Right front wheel arch (gloss black)	MRC9378GF
DEF 90/110	Rear wheel arch (gloss black)	ALO710010GF



## TerrafirMa

## **SNOW COWL**

#### **FEATURES:**

Prevents heater duct blockage

Reduces water intake

The Terrafirma Snow
Cowl is based on
the military Snow Cowl
Application. This all-weather
accessory helps to prevent
snow, mud, leaves, water and
sand entering the heater intake
and hindering performance.

The Snow Cowl is the ultimate accessory for your Defender, easy to fit and made to last giving that military look as well as having practical benefits.



Description	Left side	Right side
Snow cowl	TF150LH	TF150RH
XD Vent		TF1041



## SIDE STORAGE LOCKERS

#### **FEATURES:**

Utilises otherwise wasted space

Stainless steel construction

Sealed door

Flush fit lock and handle

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.



Vehicle	Description	Part number
DEF 110 07 on	Stainless steel LH rear wheel arch side locker (375 X 330 X 300)	TF886
DEF 110 HT/PU 83-2016	Stainless steel side locker (510 X 330 X 300)	TF887

## **MUD DEFLECTORS**

#### **FEATURES:**

Prevents heater duct blockage

Reduces water intake



Description	90	110
Set of 4 gloss paintable mud deflectors	TF1130	TF1131



Any Defender owner will know that mud splashes up between the wheel arch and the mud flap and typically covers the front doors and the rear quarter panels. These clever mud deflectors block this space and keep your body sides clean. Supplied as a set of four, for the front and rear of your 90 or 110.



## MUD FLAPS



#### **FEATURES:**

Keep bodywork clean from mud and splashes

Mount to existing fixtures

Mudflaps are designed to keep the body clean from mud and splashes thrown up by large tyres. Traditional flat rubber flaps are available for Defenders while other models require moulded and contoured semi

flexible mud flaps that attach to existing fixings to avoid the need to drill the bodywork.

















Vehicle	Description	Part number
DEF 90/110/130	Front mudflaps with brackets (PAIR)	RTC9479
DEF 90/110/130	Front mudflaps without brackets (PAIR)	RTC4685
DEF 90/110/130	Right hand front mudflap and bracket	LR055323
DEF 90/110/130	Left hand front mudflap and bracket	LR055333
DEF 90/110/130	Right hand rear mudflap with bracket	LR055332
DEF 90	Left hand rear mudflap and bracket with exhaust cut out	LR055340
DEF 90	Left hand rear mudflap and bracket without exhaust cut out	CAT500450PMAG
DEF 110/130	Right hand rear mudflap with bracket	LR055330
DEF 110/130	Left hand rear mudflap with bracket	LR055334
D1	Front mudflaps (PAIR)	RTC6820
D1	Rear mudflaps (PAIR)	RTC6821
D2	Front mudflaps (PAIR)	CAS100900LR
D2	Rear mudflaps (PAIR)	CAS100910LR
D3 & D4	Front mudflaps (PAIR)	CAS500010PCL
D3 & D4	Rear mudflaps (PAIR) unpainted bumper	CAT500010PCL
D3 & D4	Rear mudflaps (PAIR) partially painted bumper	VPLAP0017
D5	Front mudflaps (PAIR)	VPLRP0283LR
D5	Rear mudflaps (PAIR)	VPLRP0357LR
DISCO SPORT	Front mudflaps (PAIR)	VPLCP0203
DISCO SPORT	Rear mudflaps (PAIR) 5 seat, 7 seat without spare wheel	VPLCP0204
DISCO SPORT	Rear mudflaps (PAIR) 7 seat with spare wheel	VPLCP0277LR
FL2	Front mudflaps (PAIR)	LR003324
FL2		LR003324 LR003322
	Rear mudflaps (PAIR)	<del> </del>
EVOQUE Pure and Prestige	Front mudflaps (PAIR)	VPLVP0065
EVOQUE Dynamic	Front mudflaps (PAIR)	VPLVP0066
EVOQUE Pure and Prestige	Rear mudflaps (PAIR)	VPLVP0069
EVOQUE Dynamic	Rear mudflaps (PAIR) excluding parallel parking sensors	VPLVP0070
RRC 86-94	Front mudflaps with brackets (PAIR)	RTC9562
RRC 86-94	Front and rear mudflaps only	MXC5587
P38	Front mudflaps (PAIR)	STC8535
P38	Rear mudflaps (PAIR) single exhaust	STC8536
P38	Rear mudflaps (PAIR) twin exhaust	STC7703
P38	Rear mudflaps (PAIR) from XA428522	CAT101160
P38	Rear mudflaps (PAIR) from XA428522	CAT101170
L322 2002-2009	Front mudflaps (PAIR) up to 5A999999	CAS000150PMALI
L322 2002-2009	Right hand front mudflap up to 5A999999	VUB001320LR
L322 2002-2009	Left hand front mudflap up to 5A999999	VUB001330LR
L322 2002-2009	Front mudflaps (PAIR) from 6A198416	CAS500060PMA
L322 2002-2009	Front mudflaps (PAIR) from 6A198416 with	VUB503940
	side steps	
L322 2002-2009	Rear mudflaps (PAIR) up to 5A999999	CAT000180PMA
L322 2002-2009	Rear mudflaps (PAIR) from 6A198416	CAT500070PMA
L322 2010-2012	Front mudflaps (PAIR) from AA000001	CAS500060PMA
L322 2010-2012	Rear mudflaps (PAIR) from AA000001	CAS500070PMA
_405	Front mudflaps (PAIR) with deployable side steps	VPLGP0111LR
L405	Front mudflaps (PAIR) without deployable side steps	VPLGP0109
L405	Rear mudflaps (PAIR)	VPLGP0110
RRS 2005-2009	Front mudflaps (PAIR)	CAS500070PCL
RRS 2005-2009	Rear mudflaps (PAIR)	CAT500120PCL
RRS 2010-2013	Front mudflaps (PAIR)	CAS500070PCL
		VPLSP0016LR
RRS 2010-2013	Rear mudflaps (PAIR)	VELGEOUIGEN
RRS 2014 on	Front mudflaps (PAIR) with deployable side steps	VPLWP0167
RRS 2014 on	Front mudflaps (PAIR) without deployable side steps	VPLWP0165
RRS 2014 on	Rear mudflaps (PAIR)	VPLWP0166

WIND DEFLECTORS

Terrafirma wind deflectors are useful in several ways:

#### **FEATURES:**

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

Smoke tinted

Easy to fit

They enable the windows to be open slightly allowing fresh air to circulate and provide ventilation, even when it is raining, without the water coming in. 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.

Terrafirma wind deflectors are smoke tinted and easy to fit. In most cases no tools or adhesive is required, as they are supplied with self-adhesive strips pre-fitted for easy application to the door frame.



<b>V</b> ehicle	Part number
DEF 1984 on FRONT set of 2	TF666
DEF 1984 on REAR set of 2	TF667
D1 set of 4	TF660
D2 set of 4	TF661
D3 & D4 set of 4	TF662
D5 set of 4	TF678
Discovery Sport set of 4	TF679
L1 2 door set of 2	TF670
FL1 4 door set of 4	TF671
L2 set of 4	TF664
Evoque 3 door set of 2	TF672
Evoque 4 door set of 4	TF675
RRC 4 door set of 4	TF669
P38 set of 4	TF673
.322 2002-2012 set of 4	TF665
.322 2012-2014 set of 4	TF677
.405 set of 4	TF6108
RRS 2005-2013 set of 4	TF663
RRS 2014 on set of 4	TF676
/elar set of 4	TF668

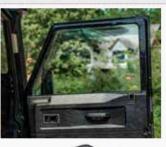






















Upgrade your Defender with a retrofit air con front end, new grille and matching headlamp panels!

#### **FEATURES:**

Tough vacuum formed or OE spec plastic

Contoured for great fit

Essential when fitting wider wheels and tyres

The Sport and Honeycomb front grilles 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 install.

The Honeycomb grille replaces the original grille and retains the original headlamp surrounds whereas the Sport grille is supplied as a kit with

matching headlamp surrounds for a full frontend makeover.

To compliment the Sport grilles, a pair of wing top heater intake vents as well as side air intake vents which are available individually depending on which side your air intake grill is, are also available, all of these grilles and vents are a direct replacement so are easy to fit.





TF270





TF282







DEFENDER	Part number
SPORT front grille and headlight surrounds	TF270
SPORT left side wing vent grille satin black	TF271LH
SPORT left side wing vent grille gloss black	TF271LHGF
SPORT right side wing vent grille satin black	TF271RH
SPORT right side wing vent grille gloss black	TF271RHGF
SPORT wing top vent grilles satin black (PAIR)	TF272
SPORT wing top vent grilles gloss black (PAIR)	TF272GF
HONEYCOMB front grille gloss	TF282
HONEYCOMB front grille matt	TF283
Air con front panel kit matt	TF275
Air con front panel kit gloss	TF276
Air con front panel lower vent grille	TF6551
Ram air left side wing vent	GS177
Ram air right side wing vent	GS178







## **AIR CON** PANEL KIT

#### **FEATURES:**

Direct fit

Supplied as a kit

Gloss or matt finish

Accepts all **Defender grilles** 







TF276

panel which includes all the required mounting parts. The front panel is also a direct replacement for the original in the event of crash damage. To complete the transformation a lower vent grille can be attached for a total factory look.



### **RAM AIR WING VENTS**

#### **FEATURES:**

Improves heater performance

Forces cool air into the engine bay



plastic moulded ram air intake vents with mesh grilles helps

to force air to the heater system and engine bay from the vent panels on the top of Defender front wings.



















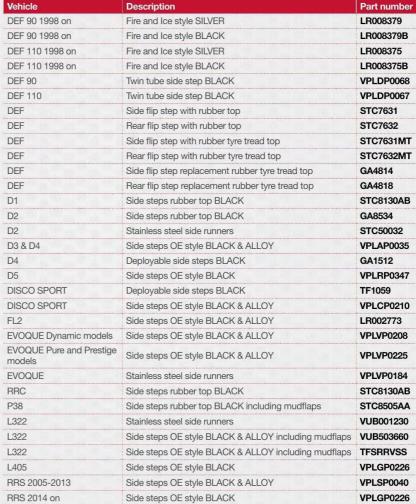






STC

	RRS 201
	A TOP
27631	











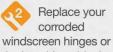
## WINDSCREEN HINGE BLOCKS

#### **FEATURES:**

Gaskets and bolts included

Supplied as a pair

Direct fit



the later hinge blocks with these smart billet alloy CNC machined hinge blocks in either silver or black anodised. If you are replacing hinges you will require LR016671 reinforcing plate to fit on the inside of the vehicle.





Description	Silver	Black
Alloy windscreen hinge blocks	GA1142	GA1142B



#### FEATURES:

Attach to factory roof channels

Enable cross bars to be fitted



Alloy roof rails add a bit of style as well as providing the possibility of adding cross bars for luggage baskets, ski and cycle racks or top boxes etc.

Vehicle	Description	Part No
DISCO SPORT	Roof rails with panoramic roof	VPLCR0136



## RAPTOR COATINGS

Protection that is easy to apply, durable, repairable, looks great and lasts!



Easy to use and clean

**Provides excellent UV protection** 

Waterproof - provides a water tight seal, keeping water out and protects new surfaces against rust

Sound deadener (reduces noise and vibrations)

Protects against rust, corrosion salt, damp and extreme temperatures

High resistance to everyday and off-road use

Abrasion and stain resistant

Dries rapidly and is flexible

Provides excellent adhesion

No need to wax after application

RAPTOR is a tough and durable

coating that provides surfaces with a protective barrier that can withstand the toughest situations.

RAPTOR is UV resistant and won't fade or discolour even after years in the sun. It is also waterproof and protects surfaces from rust, fuel, oils and salt water. RAPTOR's versatility makes it perfect for almost any application. Spray or roll RAPTOR on high traffic areas; it is scratch and stain resistant and easy to clean, simply hose it off. It is flexible and resists impacts without cracking, making it perfect for 4x4 applications.

RAPTOR is a 2-part urethane product that can easily be repaired in the unlikely event that the surface should become damaged.



GA6497



GA6371



GA6391



GA6370









**GA6447** 



GA6395

Description	Part No
2k black aerosol x 6	GA6642
2k epoxy primer aerosol beige single	GA6647
2k white aerosol single	GA6665
4lt kit black	GA6382
4lt kit white	GA6649
4ltr kit tintable	GA6384
5ltr black	GA6370
5ltr hardener	GA6371
5ltr tintable	GA6436
750ml kit black (inc hardener)	GA6497
750ml kit tintable (inc hardener)	GA6498
Acid #8 acid etch primer 450ml aerosol	GA6393
Anti slip additive	GA6484
Anti-corrosive epoxy primer 1ltr	GA6615
Anti-corrosive epoxy primer 5ltr	GA6616
Application sprayer	GA6386
Finishing pads pack fine red 10 pack	GA6395
Grip #4 universal adhesion promoter 450ml aerosol	GA6394
Hvlp spray gun 1.7 Nozzle	GA6447
Panel wipe cloth - 350 sheets	GA6396
Roller and tray kit	GA6653
S2002 solvent based degreaser 1ltr tin	GA6390
S2002 solvent based degreaser 5ltr tin	GA6391
Tiger seal black	GA6388BL
Tiger seal grey	GA6388GG
Tiger seal white	GA6388BW
Vari-nozzle application gun	GA6617



Additional lights for work and play, replacement or upgrade, Terrafirma has a lighting solution for you. From standard and LED upgrade lights made as a kit for your convenience through to super bright spotlights, light bars and work lights.



Terrafirma has teamed with the world's leading manufacturers to bring you the latest in LED technology. Take a look at the new range of OSRAM LED 4x4 lights on page 158 >>



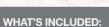
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## LIGHTING

## **MULTI-FUNCTION 8-WAY** SWITCH PANEL SYSTEM

If you looking to fit LED lights to your vehicle but are put off with all the wiring?



Touch Screen Panel (115mm x 66mm x 15mm)

Circuit Control Box (162mm x 110mm x 34mm)

**Switch Panel Brackets** 

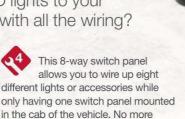
**Voltage Protection Breaker** 

Circuit Box Brackets

Sheet of 50 Standard Labels

**Battery Cables &** Wire harness

Screws & Mounting Hardware



Simply connect your lights to the main fused control board and run one control wire through to the cab area. This then allows you to control all eight devices separately. A sheet of 50 labels is also included so you can customise your touch screen panel to match your lights.

drilling lots of holes with separate

switches and relays.

Maximum Power - 600w - 1200w; Maximum Current - 60A; Input 12v to 24v; Outlets - 2 x 30amp, 2 x 20amp, 2 x 10amp and 2 x 5amp; IP67 rated





TF7010

UNIVERSAL

Part number

Multi function (8 way) switch panel system

TF7010



## 7" LED HEADLIGHTS

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

**FEATURES:** 

2800LM @ 30W low beam

4450LM @48W high beam

9-36v DC

E marked and DOT approved

Ready to fit

Advantages to LED lighting include incredible light output, low draw, solid-state electronics, and no bulbs to burn out. These headlights are a massive upgrade from the original sealed beam and halogen lights.

DEFENDER	Part No
7" LED E marked, DOT approved headlights RHD (PAIR)	TF710
7" LED E marked, DOT approved headlights LHD (PAIR)	TF711



### LED MIRROR INDICATOR REPEATER CHASER LIGHTS

These easy to fit replacement, plug and play LED chaser lights replace the centre section of the mirror cover and provide a stylish upgrade.

Suitable for Discovery 4 2014-16, Discovery 5, Range Rover Sport 2014-18, Range Rover Evoque 2012-13 and Range Rover L405 2013-2018.

UNIVERSAL	Part No	
LED mirror	TE704E	
indicator kit	TF7015	





## **LED WING MIRRORS**



Direct replacement

Uses std 95mm light & mirror lens

Terrafirma LED wing mirrors. supplied as a pair they are a direct replacement for the original mirror heads,

retained with a single Allen key. Designed to illuminate the roadside & hedge rows with bright 21w,

95mm LED lights and adjustable using finger grip styled moulded housings.







## **DISCOVERY 4** LED GRILLE LIGHTING KITS

#### FEATURES:

Grille fitting kit and wiring loom

8" Double row Driving light

36w fitted with 3w OSRAM LEDs

3240 Lumens

1350 LUX at 10m

2.26amps @ 12v

Combination Beam Pattern – both flood and spot beam

ECE R112 Certified and approved for road use

IP68 water and dust ingress rated

Fitted with waterproof Deutsch connectors



Each kit includes a pair of 8" 36w double row E marked LED Terrafirma driving lights that produce a super bright 3240 Lumen combination flood and spotlight pattern. The lights are IP68 rated and come complete with an OE quality mounting kit that perfectly complements the front grille on your Discovery 4 for a 'Factory' appearance. The kit includes a comprehensive wiring kit with waterproof Deutsch connectors and is suitable for competent DIY and workshop fitment using the detailed cutting guides and fitting instructions provided.



D4	Part No
LED Grille lighting kit 2009 to 2014	TF7006
LED Grille lighting kit 2014 to 2016	TF7008



Amber clip on filters

1800 Lumens

IP67 rated

Alloy housing & PC lens

125x120x150

with wiring loom and switch these great spotlights are ideal for a multitude of applications for the front of your vehicle, perfect on a light bar

winch bumper or roof rack, even bumper or bulkhead mounted.



Vehicle Description 5" 125mm round spotlights 25w UNIVERSAL LED 1800LM (PAIR)

TF705









#### **FEATURES:**

Pair of light bars and wiring loom

36w fitted with 3w OSRAM LEDs

3240 Lumens

1350 LUX at 10m

2.26amps @ 12v

**Combination Beam** Pattern - both flood and spot beam

**ECE R112 Certified** and approved for road use

IP68 water and dust ingress rated

### 8" DOUBLE **ROW LED** LIGHT BAR



Pair of 8" 36w double row E marked LED Terrafirma driving light bars that produce a super bright 3240 Lumen combination flood and spotlight pattern.

The lights provide incredible illumination and can be fitted anywhere on the front of a vehicle or roof rack

#### UNIVERSAL

Part No

8" double row LED light bar 3240LM (PAIR)

TF7005

#### FEATURES:

12W output (4 x 3W LED)

1000 Lumen brightness - equivalent of 80 candles.

3.7V Lithium battery

Up to 5hrs working life

8hr max charge time

Magnetic Base

Hand-held or free-standing

Folds into a cube for easy and convenient storage

Includes USB charging lead and car adaptor

Tough, durable outer casing

## **TerrafirMa**

### **EMERGENCY** RECHARGEABLE **WORK LIGHT**

Lightweight fully adjustable rechargeable work light with magnetic base.

Three light modes:

- Bright
- Medium
- Flashing





#### **FEATURES:**

#### 16 x 10W CREE LEDs

600k colour temperature

Operating voltage 10-30v

Wiring loom and switch

Stainless steel mounting brackets

IP68 water and dust ingress rated

### 18" SINGLE ROW LED LIGHT BAR

This great value high performance light bar will illuminate the trail, black die cast alloy housing with stainless steel mounting brackets and polycarbonate lens, this lightbar has flood beam pattern giving a broad long distance spread of light.

100.00		_	_		
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Part No

18" single row LED light bar

**TF712** 





#### **FEATURES:**

Supplied as a pair

Unbreakable Lexan lens

IP67 rated

Low current draw

## COMPACT 1 LED SPOTLIGHTS

These perfect little 2" spotlights have a single 10watt LED chip producing 800 Lumens of light with a 10-degree spot beam pattern ideal for projecting long distance. Built into a black alloy housing with stainless steel mountings.





Vehicle	Description	Part No	
UNIVERSAL	2" 50mm round spotlights 10w 800LM LED (PAIR)	TF713	

### **PUDDLE LAMPS**

These great puddle lamps project an illuminated logo onto the ground to help you step out of your vehicle.

UNIVERSAL	Part No
LR Logo puddle lamps	TF680
(PAIR)	1 1 000



chance with these lights!

Terrafirma has teamed up with legendary lighting manufacturer Osram to bring you this incredible range of 4x4 specific LED lights.

OSRAM
The variety of performances, styles and beam patterns bring intense white LED light to the darkest corners of the World, at work or at play. Osram lights offer the most sophisticated LED light and electrical designs on the market.

Osram have combined rugged strength & durability with the latest innovation in indirect illumination and LED technology to provide the greatest optical performance, reducing glare and improving visibility.

The unique MX Range all include a position light for daytime running as well as beam patterns that reach over 400m and spread to over 50m wide.

Osram's incredible FX Range of light bars in Combo and Spot beam patterns for the ultimate in near and far illumination.

The stunning FX1000 1m light bar gives light at over 600m distance and 150m wide... what more could you need?

Sleek and stylish or where space is at a premium the Slim SX range offers the perfect combination of size and performance, fit them individually or in pairs to produce unrivalled light patterns to suit every application.

The VX Range includes light bars, reverse and work lights perfect for any working vehicle or off-roader in wide, spot and combo beam patterns.

Osram lets you customize your light profile with multiple beam options from its hard working & hard wearing, robust & compact light specifically developed with the 4 wheel driver in mind.

























### **OSRAM** BULB UPGRADES



Vehicle	Fit	Qty	OE X reference	Part number
Night breaker la	ser			
DEF/D1/RRC/	H4	Single	589783	64193NBL-01B
P38/D2/FL1	H4	Twin	589783	64193NBL-HCB
D3/D4/RRS/	H7	Single	LR000703 - XZQ000011	64210NBL-01B
L322/D2/D Sport/FL2	H7	Twin	LR000703 - XZQ000011	64210NBL-HCB
Night breaker u	nlimite	d		
DEF/D1/RRC/	H4	Twin	589783	64193NBU-HCB
P38/D2/FL1	H4	Single	589783	64193NBU-01B
D3/D4/RRS/	H7	Twin	LR000703 - XZQ000011	64210NBU-HCB
L322/L405/ D2/D Sport/FL2	H7	Single	LR000703 - XZQ000011	64210NBU-01B
D2/D3/D4/RRS/ FL1/FL2	H11	Single	LR005383	64211NBU-01B
D1/P38	H1	Twin	XCD100030L	64150NBU-HCB
D1/F30	H1	Single	XCD100030L	64150NBU-01B
P38	НЗ	Single	606178 - STC3085	64151NBU-01B
L322	H8	Twin	LR010353	64212NBU-HCB
Evoque	HB3	Twin		9005NBU-HCB
	HB4	Twin		9006NBU-HCB

Description	Range	Qty	Osram Pt No	Product name	Part No
85mm cube 1250lm wide beam	55m	Pair	LEDDL101-WD	MX85-WD	TF2060
85mm cube 1250lm spot beam	110m	Pair	LEDDL101-SP	MX85-SP	TF2061
250mm light bar 2700lm spot beam	360m	Single	LEDDL103-SP	FX250-SP	TF2062
250mm light bar 2700lm combo beam	320m	Single	LEDDL103-CB	FX250-CB	TF2063
500mm light bar 3500lm spot beam	450m	Single	LEDDL104-SP	FX500-SP	TF2064
500mm light bar 5500lm combo beam	440m	Single	LEDDL104-CB	FX500-CB	TF2065
500mm light bar 5500lm combo beam	440m	Single	LEDDL104-CB SM	FX500-CB SM	TF2066
180mm slim light bar 1300lm spot beam	190m	Single	LEDDL105-SP	SX180-SP	TF2067
300mm slim light bar 2600lm spot beam	270m	Single	LEDDL106-SP	SX300-SP	TF2068
300mm slim light bar 2600lm combo beam	210m	Single	LEDDL106-CB	SX300-CB	TF2069
500mm slim light bar 3900lm spot beam	370m	Single	LEDDL107-SP	SX500-SP	TF2070
500mm slim light bar 3900lm combo beam	290m	Single	LEDDL107-CB	SX500-CB	TF2071
120mm round reverse/work light 1100lm wide beam	36m	Single	LEDDL108-WD	VX120R-WD	TF2072
120mm cube reverse/work light 1100lm wide beam	36m	Single	LEDDL109-WD	VX120S-WD	TF2073
250mm light bar 2700lm combo beam & position light	320m	Single	LEDDL110-CB	MX250-CB	TF2074
180mm round 3000lm combo beam & position light	300m	Pair	LEDDL111-CB	MX180-CB	TF2075
260mm round 3500lm combo beam & position light	350m	Pair	LEDDL112-CB	MX260-CB	TF2076
240mm cube 4000lm combo beam & position light	430m	Pair	LEDDL113-CB	MX240-CB	TF2077
1000mm light bar 8000lm combo beam	635m	Single	LEDDL114-CB SM	FX1000-CB SM	TF2078
250mm light bar 1500lm spot beam	318m	Single	LEDDL115-SP	VX250-SP	TF2079
500mm light bar 2800lm spot beam	415m	Single	LEDDL116-SP	VX500-SP	TF2080
250mm light bar 2100lm combo beam	170m	Single	LEDDL117-CB	VX250-CB	TF2081
500mm light bar 4100lm combo beam	238m	Single	LEDDL118-CB	VX500-CB	TF2082
80mm round work light 1150lm wide beam	240m	Pair	LEDDL119-WD	VX80-WD	TF2083
80mm cube work light 1300 spot beam	114m	Single	LEDWL101-SP	VX80-SP	TF2084
70mm round work light 550lm spot beam	53m	Single	LEDWL102-SP	VX70-SP	TF2085
70mm cube work light 550lm wide beam	43m	Pair	LEDWL103-WD	VX70-WD	TF2086
Single light wiring kit		Single	LEDDL ACC 101	AX1LS	TF2087
Pair of lights wiring kit		Single	LEDDL ACC 102	AX2LS	TF2088
Number plate and light mounting bracket		Single	LEDDL ACC 103	AX	TF2089



## **WILDERNESS LIGHTING**

Whatever the application, these lights will not let you down!

Wilderness Lighting supply what are believed to be some of the highest quality & brightest LED lights on the market today using class leading technology.





The unbeatable toughness & durability of Wilderness lights means they are ideally suited for the most of extreme conditions including Agriculture, Mining, Forestry, Marine & Extreme off-road motorsport.



#### **COMPACT 8 LED** LIGHTS

Our Compact 8 LED Spotlights are small yet very powerful. Supplied as a pair these lights produce a massive 3000 Lumens of light. The Compact 8 features 8 x 5W 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.



### 20" SOLO SINGLE ROW **COMBINATION BEAM** LED LIGHT BAR

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 5W OSLON white LED chips giving visible beam distance of 1210m. The low energy consumption technology means they only consume 6.7 amps of power.



### 50" SOLO SINGLE ROW **COMBINATION BEAM** LED LIGHT BAR

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 5W OSLON white LED chips giving visible beam distance of 2180m. The low energy consumption technology means they only consume 17.3 amps of power.





### **DOWN LIGHTER** 'SCENE' LIGHT

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 UVresistant 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.



Description	Part No
Compact 8 side shooter spot and spread beam 3000LM (PAIR)	TF716
20" Solo single row combination beam light bar 10780LM	TF717
50" Solo single row combination beam light bar 27060LM	TF718
Pair of bottom mounting brackets for Wilderness light bars	TF718A
Down lighter 'scene' light camping/work light	TF719





## TerrafirMa LIGHT GUARDS

#### **FEATURES:**

High grade plastic Suitable for 73 and 95mm lamps Terrafirma Defender front and rear light guards are made from high grade plastic and are suitable for both standard 73mm lights as well as the larger 95mm diameter NAS style lights.





DEFENDER	Part number
73mm standard light diameter light guard	TF170
95mm NAS light diameter light guard	TF171

## **OTHER LIGHT GUARDS**

#### **FEATURES:**

Minimal drilling to fit

Easy to install

Offers protection and styling

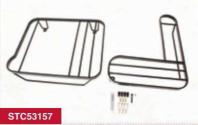


Light guards are designed to protect the lights and enhance the appearance and emphasise the shape of your head lights and tail lights giving a more purposeful look.

Vehicle	Description	Part number
S3	Mesh light guard (SINGLE)	345985
DEF	Front light guards	STC53161
DEF	Rear light guards (square left L shape right)	STC53157
DEF	Rear light guards (square left & square right)	STC53158
D2 up to 3A	Front light guards	STC50026
D2 3A on	Front light guards	STC53193
D2	Rear light guards	STC53194
D3	Front light guards	VUB501200
D3	Rear light guards	VUB501380
D4	Front light guards	VPLAP0008
D4	Rear light guards	VPLAP0009
RRS 2010-2013	Front light guards	VPLSP0010
RRS 2010-2013	Rear light guards	VPLTP0064



















## LIGHT MOUNTS

Sometimes it's not straightforward to mount spotlights to a vehicle, drilling the bumpers or bodywork is not a great option, this range of light mounts provides a solution.



Terrafirma bulkhead spotlight mounting brackets for Defenders. Supplied as a pair these clever black powder coated fabricated steel brackets allow small to medium sized spot lights to be mounted on the bulkhead providing long range visibility whilst still allowing the bonnet to be opened or removed, for the bulkhead vent panels to be opened and without obscuring the view from the drivers and passengers seat.

DEFENDER	Part No
Bulkhead spotlight mounting brackets (PAIR)	TF7220



#### FEATURES:

Suitable for many bumper options

Fits multiple lights and light bars

DEFENDER BUMPER SPOTLIGHT BARS

These relatively shallow but chunky bars are designed to fit 2, 3 or 4 spotlights, depending on their size, even smaller light bars.

There is a winch bumper version that is slightly taller than the standard version to clear winches with overhead solenoid packs which is suitable for both Air Con and Non Air Con vehicles and a shallower options for standard and non-winch heavy duty bumpers. Made from 2.5" diameter tube and black powder coated; they really look the part on any Defender.

DEFENDER	Part No
Spotlight mounting bar to suit Terrafirma commercial winch bumpers	TF008
Spotlight mounting bar to suit Defender standard bumpers	TF008SH



SHALLOW

Simple to fit

Stylish mounting bar for 2 spotlights

Perfect for mounting small to medium sized lights directly to the top of a bumper. Also suitable for plastic bumpers such as Discovery 1 and 2.

Part No
TF7003

### **HEADLIGHT ANTI** THEFT BRACKETS



Stop your expensive headlights from being stolen with these simple to fit anti-theft guards which prevent the securing tag from being prized up meaning the lights cannot be removed without opening the bonnet. They are simple to fit using existing mounting, no drilling required.

Vehicle	Description	Part No	
D3 & D4	Headlight anti theft brackets (PAIR)	TF756	



### **BEHIND THE WINCH FAIRLEAD LIGHT** MOUNTING BRACKET

Sandwiched between a hawse or roller fairlead and winch bumper through the standard fixings this light mounting bracket is ideal for mounting a pair of lights or light bar.

UNIVERSAL	Part No	
Behind the winch fairlead light mounting bracket	TF7004	



### BEHIND NUMBER PLATE LIGHT BAR MOUNT

By using more substantial fixings this clever light mounting bracket is sandwiched behind the number plate which saves drilling fresh holes, particularly in vehicles that have plastic bumpers. Suitable for small LED lights and light bars.

UNIVERSAL  Behind the number plate light bar mounting bracket	Part No
Behind the number	
plate light bar	TF4107
mounting bracket	



## **ROOF LIGHT BARS**



#### **FEATURES:**

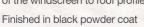
Follows the shape of the roof line

Perfect form mounting lights up high without a roof rack

Mounting spotlights above the windscreen not only looks great but also projects good light to illuminate a wider path and to show up potholes ahead.

These roof bars attach to the rain gutter and allow for 4 small to medium driving or spotlights to be fitted. The Defender version is obviously straight to follow the roof line above the windscreen whilst the

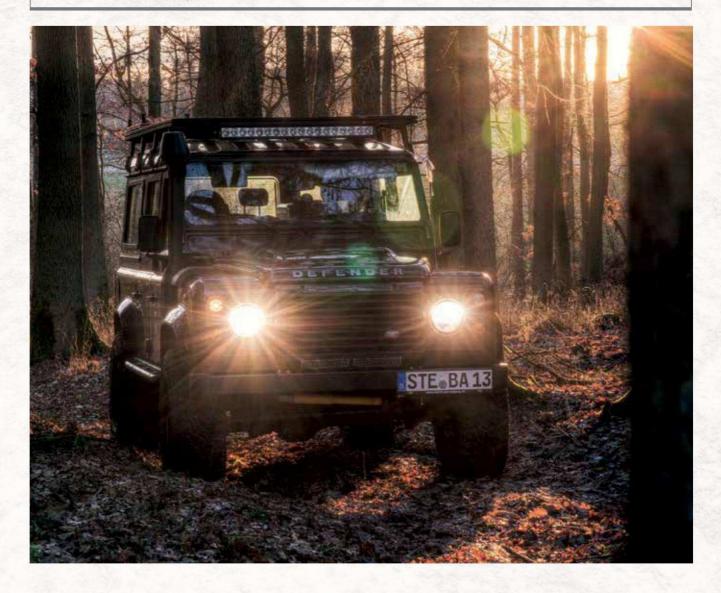
Discovery version is very precisely curved to follow the shape of the windscreen to roof profile.







Vehicle	Description	Part No
DEF	Gutter mounted across the windscreen light bar	TF7001
D1 & D2	Gutter mounted across the windscreen light bar	TF7002
D2	Gutter mounted rear light bar	TF7016
DEF	Gutter mounted rear light bar	TF7017
Universal	Pair of aerial mounts for TF7016 & 7017	TF7018





## REPLACEMENT & LED UPGRADE KITS

For Defenders...



Wipac design and manufacture exterior lighting products for the world's premium car makers. They are technology readers in this

market and the majority of the products utilise high powered LEDs in both front and rear applications. Extensive design development and the test facilities combined with state of the art, clean-room manufacturing delivers products to the quality levels required by the most discerning customers.



















Kits	Clear	Coloured	Smoked
73mm standard light kit inc. relay		GL1077G	
73mm standard light kit		GL1080G	
95mm LED light kit	GL1143CL	GL1143	GL1143SM
73mm LED light kit	GL1191	GL1192	GL1190
95mm LED front kit	GL1274CL	GL1274	GL1274SM
73mm kit with 95mm fog and reverse	GL1291	GL1292	GL1577SM
Replacement lights			
73mm LED front indicator	LR047798LEDCL	LR048188LED	LR048188SM
73mm LED rear indicator	LR048187LEDCL	LR048187LED	LR048187SM
73mm LED Front side light	LR048189LEDCL		LR048189LEDSM
73mm LED stop tail light	LR048200LEDCL	LR048200LED	LR048200SM
95mm LED stop tail light	AMR6526LEDCL	AMR6526LED	AMR6526LEDSM
95mm LED indicator	AMR6527LEDCL	AMR6527LEDG	AMR6527LEDSM
95mm Front side light	GL1273		GL1273SM
95mm LED fog light	LR048201LEDCL	LR048201LED	LR048201LEDSM
95mm LED reverse light	LR048202LEDCL		LR048202LEDSM
LED number plate light		XFC100550LED	
LED high level brake light unit	LR044451LEDW	LR044451LEDR	LR044451LEDB
Side repeaters late type	GL8530	GL8532	GL8531
Flasher relay for LED indicators	GL051		
95mm light plinth	AMR3850		
Pack of 10 screws	SE105161L		
2 wire link harness ind, side, fog & rev	STC1188		
3 wire link harness stop tail		STC4637	









## REPLACEMENT LIGHTS

Over the years lighting equipment has improved considerably. Some vehicle model lights have not always been the best, so better replacements and upgrades are often high on owners wish lists.

Upgrade your Defender sealed beam units to halogen, replace the vulnerable fog lights on your Range Rover Classic or simply add some spotlights or a work light.

























Vehicle	Description	Part number
DEF/UNIVERSAL	Replacement lights (PAIR) for TF056 bumper	TF056L
UNIVERSAL	EU approved spare bulb and fuse kit containing the 5 most popular bulbs - C047	GL1001
UNIVERSAL	H4 XENON MAX bulbs giving up to 90% more light (PAIR)	GL1004
UNIVERSAL	H7 XENON MAX bulbs giving up to 90% more light (PAIR)	GL1006
UNIVERSAL	RING round rear work lamp with grab handle and switch	GL2001
UNIVERSAL	H3 12V 55w bulb also suits GL2001	GL2003
RRC & UNIVERSAL	Rectangular 55w rectangular (PAIR)	GL002
DEF	7" RING Halogen headlamp conversion kit RHD	GL003
DEF	7" WIPAC Halogen headlamp conversion kit RHD	GL003G
DEF	7" WIPAC Halogen headlamp conversion kit LHD	GL006
UNIVERSAL	5.5" RING ROADRUNNER driving lights (PAIR)	GL014
UNIVERSAL	RING Pre wired fitting kit for a pair of spotlights including 30amp relay	GL010
UNIVERSAL	LED indicator lamp load device	GL017
DEF, S2 & S3	Allmakes LED front flasher lamp	RTC5013LED
DEF, S2 & S3	Allmakes LED stop & tail lamp	RTC5523LED





MERCHANDISE

Terrafirma is one of the most recognized brands in the 4x4 industry.

To compliment this extensive range of accessories, Terrafirma offers a range of merchandise to help you show off your investment personally.

The motor industry is packed full of powerful and exciting brands, many of which have become household names with masses of product, clothing and accessories bearing internationally recognised logos.

Terrafirma is one of the most desired and recognised brands in the 4x4 industry. To help 4x4 owners demonstrate their confidence and pride having invested in Terrafirma, we have had a selection of Shirts, T Shirts, Polo Shirts, hoodies, Baseball Caps and beanie bearing the stylish Terrafirma 'serious 4x4 accessories' logo created to allow you to really feel part of the brand.

## CAPS, HATS AND BUFF

Stylish black with red accents and Terrafirma logo for this baseball cap and machine washable beanie. The buff is made from 92% polyester & 8% Spandex, this buff is a multi-functional tubular accessory ideal for many activities. Designed to keep you warm in the cold and wick moisture away from your skin to keep you cool when it is hot. Great as a face covering or dust mask.

Description	Part number
COMPETITION CAP - BLACK AND RED	TF788
BEANIE HAT - BLACK AND RED	TF789
SIZE DOUBLE XL	TF784XXL
BUFF-FACE COVERING	TF787











### **JACKET**

The Terrafirma jacket is warm-backed stretch ripstop fabric, hardwearing, polyamide overlays and reflective trim. Machine washable.

Description	Part number		
SIZE LARGE	TF786L		
SIZE X- LARGE	TF786XL		
SIZE DOUBLE XL	TF786XXL		



### **POLO SHIRT**

100% cotton. Machine washable.

Description	Part number
SIZE MEDIUM	TF780M
SIZE LARGE	TF780L
SIZE X- LARGE	TF780XL
SIZE DOUBLE XL	TF780XXL



## HOODY

Kangaroo pouch pocket with hidden opening for earphone cord feed. Hidden earphone loops. Doublefabric hood with contrast inner. Machine washable.

Description	Part number
SIZE LARGE	TF784L
SIZE X- LARGE	TF784XL
SIZE DOUBLE XL	TF784XXL



## SAFARI SHIRT

Semi-cutaway, relaxed collar with square edged adjustable cuff. Sleeve can be rolled up and tabbed. Machine washable.

Description	Part number
SIZE MEDIUM	TF782M
SIZE LARGE	TF782L
SIZE X- LARGE	TF782XL
SIZE DOUBLE XL	TF782XXL

345985	161	FTC859	109	GA5810	137	GI054	139
64150NBU-01B	159	G1398	133	GA5812	137	GI055	137
64150NBU-HCB	159	G1399	133	GA5813	137	GI058	139
64151NBU-01B	159	GA1142	152	GA6370	153	GI064	139
64193NBL-01B	159	GA1142B	152	GA6371	153	GI200	139
	159	GA1435	134	GA6382	153	GI200	139
64193NBL-HCB							
64193NBU-01B	159	GA1512	151	GA6384	153	GI202	139
64193NBU-HCB	159	GA1631	137	GA6386	153	GI219	134
64210NBL-01B	159	GA2891	105	GA6388BLK	153	GI220	134
64210NBL-HCB	159	GA2892	105	GA6388BW	153	GJC20BLK	125
64210NBU-01B	159	GA2893	105	GA6388GG	153	GL002	165
64210NBU-HCB	159	GA4141	137	GA6390	153	GL003	165
64211NBU-01B	159	GA4424	138	GA6391	153	GL003G	165
64212NBU-HCB	159	GA4425	138	GA6393	153	GL006	165
7102-009-00A	135	GA4426	138	GA6394	153	GL010	165
9005NBU-HCB	159	GA4427	138	GA6395	153	GL014	165
9006NBU-HCB	159	GA4430	138	GA6396	153	GL017	165
ALO710010GF	144	GA4431	138	GA6436	153	GL051	164
AMR3850	164	GA4503	139	GA6447	153	GL1001	165
AMR6526LED	164	GA4800	138	GA6484	153	GL1004	165
AMR6526LEDCL	164	GA4801	138	GA6497	153	GL1006	165
AMR6526LEDSM	164	GA4802	138	GA6498	153	GL1077G	164
AMR6527LEDCL	164	GA4803	138	GA6615	153	GL1080G	164
			16-3-3-55	The second second second		The state of the s	
AMR6527LEDG	164	GA4804	138	GA6616	153	GL1143	164
AMR6527LEDSM	164	GA4805	138	GA6617	153	GL1143CL	164
ANR4583PM	101	GA4806	138	GA6642	153	GL1143SM	164
ANR4583SILVER	101	GA4807	138	GA6647	153	GL1190	164
BCKIT01-DEF/A	143	GA4808	138	GA6649	153	GL1191	164
BCKIT01-DEF/B	143	GA4809	138	GA6653	153	GL1192	164
BTS-KIT/A	143	GA4812	138	GA6665	153	GL1273	164
BTS-KIT/B	143	GA4813	138	GA8534	151	GL1273SM	164
CAS000150PMALR	146	GA4814	151	GA9018	112	GL1274	164
CAS100900LR	146	GA4818	151	GE001	88,125	GL1274CL	164
CAS100910LR	146	GA4819	138	GE005	125	GL1274SM	164
CAS500010PCL	146	GA4820	138	GE020G	125	GL1291	164
CAS500060PMA	146	GA4821	138	GE1001	125	GL1292	164
CAS500070PCL	146	GA4823	138	GE1002	125	GL1577SM	164
CAS500070PMA	146	GA4824	138	GE1003	125	GL2001	165
CAT000180PMA	146	GA4827	138	GE1004	125	GL2003	165
CAT101160	146	GA4828	138	GE1007	125	GL8530	164
CAT101170	146	GA4832	138	GE1010	125	GL8531	164
CAT500010PCL							
	146	GA4858	138	GE1020R	125	GL8532	164
CAT500070PMA	146	GA4859	138	GE1099	125	GRW001	101
CAT500120PCL	146	GA4860	138	GE2001	127	GRW002	101
CAT500450PMAG	146	GA4861	138	GE2392	125	GRW003	101
CNKIT01-110/A	143	GA5055	135	GHL2	90	GRW004	101
CNKIT01-110/B	143	GA5056	135	GHL3	90	GRW005	101
CNKIT01-90/A	143	GA5057	135	GHL4	90	GRW006	101
CNKIT01-90/B	143	GA5058	135	GHL4/5A	90	GRW012	101
CNKIT02-110/A	143	GA5059LH	135	GHL4/5BAG	90	GS177	149
CNKIT02-110/B	143	GA5059RH	135	GHL4XT	90	GS178	149
EAH500520	139	GA5060LH	135	GHL5	90	GSB210	135
EAH500530	139	GA5060RH	135	GHL6	90	GSB2220	135
EAH500540	139	GA5079	135	GHL7	90	GSB300/30	135
FBKIT01-07/A	143	GA5080	135	GI002	133	GSB500/30	135
FBKIT01-07/B	143	GA5539	137	GI003	133	HS163	110
FF-TD5/A	143	GA568	114	GI003	133	KAM101	109
		-	114	· ·		-	
FF-TD5/B	143	GA569	32 55050	GI005	133	KAM541	108
FF-TDI/A	143	GA5803	137	GI050	139	KAM542	108
FF-TDI/B	143	GA5805	137	GI051	139	KAM546	108
FRC5806	109	GA5806	137	GI053	137	KAM547	108



KAM548	108	LR043714P	59	MRC9377GF	144	SFP500210P	59
KAM549	108	LR043714TF	60	MRC9378GF	144	SFP500210TF	60
LR001018CDG	58	LR044451LEDB	164	MXC5587	146	SFP500220P	59
LR001019CDG	58	LR044451LEDR	164	NTC8780CDG	58	SFP500220TF	60
LR002516	139	LR044451LEDW	164	NZ606041L	110	SLKIT01-90/A	143
LR002773	151	LR045096	139	PC1500DT	125	SLKIT01-90/B	143
LR003322	146	LR045409	110	PD1881BLACK	99	SLKIT01-CSW/A	143
LR003324	146	LR047798LEDCL	164	PD1881GREY	99	SLKIT01-CSW/B	143
LR003894	139	LR048187LED	164	RBJ500222TF	51	SLKIT01-VAN/A	143
LR005039	138	LR048187LEDCL	164	RBJ500232TF	51	SLKIT01-VAN/B	143
LR005040	139	LR048187SM	164	RCMKIT01-DEF/A	143	STC1188	164
LR005041	138	LR048188LED	164	RCMKIT01-DEF/B	143	STC4637	164
LR005613	139	LR048188SM	164	RQKIT01-110/A	143	STC4858	110
LR005615	139	LR048189LEDCL	164	RQKIT01-110/B	143	STC50026	161
LR006401	139	LR048189LEDSM	164	RRB100510	99	STC50032	151
LR007055CDG	58	LR048200LED	164	RRD500010	101	STC50052AA	139
LR007320	137	LR048200LEDCL	164	RTC4685	146	STC50053AA	139
LR008375	151	LR048200SM	164	RTC5013LED	165	STC50172	138
LR008375B	151	LR048201LED	164	RTC5523LED	165	STC50173	138
LR008379	151	LR048201LEDCL	164	RTC5869	55	STC50265	123
LR008379B	151	LR048201LEDSM	164	RTC5870	55	STC50323	137
LR011591CDG	58	LR048202LEDCL	164	RTC6820	146	STC53157	161
LR015519P	59	LR048202LEDSM	164	RTC6821	146	STC53158	161
LR015519TF	60	LR051592TF	51	RTC8095	137	STC53161	161
LR016176CDG	58	LR051594TF	51	RTC9479	146	STC53101	161
LR016192CDG	58	LR051614TF	51	RTC9535	101	STC53194	161
LR017951CDG	58	LR051614TF	51	RTC9562	146	STC7555	137
	58		51	RUC105200		STC7631	151
LR017952CDG		LR051617TF			109		24,000 100
LR017952WCDG	57	LR051622TF	51	SDB000201CDG	58	STC7631MT	151
LR017953CDG	58	LR051623TF	51	SDB000211CDG	58	STC7632	151
LR017953WCDG	57	LR051626P	59	SDB000380CDG	58	STC7632MT	151
LR018026CDG	58	LR051626TF	60	SDB000380WCDG	57	STC7703	146
LR018026WCDG	57	LR055323	146	SDB000470CDG	58	STC7939AB	137
LR019618P	59	LR055330	146	SDB000470WCDG	57	STC8130AB	151
LR019618TF	60	LR055332	146	SDB000604CDG	58	STC8414	137
LR019977TF	51	LR055333	146	SDB000614CDG	58	STC8505AA	151
LR019978TF	51	LR055334	146	SDB000624CDG	58	STC8524	137
LR021316P	59	LR055340	146	SDB000636CDG	58	STC8535	146
LR021316TF	60	LR055454P	59	SDB000646CDG	58	STC8536	146
LR025739P	59	LR055454TF	60	SDB100830CDG	58	STC8843AA	99
LR025739TF	60	LR055455P	59	SDB101070CDG	58	STICKER-COMPASS	105
LR026221P	59	LR055455TF	60	SDB500182CDG	58	STICKER-TERR	105
LR026221TF	60	LR059122CDG	58	SE105161L	164	STICKER-TRACK	105
LR027107CDG	58	LR061385P	59	SFC500080P	59	STICKER-UNION-F	105
LR027123CDG	58	LR061385TF	60	SFC500080TF	60	STICKER-UNION-FG	105
LR027309P	59	LR061388CDG	58	SFP000250P	59	TF001	75
LR027309TF	60	LR063688TF	51	SFP000250TF	60	TF0010	76
LR029301TF	51	LR063711TF	51	SFP000260P	59	TF0011	76
LR029302TF	51	LR063718TF	51	SFP000260TF	60	TF0012	69,70
LR029303TF	51	LR063719TF	51	SFP000280P	59	TF0013	69,70
LR029304TF	51	LR064181P	59	SFP000280TF	60	TF0014	76
LR029305TF	51	LR064181TF	60	SFP500070P	59	TF0015	76
LR029306TF	51	LR072681P	59	SFP500070TF	60	TF0016	67
LR031843CDG	58	LR072681TF	60	SFP500130P	59	TF0017	67
LR031844CDG	58	LR073367TF	51	SFP500130TF	60	TF0018	71
LR031845CDG	58	LR073369TF	51	SFP500150P	59	TF001AC	75
LR031846CDG	58	LR074838TF	51	SFP500150TF	60	TF002ACST	77
LR033302CDG	58	LR075993TF	51	SFP500160P	59	TF002ACW	77
LR033303CDG	58	LR075995TF	51	SFP500160TF	60	TF002ST	77
LR038934CDG	58	LR108260P	59	SFP500190P	59	TF002W	77
LR039935CDG	58	LR108260TF	60	SFP500190TF	60	TF003	75

## PART INDEX

TF003AC	75	TF1012	49	TF121	11,24,45	TF1700	121
TF005	75	TF1013	49	TF123	14,24	TF1701	121
TF005AC	75	TF1014	49	TF124	14,24	TF171	161
TF006	77	TF1015	49	TF125	10,24	TF1710	121
TF006AC	77	TF1016	49	TF126	10,24	TF172	12,24
TF007A	80	TF1017	49	TF129	14,24	TF1720	128
TF008	162	TF1018	49	TF130	14,24	TF1725	128
TF008SH	162	TF1019	49	TF131	11,24	TF173	12,24
TF009	80	TF102	103	TF132	11,24	TF1730	128
TF009A	80	TF1020	39,42,49	TF137	20,24,46,95	TF174	12,24
TF010	28,29	TF1021	49	TF137SEALS	20,95	TF175	12,24
TF011	28,30	TF1022	49	TF139	21,96	TF176	12,24
TF014	28,29	TF1023	39,42,47,49	TF139A	21,96	TF177	12,24
TF015	28,29	TF1024	49	TF139B	21,96	TF178	13,24,47
TF018	28,29	TF1025	49	TF140	21,46,96	TF179	13,24,47
TF019	28,29	TF1026	49	TF140PAD	21,96	TF181	115
TF023V	28,29	TF1027	49	TF140SEALS	21,96	TF1810	134
TF027V	28,29	TF1028	49	TF140VALVE	21,96	TF182	115
TF030		TF1029	49	TF141	94	TF183	115
<del></del>	28,30			- II			
TF031	28,30	TF103	103	TF141SEALS	94	TF184	115
TF032	28,30	TF1030	49	TF142	14,24	TF190	12,24
TF033	28,30	TF1031	49	TF143	14,24	TF191	12,24
TF034	28,30	TF1032	49	TF144	11,24	TF197	32
TF035	28	TF1034	55	TF145	11,24	TF1978	144
TF036	28,30	TF1035	49	TF146	11,24	TF1979	144
TF037	28,30	TF1036	49	TF147	11,24	TF198	32
TF038	28,30	TF1037	49	TF1470	136	TF199	32
TF040	28	TF1038	123	TF1471	136	TF200	32
TF041	28	TF1039	123	TF1472	133	TF2000	135
TF042	28,30	TF103A	103	TF148L12	94	TF2001	109
TF051	124	TF104	99	TF148L14	94	TF2002	109
TF052	28,30	TF1040	123	TF148L16	94	TF2003	109
TF053	124	TF1040TOP	123	TF148R12	94	TF2005	109
TF053STRUT	124	TF1041	123,145	TF148R14	94	TF2006	109
TF055	78	TF1042	49	TF148R16	94	TF2008	109
TF055WRP	78	TF1043	49	TF149	96	TF201	32
TF056	76	TF105	99	TF149A	96	TF202	32
TF056L	165	TF1059	151	TF150LH	145	TF2020	136
TF060	77	TF106	103	TF150RH	145	TF203	32
TF060AC	77	TF107	103	TF151L12	95	TF204	32
TF070A	80	TF108	99	TF151L14	95	TF205	32
TF078	78	TF110	144	TF151L16	95	TF206	32
TF090	80	TF111	123	TF151R12	95	TF2060	159
TF090A	80	TF112	103	TF151R14	95	TF2061	159
TF095	80	TF1120	144	TF151R16	95	TF2062	159
TF095A	80	TF1129	41,42	TF152	101	TF2063	159
TF097	78	TF1129ULTRA	41,42	TF152NUTBLACK	101	TF2064	159
TF100	103	TF112KIT	103	TF153	94	TF2065	159
TF1000	49	TF112KITA	103	TF154	94	TF2066	159
<del>-</del>	49		144	TF154	123	TF2067	159
TF1001		TF113		19			
TF1002	49	TF1130	145	TF160B	100	TF2068	159
TF1003	49	TF1131	145	TF160G	100	TF2069	159
TF1004	49	TF113DEF	103	TF164	123	TF207	32
TF1005	49	TF114	144	TF166	123	TF2070	159
TF1006	49	TF115	144	TF167	123	TF2071	159
TF1007	49	TF116	10,24	TF1683	111	TF2072	159
TF1008	49	TF117	10,24	TF1684	111	TF2073	159
TF1009	49	TF118	10,24	TF1687	111	TF2074	159
TF1009CC	47,49	TF119	10,24	TF1688	111	TF2075	159
TF1010	49	TF120	11,24,45	TF169	13,24,45	TF2076	159
TF1011	49	TF1200	129	TF170	161	TF2077	159



TF2078	159	TF248	46	TF303	104	TF491	41,42,47
TF2079	159	TF2480	140	TF303B	104	TF492	79
TF208	32	TF2481	140	TF308	127	TF493	69,70
TF2080	159	TF2482	140	TF3301	83	TF494	22,46,47
TF2081	159	TF2483	140	TF3302	88	TF495	22,46,47
TF2082	159	TF2484	140	TF3303	88	TF497	41,42,47
TF2083	159	TF2485	140	TF3304	88	TF498	41,42,54
TF2084	159	TF2486	140	TF3305	88	TF499	124
TF2085	159	TF2487	140	TF3306	88	TF501	37,42,45,46
TF2086	159	TF2490	140	TF3307	88	TF502	37,42,45,47
TF2087	159	TF2491	140	TF3308	88	TF503	37,42
TF2088	159	TF2492	140	TF3309	86,88	TF504	37,42,45
TF2089	159	TF2493	140	TF3310	87,88	TF505	37,42,45
TF209	32	TF250	55	TF3311	86,88	TF5051	133
TF210	32	TF251	55	TF3312L	87,88	TF506	37,42,45
TF211	32	TF252	55	TF3312M	87,88	TF507	37,42,45
TF212	32	TF253	55	TF3313	127	TF508	38,42,45,46
TF213	32	TF254	55	TF3314	87,88	TF509	38,42,45
TF214	32	TF255	55	TF3315	89	TF510	38,42,45
TF215	32	TF256	55	TF3316	89	TF511	38,42,45
TF216	32	TF259	35	TF3317	89	TF512	38,42
TF217	32	TF260	35	TF3318	89	TF513	39,42
TF218	32	TF261	35	TF3319	88	TF514	39,42
TF220	40,42,50	TF262	35	TF3320	84	TF515	39,42,45
TF221	35,41,42	TF263	35	TF3322	88	TF516	39,42
TF222	35	TF264	35	TF3323	88	TF517	39,42
TF222HD	35	TF2662B	132	TF3324	88	TF518	40,42
TF222KD	35	TF2662G	132	TF3325	87,88	TF519	40,42,45
TF223	35	TF2662SEC	132	TF3326	88	TF520	40,42
TF223HD	35	TF270	149	TF3327	88	TF521	38,42,45,47
TF225	35	TF271LH	149	TF3328	90	TF5210	38,42
TF226	35	TF271LHGF	149	TF3329	88,127	TF522	37,42,45
TF227	35	TF271RH	149	TF3330	87,88	TF524	37,42,47
TF228	35	TF271RHGF	149	TF3340	85	TF525	39,42
TF229	35	TF272	149	TF380	116	TF526	39,42
TF230	35	TF2720	112	TF381	116	TF527	40,42,53,54
TF231	45	TF272GF	149	TF382	116	TF528	38,42
TF232	45	TF2730	140	TF383	116	TF529	38,42,47
TF233	45	TF2732	140	TF384	116	TF532	38,42,45,46
TF234	45	TF2733	140	TF385	123	TF532RJ	42
TF2342L	141	TF2734	140	TF387	123	TF534	37,42,47
TF2342R	141	TF2735	140	TF390	116	TF535	37,47
TF2343L	141	TF2740	140	TF391	116	TF537	39,42
TF2343R	141	TF2741	140	TF392	116	TF540	22,46,95
TF2344	141	TF2742	140	TF393	116	TF541	22,46,95
TF235	45	TF275	149	TF394	116	TF542	22,46,96
TF2357HD	111	TF276	149	TF400	118	TF543	22,46,96
TF2357HDG	111	TF280	144	TF4001	118	TF544	22,46,96
TF236	45	TF281	144	TF4002	118	TF550	114
TF238	46	TF282	149	TF4107	162	TF551	114
TF241	46	TF283	149	TF450	107	TF552	114
TF242	46	TF288	50	TF460	107	TF553	114
TF2440	140	TF289	50	TF4664	141	TF554	114
TF2441	140	TF290	50	TF481	18,24	TF555	114
TF2442	140	TF291	50	TF482	18,24	TF556	114
TF2443	140	TF292	50	TF483	19,24	TF558	114
TF2444	140	TF295	50	TF484	19,24,47	TF559	114
TF2445	140	TF301	104	TF485LH	19,47	TF560	114
TF2446	140	TF301B	104	TF485RH	19,47	TF561	114
TF2447	140	TF302	104	TF486	79	TF562	114

## PART INDEX

TF564	114	TF680	157	TF784L	167	TF863	67
TF570	71	TF700	155	TF784XL	167	TF864	67
TF570WC	71	TF7001	163	TF784XXL	166,167	TF865	67
TF571	71	TF7002	163	TF786L	167	TF868	67
TF571WC	71	TF7003	162	TF786XL	167	TF868V8	67
TF572	71	TF7004	162	TF786XXL	167	TF870	81
TF573	71	TF7005	157	TF787	166	TF871	134
TF574	71	TF7006	156	TF788	166	TF872	135
TF575	71	TF7008	156	TF789	166	TF873	82
TF580	47	TF7010	155	TF794B	128	TF874	82
TF5806	109	TF7012	129	TF794R	128	TF875	82
TF5806N	109	TF7013	129	TF795B	128	TF876	82
TF581	47	TF7015	155	TF795R	128	TF877	82
TF585	47	TF7016	163	TF801	70	TF878	82
TF6108	147	TF7017	163	TF801GAL	70	TF879	82
TF630	62	TF7018	163	TF802	53	TF879A	82
TF632	62	TF705	156	TF803	70	TF880	67
TF634	62	TF710	155	TF8049	67	TF881	67
TF636	62	TF711	155	TF805	70	TF882	67
TF638	62	TF712	157	TF807	70	TF883KIT110	72
TF639GD	61	TF713	157	TF807WA	70	TF883KIT90	72
TF640GD	61	TF715	157	TF808	70	TF883KIT90TDI	72
TF641GD	61	TF716	160	TF809	70	TF883WB	72
TF642GD	61	TF717	160	TF810	70	TF886	145
TF643GD	61	TF718	160	TF810GAL	70	TF887	145
*						***	
TF644GD TF645GD	61	TF718A	160	TF811 TF813	53	TF888 TF890	126
	61	TF719	160		70		67
TF646GD	61	TF720	115	TF814	70	TF891	67
TF647GD	61	TF7205	51	TF815	70	TF892	129
TF648GD	61	TF7206	51	TF816	70	TF893	129
TF649GD	61	TF7207	51	TF818	70	TF894	67
TF650GD	47,61	TF7208	51	TF819	70	TF894WB	67
TF650GDXL	47,61	TF721	115	TF828	67	TF895	67
TF651GD	61	TF722	115	TF829	67	TF895WB	67
TF652GD	61	TF7220	162	TF830	67	TF898	67
TF653GD	61	TF723	115	TF832	53	TF9017	112
TF654GD	61	TF724	115	TF833	53	TF907	132
TF6551	149	TF735	115	TF834	53	TF908	132
TF655GD	61	TF736	115	TF835	54	TF909	132
TF657GD	61	TF737	115	TF837	53	TF928	133
TF658GD	61	TF738	115	TF838	67	TF929	133
TF659GD	61	TF739	115	TF839	67	TF930	118
TF660	147	TF740	115	TF841L	67	TF935	141
TF661	147	TF742	115	TF841LB	67	TF940	49
TF662	147	TF742LATE	115	TF841R	67	TF946	49
TF663	147	TF745	115	TF841RB	67	TF950	118
TF664	147	TF746	115	TF843	67	TF972	120
TF665	147	TF750	81	TF844	67	TF972SP	120
TF666	147	TF756	162	TF845	67	TF973	120
TF667	147	TF770	73	TF846	67	TF975	120
TF668	147	TF771	73	TF848	67	TF976	120
TF669	147	TF775	73	TF850	67	TF977	120
TF670	147	TF776	73	TF853	67	TF980	120
TF671	147	TF780L	167	TF854	67	TF981	120
TF672	147	TF780M	167	TF855	67	TF999	126
TF673	147	TF780XL	167	TF856	67	TFARBKF	50
TF675	147	TF780XXL	167	TF857	67	TFARBKR	50
TF676	147	TF782L	167	TF858	67	TFARSK2	50
		-				-	50
TF677	147	TF782M	167	TF859	109	TFARSK4	
TF678	147	TF782XL	167	TF859N	109	TFBRP	81



TFDBHBK PADS	63
TFDC610	110
TFDC680	110
TFDCB	132
TFDCWA000110	110
TFDPS	131
TFDPS2P	131
TFDRC	131
TFDRCTC	131
TFEGR01	113
TFEGR06	113
TFEGR300	113
TFEGRV6	113
TFES11000	89
TFFR01	126
TFFR02	126
TFFR03	126
TFFRK	40,42
TFGASKITPRO	23
TFHPIN	82
TFI810	118
TFIIDBT	117
TFIIDPRO	117
TFR2012	93
TFR2014	93
TFR2016	93
TFR2512	93
TFR2512DUAL	93
TFR2514	93

TFR2514DUAL	93
TFR2516	93
TFR2516DUAL	93
TFRVSNUT	103
TFRVSNUTBLACK	103
TFRVSNUTD2	103
TFRVSNUTD2BLACK	103
TFSBJ	20,95
TFSRNUTLH	55
TFSRNUTRH	55
TFSRP	81
TFSRRVSS	151
TFSS11000	89
TFSWC01	105
TFSWC02	105
TFTS5M	89
TFWA1050	110
TFWA1140	110
TFWA610	110
TFWA630	110
TFWA680	110
TFWA850	110
TFWSRP	81
VPLAP0008	161
VPLAP0009	161
VPLAP0017	146
VPLAP0035	151
VPLCP0203	146
VPLCP0204	146

VPLCP0210	151
VPLCP0277LR	146
VPLCR0136	152
VPLCS0279	139
VPLDP0067	151
VPLDP0068	151
VPLDS0147	138
VPLFS0146	137
VPLFS0233	139
VPLGP0109	146
VPLGP0110	146
VPLGP0111LR	146
VPLGP0226	151
VPLGS0151	139
VPLGS0260	139
VPLRP0283LR	146
VPLRP0347	151
VPLRP0357LR	146
VPLRS0375	137
VPLSP0010	161
VPLSP0016LR	146
VPLSP0040	151
VPLSS0043	139
VPLTP0064	161
VPLVP0065	146
VPLVP0066	146
VPLVP0069	146
VPLVP0070	146
VPLVP0184	151

VPLVP0208	151
VPLVP0225	151
VPLVS0089	139
VPLVS0091	139
VPLWP0165	146
VPLWP0166	146
VPLWP0167	146
VPLWS0225	139
VUB001230	151
VUB001320LR	146
VUB001330LR	146
VUB501200	161
VUB501380	161
VUB503660	151
VUB503940	146
WT-GAS	143
WT-GAS07	143
WTKIT01-LAH/A	143
WTKIT01-LAH/B	143
WTKIT01-NH/A	143
WTKIT01-NH/B	143
WTKIT01-RAH/A	143
WTKIT01-RAH/B	143
WTKIT03/A	143
WTKIT03/B	143
XFC100550LED	164







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## TERRAFIRMA WARRANTY

Terrafirma products are warranted free from defects in materials and workmanship for a period of 12-months from the date of retail invoice, unless otherwise stated.

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.

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