

QUALITY, VALUE & PERFORMANCE



**Terrafirm**

*Serious 4x4 Accessories*



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## THE STORY SO FAR...

Not all that long ago with just a few shock absorbers and coil springs Terrafirma was conceived. Fuelled by the enthusiasm and demand from Land Rover owners Worldwide there are now over 500 products available plus hundreds more from associated brands making Terrafirma the largest and most comprehensive range of Accessories for Land Rovers in the World.

### And it doesn't end here...

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

More recently other industry leading brands have forged partnerships with Terrafirma. KAM Differentials, Mammoth Chequer Plate and Southdown 4x4 products have joined forces with Terrafirma confirming its place amongst the industry leaders.

### TUV approval for Terrafirma products

As safety requirements become more stringent worldwide, certain international markets including Germany, Austria, Switzerland and Norway now require some accessory products to be independently tested to ensure they are suitable for the application intended. Terrafirma has sought to acquire TÜV certification on a range of products to be sold in these markets.

Throughout the catalogue you will see the TÜV logo and a footnote highlighting that TÜV options are available. If a vehicle is found to be fitted with non-TÜV approved accessories then the local authorities can insist that the owner remove the product and return the vehicle to the original, factory fitted state.



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## OUR PHILOSOPHY

Terrafirma (Latin meaning Solid Earth)

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

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

To satisfy the diverse requirements of 4x4 owners both on and off road we have produced an amazing selection of accessories for Land Rovers. In Particular Terrafirma suspension, which is by far the most comprehensive category including the largest range of upgrade shock absorbers, steering dampers, coil springs and suspension hardware available anywhere in the marketplace.

Terrafirma accessories are 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.

To compliment Terrafirma, in this catalogue you will also find products from premium accessory manufacturers such as **Superwinch, KAM, Odyssey, Safety devices, Green Cotton, Lightforce, Mammoth, Mantec, Front Runner, VIAIR, Hi-lift and Safari.**

These brands have been selected because they compliment the Terrafirma range providing a 'one stop shop' for all Land Rover preparation requirements placing Allmakes 4x4 as market leader in the distribution of specialist Land Rover accessories.





TerraFirma  
MADE IN AUSTRALIA

LAND ROVER

SUPERTRUCK

LightForce

LightForce

## TERRAFIRMA WORLDWIDE

Even since the brand was introduced, TerraFirma has been actively involved in corporate sponsorships and successfully built up its strong fan base around the world with its ever increasing product range through various 4x4 events and charities across the world.

TerraFirma is proud of becoming the official sponsors of "Project Mobility", "The Armed Forces Rally Team", "Flight for Heroes", "All Wheel Drive Club (AWDC) Safari Championship" and many more. TerraFirma is going to continue its active involvement and play an important role in the world's 4x4 arena.



TerraFirma was showcasing at the Billing Show 2010. A Defender 110 was custom built on show by Project Mobility crew using TerraFirma parts.



TerraFirma sponsored Project Mobility appeared on an episode of Top Gear aired on 31/07/2011



TerraFirma has sponsored Project Mobility for its challenge of crossing 2,300km of Moroccan desert from 18th March to 26th March 2012. The Defender 130 "Nelly" has got new wheels, steering damper, shocks, rock sliders, diff guards, sump guard, tank guard and more all supplied by TerraFirma and Allmakes 4x4. The vehicle was used in support of the Bowler Offroad team throughout the event.



'Pie in the Sky' is an ultimate fund-raising challenge which involves 2 pilots flying a powered paramotor in turns from John O'Groats to Dover in the UK - covering 850 miles in 10 days. TerraFirma has sponsored this extraordinary challenge by offering the TerraFirma Discovery 3 vehicle as one of the support vehicles. This has helped raising over £70,000 for the charity 'Flight4heroes'.



In 2012, TerrafirMa has become the official sponsor of the All Wheel Drive Club (AWDC) Safari Championship 2012. A total of 8 rounds of this competition across the county will be aired on TV (SKY 143)



All Wheel Drive Club **TerrafirMa**  
**SAFARI**  
 CHAMPIONSHIP 2012



TerrafirMa is sponsoring The Armed Forces Rally Team in 2012 and has supplied TerrafirMa products including shock absorbers, shock turrets and brake discs for testing in the rally.

Teamed with McCarthy Land Rover N1 City - the authorised Land Rover dealership in Cape Town and vehicle preparation specialist - LR Services Cape Town, TerrafirMa supplied parts including the shock absorbers, the winch bumper and various other parts to help prepare this stunning vehicle.

## TERRAFIRMA SHOCK ABSORBERS RANGE

TerraFirma offers the widest range of shock absorbers specifically for Land Rover vehicles including the **All Terrain, Pro Sport, Extreme LT, Big Bore Expedition, Commercial HD** and **Remote Reservoir** as well as the universal fit **Mega Sport** and **Air Shocks** 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. 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 Land Rover's suspension. Shocks provide stability when cornering and braking, they maintain safe handling characteristics when driven hard, while towing and when heavily loaded. They also eliminate bounce and vibration improving driver and passenger comfort. Extended travel shocks allow for greater axle articulation making sure the tyres stay in contact with the ground for maximum movement.

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

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" (125 mm) longer.

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

Vehicle	90/110/130/D1/RRC		D2		Range Rover P38	
	Front	Rear	Front	Rear	Front	Rear
Shock absorber type						
All Terrain	TF116	TF117	TF118	TF119	TF125	TF126
All Terrain +2"			TF127	TF128		
Pro Sport	TF131	TF132				
Pro Sport +2"	TF120	TF121			TF144	TF145
Pro Sport +3"			TF133	TF134		
Extreme LT +5"	TF122LT	TF122LT				
Big Bore Expedition	TF129	TF130				
Big Bore Expedition +2"	TF123	TF124				
Commercial HD	TF142	TF143				
Remote Reservoir +2"	TF401	TF402				
Remote Reservoir +5"	TF403	TF403				
Mega Sport 9"	TF135*	TF136*				
Mega Sport 11"	TF137*	TF138*				
Air Shock 16"	TF141*					

\* Mega Sport shocks require Terrafirma mounting kits or custom mount systems, Air shocks require custom mounting systems.

## TYPICAL TERRAFIRMA SHOCK SPECIFICATION

### SHAFT

With shaft sizes of 16mm 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 AND SEALS

The end of the shock houses the shaft guide which uses 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 the 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 AND 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

The highest quality shock absorber oils are used providing long service life in extreme conditions including extreme temperatures between -30 and +40 C

### SHOCK MOUNTINGS

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

### 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.

### RUBBER BUSHES

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



Part Number	Type	Application	Open	Closed	Construction	Shaft diameter	Piston diameter	Body diameter
TF116	All Terrain	90/110/130/D1/RRC	585mm	345mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF117	All Terrain	90/110/130/D1/RRC	585mm	360mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF118	All Terrain	D2	590mm	365mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF119	All Terrain	D2	595mm	370mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF120	Pro Sport	90/110/130/D1/RRC	605mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF121	Pro Sport	90/110/130/D1/RRC	613mm	383mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF122LT	Pro Sport	90/110/130/D1/RRC	673mm	393mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF123	Big Bore Expedition	90/110/130/D1/RRC	610mm	370mm	Twin tube oil	20mm	50mm	76mm
TF124	Big Bore Expedition	90/110/130/D1/RRC	610mm	395mm	Twin tube oil	20mm	50mm	76mm
TF125	All Terrain	P38	535mm	330mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF126	All Terrain	P38	485mm	305mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF127	All Terrain	D2	640mm	390mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF128	All Terrain	D2	640mm	390mm	Twin tube low pressure nitrogen/oil	16mm	35mm	54mm
TF129	Big Bore Expedition	90/110/130/D1/RRC	550mm	340mm	Twin tube oil	20mm	50mm	76mm
TF130	Big Bore Expedition	90/110/130/D1/RRC	560mm	370mm	Twin tube oil	20mm	50mm	76mm
TF131	Pro Sport	90/110/130/D1/RRC	555mm	340mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF132	Pro Sport	90/110/130/D1/RRC	565mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF133	Pro Sport	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF134	Pro Sport	D2	665mm	410mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF135	Mega Sport	Universal	705mm	480mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm
TF136	Mega Sport	Universal	705mm	480mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm
TF137	Mega Sport	Universal	810mm	530mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm
TF138	Mega Sport	Universal	810mm	530mm	Mono tube high pressure nitrogen/oil	20mm	46mm	52mm
TF141	Air Shock	Universal	1100mm	690mm	Mono tube high pressure nitrogen/oil	40mm	60mm	66mm
TF142	Commercial HD	90/110/130/D1/RRC	555mm	335mm	Twin tube low pressure nitrogen/oil	20mm	40mm	60mm
TF143	Commercial HD	90/110/130/D1/RRC	565mm	350mm	Twin tube low pressure nitrogen/oil	20mm	40mm	60mm
TF144	Pro Sport	P38	585mm	360mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF145	Pro Sport	P38	535mm	335mm	Twin tube low pressure nitrogen/oil	20mm	40mm	57mm
TF401	Remote Reservoir	90/110/130/D1/RRC	605mm	368mm	Twin tube high pressure nitrogen/oil	20mm	40mm	57mm
TF402	Remote Reservoir	90/110/130/D1/RRC	610mm	380mm	Twin tube high pressure nitrogen/oil	20mm	40mm	57mm
TF403	Remote Reservoir	90/110/130/D1/RRC	675mm	400mm	Twin tube high pressure nitrogen/oil	20mm	40mm	57mm

## TERRAFIRMA ALL TERRAIN SHOCKS

- 35mm internal bore and piston
- 16mm double chromed shaft
- Nitrogen charged
- High temperature fluid
- 1.2mm outer shock tube wall thickness
- 14mm mounting pins

A great all rounder, the TerraFirma All Terrain shock is a favourite in any condition 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.

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

TerraFirma All Terrain shocks are built with the largest possible fully welded mounting pins and eyes with 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 for long lasting good looks and including the smart TerraFirma All Terrain shock absorber logo.

TerraFirma All Terrain shocks are the perfect replacement for existing shocks and yet can also accommodate up to 2" (50mm) of lift using TerraFirma coil springs. +2"(50mm) longer All Terrain shocks are also available for Discovery 2.

Application	90/110/130/D1/RRC	D2	P38
Front	<b>TF116</b>	<b>TF118</b>	<b>TF125</b>
Rear	<b>TF117</b>	<b>TF119</b>	<b>TF126</b>
Front +2"		<b>TF127</b>	
Rear +2"		<b>TF128</b>	



## TERRAFIRMA PRO SPORT SHOCKS

- Up to 3" (75mm) longer than standard
- 40mm internal bore and piston
- 20mm double chromed shaft
- Velocity sensitive valving
- Nitrogen charged
- High temperature fluid
- 1.5mm outer shock tube wall thickness
- 14mm mounting pins

It is the most popular choice of shock used for off-roading by Land Rover owners. 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.

The Pro Sport is regarded by many as the benchmark shock for Land Rovers. 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, +2" (50mm) & +3" (75mm) 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 eyes with 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) with a corresponding increase in wheel travel.

Application	90/110/130/D1/RRC	D2	P38
Front	<b>TF131</b>		
Rear	<b>TF132</b>		
Front +2"	<b>TF120</b>		<b>TF144</b>
Rear +2"	<b>TF121</b>		<b>TF145</b>
Front +3"		<b>TF133</b>	
Rear +3"		<b>TF134</b>	



## TERRAFIRMA EXTREME LONG TRAVEL SHOCKS

- 5" (125mm) longer than standard
- 40mm internal bore and piston
- 20mm double chromed shaft
- Velocity sensitive valving
- Nitrogen charged
- High temperature fluid
- 1.5mm outer shock tube wall thickness
- 14mm mounting pins

Application	90/110/130/D1/RRC
Front +5"	TF122LT
Rear +5"	TF122LT

The challenge to conquer the largest rocks and deepest ruts is hugely appealing to hard-core Land Rover 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.

Built to exactly the same tough specifications as the Pro Sport shocks including velocity sensitive valving, huge 20mm shaft, 40mm piston and fully welded mounts. The main difference is that the TerrafirMa Extreme LT shock is a massive 5" (125mm) longer than standard. Amazingly the Extreme shocks share the same high quality ride and handling on the road yet allow enormous wheel travel when off road.



TF122LT fitted with TF519 Mounting Bracket

Specific valving has been developed to allow the same shock to be used front and rear giving bump killing performance and unrivalled strength and flexibility in the serious rough stuff.

The TerrafirMa Extreme LT shock is constructed 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 LT 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.



## TERRAFIRMA BIG BORE EXPEDITION SHOCKS

- Standard length and 2" (50mm) longer than standard
- 76mm body, twin tube design
- 50mm internal bore and piston
- 20mm double chromed shaft
- High temperature oil filled
- 1.5mm outer shock tube wall thickness
- 14mm mounting pins

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

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

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

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

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



## TERRAFIRMA COMMERCIAL HD SHOCK



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 create the perfect shock, well this is true, so how to improve on what are already awesome shocks and who could possibly want more from a shock absorber? The Military of course!

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

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

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

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

- Military grey paint scheme
- 46mm internal bore and piston
- 20mm double chromed shaft
- Velocity sensitive valving
- 60mm body twin tube design
- Nitrogen charged
- High temperature fluid
- 1.5mm outer shock tube wall thickness
- 14mm mounting pins

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





## TERRAFIRMA HYDRAULIC BUMP STOPS

- 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

Axle bending, bone jarring impacts are a thing of the past with Terrafirma hydraulic bump stops fitted. The perfect solution for preventing the harsh suspension 'bottoming' associated with standard rubber bump stops. With 4" of travel the 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.

Mounting Terrafirma hydraulic bumps stops to Land Rovers is made possible with specific Terrafirma mounting kits. They can be mounted with any shock absorber option and are adjustable to limit compression movement as required. Take a look at the suspension hardware section for full details.

Weld on mounting tubes are also available for custom vehicle builders who wish to incorporate Terrafirma hydraulic bumps stops into their chassis design.

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

Application	90/D1/RRC	110/130
4" travel		TF140
universal weld on mounting can		TF139
front fitting kit		TF542
rear fitting kit	TF543	TF544



TF139

For further Bump Stop information and fitting advice refer to page 24



## TERRAFIRMA REMOTE RESERVOIR SHOCKS

- 2" (50mm) and 5" (125mm) longer than standard
- Remote reservoir with increased oil capacity
- 40mm internal bore and piston
- 20mm double chromed shaft
- Velocity sensitive valving
- Nitrogen charged
- Adjustable between 60 and 200psi, factory set at 150psi for immediate fitment
- High temperature fluid
- 2.5mm outer shock tube wall thickness
- Reservoir mounting kit included
- 14mm mounting pins

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

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



### RESERVOIR CANISTER

A remote reservoir allows for increased oil volume and greater cooling capacity. This ensures far more stable operating temperatures can be maintained in extreme conditions and gives long service life.

### REMOTE RESERVOIR AND FLOATING PISTON

The remote reservoir incorporates a floating piston which separates the hydraulic oil and high pressure Nitrogen eliminating aeration or mixing of the oil and gas.

Aeration or foaming causes shock fade and dramatically reduced performance. The floating piston also allows for increased Nitrogen pressure providing stable performance of the valving in all conditions.

The remote reservoir piston incorporates a Teflon wear band to reduce operating friction and a high temperature long life Viton O-ring seal to maintain fade resistance. Nitrogen at 60-200psi is used to maintain correct damping forces.

### HYDRAULIC HOSE

The hose connecting the reservoir with the shock is made from high quality flexible hydraulic hose suitable for extreme temperatures and high pressures

Application	90/110/130/D1/RRC
Front +2"	TF401
Rear +2"	TF402
Front +5"	TF403
Rear +5"	TF403

TerraFirma 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.

With approximately 75% greater oil capacity considerably lower operating temperatures are achieved resulting in exceptional ride quality and endurance.

TerraFirma Remote Reservoir 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 60 and 200psi to suit conditions and driving style. Higher nitrogen pressure will result in increased damping giving a firmer more controlled ride.

Visually these shocks are seriously impressive, mounted to the vehicle effectively upside down, 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 Remote Reservoir shock absorber logo, a bright blue flexible polyurethane shock 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, 40mm piston and 57mm 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.

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

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



## TERRAFIRMA MEGA SPORT SHOCK

- Available in 9" and 11" travel options
- Suitable for front and rear application
- Zinc plated for bright long lasting finish with striking blue anodised machined alloy fittings.
- 5/8 (16mm) diameter 1.5" (38mm) wide spherical bearing mounting eyes
- Multi stage valving
- High pressure nitrogen charged
- High temperature fluid
- Adjustable between 100 and 200psi, factory set at 150psi for immediate fitment
- 3mm wall thickness

Application	90/110/130/D1/RRC
Front 9" travel	TF135
Rear 9" travel	TF136
Front 11" travel	TF137
Rear 11" travel	TF138
Front fitting kit 9 & 11"	TF540
Rear fitting kit 9 & 11"	TF541
Replacement Ball Joint	TFSBJ

The ultimate 4x4 shock absorber, previously only associated with custom built off road competition vehicles. The TerraFirma Mega Sport shock combines the finest quality machining, specialist components and design features and is built to stand up to the punishment encountered in the harshest off road conditions. Multi stage damping provides outstanding control and the high volume of oil contained within the huge remote reservoir dissipates heat ensuring consistent performance for long periods regardless of the terrain.

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

TerraFirma Mega Sport shocks can be adjusted by varying the nitrogen pressure using a gassing kit such as TFGASKIT. The shocks are factory set at 150psi for immediate fitment and can be adjusted between 100 and 200psi to suit conditions and driving style. Higher nitrogen pressure will result in increased damping giving a firmer more controlled ride.

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

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

The adjustable shock mounting kits are designed to allow either the 9" or 11" shocks to be fitted to provide several options on wheel travel from standard to extreme! These mounting kits are available as part of a comprehensive kit or separately, take a look in the suspension kit section and suspension hardware sections of this catalogue.



For further information and fitting advice please refer to page 24.

## TERRAFIRMA AIR SHOCK

- Huge 16" travel
- 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
- 3mm wall thickness

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 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.

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 3000kgs. A basic rule of thumb is as follows:

### Nitrogen Pressure

Always set and adjust the pressure with shocks fully extended, with the vehicle on flat ground check the ride height, adjust the shock pressure in 25psi increments to achieve the correct ride height. Normal ride height should be achieved with the shock extended to around 30-40% of the shock absorbers travel. Use TFGASKIT or similar. Do not use any gas other than Nitrogen.

### Oil Level

If the shocks bottom out too easily but the ride feels good increase the oil capacity by 20ml at a time until they no longer bottom out, be sure to release the Nitrogen pressure each time with the shocks fully extended and the vehicle supported. Oil can be added using a syringe by removing the Shrader valve.

Terrafirma does not offer a mounting kit for the air shocks due to the highly customised applications they are designed for. When building an off road vehicle ensure that the top and bottom mountings are attached to load bearing frame or chassis members, remembering these shocks take the full load of the vehicle in place of a conventional spring.

The amount of travel afforded by these shocks is incredible and care must be taken to ensure brake lines can extend sufficiently and no driveline binding occurs.



Vehicle	Part Number
Air Shock 16"	TF141

For further information and fitting advice please refer to page 24.



## TERRAFIRMA STEERING DAMPERS

- 35mm internal bore and piston
- 54mm big bore twin tube design
- 16mm double chromed shaft
- 50/50 damping

Application	90/110/130	D1/RRC	D2	P38
Steering damper	TF832	TF811	TF802	TF834
Adjustable steering damper	TF833			
Return to Centre steering damper	TF835			
Fitting kit for TF833 & TF835		TF527		

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

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

All TerraFirma steering dampers have multi stage damping and use the latest cellular foam technology for superior performance. Painted in the traditional TerraFirma silver metallic finish with blue dust shield.

TerraFirma steering dampers improve driver comfort and reduce fatigue.

## TERRAFIRMA ADJUSTABLE STEERING DAMPER

- 35mm internal bore and piston
- 57mm big bore twin tube design
- 18mm double chromed shaft
- Multi-stage 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 4 options of damping force allowing the driver to select the setting that feels best. Terrain conditions, larger or smaller tyres, different tread types and pressures, driving styles and vehicle load will all have an effect on how the vehicle handles and reacts. An easy to rotate 4 position adjuster knob is built into the shock to alter the internal valving.

TF833

## RETURN TO CENTRE (RTC) STEERING DAMPER

- 30mm internal bore
- Mono tube design
- 12.5mm double chromed shaft
- 50/50 damping
- Coil-over design

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

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

Fit a TerrafirmMa 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 TerrafirmMa RTC logo and bright blue coil-over spring this steering damper looks as good as it works.

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





## TERRAFIRMA SHOCKS FITTING ADVICE & INFORMATION

The correct selection of shock absorbers to suit your Land Rover is crucial to ensure the best performance is achieved. Just as important is to make sure they are fitted correctly. Your Land Rover's suspension has to work hard and can be subject to considerable strain and vibration. TerraFirma shocks allow increased wheel movement which can put stress on mounting points and suspension components. There are a few points to consider when fitting long travel shocks. **N.B GAS SHOCKS DO NOT RAISE THE SUSPENSION OF YOUR VEHICLE.**

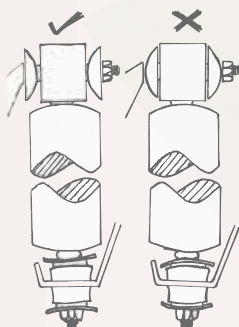
Make sure there is no metal to metal contact throughout the full stroke of the shock when fitted to the vehicle. Check that bush mounting washers are fitted as per the diagram. In particular the dished top washers found on Defenders, Discovery 1 and Range Rover Classic rear top shock brackets must be fitted with the curved face towards the bush.

For long travel (+2" and longer) shocks it is an advantage to remove the bush cups found on post 1994 Defenders and Discovery rear axles, this will allow unrestricted movement of the lower

shock mount. Allowing the shock bush washers to contact the bush cup can cause premature shock failure.

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.



## TERRAFIRMA HYDRAULIC BUMP STOP, AIR SHOCK, REMOTE RESERVOIR AND MEGA SPORT SHOCK ABSORBER INSTRUCTIONS

**Important Notice: Only Nitrogen Gas Must Be Used With TerraFirma Shock Absorbers And Bump Stops**

### FITTING INSTRUCTIONS:

- Fit TerraFirma Remote Reservoir and Mega Sport shocks with the shaft at the bottom, shock body at the top, this is primarily so that the hose and reservoir is attached to the fixed end of the shock.
- Air shocks and hydraulic bump stops should be mounted vertically for best results again with the body at the top.
- Make sure the remote canisters are mounted securely and will not foul during steering or suspension movement.
- If the original front shock turrets are to be used to mount TerraFirma Remote Reservoir shocks a keyhole shaped cut out will be required to allow the hose to pass through. Alternatively use tubular turrets allowing the remote reservoir and hose to pass through the legs, it may be necessary to cut a section from the turret mounting plate to allow the hose to pass through. Do not separate the reservoir from the shock as oil and Nitrogen will be lost.
- TerraFirma mounting kits are required for Mega Sport shocks and Hydraulic bump stops.
- Custom mountings will be required (not currently available from TerraFirma) to mount TerraFirma Air shocks.

### GASSING INSTRUCTIONS:

- The correct gassing system is required to set up TerraFirma Hydraulic bump stops, Air shocks, Remote Reservoir and Mega Sport shocks. This system is available as Part No. **TFGASKIT**
- The only gas to use in all shock absorbers and bump stops is Nitrogen. Under no circumstances must any other gas be used. Do not use compressed air.
- When setting the Nitrogen pressure ensure that the shock is fully extended, if re-gassing is to be carried out while shocks are fitted ensure the vehicle is jacked up.
- Prior to gassing make sure the valve on the reservoir/shock is tight and that there are no leaks.
- The nitrogen pressure on Remote Reservoir and Mega Sport shocks is factory set at 150psi for recreational use. The pressure can be adjusted between 60 and 200psi. High gas pressures will result in a firm ride, low pressures will give a softer ride.
- Air shocks and Hydraulic bump 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 12,000 miles.

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



## TERRAFIRMA COIL SPRINGS

The purpose of a vehicle's suspension is to support the weight of the vehicle and absorb impacts, maximising the tire's contact with the ground while maintaining stability and control. When using a Land Rover off road the limits of the standard suspension are quickly realised when the lack of wheel travel affects traction and ultimately the vehicle's ability to maintain forward motion.




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

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

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

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

Terrafirma Coil Springs are made from the highest quality steel, formed on accurate computer controlled mandrels and precisely heat treated to ensure consistent manufacture. All springs are shot peened to relieve stress and scragged to ensure long spring life and prevent sagging, then finally powder coated silver for long lasting good looks.

LIGHT LOAD	MEDIUM LOAD	HEAVY LOAD
		
No additional equipment fitted	With some additional weight such as a roof rack and winch and bumper	With significant off road or expedition equipment such as a heavy winch and bumper, loaded roof rack, storage equipment and spare wheel carrier.

### COIL SPRING APPLICATION GUIDE

Application	Light load	Medium load	Heavy load	Lowered 1"	Lowered 2"	STD Height Heavy Load
<b>DEFENDER 90</b>						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF015	TF023V	TF027V	TF033		TF037
<b>DEFENDER 110/130</b>						
Front	TF014	TF018	TF015	TF032		TF036
Rear	TF010	TF019	TF011	TF034	TF035	TF038
<b>DISCOVERY 1/RRC</b>						
Front	TF014	TF018	TF015			
Rear	TF015	TF023V	TF027V			
<b>DISCOVERY 2</b>						
Front		TF042	TF052			
Rear		TF023V	TF027V			
<b>P38 AIR TO COIL CONVERSION</b>						
Front	TF030	TF042				
Rear	TF031	TF052				

## 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 Hardware range of accessories does allow for greater lift and significantly increased wheel travel, further enhancing off road ability.

Selecting the most suitable springs for a Land Rover may be with some compromise. A heavy load spring needed when fully loaded may ride too high and too hard when unloaded. Likewise a light load spring that is comfortable and flexible will not achieve the desired lift or carry the heavy loads associated with expedition vehicles.

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

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

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

## 2" LIFT COIL SPRING SPECIFICATIONS

Part No.	Spring rate	Length (DS/PS)	Load kg	
	lbf/in	mm	Front	Rear
TF010	270	435/435 mm		150
TF011	420	435/435 mm		500
TF014	200	400/390 mm	0-50	
TF015	220	430/420 mm	150	100
TF018	230	390/380 mm	50-100	
TF019	300	435/435 mm		300
TF023V	300-340	420/410 mm		200
TF027V	360	420/410 mm		300
TF042	180	385/375 mm	0-50	
TF052	230	385/375 mm	75-150	

**TERRAFIRMA COIL SPRING APPLICATION**

**90/110/130/D1/RRC** LIGHT LOAD FRONT springs

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

**90/110/130/D1/RRC** MEDIUM LOAD FRONT springs

**TF018** Medium load front coil springs will provide 2" of lift when fitted to vehicles with up to 100kg of additional equipment, such as a winch and bumper. **TF018** is a hugely popular spring for all front medium load applications. More than 2" of lift may be achieved when less than 50kg of additional equipment is fitted. No additional equipment fitted will lead to a much greater lift possibly requiring attention to driveshaft angles and steering geometry.

**90/110/130/D1/RRC** HEAVY LOAD FRONT spring

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

**90/D1/RRC** LIGHT LOAD REAR springs

**TF015** Light load rear coil springs. This spring is also suitable for the rear of a standard Defender 90 with little or no additional equipment fitted, certainly no more than 100kg and will give approx 2" lift. It should only be used on the rear of Discovery 1 and Range Rover Classic where no additional equipment is fitted and where less than a 2" lift is acceptable. In most cases the **TF018** is more suitable for a Discovery 1 and Range Rover Classic. This spring would most likely be combined with **TF014**.

**90/D1/D2/RRC** MEDIUM LOAD REAR springs

**TF023V** Medium load rear coil springs. This spring is suitable for the rear of a Defender 90, Discovery 1 and Range Rover Classic carrying up to 200kg of additional equipment and will provide around 2" of lift. This equates to a well equipped off road or expedition vehicle, and those used to carry a constant medium to heavy load in the rear. It can also be used on the rear of a Discovery 2 but will not carry the same load and may not achieve 2" of lift. This is also one of the most popular springs when combined with **TF014** light load and **TF018** medium load front springs.

**90/D1/D2/RRC** HEAVY LOAD REAR springs

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

**110/130** LIGHT LOAD REAR springs

**TF010** Light load rear coil springs are designed to provide 2" of lift on a standard 110 Defender with no additional equipment fitted, they will carry light to moderate loads but may not maintain a 2" lift. These springs could be fitted to a 130 and would carry more load than standard but only if no lift was required. They can be fitted in conjunction with **TF014** to give a comfortable ride and a 2" lift to an unladen 110.

**110/130** MEDIUM LOAD REAR springs

**TF019** Medium load rear coil springs. These springs are suitable for the rear of a Defender 110/130 with around 300kg of additional equipment fitted and will provide around 2" of lift. This equates to a moderately equipped off road or expedition vehicle, and vehicles used to carry a constant medium to heavy load in the rear. The most popular 110/130 rear springs when combined with **TF018** medium load front springs. Avoid fitting these springs if you are not carrying the load as the lift may be too great and could cause over extension of the rear shocks.

**110/130** HEAVY LOAD REAR springs

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

**D2/P38** MEDIUM LOAD FRONT springs

**TF042** Medium load front coil springs are designed to provide 2" of lift on a Discovery 2 with a light to medium load up to around 50kg of additional equipment fitted, such as a discrete winch mount and winch. The **TF042** only fits the front of Discovery 2. 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

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

**TF031** Light load rear springs, standard right height coil springs, specifically designed to replace the air spring (air suspension bag) on a P38 Range Rover and are included in the **TF222** conversion kit. This spring has moderate load carrying capability and is intended to maintain the normal running height of the original air suspension.

**90/110** LOWERED FRONT springs

**TF032** Standard rate lowered coil springs are designed to reduce the ride height of the front of a Defender by 1". These springs are not designed to carry additional load and closely match the original Land Rover spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

**90** LOWERED REAR springs

**TF033** Standard rate lowered coil springs are designed to reduce the ride height of the rear of a Defender 90 by 1". These springs are not designed to carry additional load and closely match the original Land Rover spring specification and rate giving a squat sporty appearance and reduced body roll when cornering.

**110** LOWERED REAR springs

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

**90/110/130** HEAVY LOAD STANDARD ride height springs

**TF036**, **TF037** and **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.



## TERRAFIRMA SUSPENSION KITS

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

Popular combinations of 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 may be required to complete your suspension upgrade to the required specification.

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

TerraFirma Suspension Kits have been created for convenience, ensuring correct parts are matched and making ordering easier. These kits are not intended as a fully engineered solution for your entire requirement but will take care of the major element of common parts needed. Depending on the final specification of the vehicle additional products may be required such as extended bump stops and brake hoses to prepare your vehicle to a certain specification. The more comprehensive suspension kits do not include coil springs as it is envisaged that a greater degree of tuning will require specific springs to be selected from our range.

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 Land Rover. This catalogue along with your TerraFirma Distributor will advise you on the correct selection for your application.



### TERRAFIRMA SPRING AND SHOCK KITS (4 SPRINGS AND 4 SHOCKS)

	90/D1/RRC			110/130		
2" Coil Springs	Light	Medium	Heavy	Light	Medium	Heavy
All Terrain std travel shocks	TF201	TF202	TF204	TF206	TF203	TF205
Pro Sport +2" travel shocks	TF207	TF208	TF210	TF212	TF209	TF211
Pro Sport std travel shocks	TF213	TF214	TF216	TF218	TF215	TF217

■ BLUE COLOR indicates that these parts are also available with TUV certification. To quote a TUV part number when contacting us, just add TUV to the part number. e.g. TF201TUV

2" PRO SPORT MINI DISLOCATION KIT

Kit Part Number	90/D1/RRC		110/130	
	TF231		TF232	
Component P/N	Front	Rear	Front	Rear
2" 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



TF231

2" PRO SPORT MAXI DISLOCATION KIT

Kit Part Number	90/D1/RRC		110/130	
	TF233		TF234	
Component P/N	Front	Rear	Front	Rear
2" 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



TF233

5" EXTREME LT DISLOCATION KIT

Kit Part Number	90/D1/RRC		110/130	
	TF235		TF236	
Component P/N	Front	Rear	Front	Rear
5" Extreme Lt Shock Absorbers X4	TF122LT		TF122LT	
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



TF235



TF237

MEGA SPORT 9" TRAVEL SHOCKS AND MOUNTING KIT

Kit Part Number	90/110/130/D1/RRC	
	TF237	
Component P/N	Front	Rear
Mega Sport 9" Travel Shock X2	TF135	TF136
Mega Sport Shock Mounting Kit	TF540	TF541

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

Kit Part Number	90/110/130/D1/RRC	
	<b>TF238</b>	
Component P/N	Front	Rear
Mega Sport 11" Travel Shock X2	<b>TF137</b>	<b>TF138</b>
Mega Sport Shock Mounting Kit	<b>TF540</b>	<b>TF541</b>



**MEGA SPORT COMPETITION KIT 11" TRAVEL**

Kit Part Number	90/D1/RRC		110/130	
	<b>TF247</b>		<b>TF248</b>	
Component P/N	Front	Rear	Front	Rear
Mega Sport 11" Travel Shock X2	<b>TF137</b>	<b>TF138</b>	<b>TF137</b>	<b>TF138</b>
Mega Sport Shock Mounting Kit	<b>TF540</b>	<b>TF541</b>	<b>TF540</b>	<b>TF541</b>
Hydraulic Bump Stop X4	<b>TF140</b>		<b>TF140</b>	
Hydraulic Bump Stop Mounting Kit	<b>TF542</b>	<b>TF543</b>	<b>TF542</b>	<b>TF544</b>
Dislocation Cones	<b>TF501</b>		<b>TF501</b>	
Caster Corrected Front Radius Arms 3 Degree	<b>TF508</b>		<b>TF508</b>	
Rose Jointed Rear Radius Arms		<b>TF532</b>		<b>TF532</b>



**TF247**

**HYDRAULIC BUMP STOP AND MOUNTING KIT**

Kit Part Number	90/D1/RRC		110/130	
	<b>TF241</b>		<b>TF242</b>	
Component P/N	Front	Rear	Front	Rear
Hydraulic Bump Stop X4	<b>TF140</b>		<b>TF140</b>	
Hydraulic Bump Stop Mounting Kit	<b>TF542</b>	<b>TF543</b>	<b>TF542</b>	<b>TF544</b>



**TF241**

**MEGA SPORT XT DISLOCATION KIT 9" TRAVEL**

Kit part number	90/D1/RRC		110/130	
	<b>TF243</b>		<b>TF244</b>	
Component P/N	Front	Rear	Front	Rear
Mega Sport 9" travel shock x2	<b>TF135</b>	<b>TF136</b>	<b>TF135</b>	<b>TF136</b>
Mega Sport shock mounting kit	<b>TF540</b>	<b>TF541</b>	<b>TF540</b>	<b>TF541</b>
Dislocation cones	<b>TF501</b>		<b>TF501</b>	
Coil spring retaining plates				<b>TF507</b>
Caster corrected front radius arms 3 degree	<b>TF508</b>		<b>TF508</b>	
Rose jointed rear radius arms		<b>TF532</b>		<b>TF532</b>
Rear polycarbonate relocation cones		<b>TF530XT</b>		<b>TF531XT</b>
Bump stop spacers	<b>TF515</b>	<b>TF515</b>	<b>TF515</b>	<b>TF515</b>



**TF244**



MEGA SPORT XT DISLOCATION KIT 11" TRAVEL

TF246

Kit Part Number	90/D1/RRC		110/130	
	TF245		TF246	
Component P/N	Front	Rear	Front	Rear
Mega Sport 11" Travel Shock X2	TF137	TF138	TF137	TF138
Mega Sport Shock Mounting Kit	TF540	TF541	TF540	TF541
Dislocation Cones	TF501		TF501	
Coil Spring Retaining Plates				TF507
Caster Corrected Front Radius Arms 3 Degree	TF508		TF508	
Rose Jointed Rear Radius Arms		TF532		TF532
Rear Polycarbonate Relocation Cones		TF530XT		TF531XT
Bump Stop Spacers	TF515	TF515	TF515	TF515



## TERRAFIRMA AIR TO COIL CONVERSION KITS

The EAS or Electronic Air Suspension systems fitted to P38 Range Rovers and the rear of the Discovery 2 can be expensive to repair and not especially reliable when heavily laden. Eliminating the costly electronic components; air spring 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.

All P38 Range Rovers manufactured between 1995 and 2002 were fitted with air suspension, at the time this system was regarded as state of the art and offered high levels of comfort and the ability to self-level when loaded or when towing. The P38 has generally stood the test of time and as with all Land Rovers has a loyal band of supporters keeping them roadworthy and in good shape. The cost of repairing sophisticated systems can sometimes become 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.

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

Range Rover P38	Part No
Air to coil conversion kit standard ride height	TF222
Air to coil conversion kit medium load 1" lift	TF222HD
Air to coil conversion kit standard ride height including std travel All Terrain shocks	TF223
Air to coil conversion kit medium load 1" lift including standard travel All Terrain shocks	TF223HD

Discovery 2	Part No
Air to coil conversion kit standard ride height (with rear springs)	TF225
Air to coil conversion kit 2" lift includes front & rear 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 All Terrain shocks	TF229
Air to coil conversion kit 2" lift inc front & rear heavy load springs & +2" travel All Terrain shocks	TF230
Air to coil conversion kit 2" lift inc front & rear medium load springs & +3" travel Pro Sport shocks	TF259
Air to coil conversion kit 2" lift inc front & rear heavy load springs & +3" travel Pro Sport shocks	TF260



TF222



TF226



## TERRAFIRMA SUSPENSION BUSHES

Replacing your standard rubber suspension bushes with polyurethane bushes will give you longer bush life, more responsive steering with improved handling and stability.

Terrafirma suspension bushes will make a big difference to how your Land Rover feels both on and off road, the ride will be taught and precise with no increase in vibration or restriction in suspension movement.

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, available as complete vehicle kits with assembly lube or as individual smaller kits to replace original Land Rover bushes. Applications include older and newer Defenders, Discoverys and Range Rovers with both 40 and 44mm wide radius arms.



TF910

### TERRAFIRMA POLYURETHANE SUSPENSION BUSHES

TF P/N	LR Part Number	Application	Description
TF910	n/a	90/110/130 up to 1993	Full bush kit 40mm wide radius arms
TF952	NTC9027	D1/RRC 1986 on/90/110/130 1993 on	Rear radius arm to chassis bush kit
TF951	ANR3410	D1/RRC 1986 on/90/110/130 1993 on	Panhard bush kit
TF950	NRC4514	D1/RRC 1986 on/90/110/130 1993 on	Front radius arm to chassis bush kit
TF953	NTC1772	D1/RRC 1986 on/90/110/130 1993 on	Rear radius arm to axle bush kit
TF958	NTC7307	RRC up to 1986/90/110/130 up to 1993	Front radius arm to axle bush kit (40mm)
TF954	NTC1773	D1/RRC 1986 on/90/110/130 1993 on	A frame bush kit
TF P/N	LR Part Number	Application	Description
TF911	n/a	D1/RRC 1986 on/90/110/130 1993 on	Full bush kit 44mm wide radius arms
TF952	NTC9027	D1/RRC 1986 on/90/110/130 1993 on	Rear radius arm to chassis bush kit
TF951	ANR3410	D1/RRC 1986 on/90/110/130 1993 on	Panhard bush kit
TF950	NRC4514	D1/RRC 1986 on/90/110/130 1993 on	Front radius arm to chassis bush kit
TF953	NTC1772	D1/RRC 1986 on/90/110/130 1993 on	Rear radius arm to axle bush kit
TF955	NTC6860	D1/RRC 1986 on/90/110/130 1993 on	Front radius arm to axle bush kit (44mm)
TF954	NTC1773	D1/RRC 1986 on/90/110/130 1993 on	A frame bush kit
TF956	NRC5593	D1/RRC 1986 on/90/110/130 1987 on	Shock absorber mounting bush, upper
TF957	552818	D1/RRC 1986 on/90/110/130 1987 on	Shock absorber mounting bush, lower

## AIR LIFT ADJUSTABLE AIR HELPER SPRINGS

The Airlift 1000 kits are engineered as add-on helper springs for vehicles with open coil spring suspension which includes Land Rover Defenders, Discovery 1 and 2 and Range Rover Classics.

The systems improve handling, reduce roll, and prevent the vehicle from bottoming out. They can be adjusted either with the use of an on board compressor, or with a standard tyre inflator. The air bags are made of very tough moulded polyurethane and are extremely resilient and can provide up to 1000lbs of levelling capacity.

The Air Lift 1000 helper spring kit comes complete with:

- **Two Air Bags**
- **1/4" flexible Air Hose**
- **Spacers/Protectors**
- **Fitting Kit**
- **Fitting Instructions**

While the air suspension kits can be inflated manually with a conventional tyre inflator, you can't beat the luxury of being able to adjust the air pressure and ride height with an on board compressor directly from the driver's seat.

The Air Lift Load Controller 2 compressor kit makes adjusting the airbag suspension as simple as pressing a button! This kit adjusts both air bags equally and simultaneously and includes a complete plumbing and wiring kit and comprehensive instructions.



### AIR LIFT ADJUSTABLE AIR HELPER SPRINGS

Description	Application	Part NO.
Load Controller 2 Compressor Kit	90/110/130/D1/RRC	<b>GAK100</b>
Air Helper Spring Kit	90/D1/RRC	<b>GAK101</b>
Air Helper Spring Kit	110/130	<b>GAK103</b>



## TERRAFIRMA SUSPENSION HARDWARE

There is one thing that is paramount to safe and successful off road driving...Traction! Keeping the tyres in contact with the ground is essential to maintain forward motion. While Land Rover can claim class leading off road suspension straight out of the box even keen amateur off roaders quickly reach the limits of wheel travel and lose momentum with wheels in the air fighting for grip.

TerraFirma Suspension Hardware is a range of chassis and suspension accessories designed to considerably improve your off road driving experience. Increasing wheel travel or axle articulation with stability and balance is the key to forward movement 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 to fit longer springs and shock absorbers but there are implications that can affect safety, performance and reliability. Within the TerraFirma Suspension hardware range there are accessories specifically designed to tackle problems such as tyre to body clearance, shocks topping and bottoming out, dislocating coil springs, steering geometry and driveline angles etc to ensure your Land Rover continues to perform beyond expectation.

TerraFirma Suspension Hardware allows you to customise the performance of your Land Rover's suspension. Constant development, testing and customer feedback ensures every product is 'fit for purpose' allowing you to drive further in all

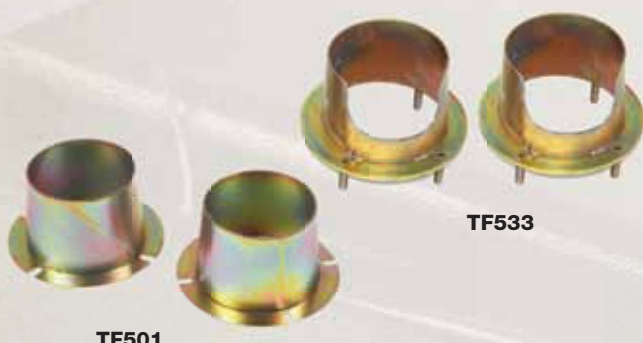
conditions and on all types of terrain, from recreational off road to hard core competitions.

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.

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.

### TF501 & TF533 FRONT COIL SPRING DISLOCATION CONES

When longer than standard front shocks are fitted the coil spring can move around becoming dislodged on full suspension drop out, sometimes failing to relocate correctly when the suspension compresses again. Fitting dislocation cones in conjunction with spring retaining plates will ensure the spring re-seats correctly every time. **TF501** suits 90/110/130/D1 and RRC and **TF533** suits Discovery 2. The Discovery 2 front dislocation cones incorporate a securing ring for ease of fitment.



TF501

TF533

### TF522 +2" EXTREME LONG TRAVEL SKELETON FRONT SHOCK TURRETS

These strong and stylish fabricated front shock turrets are ideally suited to the **TF122LT** TerraFirma Extreme long travel shock absorbers and are necessary to prevent the +5" travel shock from bottoming out on full compression and making the most of these amazing shocks.



TF522

### TF502 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**.



TF502

### TF534 SKELETON FRONT SHOCK TURRETS

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



TF534

### TF503 AND TF504 TUBULAR FRONT SHOCK TURRETS

Tubular front shock turrets are stylish, much stronger and less liable to rusting 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 **GAL146R** or **GAL147R**.



TF503 TF504

### TF505, TF506, TF507 AND TF524 COIL SPRING RETAINING PLATES

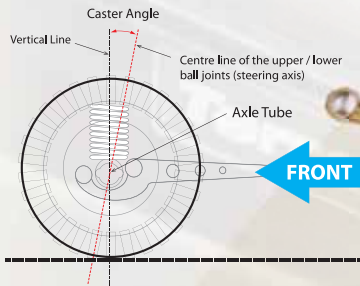
Coil springs can part company and become dislodged from their mounts when long travel shocks are at full extension. Heavy duty spring retaining plates are used to hold the coil spring in place on the axle and when combined with dislocation cones **TF501**, **TF510**, **TF511** and relocation cones **TF520**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



TF505 TF506 TF507

**TF508 (3 DEGREE), TF528 (6 DEGREE) AND TF529 (3 DEGREE) CASTER CORRECTED FRONT RADIUS ARMS**

When coil sprung Land Rovers are lifted the caster angle is changed (see diagram). This can lead to vagueness and a lack of self-centering of the steering. Fitting 3 degree caster corrected radius arms re introduces positive caster angle to return the steering to the correct geometry on vehicles lifted 2-3" (50-75mm), for vehicles lifted more than 2-3" 6 degree caster corrected radius arms should be used. The **TF508** and **TF528** radius arms are designed to accept the 44mm wide bushes that fit RRC/D1 from 1986 and Defender from 1994. **TF529** radius arms are designed to fit Discovery 2.



TF508

**TF510 AND TF511 REAR COIL SPRING DISLOCATION CONES**

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



TF511

TF510



What can happen when not using dislocation cones

**TF509 CRANKED REAR RADIUS ARMS**

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



TF509

**TF530XT AND TF531XT POLYCARBONATE REAR COIL SPRING DISLOCATION CONES**

Performing the same task as the popular **TF510** and **TF511** rear dislocation cones, these stylish and unbreakable bright blue hi tech polycarbonate cones represent current technology. Silent in operation, resistant to corrosion and produced in the striking Terrafirma blue these cones are the latest evolution in one of the most popular suspension upgrades produced today.



TF530XT

**TF532 JOHNNY JOINT REAR RADIUS ARMS**

The ultimate flexible joint, the American 'Johnny' joint is used extensively in custom built suspension systems. It provides the most articulation (30 degrees) of any joint; it is greaseable, better sealed and much stronger and more resistant to wear than conventional 'rose' joints. The **TF532** 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.



TF532

**TF521 & TF523XT REAR AXLE INVERSE RELOCATION CONES**

An alternative to the dislocation cones, these relocation cones are 2 variations of the now essential method of locating coil springs on extreme long travel suspension. It is possible with massive drop out rear suspension that even conventional cones fail to relocate coil springs, especially when working at speed. Retaining the coil at the top as opposed to the bottom allows for a shorter cone to be used providing reliable location regardless of shock travel. Terrafirma offers a popular steel fabricated option as well as the new technology bright blue polycarbonate choice. Both kits come with complete fixing kits.



TF521



TF523XT

### TF512 LOWERED REAR TOP SHOCK MOUNTS

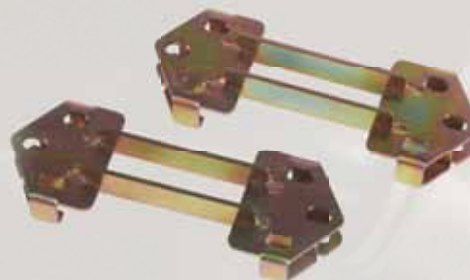
It is possible to gain an additional 2" (50mm) of rear suspension drop out with replacement lowered rear top shock mounts. Attaching the shock lower on the chassis allows greater axle articulation. Lowering your shocks can reduce the amount of upward or compression movement and may require the fitment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



TF512

### TF515 BUMP STOP SPACERS

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



TF515

### TF513 REAR TWIN SHOCK MOUNT KIT

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



TF513

### TF516 AND TF517 SPRING SPACERS

Increase the body clearance to allow the fitment of really big tyres as well as provide an additional 2" (50mm) of lift to your suspension. These simple spacers bolt between the coil spring and the axle and can be the perfect way to lift the vehicle to the desired ride height when the load or equipment carried exceeds even the heaviest rated coil springs. It must be noted that bump stop spacers **TF515** or extended bump stops **GAL146R** or **GAL147R** may be required to prevent the coil spring from becoming coil bound (fully compressed) on full compression.



TF516 TF517

### TF514 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 of driving at speed over rough terrain. Suitable for all TerraFirma shocks except Big Bore Expedition shocks. Some trimming is required to fit this kit to Discovery 1 and Range Rover Classics.



TF514

### TF525 AND TF526 DISCOVERY 2 FRONT COIL SPRING AND REAR AIR SPRING SPACERS

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

For Discovery 2's with rear coil suspension combine **TF525** with **TF517** for the same effect.



TF525

TF526

**TF518 REAR TOP SHOCK MOUNT RE-LOCATORS**

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 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**.



**TF518**

**TF520 LONG TRAVEL REAR COIL SPRING RELOCATOR**

When fitting **TF122LT** and **TF403 +5"** (125mm) longer shocks the suspension drop out is so great it is possible for the rear coil springs to fall below conventional dislocation cones, then miss the cone on compression movement causing the spring to be forced up the outside of the cone. To prevent this from happening use **TF520** spring re-locator which is designed to catch the last coil of the spring before it leaves the end of the cone ensuring it locates properly every time.



**TF520**

**TF519 EXTREME LONG TRAVEL REAR TOP SHOCK MOUNTS**

Terrafirma **TF122LT** and **TF403 +5"** (125mm) longer shocks have pin top mounts instead of the conventional ring, this is to allow unrestricted articulation and movement of the mounting point on these extreme travel shocks. To allow these shocks to be fitted these unique rear top shock mounts that can be bolted to the original mounting points are required. It is possible that bump stop spacers **TF515** and/or extended bump stops **GAL146R** or **GAL147R** will be required to prevent the shocks from bottoming out on full compression.



**TF519**

**PB51-502K CASTER CORRECTION BUSHES**

An alternative to **TF508** Caster corrected radius arms, these 44mm wide replacement bushes are another way to regain positive caster angle after a Land Rover has been lifted. The bushes have eccentric centres that when fitted into the original radius arms rotate the axle back 3 degrees correcting the steering geometry for vehicles lifted 2-3" (50-75mm). Negative caster can lead to vagueness and a lack of self-centering of the steering.



**PB51-502K**

**TFFRK FUEL FILTER RELOCATION KIT**

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



**TFFRK**

**TFGASKIT REMOTE RESERVOIR SHOCK GASSING KIT**

This kit comprises a nitrogen regulator, hoses, tap, shock gas pressure gauge and a special lock chuck to attach the kit to the Schrader valve on the shock reservoir. The gassing kit is essential to accurately adjust the nitrogen pressure in the following shocks and bump stops:

**TF401, TF402, TF403, TF135, TF136, TF137, TF138, TF140, TF141.**



**TFGASKIT**

### **GAL146R AND GAL147R EXTENDED BUMP STOPS**

Extended bump stops are necessary to reduce the upward axle movement when very large tyres are used and also when long travel shocks are fitted to avoid the shocks bottoming out before the axle meets the bump stop. Made from super resilient polyurethane and bonded to a stainless steel mounting plate these bump stops are far superior to any other on the market.

**GAL146R** is the 2 hole bump stop replacing Land Rover part ANR4189

**GAL147R** is the 4 hole bump stop replacing Land Rover part ANR4188



**GAL146R**

**GAL147R**

### **TF540 AND TF541 MEGA SPORT SHOCK ABSORBER MOUNTING KITS**

The new Mega Sport shock absorber uses race bred 'rose' joint mountings top and bottom and as such requires a specific mounting kit. These fantastically well engineered front and rear mounting systems take into account both the 9" and 11" travel shock options.

Both front and rear kits are fully adjustable. Mounting the 9" travel shocks in the upper position gives similar travel to standard shocks suitable for military or expedition applications where shock performance and adjustability is more important than wheel travel. Fit the 9" shock in the lower position for endurance rallies and speed trials where an increase in wheel movement is a benefit. 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 Land Rover shock and mounting kits in the World. Designed as a bolt on kit to mount directly to Land Rover Defenders these kits will bolt to the chassis and axles of D1 and RRC but will require body alterations.



**TF540**

**TF541**

### **TF527 STEERING DAMPER RELOCATION KIT**

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



**TF527**

### **TF542, TF543 AND TF544 TERRAFIRMA HYDRAULIC BUMP STOP MOUNTING KITS**

The new 4" travel TerraFirma Hydraulic bump stops require a serious mounting kit. To withstand the punishment associated with hammering over bumps and jumps considerable work has been involved in the production of these mounting kits.

Designed as a bolt on kit to fit 90/110/130/D1 and RRCs with no modifications. Included in the bump stop mounting kits are spacers to allow for long travel shocks that require the compression movement to be restricted to avoid the shock bottoming out. The front kit operates in front of the front shock tower and utilises mostly Land Rover's original fixings with some drilling required. The rear kit mounts within the rear coil spring and also acts as a relocation device for the spring and the lower contact pad incorporates a spring retainer. The TerraFirma hydraulic bump stop kit is designed to fit with any spring and shock combination.

**TF139** universal weld on hydraulic bump stop mounting tube For those custom vehicle builders out there that like to make their own hardware this bump stop tube is designed to take the TerraFirma 4" travel hydraulic bump stop and can be welded directly into chassis fabrication or to any suitable bracketry.



**TF542**

**TF543**



**TERRAFIRMA SUSPENSION HARDWARE APPLICATION GUIDE**



Part No. quick reference guide	90		110/130		D1/RRC		D2		
	Front	Rear	Front	Rear	Front	Rear	Front	Coil Rear	Air rear
Dislocation cones	TF501	TF510	TF501	TF511	TF501	TF510	TF501		
Front spring dislocation cones c/w sec rings							TF533		
Front shock turret securing rings	TF502		TF502		TF502				
Tubular 2" lowered height front shock turrets	TF503		TF503		TF503				
Tubular standard height front shock turrets	TF504		TF504		TF504				
Skeleton shock turrets							TF534		
Skeleton 2" taller front shock turrets	TF522		TF522		TF522				
Coil spring retaining plates	TF505	TF506	TF505	TF507	TF505	TF506	TF524	TF506	
Caster corrected front radius arms 3 degree	TF508		TF508		TF508		TF529		
Caster corrected front radius arms 6 degree	TF528		TF528		TF528				
Steering damper relocation kit					TF527				
Cranked rear radius arms		TF509		TF509		TF509			
Rose jointed rear radius arms		TF532		TF532		TF532			
Rear axle mounted inverse relocation cones		TF521				TF521		TF521	
Rear polycarbonate relocation cones		TF530XT		TF531XT		TF530XT		TF530XT	
Rear polycarbonate inverse relocation cones		TF523XT				TF523XT		TF523XT	
Lowered rear top shock mounts		TF512		TF512		TF512			
Twin shock mount kits	TF514	TF513	TF414	TF513	TF514	TF513			
Bump stop spacers	TF515	TF515	TF515	TF515	TF515	TF515			
Spring spacers 2"	TF516	TF517	TF516	TF517	TF516	TF517	TF525	TF517	TF526
Rear top shock mount re-locators		TF518		TF518		TF518			
Extreme long travel rear top shock mounts		TF519		TF519		TF519			
Cross member spacer kit									TFCMSK
Fuel filter relocater when TF519 used. 1998 on									TFFRK
Long travel rear coil spring re-locators		TF520				TF520			
Caster correction bushes (44mm)	PB51-502K		PB51-502K		PB51-502K				
Mega Sport shock mounting kit	TF540	TF541	TF540	TF541	TF540	TF541	TF545	TF546	
Hydraulic bump stop mounting kit	TF542	TF543	TF542	TF544	TF542	TF543	TF547	TF548	
Hydraulic bump stop univerasal mounting tube					TF139				

## TERRAFIRMA 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 Land Rovers 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.

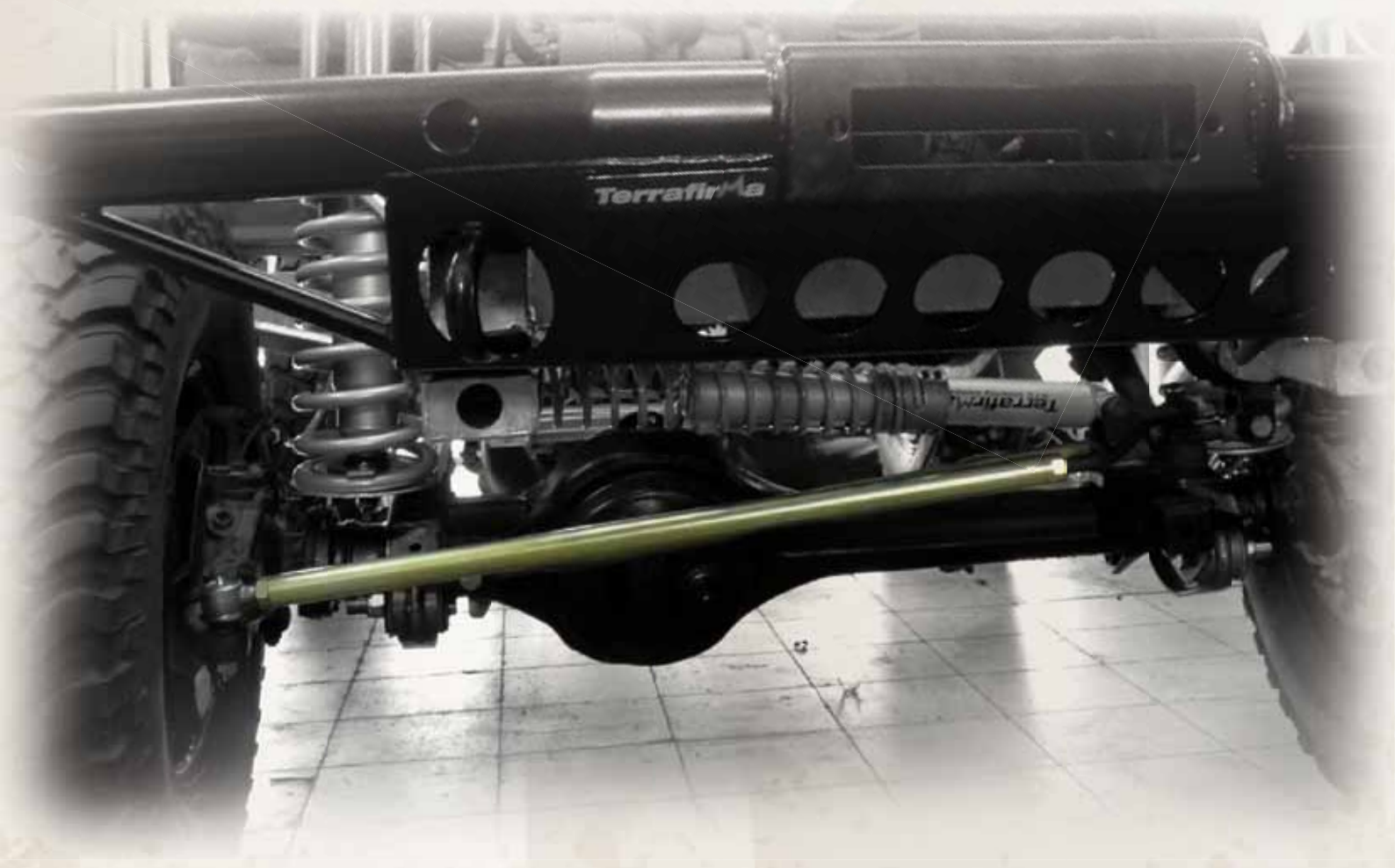
When Land Rovers are fitted with very large tyres the forces acting on the steering gear are far greater especially when attacking obstacles off road, hard impacts on the wheels can also bend or kink the steering rods causing serious steering problems.

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

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



TerraFirma Steering Rods	Part Number
90/110/130	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



## TERRAFIRMA ADJUSTABLE PANHARD RODS

Lateral stability on the front end of coil sprung Land Rovers fitted with live axles is controlled by a tie rod called a Panhard Rod which is fitted between the front axle and the chassis, typically mounted in parallel with the drag link connecting the steering box to the axle. When live axle vehicles such as these are lifted the axle is pulled off centre due to the fixed length of the Panhard rod. TerraFirma Adjustable Panhard Rods allow the axle to be adjusted back to centre restoring the steering geometry.

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

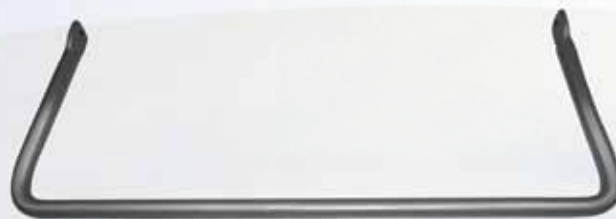
TerraFirma Adjustable Panhard Rods	Part Number
90/110/130 up to 2002 & D1/RRC up to 1998	TF253
90/110/130 2002 on	TF254
D2 up to VIN number 2A999999 – Longer version	TF254
D2 VIN number 3A000001 on – Shorter version	TF256



## TERRAFIRMA ANTIROLL BARS

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

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



**TF289**

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

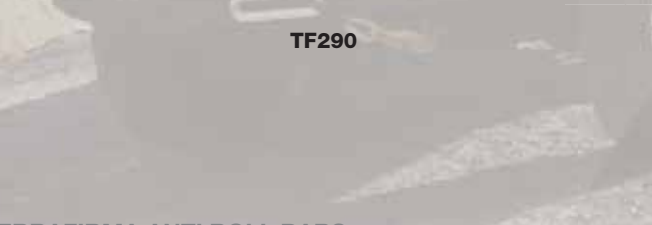
To provide better control TerraFirma rear anti roll bars are not just thicker but also wider than standard designed to fit outside the original fixings, this is done by simply reversing the links in their mounts. The front is a stronger version to the original shape and design.

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 center 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.



**TF288**



**TF290**

### TERRAFIRMA ANTI ROLL BARS

Type	Description	
<b>TF288</b>	TerraFirma heavy duty rear anti roll bar 25.4mm	
<b>TF289</b>	TerraFirma heavy duty front anti roll bar 25.4mm	
<b>TF290</b>	TerraFirma heavy duty rear anti roll bar kit 28.0mm	
<b>TF291</b>	TerraFirma polybush for 25.4mm front heavy duty anti roll bar 90/110	
<b>TF292</b>	TerraFirma polybush for 25.4mm rear heavy duty anti roll bar 110/130	
<b>TF293</b>	TerraFirma polybush for 25.4mm rear heavy duty anti roll bar 90	90 UP TO WA159806
<b>TF294</b>	TerraFirma polybush for 25.4mm rear heavy duty anti roll bar 90	90 FROM XA159807
<b>TF295</b>	TerraFirma polybush for 28.0mm rear heavy duty anti roll bar 110/130	
<b>TF296</b>	TerraFirma polybush for 28.0mm rear heavy duty anti roll bar 90	90 UP TO WA159806
<b>TF297</b>	TerraFirma polybush for 28.0mm rear heavy duty anti roll bar 90	90 FROM XA159807
<b>TFARBKF</b>	TerraFirma front anti roll bar fitting kit	
<b>TFARBKR</b>	TerraFirma rear anti roll bar fitting kit	
<b>TFARSK2</b>	TerraFirma 2 hole anti roll bar spacer kit for defenders	
<b>TFARSK4</b>	TerraFirma 4 hole anti roll bar spacer kit for defenders	



**TFARSK2**

**TFARSK4**



## TERRAFIRMA WINCH BUMPERS & MOUNTS AND FRONT & REAR BUMPERS

The Terrafirma range of bumpers and winch mounts has been designed to meet the broad range of winching and off road activities carried out by Land Rover owners and operators. A combination of performance and practicality has been employed in the development of these bumpers, from recreational and serious off road to commercial and military use.

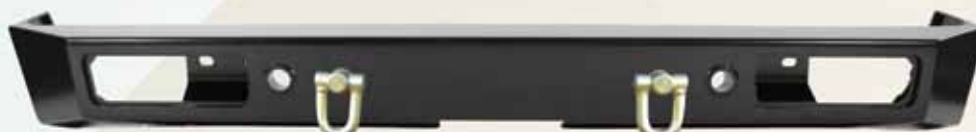
The entire range has been created around the comprehensive and highly respected Superwinch LP, Talon and Tiger Shark winch ranges from 8500-18000lbs pulling capacity. Of course with most makes of winch sharing common physical dimensions and traditional 10" x 4.5" bolt patterns the majority will fit quite happily into a Terrafirma winch bumper or mount.



All TerraFirma bumpers are made from steel which are then sand blasted, zinc phosphate washed and powder coated semi-gloss black for a factory quality finish. Bumpers include jacking and recovery points where appropriate and are built tough and able to take on the rigours of serious off road and commercial use. Space is built into the chassis mounting brackets on all Defender bumpers to allow for 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.



TF009



TF090

### FRONT AND REAR BUMPERS FOR DISCOVERY1, 2 & 3 AND P38 RANGE ROVER.

TerraFirma has adopted a common philosophy for the creation of these bumpers. The whole range has been designed to replicate the original bumper profiles as closely as possible while allowing for winch fitment and increased protection. Angles, 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 move the bumper on its mountings for guaranteed long lasting strength and reliability.

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

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

As 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.



TFSRP

## TUBULAR BUMPERS

Tubular winch bumpers have become very popular with both recreational and competitive off roaders. The A bar is often seen as an important structural part of tubular bumper design. The all in one construction of the TerraFirma tubular bumper ensures a considerable strength advantage over others, with the integral perforated front plate not only providing the style but also allowing cooling air to the radiators. Tubular winch bumpers are available with or without the A bar to suit your personal preference.

The tubular winch bumper specifically for Defender's without air conditioning is designed primarily for serious off road use. To provide the extreme approach angle required the bumper is set well back and the grill and lower front panel will need to be cut to facilitate a winch fitment. These items are not structural and do not affect the vehicle's integrity and the improvement in off road ability is always considered to be the priority. The bumper suitable for air conditioned Defenders has slightly reduced approach angle in order to accommodate the extended front panel which simply requires the louvered plastic grill to be modified slightly.

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



TF003



TF006

## PRO TAPER BUMPERS

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

With these bumpers the winch is raised above the chassis rails and with tapered and swept back wings approach angle and styling are optimised even with the air conditioned versions. The TerraFirma Pro Taper bumpers are available to suit both the conventional 'small chassis' winches with pulling capacities up to 12000lbs as well as the 'Bigger is Better' super strong option for 'large chassis' winches from 12,000-18000lbs pulling capacity.

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





**HEAVY DUTY TAPERED BUMPERS**

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.



**TF055**



**TF055WRP**

**COMMERCIAL WINCH BUMPERS**

Terrafirma Defender commercial winch bumpers are designed to accommodate the most popular mid-range winches, in particular those from Superwinch and Warn. The bolt pattern dimensions of 10" x 4.5" are common for almost every brand of winch constructed with inline motor-drum-gearbox configuration. Regarded as a standard type, the Commercial winch bumper is ideal for the user looking for additional protection and conventional winch mounting without the increased off road performance provided by the Tubular and Pro Taper bumpers.

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



**TF002ACS**



**TF004**

**DISCRETE WINCH MOUNTS**

For owners who require a winch and wish to retain the original vehicle looks and do not require the additional protection provided by a replacement bumper a Terrafirma discrete winch mount is the perfect option. For all Discovery models there is sufficient space behind the original bumper to allow a winch to be fitted into a chassis mounted bracket. The only evidence that a winch is fitted is the fairlead protruding through the front bumper which can be hidden by the licence plate when not in use.

The kits for Discovery 1 and 2 offer a straight forward solution to mounting a winch behind the original bumper, whereas the significantly more sophisticated Discovery 3 requires 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 Discovery 3 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. Although the Discovery 3 has a substantial front towing point, Terrafirma offers an additional pair of heavy duty recovery points as an option that can be bolted into the winch mounting tray that will protrude through the front bumper for easy access.



**TF078**

See next page our winch fitting guide to identify which Superwinch winch fits your bumper choice.



TERRAFIRMA BUMPERS AND WINCH MOUNTS	90/110/130		D1	D2	P38	D3
	Without AC	With AC				
Heavy Duty Tapered Bumper	TF055					
Heavy Duty Tapered Bumper With Centre Towing Pin And Recovery Points	TF055WRP					
Commercial Winch Bumper Superwinch	TF002ST	TF002ACST				
Commercial Winch Bumper Warn	TF002W	TF002ACW				
Commercial Winch Bumper To Suit Superwinch Husky 8 & 10	TF004					
Tubular Winch Bumper With A Bar	TF001	TF001AC				
Tubular Winch Bumper Without A Bar	TF003	TF003AC				
Tubular Non Winch Bumper	TF005	TF005AC				
Pro Taper Winch Bumper Suits Small Chassis Winches	TF006	TF006AC				
Pro Taper Winch Bumper Suits Large Chassis Winches	TF060	TF060AC				
Winch Bumper With Swivel Recovery Points			TF095	TF009	TF007	
Winch Bumper Without Swivel Recovery Points				TF009A	TF007A	
Rear Bumper With Swivel Recovery Points				TF090	TF070	TF080
Rear Bumper Without Swivel Recovery Points			TF889	TF090A	TF070A	TF080A
Discrete Winch Mount			TF077	TF078		TF096
Swivel Recovery Points			TFSRP			
D3 Winch Mount Recovery Point Kit						TFD3RPK

■ BLUE color indicates that these parts are also available with TUV certification. To quote a TUV part number when contacting us, just add TUV to the part number. e.g. TF201TUV



## BUMPER WINCH FITTING GUIDE \*

P/N	Winch model	Fitting Issues
TF001	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	Requires grill and lower front panel modifications
TF001AC	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	Requires grill and possibly lower front panel modifications
TF002ST	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	No fitting issues
TF002ACST	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	No fitting issues
TF002W	Warn Tabor 9k & 12k, M8000, XD9000, XD9000i, 9.5ti, 9.5XP & 12.0XE	No fitting issues
TF002ACW	Warn Tabor 9k & 12k, M8000, XD9000, XD9000i, 9.5ti, 9.5XP & 12.0XE	No fitting issues
TF003	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	Requires grill and lower front panel modifications
TF003AC	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	Requires grill and possibly lower front panel modifications
TF004	Superwinch Husky 8 and Husky 10	No fitting issues
TF006	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	No fitting issues
TF006AC	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5SR, 12.5i & 12.5iSR, Tiger Shark 9500 & 11500	No fitting issues
TF060	Superwinch Talon 14.0, 14.0SR, 18.0 & 18.0SR, Tiger Shark 13500, 15500 & 17500	No fitting issues
TF060AC	Superwinch Talon 14.0, 14.0SR, 18.0 & 18.0SR, Tiger Shark 13500, 15500 & 17500	No fitting issues
TF007	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 12.5, 12.5SR, Tiger Shark 9500 & 11500	Requires chassis cross member removal
TF007A	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 12.5, 12.5SR, Tiger Shark 9500 & 11500	Requires chassis cross member removal
TF077	Superwinch LP8500 & LP10000, Tiger Shark 9500 & 11500	Requires minor bumper modification
TF078	Superwinch LP8500 & LP10000, Tiger Shark 9500 & 11500	Requires minor bumper modification
TF009	Superwinch LP8500 & LP10000, Tiger Shark 9500 & 11500	Requires minor grill, lower front panel & inner plastic wheel arch modifications
TF009A	Superwinch LP8500 & LP10000, Tiger Shark 9500 & 11500	Requires minor grill, lower front panel & inner plastic wheel arch modifications
TF095	Superwinch LP8500 & LP10000, Tiger Shark 9500 & 11500	Requires minor grill, lower front panel & inner plastic wheel arch modifications
TF096	Superwinch LP8500 & LP10000, Talon 9.5, 9.5SR, 12.5, 12.5SR, Tiger Shark 9500 & 11500	Requires minor bumper & plastic ducting modifications & sundry part relocation

\* GUIDE ONLY AND SUBJECT TO FUTURE CHANGES

## TERRAFIRMA ROCK SLIDERS

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

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 made from 6mm alloy carefully folded to match the shape of the sill with optional tubular tree bars which also double as effective side steps for easier access.

All rock sliders follow the profile of the original side sill. For fitting to Defenders, the alloy lower sill below the doors is replaced with the rock slider. On Discoverys and P38 Range Rovers the plastic trim sill is removed and replaced with the appropriate rock sliders. 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.

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

Description	90	110	130	D1/RRC		D2	D3	P38
				3DR	5DR			
Rock Sliders Without Tree Bars	TF803	TF813	TF815	TF804	TF806	TF808	TF817	TF812
Rock Sliders With Tree Bars	TF801	TF810	TF814	TF805	TF807	TF809	TF818	TF816
Galvanised With Tree Bars	TF801GAL	TF810GAL						
Grip Tape Roll 50mm x 5m	TF819							

TF818

TF809

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.

TF819

## TERRAFIRMA UNDER BODY GUARDS

Regardless of your chosen off road activity, work or play and despite Land Rovers being built for off road use there is more to be done in terms of protecting the underside of your Land Rover against damage from rocks and ruts etc. The more serious your chosen off road adventures the more protection is necessary. All TerraFirma under body guards perform important roles and have been designed to protect any part of the Land Rovers under carriage that if damaged could affect the rest of your journey or day's work. Prevention rather than cure is the message here allowing you to drive safely and with confidence.

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

TerraFirma produce a range of guards that are necessary to ensure reliable and safe operation off road and these may not fit into specific groups. If there is a need to protect a part of the vehicle then it is likely there is a guard available or in development.

During 2011 TerraFirma acquired the rights to manufacture the range of under body guards developed and produced by Southdown 4x4 Products, this has enabled TerraFirma to accelerate the development of the range and has influenced the introduction of many new part numbers.



**TF830** and **TF828** fitted on a Discovery 3

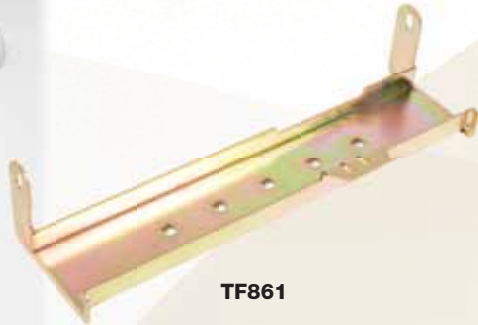


### STEERING GUARDS

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



**TF894WB** fitted on a Discovery 2



**TF861**

**TRACK ROD GUARDS**

Terrafirma track rod guards cleverly maximise ground clearance while totally protecting the steering track rod which is the most vulnerable part of the steering gear.

Two model types are available. To be certain which guard is required it is important to look at the front axle; Pre 1994 and post 1994 (dates approximate), the period before 1994 saw most vehicles produced with axles without anti roll bar brackets and after 1994 they were made with brackets, this dictates which track rod guard should be used.

Made from 6mm zinc passivated steel and including all necessary fixings. The track rod guard will also allow fitment of Terrafirma steering rods.

**DIFFERENTIAL GUARDS**

The 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.



**TF838** fitted on a Discovery 2



**TF868** fitted on a Discovery 2

**TRANSMISSION GUARDS**

The bottom of the gearbox, transfer box and hand brake assembly hang slightly below the chassis rails on Land Rover Defenders and Discoveries leaving them vulnerable when crossing obstacles.

Terrafirma transmission guards not only protect the transmission and hand brake but also act as a skid plate to slide over the ground or rocks reducing the chance of getting stuck.

## 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 on Land Rovers are typically under the side or under the rear over hang, both being 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 non standard equipment has been fitted.



TF845



TF923

## FUEL TANK GUARDS WITH DETACHABLE HITCH

One of the most popular product groups developed by Southdown 4x4 products, this range of steel fuel tank guards incorporates a unique detachable bracket to which any towing hitch can be bolted.

When driving off road the hitch bracket can be removed to give maximum protection and departure angle with no low hanging brackets to halt progress.

The steel guards are made from 5mm steel and the bracket and associated mounting plates are made from 10mm steel. The bracket is attached using 2 high quality 19mm diameter steel pins with clips. The hitch bracket is drilled to provide different height mounting positions.

## TERRAFIRMA UNDERBODY GUARDS - APPLICATION GUIDE

	Defender 90						Defender 110/130						D1/RRC		D2		P38	D3
	83-94	94-98	98-02	02-07	07-12	12-	83-94	94-98	98-02	02-07	07-12	12-	89-94	94-98	98-02	02-04		
Steel steering guard LHD							TF840L						TF858		TF894		TF896	
Steel steering guard RHD							TF840R											
Steel steering guard suitable for TerraFirma winch bumper													TF858WB		TF894WB			
Alloy steering guard LHD							TF841L						TF890		TF895		TF897 TF828	
Alloy steering guard RHD							TF841R											
Alloy steering guard suitable for TerraFirma winch bumper													TF890WB		TF895WB			
Track rod guards	TF842		TF843				TF842		TF843				TF861 TF860					
Differential guard - front							TF844								TF838		TF898	
Differential guard - rear							TF846						TF846		TF839		TF899	
Differential guard - rear salisbury axle							TF853											
Differential guard - rear salisbury skeleton							TF891											
Transmission guard - steel	TF856		TF881				TF856		TF881				TF892		TF868 or TF868V8		TF826	
Transmission guard - alloy	TF857		TF882				TF857		TF882				TF893				TF830*	
Fuel tank guard - steel	TF847		TF849				TF851		TF852				TF862		TF864		TF827	
Fuel tank guard - alloy	TF848		TF850				TF855		TF845				TF863		TF865		TF831	
Fuel cooler guard							TF880						TF880					
Fuel tank guard with detachable hitch pack	TF920		TF921				TF922		TF923				TF924		TF925			
Detachable jack and recovery point							TFJRP1						TFJRP2		TFJRP3			

NB "WB" STEERING GUARDS ARE DESIGNED TO WORK WITH TERRAFIRMA WINCH BUMPER  
\* TF830 CAN ONLY BE FITTED TOGETHER WITH TF828

**CHOOSING TERRAFIRMA MEANS YOU GET ACCESS TO THE WORLD'S MOST COMPREHENSIVE SELECTION OF LAND ROVER ACCESSORIES ANYWHERE IN THE MARKETPLACE.**



## TERRAFIRMA BRAKES

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

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 fill with mud when off road, clean them out afterwards when washing the vehicle to maintain performance and pad life. With the angled grooves it is found that they self clean in most cases. Quality machining to high tolerances using the correct materials ensure TerraFirma brake discs will withstand any test.

With overweight four-wheel drive vehicles with oversize tyres it's important to find a set of brake pads that really do perform. A heavily laden expedition vehicle will quickly overheat brakes, very large tyres fitted to off road vehicles also require extra brake pedal pressure to stop them turning. Many so-called performance pads are better suited to sports type driving styles where heat is required and can be maintained to enable the pads to really work. Even some well-known brands require the temperature to build up before they start to work effectively.

To get the best from TerraFirma Cross Drilled and Grooved (CDG) brake discs we recommend the use of high quality brake pads such as Lockheed or TRW for best results. 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.

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



### TERRAFIRMA CROSSED DRILLED AND GROOVED (CDG) BRAKE DISCS

Vehicle	F/R	Type	Part number
---------	-----	------	-------------

#### Freelander 1

1.8P And 2.0D 2001 On	Front	Solid	<b>SDB100830</b>
2.0 Td4 And 2.5 V6	Front	Vented	<b>SDB101070CDG</b>

#### Discovery 1 & Range Rover Classic

2.0P, 200Tdi, 300Tdi, V8 Carb & V8 Efi	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
	Rear	Solid	<b>LR017953CDG</b>

#### Discovery 2

Td5 And V8p 1998 To 2004	Front	Vented	<b>SDB000380CDG</b>
Td5 And V8p 1998 To 2004	Rear	Solid	<b>SDB000470CDG</b>

#### Discovery 3

Tdv6 And 4.0P	Front	Vented	<b>SDB000604CDG</b>
4.4P	Front	Vented	<b>SDB000614CDG</b>
Tdv6 And 4.0P	Rear	Vented	<b>SDB000636CDG</b>
4.4P	Rear	Vented	<b>SDB000646CDG</b>
4.4P With Dynamic Pack	Rear	Vented	<b>SDB000646CDG</b>

#### Discovery 4

Tdv6 And 5.0P	Front	Vented	<b>SDB000624CDG</b>
Tdv6 And 5.0P	Rear	Vented	<b>SDB000636CDG</b>

#### Defender 90

	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
	Rear	Solid	<b>LR017953CDG</b>

#### Defender 110/130

Salisbury Rear Axle 1994 To 2002	Front	Solid	<b>LR017951CDG</b>
	Front	Vented	<b>LR017952CDG</b>
	Rear	Solid	<b>LR017953CDG</b>
Rover Rear Axle 2002 On	Rear	Solid	<b>LR018026CDG</b>

#### Range Rover P38

2.5D, 4.0P And 4.6P	Front	Vented	<b>NTC8780CDG</b>
2.5D, 4.0P And 4.6P	Rear	Solid	<b>SDB000470CDG</b>

#### Range Rover L322

Td6, Tdv8 And V8p	Front	Vented	<b>LR031843CDG</b>
Td6, Tdv8 And V8p	Rear	Solid	<b>SDB000211CDG</b>

#### Range Rover Sport

Tdv6, Tdv8, 4.2P, 4.4P And 5.0P	Front	Vented	<b>SDB000624CDG</b>
Tdv6, Tdv8, 4.2P, 4.4P And 5.0P	Rear	Solid	<b>SDB000646CDG</b>





## TERRAFIRMA STAINLESS STEEL BRAKES HOSES

Replacing the standard original rubber brake hoses fitted to all Land Rovers with stainless steel braided hoses will significantly improve brake pedal feel, reduce sponginess and increase braking efficiency. Stainless steel brake hoses can also be entirely corrosion resistant especially with stainless steel fittings.

Developed for motorsport applications where braking performance has to 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 stainless steel brake hose kits feature the finest quality stainless steel braided hose with a PTFE liner and the hose end fittings are zinc plated steel as standard, with a clear PVC cover to maintain appearance.

For the ultimate stainless steel braided brake hose our TERRAFIRMA XTL RANGE combines all the finest features of brake hose construction with a smart Terrafirma blue PVC cover extruded onto the braid during manufacture and including the highest quality stainless steel hose end fittings. Terrafirma XTL brake hoses are probably the finest brake hose available in the Land Rover market.

Stainless steel braided brake hoses are available in standard length to match the Land Rover originals and 2" longer for vehicles with lifted or longer suspension travel. The XTL hoses are only available in the more popular 2" longer option but if required can easily be fitted to vehicles with more standard ride height and suspension set ups.

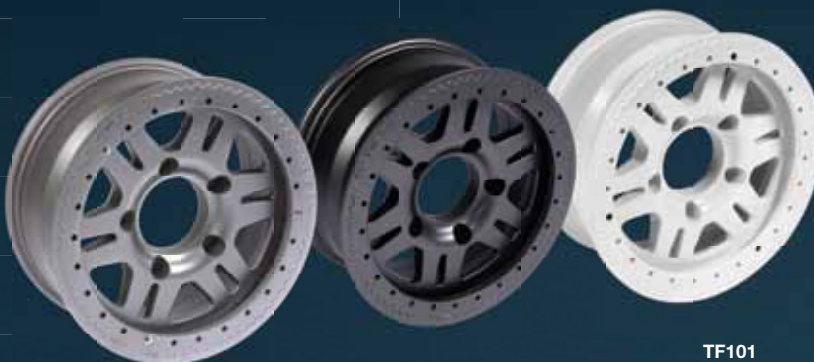
Land Rover Application	Terrafirma Brake Hose	Terrafirma +2" Brake Hose	Goodridge +2" TÜV AUSTRIA	Terrafirma Xtl +2" Brake Hose TÜV AUSTRIA	Hoses In Each Kit
Defender 90 up to 1999	TF600	TF600L	TLR0105-3P2	TF600XTL	3
Defender 90/110/130 1999 to 2004 no ABS	TF601	TF601L	TLR0108-4P2	TF601XTL	3
Defender 110/130 up to 1999	TF602	TF602L	TLR0106-3P2	TF602XTL	3
Defender 90/110/130 1999 to 2004 with ABS	TF603	TF603L		TF603XTL	4
Defender 90/110/130 2004 on with ABS				TF604XTL	4
Defender 90/110/130 2004 on no ABS				TF605XTL	3
Discovery 1 1989 to 1992	TF606	TF606L	TLR0300-5P2	TF606XTL	5
Discovery 1 1992 to 1994	TF607	TF607L	TLR0301-5P2	TF607XTL	5
Discovery 1 1994 to 1998 with ABS	TF608	TF608L	TLR0107-4P2	TF608XTL	4
Discovery 1 1994 to 1998 no ABS	TF609	TF609L	TLR0107-3P2	TF609XTL	3
Discovery 2	TF610	TF610L	TLR0109-4P2	TF610XTL	4
Range Rover Classic no ABS	TF611	TF611L			5
Range Rover Classic 1992 to 1994 with ABS	TF612	TF612L			6
Range Rover Classic 1990 to 1992 with ABS	TF613	TF613L			6

# TERRAFIRMA WHEELS

## TERRAFIRMA ALLOY BEAD LOCK WHEELS

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

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



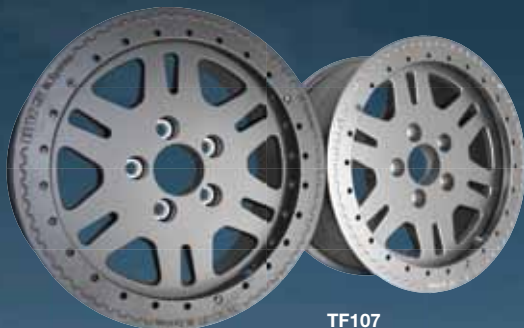
TF100

TF102

TF101

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

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



TF106

TF107

### BEADLOCK WHEEL

Vehicle	90/110/130	D1/RRC	D2/P38
Anthracite	TF100 7x16 ET10		TF107 7x16 ET20
White	TF101 7x16 ET10		
Matt Black	TF102 7x16 ET10		TF106 7x16 ET20
Locking wheel nuts	TF113DEF (Set of 5 Nuts and 1 Key)		TF113D2 (Set of 5 Nuts and 1 Key)
Beadlock Kit (Set Of 4)	TF103		
Beadlock Kit (1 Set)	TF103A		

### TERRAFIRMA BEAD LOCK KIT

The Terrafirma bead lock kit is a set of 4 specially machined alloy rings designed to clamp the tyre in place preventing it from being pushed off the rim at very low inflation pressures. The ring is machined in such a way that it centralises the tyre on the wheel so that balancing is possible, something not easily achievable with other bead lock systems. The bead lock ring kit also includes alignment dowels and a full set of bolts and lock nuts. The bead lock ring is recessed reducing rock damage to the bolt heads. The bead lock rings are powder coated anthracite grey with discrete Terrafirma logos.

TF103A

**STEEL BEAD LOCK WHEELS AND WELD ON KITS**

Built onto the popular 7x16 black modular steel wheel the Terrafirma bead lock Kit is available ready-made or as a weld on kit. These traditionally robust wheels are made rock ready and come complete with a silver steel bead lock rim and full nut and bolt kit. Clamping the outer bead of the tyre will prevent the tyre from being pushed off the rim when operating at very low tyre pressures while driving off road.

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

**TERRAFIRMA STEEL BEADLOCK WHEEL**

Vehicle	90/110/130	D1/RRC	D2/P38
Black Modular Beadlock Wheel	TF112 7x16 ET08 + BL		
Weld On Beadlock Kit (Set Of 4) Suits Most 16" Steel Wheels	TF112KIT		
Weld On Beadlock Kit (1 Set) Suits Most 16" Steel Wheels	TF112KITA		



TF112



TF112KIT



**TERRAFIRMA DAKAR WHEELS**

Influenced by the rugged and stylish wheels used on Rally Raid vehicles the new Terrafirma Dakar wheel looks amazing in either satin black or silver and is super strong with a massive 1450kg load rating.

Available in 7x16" and with 5x165 33mm off set and 5x120 45mm off set using original Land Rover alloy wheel nuts. The Dakar wheel is a 12 spoke wheel with built in valve protection against rocks and ruts and is suitable for the heaviest off road use when fitted to Land Rover Defender, Discovery 1 & 2 and Range Rover Classic & P38.

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



TF108

TF109



TF104

TF105

**Dakar Wheel**

Vehicle	90/110/130	D1/RRC	D2/P38
Silver	<b>TF104</b> 7x16 ET33		<b>TF109</b> 7X16 ET45
Satin Black	<b>TF105</b> 7x16 ET33		<b>TF108</b> 7x16 ET45
Locking Wheel Nuts	<b>STC8843AA</b> (Set of 5 Nuts and 1 Key)		<b>RRB100510</b> (1 Lock Nut and Key)



For wheel spacers and adaptors, see page 75.

**BOSS OFF ROAD WHEELS**

The Boss off road wheel is a cool looking, chunky 5 spoke alloy wheel available in three different colour schemes; all silver, black with a silver rim and gun metal with a silver rim, each wheel carries the BOSS OFF-ROAD logo in the rim edge and is perfectly suited for Land Rover Defenders, Discovery 1 and Range Rover Classics in 8 x16" with 5 x165 bolt pattern and a 25mm off set. These wheels are more than strong enough for tough off road use with a load rating of 955kg.

**Boss Off Road**

Vehicle	90/110/130	D1/RRC
Silver	<b>GRW014</b> 8x16 ET25	
Black And Silver	<b>GRW015</b> 8x16 ET25	
Gun Metal And Silver	<b>GRW016</b> 8x16 ET25	
Locking Wheel Nuts	<b>STC8843AA</b> (Set of 5 Nuts and 1 Key)	



GRW014



GRW015



GRW016

**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. Available in a variety of sizes and colours.



GRW012

GRW001



ANR4583PM

**OFFSET - EXPLAINED**

The offset of a wheel is the distance between the centerline of the wheel and the hub-mounting surface. It can be either positive or negative and is typically measured in millimeters. 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.



**Negative Offset**

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



**Zero Offset**

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



**Positive Offset**

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

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

**BOOST AND OFFENDER ALLOY WHEELS**

These are very popular alloy wheels designed to improve the looks of your Land Rover in 5 x165 to fit Defender, Discovery 1 and Range Rover Classic. With traditional Land Rover heavy 5 spoke styling these 2 are high quality great value wheels.



GRW007

RRC503400MNH

**WOLF WHEELS**

This military specification wheel has proven itself over and over and is supplied as Land Rover's heavy duty option for the Defender. It is used by armed forces and utility companies all around the World and is the strongest steel wheel on the market at 1500kg load rating, supplied black ready to fit in 6.5x16" and 5x165 bolt pattern.

**TERRAFIRMA WHEELS**

Vehicle	90/110/130	D1/RRC	D2/P38
<b>8 Spoke</b>			
White	<b>GRW001</b> 7x16 ET00		
Silver	<b>GRW002</b> 7x16 ET00		
Silver	<b>GRW017</b> 8x15 ET25		
Black	<b>GRW003</b> 7x16 ET00		
Black	<b>GRW011</b> 8x15 ET25		
<b>Modular</b>			
White	<b>GRW004</b> 7x16 ET08		
Silver	<b>GRW005</b> 7x16 ET08		
Black	<b>GRW006</b> 7x16 ET08		<b>GRW012</b> 8x16 ET25
Locking Wheel Nuts	<b>RTC9535</b> (Set of 5 Nuts and 1 Key)		
<b>Boost Alloy Wheel</b>			
Silver	<b>RRC503400MNH</b> 7x16 ET33		
<b>Offender Alloy Wheel</b>			
Silver	<b>GRW007</b> 8x16 ET25		
Locking Wheel Nuts	<b>STC8843AA</b> (Set of 5 Nuts and 1 Key)		
<b>Wolf Wheel</b>			
Black	<b>ANR4583PM</b> 6.5x16 ET21		

## TERRAFIRMA RECEIVER HITCHES

Land Rover tow bars are often one of the lowest points of a Land Rover significantly reducing the departure angle and frequently getting hung up while driving off road. Due to the dual purpose nature of most people's vehicles, removing the tow bar altogether is not an option. TerraFirma Receiver Hitches help to maintain 100% versatility by providing a 'female' box section mounting point known as a 'receiver' fitted high up, close to the chassis out of harms way.

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

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

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

Application	Part No.
Defender 90/110/130 up to 1998	TF873
Defender 90 1998 on	TF876
Defender 110/130 1998 on	TF877
Discovery 1	TF874
Discovery 2	TF875
Drop plate	TF879
Recovery point	TF878
Spare retaining pin	TFHPIN



TF878



TF879



TF877



TF873



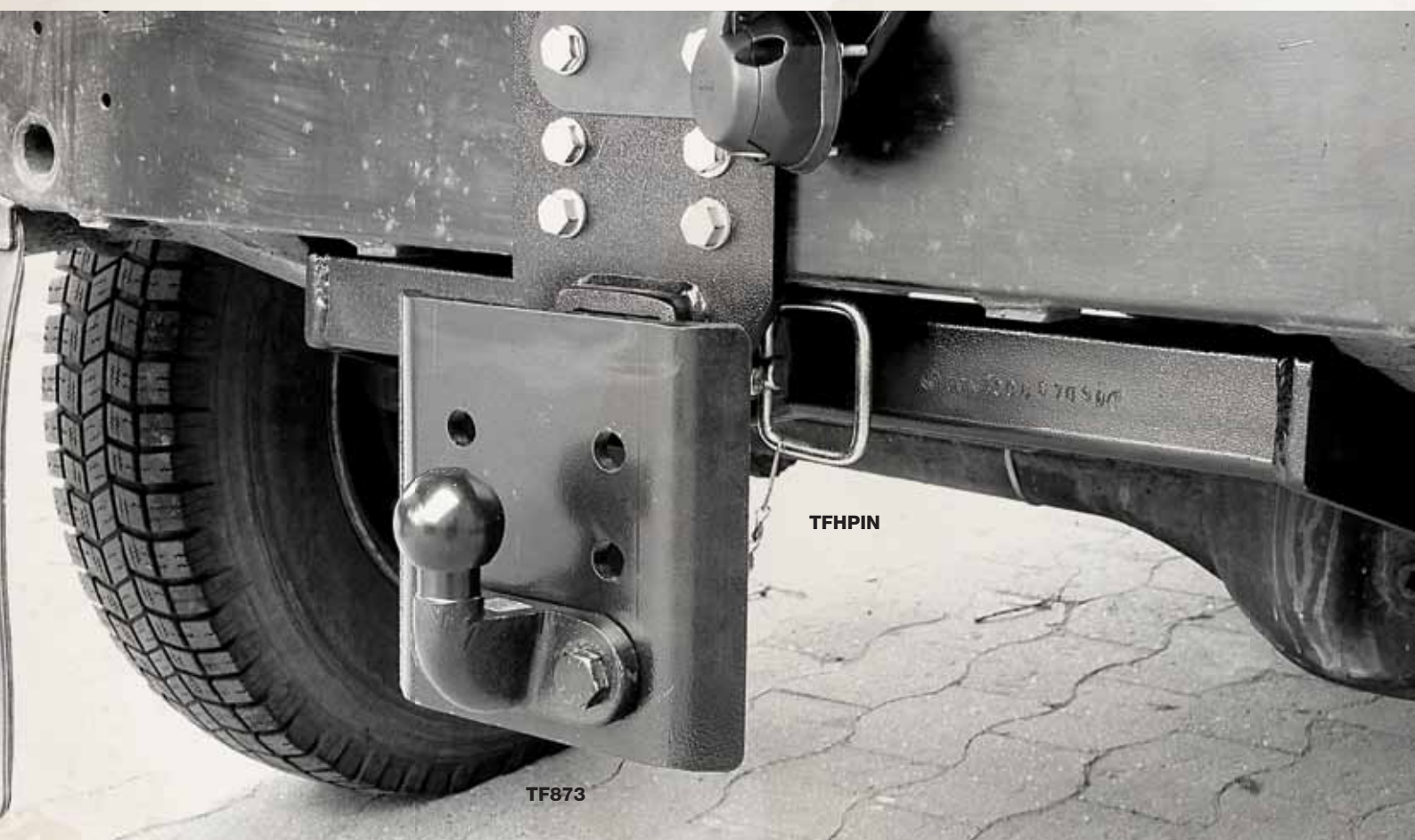
TF874



TF875



TF876



TFHPIN

TF873

## TERRAFIRMA PROPSHAFTS

- 20% stronger than standard Land Rover propshafts.
- Double seal arrangement on slip coupling.
- RILSAN coated 100mm spline slip coupling for smoother operation.
- Metal shield greasable universal joints
- 32 deg. wide angle yoke and joints
- Unique gun metal grey paint

When a Land Rover 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.

Lifting the vehicle by raising the suspension alters the propshaft angles which often causes severe vibration. Aggressive mud tyres, noisy engine and transmission and the slower speeds associated with hard core off road vehicles usually masks the vibration and drivers often tolerate the additional drone or rattle from the shafts on overrun. A more road biased lifted Land Rover 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. Even Land Rover found this essential on the Discovery 2.

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

\*Universal joints working at an angle speed up and slow down during rotation.

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

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

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

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

Terrafirma double cardan and wide angle propshafts are made to a higher spec as follows:

Wide Angle Propshafts	90		110		Discovery 1		Discovery 2	
	Front	Rear	Front	Rear	Front	Rear**	Front	Rear**
200TDI 1990 to 1994	<b>TFWA650</b>	<b>TFWA635</b>	<b>TFWA650</b>	<b>TFWA1050</b>	<b>TFWA650</b>	<b>TFWA850</b>		
300TDi 1994 to 1998	<b>TFWA610</b>	<b>TFWA680</b>	<b>TFWA610</b>	<b>TFWA1050</b>	<b>TFWA610</b>	<b>TFWA850</b>		
V8 1994 to 1998	<b>TFWA610</b>		<b>TFWA610</b>	<b>TFWA1050</b>	<b>TFWA610</b>	<b>TFWA875</b>		<b>TFWA850</b>
TD5 1998 to 2002				<b>TFWA1050</b>				<b>TFWA850</b>
TD5 2002 to 2007	<b>TFWA610</b>	<b>TFWA680</b>	<b>TFWA610</b>	<b>TFWA1140</b>				
Td4 2007 on	<b>TFWA680</b>	<b>TFWA630</b>	<b>TFWA680</b>	<b>TFWA1070</b>				

\*\* Required to replace 3 bolt flexi coupling

Double Cardan Propshafts *	90	110	Discovery 1
	Front	Front	Front
200TDI 1990 to 1994	<b>TFDC650</b>	<b>TFDC650</b>	<b>TFDC650</b>
300TDi 1994 to 1998	<b>TFDC610</b>	<b>TFDC610</b>	<b>TFDC610</b>
V8 1994 to 1998	<b>TFDC610</b>	<b>TFDC610</b>	<b>TFDC610</b>
TD5 1998 to 2007	<b>TFDC610</b>	<b>TFDC610</b>	
Td4 2007 on	<b>TFDC680</b>	<b>TFDC680</b>	

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

Propshafts Accessories	Part Number
Diff Flange Kit (4 bolt)**	<b>STC4858</b>
3/8 UNF Propshaft Nuts	<b>NZ606041L</b>
3/8 UNF Propshaft Bolts	<b>509045P</b>
WA Replacement Universal Joint	<b>HS163</b>



## TERRAFIRMA SOUTHDOWN SNORKELS

The Southdown 4x4 Products developed raised air intake or 'snorkel' consists of a stainless steel tube that runs up the Land Rover 'A' post (windscreen frame) which is black powder coated for a factory finish. The bracket that secures the tube to the 'A' post is also stainless steel, when combined with the injection moulded plastic wing adaptor and ram air top you have a virtually indestructible and rust free snorkel. The ram air top forces air into the intake system eliminating the air flow losses caused by long pipework.

TerraFirma Southdown snorkels include any necessary pipework, cutting template and fittings to connect to the air filter. It is important to remember when fitting a snorkel to seal the rubber dust trap valve in the air filter housing with silicone sealer as well as all pipe joints. Use silicone grease to seal the air filter closed or you will never separate it to change your air filter again!

Vehicle	Application	Part No.
Defender 200tdi, 300tdi and Td5	1990 to 2007	<b>TF820</b>
Defender Td4	2007 on	<b>TF821</b>
Range Rover Classic	1971 to 1996	<b>TF822</b>
Discovery 1	1990 to 1998	<b>TF823</b>
Discovery 2	1998 to 2004	<b>TF824</b>
Range Rover P38	1994 to 2002	<b>TF825</b>
Roll cage clamp bracket	45mm	<b>TF82045</b>
	48mm	<b>TF82048</b>
	50mm	<b>TF82050</b>



**TF82045**





## TERRAFIRMA RAISED TRANSMISSION BREATHER KITS

Possibly one of the most important but least considered upgrades you could give your Land Rover.

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 cost you a considerable amount of money rebuilding differentials.

Almost all gearbox casings and fluid reservoir on a vehicle that heat up and cool down in operation will require a breather to accommodate the fluid expansion and contraction.

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

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



Vehicle	Application	Part No.
Series Land Rovers or universal kit	Up to 1983	<b>TF160</b>
90/110/130 NAD	1983 to 1987	<b>TF161</b>
90/110/130 TD	1987 to 1990	<b>TF162</b>
90/110/130/D1/RRC 200 and 300tdi	1990 to 1998	<b>TF163</b>
90/110/150/D2 Td5 with 4 into 1 connector	1998 to 2007	<b>TF164</b>
90/110/130/D2 Td5 with no connector	1998 to 2007	<b>TF165</b>
90/110/13A 2.4 TDci	2007 on	<b>TF166</b>
90/110/130/D1/D2/RRC V8	1971 to 1998	<b>TF167</b>



## TERRAFIRMA LIGHTING

TerraFirma high performance 8" diameter lights are constructed with a tough polycarbonate body and an adjustable steel mounting bracket. The glass lens is protected with a tough polycarbonate cover printed with the TerraFirma logo.

Two choices are available including 55watt Halogen and the amazingly bright HID option.

HID technology uses pure Xenon bulbs and the light output is up to 3 times more than other popular spot lights whilst consuming half the power.

Both pairs of lights include the complete wiring loom, relay, ballasts for the HID version and a very neat dash mounted isolator switch.

### TERRAFIRMA SPOT LIGHTS

Description	Part Number
Pair TerraFirma 8" HID spot lamp set inc wiring kit	TF701
Pair TerraFirma 8" Halogen spot lamp set inc wiring kit	TF702



EUROPE'S FIRST E APPROVED  
LED 7" (180MM) LIGHT UNIT

## LED 7" HEADLIGHT



Description	Part Number
Duo-Lux 7" LED headlight (single RHD)	<b>GDL015</b>
Duo-Lux 7" LED headlight (single LHD)	<b>GDL016</b>



### Features

- High beam
- Low beam
- Position light
- LED technology
- IP68 rated



### Benefits

- Road legal upgrade
- Long life
- Direct Replacement
- Low power consumption
- Waterproof



XFD500010LED



AMR6526LED



AMR6527LED



XFE500010LED



AMR3850



GDL017

## NAS LED LIGHTS

These stylish and water proof (IP67) NAS style LED lamps provide brighter lighting than the OE style Halogen lights with the added benefit of long life and low energy consumption. (LED typical life: 100,000 hours)

Description	Part Number
NAS LED stop/tail light	<b>AMR6526LED</b>
NAS LED indicator light	<b>AMR6527LED</b>
NAS LED reversing light	<b>XFD500010LED</b>
NAS LED fog light	<b>XFE500010LED</b>
NAS light mounting plinth	<b>AMR3850</b>
LED Lamp load device*	<b>GDL017</b>

\*Only required for indicators

Other popular lighting products include entry level 55watt spot lights, wiring kit, a selection of work lamps, spare bulbs and Xenon headlight upgrade bulbs.



GDL014



GDL001



GWL004



GDL012



GBK001



GDL013



GWL001



GWL002

Description	Part Number
Pair 8" 55W Driving lights (requires GDL010)	GDL001
Pair 4" 55W Chrome driving lights (requires GDL010)	GDL012
Pair 4.5" 55W Driving lights (requires GDL010)	GDL013
Pair 5.5" 55W Driving lights (requires GDL010)	GDL014
Universal spot light wiring kit	GDL010
Round adjustable work lamp c/w on off switch	GWL001
Rectangular adjustable work lamp	GWL002
H3 55W work lamp bulb	GWL003
LED round work lamp	GWL004
H4 emergency bulb selection kit	GBK001
Pair H4 upgrade bulbs (50% brighter)	GBK002
Pair H4 Xenon upgrade bulbs (90% brighter)	GBK004
Pair H1 Xenon upgrade bulbs (90% brighter)	GBK005
Pair H7 Xenon upgrade bulbs (90% brighter)	GBK006

## TERRAFIRMA PERFORMANCE UPGRADES



## TERRAFIRMA EGR VALVE REMOVAL KITS

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

Removing this system actually makes little difference to emissions. The TerraFirma EGR valve removal kit for Td5 Defender and Discovery 2 allows the EGR valve to be completely removed from the inlet manifold which eliminates the restriction, increasing air flow and performance.

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

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



### TERRAFIRMA EGR VALVE REMOVAL KITS

Description	Part No
90/110/130 & D2 Td5	<b>TFEGR01</b>
D3 Tdv6 up to and inc. 6A Chassis number	<b>TFEGRV6</b>
90/110/130 & D1 300tdi	<b>TFEGR300</b>

## TERRAFIRMA INTERCOOLERS BY SERCK MOTORSPORT

Intercooler performance is crucial when generating high air temperatures from turbochargers especially following engine management upgrades. Serck Motorsport is unique in developing specific core choices and fin density options to optimise the cooling effect for both fast road and off road applications. End tanks are also specifically designed, laser cut and carefully welded using flared tubes for maximum efficiency of air flow across the full width of the core.

Available for 300Tdi, Td4 Defender and Td5 Defender & Discovery 2, the TerraFirma intercoolers are an easy to fit replacement intercooler manufactured to the highest standards to Serck's original design to enhance air flow and temperature dissipation. Fast road intercoolers utilise highly efficient 16 fin per inch cores and the off road core uses a coarse 9 fins per inch for easy cleaning and efficient low speed performance.



Description	Year	Part No
90/110/130 300tdi	1994 to 1996	<b>TF180</b>
90/110/130 Td5 and Td4 off road	1998 on	<b>TF181</b>
90/110/130 Td5 and Td4 fast road	1998 on	<b>TF182</b>
D2 Manual	1998 to 2004	<b>TF183</b>
D2 Auto	1998 to 2004	<b>TF184</b>

**TF184** Fitted to a Discovery 2

## TERRAFIRMA EXHAUST PIPES

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

Save a fortune when your catalytic converter fails by fitting a Terrafirma 'de-cat' down pipe and enhance the performance and economy by derestricting the exhaust system. UK MOT regulations suggest a maximum weight limit, above which a catalytic converter is not required. This permits replacement exhaust systems to be fitted. 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.



### TERRAFIRMA 'DE CAT' DOWN PIPES

Description	Part No
Defender/Discovery 1/HHC 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

Description	Part No
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	TF556
Discovery 1 3.9Ei 3bolt flange type 1991 to 1998	TF556
Discovery 1 200tdi 1990 to 1994	TF557
Discovery 1 300tdi 1994 to 1998	TF558
Discovery 2 Td5 and V8 1998 to 2004	TF559



*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.*

## TERRAFIRMA SILICONE TURBO AND INTERCOOLER HOSES

TerraFirma Silicone turbo and intercooler hoses are designed to survive the high pressures and extreme temperatures found on high performance engines. They will perform better and last longer especially if your Land Rover diesel engine has been given enhanced engine 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 important and enhancing the look of your engine bay is possible by choosing from 3 bright colours including the classic bright blue, orange and lime green as well as black for owners wanting a more 'factory' appearance. All hoses are embossed with the TerraFirma logo and part numbers.

TerraFirma also offers a range of universal silicone hoses in all colours for custom vehicle builders and converters.



### TERRAFIRMA SILICONE TURBO AND INTERCOOLER HOSE KITS

Model	Defender					D1		D2	D3
	200TDi	300TDi	TD5	TD4 2.4	TD4 2.2	200tdi	300tdi	Td5	TdV6
Blue	TF720	TF721	TF722	TF724	TF742	TF721	TF721	TF723	TF740
Green	TF725	TF726	TF727	TF729	TF743	TF726	TF726	TF728	
Orange	TF730	TF731	TF732	TF733	TF744	TF731	TF731	TF734	
Black	TF735	TF736	TF737	TF738	TF745	TF736	TF746	TF739	TF741



# TERRAFIRMA OFF ROAD FOAM FILTERS BY PIPERCROSS



As used by some of the world's top engine builders Terrafirma foam air filters are produced by Pipercross, leaders in foam filter technology. The filters are a direct replacement for the original paper element giving 30% more air flow and a lifetime washable air filter without an increase in induction sound. When airborne dirt particles are trapped by a standard paper or cotton filter there is a reduction in air flow and power. With the high performance deep foam construction of the Terrafirma foam filter, air is able to bypass the trapped dirt thus maintaining air flow and power.

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 airflow. When the Terrafirma foam filter finally reaches its full dust capacity it can easily be cleaned using the cleaning solution and re-oiled as required. Servicing could not be easier.

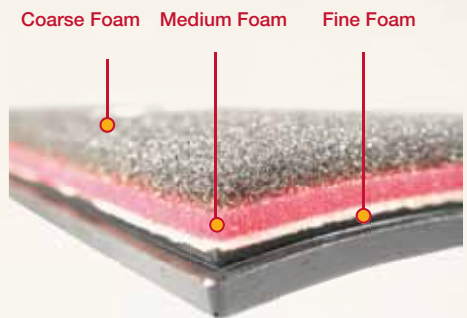
The high performance foam is a specially developed polyurethane foam which acts as the filtration medium, having both a higher performance and life expectancy than paper. The triple layers filter through course to fine trapping dirt particles in the outer layers as they enter the filter, the inner layer provides an exceptionally high level of filtration and engine protection.

Terrafirma offers off road foam filters for the most popular Land Rover models, service fluids and a unique Snorkel sock to reduce dust intake on raised air intakes. Please use Terrafirma Pipercross fluids when servicing foam filters.

## 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**

## Triple Layer Foam Cross-section



TF386

TF381

TF382

TF385

## TERRAFIRMA OFF ROAD FOAM FILTERS

Description	Year	Part No
Defender 300tdi	1994 to 1998	TF381
Defender and Discovery Td5	1998 to 2007	TF382
Defender Td4	2007 on	TF383
Discovery 300tdi	1994 to 1998	TF384
Safari snorkel sock	early type head	TF385
Safari snorkel sock	late type head	TF387
Southdown snorkel sock		TF386
Service kit		TF380



## TERRAFIRMA CRUISE CONTROL KITS



TerraFirma electronic cruise control kits are available in two versions for 2002-2007 Defender Td5, as 'basic' and 'factory' and also 2007> Defender Td4 in the 'factory' version only.

For the basic version functions are controlled by two buttons. The speed is adjusted using the SET button. When this button is held down, the Defender accelerates; when it is released, the Defender maintains the current speed. The second button, RESET/RESUME has two functions. If cruise control is active, pressing RESET/RESUME deactivates it. When it is pressed again, the most recently stored speed is recalled, and the Defender gradually accelerates automatically until this speed is reached. Cruise is also deactivated when the brakes or clutch are used. Cruise control can generally be used at speeds of 45 km/h (28mph) and above. The basic version will not operate in conjunction with a GKN overdrive.

The 'factory' version is a highly sophisticated cruise control kit that looks and works as the name suggests exactly like you would expect in a factory fit option. The control stalk is perfectly suited to Defender applications and operation barely requires your hand to leave the steering wheel. All typical cruise control functions are operated from the stalk and likewise cruise is deactivated with clutch and brake operation.



TFCK07

Description	Year	Year	Part No
Defender basic kit	Td5	2002 to 2007	TFCK
Defender 'factory' kit	Td5	1998 to 2007	TFCKTD5
Defender 'factory' kit	Td4	2007 on	TFCK07

## TERRAFIRMA ECU EXTENSION LOOM

Water and electrics do not mix. The Electronic Control Unit or ECU is mounted under the seat on a Td5 Defender and under the bonnet of the Discovery 2.

Relocating the ECU is highly recommended for serious off road use where deep water will be encountered.

TerraFirma's ECU extension loom is 2m long and allows you to mount the ECU high up out of harm's way.



Description	Year	Part No
90/110/130/D2 Td5	1998 to 2007	TFEL052

# HEATSHOT HEATED WINDSCREEN WASHER SYSTEM

**heatshot**<sup>ltd</sup>  
the difference is clear

Heatshot provide the only proven, effective heated windscreen wash system. The system easily fits to any Land Rover in a minimal amount of time, and once fitted will clear ice, snow, grease, bird droppings and dead insects from the windscreen, whilst prolonging the life of your wiper blades. The fluid heats up within 30 seconds of starting the engine and is sprayed onto the windscreen through the vehicles existing washer jets with the vehicles existing controls.

The heated fluid will not burn you, crack the windscreen, or damage the vehicles paintwork. You can say goodbye to scraping ice, defrosting windscreens and the frustration of not being able to use your washers to clear your windscreen whilst driving. Heatshot comes as a complete kit ready to install with comprehensive instructions.



Description	Part No.
Terrafirma Heatshot Heated Windscreen Washer System	TFHWJ

winter



summer



- Quickly clears the windscreen without scraping
- Minimises ice build-up on wiper blades while driving
- Continue to use your wash/wipe whilst driving, when it would normally be frozen
- Quickly dissolves salt and road grime
- Unblocks frozen washer nozzles
- Reduces wear & tear on wiper blades for superior cleaning and longer life

- Eliminates summer glare by removing haze and streaks
- Reduces washer fluid use by cleaning more effectively
- More effective than cold fluid for removing mud, dirt, bird droppings & tree sap.



Blade after use with *hot fluid*



Blade after use with *cold fluid*



## TERRAFIRMA EXTERIOR ACCESSORIES

TerrafirMa Exterior Accessories are a range of products essential to enhance the appearance and performance of your Land Rover. Accessories that are created by demand and designed to improve the functionality, increase the strength and reliability as well as style and personality of your vehicle can be found here.



## TERRAFIRMA WHEEL SPACERS

Terrafirma 30mm alloy wheel spacers give an additional 60mm track width to all Land Rovers. The benefits are improved handling, cornering and stability as well as increased steering lock. 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 aluminum to the highest standards with high tensile studs and include a complete set of wheel nuts to ensure they are secured correctly.



TF301

Description	Part NO.
Defender	TF301
Discovery1/RRC	TF302
Discovery 2/ RR P38	TF302
Discovery 3/RR Sport/RR L322	TF303

## TERRAFIRMA WHEEL ADAPTORS

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 also space out the wheels by 54mm to give the desired 'fast road' sports look. Wheels over 22" diameter with appropriate tires can be fitted with these high quality alloy adaptors.

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



Description	Part NO.
Defender 5x165 hub to 5x120 70.1mm ID D2/P38 Wheel	TF304
Defender 5x165 hub to 5x120 72.6mm ID D3/HRS Wheel (54mm thick)	TF305

## TERRAFIRMA 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.



Application	Land Rover part No.	Type	Terrafirma part No.	Replacement Nut
90/110/130/D1 up to 1994	FRC5806	Thick	TF5806	TF5806N
90/110/130/D1/RRC 1994 on	FTC859/RUC105200	Thin	TF859	TF859N

## TERRAFIRMA DISC BRAKE HANDBRAKE KIT

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

The TerraFirma disc brake handbrake kit uses a precision machined brake disc combined with a unique fully floating brake calliper that retains its brake pads that are gently sprung loaded to prevent rattling. The high clamping force of the calliper, even when combined with a smaller diameter disc than the original brake drum makes for a more effective system than a well serviced original set up. An added bonus of a smaller diameter brake disc is the reduced chance of the brake getting hung up on obstacles.

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



Description	Part NO.
Defender 90/110/130	TFDBHBK

## TERRAFIRMA WIDE WHEEL ARCH KITS

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

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

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

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

	Application	Fitting Info	Part NO.
Defender	2" wider than standard	screw fix no cutting required	TF110
D1/RRC 3 door	2" wheel arches	screw fix cutting required	TF113
D1/RRC 4 door	2" wheel arches	screw fix cutting required	TF114
D2	2" wheel arches	screw fix no cutting required	TF115



## TERRAFIRMA DEFENDER REAR BUMPER CORNERS

Departure angle is an off roaders biggest concern. When dropping off a ledge or attacking a steep accent the fragile alloy rear corners of your Defender can easily hit the ground and get damaged, especially on a 110. Terrafirma rear bumper corners not only protect the underside of the rear corners but also act as rear bumpers keeping the lights from harm and acting as a step with the useful grip tape applied.



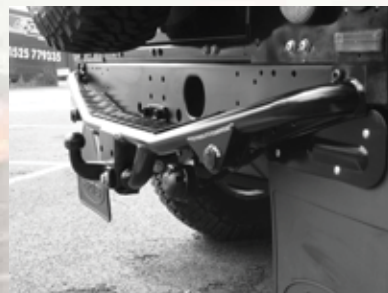
Application	Part NO.
Rear bumper corners for Defender 90	TF570
Rear bumper corners for Defender 110	TF571

## NORTH AMERICAN SPEC (NAS) REAR STEP TOW BAR

This classic accessory was first made in the mid 90s for the Land Rover Defenders exported to the US. The NAS rear step is also a tow bar and is securely bolted to the rear cross member and chassis on all Defender models.

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

**TÜV** APPROVED  
AUSTRIA



Application	Part NO.
Defender 90	TF883KIT90
Defender 110	TF883KIT110

## TERRAFIRMA TOWING AND RECOVERY POINTS

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 standard bumpers and air conditioning.

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



TF750



TFSRP



TFBRP



TFWSRP

Description	Application	Part NO.
Defender rear cross member centre recovery point	90/110/130	<b>TF750</b>
Defender front bumper swivel recovery point	90/110/130	<b>TFBRP</b>
Defender rear cross member recovery points (pair)	90/110/130	<b>TFRRP</b>
Defender front bumper recovery points (pair)	90/110/130 no AC	<b>TFFRP</b>
Jate rings 10mm bolt	90/110/130/D2 1998 on	<b>TF870</b>
Universal weld on swivel recovery point		<b>TFWSRP</b>
Swivel recovery point		<b>TFSRP</b>

## TERRAFIRMA SAND TRACKS

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



Description	Application	Part NO.
TerraFirma alloy sand tracks	universal	<b>TF888</b>

## SAFARI SNORKEL GRILL

When driving off road some damage is inevitable, keeping your vehicle away from trees can sometimes be impossible when suddenly an insignificant looking branch smashes the intake grill on your expensive Safari snorkel. Replace it with this neat laser cut stainless steel version once and for all.



Description	Application	Part NO.
Safari snorkel grill (stainless steel)	Suits all Safari snorkels	<b>TF111</b>



## TERRAFIRMA WIND DEFLECTORS

TerraFirma wind deflectors are useful in a number of ways: They enable the windows to be open slightly allowing fresh air to circulate even when it is raining without the water coming in. They provide ventilation and help to draw out cigarette smoke when moving. For vehicles fitted with tinted windows they reduce glare when the windows are partially open and significantly reduce wind noise while driving with the windows down.

TerraFirma wind deflectors are smoke tinted and easy to fit, in most cases no tools or additional adhesive is required. For all models they are supplied with self-adhesive strips pre fitted for easy application to the door frame.

Description	Application	Part NO.
Discovery 1	set of 4	<b>TF660</b>
Discovery 2	set of 4	<b>TF661</b>
Discovery 3	set of 4	<b>TF662</b>
Range Rover Sport	set of 4	<b>TF663</b>
Freelander 2	set of 4	<b>TF664</b>
Range Rover L322	set of 4	<b>TF665</b>
Defender	front pair	<b>TF666</b>
Defender	rear pair	<b>TF667</b>
Freelander 1 3 door	front pair	<b>TF668</b>
Freelander 1 5 door	set of 4	<b>TF669</b>
Range Rover P38	set of 4	<b>TF670</b>



## ROOF LIGHT BARS

Mounting spot lights above the windscreen not only looks great but also projects good light to illuminate a wider path and to show up pot holes ahead. These roof bars attach to the rain gutter and allow for 4 small to medium driving or spot lights to be fitted. The Defender version is obviously straight to follow the roof line above the windscreen but the Discovery version is very precisely curved to follow the shape of the windscreen to roof profile.

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

Description	Application	Part NO.
Defender	90/110/130	<b>GLB001</b>
Discovery	D1/D2	<b>GLB002</b>



## TERRAFIRMA DEFENDER BUMPER SPOT LIGHT BARS

These relatively shallow but chunky bars are designed to fit 2, 3 or 4 spot lights depending on their diameter.

There is a winch bumper version that is slightly taller to clear winches with built in solenoids which suits both air con and non air con vehicles and a shallower option for standard and non winch heavy duty bumpers.

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

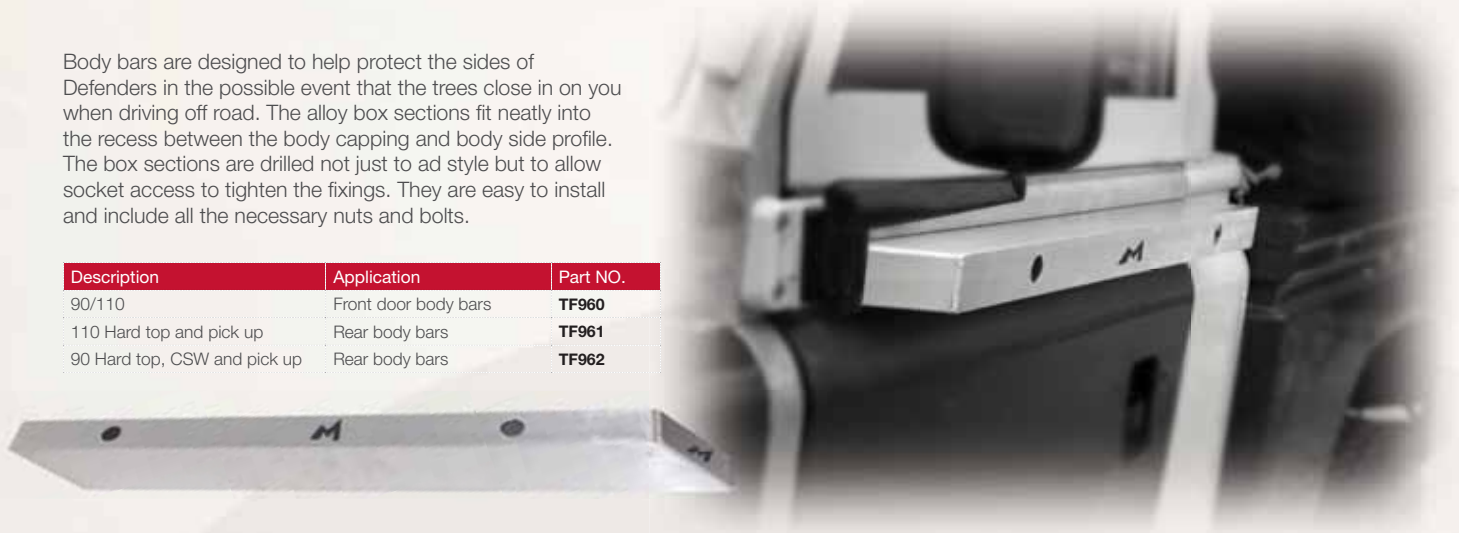


Description	Application	Part NO.
Defender with and without AC	Suits <b>TF002ACST, TF002ST, TF002W, TF002ACW, TF006, TF006AC, TF060</b> and <b>TF060AC</b>	<b>TF008</b>
Defender without AC	Suits all conventional bumpers for non air con Defenders inc. <b>TF055</b> and <b>TF055WRP</b>	<b>TF008SH</b>

## DEFENDER BODY BARS

Body bars are designed to help protect the sides of Defenders in the possible event that the trees close in on you when driving off road. The alloy box sections fit neatly into the recess between the body capping and body side profile. The box sections are drilled not just to add style but to allow socket access to tighten the fixings. They are easy to install and include all the necessary nuts and bolts.

Description	Application	Part NO.
90/110	Front door body bars	<b>TF960</b>
110 Hard top and pick up	Rear body bars	<b>TF961</b>
90 Hard top, CSW and pick up	Rear body bars	<b>TF962</b>



## TERRAFIRMA SPARE WHEEL CARRIERS

Originally Land Rover mounted the spare wheel on the bonnet of early vehicles. This was fine on a Series III with skinny tyres but as wheel and tyre options began to increase the logical choice was to put it on the back. Ever since the Land Rover owners have suffered with rattling, cracked and broken rear doors. The larger the wheel & tyre and the rougher the conditions, the worse the situation becomes.

### DEFENDER

The Terrafirma spare wheel carrier for the Land Rover Defender allows the spare wheel to be mounted on its own frame, designed to open in conjunction with the rear door, hinged on the chassis & onto the reinforced body capping and attached to the rear door only with a clever anti rattle connection which opens the carrier at the same time you open the door. This system ensures the load is carried on the stronger body and chassis and not directly onto the rear door. The Terrafirma wheel carrier is also designed to carry a Hi-Lift jack and even a shovel.

### DISCOVERY 3

Contrary to Land Rover's trend with the Discovery of mounting the spare wheel on the rear door, the Discovery 3 was built with its spare wheel underneath the rear of the car. This caused uproar with Land Rover and Discovery fans as externally mounted spare wheels on Land Rovers have been a recognisable feature for decades. The prospect of having to wrestle the heavy spare wheel out from underneath a stuck Land Rover with a flat tyre filled buyers with dread.

The Discovery 3 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. The Terrafirma D3 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 locked open with a sprung loaded plunger, essential on a side slope 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.



TFDEFSWC



TFD3SWC

Description	Application	Part NO.
Defender hard top and station wagon	90/110 1983 on	TFDEFSWC
Discovery	D3	TFD3SWC



## ROOF RACKS

Land Rovers are synonymous for their load lugging capability and their payloads are unrivalled. A whole variety of users from commercial to overland travelling will benefit from utilising the space on top of a Land Rover. Roof racks are selected based on a number of criteria; load capacity, strength, looks and cost.

Terrafirma offers a range of roof racks to suit all the main criteria including features such as low noise, stylishly contoured to match the roof profile of the Land Rover and excellent quality and value for money. The tubular construction is ideal for strapping down loads and the high quality black powder coating gives a long lasting finish.

Each roof rack clamps onto the rain gutter or in the case of the Discovery 3 locates into Land Rover's original roof track system.

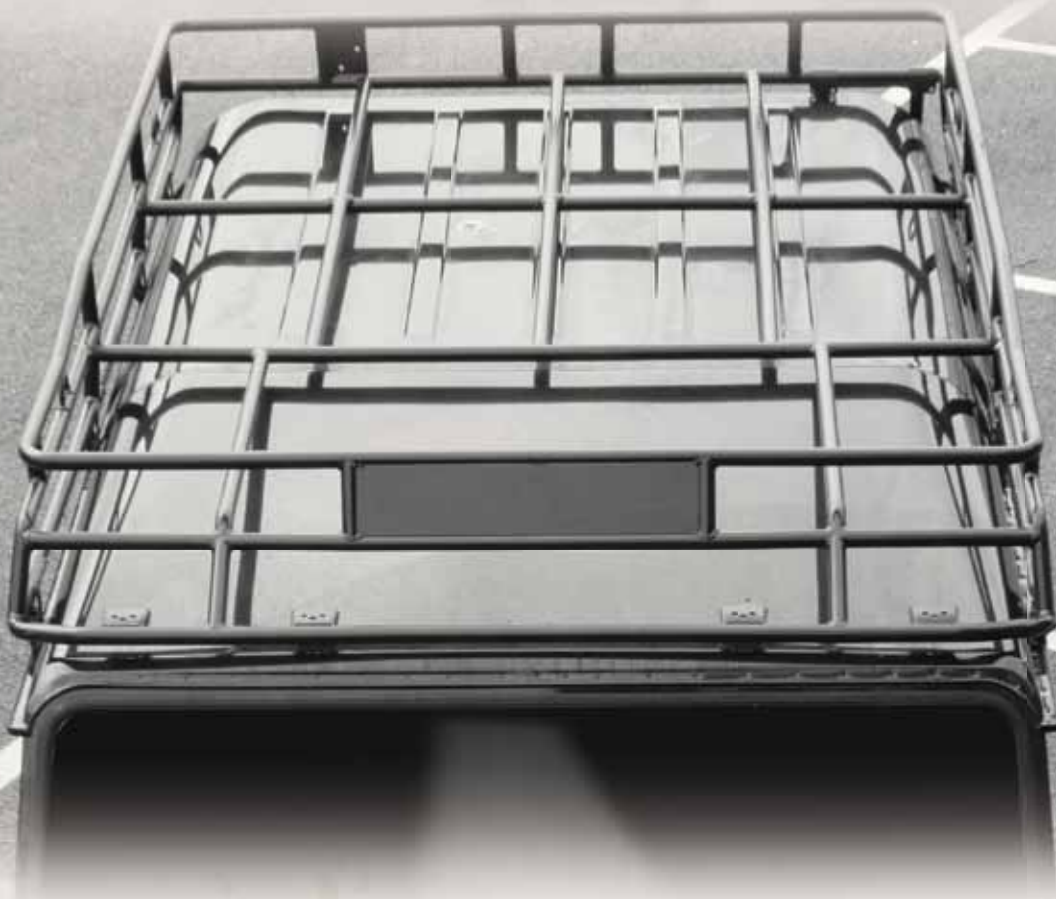


TF972

Description	Application	Part NO.
Defender Hard Top and Station Wagon	90	TF970
Defender Hard Top and Station Wagon	110	TF971
Discovery 3	D3	TF972



TF970



## JERRY CANS

A Jerry can is a robust fuel container originally made from pressed steel and designed in Germany in the 1930s for military use to hold 20 litres of fuel. The stamped indentations on the sides serve two purposes: firstly to stiffen the sheet metal sides and secondly to allow greater surface area for expansion and contraction of the contents with heat and cold.

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

Application	Part NO.
5 litre green Jerry can	GJC05
10 litre green Jerry can	GJC10
20 litre green Jerry can	GJC20
20 litre red Jerry can	GJC20R
20 litre blue water Jerry can	GJC20W
10 litre Jerry can holder	GJC004
20 litre Jerry can holder	GJC003
Jerry can rigid spout	GJC001
Jerry can semi flexible spout	GJC002
Jerry can flexible spout	GJC006
Jerry can cap seal	GJC99



GJC20



GJC10



GJC05



GJC20R



GJC20W



GJC006



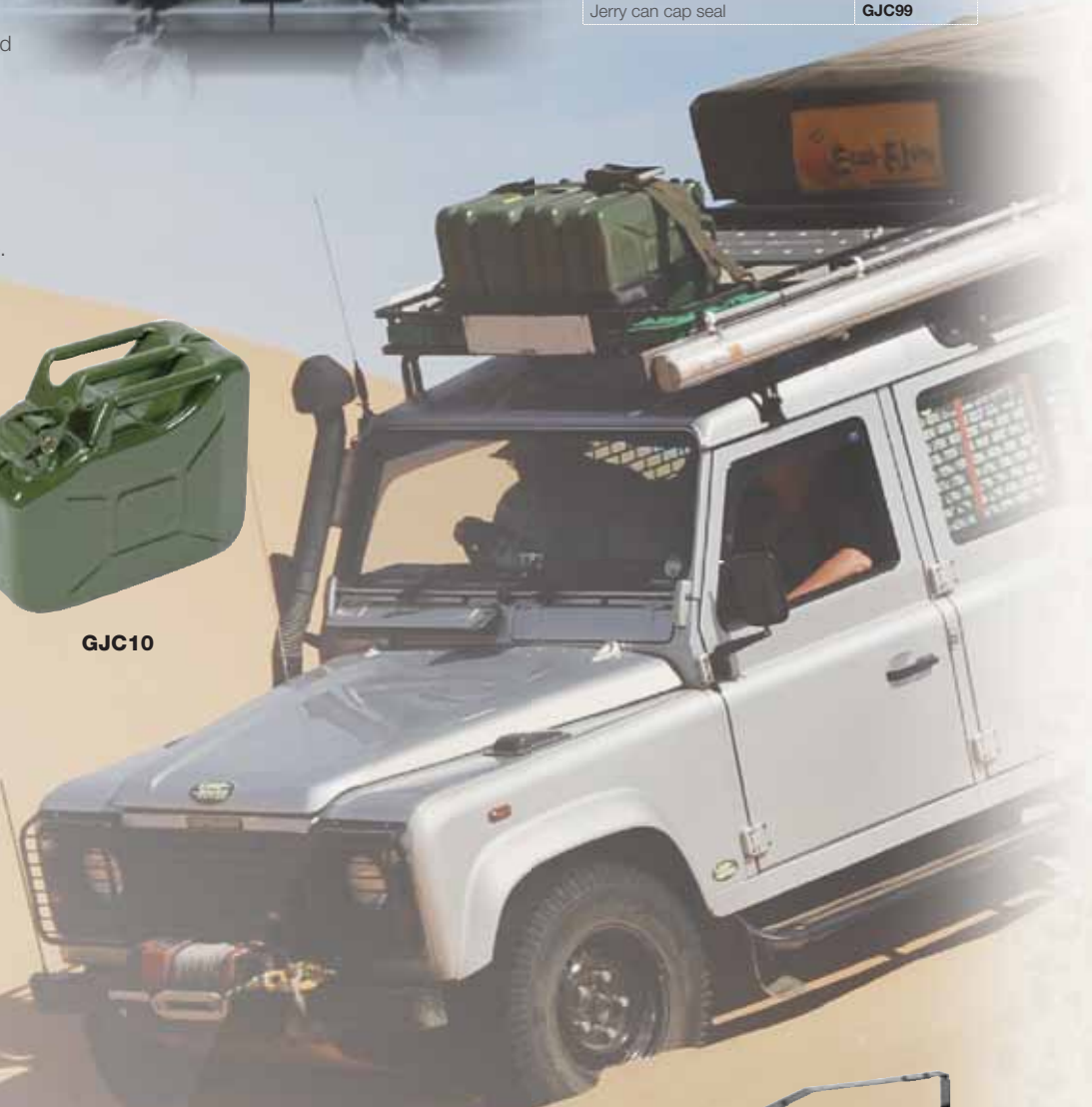
GJC002



GJC001



GJC009

GJC003  
GJC004

## TERRAFIRMA INTERIOR ACCESSORIES

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



## TERRAFIRMA DEFENDER SEAT RISERS

For the taller Defender owner these are an absolute must! The driving position in a Defender is cramped at best but some additional comfort can be had by fitting these seat risers. Lifting the seat around 1.25" (30mm) and allowing the seat to move back a further 2" (50mm) gives more leg room and straighter arms without effecting head room unnecessarily. The seat risers are tapered to further ease comfort by very slightly tipping the seat forward. The kit bolts into all the original mounting points and includes all nuts and bolts.



TF872

## TERRAFIRMA BULKHEAD REMOVAL KIT

Another way of increasing comfort for taller drivers and passengers is to remove the bulkhead behind the seats allowing them to move further back and recline even more. Removing the bulkhead also provides easier access to the rear of your Defender. The bulkhead is cut away to a convenient structural point and the cut edges are hidden and full strength restored by fitting this kit leaving a factory finish. Defender station wagons built after 2007 do not benefit from this kit.



TF871



GLM001

## INCLINOMETER

This dash mounted meter shows both the angle of climb & descent and also the angle of side slope. You can even set your indicators to show the maximum angle the vehicle has achieved or more likely the point at which your nerves got the better of you. This useful inclinometer is mounted with double sided tape so no screws are required and includes wiring for the back lighting.

## TERRAFIRMA LOAD SPACE DRAWERS

The rear load space of a Land Rover Defender or Discovery 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 over 100kgs 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.

Available for 90 and 110 Defender and Discovery 2.



TF884

TF906 Fitted to a Discovery 2

Storage Drawer	Internal Drawer Dimensions	Applications	Part NO.
90/110 storage drawer	725W x 1000D x 195H	up to 2007	TF884
90/110 storage drawer	725W x 920D x 195H	2007 on	TF905
D2 double storage drawer	445W x 780D x 240H	1998 to 2004	TF906

## TERRAFIRMA SIDE STORAGE LOCKERS



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.

Storage Locker	Dimensions	Application	Part NO.
Defender 110 LH rear side quarter storage locker	375W X 330D X 300H	up to 2007	<b>TF885</b>
Defender 110 LH rear side quarter storage locker (Reduced depth and height at rear to clear 2007 on inner rear wheel arch)	375W X 330D X 300H	2007 on	<b>TF886</b>
Defender 110 hard top and pickup all models side storage locker fitted between the cab door and the rear wheel arch on either side	510W X 330D X 300H	1983 on	<b>TF887</b>



## DEFENDER SECURITY CUBBY BOX

Carrying valuables in vehicles is a tricky business, the added security of a lockable steel cubby box should give peace of mind if for any reason you have to leave valuables inside your Defender.

Both cubby boxes feature a triple cup holder as standard. The net storage pocket is also standard for 2007 on Defenders. For vehicles upto 2007, there's a single DIN aperture provided to house a stereo, CB radio or navigation system which due to the gear lever configuration of 2007 on Defenders, is not included.

Both options are securely mounted to the seat box between the driver and passenger seats with a comfortable padded arm rest.

Defender Security Cubby Box	Vehicle / Application	Part NO.
Defender security cubby box (with single DIN aperture)	1983 - 2007	<b>TFDCB</b>
Defender security cubby box (with net storage pocket)	2007 on	<b>TFDCB07</b>
Mounting base (optional)	1983 - 2007	<b>TFDCBMB</b>
Mounting base (optional)	2007 on	<b>TFDCBMB07</b>



## UNIVERSAL FIRE EXTINGUISHER



Fire Extinguisher	Application	Part NO.
1kg Fire Extinguisher	Universal	<b>PS1X/FM</b>
600g Fire Extinguisher	Universal	<b>FMP600</b>

**TFDCB**

**TFDCB07**

## TERRAFIRMA PARCEL SHELVES

Maximising storage space in the cab of any Defender will increase comfort and convenience. The TerraFirma parcel shelves are ideal for stowing away maps, note books, pens and odds and ends.

The parcel shelf is available in two options:

- A full width version which secures into the door openings and spans the width of all Defenders which includes provision to add another or relocate the original interior light. The sun visors fit neatly and tidily into recesses moulded into the parcel shelf.
- The second option is a two piece parcel shelf designed to be incorporated with the TerraFirma roof console.

Two sections attached either side of the roof console maximising even more roof space, again with the recesses to accept the sun visors. The full width parcel shelf is designed to fit all Defenders with or without sunroofs or even a headlining, the two piece shelf relies on the console so is suitable for all Defenders without sunroofs. Parcel shelves are supplied with step by step instructions and fitting kits.

Defender Parcel Shelf	Application	Part NO.
TerraFirma Defender front parcel shelf	1983 on	<b>TFDPS</b>
TerraFirma Defender front parcel shelf 2 piece	1983 on	<b>TFDPS2P</b>





## TERRAFIRMA ROOF CONSOLE

Storage in the cabin area of a Defender is minimal with very few places to put things. Any additional space that can be created is a real bonus especially if it doesn't cramp the driving space. The Terrafirma roof console is the perfect solution for tucking away maps, pens and cigarettes, even small binoculars and a folding saw can be stashed away in the reversible trap door storage tray.

Defender Roof Console	Application	Part NO.
Terrafirma Defender roof console (not truck cab)	1983 on	<b>TFDRC</b>
Terrafirma Defender roof console (truck cab)	1983 on	<b>TFDRCTC</b>

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 and instructions.

## ALLOY GEAR KNOBS

Smarten up the interior of your Defender with these stylish alloy gear lever knobs, fuse box screws and window winders. Machined from solid aluminium, these gear knobs suit all Defenders with 5 speed gearboxes up to 2007.

Defender Alloy Knobs	Application	Part NO.
Alloy gear lever and transfer box lever knobs	Defender 1983 to 1994	<b>TF928</b>
Alloy gear lever and transfer box lever knobs	Defender 1994 to 2007	<b>TF929</b>
Alloy fuse box cover knobs	Defender 1983 to 2007	<b>TF930</b>
Alloy window winder handles	Defender 1983 on (non electric windows)	<b>TF931</b>



## IRON GOAT DASH CENTRE CONSOLE

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

The Iron Goat dash centre console has been designed around the popular Carling switches which share common dimensions with many other brands. Located centrally the centre console suits both left and right hand drive vehicles and is constructed using a 2mm aluminium sub-frame and black vacuum formed leatherette textured facia 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.



Iron Goat centre dash board		Part NO.
Iron Goat centre dash board Black	Defender 1983 to 2002	<b>TFIGDBB</b>
Iron Goat centre dash board Grey	Defender 1983 to 2002	<b>TFIGDBG</b>

## CARLING SWITCHES

Carling Technologies's fully sealed V-Series Contura switches are well known for their cutting edge design, high quality, maximum performance and unmatched reliability. These switches are a staple in the marine and transportation industries and have passed a range of environmental, corrosion, temperature, vibration, shock and sealing tests including MIL Std 202F, MIL Std 810C, UL 1500, ISO 8846, IEC 60529 and BS 5490 among others, making them one of the most rugged and reliable switches ever manufactured.



Iron Goat switches by Carling Technologies ®	Part NO.
6 switches kit containing: - Single pole on-on with green back light and amber function x 3 - Double pole on-on with green back light and amber function x 2 - Single pole off-on-on with green back light and amber function x 1 - Legend sheet x 1	<b>TFIGSWK1</b>
6 switches kit containing: - Single pole on-on with green back light and amber function x 2 - Double pole (on)-off-(on) with green back light and amber function x 2 - Single pole off-on-on with green back light and amber function x 2 - Legend sheet x 1	<b>TFIGSWK2</b>





## TERRAFIRMA PORTABLE FRIDGE FREEZER

The Terrafirma fridge freezer is specially designed to operate in tough 4x4 and off road environments. Vibration resistant this fridge freezer is suitable for everything from weekend camping trips right through to full blown expeditions.

Fisherman and medical organisations alike will also find the Terrafirma fridge freezer invaluable, able to perform even at +50deg. ambient temper outside freezing down to -18 deg.

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

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

The Terrafirma fridge freezer works in 12 and 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. To protect and add additional insulation, a snug fitting protection jacket is available as an optional extra.



Terrafirma expedition fridge freezer	Part Number
45 litre fridge freezer	TFFR01
12/240v adaptor	TFFR02
Protection jacket	TFFR03

## TERRAFIRMA MERCHANDISE

To compliment the extensive range of accessories for Land Rovers 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 Land Rover owners demonstrate their confidence and pride having invested in Terrafirma a selection of T Shirts, Polo Shirts, Baseball Caps, Hoodies and Body Warmers bearing the stylish Terrafirma 'serious 4x4 accessories' logo has been created to allow you to really feel part of the brand.

Stickers, Dealer Signs and Plastic Carrier Bags are also available for trade and end user to further promote and represent the most exciting Land Rover accessory names in the World.



	Size	Body Warmer	Polo Shirt	T shirt	Baseball Cap	Hoodie	Torch	Cigar Torch	Sticker	Sticker Silver	Sticker Black	Carrier Bag x50
Terrafirma Merchandise	S	TF350	TF353	TF357					TF361 350x100mm	TF346 D2	TF348 90	
	L	TF351	TF354	TF358	TF356		TF378	TF379	TF362 550x140mm	TF347 D2	TF349 90	TF360
	XL	TF352	TF355	TF359					TF363 700x190mm			
The firm Merchandise	S			TF364		TF370			TF375 350x100mm			
	M			TF365		TF371			TF376 550x140mm			
	L			TF366	TF369	TF372			TF377 700x190mm			
	XL			TF367		TF373						
	XXL			TF368		TF374						



## THE FIRM

Welcome to the Terrafirma members club, an unofficial group of like minded individuals who all regard Terrafirma as a favourite brand. For years we have worn baseball caps and cool clothing or used gadgets and equipment branded like our favourite products. Motorsport in particular is massive in branding and at any event you will see people wearing the logo or slogans of their favourite products.

The Firm merchandise is a fun way of showing your enthusiasm for your favourite Off Road products, be part of the largest and most comprehensive range of Land Rover accessories in the World. Just like Terrafirma accessories The Firm range combines style and practicality, it's fit for purpose and great value.

Making The Impassable Possible!



**the firm**  
Serious 4x4 Accessories



## TERRAFIRMA STYLING PRODUCTS



It is possible to completely change the way a Land Rover looks simply by swapping the wheels and tyres. Re styling, enhancing or even disguising the original appearance or style of a vehicle is a way of differentiating from the norm; it can be seen as a sign of the owner's personality or individuality.

Land Rover like most manufacturers produce vehicles in a limited selection of colours and specifications and with a small choice of wheels and trim options. TerraFirma has combined a range of products that allow you to simply change a few key parts that will completely change the appearance of the vehicle, right through to comprehensive upgrade kits that replicate the appearance of the very latest models from the factory.

TerraFirma styling products can be combined in infinite ways to personalise and update your Land Rover.

## CHROME AND CARBON FIBRE GRILLES, VENTS AND TRIM PARTS

Whether it's shining chrome for a touch of class or stealthy carbon fibre for a hi tech sporty look, these easy to change items add a personal touch to your Land Rover. Reproducing the same quality and fit as the original parts but with a more 'stand out' appearance this range of products provides a simple DIY styling upgrade without major modifications.

### GRILLES

Style	Discovery 3	Discovery 4	RRS2005-2009 Supercharged	RRS2010 on		L322 2002 to 2005 & supercharged	L322 05-09 Supercharged	L322 2010 on
Land Rover Pt No.	DHB000274LML	LR024301	DHB500390WWQ	LR020926	VPLSB0060	DHB000042LQV	DHB500550LQV	LR019657
Replacement	DHB000274LML	LR024301	DHB500390WWQ	LR020926	VPLSB0060	DHB000042LQV	DHB500550LQV	LR019657
Chrome	DHB000274LMLC JM-99608C (supercharged look)	LR024301C	DHB500390WWQC JM-99607C (full meshed design)	LR020926C	VPLSB0060C	DHB000042LQVC JM-99265C (supercharged look)	DHB500550LQVC	LR019657C
Carbon Fibre	DHB000274LMLCF	LR024301CF	DHB500390WWQCF	LR020926CF	VPLSB0060CF	JM-99265CCF (supercharged look)		



### SIDE VENTS

Style	Discovery 3	RRS2005-2009	RRS2010 on	L322 02-09		L322 2002 to 2009 & supercharged		L322 with moulded horizontal stripes
Land Rover Pt No. RH	JAK000064LQV	JAK500320WWH	LR019280	JAK000041LQV - UP TO 5A999999	VUB002200MMM (Double Vent)	JAK500201LQV - FROM 6A217195 TO 8A305302	JAK500300LQV - FROM 8A305303	LR023200
Land Rover Pt No. LH		JAK500330WWH	LR019283	JAK000051LQV - UP TO 5A999999	VUB503650 (Triple Vent)	JAK500211LQV - FROM 6A217195 TO 8A305302	JAK500310LQV - FROM 8A305303	LR023199
Replacement RH	JAK000064LQV	JAK500320WWH		JAK000041LQV - UP TO 5A999999	VUB002200MMM (Double Vent)	JAK500201LQV - FROM 6A217195 TO 8A305302	JAK500300LQV - FROM 8A305303	LR023200
Replacement LH		JAK500330WWH		JAK000051LQV - UP TO 5A999999	VUB503650 (Triple Vent)	JAK500211LQV - FROM 6A217195 TO 8A305302	JAK500310LQV - FROM 8A305303	LR023199
Chrome RH	JAK000064LQVC	JAK500320WWHC	LR019280C	JAK000041LQVC - UP TO 5A999999	VUB002200MMM (Double Vent)	JAK500201LQVC - FROM 6A217195 TO 8A305302	JAK500300LQVC - FROM 8A305303	LR023200C
Chrome LH		JAK500330WWHC	LR019283C	JAK000051LQVC - UP TO 5A999999	VUB503650 (Triple Vent)	JAK500211LQVC - FROM 6A217195 TO 8A305302	JAK500310LQVC - FROM 8A305303	LR023199C
Carbon Fibre RH	JAK000064LQVCF	JAK500320WWHCF		VUB503650CF	VUB503650CF	VUB503650CF	VUB503650CF	
Carbon Fibre LH		JAK500330WWHCF						

## MIRROR COVERS

Style	Freelander 2, Disco 3	Disco 4	RRS2005-2009	RRS2010 ON	L322 2002 to 2009 & supercharged	L322 2010 ON
Land Rover Pt No. UPPER	VUB503880MMM	VPLMB0041	VUB503880MMM	VPLMB0041	VUB503880MMM	VPLMB0041
Land Rover Pt No. LOWER	LR003905		LR003905		LR003905	
Chrome UPPER	VUB503880MMMC		VUB503880MMMC		VUB503880MMM	
Chrome LOWER	LR003905C		LR003905C		LR003905	
2 Piece set of covers		VPLMB0041		VPLMB0041		VPLMB0041
Carbon Fibre UPPER	VUB503880MMMCF		VUB503880MMMCF		VUB503880MMMCF	
Carbon Fibre LOWER	LR003905CF		LR003905CFT		LR003905CF	
2 Piece set of covers		VPLMB0041CF		VPLMB0041CF		VPLMB0041CF



## DOOR HANDLE COVERS

Style	Freelander 2	Disco 4	RRS 2005-2009	L322 2002 to 2009 & supercharged	L322 2010 on
Chrome	LR020632C	LR023729C	LR020632C	CXB500160CDXC	LR028095
Carbon Fibre	LR020632CF	LR023729CF	LR020632CF		



## WINDSCREEN WASHER JETS

Style	Freelander 2	Discovery 3
Land Rover Pt No.	DNJ500100 - RH DNJ500110 - LH	DNJ500100
Replacement	DNJ500100 - RH DNJ500110 - LH	DNJ500100
Chrome	DNJ500100C - RH DNJ500110C - LH	DNJ500100C
Carbon Fibre	DNJ500100CF - RH DNJ500110CF - LH	DNJ500100CF

## SPOT LIGHT BEZELS

Style	Freelander 2	Discovery 3	RRS 05-09 & 09 on	L322 2002 to 2009 & supercharged
Land Rover Pt No. RH	DXB500260LML	DXB500051PCL	DXB000221LML	DXB500330LML
Land Rover Pt No. LH	DXB500270LML	DXB500041PCL	DXB000231LML	DXB500310LML
Replacement RH		DXB500051PCL	DXB000221LML	
Replacement LH		DXB500041PCL	DXB000231LML	
Chrome RH	DXB500260LMC	DXB500051PCLC	DXB000221LMC	DXB500330LMC
Chrome LH	DXB500270LMC	DXB500041PCLC	DXB000231LMC	DXB500310LMC
Carbon Fibre RH		DXB500051PCLCF	DXB000221LMCLCF	
Carbon Fibre LH		DXB500041PCLCF	DXB000231LMCLCF	



## TERRAFIRMA BODY STYLING PRODUCTS

To satisfy the next generation of owners Land Rover introduce face lifted versions of their popular models, maintaining the desirability and must have appeal of their vehicles. It is now possible to update your Range Rover Sport or Range Rover Vogue (L322) to look exactly like the latest version for a fraction of the cost.

This is the ultimate styling upgrade with all the major components available to completely change the appearance of your Pre 2010 model. Various grille , vent and trim part combinations can be incorporated for an entirely new look.

A range of top quality side steps for Freelander, Discovery and Range Rover including the radical electronic deployable side steps for the Range Rover Vogue are available.

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

## RANGE ROVER EVOQUE STYLING PRODUCTS



**TFSESSB**

**TFSERM1**

**TFSERM2**



**TFSEFM1**

**TFSEFM2**

Description	Part No.	UNIT
Pure and Prestige model front mudflaps	<b>TFSEFM1</b>	Pair
Pure and Prestige model rear mudflaps	<b>TFSERM1</b>	Pair
Dynamic model front mudflaps	<b>TFSEFM2</b>	Pair
Dynamic model rear mudflaps	<b>TFSERM2</b>	Pair
Stainless steel side bars	<b>TFSESSB</b>	Set





## RANGE ROVER SPORT STYLING PRODUCTS

The ultimate styling upgrade must be when you can hide the age of your vehicle and make it look like the latest model. The TerraFirma body styling kits convert all Range Rover Sports to look like the very latest model. The increased sporty look for this hugely popular vehicle has been achieved with the huge rear spoiler and deeper more striking look front and rear bumpers, additional matching accessories complete the facelift.

The kit includes all the parts required to carry out the conversion for both, left and right hand drive vehicles and have been divided into groups to allow easy selection of options and alternatives depending on the finished look and age of your vehicle. Where there are options for petrol and diesel, items can also be selected from the list and added to the kit to complete the project.

The front & rear bumpers and front wings require partial painting and the rear spoiler also needs to be painted to match the vehicle, grills, vents, light bezels and trim parts are ready to fit. Exhaust tail pipes finish the job to perfection.

Also from TerraFirma are the optional chrome and carbon fibre look grills, side vents, mirror caps and door handle covers.

\*\* These kits are designed to convert 2005-2010 models to 2012 style. Certain optional parts will help the conversion for pre 2010 models and some parts are not required for 2010 on vehicles. The exhaust tail pipes may require silencer modification to fit perfectly. The application guide provides the necessary information but for further information please discuss your requirements with your TerraFirma Distributor.

Styling products that also have practical benefits including high quality side steps, mud flaps and roof rail and cross bar kits.

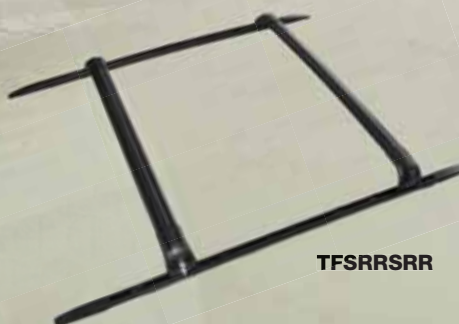
### 2012 Body styling kit (requires headlight and tailpipe selection)

Kit Part Number:  
(component parts can be bought seperately as shown below)

**TFRRRSBSK**

Description	TF Part No.	Unit
2012 model front bumper	<b>TFRRRSFB</b>	Part
2012 model RH spot lamp bezel	<b>TFRRRSRLB</b>	Part
2012 model LH spot lamp bezel	<b>TFRRRSLLB</b>	Part
2012 bumper bracket LH	<b>LR015104</b>	Part
2012 bumper bracket RH	<b>LR015103</b>	Part
2012 model rear bumper	<b>TFRRRSRB</b>	Part
2012 rear bumper mounting bracket LH	<b>LR015111</b>	Part
2012 rear bumper mounting bracket RH	<b>LR015110</b>	Part
2012 rear bumper mounting bracket LH corner	<b>LR013860</b>	Part
2012 rear bumper mounting bracket RH corner	<b>LR013858</b>	Part
2012 model RH front wing	<b>TFRRRSRFW</b>	Part
2012 model LH front wing	<b>TFRRRSLFW</b>	Part
2012 model RH wing bracket	<b>TFRRRSRWB</b>	Part
2012 model LH wing bracket	<b>TFRRRSLWB</b>	Part
2012 model rear spoiler	<b>TFRRRSRS</b>	Part

Description	TF Part No.	Unit
2012 model front grill (black and chrome)	<b>TFRRRSRG</b>	Part
2012 model side vents (black and chrome)	<b>TFRRRSSV</b>	Pair
2012 model front bumper crash bar (optional for 2005 to 2010 models)	<b>TFRRRSFCB</b>	Part
2012 RH head lamp RHD (required for 2005 to 2010 models)	<b>LR023553</b>	Part
2012 LH head lamp RHD (required for 2005 to 2010 models)	<b>LR023554</b>	Part
2012 RH head lamp LHD (required for 2005 to 2010 models)	<b>LR023551</b>	Part
2012 LH head lamp LHD (required for 2005 to 2010 models)	<b>LR023552</b>	Part
2012 model RH rear lamp (optional)	<b>LR015289</b>	Part
2012 model LH rear lamp (optional)	<b>LR015290</b>	Part
2012 model exhaust tailpipes (diesel engine)	<b>TFRRRSETD</b>	each
2012 model exhaust tailpipes (petrol engine)	<b>TFRRRSETP</b>	each
Side steps	<b>TFRRRSSS</b>	Set
Roof rails and cross bars	<b>TFRRRSRR</b>	Set
Front mudflaps	<b>TFRRRSFM</b>	Pair
Rear mudflaps	<b>TFRRRSRM</b>	Pair



**TFRRRSRR**





## RANGE ROVER L322 STYLING PRODUCTS

The iconic Range Rover L322 is a status symbol, the 2012 model makes a bold statement so the ultimate styling upgrade must be when you can facelift your vehicle and make it look like the latest model.

The TerraFirma body styling kits convert all Range Rover Vogues to the most up to date style. The modern and classy look for this hugely popular vehicle has been achieved by enhancing the lines of the bumpers and side mouldings as well as the additional matching accessories that complete the facelift.

The kit includes all the parts required to carry out the conversion for both, left and right hand drive vehicles and have been divided into groups to allow easy selection of options and alternatives depending on the finished look and age of your vehicle.

The bumpers and side mouldings require painting, however the grills, vents, light bezels and trim parts are ready to fit. Exhaust tail pipes are a must to finish the job to perfection.

Also from TerraFirma are alternative chrome grills, side vents, mirror caps and door handle covers.

\*\* These kits are designed to convert all 2003on models to 2012 style. Certain optional parts may need to be considered to provide the perfect end result. The exhaust tail pipes may require silencer modification to fit perfectly. The application guide provides the necessary information but for further information please discuss your requirements with your TerraFirma Distributor.

Styling products that also have practical benefits also include high quality side steps including electronically deployable side steps and mud flaps.

NB Side steps cannot be fitted with the body sill moulding kit.



### 2012 body styling kit (requires headlight and grill selection)

Kit Part Number (component parts can be bought separately as shown below)		TFSSRVBSK
Description	TF Part No.	Unit
2012 model front bumper	TFSSRVFB	Part
2012 model rear bumper	TFSSRVB	Part
2012 model RH spot lamp bezel	TFSSRVRLB	Set
2012 model LH spot lamp bezel	TFSSRVLLB	Set
2012 model exhaust tailpipes	TFSSRVET	Set

Description	TF Part No.	Unit
Front bumper reinforcement (optional)	LR020912	Part
2012 model sill moulding kit, optional (not compatible with side steps)	TFSSRVSMK	Kit
2012 model front grill (chrome)	TFSSRVG	Part
2012 model bumper grill (chrome)	TFSSRVBGC	Part
2012 model side vents (chrome)	TFSSRVSVC	Pair
2012 model front grill (black and chrome)	TFSSRVGBC	Part
2012 model bumper grill (black and chrome)	TFSSRVBGC	Part
2012 model side vents (black and chrome)	TFSSRVSVC	Pair
2012 model RH head lamp RHD (optional)	LR026139	Part
2012 model LH head lamp RHD (optional)	LR026154	Part
2012 model RH head lamp LHD (optional)	LR026140	Part
2012 model LH head lamp LHD (optional)	LR026156	Part
2012 model RH rear lamp (optional)	LR010773	Part
2012 model LH rear lamp (optional)	LR010776	Part
Range Rover L322 side steps	TFSSRVSS	Set
Front mudflaps	TFSSRVFM	Pair
Rear mudflaps	TFSSRVRM	Pair
Range Rover L322 deployable side steps	TFSSRVDS	Set





## DISCOVERY 3, 4 STYLING PRODUCTS

Description	TF Part No.	Unit
Discovery 3 side steps	<b>TFSD3SS</b>	Set
Discovery 3 front mudflaps	<b>TFSD3FM</b>	Pair
Discovery 3 rear mudflaps	<b>TFSD3RM</b>	Pair
Discovery 4 front mudflaps	<b>TFSD4FM</b>	Pair
Discovery 4 rear mudflaps	<b>TFSD4RM</b>	Pair



**TFSD3SS**



**TFSD3RM**

**TFSD3FM**



**TFSD4RM**

**TFSD4FM**

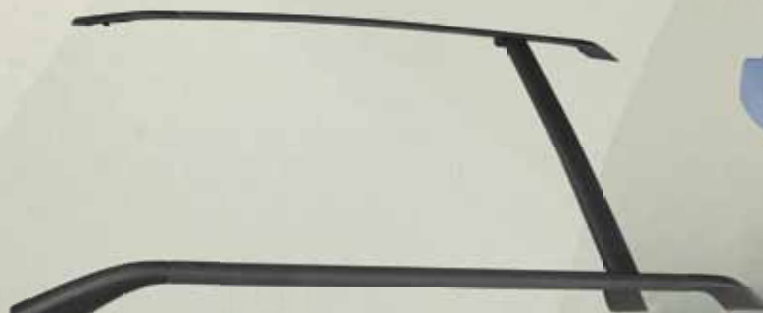
## FREELANDER 2 STYLING PRODUCTS



**TFSF2SS**



**TFSF2FM**  
**TFSF2RM**



**TFSF2RR**



**TFSF2RS**

Description	TF Part No.	Unit
Freelander 2 side steps	<b>TFSF2SS</b>	Set
Freelander 2 roof rails and cross bars	<b>TFSF2RR</b>	Set
Freelander 2 roof spoiler	<b>TFSF2RS</b>	Part
Freelander 2 front mudflaps	<b>TFSF2FM</b>	Pair
Freelander 2 rear mudflaps	<b>TFSF2RM</b>	Pair





## TERRAFIRMA STYLING WHEELS

Vehicle	D2/D3/D4/RRS/L322	
Stormer 9 spoke alloy		
Silver	<b>GRW008</b> 9.5x20 ET45	<b>GRW00822</b> 10x22 ET50
Black and silver	<b>GRW009</b> 9.5x20 ET53	<b>GRW00922</b> 10x22 ET50
Diamond Sport 10 spoke alloy		
Silver	<b>GRW010</b> 9.5x20 ET53	



## STYLING AND RESTORATION PRODUCTS

Restoring aged and faded appearance, disguising or hiding scuffs and scratches or continuing the personalisation of your Land Rover can be taken several stages further with this range of styling and trim products. Smoke tinted lights and bright red brake callipers, carbon fibre door treads and painted manifolds or even carry out your own alloy wheel repairs and perhaps change the colour. Everything is possible with this great range of easy to use products. Each kit comes with everything you need including instructions for a body shop standard repair or upgrade.



# XHT

## XTREMELY HIGH TEMPERATURE PAINT



This new E-Tech paint formula has been developed using the latest advances in paint technology. Designed for surfaces that are exposed to extremely high temperatures, this paint will coat, protect and enhance wherever it is applied.

- Ideal for engine blocks, rocker covers, exhausts and manifolds
- Long lasting high quality finish
- Easy to apply with fast curing time
- Strong adhesion
- Allows personalisation and reconditioning of parts

Description	Color	Part No.
400ml can of HT paint rated to 650°C. Red only rated to 350°C as above the temperature the colour may fade.	Black	TFSXHT001
	White	TFSXHT002
	Silver	TFSXHT003
	Graphite	TFSXHT004
	Red	TFSXHT005



## ALLOY WHEEL REPAIR KITS

Introducing Terrafirma E-Tech alloy wheel repair kit - a solution for repairing deep scuffs and scratches, kerb damage to the wheel rim and most other superficial non-structural damage.

The kit provides all the components you need to repair your alloy wheels yourself and contains detailed instructions of how to achieve a professional finish that is virtually invisible to detect. So if your alloys are damaged and looking second hand, for a small investment in time and money you could dramatically improve their appearance and the value of your car.

### Kit contains

- 1 x 400ml tin of alloy wheel lacquer spray
- 1 x 400ml tin of silver alloy wheel spray paint
- 10cm tube of E-Tech alloy wheel putty
- Applicator
- Masking tape
- 2 x Degreasing sachets
- 5 Diamond files
- 3 sheets of sandpaper
- Flexi wheel rim shield
- 1 x pair of gloves



Description	Color	Part No.
Alloy Wheel Repair Kit	Silver	TFSAWKIT01
	Motorsport black	TFSAWKIT02
	Competition white	TFSAWKIT03
	Technik grey	TFSAWKIT04



TFSAWL187216 400ml Clear Alloy Wheel Lacquer



TFSAWP01 400ml Tube of Alloy Wheel Putty

### damaged wheel...



### repairing wheel...



### ...finished!



## ALLOY WHEEL PAINT



- Supplied in a 400ml aerosol - enough for 4 wheels
- Specially formulated paint can restore the appearance of your alloy wheels or give them a totally new look and a new lease of life
- The paint provides a durable coating which is resistant to brake dust, cleaning chemicals and road salt and dries to a hard, chip resistant, long lasting finish
- Resistance to cracking and flaking

Description	Color	Part No.
400ml can of wheel paint	Silver	TFSAWP60021
	Motorsport black	TFSAWP08028
	Competition white	TFSAWP08027
	Technik grey	TFSAWP7016
400ml can of clear lacquer	Clear	TFSAWL187216
10cm tube of alloy wheel putty	Alloy wheel putty	TFSAWP01
Touch up stick	Silver	TFSTUP06025



## LENS TINTING KIT

TerrafirMa E-Tech lens tinting kit is designed for use on the front head lamps, rear tail lights and side repeater lenses of Land Rover vehicles. Due to the product's special transparency properties you can achieve an aggressive but subtle styling that lightly colours the lens with minimal light distortion and reduction.

The lens tinting kit offers an inexpensive simple alternative from having to purchase new coloured head lamps or lenses. It is easy to apply and is specially formulated to be easily removed if required without causing any damage to the lenses.

- Creates a subtle but dramatic styling upgrade for any light lens
- Ideal for 4x4s especially Land Rover vehicles
- Quick and easy to apply and remove
- Can be used on front, rear, side or fog light lenses
- Minimal light distortion and reduction
- MOT vehicle test passed (see packaging for details)



Lens Tinting Kit includes:

- 1 x 150ml Lens Tint Spray
- 1 x 150ml Remover Spray
- 2 x Degreaser/Cleaner Sachets
- 1 x Instructions Sheet



Description	Color	Part No.
Lens Tinting Kit	Smoke	TFSELS00160
	Red	TFSELS00161
	Blue	TFSELS00162
	Green	TFSELS00163

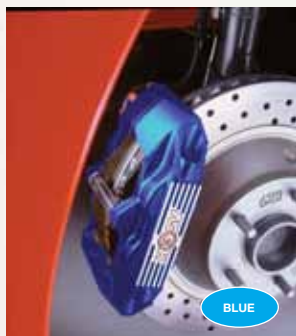
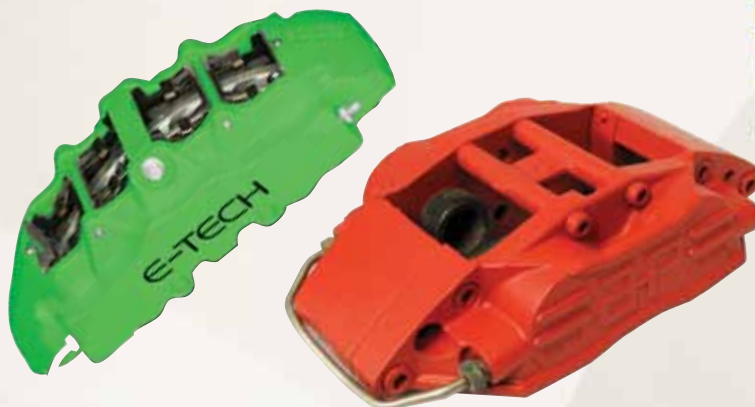
Description	Color	Part No.
Single Tin of Spray	Smoke	TFSELS150S
	Red	TFSELS150R
	Blue	TFSELS150B
	Green	TFSELS150G
150ml of Remover	Remover	TFSELS150REM

## BRAKE CALIPER AND ENGINE BAY PAINT

The E-Tech Caliper Paint is a one part paint system which requires no mixing with hardeners or priming and is therefore easy to use with no mess. It is easy to apply, quick drying and has an outstanding high quality, long lasting, lustre finish which will enhance your vehicle's brake calipers, wheel hubs or engine bay. Paint can be re-sealed and used at a later date for touch-ups and repairs.

- Paint is resistant against Brake Dust, Cleaning Chemicals, Corrosion and Oil
- Easy to apply
- No dismantling of parts required
- Stunning long lasting finish
- Easy to clean

Description	Color	Part No.
Kit contains 1 x 250ml tin of enamel paint, 500ml spray cleaner and a brush	Silver	TFSEBCPS
	Red	TFSEBCPR
	Blue	TFSEBCPBL
	Gold	TFSEBCPG
	Black	TFSEBCPBK
	Green	TFSEBCPGR



## STYLING TAPE

This is a high quality durable film that is ideal for personalising styling and protecting variety of surfaces on your Land Rover.

The film protects panels and painted surfaces from scuffs and scratches and is ideal for adding a personal touch.

- Adds an instant styling upgrade to any surface
- Self-adhesive, easy to fit and cut to shape
- Protects paint and bodywork from scuffs and scratches
- Can be used to cover up existing damage

## E-TECH TECHNIK DETAIL FILM



Description	Color	Part No.
Kit includes a 3m roll of 125mm wide tape, 2 cleaning sachets and a squeegee	Textured	TFSEDF01BK
	Carbon Fibre	TFSEDF02CR
	Brushed alloy	TFSEDF03BS
	Transparent	TFSEDF04TP



Textured Black



Carbon Fibre



Brushed Alloy



Transparent



Transparent





*Differentials Ltd*

**TRACTION AND DRIVE TRAIN UPGRADES**

a brand of **AllMakes4x4**



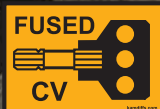
**KAM**  
**DIFFLOCK**



DIFF  
RATIO



HD SHAFTS



FUSED  
CV



4 PIN  
DIFF



HD  
HUB



LSD



When 4x4 vehicles are heavily laden and used in seriously tough conditions or even a battlefield, getting stuck and suffering transmission failure can have severe consequences. These consequences can be dramatically reduced or eliminated by increasing the strength of the transmission components most at risk of failure, lowering the strain on the driveline by reducing the final drive gearing and increasing the available traction with a differential locking system.

In the very unlikely event of a KAM upgraded transmission failure, use of the unique KAM fused stub shaft in the driveline will protect crucial components and reduce down time to just a few minutes instead of hours.

With KAM traction and heavy duty drive train products fitted to front and rear axles, heavier loads can be carried across tougher terrain with greater safety and reliability. The amount of traction is doubled when a KAM locking differential is engaged enabling even the worst surfaces and driving conditions to be overcome.

**Products include: Differential locking systems, limited slip differentials, 4 Pinion Differentials, Heavy Duty Front & Rear Drive Shafts, CV Joints, Fusible Stub Shafts & Drive Flanges and Alternative Ratio Crown Wheel and Pinions.**

This buyers guide is intended to provide all the information necessary to upgrade and modify Land Rover axles. For more detailed information please go to [www.kamdiffs.com](http://www.kamdiffs.com) and [www.terrafirma4x4.com](http://www.terrafirma4x4.com).

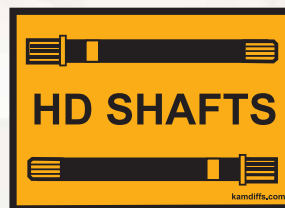
KAM Differentials products are available from Allmakes 4x4 worldwide distributors.



## KAM HEAVY DUTY HALF SHAFTS

KAM HD half shafts are made from Aerospace grade material which is far more flexible allowing for a greater degree of twist. Independent tests have proven they are 95% stronger than standard OE shafts. KAM HD half shafts have been used successfully for over 20 years on recreational off road, competition and military vehicles Worldwide.

After machining the shafts are put through a multiple stage finishing process including heat treatment, shot peening, cryogenic treatment and polishing. KAM produce the strongest and finest quality half shafts available and provide a 5 year no quibble warranty in the extremely unlikely event of failure.



- Aerospace grade material
- Independently tested
- 95% stronger than OE shafts
- Over twice the amount of twist
- Multiple stage finishing process
- Military and competition proven
- 5 year warranty\*



KAM Aerospace Break Point 9403 Nm



Land Rover OE front half shaft broke at 230 degrees of twist compared to the KAM shaft which twisted 540 degrees.

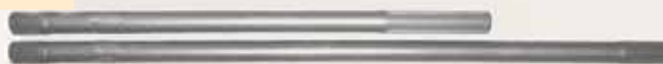


Land Rover OE Break Point 4800 Nm

## KAM REAR HALF SHAFTS

### Part No Type Fits wide flange without oil seal

<b>KAM201</b>	Short	90/D1/RRC up to 1994 24 spline (703mm)
<b>KAM202</b>	Long	90/D1/RRC up to 1994 24 spline (978mm)



### Part No Type Fits narrow flange with oil seal

<b>KAM203</b>	Short	90/D1/RRC 1994 on, 110/130 2002 on & 2007 on (683mm)
<b>KAM204</b>	Long	90/D1/RRC 1994 on, 110/130 2002 on & 2007 on (953mm)



### Part No Type Without Oil Seal

<b>KAM205</b>	Short	110/130 upto 1994 Salisbury drum brake axle (660mm)
<b>KAM202</b>	Long	110/130 upto 1994 Salisbury drum brake axle (978mm)



### Part No Type With Oil Seal

<b>KAM207</b>	Short	110/130 up to 2002 Salisbury disc brake axle (640mm)
<b>KAM204</b>	Long	110/130 up to 2002 Salisbury disc brake axle (953mm)



NB: please note 24 spline differential unit only.  
\*Warranty limited up to 35 inch tyres.



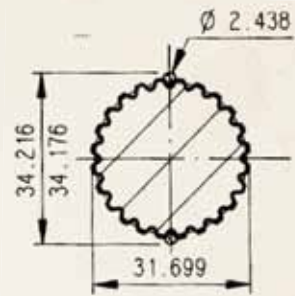
### KAM FRONT HALF SHAFTS

Since all D1/RRC and 90/110/130 1994 on and are fitted with smaller diameter 32 spline (CV end) front half shafts, it is not possible to achieve the strength required with these half shafts.

KAM has elected to focus on the larger earlier shaft and CV joint to achieve the desired strength. In order to upgrade these axles a complete Heavy Duty 23 spline shaft and CV conversion kit is required, combining the larger diameter half shafts and considerably stronger CV joints.



32 spline shaft cross section is 542mm sq.



23 spline shaft cross section is 714mm sq

Part No	Type	Application
<b>KAM209</b>	Short	90/110/130/D1/RRC 23/24 spline (452mm)
<b>KAM210</b>	Long	90/110/130/D1/RRC 23/24 spline (837mm)

NB: please note 24 spline differential unit only.



### KAM HEAVY DUTY DRIVE FLANGES

KAM HD drive flanges are made from material EN36. They have 10 bolt holes so they will fit axles originally fitted with either early wide or later narrow drive flanges which have different bolt hole centres.

These stylish flanges are super strong and extremely resistant to wear. To replace the wide flange a spacer is required to accommodate the slightly longer half shaft.



Part No	Type	Application 90/110/130/D1/RRC
<b>KAM101</b>	Narrow	FTC859 / RUC105200
<b>KAM102</b>	Spacer	Use this spacer if original drive flange is FRC5806. Converts narrow type to wide.

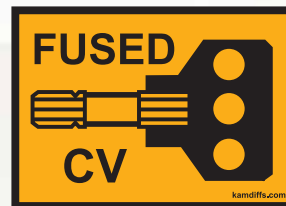


Registered Designs No: 3025504

## KAM HEAVY DUTY CV JOINTS AND CONVERSIONS

KAM CV joints are made from Aerospace grade material and have been independently tested proving they are more than twice as strong as the originals. The stub shafts which are unique to KAM are designed to withstand the strain associated with using tyres up to 35" diameter without breaking. For vehicles with larger than 35" tyres or very high engine horse power it is almost impossible to entirely prevent breakage at some stage.

KAM provides the most effective solution by 'fusing' the stub shaft which ensures that in the unlikely event of failure the stub shaft can be replaced in under 5 minutes thus protecting the drive train.



### Independent Test Result

Land Rover OEM CV joint failed at 4050 Nm. Load.  
KAM CV Joint withstood more than 8500 Nm.

- Aerospace grade material
- Independently tested
- Multiple stage heat treatment
- Over 100% stronger than original CV
- Replaceable 'Fused' stub shafts
- Stub shaft replaced in under 5 minutes
- Clean breakage - No swarf
- Protects the drive train
- 5 year warranty\*

### KAM HEAVY DUTY SHAFTS & CV AXLE CONVERSION KITS

(inc 2 shafts, 2 CV joints and 2 fused stub shafts)

Part No	CV Length	Description
KAM301	213 mm	90/110/130/D1/RRC non ABS 1994 on (160mm stub)
KAM302	242 mm	90/110/130/D1/RRC non ABS up to 1994 (185 mm stub) Fitting kit required
KAM303	213 mm	90/110/130/D1/RRC with ABS 1994 on (160mm stub)



### KAM HEAVY DUTY CV AND STUB SHAFT

(inc 1 x CV Joint & 1 x fused stub shaft)

Part No	CV Length	Description
KAM311	213 mm	90/110/130/D1/RRC non ABS 1994 on (160mm stub)
KAM312	242mm	90/110/130/D1/RRC non ABS up to 1994 (185 mm stub) Fitting kit required
KAM313	213 mm	90/110/130/D1/RRC with ABS 1994 on (160mm stub)



### KAM HEAVY DUTY CV ONLY

Part No	Type	Application
KAM330	non ABS	KAM heavy duty CV only (requires stub shaft) 90/110/130/D1/RRC
KAM331	ABS	KAM heavy duty CV only (requires stub shaft) 90/110/130/D1/ RRC



### KAM HEAVY DUTY FUSED STUB SHAFTS

Part No	Stub Length	Application
KAM340	185mm	Fusable Stub shaft Long up to 1994
KAM341	160mm	Fusable Stub shaft Short



\* Warranty limited upto 35 inch tyre

Recommended to purchase as a spare part

To cover the various CV joints that are used in Land Rover axles we have designed a CV that is interchangeable on all versions. We have produced a heavy duty aerospace joint with and without ABS. We have also produced two different length stub shafts two fit early and late (94 on) stub axles.

For extreme off road use a spare stub shaft is recommended in the unlikely event of failure. The fusible stub shaft protects the rest of the drive train. It is usefull to identify the original CV

joint and to confirm the overall length. 1994 onwards CV joints are direct fitment without the need for a fitting kits and use the shorter fusible stub shaft (160 mm).

All KAM CV joints use the later type roller bearing FTC861. There is no modification required to the stub axle. If the original CV joint does not use this roller bearing then you need to purchase a KAM fitting kit which replaces the original bronze bush.

### OE Land Rover CV joints identification

<p><b>RTC5843 Suffix B</b> RRC - 88-92 D1- 89-92</p> <p>93mm</p> <p>32 spline</p> <p>FROM EA305590 TO JA624754</p> <p>Stub axle bearing</p> <p>KAM Part No: KAM351</p>	<p><b>606665 Suffix A</b> RRC / 86 -88</p> <p>75mm</p> <p>23 spline</p> <p>UP TO EA305589</p> <p>Stub axle bearing</p> <p>KAM Part No: KAM352</p>
<p><b>STC3051 &amp; TDJ000010</b></p> <p>ABS 213mm STC3046 NO ABS</p> <p>32 spline</p> <p>FROM XA159807</p> <p>Stub axle bearing</p> <p>KAM Part No: FTC861</p>	<p><b>AEU2522</b> 90/110/130 242mm</p> <p>23 spline</p> <p>UP TO KA930455</p> <p>Stub axle bearing</p> <p>KAM Part No: KAM350</p>
<p><b>RTC6811</b> Defender RRC/D1 upto 1994</p> <p>ABS 213mm</p> <p>32 spline</p> <p>UP TO HA610293</p> <p>Stub axle bearing</p> <p>KAM Part No: FTC861</p>	<p><b>RTC6862</b></p> <p>242mm</p> <p>32 spline</p> <p>UP TO KA930455</p> <p>Stub axle bearing</p> <p>KAM Part No: KAM350</p>

### PRE 1994 FITTING KIT

Part No	Model	OE Part No	Fitting kit
<b>KAM350</b>	90/110/130/RRC/D1 upto 1994	RTC6862	32 spline Total length of CV 242mm
		AEU2522	23 spline
<b>KAM351</b>	Suffix B RRC-88 -92	RTC5843	32 spline Total length of CV 93mm 10 spline
<b>KAM352</b>	Suffix A RRC/ 86-88	606665	23 spline Total length of CV 75mm 10 spline

Standard OEM stub axle used in all applications

## KAM LOCKING DIFFERENTIAL

The KAM locking differential is electrically operated at the flick of a switch on the dashboard. A 45 amp burst of power activates a heavy duty dual coil solenoid located inside the differential cover.

The coil pulls a selector fork which preloads the engagement spring and forces the sliding dog collar along the locking tube onto the carrier, the differential is now locked. A constant .5 amp current holds the coil in the locked state until the switch is deactivated and the locker disengages.

The super strong 8mm cast alloy cover significantly increases protection of the ring and pinion making bolt on diff guards unnecessary.

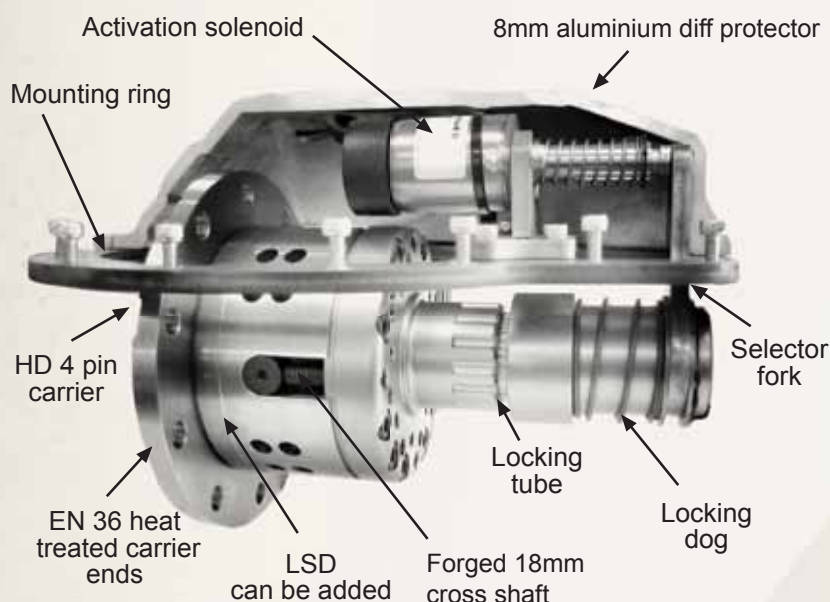


- **Doubles your traction off road**
- **Heavy duty 4 pin carrier**
- **Use any 24 spline half shaft**
- **8mm aluminium diff cover as std**
- **Add LSD to locker**
- **Solenoid activated 12v or 24v**

Under normal circumstances a standard or 'open' differential allows the wheels to rotate at different speeds for cornering, however when off road where traction can be lost, all the drive will be directed to the wheel with least grip which can result in a loss of forward momentum. The KAM locking differential provides the ideal traction solution by locking the differential manually. When activated, The differential lock engages in 0.4 second whilst on the move providing 100% drive to both wheels, ensuring maximum traction is achieved.

KAM produces a limited slip differential for drivers looking for a system that requires no manual operation but still offers a considerable increase in traction, KAM LSD units have 7 clutch plates that can be pre-set to suit a variety of applications and will accept upto 450bhp/500ftlbs torque. The more power applied the more lock up is achieved.

For the ultimate locking differential and 'best of both worlds' a limited slip differential centre can be installed into the locking differential casing to give both smooth limited slip action combined with an electronically operated locking differential for 100% drive. No additional equipment is required in order to operate a KAM locking differential or LSD.



### KAM LOCKING DIFFERENTIALS

Part No	Type	Application
<b>KAM420</b>	Long Nose	90/110/130/D1/D2/RRC FRONT. 90 upto 1998, D1/D2/RRC REAR.
<b>KAM430</b>	Short Nose	110/130 2002 on REAR, P38 FRONT & REAR*
<b>KAM435</b>	Long Nose	90 1998 on REAR.

### KAM Locking Differentials and Limited Slip Differential Combinations

Part No	Type	Application
<b>KAM421</b>	Long Nose	90 upto 1998, D1/D2**/RRC REAR.
<b>KAM422</b>	Long Nose	90/110/130/D1/D2/RRC FRONT.
<b>KAM431</b>	Short Nose	110/130 2002 on, P38 REAR.
<b>KAM432</b>	Short Nose	P38 FRONT*
<b>KAM436</b>	Long Nose	90 1998 on REAR.

\* P38 will require some modifications to the suspension particularly the panhard rod  
 \*\* D2 will require a special bolt for the Watts linkage

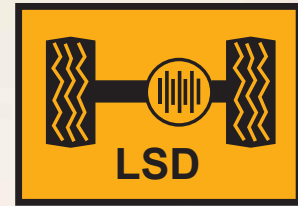


# KAM LIMITED SLIP DIFFERENTIAL & 4 PINION CARRIER

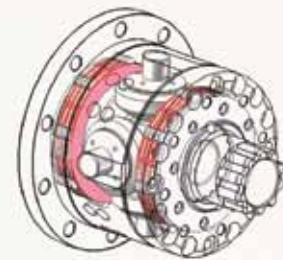
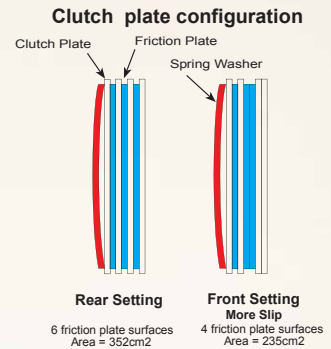
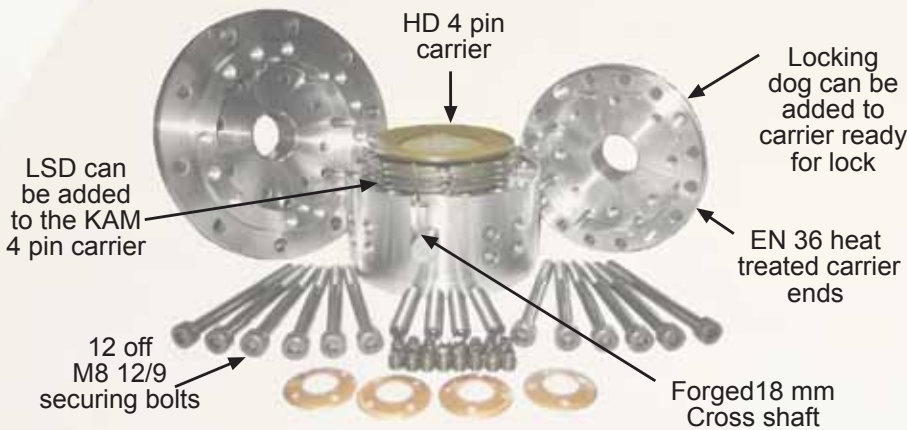
KAM provides a unique traction solution by offering a fully adjustable and upgradeable differential assembly. You can have both a full manually operated differential locker and Limited Slip Differential in combination. The KAM LSD unit is a clutch type Limited Slip Differential. In simple terms, the more power you apply, the more lock up you get across the half shafts. There are 3 options of clutch plate configuration and the pre-load is fully adjustable.

Its ability to be set up gives it a major advantage over other Limited Slip Differentials on the market and the KAM Limited Slip Differentials have been successfully tried and tested in top race vehicles with 450bhp/500 ft/lbs torque.

The KAM clutch plate LSD unit provides smoother power delivery than the competitors units. This ensures less stress is applied to the half shafts. Specialist F1 material used in manufacturing ensures longevity of the clutch plates.



- Clutch type LSD
- 4 pinion diff carrier
- LSD & full locker combo
- More power = More lock
- Available front or rear
- Pre load fully adjustable



## KAM HEAVY DUTY 4 PINION DIFFERENTIAL CARRIER

Part No	Type	Application
KAM610	Long Nose	90/110/130/D1/D2/RRC FRONT, D2 up to 2002 REAR
KAM620	Short Nose	90/110/130/D2 2002 on REAR, P38 FRONT & REAR

Four pin carrier can be upgraded to LSD combination (see upgrade page)

## KAM HEAVY DUTY LSD 4 PINION DIFFERENTIAL CARRIER

Part No	Type	Application
KAM630	Long Nose	90/D1/D2/RRC up to 2002 REAR
KAM631	Long Nose	90/110/130/D1/D2/RRC FRONT
KAM640	Short Nose	110/130/D2 2002 on, P38 REAR
KAM641	Short Nose	P38 FRONT



NB: For clarification all 2002 on defenders have a short nose fitted to the rear and the long nose fitted to the front

# KAM CROWN WHEEL & PINIONS

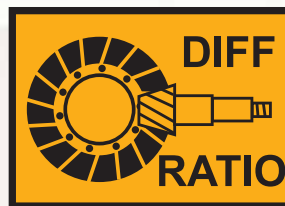
KAM offers a range of alternative ratio crown wheel and pinion gear sets specifically designed for Military, commercial and competition applications. The optimum final drive ratio can be selected to accommodate increased tyre diameter, up rated engine performance and vehicle application.

The strength increases are measured by using the standard 3.54 ratio as a datum and 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 with up to 70% increase in strength is possible with KAM lower ratio crown wheels and pinions.

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

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



- 2.83 3.8 4.1 & 4.75 available
- Reverse cut front option
- Up to 70% stronger
- 43% Thicker crown wheel
- 40% Larger tooth profile
- Competition proven

### Gearing variations from 3.54 ratio

Ratio	Teeth No	Land Rover	Strength Inc %
4.75:1	38/8	-25.47%	50%
4.1:1	41/10	-13.65%	25%
3.8:1	38/10	-7%	70%
2.83:1	51/18	+25.08	28%

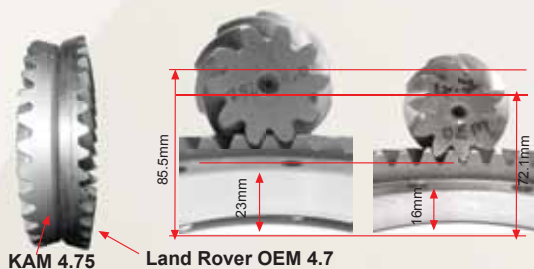
### KAM CROWN WHEEL AND PINIONS

Part No	Ratio	Application for Long Nose Differentials
KAM538	3.8	90/110/130/D1/D2/RRC FRONT
KAM539	3.8	90/D1/D2/RRC up to 2002 REAR
KAM541	4.1	90/110/130/D1/D2/RRC FRONT
KAM542	4.1	90/D1/D2/RRC up to 2002 REAR
KAM546	4.75	90/110/130/D1/D2/RRC FRONT
KAM547	4.75	90/D1/D2/RRC up to 2002 REAR
KAM528	2.83	90/D1/D2/RRC FRONT & REAR

Part No	Ratio	Application for Short Nose Differentials
KAM548	4.75	110/130 REAR 2002 ON, P38 F&R
KAM549	4.1	110/130 REAR 2002 ON, P38 F&R

### Improved Strength KAM 4.75 Land Rover OEM 4.7



NB: For clarification all 2002 on defenders have a short nose fitted to the rear and the long nose fitted to the front

## KAM HD REPLACEMENT AXLE

Constructed from 40% thicker axle beam tube  
Suspension brackets 50% thicker from 4mm to 6mm



Front axle tube



Rear axle tube with removable KAM Differential cover



Rear axle tube with fully welded cover

- 10mm seamless tube
- 40% thicker than standard
- Reinforced Diff housing 8mm plate
- Optional KAM Diff cover
- Stronger linkage points 6mm plate
- 8mm front diff pan
- Available for Land Rover Long nose front and rear RRC,90,110,130, D1
- Left and right hand drive
- Full options on KAM internal parts
- All original suspension can be fitted
- Optional axle beam lengths available
- Certified / Coded welded

### KAM HD REPLACEMENT LAND ROVER AXLE TUBE TUBES

Part No	Type	Description
KAM710	Front	Long Nose 90/110/130/D1/RRC 1994 on
KAM720	Rear	Long Nose 90/110/130/D1/RRCt up to 2002
KAM730	Rear	Short Nose 90/110/130 2002 on
KAM740	Front	Long Nose with KAM 8mm Diff locker cover fitted 90/110/130/D1/RRC 1994 on
KAM750	Rear	Long Nose with KAM 8mm Diff locker cover fitted 90/110/130/D1/RRC up to 2002
KAM760	Rear	Short Nose with KAM 8mm Diff locker cover fitted 90/110/130 2002 on

### KAM 8mm ALUMINIUM DIFF COVER KIT

Part No	Type	Description
KAM150	Long Nose	90 front, 90 rear upto 1998; 110/130 front, D1/D2/RRC front & rear
KAM151	Short Nose	110 rear 2002 on
KAM152	Long Nose	90 rear 1998 on



### KAM AXLE REINFORCING KITS

This KAM reinforcing kit comes with full instruction on how to weld it on. The picture shows the reinforced parts in position but not welded on. Simply remove the paint and any rust around the area you will be welding. Tack into position and follow the instructions that come with every kit.

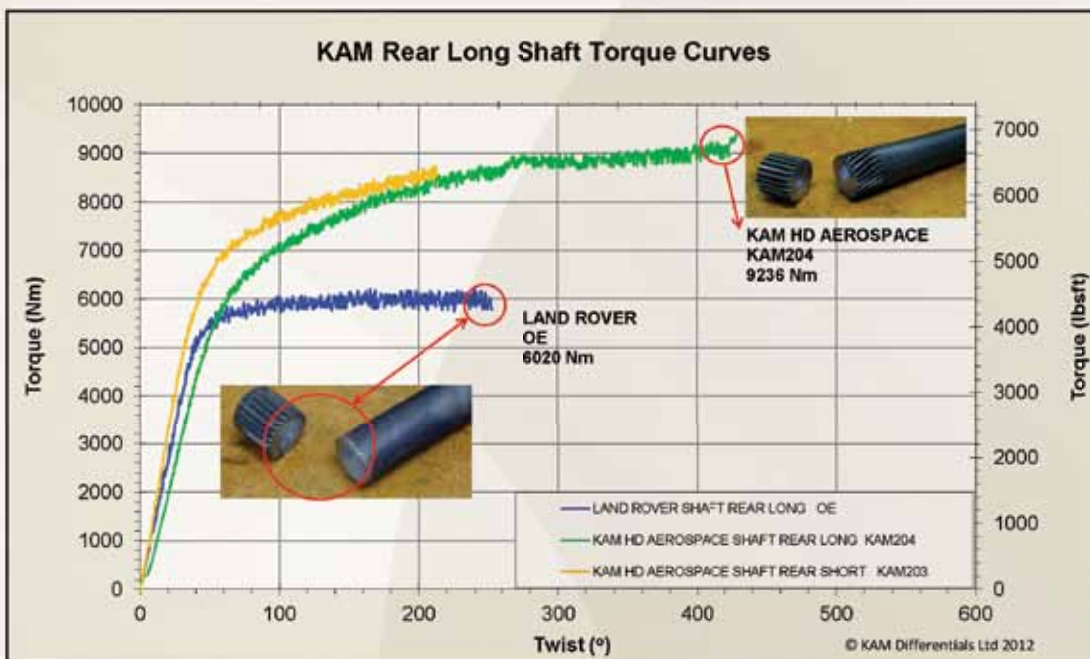
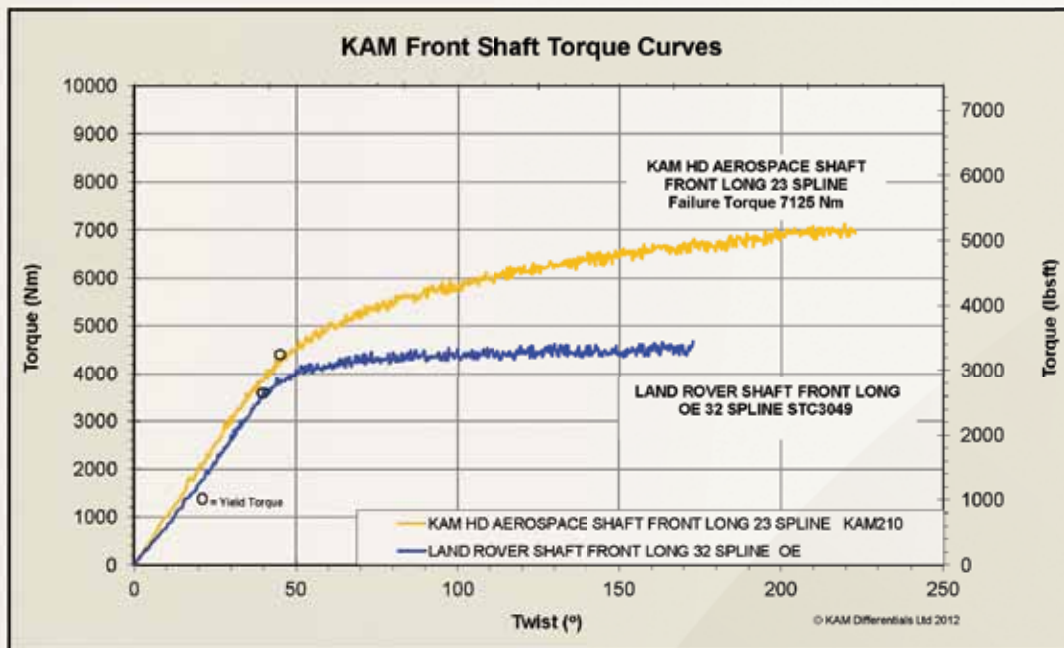
Part No	Type	Description
KAM770	Rear	Long Nose 90/110/130/D1/RRC up to 2002
KAM775	Front	Long Nose 90/110/130/D1/RRC 1984 on



## TEST DATA OF LAND ROVER VS KAM DRIVE SHAFTS

A request has been made by a number of defence contractors to supply imperial test data on the KAM heavy duty components. KAM have commissioned an independent report on the strength of the KAM parts over the standard Land Rover OEM parts. The full report is available upon request from KAM.

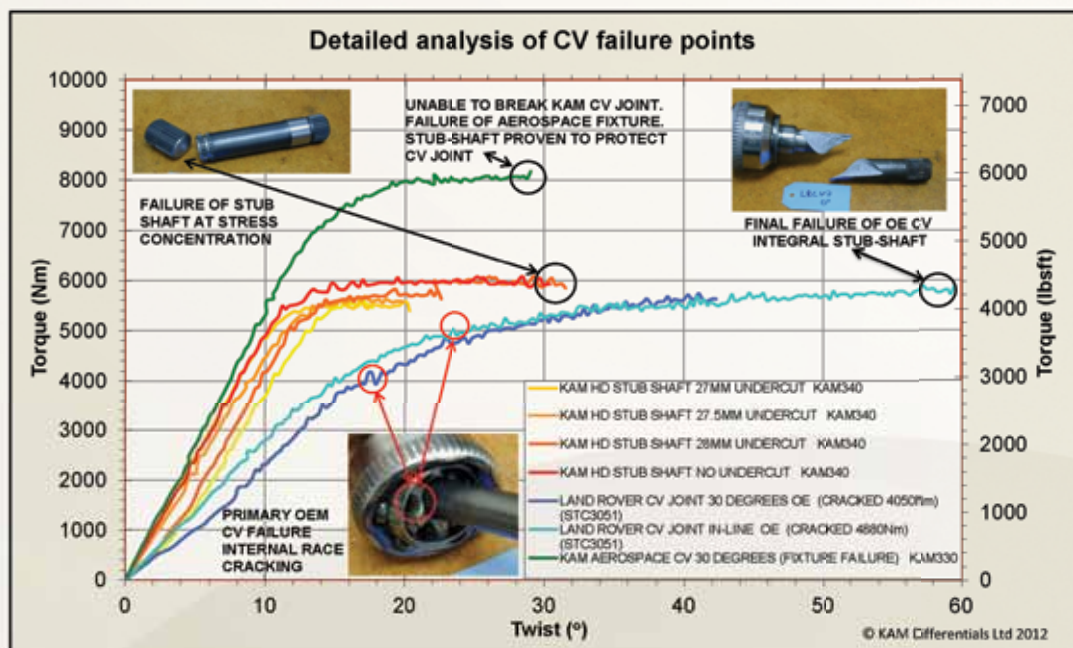
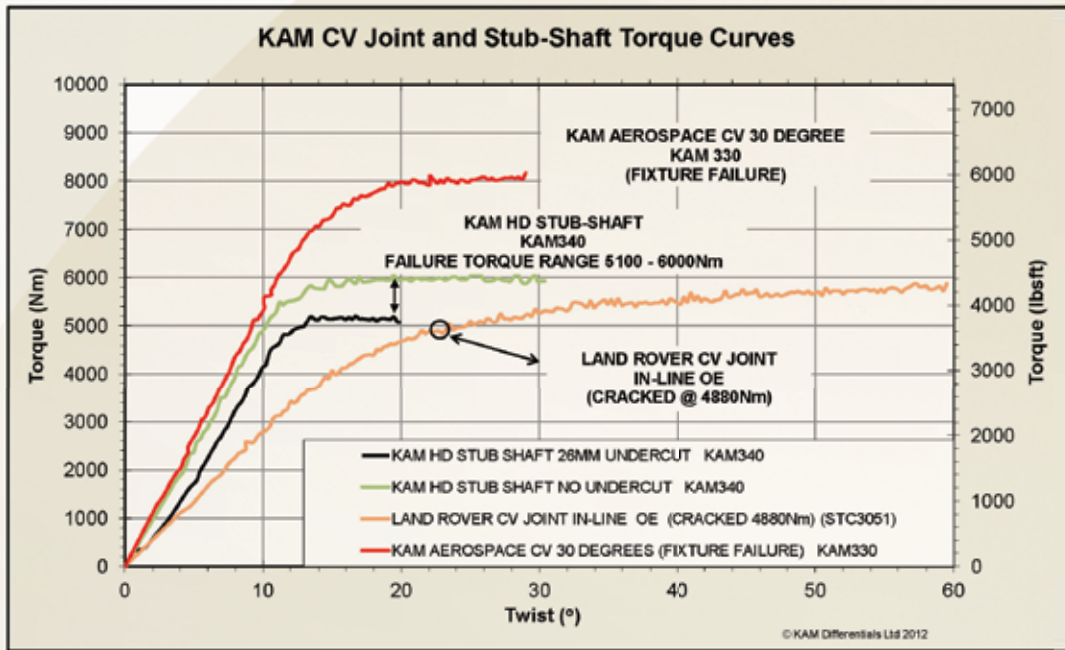
### Test data on OEM vs KAM front long shaft





# TEST DATA OF LAND ROVER VS KAM CV JOINTS AND STUB SHAFTS

Test data on Land Rover vs KAM CV & fusible stub shaft system



## SUPERWINCH WINCH RANGE

Superwinch winches are trusted by professionals and weekend users Worldwide. In 40 years Superwinch has produced over two and a half million winches ranging from 1,000 to 30,000lbs pulling capacity. Popular 4x4 winches range from 8,500 to 16,500lbs and are suitable for all commercial winching and self recovery applications. The new and improved Talon Series range is compact and easy to install due to the super reliable electric solenoid pack being pre-assembled on the winch.

Included in the Superwinch range is a series of accessories including pulley blocks, straps, shackles, wireless remote controls and other aids for safe and effective winching. Selecting the correct winch and equipment is important for performing safe and successful winching operations. A winch is a powerful machine and correct training will help to avoid accidental damage.



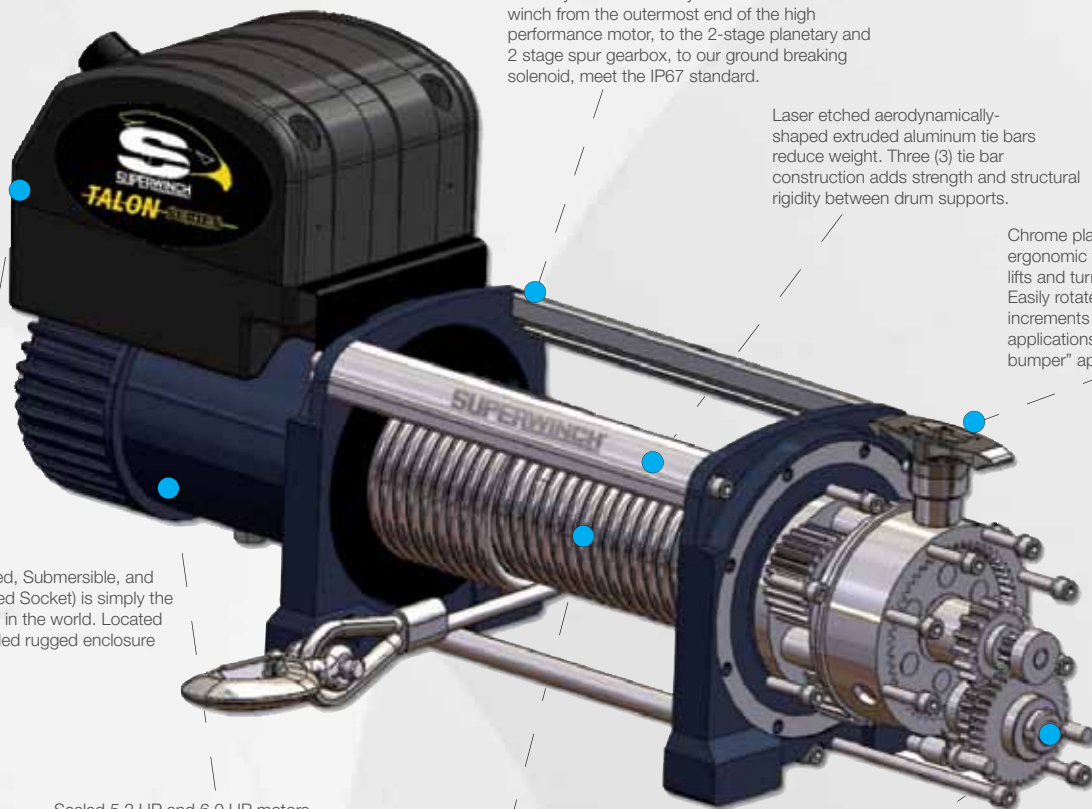
Solenoid meets IP67 standard, which ensures to keep out water, mud, snow, and dust. Patented venting feature allows the contacts to resist water and release contact damaging internal condensation.

Tri-bar bracket includes steel lined rubber insulated mounts to stabilize solenoid, reduce vibration and fatigue. Automotive-style sealed plug ensures a corrosion free connection.

## TALON SERIES WINCHES

The TALON winch is the industry's best truly sealed vehicle recovery winch. All the seals on the entire winch meet the IP67 standard, from the outermost end of the high performance motor and solenoid to the 2-stage planetary and 2-stage spur gearbox.

The sealed 5.2 HP and 6.0 HP motors deliver a fast but safe 62 FPM line speed at a low 75 amp current draw and the heat sink-styled motor cap maintains low temperatures under the heaviest loads. The solenoid will keep out water, mud, snow, and dust and has a patented venting feature that allows the contacts to resist water and release contact damaging internal condensation.



This is the industry's best truly sealed vehicle recovery winch assembly. All seals on the entire winch from the outermost end of the high performance motor, to the 2-stage planetary and 2 stage spur gearbox, to our ground breaking solenoid, meet the IP67 standard.

Laser etched aerodynamically-shaped extruded aluminum tie bars reduce weight. Three (3) tie bar construction adds strength and structural rigidity between drum supports.

Chrome plated aluminum ergonomic free spool knob lifts and turns effortlessly. Easily rotates in 45° increments for custom applications and "in bumper" applications.

VS4 Solenoid (Vented, Submersible, and Stabilized with Sealed Socket) is simply the best winch solenoid in the world. Located inside a modern styled rugged enclosure

Sealed 5.2 HP and 6.0 HP motors deliver a quick but safe 62 FPM line speed at a low 75 Amp draw. Heat sink styled motor cap maintains low temperatures under the heaviest loads.

Special steel drum constructed with high tensile strength material to resist the unique loading characteristic of the optional 3/8" x 80' synthetic rope rated at 17,600 lbs ensures a safe pull.

Innovative "Dual-Stop" 100% load-holding brake design provides zero drag on cable in. Located inside the gearbox away from the drum to eliminate heat transfer to synthetic ropes.



Ergonomically shaped, hand-held sealed remote with brilliant LED light assists in night-time winching. Remote meets tough IP67 standard, which ensures keeping out water, mud, snow, and dust.

Coiled cord extends to 15', retracts to 4', and includes strap to contain unit for storage. Connects to winch with military style twist-lock plug, sealed to keep the elements out.



**COVERED BY A LIMITED LIFETIME WARRANTY WHICH INCLUDES AN INDUSTRY-FIRST 3-YEAR WARRANTY ON ALL ELECTRICAL COMPONENTS, THE ABSOLUTE BEST IN THE INDUSTRY!**



**1695200**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 9.5**  
9,500lbs /12v  
Sealed 5.2 hp  
3/8" x 85'  
62 FPM



**1612200**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 12.5**  
12,500lbs /12v  
Sealed 6.0 hp  
3/8" x 85'  
62 FPM



**1614200**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 14.0**  
14,000lbs /12v  
Sealed 5.2 hp  
1/2" x 90'  
25 FPM

large frame



**1695210**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 9.5i**  
9,500lbs /12v  
Sealed 5.2 hp  
3/8" x 85'  
62 FPM



**1612210**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 12.5i**  
12,500lbs /12v  
Sealed 6.0 hp  
3/8" x 85'  
62 FPM



**1614201**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 14.0 SR**  
14,000lbs /12v  
Sealed 5.2 hp  
1/2" x 90'  
25 FPM

large frame



**1695201**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 9.5 SR**  
9,500lbs /12v  
Sealed 5.2 hp  
3/8" x 80'  
62 FPM



**1612201**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 12.5 SR**  
12,500lbs /12v  
Sealed 6.0 hp  
3/8" x 80'  
62 FPM



**1618200**  
Line Pull:  
Motor:  
Wire rope:  
Line Speed:

**Talon 18.0**  
18,000lbs /12v  
Sealed 6.0 hp  
1/2" x 90'  
25 FPM

large frame



**1695211**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 9.5i SR**  
9,500lbs /12v  
Sealed 5.2 hp  
3/8" x 80'  
62 FPM



**1612211**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 12.5i SR**  
12,500lbs /12v  
Sealed 6.0 hp  
3/8" x 80'  
62 FPM



**1618201**  
Line Pull:  
Motor:  
Synthetic rope:  
Line Speed:

**Talon 18.0 SR**  
18,000lbs /12v  
Sealed 6.0 hp  
1/2" x 90'  
25 FPM

large frame

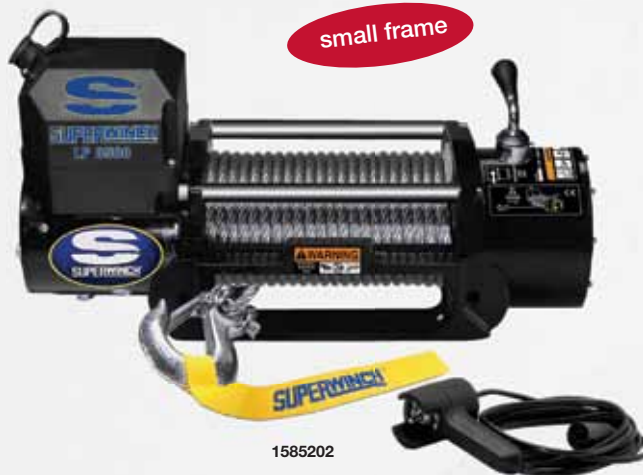
**PLEASE SEE PAGE 50 FOR BUMPER WINCH FITTING GUIDE**

## LP8500, LP10000 WINCH

Superwinch's LP8500 8,500lb (3856kg) and LP10000 10,000lb (4536kg) winches are designed to accommodate entry level buyers shopping for excellent value. Meeting the rugged demands of off-road and utility use, the LP range introduces price conscious buyers to the quality, power and performance advantages of the Superwinch brand.

**Features:**

- Powers load in and out
- 4.5 hp series wound motor
- Automatic load holding, mechanical braking
- Planetary gear-train
- Circuit breaker protected
- Weather sealed solenoids
- Lever shift freespooling clutch
- Heavy duty latched hook with rope thimble
- Heavy duty powder coated hawse fairlead
- Rubber handheld remote



1585202



1510200

Superwinch LP winch 8500LBS (3855 KG) & 10000LBS (4536 KG)

1585202	LP8500 12v, Iron Hawse Fairlead, Remote Control
1510200	LP10000 12v, Steel Roller Fairlead, Remote Control

## ROCK 98

The Rock 98 rock crawling winch is a lightweight, very low profile and narrow winch that fits in between the frame of Rock Crawling and Challenge vehicles, with an industry-leading rating of 9,500lbs and multiple mounting options.

Designed with the brake outside the drum to reduce rope melting heat build up, the Rock 98 comes with 50 feet of synthetic rope, heavy-duty blue anodized aluminium hawse fairlead, a large 'Gunnebo' latched hook, and Superwinch's exclusive S3 Sealed Submersible Solenoid with 3-year Warranty (the best in the industry).

The winch will be delivered with the solenoid control box installed to the left facing over the motor (Off-Set Configuration), the customer has the option to relocate the control box in a location to suit the application and winch mounting position on the vehicle.

Superwinch Rock 98 winch 9,800lbs (4,445kgs)	
1698201	Rock 98 SR 12v, synthetic rope & aluminium hawse



1698201

PLEASE SEE PAGE 50 FOR BUMPER WINCH FITTING GUIDE

## HUSKY SERIES WINCHES

The Superwinch Husky Series - We dare you to find tougher winches. With their rugged worm-gear drive mechanism and 4.2 horsepower series wound motors, the Husky 8 and Husky 10 are two off-road champions in their own right.

The case-hardened nickel spur gears and steel-centred phosphor bronze worm wheel matched to a case-hardened ground and polished worm shaft make this winch virtually indestructible. When only the best will do - the only choice for serious commercial use is a Superwinch Husky.



8552

**Features:**

- 12vdc / freespooling / roller fairlead
- 4.2 hp series sealed permanent magnet motor
- S sealed submersible solenoid with 3-year warranty
- Solenoid housing removable for remote mounting
- Worm gear
- Lever-operated clutch
- Back-drive resistance, load holding brake system

PART NUMBER	Description
8552	HUSKY 8 electric winch - 8,500 LBS (3,855 KG) 12V with roller fairlead and 9mm x 31M rope (no electric cables)
8548	HUSKY 10 electric winch - 10,000 LBS (4,536 KG) 12V 10,000 lb rating with 10mm x 30M rope & roller fairlead



1120149

## WINCH-IN-A-BAG

Winch-In-A-Bag™ a convenient self recovery winch kit with everything you need to keep going. Whether rescuing yourself or others from danger, unloading or loading your boat, off-road with your 4-wheel drive vehicle, ATV or snowmobile or on the job site pulling a load closer to your truck, this winch is handy and ready.

**Features:**

- 12v dc motor powers load in and out
- Wire rope 5/23" (3.9mm) x 49' (15m)
- Pull and turn free spooling clutch
- 8' (2.4m) remote control
- 8 gauge wiring with colour coded quick connects
- 4' (1.2m) and 6' (1.8) tree-saver straps
- 1 ton shackle
- Direct connect wiring harness & circuit breaker
- Jumper cable wiring harness
- Storage bag

**Benefits:**

- Rated line pull 2000 lb (907 kg)
- Completely portable
- No permanent installation required
- Fast set-up and easy to use
- Can be carried from vehicle to vehicle
- Versatile, compact and lightweight

PART NO.	Description
1120149	Winch-in-a-bag 12v winch

PLEASE SEE PAGE 50 FOR BUMPER WINCH FITTING GUIDE



**NEW**

## TIGER SHARK

Superwinch is redefining the 'occasional user' winch market with the new Tiger Shark Series with features and benefits designed for the enthusiast. Created from everything learned over the past 40+ years, the Tiger Shark brings unmatched functionality, quality and value.

This is what separates the Tiger Shark range apart from its rivals:

- Weather sealed heavy duty 5.0 HP motor is highly resistant to rain, snow and blowing dust.
- Heavy duty 3-stage gearbox designed to handle high levels of stress and torque on demand.
- The winch construction and its component parts are load tested all the way to stall.
- Weather sealed solenoids are resistant to damage from rain, snow and blowing dust.
- A modern textured finish stands up to harsh outdoor use and off-road abuse.
- Heavy duty rubber hand-held remote control is a field proven design and provides effortless switching.
- Stainless steel tie bars and hardware enhances appearance and resists corrosion.
- Heavy duty fairlead with stainless steel rollers have a brushed finish which endures weather and wire rope abuse and the ergonomically shaped free spool control is easy to grip and effortless to operate.

PART NUMBER	
1595200	TS9500 12v, Roller Fairlead, Remote Control
1511200	TS11500 12v, Roller Fairlead, Remote Control
1513200	TS13500 12v, Roller Fairlead, Remote Control
1515200	TS15500 12v, Roller Fairlead, Remote Control
1517200	TS17500 12v, Roller Fairlead, Remote Control



small frame

**1595200 Tiger Shark 9500**  
 Line Pull: 9,500lbs /12v  
 Motor: Sealed 5.2 hp  
 Wire rope: 21/64" x 96'



small frame

**1511200 Tiger Shark 11500**  
 Line Pull: 11,500lbs /12v  
 Motor: Sealed 6.0 hp  
 Wire rope: 3/8" x 85'



large frame

**1513200 Tiger Shark 13500**  
 Line Pull: 13,500lbs /12v  
 Motor: Sealed 5.3 hp  
 Wire rope: 3/8" x 85'



large frame

**1515200 Tiger Shark 15500**  
 Line Pull: 15,500lbs /12v  
 Motor: Sealed 5.7 hp  
 Wire rope: 29/64" x 94'



large frame

**1517200 Tiger Shark 17500**  
 Line Pull: 17,500lbs /12v  
 Motor: Sealed 6.5 hp  
 Wire rope: 3/8" x 94'

PLEASE SEE PAGE 50 FOR BUMPER WINCH FITTING GUIDE



## SUPERWINCH ACCESSORIES

### ACCESSORIES

7750	Pulley block, swingaway type 9000 kgs suits 8500 to 12000 lbs winches
7755	Pulley block, swingaway type 13,600 kgs suits 12500 to 18000 lbs winches
90-32473	Roller fairlead - all Talons
90-24507	Aluminium hawse fairlead - suitable for all Talons (except Rock 98)
90-24509	Aluminium hawse fairlead - suitable for Rock 98 only
90-24550	Wire rope - suitable for Talon 9.5/9.5i & 12.5/12.5i
90-24555	Clevis hook - suitable for Talon 9.5/9.5i & 12.5/12.5i wire rope models
90-24506	Synthetic rope - suitable for Talon 9.5/9.5i & 12.5/12.5i
90-24556	Clevis hook - suitable for Talon 9.5/9.5i & 12.5/12.5i synthetic rope models
90-24510	Synthetic rope - suitable for Rock 98
90-24563	Wire rope - suitable for Talon 14.0 & 18.0
90-24556	Clevis hook - suitable for Talon 14.0 & 18.0 wire rope models
90-24564	Synthetic rope - suitable for Talon 14.0 & 18.0
90-24567	Clevis hook - suitable for Talon 14.0 & 18.0 synthetic rope models



# LightFORCE™

PERFORMANCE LIGHTING



For over twenty years LIGHTFORCE have been the innovators in Hi-Tec portable lighting equipment and producing benchmark professional standard products with the exceptional understanding of the 4x4 market/customer needs. Why LIGHTFORCE?

### SUPERIOR LIGHT OUTPUT

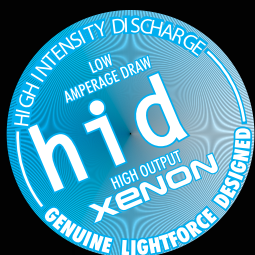
You get great output achieved by specifically designed reflectors and superior bulb choice. Whether it's off-road motorsport or just day-to-day driving, LIGHTFORCE lights enables you to see further and with less fatigue.

### STRONG, LIGHTWEIGHT & DURABLE

LIGHTFORCE products are designed ultra tough utilising Hi-Tec composite materials resulting in light weight and extreme structural strength and durability. Long term durability and performance is a win-win scenario for value and reliability.

### UNIQUE MODULAR FILTER SYSTEM

LIGHTFORCE driving lights are designed to enable you to customise to changing driving conditions in seconds with no tools required! The clip-on filter system is unique and a recognised favourite with the off-road enthusiast and professionals alike.



Over the last decade independent tests from major 4WD and outback magazines have consistently proven that Lightforce outperforms all other brands.

# XGT

XENON GRANDE TURISMO

Trust the original

No imitation light can hold a candle to our performance lighting systems.





**140 LANCE™** 1 LUX @ 450m • 492 yds

100m 200m 300m 400m 500m 600m 700m 800m 900m 1000m 1100m 1200m  
100yds 200yds 300yds 400yds 500yds 600yds 700yds 800yds 900yds 1000yds 1100yds 1200yds 1300yds



**170 STRIKER™** 1 LUX @ 650m • 710 yds

100m 200m 300m 400m 500m 600m 700m 800m 900m 1000m 1100m 1200m  
100yds 200yds 300yds 400yds 500yds 600yds 700yds 800yds 900yds 1000yds 1100yds 1200yds 1300yds



**240 BLITZ™ XGT** 1 LUX @ 900m • 984 yds

100m 200m 300m 400m 500m 600m 700m 800m 900m 1000m 1100m 1200m  
100yds 200yds 300yds 400yds 500yds 600yds 700yds 800yds 900yds 1000yds 1100yds 1200yds 1300yds



**240 HID 35 watt** 1 LUX @ 1200m • 1312 yds

100m 200m 300m 400m 500m 600m 700m 800m 900m 1000m 1100m 1200m  
100yds 200yds 300yds 400yds 500yds 600yds 700yds 800yds 900yds 1000yds 1100yds 1200yds 1300yds



**Light FORCE**  
PERFORMANCE LIGHTING

**LANCE 140mm ULTRA COMPACT DRIVING LIGHTS**

Gram for gram, Lance outshines all competitors through the use of high performance 75w Xenophot halogen bulbs and a sub-compact high performance reflector system. Low profile and ultra light weight combined with flexible filter choices that make Lance the ideal choice for compact 4x4, ATV or as secondary cornering lights mounted above the roof. Lance delivers the punch to guide you home.



**STRIKER 170mm HIGH PERFORMANCE COMPACT DRIVING LIGHTS**

Striker is the heavy hitter in the Lightforce range with outstanding performance and suitability for installation in tight locations. High output 100w Xenophot bulbs and supremely efficient polycarbonate reflectors system ensure Striker out-performs bulky glass and metal competitors, while maintaining compact dimensions and virtually unbreakable construction. Four beam distributions and five filter colours make Striker the ideal choice for heavy duty off-road applications.



**BLITZ 240mm LONG DISTANCE DRIVING LIGHTS**

Blitz is the original outback legend, proven through decades with the most gruelling off-road and demanding commercial trucking applications. Blitz shines a tight penetrating beam with exceptional control that directs a distance beam – at home on the open highway or bush track. Anywhere a robust performance driving light is required.



Lightforce RMDL Driving Lights		
<b>RMDL140HT</b>	Lance 140mm	12V 75w Xenophot Halogen (pair)
<b>RMDL170HT</b>	Striker 170mm	12V 100w Xenophot Halogen (pair)
<b>RMDL240T</b>	Blitz 240mm	12V 100w Xenophot halogen (pair)

Lightforce HID Driving Lights		
<b>HID140T</b>	Lance 140mm	12V HID 35w 5000K (pair)
<b>HID170T</b>	Striker 170mm	12V HID 35w 5000K (pair)
<b>HID240T</b>	Blitz 240mm	12V HID 35w 5000K (pair)

**GENESIS 210mm PROFESSIONAL DRIVING LIGHT**

Genesis boasts a remarkably slim footprint with its unique four position mount making it ideally suited to installation in the most restricted mounting situations. With a reflector that is 15% larger than similar competitor lights, Genesis gives unrivalled performance in its class. Two beam spreads, wide cornering or spot, the spot can be converted to a combo pattern using the spread filter option.

Genesis 210mm Professional Driving light	
<b>DL210</b>	100W halogen spot light (single)
<b>DL210H</b>	35W HID spot light (single)
<b>DL210H50W</b>	50W HID spot light (single)
<b>DLSB210</b>	security bolt for Genesis (single)
<b>MBS</b>	mounting stay



### FILTER AND COVERS FOR DRIVING LIGHTS, WITH LIGHTFORCE SCRIPT LOGO

Durable polycarbonate covers should remain fitted to driving lights at all times. Capable of absorbing road grime and bombardment for many a highway mile, these replicable covers should be renewed from time to time to protect your investment and maintain maximum beam output. Driving light filters feature the distinctive Lightforce script logo.



Optional Filters & Covers	
<b>140 - LANCE</b>	
<b>FCLD</b>	Clear Spot filter lens
<b>FCLWD</b>	Clear Wide filter lens
<b>FBLUCLD</b>	Crystal Blue Spot filter lens
<b>FBLUCLWD</b>	Crystal Blue Wide filter lens
<b>170 - STRIKER</b>	
<b>FCSWSD</b>	Clear Combo filter lens
<b>FBLUCSWSD</b>	Crystal Blue Combo filter lens
<b>240 - BLITZ/XGT/HID</b>	
<b>FCBWD</b>	Clear Combo filter lens
<b>FBLUCBWD</b>	Crystal Blue Combo filter lens

### CORDLESS HANDHELD LIGHTS AND FLASHLIGHTS

The Enforcer is a full featured portable searchlight system for those on the move. A lightweight 3.5a/h battery is built into the base to operate in cordless mode. Alternatively the battery can be removed and the unit converted into a plug-in light that can operate for extended periods. LED lamps provide long run times with minimal current consumption.

Lightforce Packs	
<b>ENFORCPACK</b>	Enforcer 170mm handheld light 30w halogen + LED in yellow plastic case
<b>TAC30</b>	TAC 3xC126 lumen Torch with colour filter kit

### STUBBY WORKLIGHT, 110mm 30w SEALED BEAM

Temporary or permanent, Stubby is a handy little work light with a 30w sealed beam globe that makes life easy.

Work Lights	
<b>STUBBYWA</b>	Stubby Work Light with bolt on/swivel base
<b>STUBBYSUCWA</b>	Stubby Work Light with suction/swivel base
<b>STUBBYMAGWA</b>	Stubby Work Light with magnetic/swivel base



### DRIVING LIGHT INSTALLATION ACCESSORIES

Genuine Lightforce accessories simplify installation of driving lights. Looms with pre-terminated connections and quality workmanship will ensure your lights' performance is at optimum level. The Unibar mounts in place of your number plate and provides a convenient mounting position for driving lights without the need for heavy, expensive front bars.

Other Accessories	
<b>LFDLH</b>	Driving Light wiring harness - complete with switch, 12V relay & terminals
<b>ATN10MM</b>	Security Nuts - Two anti-theft lock nuts with one fitting tool (10mm)



### REPLACEMENT LIGHT BULBS

Lightforce have bulbs available including 12v 20, 30, 50, 75w and 100w for specialist applications. Preserve the original performance of your lights, insist on genuine Lightforce supplied replacement bulbs.



Replacement Globes	
<b>GL02</b>	64623 12V 100w long life - HF (standard for RM170 & RM240)
<b>GL05</b>	64450 12V 75w long life 4000hrs VF
<b>GL18</b>	100w 12V HB3 suit Genesis

## MAMMOUTH CHEQUER PLATE



®

# MAMMOUTH

a brand of **AllMakes4x4**

### Aluminium Chequer Plate



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

All materials are UK sourced and the fully developed range of protection and tread plate products are made to full OE specification. The Mammoth Premium 3mm product range is leading the market due to excellent levels of manufacturing and superior quality finish, customers truly see a difference as soon as they open the packaging.

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



Premium 3mm chequer plate is supplied in 3 types; **uncoated**, **silver anodised** (20 micron) or **black powder coated** (9 stage) and all products come supplied as a kit including stainless steel nuts & bolts.

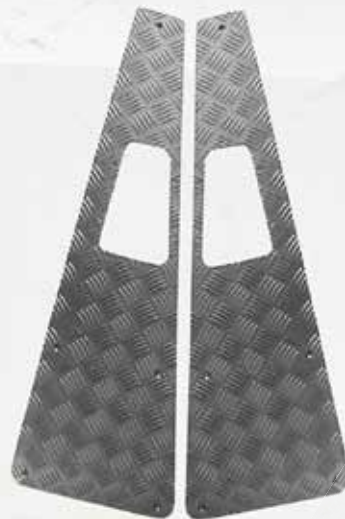
**Mammoth 2** is a range of 2mm chequer plate products where the absolute best value is required. This product range offers the same degree of finishing as the Premium 3mm range but is supplied uncoated without a fixing kit.

## MAMMOUTH 2 UNCOATED 2MM LAND ROVER DEFENDER CHEQUER PLATE

Mammoth 2 is a range of 2mm chequer plate products where the absolute best value is required. This product range offers the same quality of finishing as the Premium range and is supplied pre drilled for pop rivets, uncoated and without a fixing kit.

Product	Vehicle / Application	Description	Finish	Part Number	Unit
Wing tops	Defender 1983 to 2007	Wing tops no aerial hole	Uncoated aluminium	WTP2MV-NH/U	pair
	Defender 1983 to 2007	Wing tops left hand aerial hole	Uncoated aluminium	WTP2MV-LH/U	pair
	Defender 1983 to 2007	Wing tops right hand aerial hole	Uncoated aluminium	WTP2MV-RH/U	pair
Side sills	Defender 110 Station Wagon	Side Sills	Uncoated aluminium	SL2MV-CSW/U	pair
	Defender 110 Hard Top/Pick up/	Side Sills	Uncoated aluminium	SL2MV-VAN/U	pair
	Defender 90 Hard Top/Pick up/SW	Side Sills	Uncoated aluminium	SL2MV-90/U	pair
Rear corners	Defender 110	Rear Corners	Uncoated aluminium	CN2MV-110/U	pair
	Defender 90	Rear Corners	Uncoated aluminium	CN2MV-90/U	pair
Bonnet	Defender 1983 to 2007	Bonnet Centre chequer plate	Uncoated aluminium	BC2MV-DEF/U	pair
Bumper	Defender	Bumper Treadplates short	Uncoated aluminium	BTS-2MV/U	pair
	Defender	Bumper Treadplates long	Uncoated aluminium	BTL-2MV/U	pair
Quadrant	Defender 110 Station Wagon	Quadrant chequer plate	Uncoated aluminium	RQ2MV-110/U	pair
Rear cross member	Defender	Rear Cross Member chequer plate	Uncoated aluminium	RCM2MV-DEF/U	each

# MAMMOUTH PREMIUM 3MM LAND ROVER DEFENDER CHEQUER PLATE



Product	Vehicle / Application	Description	Finish	Part Number	Unit	
Wing tops	Defender 1983 to 2007	Wing tops inc S/S fittings no aerial hole	Silver anodised	<b>WTKIT01-NH/A</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings left hand aerial hole	Silver anodised	<b>WTKIT01-LAH/A</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings right hand aerial hole	Silver anodised	<b>WTKIT01-RAH/A</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings no aerial hole	Black powder coated	<b>WTKIT01-NH/B</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings left hand aerial hole	Black powder coated	<b>WTKIT01-LAH/B</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings right hand aerial hole	Black powder coated	<b>WTKIT01-RAH/B</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings no aerial hole	Uncoated aluminium	<b>WTKIT01-NH/U</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings left hand aerial hole	Uncoated aluminium	<b>WTKIT01-LAH/U</b>	kit	
	Defender 1983 to 2007	Wing tops inc S/S fittings right hand aerial hole	Uncoated aluminium	<b>WTKIT01-RAH/U</b>	kit	
	Defender 1983 to 2007	Wing top foam gasketst		<b>WT-GAS</b>	pair	
	Defender 2007 on	Pumatec	Wing tops inc S/S fittings	Silver anodised	<b>WTKIT03/A</b>	kit
	Defender 2007 on	Pumatec	Wing tops inc S/S fittings	Black powder coated	<b>WTKIT03/B</b>	kit
	Defender 2007 on	Pumatec	Wing tops inc S/S fittings	Uncoated aluminium	<b>WTKIT03/U</b>	kit
	Defender 2007 on	Pumatec	Wing top foam gaskets		<b>WT-GAS07</b>	pair

Product	Vehicle / Application	Description	Finish	Part Number	Unit	
Bonnet	Defender 1983 to 2007	Bonnet Centre chequer plate inc S/S fittings	Silver anodised	<b>BCKIT01-DEF/A</b>	kit	
	Defender 1983 to 2007	Bonnet Centre chequer plate inc S/S fittings	Black powder coated	<b>BCKIT01-DEF/B</b>	kit	
	Defender 1983 to 2007	Bonnet Centre chequer plate inc S/S fittings	Uncoated aluminium	<b>BCKIT01-DEF/U</b>	kit	
	Defender 2007 on	Pumatec	Full Bonnet chequer plate inc S/S fittings	Silver anodised	<b>FBKIT01-07/A</b>	kit
	Defender 2007 on	Pumatec	Full Bonnet chequer plate inc S/S fittings	Black powder coated	<b>FBKIT01-07/B</b>	kit
	Defender 2007 on	Pumatec	Full Bonnet chequer plate inc S/S fittings	Uncoated aluminium	<b>FBKIT01-07/U</b>	kit



Product	Vehicle / Application	Description	Finish	Part Number	Unit
Side sills	Defender 110 Station Wagon	Side Sills inc S/S fittings 5 door	Silver anodised	SLKIT01-CSW/A	kit
	Defender 110 Station Wagon	Side Sills inc S/S fittings 5 door	Black powder coated	SLKIT01-CSW/B	kit
	Defender 110 Station Wagon	Side Sills inc S/S fittings 5 door	Uncoated aluminium	SLKIT01-CSW/U	kit
	Defender 110 Hard Top/Pick up	Side Sills inc S/S fittings 3 door	Silver anodised	SLKIT01-VAN/A	kit
	Defender 110 Hard Top/Pick up	Side Sills inc S/S fittings 3 door	Black powder coated	SLKIT01-VAN/B	kit
	Defender 110 Hard Top/Pick up	Side Sills inc S/S fittings 3 door	Uncoated aluminium	SLKIT01-VAN/U	kit
	Defender 90 Hard Top/Pick up/SW	Side Sills inc S/S fittings	Silver anodised	SLKIT01-90/A	kit
	Defender 90 Hard Top/Pick up/SW	Side Sills inc S/S fittings	Black powder coated	SLKIT01-90/B	kit
	Defender 90 Hard Top/Pick up/SW	Side Sills inc S/S fittings	Uncoated aluminium	SLKIT01-90/U	kit
	Defender 110 Hi Cap	Side Sills inc S/S fittings	Silver anodised	SLKIT01-STC/A	kit
	Defender 110 Hi Cap	Side Sills inc S/S fittings	Black powder coated	SLKIT01-STC/B	kit
	Defender 110 Hi Cap	Side Sills inc S/S fittings	Uncoated aluminium	SLKIT01-STC/U	kit
	Defender 130 Crew Cab	Side Sills inc S/S fittings	Silver anodised	SLKIT01-130DC/A	kit
	Defender 130 Crew Cab	Side Sills inc S/S fittings	Black powder coated	SLKIT01-130DC/B	kit
	Defender 130 Crew Cab	Side Sills inc S/S fittings	Uncoated aluminium	SLKIT01-130DC/U	kit
	Rear Corners	Defender 110	Rear Corners inc S/S fittings	Silver anodised	CNKIT01-110/A
Defender 110		Rear Corners inc S/S fittings	Black powder coated	CNKIT01-110/B	kit
Defender 110		Rear Corners inc S/S fittings	Uncoated aluminium	CNKIT01-110/U	kit
Defender 90		Rear Corners inc S/S fittings	Silver anodised	CNKIT01-90/A	kit
Defender 90		Rear Corners inc S/S fittings	Black powder coated	CNKIT01-90/B	kit
Defender 90		Rear Corners inc S/S fittings	Uncoated aluminium	CNKIT01-90/U	kit
Defender 110 Pumatec		Rear Corners inc S/S fittings slim style	Silver anodised	CNKIT02-110/A	kit
Defender 110 Pumatec		Rear Corners inc S/S fittings slim style	Black powder coated	CNKIT02-110/B	kit
Defender 110 Pumatec		Rear Corners inc S/S fittings slim style	Uncoated aluminium	CNKIT02-110/U	kit
Bumper	Defender	Bumper Treadplates short inc S/S fittings	Silver anodised	BTS-KIT/A	kit
	Defender	Bumper Treadplates short inc S/S fittings	Black powder coated	BTS-KIT/B	kit
	Defender	Bumper Treadplates short inc S/S fittings	Uncoated aluminium	BTS-KIT/U	kit
	Defender	Bumper Treadplates long inc S/S fittings	Silver anodised	BTL-KIT/A	kit
	Defender	Bumper Treadplates long inc S/S fittings	Black powder coated	BTL-KIT/B	kit
	Defender	Bumper Treadplates long inc S/S fittings	Uncoated aluminium	BTL-KIT/U	kit
Quadrant	Defender 110 Station Wagon	Quadrant chequer plate inc S/S fittings	Silver anodised	RQKIT01-110/A	pair
	Defender 110 Station Wagon	Quadrant chequer plate inc S/S fittings	Black powder coated	RQKIT01-110/B	pair
	Defender 110 Station Wagon	Quadrant chequer plate inc S/S fittings	Uncoated aluminium	RQKIT01-110/U	pair
Rear cross member	Defender	Rear Cross Member chequer plate	Silver anodised	RCMKIT01-DEF/A	each
	Defender	Rear Cross Member chequer plate	Black powder coated	RCMKIT01-DEF/B	each
	Defender	Rear Cross Member chequer plate	Uncoated aluminium	RCMKIT01-DEF/U	each
Fuel filler surround	Defender 1983 to 1998	Fuel Filler Surround	Silver anodised	FF-TD/A	each
	Defender 1983 to 1998	Fuel Filler Surround	Black powder coated	FF-TD/B	each
	Defender 1983 to 1998	Fuel Filler Surround	Uncoated aluminium	FF-TD/U	each
	Defender 1998 - 2011	Fuel Filler Surround	Silver anodised	FF-TD5/A	each
	Defender 1998 - 2011	Fuel Filler Surround	Black powder coated	FF-TD5/B	each
Defender 1998 - 2011	Fuel Filler Surround	Uncoated aluminium	FF-TD5/U	each	



# Hi-Lift®

Don't settle for an imitation - the difference is quality!

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 in the Moab desert canyons, the Welsh mountains, the Amazon jungle, or the farmlands of Indiana.

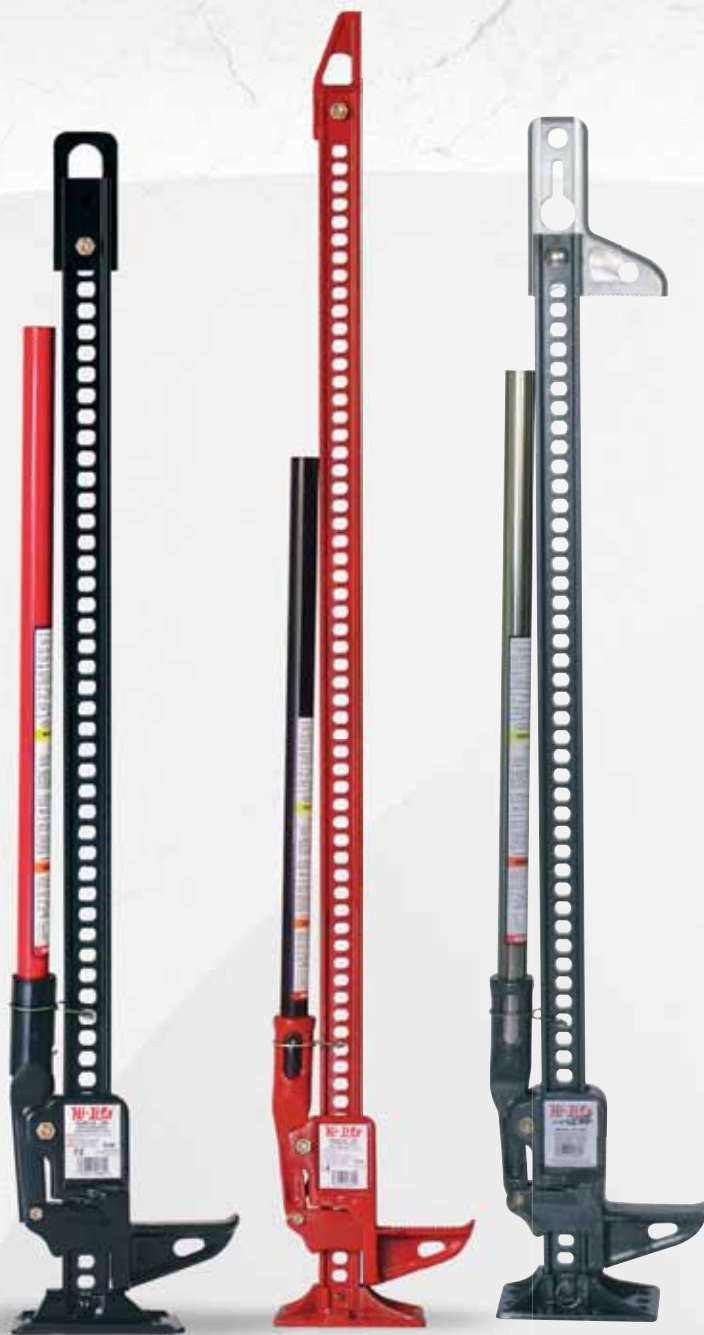
With a full range of specially designed accessories, the Hi-Lift Jack is just about the most versatile piece of off-roading/farm/auto recovery equipment you can buy.

## Hi-Lift Jack Specifications

- Approximate weight: 30lbs (14 kg).
- 4660lbs (2113.74 kg) rated capacity
- Tested capacity 7000lbs.
- Climbing pins of specially processed steel with 125000psi tensile strength and 100000 psi yield.
- Steel bar is manufactured from specially rolled extra high carbon steel with 80,000 pound minimum tensile & carbon .69 to .82.
- Steel handle of 14 gauge high-yield structural tubing with minimum yield of 55000psi.
- 15/16" diameter x 30" long.

## Hi-Lift Jack Features

- Every Jack comes complete with an adjustable top clamp/clevis for use in clamping and winching.
- Safety bolt is designed to shear at 7000lbs. (3175kg).
- For speedy disengaging, lifting unit automatically drops away when load is removed.
- 4 1/2" (11cm) long lifting nose for positive contact with load.
- Steel bar can be reversed for extra long life.
- Low pickup of 4 1/2" (11cm).
- 28 square inch base plate.



HL484

HL485

XT485

MODEL	CAST / STEEL	ALL - CAST	X-TREME
Occasional typical use (lifting, winching, clamping)	X	X	X
Regular typical use (lifting, winching, clamping)		X	X
Occasional rugged use (spreading, vehicle recovery)		X	X
Regular rugged use (spreading, vehicle recovery)			X
36" high (91cm)	X		
42" high (107cm)	X	X	
48" high (122cm)	X	X	X
60" high (152cm)	X	X	X
Black powder finish	X		
Red powder finish		X	
Charcoal metallic powder finish			X
Zinc-coated hardware	X	X	X
Winch-clamp-spread attachment			X



**Alleviate Jack Sinkage on Soft Ground**

Increase your support surface area and make the original power tool even more versatile! Use the Hi-Lift Off-Road Base to alleviate jack sinkage on soft ground. Convenient to use, easy to store. Rugged construction meets Hi-Lift Jack specifications for strength & durability. Can be used with ANY model of Hi-Lift Jack



**ORB**

**Lift Mate**

Lift Directly from the Wheel - plastic bumpers and extreme lift-kits are no longer a problem. Many trucks and SUV's have larger tyres and/or lift kits that require extensive lifting height ability from the bumper jack. The Lift-Mate is designed to operate in a manner that allows the vehicle wheel to be lifted directly from the wheel, greatly reducing the amount of travel up the jack bar needed to lift the wheel to an adequate and safe height.

Lift-Mate Features & Specifications:  
Lift Capacity: 5000 lbs. (2273 kg)  
Rubber-Coated hooks to protect the wheel  
Rubber pad for protecting the tyre and wheel



**LM100**

**Hi-Lift Jack Protector**

The Hi-Lift Jack Protector protects your Hi-Lift Jack from weather, mud, dirt and sand. Made of durable vinyl coated nylon, the Jack Protector is waterproof, as well as mildew and decay resistant.

- Fits 36", 42", 48" and 60" Hi-Lift Jacks.
- The Jack Protector WILL work with the 4XRAC and the LOC-RAC. (user will have to place holes in protector)
- Soft case easily stores.
- Draw string closure.



**JP350**

Note: All working parts of the 60" jack are protected. However, the foot piece and 5" of steel bar are exposed.

**LOC-RAC**

If you use the LOC-RAC accessory, you can conveniently mount and lock your Hi-Lift Jack to the bed rail of your Land Rover. Installation is simple. It can be mounted horizontally or vertically, with or without a Jack Protector. Your Hi-Lift Jack is mounted in an easy to reach location and is locked to deter theft. Designed to fit the bedrail of most pickups.



**LR200**

Loc-Rac Features:  
Each kit contains 2 mounting brackets, a padlock, and all necessary mounting hardware.

**4XRAC**

The Hi-Lift 4XRAC is designed for serious off-roaders who are looking for an easy, inexpensive way to stow their Hi-Lift Jack in a convenient, secure location.

- 1/8" steel construction holds up under the strain of off-road travel
- A padlock can be placed through a hole in the carriage bolt.
- All mounting hardware and instructions are included (some drilling is required)
- Mounting brackets are slotted for adjustment.
- Velcro handle strap secures handle to jack bar.

4XRAC Features:

Each kit contains 2 mounting brackets, 2 mounting bracket caps, a Velcro strap for securing the Hi-Lift's handle and all necessary mounting hardware.



**4XRAC**

**Off Road Accessory Kit**

Everything You Need to Winch with the Hi-Lift Jack - All in One Convenient Gear Bag! Use the Off-Road Kit to turn your Hi-Lift Jack into an even more versatile tool. This kit keeps all of the needed parts for winching at arms reach.

Off-Road Kit Includes: 1 - Winch Tensioner, 1 - Custom Nose Attachment, 1 - 8ft. Tree Saver Strap, 1 - Pair/Hi-Lift Gloves, Hardware & Gear Bag.



**ORK**

**Hi-Lift Neoprene Jack Cover**

Protect your Jack from the Elements!

Keep your Hi-Lift Jack's lifting assembly protected from mud, dirt and road grime. This product is designed to greatly reduce the amount of dirt and mud that can accumulate in the working mechanism of the jack. It WILL NOT eliminate ALL moisture or dirt.

- Easy On, Easy Off
- Tight Fit
- Fast Drying
- Machine Washable
- UV Protected



**NJC**

**Fix-it-Kit**

The Fix-It-Kit contains all essential parts for servicing all Hi-Lift Jack lifting units.

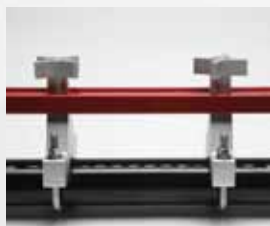
- Kit Includes:  
2 Climbing Pins  
2 Climbing Pin Springs  
2 Cross Pins  
1 Shear Bolt & Nut  
1 tube of jack lubricant



**FKI**

**Adjustable Tube Mount**

Mount your Hi-Lift Jack to tube bumpers, bull bars, roll cages or roof racks. Models fit tubing sizes 1-3"



**TM-700  
TM-750**

**Handle Keeper Accessory**

The rugged polyurethane Handle-Keeper holds the Hi-Lift handle to the upright steel bar, keeping it in place when not in use and eliminating "rattling" during transportation and storage.



**HKR**

The Handle-Keeper easily slips on and off over the Hi-Lift Top Clamp-Clevis to allow for proper use of the Hi-Lift Jack. The unique design eliminates the need to remove the Top Clamp-Clevis for putting on or taking off the Handle-Keeper.

\*NOTICE: IT IS VERY IMPORTANT FOR THE HANDLE-KEEPER TO BE REMOVED DURING JACK USE TO ALLOW THE HANDLE TO BE PLACED IN THE FULL UPRIGHT POSITION AS STATED IN THE HI-LIFT SAFETY INSTRUCTION MANUAL. Fits all models of Hi-Lift brand jacks.

## TERRAFIRMA RECOVERY EQUIPMENT

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

Terrafirma has its own range of recovery kit selected from high quality manufacturers. Everything is tested and rated and is fit for both commercial and recreational use.

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

Terrafirma offers a range of products to ensure your off road activities are carried out with safety and performance in mind.

Synthetic winch ropes are almost becoming standard fit on winches these days. In fact Superwinch offer most of their Talon winches with synthetic rope as an option.

Synthetic rope is only a fraction of the weight of steel cable but is impressively up to 45% stronger making it easier and safer to use than conventional steel wire cable. Unlike wire cable, synthetic winch rope has minimal recoil or whiplash in the rare event of a breakage. Synthetic rope is very lightweight, handles easily and even floats on water. Other advantages include no curls, kinks, wire splinters or sore fingers. Each Superwinch synthetic rope comes with a steel thimble, a large safety hook and a 10 ft. heat guard to protect the rope from winch overheating.

ARB recovery kit is regarded by many competition off roaders as the only thing to have, without question it is top quality equipment. The range includes; tree stropps, snatch blocks and essential items such as winch cable dampers and puncture repair kits.

**THE TERRAFIRMA RANGE INCLUDES: RATED SHACKLES AND SNATCH BLOCKS, TOW ROPES & RECOVERY ROPES, CHOKER CHAINS AND HOOK AND EYE WINCHING STRAPS AND A SELECTION OF TREE STROPPS.**



KTR5



RBS4



AWG

Recovery Equipment	Part No.
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**Green Pin® Hi-Load Shackles**

WII 4.75 T Green Pin Bow Shackle - 22mm Pin [28.5T MBL]	GPABSA19
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**Standard Hi-Load Shackles - [Silver/Yellow Pin]**

WII 3.25 T Bow Shackle - 19mm Pin [19.5T MBL]	RBS3
WII 4.75 T Bow Shackle - 22mm Pin [28.5T MBL]	RBS4

**Swing Away Snatch Blocks**

16000 lb 3 3/4" Dia Sheave Medium Duty	RSSB 16
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**Miscellaneous Products**

Choker Chain - Grade 70 WII 1.75T 8mm X 3m - Grab Hooks Each End [7T MBL]	RCC 08
Winching Gloves [Leather & Cotton]	AWG

**Tow Ropes**

24mm Dia Nylon X 5m - [12000 Kg MBL]	NTR 5
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**Kinetic Recovery Ropes**

24 mm Dia Nylon Octoplat X 5m - [12000 Kg MBL]	KTR 5
24 mm Dia Nylon Octoplat X 8m Long - [12000 Kg MBL]	KTR 8

**Duplex Stropps With Masterlink & Hook**

90mm X 2m - C/W Masterlink And Safety Hook	DX3T02MMLH
90mm X 3m - C/W Masterlink And Safety Hook	DX3T03MMLH

**Duplex Tree/ Tow Stropps**

50mm Wide Duplex X 2m - [7000 kg Mbl]	DX1T02M
50mm Wide Duplex X 3m - [7000 kg Mbl]	DX1T03M
50mm Wide Duplex X 4m - [7000 kg Mbl]	DX1T04M
50mm Wide Duplex X 5m - [7000 kg Mbl]	DX1T05M
50mm Wide Duplex X 6m - [7000 kg Mbl]	DX1T06M
90mm Wide Duplex X 2m - [21000kg Mbl]	DX3T02M
90mm Wide Duplex X 3m - [21000kg Mbl]	DX3T03M
90mm Wide Duplex X 4m - [21000kg Mbl]	DX3T04M
90mm Wide Duplex X 5m - [21000kg Mbl]	DX3T05M
90mm Wide Duplex X 6m - [21000kg Mbl]	DX3T06M

**Marlow Dynaline**



9mm x 30m Dynaline winch rope	200015
10mm x 30m Dynaline winch rope	200016

RCC08



## TERRAFIRMA RECOVERY STRAPS

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

- Terrafirma Snatch Straps** are constructed from a complex bright orange nylon 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 recovery and towing situations as the stretch provides a much more forgiving and less jarring connection between the vehicles.
- Terrafirma Tree Straps** are wider than other recovery straps, this is important to prevent ring barking or damage to trees when using them as a suitable anchor point when winching. Tree straps are produced from bright green nylon to clearly identify them from other recovery straps.
- Terrafirma Extension Straps** can be used for towing but as they do not stretch they give a hard connection between the two vehicles, the most suitable and common use is to extend the length of the winch cable in situations when the recovery vehicle or the only tree in site is out of reach. Terrafirma extension straps are made from purple nylon to clearly distinguish them from other straps in your kit bag.



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

Description	Terrafirma Snatch Strap	Terrafirma Snatch Strap	Terrafirma Snatch Strap	Terrafirma Tree Strap	Terrafirma Tree Strap	Terrafirma Extension Strap	Terrafirma Extension Strap
	<b>TFSS8000</b>	<b>TFSS11000</b>	<b>TFSS15000</b>	<b>TFTS3M</b>	<b>TFTS5M</b>	<b>TFES4500</b>	<b>TFES8000</b>
Part number	8000kg	11000kg	15000kg	12000kg	12000kg	4500kg	8000kg
Min breaking strength	Orange	Orange	Orange	Green	Green	Purple	Purple
Colour	9m	9m	9m	3m	5m	20m	20m
length	60mm	80mm	110mm	80mm	80mm	55mm	80mm
width	20%	20%	20%			n/a	
stretch							

## ARB RECOVERY EQUIPMENT

Description	Part No.
Recovery Strap 8000kg 50mm X9m	<b>ARB705</b>
Recovery Strap 11000kg 80mm X9m	<b>ARB710</b>
Winch Extension Strap 4500kg 50mm X20m	<b>ARB720</b>
Winch Extension Strap 8000kg 80mm X20m	<b>ARB725</b>
Tree Trunk Protector 12000kg 75mm X3m	<b>ARB730</b>
Tree Trunk Protector 12000kg 75mm X5m	<b>ARB735</b>
Snatch Block 14500kg	<b>ARB209</b>
Ultralight Snatch Block 9000kg	<b>10100020</b>
Winch Cable Damper	<b>ARB220</b>
Ez Deflator Psi/Bar	<b>ARB505</b>
Speedy Seal Puncture Repair Kit	<b>10000010</b>
Adventure Light With Bag 12V	<b>ARB225</b>

The 4x4 Adventure light is a tough, compact and lightweight 12v fluorescent light, suited to numerous outdoor activities.

The light intensity is simply stunning, yet the Adventure light draws a current of just one Amp from your standard 12 volt power socket in your vehicle, or a portable battery pack.

It comes with a 5 metre power lead incorporating a power switch and hanging points.



**ARB225**

ARB produce 2 versions of the recovery strap, both constructed of specialist nylon fabric with 20% elasticity and reinforced with cordura on the end loops to prevent chafing from prolonged heavy use. These straps are the ultimate for vehicle recovery.



**ARB705**  
**ARB710**

Two moveable sleeves on the main section prevent chafing of the nylon material under various rigging configurations.

ARB Tree trunk protectors are constructed of green polyester so that the user may differentiate it at a glance from the orange colored ARB snatch recovery strap and the purple colored ARB Winch extension strap.

The ARB Tree trunk protectors are 75mm wide and 3m & 5m long and are reinforced with cordura on the end loops to prevent chafing from prolonged heavy use. Two moveable sleeves on the main section prevent chafing of the polyester material under various rigging configurations.



**ARB730**  
**ARB735**

The Tree trunk protectors will withstand 25,000 pounds of load before breaking. Vehicle recovery booklet included.

Even the most powerful winches sometimes need a helping hand. Double the pulling capacity of your winch with the ARB Snatch Block 9000. The unit scissors open to enable the insertion of a winch line. The Snatch Block 9000 features a 20,000 lb. working load limit.



**10100020**

The ARB Speedy Seal Puncture Repair Kit quickly and easily repairs tubeless tires without having to remove the tire from the vehicle or the wheel.

**10000010**



ARB winch extension straps are designed for extending the length of your winch cable when the most suitable anchor point is out of reach.

They are reinforced with cordura on the end loops to prevent chafing from prolonged heavy use and the purple color differentiates this winch extension strap from the orange-colored snatch straps.

Two moveable sleeves on the main section prevent chafing of the nylon material under various rigging configurations. Vehicle recovery booklet included.



**ARB720**  
**ARB725**

The ARB Winch Cable Damper, when fitted to a rigged winch line, greatly diminishes winch line fling in the event of a winch line or anchor failure. The ARB Winch Cable Damper is manufactured from heavy-duty vinyl and Velcro, and features internal storage pockets to facilitate carry of pulley blocks, shackles, tree straps, and other recovery gear from your vehicle to the anchor point.



**ARB220**

A snatch block is one of the most useful items of recovery gear that you can carry. The ARB snatch block incorporates an original feature of a greasable, hardened steel pin and easy glide side plates.



**ARB209**

The unique, patented design of the ARB E-Z Tyre Deflator allows for rapid deflation, even of very large tires, while also providing accurate tire reading via the simple movement of a sliding valve.

The Bronze Bourdon Tube gauge design ensures accuracy is not affected by changes in temperature, humidity, or altitude, and is protected by a vinyl boot.

The dial is large and legible, and provides accurate pressure readings in 1psi increments from 4 to 60 PSI. Protective canvas pouch and instruction sheet are included.



**ARB505**

## VIAIR 12 VOLT AIR COMPRESSORS



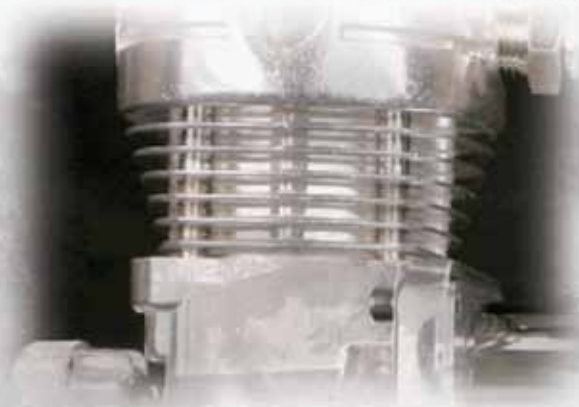
Probably the most well known brand of vehicle based and portable air compressors on the market. Viair offers the most comprehensive range of air compressors & air accessories for both on-and off-road use available anywhere. These quality engineered compressors and components have become the industry standard for aftermarket automotive applications worldwide. VIAIR compressors are in use in the world's harshest environments from arctic climates to the world's most unforgiving deserts.

The piston of every Viair compressor is driven directly by the electric motor for optimum efficiency and all medium and large compressors feature big pistons and valves to deliver air fast. Each compressor has a powerful motor to cope with the heat and power sapping pressure when inflating large tyres or other high demand pneumatic needs.

Off road enthusiasts worldwide enjoy the built-in quality and performance that comes as standard with every VIAIR compressor. TerraFirma offers a comprehensive range of VIAIR compressors and on board air systems as well as a selection of accessories to deliver the power needed to accomplish virtually any mobile pneumatic task.

Compressors are ideal for re-inflating your tyres after you've crossed a soft sand desert section or off road area or for using as an emergency compressor if you have a flat tyre. The 300P kit and above feature a 25ft air line and deflator. The 25ft air line will easily reach to your trailer or another vehicle.

This range of portable and on-board Viair compressor kits come with everything you need to equip your vehicle with air.



## PORTABLE AIR KITS



Part Number: **88**

A great little unit. It can inflate a 7.50 x 16 tyre from 15 to 30 psi in about 2 minutes. The 88P compressor is a useful addition to your off road tool kit. Ideal for re-inflating your tyres after you've been off road. Easy to store and simple to use. Comes with crocodile clips to fix to your battery, gauge and work light. The 88P can inflate to a max pressure of 120psi. comes with 8ft power cord.

## PORTABLE AIR KITS



**93**

The 90P is Ideal for re-inflating your tyres after you've been off road. Easy to store and simple to use. Comes with crocodile clips to fix to your battery, gauge. The 90P can inflate to a max pressure of 120psi and draws 22 amps max. Comes with 12ft power cord.

Time to inflate a 7.50 x 16 tyre from 0 to 30 psi = 4 mins 40 secs

**30033**

The 300P is a great portable kit that can inflate tyres fast! Comes with carry bag and 25 ft air line with gauge and deflator. Simple crocodile clips to attach to your battery. Very easy and quick to use.

Time to inflate a 7.50 x 16 tyre from 0 psi to 30 psi = 3 mins 25 secs



**40043**

The 400P is the number one choice in portable tyre inflation. This unit is fast and simple, delivering air at 2.54 cfm. Comes with carry bag, 25ft air line, tyre deflator, gauge etc.

Time to inflate a 7.50 x 16 tyre from 0 to 30 psi = 2 mins 28 secs

**45043**

The 450P-A portable compressors kit features a 100% duty motor, this means it can go on and on without overheating - perfect for pumping large 4x4 tyres. This unit also features a closed end tyre inflator and auto shut off, this is useful for checking tyre pressure during filling.

Time to inflate a 7.50 x 16 tyre from 0 to 30 psi = 4 mins 5 secs



## ON-BOARD AIR KITS

With on board air you can run air locking diffs, free spools for winches, air horns, air suspension, air tools and many other pneumatic applications.



### 10000 Ultra Light Duty Kit

This on board kit is perfect for air locking diffs and free spool winches. It provides air for air locking diffs and pneumatic free spool winches. The compressor kicks out 1.27cfm, so it will fill the 1 gallon tank from 0 psi to 105 psi in 1 minute and 35 seconds.



### 10002 Light Duty Kit

This kit features a 2 gallon tank and fast 2.03 cfm compressor and is great for air horns, air locking diffs (via a regulator) and many other smaller inflation tasks. The fast 2.03 cfm compressor can fill the 2 gallon tank from 0 psi to 120 psi in 2 minutes and 22 seconds.



### 10003 Medium Duty Kit

The kit has a durable 1.38 cfm compressor and 2.5 gallon tank and is ideal for many pneumatic needs. Tyre inflation, air horns, air locking diffs, it can even run air tools briefly. The 33% duty compressor can fill the 2.5 gallon tank from 0 psi to 145 psi in 4 minutes and 15 seconds.



### 10005 Heavy Duty Kit

The kit has a fast 2.54 cfm compressor and 2.5 gallon tank kit is great for tyre inflation, light air tool use, air horns, air locking diffs (via a regulator). The fast 2.54 cfm compressor can re-fill the tank from 110 psi to 145 psi in 48 seconds.



**Air Pressure Regulator**

### 90150

The regulator kit can be set to reduce the air pressure to anything between 0 psi to 200 psi. This is necessary for most air locking diffs that can only run at a max pressure of 105 psi.

Kit comes with all fittings for ARB solenoids.



**90059 Gauge**

2.5in Gauge air down gauge. This air down gauge is perfect for getting to those low pressures. Gauge range is from 0 to 15 psi.



**32 Gauge**

This 1.5in gauge comes with a little hands free deflation collar. Easy to deflate. Gauge reads from 0 to 60 psi.



**90058 Gauge**

This little 2.0in gauge with rubber boot is great for quad bikes and tyres with low pressures. Gauge range is 0 to 15 psi.



**90056 Gauge**

2.0in gauge 0 to 35 psi. 2.0in gauge ideal for reading tyre pressures up to 35psi



**90072 Gauge**

2.0in gauge 0 to 100 psi. 2.0in gauge ideal for reading higher tyre pressures from 0 to 100psi

# GREEN COTTON AIR FILTER®

High performance air filters

Green Cotton Air Filters are one of the best on the market, designed and developed from supplying premium cotton air filters to the motorsport industry.

These Air filters are 100% serviceable while filtering dirt and moisture particles down to 5 microns. Higher airflow increases engine efficiency, throttle response, horsepower and torque. The experience gained has promoted Green Cotton Filters to become Europe's largest cotton air filter manufacturer.

## IONIC CHARGE = POWERFUL PERFORMANCE

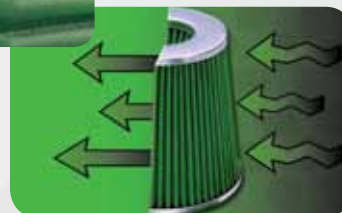
Green High Performance Air Filters come pretreated with a specially formulated dirt trapping oil. This oil creates a positive (+) magnetic charge, or ionic bond, with the filter's stainless steel mesh. The positive charge attracts the negatively (-) charged dust particles entering the filter, causing them to cling to the steel mesh and allowing the cotton to remain clear for maximum air flow.

## DEEP PLEATS FOR MAXIMUM AIR FLOW

Deep pleats in the double layered cotton create a 10-20% increase in filtration surface area. This increase allows a greater volume of air to move more freely into the engine cylinders.

## PRECISION PRODUCTION

Other filters use a simple pressure-moulded injection process to bond the perimeter rubber to the interior components. That method saves manufacturing time, but in the process a considerable amount of rubber can seep onto the filtering surface. While it may not look like much, that spill-over rubber can restrict as much as 25% of the intended air flow. Green, on the other hand, uses a time consuming and costlier 4-step production process which virtually eliminates seepage and maintains a maximum air flow through the filter.





**CONSTRUCTION**

The most important aspect of any product is its construction and this is where Green Cotton Air Filters are head and shoulders above the competition. Green Filters are synonymous with motor sport and motor racing and so they have simply used their experience to produce their roadgoing air filter range.

Deep pleats in the double layered cotton gauze ensure there is a 10-20% increase in surface area to draw more air into the engine.

The double layered cotton gauze is made up of a medium and fine layer to trap and hold dirt, dust and moisture particles as small as 5 microns. The gauze is held in place by a strong, fine, mesh that allows the filter to perform a perfect job.

The moulded flexible rubber base offers an airtight seal and also absorbs vibration. It can also expand and contract to fit "in-between" sizes and help the filter maintain its form and shape.



Stainless steel and rubber components ensure airtight seal whilst absorbing harsh vibrations.

Green colour enables you to see dirt being trapped by the filter so you know when to clean it.

Organic base material, not affected by humidity or moisture.

- **100% serviceable - 100,000mile guarantee**
- **Filtration of dirt and moisture particles down to 5 microns.**
- **Easy 'factory quality' installation**
- **Green in colour to visually indicate when the filter needs cleaning.**
- **Deep pleats increase surface area by 10-20%**
- **Disposed of less frequently, so kinder on the environment.**



Vehicle Type	Green Cotton	Land Rover	Description	Application
Defender	G491611	NTC6660	Air Filter	90/110/130 200/300tdi
	P918290	ESR4238	Air Filter	90/110/130 Td5
	P950406	PHE500060	Air Filter	90/110/130 Td4
Discovery 1	G491611	ESR1435/ ESR2623	Air Filter	D1 200tdi
	R760022	RTC4683	Air Filter	D1 3.5/3.9V8 -94
	P360468	ESR1445	Air Filter	D1 300tdi/3.9V8 94-
Discovery 2	P918290	ESR4238	Air Filter	D2 Td5/4.0V8
Discovery 3	P970040	PHE000112	Air Filter	D3 TdV6/4.4V8
Range Rover Classic	R760022	RTC4683	Air Filter	RRC 3.5/3.9V8 -94
	P360468	ESR1445	Air Filter	RRC 300tdi/3.9V8 94-
Range Rover Sport	P970040	PHE000112	Air Filter	RRS TdV6/4.4V8
Range Rover L322	G491609	PHE000040	Air Filter	RR L322 Td6 02-
	G591009	PHE000050	Air Filter	RR L322 4.4V8 02-06
Universal filters	K4.75	-	Air Filter	75mm dia. Cone
	K3.65	-	Air Filter	65mm dia. Cone
	B3.75	-	Air Filter	75mm dia. Cylinder
	B3.65	-	Air Filter	65mm dia. Cylinder
Filter cover sock	G9034	-	Filter Sock	SUITS K4.75, B3.75, B3.65
	G9010	-	Filter Sock	SUITS K3.65
Service items	NH01	-	Cleaning Kit	2x .5litre
	NET1	-	Cleaning Fluid	1litre
	NET05	-	Cleaning Fluid	.5litre
	TT	-	Filter Oil	.5litre

# FRONT RUNNER

## 4X4 TECHNOLOGY

The ultimate overland driving destination for many people is Africa. Scenery, wildlife, culture, space and remoteness it has it all in abundance, so where better than to source the finest range of expedition equipment than from Front Runner based in South Africa. By utilising the very latest materials and technology combined with CAD (Computer Aided Design) and years of experience in the bush, Front Runner has developed the most advanced and versatile range of Land Rover expedition accessories.

Front Runner's mission statement is to provide quality engineered 4x4 accessories that represent excellent value whilst maintaining a technological advantage. The range includes **ROOF RACKS, RACK ACCESSORIES, STORAGE SYSTEMS, SIDE AWNINGS, WATER TANKS AND AUXILIARY FUEL TANKS.**



### FRONT RUNNER ROOF RACK ACCESSORIES

Front Runner's unique 'T' slot mounting system allows a large range of expedition equipment to be fitted including items such as a Hi-Lift jack, spade, axe, spare wheel mount and fuel and water cans etc. All the items are pre drilled to allow immediate fitment and can be adjusted into position as required so that the equipment is balanced and easy to access. All Front Runner roof rack accessories are high quality and produced from stainless steel and aluminium.

### FRONT RUNNER ROOF RACKS

are constructed using strong and lightweight aluminium extrusions incorporating a unique "T" slot that allows you to attach and remove your equipment easily.

This gives you endless flexibility eliminating the need to drill the rack to mount your tent and equipment. Roof racks come in various sizes and configurations to suit all Land Rovers.

- High grade aluminium for light weight and strong construction
- T slot extruded floor with 8mm hex head bolt slot on top and bottom, to mount accessories without drilling
- Additional legs can be fitted for greater load carrying
- Most racks are reversible with 1.35m open end for tent location
- Heavy duty black powder coating for long term resistance to the elements
- Lateral floor design to reduce wind noise while in motion
- Low profile perimeter to reduce drag and noise
- Gutter and track mounting systems both provide the strongest and most secure fastening to Land Rovers providing the highest load rating. Leg sets and mounting kits are fabricated to follow the contour to the gutter or roof of the vehicle
- Stainless steel gutter clamps

### FRONT RUNNER AWNINGS

The Featherlite awning is one of the best in the business, at 3.3x2.7m it is the largest when fitted to the vehicle and unique in that it attaches to a 1m length of aluminium track fitted to the roof rack. The track can be attached on any side of the rack including front and back if required allowing you to position the awning to suit your needs. When stowed away, the awning measures around 1200x250mm and can be easily stored in the vehicle or on the roof rack.



## FRONT RUNNER LONG RANGE FUEL TANKS

Front Runner has developed a range of high quality auxiliary and replacement fuel tanks for most Land Rovers. Made from CR12 Stainless Steel, these tanks are fully welded, baffled and tested before they leave the factory. They are also painted with a chip resistant coating to protect them against stones and the weather.

Each tank is supplied as a complete kit including the tank and mounting kit as well as all the necessary parts required to fill and empty the tank. There are no fuel gauges or level senders but it is possible to custom fit them if required.

Tanks mount to existing chassis points, so major modifications are not necessary and typically the ground clearance is not affected.

Description Application	Vehicle	Part Number
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### ROOF RACKS

Expedition rack 2.0x1.4m	90	FRLREX90
Expedition rack 2.8x1.4m	110	FRLREX110
Expedition rack 1.8x1.4m	130	FRLREX130
Expedition rack 2.2x1.4m	D1,D2	FRDISCOEX
Slimline roof rack 2.0x1.4m	D3	FRDISCO4002
2 piece rear ladder	90/110	FRLR23
Rear ladder	D1,D2	FRDISCO21
Rear ladder	D3	FRDISCO22

### ROOF RACK ACCESSORIES

Double Jerry can holder		FRUN2009
Spot light mounting bracket		FRUN54
Hi-Lift jack mounting kit		FRUNWC05
Spare wheel mounting kit		FRUN29
Spade mounting kit		FRUNWC01
Tie down rings (set of 2)		FRUN11
Axe mounting kit		FRUNWC03
Roof tent mounting kit (30mm)		FR TENT16

### AWNINGS AND SIDES

Featherlite awning (3.3x2.7m) inc mounting rail		FRAWN06
Featherlite awning front panel		FRAWN08
Featherlite awning side panels		FRAWN07

### FUEL TANKS

Fuel tank 40 litre auxiliary LH mounted	90 200/300tdi	FRLR40
Fuel tank 45 litre RH wheel arch mounted	110 200/300tdi	FRLR41
Fuel tank 45 litre auxiliary RH mounted	90 Td4/Td5	FRLR42
Fuel tank 45 litre RH wheel arch mounted	110 Td5	FRLR44
Fuel tank 44 litre RH wheel arch mounted	110 Td4	FRLR49
Fuel tank 40 litre RH wheel arch mounted	D2	FRDISCO43
Fuel tank 80 litre aux tank (wheel carrier req'd)	D3	FRDISCO45
Fuel tank guard	D3	FRDISCO36

### WATER TANKS

Water tank 36 litre LH wheel arch mounted	110 Td4	FRLR43
Water tank 44 litre LH wheel arch mounted	110 200/300tdi & Td5	FRLR46
Water tank 60 litre between wheel arches 830x300x265	90/110	FR870
Water tank 50 litre flat upright between wheel arches 1350x80x600	90/110	FR874
Water tank 40 litre roof rack mounted 480x350x310		FR875

### ACCESSORIES

Bonnet spare wheel mounting kit	Defender 200/300Tdi, Td5	FRLR37
Under cubby box safe	Defender	FRLR101
Spare wheel carrier	D3	RTSPARE02
Rear bumper mounting kit for Hi-Lift jack	90/110	FRLR104

## FRONT RUNNER WATER TANKS

Water is essential for maintaining hydration and good hygiene, a healthy quantity should be carried on expedition and storing it can be a problem with valuable space always at a premium. Front Runner solves this with tough plastic water tanks designed to fit neatly into Defenders specifically, however they can be fitted into any 4x4 with similar dimensions.

Other useful Front Runner accessories include a bonnet spare wheel mounting kit for all pre 2007 Defenders, a brilliant under cubby box security box and rear cross member mount for your Hi-Lift jack for all Defenders.

Discovery 3's make a fantastic touring vehicle but the spare wheel is underneath, Front Runner's chassis mounted rear swing away wheel carrier allows the spare to be mounted with easy access and makes way for the Front Runner 80 litre auxiliary fuel tank.



# MANTEC®

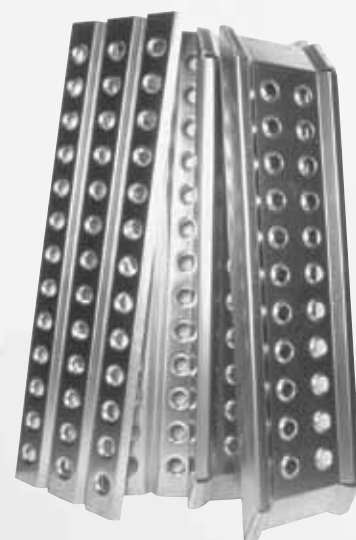
specialist vehicle equipment

For 20 years this renowned British specialist vehicle equipment manufacturer has been supplying dependable, high quality accessories for Land Rovers. Vehicles equipped with Mantec products are used all over the world in many different environments and applications, from private expeditions to military operations, even in disaster relief.

Mantec accessories are often approved by Land Rover and have been fitted to Land Rover supported events such as the famous G4 Challenge. Steel Mantec snorkels uphold tradition while their new plastic options use the very latest materials to ensure they perform faultlessly in all climates and conditions. The Defender Flexilite snorkel is designed to complement the latest technology employed by Land Rover.



▶ **STEEL MANTEC SNORKELS** uphold tradition while their new plastic options use the very latest materials to ensure they perform faultlessly in all climates and conditions. The Defender Flexilite snorkel (shown) is designed to complement the latest technology employed by Land Rover.



▶ **MANTEC SPARE WHEEL CARRIERS** are designed to relieve the stress and vibration on the rear door caused by the weight of the spare wheel. The unique patented telescopic piston connection between the rear door and the spare wheel carrier allows the carrier to swing open in conjunction with the door. All the weight of the spare wheel is taken off the back door by the spare wheel carrier which is mounted onto the chassis.



▶ Mantec's under body guards are made from specialist grade aluminium and are designed specifically to protect vulnerable parts of the underside of your Land Rover.

Part Number	Product	Vehicle	Model
1-RRV8/TDI	Steel raised air intake	Range Rover	V8 and Tdi
1-DPSV-L/04	Plastic raised air intake	Defender	200Tdi & TD
1-DIS300	Steel raised air intake	Discovery 1	300Tdi & V8
1-DIS/S11	Steel raised air intake	Discovery 2	Td5 & V8
1-DSV5	Steel raised air intake	Defender	300Tdi/Td5/Td4
1-DSV5/RC	Steel raised air intake with roll cage	Defender	300Tdi/Td5/Td4
1-DPSV-R/04	Plastic raised air intake	Defender	300Tdi/Td5/Td4
1-DPFL-R	Flexilite plastic moulded raised air intake	Defender	300Tdi/Td5/Td4
3-SG-DEF/07	Alloy steering guard	Defender	90/110/130
3-TG-DEF/110	Alloy fuel tank guard	Defender	110 Td4 & Td5
3-TG-DEF/90	Alloy fuel tank guard	Defender	90 Td4 & Td5
2-SA50/7	Spare wheel carrier <2002	Defender	90/110 not pick up <2002
2-SA50-02/7	Spare wheel carrier 2002>	Defender	90/110 not pick up >2002
4-SB-07	Security cubby box	Defender	90/110/130
4-ST	Alloy sand tracks		
4-STMB	Alloy sand tracks mounting kit		Box section racks
4-STMB-T	Alloy sand tracks mounting kit		Tubular section racks



**TERRAFIRMA OFFERS CHOICE, CLEAR PRODUCT IDENTIFICATION AND APPLICATION, ENSURING THE CORRECT PRODUCT CAN BE SELECTED FROM THE EXTENSIVE AND INCREASING RANGE OF ACCESSORIES.**



## Safety Devices®

Safety Devices International is a World leader in the design and manufacture of roll over protection systems (ROPS). With over 35 years of experience, originally in the hi-tech world of motorsport, Safety Devices have designed over 2500 safety systems to fit almost any vehicle.

Safety Devices' relationship with Land Rover began back in 1981, when the original Range Rovers of the Camel Trophy were fitted with roll cages. Arising out of its reputation for designing highly engineered and durable products, Safety Devices was asked to work with Land Rover.

It was during preparation for the 1983 event that Safety devices originally conceived the external roll cage for the Land rover Defender due to insufficient space within the cabin. This design is now commonplace and has been replicated on a whole range

of vehicles. The partnership between Safety Devices and Land Rover has been successful for many years, through Camel Trophy to its successor the G4 Challenge and remains strong to this day through commercial, leisure and military requirements.

Safety Devices roll cages are made from only the best fully traceable specialist steel tube produced to BS6323. All tubes are cut and bent using computer controlled equipment and all welders are qualified and regularly checked to ensure the highest quality standards are maintained. All roll cages are sand blasted, zinc primed and powder coated.

A range of popular Safety Devices Land Rover roll cages are on the following page. To have a look at the roll cage technical drawings and to see the entire range please visit: [www.safetydevices.com](http://www.safetydevices.com)



**RBL0116SSS Defender 110 CSW**, Rear Internal Cage, floor mounted with reinforcing plates throughout, 45mm hoops and 38mm connecting rails. B hoop includes seat belt mounting brackets.

**RBL0753SSS (FRONT) RBL0755SSS (REAR) Defender 130 Crew Cab**, Internal rear and external front cage. The cage mounts to the chassis through the floor at 4 points in the rear and at the front down the A pillar through the body at the front of the vehicle, the B hoop also attaches to the seat belt mounts. It is manufactured from 45mm tube throughout.

**RBL1155SSS Defender 90 & 110 Hard Top**, Internal rear hoop with backstays (without headlining). B Hoop mounted to the chassis through the floor and mounted at roof joint level, with back stays mounted on to the capping. Hoop made from 45mm tube with 38mm back stays.

**RBL1727SSS Defender 110**, NAS Euro Spec, full external cage. The cage mounts to the chassis through the body at 6 points on the vehicle. This cage has an internal hoop that mounts to the external cage through the roof and includes internal seat belt mounting brackets. The upper screen rail includes spot light mounting brackets and rear hoop includes ladder brackets for the L052 ladder. The cage is made from 45mm tube throughout.

**RBL1857SSS Defender 110**, Crew Cab Pick Up, NAS style full external cage. The cage mounts to the chassis through the body at 6 points on the vehicle. This cage has an internal hoop that mounts to the external cage through the roof and includes internal seat belt mounting brackets. The upper screen rail includes spot light mounting brackets. The rear cage is open backed to allow entrance to the buck.

**RBL0247SSS Discovery 1, 3 door**, front legs avoid dash. This cage has backstays from the top of the B hoop to the rear floor for longitudinal strength. The cage is floor mounted with reinforcing plates, manufactured from 45mm tube throughout.

**RBL0807SSS Discovery 1, 5 door, post '95**, for vehicles without rear AC, front legs avoid dash, the back stays mount from the rear hoop to the body of the vehicle for added strength, the cage is floor mounted with reinforcing plates and manufactured from 45mm tube throughout.

**RBL2167SSS Discovery 2**, internal with a V brace in the B hoop, front legs pass through dash, this cage is floor mounted with reinforcing plates. It also has backstays from the rear hoop mounting to the rear of the vehicle. The cage is made from 45mm tube throughout.

**RBL0335SSS Defender 90 & 110 Hard Top**, internal rear hoop with backstays (with headlining). B hoop mounted to the chassis through the floor and mounted at roof joint level, also with back stays mounted on to the capping. Hoop made from 45mm tube with 38mm back stays.

**RBL1087SSS Defender 90**, full external cage with bulkhead (similar to RBL2137SSS), the cage mounts to the chassis through the body at 6 points on the vehicle. The upper screen rail includes spot light mounting brackets and rear hoop includes ladder brackets for the L052 ladder. The cage is made from 45mm tube throughout.

**RBL1536SSS Defender 90 & 110, Truck Cab**, full external (separate Fit Kits for 90&110), the cage mounts directly to the chassis at the front and to brackets supplied at the rear that must be welded to the chassis. This cage also has backstays for added strength.

**RBL1817SSS Defender 90 CSW**, with head lining and rear seats, external front section which joins to the internal rear section through the roof, the B hoop also includes backstays. This cage mounts to the chassis at the A pillar and 4 positions in the rear. The front legs and both hoops are made from 45mm tube with the connecting rails being 38mm tube.

**RBL2137SSS Defender 90**, Td5 Td4 full external cage without bulkhead. (similar to RBL1087SSS) The cage mounts to the chassis through the body at 6 points on the vehicle. The upper screen rail includes spot light mounting brackets and rear hoop includes ladder brackets for the L052 ladder. The cage is made from 45mm tube throughout.

**RBL0747SSS Discovery 1, 5 door**, post '95 dash change, front legs go through dash, backstays from top of the B hoop to the rear of the vehicle for longitudinal strength. The cage is floor mounted with reinforcing plates, and manufactured from 45mm tube throughout.

**RBL0817SSS Discovery 1, 5 Door, Post '95**, for vehicles with full AC, legs in front of dash, the back stays mount from the rear hoop to the body of the vehicle for added strength, the cage is floor mounted with reinforcing plates and manufactured from 45mm tube throughout.

**RBL2197SSS Discovery 3, 2005**, 9 point bolt-in cage, this is an internal cage with a V brace in the B hoop and front legs pass through dash, this cage is floor mounted with reinforcing plates. It also has backstays from the rear hoop mounting to the rear of the vehicle, the B hoop also includes seat belt mounting brackets. The cage is made from 45mm tube throughout.

\*\*\* ALLMAKES 4X4 STOCK THE MOST POPULAR ROLL CAGES, ALL CAGES ARE AVAILABLE TO ORDER \*\*\*

# Polybush®

- **Reduced Body Roll**
- **Excellent Noise Damping**
- **Impressive and Confident Ride**
- **Controlled Suspension Movement**
- **Sharper Turn-in or Predictable Cornering**

Polybush are the world leader in Polyurethane Suspension Bushes and Components. With over 18 years experience in supplying suspension bushes to the Land Rover aftermarket, Polybush products are finished in very high quality and are loved by Land Rover users and enthusiasts.

All the products are designed & engineered to Land Rover OE specification using pure materials which have immense flexibility, resilience and excellent longevity, enabling you to just fit and forget.



**Performance**



The stiffest grade gives you precise setting and a controlled ride at all speeds



**Dynamic**



Excellent balance between ultimate stiffness and elasticity.



**COMFORT**



The most compliant grade provides excellent longevity and great shock absorption.



POLYBUSH PART NO	KIT QTY	PERFORMANCE	COMFORT	DYNAMIC	LAND ROVER PART NO	DESCRIPTION
1P	4	GAL121R	GAL121B	GAL121O	572068	RRC to 1986 - Front radius arm to chassis
1E	2	GAL115R	GAL115B	GAL115O	575580	RRC to 1986 - Panhard rod
1F	2	GAL116R	GAL116B	GAL116O	572180	RRC to 1986 - Rear radius arm to chassis
1A	4	GAL111R	GAL111B	GAL111O	NTC7307/1774	RRC to 1986 & Defender to 1994 - Front radius arm to axle
1B	4	GAL112R	GAL112B	GAL112O	NTC6860/6781	D1/RRC 1986 to 1994 & Defender 1994 on - Front radius arm to axle
1D	2	GAL114R	GAL114B	GAL114O	NRC9728/ANR3410	D1/RRC 1986 to 1994 & Defender to 2002 - Panhard rod
1BD	4			GAL254		D1/RRC 1986 on & Defender 1994 on - Caster corrected front radius arm bush (44mm)
1K	2	GAL255R	GAL255B	GAL255O	552818	D1/RRC 1986 on & Defender 1994 on - Front shock top & bottom/Rear shock bottom
1AM	1	GAL141R			ANR4189	D1/RRC/Defender - 2 hole bump stop
1AN	1	GAL142R		GAL142O	ANR4188	D1/RRC/Defender - 4 hole bump stop
1AX	1	GAL146R		GAL146O	ANR4189	D1/RRC/Defender - Hardcore extended 2 hole bump stop
1AY	1	GAL147R		GAL147O	ANR4188	D1/RRC/Defender - Hardcore extended 4 hole bump stop
1AV	2	GAL144R			NRC7591/NTC9027	D1/RRC/Defender - Hardcore rear radius arm to chassis
1J	2	GAL256R	GAL256B	GAL256O	NRC5593	D1/RRC/Defender 1986 on - Rear shock absorber upper
1H	4	GAL118R	GAL118B	GAL118O	NRC4514	D1/RRC/Defender 1986 to 1994 - Front radius arm to chassis
1G	2	GAL117R	GAL117B	GAL117O	NRC7591/NTC9027	D1/RRC/Defender 1986 to 1994 - Rear radius arm to chassis
1Q	2	GAL122R	GAL122B	GAL122O	NTC1773	D1/RRC/Defender 1986 to 2002 - A frame bush
1C	2	GAL113R	GAL113B	GAL113O	NTC1772	D1/RRC/Defender to 1994 - Rear radius arm to axle
1BA	2	GAL151R			NRC9728/ANR3410	D1/RRC/Defender to 2002 - Hardcore panhard rod
38R	2	GAL257R	GAL257B	GAL257O	EGP1889	90 2007 on - Rear anti roll bar bush
1CM	2	GAL258R	GAL258B	GAL258O		Defender 2002 on - A frame bush
1AF	2			GAL140	RBX101690	D2 - Anti roll bar non active
1BF	1			GAL259		D2 - Front and rear extended bumpstop
1BW	1		GAL260		RNV100060	D2 - Front and rear standard height bumpstop
1AW	2			GAL145	RBX1011181	D2 - Front anti roll bar active suspension
1BC	2			GAL152	RBX101730	D2 - Front or rear Hardcore radius arm to chassis
1AB	4			GAL137	RBX101680	D2 - Front radius arm to axle
1AT	2			GAL142	ROA100040	D2 - Front shock lower
1AU	2			GAL143	ROA100050	D2 - Front shock top/Rear shock top & bottom
1AD	4			GAL138	ANR6947	D2 - Rear radius arm to axle
1AE	2			GAL139	RGX100970	D2 - Watts link to chassis
1AS	2	GAL126R	GAL126B	GAL126O	RBX101340	D2 & Defender 2002 on - Panhard rod
1AZ	2		GAL148B	GAL148O	RBX101340	D2/P38 & Defender 2002 on - Hardcore panhard rod
1XH	2		GAL127B	GAL127O	ANR3305	P38 - Front anti roll bar clamp
1XB	4		GAL123B	GAL123O	ANR3332	P38 - Front radius arm to axle
1XC	2		GAL124B	GAL124O	ANR2563	P38 - Front radius arm to chassis
1XE	2		GAL125B	GAL125O	ANR3285	P38 - Rear radius arm to chassis
1XK	2			GAL153	RBX101240	F1 - Front anti roll bar clamp
1XS	2			GAL158	RBX101790	F1 - Front wishbone front
1XX	2			GAL159	RBX101780	F1 - Front wishbone rear
1XY	2			GAL161	RDB100080	F1 - Front wishbone rear snub washer
1XR	2			GAL157	RGX101030	F1 - Rear front track arm inner
1XN	2			GAL154	RGX101000	F1 - Rear radius arm to chassis
1XP	2			GAL155	RGX101010	F1 - Rear radius arm to hub
1XQ	6			GAL156	RGX101020	F1 - Rear track arm
1CC	2			GAL261	LR005649	F2 - Front anti roll bar bush
1BX	2			GAL262		F2 - Front wishbone, front bush
1BY	2			GAL263		F2 - Front wishbone, rear bush
1CD	2			GAL264	LR005648	F2 - Rear anti roll bar
1BZ	2			GAL265	LR001182	F2 - Rear trailing arm, inner bush
1CA	2			GAL266	LR001185	F2 - Rear trailing arm, hub end outer bush
1CB	8			GAL267	LR001184	F2 - Rear, front and rear track arms, inner and outer
1BN	2	GAL268R		GAL268O	RGX500131	D3/D4/RRS - Rear upper wishbone front
1BK	2	GAL269R		GAL269O	RBX000571	D3/D4 - Front anti roll bar clamp
1BH	2	GAL270R		GAL270O	RBX500291	D3/D4 - Front lower wishbone rear
1BQ	2	GAL271R		GAL271O	RGX500060	D3/D4 - Rear anti roll bar clamp
1BG	2	GAL272R		GAL272O	RBX500311	D3/D4/RRS - Front lower wishbone front bush
1BR	2	GAL273R		GAL273O		D3/D4/RRS - Front & rear strut lower bushes

POLYBUSH PART NO	KIT QTY	PERFORMANCE	COMFORT	DYNAMIC	LAND ROVER PART NO	DESCRIPTION
1BJ	4	GAL274R		GAL274O	RBX500301	D3/D4/RRS - Front upper wishbone, front & rear
1BL	2	GAL275R		GAL275O	RGX500101	D3/D4/RRS - Rear lower wishbone front
1BM	2	GAL276R		GAL276O	RGX500111	D3/D4/RRS - Rear lower wishbone rear
1BP	2	GAL277R		GAL277O	RGX500121	D3/D4/RRS - Rear upper wishbone rear
1CK	2			GAL278		L322 - Front anti roll bar bush
1CE	2			GAL279	LR0018345	L322 - Front wishbone arm front inner
1CF	2			GAL280	LR0000070	L322 - Front wishbone arm rear inner
1CL	2			GAL281		L322 - Rear anti roll bar bush
1CH	2			GAL282	RGX000060	L322 - Rear lower wishbone inner front
1CJ	2			GAL283	RGX000071	L322 - Rear lower wishbone inner rear
1CG	2			GAL284	RGX000080	L322 - Rear upper wishbone inner front & rear
1CP	2	GAL285R		GAL285O	LR018347	RRS - Front anti roll bar clamp (31mm)
1BU	2	GAL286R		GAL286O	RBX500291	RRS - Front lower wishbone, rear bush
1BV	2	GAL287R		GAL287O	RVU000022	RRS - Rear anti roll bar clamp
1BT	2	GAL288R		GAL288O	RGX500060	RRS - Rear anti roll bar clamp (23mm)
1BE	2	GAL289R		GAL289O	RVU500011	RRS with Dynamic Suspension - Front anti roll bar clamp (34 mm)

Kits

Kit 3	GAL102	GAL106	GAL103			RRC to 1986 - Complete bush kit
Kit 8	GAL162R	GAL162B	GAL162O			RRC to 1991 - Rear shock bush kit
Kit 13	GAL164R	GAL164B	GAL164O			RRS with air suspension - Front shock bush kit
Kit 15	GAL165R	GAL165B	GAL165O			D1/RRC - Steering damper bush kit
Kit 2	GAL101	GAL105	GAL290			D1/RRC 1986 on & Defender 1994 on - Complete bush kit
Kit 100	GAL108					D1/RRC 1986 on & Defender 2002 on - Hardcore bush kit
Kit 12	GAL163R	GAL163B	GAL163O			D1/RRC 1994 on & Defender 2002 on - Rear shock bush kit
Kit 18	GAL167R	GAL167B	GAL167O			D1/RRC/90 - Rear anti roll bar bush kit
Kit 17	GAL166R	GAL166B	GAL166O			D1/RRC/Defender - Front anti roll bar bush kit
Kit 7	GAL120R	GAL120B	GAL120O			D1/RRC/Defender 1986 to 1994 - Front shock bush kit
Kit 6	GAL119R	GAL119B	GAL119O			D1/RRC/Defender 1991 on - Rear shock bush kit
Kit 1	GAL100	GAL104	GAL291			Defender 1994 on - Complete bush kit
Kit 16	GAL129	GAL129B	GAL129O			Defender - Steering damper bush kit
Kit 68	GAL109	GAL110	GAL292			Defender 2002 on - Complete bush kit
Kit 51	GAL130R	GAL130B	GAL130O			110/130 - Rear anti roll bar bush kit
Kit 20			GAL128			D2 - Complete bush kit
Kit 23		GAL131	GAL132			P38 - Complete bush kit
Kit 69			GAL107			F1 - Complete bush kit
Kit 157			GAL293			F2 - Complete bush kit
Kit 105	GAL294R		GAL294O			D3/D4 - Complete bush kit
Kit 158			GAL295			L322 - Complete bush kit
Kit 113	GAL296R		GAL296O			RRS - Complete bush kit

Extras

PA0001	1			GAL297		Tow ball cap - Hi Viz Orange Towball Cover
PA0002	1	GAL298				Tow ball cap - Red Towball Cover
PA0003	1					Tow ball cap - Black Towball Cover
PA0012	1			GAL299		Hi Lift Jack handle Isolator



# ODYSSEY®

## THE EXTREME BATTERY



Designed and built to last up to 3 times as long.

Thanks to rugged construction and AGM (Absorbed Glass Mat) design, ODYSSEY batteries have an 8-12 year design life and a 3-10 year service life. Welded intercell connections enable it to withstand extreme vibration, and AGM design holds acid in place to prevent spills, even when installed on its side. And unlike conventional batteries, ODYSSEY batteries can be stored for up to 2 years and still be returned to full power.

Some batteries provide enormous cranking power. Others, deep cycle reserve power. The revolutionary ODYSSEY® battery is designed to do both.

How is this possible? The answer begins with flat plates made of 99.99% pure virgin lead - not lead alloy. Pure lead plates can be made thinner, so we can fit more of them in the battery. More ODYSSEY battery plates mean more plate surface area. And that means more power - twice as much as conventional batteries.

In fact, ODYSSEY batteries are capable of providing engine cranking pulses in excess of 2250 amps for 5 seconds - double to triple that of equally sized conventional batteries, even at very low temperatures. And they can handle 400 charge-discharge cycles to 80% depth of discharge.

This extreme combination of power and performance makes ODYSSEY batteries perfect for a range of applications, including automotive/LTV, marine, commercial, and powersports.



Vehicle model	Engine type	Year	Replacement	Upgrade	Dual battery
Series	Petrol	1971 to 1985	PC1500DT	PC2150S	
Series	Diesel	1971 to 1985	PC2150		
Defender 90/110/130	All except Td5	1983 to 2006	PC1500DT	PC2150S	PC1500DT x2
Defender 90/110/130	Td5	1998 to 2006	PC2150S		
Defender 90/110/130	All	2007 on	PC1350		
Discovery 1	All	1989 to 1998	PC1500DT		PC1500DT x2
Discovery 2	Petrol	1998 to 2004	PC1500DT	PC2150S	
Discovery 2	Td5	1998 to 2004	PC2150S		
Discovery 3 and 4	All	2004 on	PC1350		
Freelander 1	1.8 Petrol	1996 to 2006	PC1200		
Freelander 1	Diesel & 2.5V6	1996 to 2006	PC1220		
Freelander 2	All	2006 on	PC1220		
Range Rover Classic	All	1971 to 1995	PC1500DT		PC1500DT x2
Range Rover P38	Diesel	1995 to Oct 2000	PC2150		
Range Rover P38	Petrol	1995 to Oct 2000	PC1500DT		
Range Rover P38	All	Oct 2000 on	PC1350		
Range Rover L322	All	2002 on	PC1350		
Range Rover Sport	All	2005 on	PC1350		



Safari Snorkels were twice awarded “Best After Market Product of the Year” by 4x4 Australia Magazine.



Pioneered in Australia in the early 1980's, Safari Snorkels were born out of a need to protect 4WD engines from the hazards of dust and water commonly encountered in touring and off road applications.

In arguably the best, if not toughest environment, Safari Snorkel Systems are thoroughly researched, tested and manufactured specifically for each Land Rover. Genuine Safari Snorkels - the snorkel trusted by Australians and sold all over the World.

Safari Snorkel Systems are manufactured to the highest standards in durable, UV stable,

cross linked polyethylene material and deliver a continuous and cooler supply of air for maximum engine performance. Each system includes quality fixtures and fittings that deliver superior sealing.OEM levels of presentation and long-term durability.

In addition, Safari Snorkels are positively sealed in order to provide the engine with the ultimate in protection during river crossings and dusty desert driving conditions.

All Safari Charge Air Rams feature a highly effective water separator system built right into the air ram in order to remove rain water from the incoming air stream - thus ensuring safe engine operation through even the most torrential tropical storms.

An added benefit of the unique Safari Charge Air Ram is that it can be rotated to any position. This means great peace of mind for those who plan to travel in cold or high altitude conditions where heavy snow falls are anticipated. By rotating the air ram to face away from the prevailing wind/direction of motion, the air ram delivers additional protection from the choking effects of snow build-up inside the air intake.



Vehicle	Model	Part No.
Defender	200Tdi 1990 to 1994	SS500HF
Defender	V8 1990 to 1994	SS525HF
Defender	300Tdi 1994 to 1998	SS550HF
Defender	Td5 and Td4 1998 on LHD & RHD	SS581HF
Discovery 1	200Tdi 1990 to 1994	SS300HF
Discovery 1	V8 1990 to 1994	SS325HF
Discovery 1	300Tdi & V8 Non ABS 1994 to 1998	SS350HF
Discovery 3 & 4	TDV6 2.7 and 3.0 diesel 2004 on	SS385HF
Discovery 1	300Tdi & V8 with ABS 1994 to 1998	SS390HF
Discovery 2	Td5 & V8 1998 to 2004	SS395HF



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**COOL CRUISING    DESERT CROSSING  
THRILL SEEKING    RIVER CROSSING  
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**MAKING THE IMPASSABLE POSSIBLE**



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**ROCK CRAWLING      MUD SLINGING**  
**WHEEL SPINNING**



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## TERRAFIRMA WARRANTY & DISCLAIMER

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

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

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

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

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

All claims must be accompanied by the original retail invoice and should be submitted to the supplying Allmakes 4x4/TerraFirma distributor. This warranty covers only the replacement of the product or part concerned. The decision remains solely at the discretion of Allmakes Ltd.

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

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

**AllMakes4x4**  
Quality, Value and Performance

# Premium Range



**Manufactured with Precision**

**MINI DECISION**

We think "Quality" is a word that is used all too freely if a supplier hasn't any substance to back it up. This is the whole point of Allmakes 4x4 launching the Allmakes 4x4 Premium Range. Each product selected for the range comes with a standard 2-year end-customer warranty\* and meets a range of published quality criteria. No other range of aftermarket parts for Land Rover vehicles is put through such an extensive process of selection and scrutiny. For example:

- Each product has sufficient sales history to be able to determine whether it is fit for purpose. - Only products with a proven sales record are selected for the range.
- Each product has a success rate of over 99.5% - Overall there is a 1 in 3500 chance of a Premium Range product being faulty.
- Each product has been sourced from manufacturers with a proven history in the 4x4 parts market. - Manufacturers with reliable manufacturing, handling and distribution processes.
- Each product has a history of being used by qualified 4x4 technicians in recognised workshops - These are products that are favoured by technicians.

It means that every single part that qualifies for inclusion in the Allmakes 4x4 Premium Range (PR2) has less than a 0.5% failure rate in its entire sales history. In 2011, failure rate across the whole range was less than 0.1%. When you consider that 1.2 million PR2 products were sold in that year, it is quite clear that the PR2 range is the best that the aftermarket has to offer.

for more information please visit [www.allmakes4x4.com/pr2](http://www.allmakes4x4.com/pr2)



## OUR WEBSITE

Terrafirma website provides an easy and quick way for you to keep up-to-date with the latest news, products and distributors worldwide. You can browse product information such as the product images, weights & dims information and fitting diagrams. You can also add items to wishlists to contact our stockists for further purchasing information.

The Terrafirma Mobile is our self-developed app for using on mobile devices. It has a simplified and user-friendly interface which features all the major functions as same as the main sites - fast to find information at your fingertips. No downloading or installation is required for this app and it works across all main mobile platforms such as iPhones, iPads and Android devices.

We are also socially active across social media channels like our Facebook page, Youtube channel and Twitter. We have found it great place to engage with Land Rover enthusiasts worldwide, answer your questions about our products and share our passion about Terrafirma.

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