

# IRONMAN 4X4 SUSPENSION SUSPENSION COMPONENTS



## Suspension Components

### TORSION BARS

*Higher spring rate to support extra weight from additional vehicle accessories*

**UP-SET FORGED ENDS** - Stronger than machining alone, forging manipulates steel grain for superior strength and durability.

**PREMIUM MICRO-ALLOY STEEL** - Exceeds OEM steel grade for ultra long life and less sag.

**INCREASED BAR DIAMETER** - Higher spring rate better supports added accessories and balances front and rear suspension performance.

**X-RAY EXAMINED** - Each and every Ironman Torsion Bar is X-Ray tested to eliminate risk of breakage due to material flaw.

**DIRECTIONAL PRE-SETTING** - Torsion Bars are rotationally pre-set in their direction of installation to reduce spring settling. Each bar is marked for left or right fitment.



### POLYURETHANE BUSHES

*Provide precise spring location and enables lubrication to increase suspension flex and - Comfort*

**INJECTION MOULDED POLYURETHANE** - High density injection moulded polyurethane material ensures precise location and a durable bearing surface for your leaf springs, making them very durable in hot temperatures whilst providing a soft - Comfortable vehicle ride.

**GREASABLE** - Polyurethane bushes are greasable to aid in longer life and ensure smooth ride and quiet operation.

**SPIRAL BORE AND FLANGES** - To distribute lubricating grease evenly throughout the bushing surface when combined with greasable shackles and pins.

**SPLINES** - Allows the bush to conform to irregularities and grip to the eye surface.

### GREASABLE SHACKLES AND PINS

*Enables easy re-greasing of polyurethane spring bushes*

**QUAD-OUTLET GREASABLE** - Greasable shackles provide an easy method of re-lubricating polyurethane bushes. Chamfered Quad-Outlet ports distribute grease liberally along the bush surface.

**SERVICEABLE** - All Ironman shackles and pins feature a serviceable bolt together construction.

**ANTI-INVERSION SHACKLE** - On selected models, a third pin is positioned on the shackle to protect the spring in the case of inversion.



### CASTER CORRECTION PLATES

*Used to correct caster angle after raising suspension beyond 100mm (4")*

**PRE-CONFIGURED CASTER CORRECTION** - Fixed 5 degree offset models suit 100mm (4") to 150mm (6") lifted suspension.



### POLYURETHANE COIL SPRINGS SPACERS / TRIM PACKERS

*Available individually to adjust "side to side" or "front to back" vehicle lean due to uneven load placement*

**INJECTION MOULDED POLYURETHANE** - High density injection moulded polyurethane material ensures precise location and a durable seat with the spring.

**PRE-CONFIGURED THICKNESSES** - Varied thicknesses allow correct selection according to the amount of lean. Provides 1:1 ratio suspension lift on solid axle vehicles.

**SELF LOCATING DESIGN** - Raised profile locating flanges prevent packer from becoming dislodged or falling out.



### STRUT TRIM PACKERS

*For use only with Ironman 4x4 struts, available individually to adjust "side to side" or "front to back" vehicle lean due to uneven load placement.*

**PRECISE RIDE HEIGHT TUNING** - Basic steel collar design fits over Ironman 4x4 struts to adjust spring seat height.

**PRE-CONFIGURED THICKNESSES** - Varied thicknesses allow correct selection according to the amount of adjustment required. Usually provides 1:2 ratio suspension lift on independent suspension vehicles.



### EXTENDED BRAKE HOSES

*Longer brake hose used with suspension lifts over 100mm (4").*

**DOT SAE J1401 STANDARDS APPROVED CONSTRUCTION** - OEM style reinforced rubber hose for safety.

**EXTENDED LENGTH** - Extended length allows for greater suspension travel.



### ADJUSTABLE TRAILING ARMS

*Used to correct rear axle tilt and location after raising suspension.*

**COMPETITION SPEC** - 32mm solid rod used throughout.

**FINE THREAD ON-VEHICLE ADJUSTMENT** - M32 x 2mm thread ensures precision adjustment for greater accuracy.

**OEM STYLE RUBBER BUSHES** - Maximum flex and durability. Replaceable OEM compatible bushes.



### CASTER WEDGES

*Adjusts the caster angle within solid axle vehicles, or changes pinion angle to remove unwanted driveline vibration.*

**SUITS** - 60-70mm wide leaf springs. Breakaway side section can be removed for narrower springs.

**AVAILABLE IN** - 1, 2, 3 and 4 degree increments.



### STEERING DAMPER

*Reduce unwanted vibration and feedback through steering system in rough conditions*

**FOAM CELL TECHNOLOGY** - Micro-Cellular closed cell foam insert allows for the horizontal mounting orientation required by a steering damper.

**35mm TEFLON BANDED PISTON** - Precision shim-stack piston specifically valved by Ironman suspension engineers, banded with Teflon for smooth long life operation.

**54mm TWIN TUBE BODY** - Increased oil volume improves cooling and endurance, twin tube construction protects internal components from impact damage.

**SUPPLEMENTARY WELDED MOUNTS** - Fusion welded and supplementary welded for maximum strength and reliability.

**SINGLE PIECE BILLET EYE RINGS AND STEMS** - Ultra robust design prevents breakage or bending of mounts.

**VEHICLE SPECIFIC VALVING** - Every part number is specially valved for each vehicle application, this ensures the steering operation is smooth and unhindered by the effects of rough road driving.



### CASTER CORRECTION BUSHES

*Available in adjustable or fixed offset designs, used to correct caster angle after raising suspension under 100mm (4")*

**PRE-CONFIGURED CASTER CORRECTION** - Fixed 2 degree offset models suit 50mm (2") lifted suspension.

**ADJUSTABLE CASTER CORRECTION** - Adjustable offset suit a wide range of lift heights up to 100mm (4")

**HIGH DENSITY MATERIALS** - Vehicle specific rubber or polyurethane material.



### ADJUSTABLE PANHARD RODS

*Used to correct axle shift after raising suspension. Adjustable as required to re-centralise axle to vehicle*

**COMPETITION SPEC** - 32mm solid rod used throughout.

**FINE THREAD ADJUSTMENT** - M32 x 2mm thread ensures precision adjustment for greater accuracy.

**OEM STYLE RUBBER BUSHES** - Maximum flex and durability. Replaceable OEM style bushes.



### EXTENDED SWAY BAR LINKS

*Recalibrates sway bar index after raising suspension.*

**VEHICLE SPECIFIC BOLT ON DESIGN** - Easy fitment, utilises OEM mounting locations.

**ADJUSTABLE LENGTH** - Adjustable extension where possible depending on vehicle model.

**PRACTICAL DESIGN** - Strongest construction up-spec materials to avoid bending and breaking. Rubber bushes and aircraft grade spherical bearings used where possible depending on vehicle model.



### SWAY BARS

*Enhanced performance*

*Direct replacement sway bars featuring maximum bar diameter with factory compatible fitment.*

**SHORE A 70 DURO NR** - Bushes maximum flex and durability.



### ADJUSTABLE STEERING RODS

*Adjustable length rod to centralise steering wheel after suspension lift.*

**ADJUSTABLE LENGTH** - Compatible with all suspension ride heights.

**STRONGER CONSTRUCTION** - Reduces likelihood of failure due to impact.

**BOLT ON STEERING DAMPER MOUNTS** - Steering damper mounts can be positioned freely as required to suit suspension lift.



### STRUT MOUNTS

*Direct replacement for the OEM mounts. Facilitates the pre-assembly of complete new struts without disassembly of old unit.*

**FULLY OEM COMPATIBLE** - Easy installation.

**SHORE A 80 DURO NR BUSHES & INSULATORS** - Extended durability and precise location accuracy.

**HEAVY DUTY WASHERS** - Resists deformation in extreme use.



### ADD-A-LEAF

*Additional universal tapered leaf to upgrade existing leaf springs.*

Eliminates suspension sag and supports additional load.

Improves - Comfort and handling.

Increases load carrying capability and ride height.



### RUBBER BUSHES

*Direct replacement for the OEM bushes, compatible with OEM and Ironman 4x4 suspension arms.*

**OEM STYLE RUBBER BUSHES** - Easy press in replacement bushes, retains factory ride quality.

**SHORE A 70 DURO NR** - Maximum flex and durability.



### PRO-FORGE CONTROL ARMS

*Provides corrected wheel alignment and greater operating clearance, allows for the installation of larger tyres and further increases ride height.*

**HIGH STRENGTH FORGED ALLOY** - Stronger and more durable than a cast, machined or fabricated arm.

**BUSHES AND BALL JOINT** - Replaceable with OEM compatible or genuine components.

