



2004 Suspension



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Tara Llanes at Big Bear.

DORADO

The Dorado has the results to prove it's the best DH race fork ever made. This year, we introduce the Dorado DH's new partner in crime: the Dorado MRD X-Works. Input from World Cup racers and Manitou's elite group of freeride talent has resulted in a fork with more travel, bigger stanchions, increased torsional rigidity, and more tuning options via our revolutionary SPV damping system. The Dorado MRD X-Works is the new high water mark in mountain bike suspension technology.



DORADO MRD X-WORKS

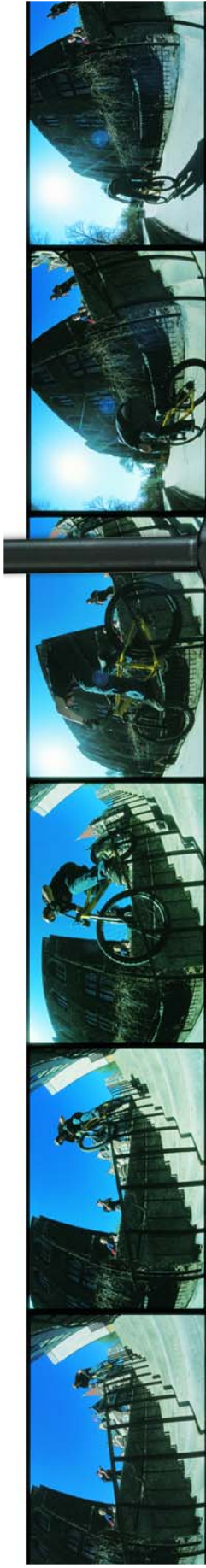
Weight	8.5 lbs
Travel	200mm
Damping	SPV
Adjustments	Rebound, SPV Platform Pressure, SPV Volume
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Upside Down Carbon Legs with CNC crowns and integrated stem
Stanchions	32mm Aluminum
Steerer	Aluminum
Axle	Hex Lock Thru-axle

DORADO DH

Weight	7.75 lbs
Travel	180mm
Damping	TPC+
Adjustments	Rebound, Compression
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Upside Down Carbon Legs
Stanchions	30mm Aluminum
Steerer	Aluminum
Axle	Hex Lock Thru-axle

"Small" dual crowns accommodate stack heights from 145mm to 175mm

"Large" dual crowns accommodate stack heights from 175mm to 200mm



SHERMAN

The crown jewel of this year's Sherman line is the world's first-ever 170mm single crown Breakout Plus, featuring both onepointfive Standard and SPV damping technologies. The Slider Plus also gets 170mm travel, and features such as SPV damping and a wider 40mm range Rapid Travel II top-mounted travel adjustment have permeated the line. What haven't we changed? Sherman is still an homage to durability with 32mm stanchions, Evil Genius Seals with Semi-Bath lubrication, and a beefed up Reverse Arch casting with Hex-Lock Thru-axle option.



SHERMAN BREAKOUT PLUS

Weight	5.8 lbs
Travel	130mm or 170mm New Rapid Travel II top-mounted travel adjust with 40mm range
Damping	SPV
Adjustments	Rebound, SPV Platform Pressure, SPV Volume, Travel
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Magnesium RA
Stanchions	32mm aluminum
Steerer	*Butted onepointfive Aluminum
Axle	Hex Lock Thru-axle

above: Eric Porter rail grind



SHERMAN SLIDER PLUS

Weight	6.8 lbs
Travel	170mm
Damping	SPV
Adjustments	Rebound, SPV Platform Pressure, SPV Volume
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Magnesium RA
Stanchions	32mm aluminum
Steerer	Aluminum
Axle	Hex Lock Thru-axle

SHERMAN BREAKOUT

Weight	5.8 lbs
Travel	112mm or 152mm New Rapid Travel II top-mounted travel adjust with 40mm range
Damping	SPV
Adjustments	Rebound, SPV Platform Pressure, SPV Volume, Travel
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Magnesium RA
Stanchions	32mm aluminum
Steerer	*Butted Onepointive Aluminum
Axle	Hex Lock Thru-axle

SHERMAN FIREFLY

Weight	4.9 lbs
Travel	90mm or 130mm New Rapid Travel II top-mounted travel adjust with 40mm range
Damping	SPV
Adjustments	Rebound, SPV Platform Pressure, SPV Volume, Travel
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Ti Coil
Casting	Magnesium RA
Stanchions	32mm aluminum
Steerer	Aluminum (Butted onepointive Aluminum Optional)
Axle	Standard Quick Release
Optional	Hex Lock Thru-axle onepointive Steerer and Crown

SHERMAN FLICK

Weight	5.3 lbs
Travel	90mm or 130mm New Rapid Travel II top-mounted travel adjust with 40mm range
Damping	TPC
Adjustments	Rebound, Compression, Travel
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Coil
Casting	Magnesium RA
Stanchions	32mm aluminum
Steerer	Steel
Axle	Standard Quick Release
Optional	Hex Lock Thru-axle



Darren Berreclough



MINUTE

The first fork in the world to utilize SPV (Stable Platform Valve) damping technology (which allows for external adjustment of platform threshold and progressivity) the ultra-lightweight Minute line combines 30mm stanchions with Manitou's super stiff Reverse Arch and up to 130mm of travel for the ultimate in cornering stability and controlled suspension performance. The new Rapid Travel Wind Down (RTWD) geared travel adjust system (featured on the Minute 1) allows riders to set their suspension anywhere between 100 and 130mm of travel, on the fly, without a spring rate change. Minute is also visually stunning. Our new hollow crown has been polished to ebony perfection, and the graphics are integrated into the casting via a 4-step process, which simultaneously seals the magnesium and showcases its metallic luster. These elements combine to make Minute the best trail fork money can buy.



MINUTE 3:00

Weight 3.8 lbs
Travel 100mm or 130mm via Rapid Travel Adjust
Damping SPV
Adjustments Air Spring Pressure, Rebound, SPV Platform Pressure, SPV Volume Travel
Lubrication Semi-Bath with Evil Genius Seals
Spring Air
Casting Magnesium RA with integrated graphics
Stanchions 30mm aluminum
Steerer Aluminum
Crown Hollow Forged Black Aluminum

MINUTE 2:00

Weight 3.4 or 3.6 lbs
Travel 100mm or 130mm Preset Travel
Damping SPV
Adjustments Air Spring Pressure, Rebound, SPV Platform Pressure, SPV Volume
Lubrication Semi-Bath with Evil Genius Seals
Spring Air
Casting Magnesium RA with integrated graphics
Stanchions 30mm aluminum
Steerer Aluminum
Crown Hollow Forged Black Aluminum

MINUTE 1:00

Weight 4.0 lbs
Travel 100mm to 130mm Rapid Travel Wind Down (RTWD)
Damping SPV
Adjustments Rebound, SPV Platform Pressure, SPV Volume, Travel
Lubrication Semi-Bath with Evil Genius Seals
Spring Coil
Casting Magnesium RA with integrated graphics
Stanchions 30mm aluminum
Steerer Aluminum
Crown Hollow Forged Black Aluminum

SKAREB

Want an XC racing fork that's light, blessed with excellent bump eating abilities, AND steers in the direction you point it? The only option is Skareb. This year we've brought SPV damping to the Skareb Platinum, and further refined the magnesium RA casing. These are all important upgrades considering Skarebs are now offered in 100mm travel options. For the first time, you can own a superlight 100mm travel fork with the stiffness to tackle even your most aggressive XC outings.



Liam Kileen at Sea Otter



SKAREB PLATINUM SPV

Weight	3.3 or 3.4 lbs
Travel	80mm or 100mm
Damping	SPV
Adjustments	Air, Rebound, SPV Platform Pressure, SPV Volume, Air Spring Volume
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Air/Coil
Casting	Magnesium RA
Stanchions	28.6mm aluminum
Steerer	Black Anodized Aluminum
Crown	Hollow Forged Aluminum

SKAREB SUPER

Weight	3.4 or 3.5 lbs
Travel	80mm or 100mm
Damping	TPC Lockout
Adjustments	Air, Rebound, Compression, Lockout
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Air/Coil
Casting	Magnesium RA
Stanchions	28.6mm aluminum
Steerer	Black Anodized Aluminum
Crown	Hollow Forged Aluminum

SKAREB ELITE

Weight	3.2 lbs
Travel	80mm or 100mm
Damping	Fluid Flow
Adjustments	Air, Rebound
Lubrication	Semi-Bath with Evil Genius Seals
Spring	Air/Coil
Casting	Magnesium RA
Stanchions	28.6mm aluminum
Steerer	Black Anodized Aluminum
Crown	Hollow Forged Aluminum



Kovarik 4-up at Big Bear

BLACK

For 2004, Blacks are not only better performing than ever - they're a better value too. Packed with features such as our new Rapid Travel Wind Down (RTWD) no spring rate change travel adjustment, TPC Lockout damping system, and the latest generation Reverse Arch magnesium casting, the new Black Platinum has a Thoroughbred's pedigree at a workhorse price. Elsewhere in the line, the standard Super offers the same high-end damping system mated to a significantly lighter air spring. Discerning riders, look no further.

BLACK PLATINUM

Weight 4.2 lbs
Travel 90mm to 120mm RTWD
Damping TPC Lockout
Adjustments Rebound, Compression, Lockout, Travel
Lubrication Semi-Bath with Evil Genius Seals
Spring Coil
Casting Magnesium RA
Stanchions 30mm aluminum
Steerer Aluminum
Crown Forged Al with Satin Black Finish

BLACK SUPER SPV 80

Weight 3.2 lbs
Travel 80mm
Damping SPV Damping
Adjustments Air, Rebound, SPV Platform Pressure, SPV Volume, Air Spring
Volume
Lubrication Semi-Bath with Evil Genius Seals
Spring Air
Casting Magnesium RA
Stanchions 30mm aluminum
Steerer Aluminum
Crown Forged Al with Satin Black Finish

BLACK SUPER

Weight 3.5 lbs
Travel 100mm or 120mm
Damping TPC Lockout
Adjustments Air, Rebound, Compression, Lockout
Lubrication Semi-Bath with Evil Genius Seals
Spring Air
Casting Magnesium RA
Stanchions 30mm aluminum
Steerer Aluminum
Crown Forged Al with Satin Black Finish

BLACK ELITE RTWD

Weight 4.2 lbs
Travel 90mm to 120mm RTWD
Damping Fluid Flow
Adjustments Rebound, Travel
Lubrication Semi-Bath with Evil Genius Seals
Spring Coil
Casting Magnesium RA
Stanchions 30mm Aluminum
Steerer Aluminum
Crown Forged Al with Satin Black Finish

BLACK ELITE 100

Weight 4.2 lbs
Travel 100mm (Preset Travel)
Damping TPC Lockout
Adjustments Rebound, Compression, Lockout
Lubrication Semi-Bath with Evil Genius Seals
Spring Coil
Casting Magnesium RA
Stanchions 30mm Aluminum
Steerer Aluminum
Crown Forged Al with Satin Black Finish



AXEL SUPER

Weight	4.2 lbs
Travel	70mm to 100mm Rapid Travel Wind Down (RTWD)
Damping	Fluid Flow Damping (FFD)
Adjustments	Rebound, Travel
Lubrication	Microtube
Spring	Coil
Casting	Magnesium RA Casting
Stanchions	28.6mm Cromo
Steerer	1 1/8" Steel Threadless

AXEL

All new for 2004, the Axel family is designed to provide new levels of high performance and high value. Features include 28.6mm stanchions, convertible travel, hydraulic damping and a Manitou RA casting for ultimate stiffness without extra weight.

**AXEL ELITE
(OEM ONLY)**

Weight	4.2 lbs
Travel	80 or 100mm Internally Convertible
Damping	Fluid Flow
Adjustments	Preload, Rebound
Lubrication	Microtube
Spring	Coil
Casting	Magnesium RA Casting
Stanchions	28.6mm cromio
Steerer	1 1/8" Steel Threadless

**AXEL COMP
(OEM ONLY)**

Weight	4.2 lbs
Travel	80 or 100mm Internally Convertible
Damping	Fluid Flow
Adjustments	Preload
Lubrication	Microtube
Spring	Coil
Casting	Magnesium RA
Stanchions	28.6mm cromio
Steerer	1 1/8" Steel Threadless



SIX

The Six is designed for the entry-level rider who doesn't want to sacrifice performance. Key features include 28.6mm stanchions, convertible travel with 80mm or 100mm and a new Reverse Arch casting.

SIX SPORT (OEM ONLY)

Weight	4.2 lbs
Travel	80mm or 100mm Internally Convertible
Damping	N/A
Adjustments	Preload
Lubrication	Microtube
Spring	Coil/MCU
Casting	Magnesium RA
Stanchions	28.6mm cromio
Steerer	1 1/8" Steel Threadless

SIX (OEM ONLY)

Weight	4.4 lbs
Travel	80mm or 100mm Internally Convertible
Damping	N/A
Adjustments	Preload
Lubrication	Microtube
Spring	Coil/MCU
Casting	Aluminum RA
Stanchions	28.6mm cromio
Steerer	1 1/8" Steel Threadless



SOUTH

A new introduction for 2004, South offers all of the comfort and versatility of the Luxe trekking fork in a more robust and stylized package. Features include preload adjustment, 28.6mm stanchions and perfectly mated ultra curvy crown and casting.

SOUTH SUPER (INT'L ONLY)

Weight	3.9 lbs
Travel	60mm or 75mm Internally Convertible
Damping	Fluid Flow with TPC Lockout
Adjustments	External Preload, Lockout
Lubrication	Microbube
Spring	Coil/MCU
Casting	Magnesium RA
Stanchions	28.6mm chromo
Steerer	Black Anodized Aluminum

SOUTH ELITE (OEM ONLY)

Weight	3.8 lbs
Travel	60mm or 75mm Internally Convertible
Adjustments	External Preload
Lubrication	Microbube
Spring	Coil
Casting	Magnesium RA
Stanchions	28.6mm chromo
Steerer	Black Anodized Aluminum

SOUTH COMP (OEM ONLY)

Weight	4.0 lbs
Travel	60mm or 75mm Internally Convertible
Adjustments	External Preload
Lubrication	Microbube
Spring	Coil
Casting	Magnesium RA
Stanchions	28.6mm chromo
Steerer	Steel Threadless



LUXE

Luxe is our trekking fork for the most discerning 700c customer. Equipped with International Standard disc brake and Dynamo (light generator) mounts adorning an all-new, magnesium Reverse Arch casting, Luxe boasts features that are virtually unheard of in this type of fork.

LUXE SUPER (OEM ONLY)

Weight	3.5 lbs
Travel	50mm or 75mm Internally Convertible
Damping	N/A
Adjustments	Preload
Lubrication	Grease
Spring	Coil/MCU
Casting	RA Magnesium
Stanchions	25.4mm chromo
Steerer	Black anodized aluminum

LUXE ELITE (OEM ONLY)

Weight	3.8 lbs
Travel	50mm travel
Damping	N/A
Adjustments	Preload
Lubrication	Grease
Spring	Coil/MCU
Casting	RA Magnesium
Stanchions	25.4mm chromo
Steerer	1 1/8" Steel Threadless

MANITOU AIR PUMPS

Manitou air pumps include a micro-pressure release control, free spinning valve coupler and high strength aluminum barrel and shaft. The standard version is for use with high-pressure air forks and shocks, while the SPV Pump only goes to 175psi for precision low-pressure fork/shock platform adjustments.



PREP M LUBE AND LUBE GUN

The best suspension fork grease ever created, Prep M was specially designed by Motorex for the rigors of professional racing. Designed to work with Manitou's Microlube grease-gun, making quick work of maintaining your investment.



MANITOU SPV 16mm VOLUME ADJUSTMENT TOOL

Use it to adjust the linear or progressive feel of your SPV fork or shock.



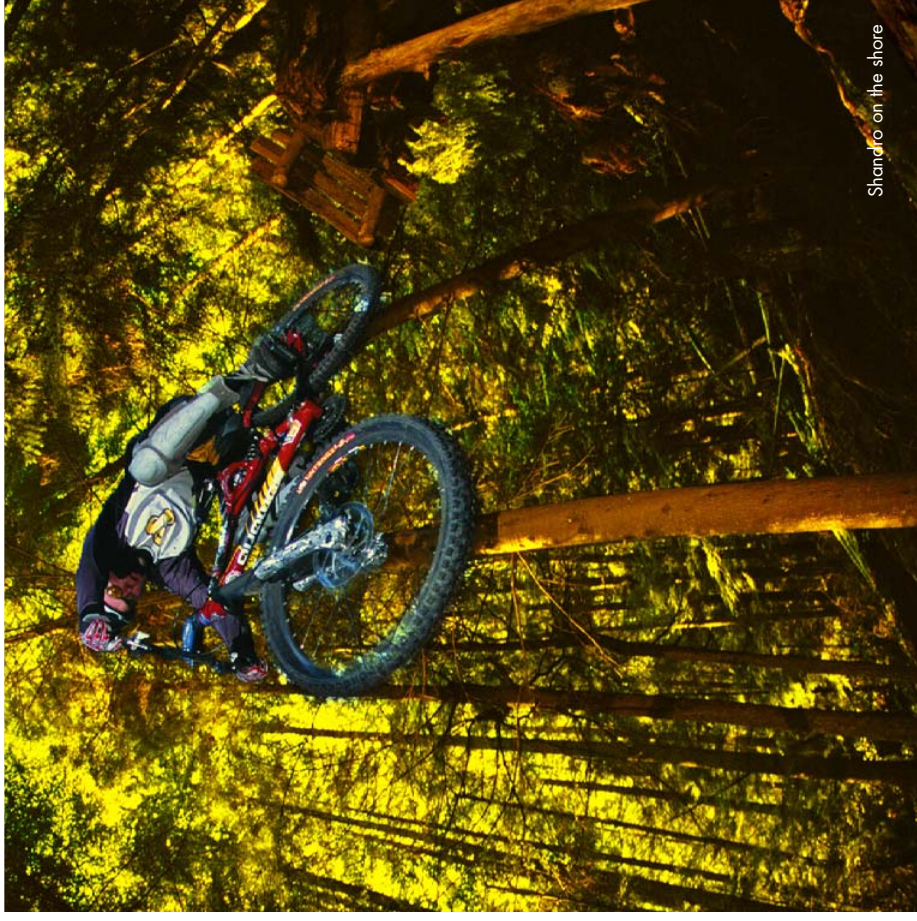
TPC LOCK OUT

With the flip of a switch you can make your fork stiff and efficient for climbing, or plush and active for descending. Now with compression damping adjustability. Available for Black, Skareb, MARS, Axel, Six, and South forks



SWINGER SPV SHOCKS

Swinger shocks feature SPV Damping, the highest performing, most tunable damping system ever developed. For 2004, we have a wide range of shocks, each developed to provide maximum bump absorption and pedaling efficiency. If you're riding a full suspension bike with a Swinger shock, you know the difference.



Shandro on the shore

SWINGER SPV AIR SHOCKS

Swinger Air Shocks with SPV provide the ultimate in tunability and performance. Each comes equipped with our new VOLUME PLUS air cap to maximize air volume. The 4-way has both SPV pressure and volume adjust. Swinger SPV Air Shocks are the perfect compliment to your full suspension bike.

SWINGER AIR SPV 3-WAY

- Weight 7.5 grams
- Damping SPV 3-Way
- Configurations See Website
- Adjustments Air, SPV Platform Pressure, Rebound
- Damper shaft Steel
- Bushings Steel / Teflon
- Negative spring Auto air
- Air canister 30 Inmpd & OLC'd
- Eyelet hardware 1-in. Al
- Options Twin Tube Canister for a more linear spring rate.
- Package Inline reservoir

SWINGER AIR SPV 4-WAY

- Weight 9.0 grams
- Damping SPV 4-Way
- Configurations See Website
- Adjustments Air, Rebound, SPV Platform Pressure, SPV Volume
- Damper shaft Steel
- Bushings Steel / Teflon
- Negative spring Auto air
- Air canister Piggy Back 30 Inmpd & OLC'd
- Eyelet hardware 1-in. Al
- Package Piggy Back reservoir





SWINGER COIL SPV 3-WAY

- Weight 350 grams
- Damping SPV 3-Way
- Configurations See Website
- Adjustments Preload, Rebound, SPV Platform Pressure
- Damper shaft Steel
- Bushings Steel/Teflon
- Eyelet hardware 1-pc S.S.
- Package Inline reservoir

SWINGER COIL SPV 4-WAY

- Weight 445 grams
- Damping SPV 4-Way
- Configurations See Website
- Adjustments Preload, Rebound, SPV Platform Pressure, SPV Volume
- Damper shaft Steel
- Bushings Steel/Teflon
- Eyelet hardware 1-pc S.S.
- Package Piggy Back

SWINGER COIL SPV 6-WAY

- Weight 500 grams
- Damping SPV 6-Way
- Configurations See Website
- Adjustments Preload, Rebound, SPV Platform Pressure, SPV Volume, Low Speed Compression, High Speed Compression
- Damper shaft Steel
- Bushings Steel/Teflon
- Eyelet hardware 1-pc S.S.
- Package Piggy Back

SWINGER SPV COIL SHOCKS

Swinger Coil Shocks have been tested by both world cup racers and top freeriders. The Verdict? The best coil spring shock ever developed. With a number of different configurations and tuning options, these SPV shocks provide the kind of performance only dreamed of just a few years ago.

MANITOU Q SHOCKS

"Q" air shocks are designed with performance, durability, weight, and cost in mind. This year, we've combined rebound adjustment and lockout into one package with the QRL, as well as adding the Twin Tube Canister option to all models for increased uncompressed air volume resulting in a more linear spring rate [for bikes with low leverage ratios and inherently rising spring rates].

Twin Tube also available on Swinger Air 3-way.

Q

Weight	*245 grams
Configurations	See Website
Adjustments	Air
Damper shaft	steel
Bushings	steel/teflon
Negative spring	Auto air
Air canister	30 torques & CNC'd
Eyelet hardware	1-pc Al
Options	Twin Tube Canister

QR

Weight	*250 grams
Configurations	See Website
Adjustments	Air, Rebound
Damper shaft	steel
Bushings	steel/teflon
Negative spring	auto air
Air canister	30 torques & CNC'd
Eyelet hardware	1-pc Al
Options	Twin Tube Canister

QRL

Weight	*270 grams
Configurations	See Website
Adjustments	Air, Lockout, Rebound
Damper shaft	steel
Bushings	steel/teflon
Negative spring	auto air
Air canister	30 torques & CNC'd
Eyelet hardware	1-pc Al
Options	Twin Tube Canister

*15mm X 30mm size used for weights



For shock part numbers, compatibility, and mounting hardware information, please call Manitou at 661/257-4411 log onto www.answerproducts.com, or visit the local distributor in your area.

MANITOU TECHNOLOGY



SPV (STABLE PLATFORM VALVE) DAMPING

Featured on Minute, Dorado, Sherman, Black & Skareb forks, Swinger shocks

- SPV features include externally adjustable pedaling platform, adjustable damping progressiveness, and a unique stabilizing valve for enhanced bump control
- Eliminates unwanted suspension movement and improves a bike's bump eating performance by eliminating compression spikes
- Quickly pre-set your bike's pedaling efficiency with a standard air pump
- The most sophisticated damping system ever developed



TPC+ POSITION ACTIVATED DAMPING

Featured on Sherman and Dorado models

- Damping system that automatically changes damping to correspond to the fork's position in travel
- Position activated damping provides initial low-resistance-enhancing bump sensitivity but then adds damping to resist bottoming
- Three piston design with independent damping pistons for rebound and compression
- Low pressure, high volume system to eliminate cavitation and heat-related problems



TPC NOW STANDARD WITH LOCKOUT!

Featured on Axel, Black, and Skareb models

- Twin independent damping pistons (Twin Piston Chamber): one optimized for rebound, the other for compression/lockout
- Low pressure, high volume system to eliminate cavitation and heat-related problems
- New Quick Range TPC allows minimum to maximum damping adjustment in a half-turn of the knob
- Compression lock out switch to eliminate unwanted bobbing during climbing and smooth terrain use



FLUID FLOW DAMPING

Featured on Axel, Skareb and Black Models

- TPC derived hydraulic damping with compression/rebound damping pistons
- Low pressure, high volume system to eliminate cavitation and heat-related problems
- Uses piston and ring design for improved function
- Adjustable rebound on some models



SEMI-BATH WITH EVIL GENIUS SEALS

Featured on all Minute, Dorado, Sherman, Skareb and Black models

- Dramatically increases durability and extends service life
- Decreases stiction and retains lubricants inside fork
- New foam wether inside fork to lubricate fork from inside
- High quality Evil Genius seals developed for motorcycle suspension



RA (REVERSE ARCH) CASTING

Featured on all Manitou forks

- Greater torsional stiffness with increased arch wrap mass in key areas
- Allows for an arch that is shorter and stiffer than traditional designs
- Optimizes the arch size, cross section and design maximizing stiffness for dramatically improved steering accuracy

onepointfive

1.5" INTERFACE STANDARD

Featured on Sherman Breakout, Breakout Plus and Firefly (optional)

- 1.5 inch interface standard for headset, cups, stem, and steerer tube
- Increased diameter improves strength, control, steering precision & durability
- Designs can be 44% stronger and 138% stiffer for similar weight of 1 1/8"
- 1.5 system allows for lightweight single crown forks with 170mm of travel
- Targeted for hardcore and extreme riding



AIR VOLUME ADJUST

- Featured on Skareb Platinum
- Increase or decrease air volume to adjust spring progressiveness
 - Externally adjustable with a 16mm wrench
 - All aluminum parts with standard Schrader air valve



RAPID TRAVEL WIND DOWN

- Featured on Black, Axel and Minute forks
- A top-mounted travel adjust feature that allows the rider to externally change the fork's travel without spring rate change.
 - New top mounted travel indicator dramatically improves functionality
 - 30mm of travel adjustment on each fork model



RAPID TRAVEL II

- Manitou exclusive featured on Sherman models
- A top-mounted travel adjust feature, which allows the rider to change the fork's travel at the flip of a switch.
 - Lowers the front end and stiffens fork to improve climbing, flip back for great descending at full travel.
 - Up to 40mm of travel change



RAPID TRAVEL ADJUST

- Manitou exclusive featured on Minute Three
- Allows the rider to change the fork's travel at the flip of a switch.
 - Lowers the front end and stiffens fork to improve climbing, flip back for great descending at full travel.
 - Now 30mm of adjustment



CONVERTIBLE TRAVEL

- Featured on SIX and Axel models
- Internally change travel between 80mm or 100mm on all Axel and Six models
 - All parts for travel change included in fork



HEX-LOCK THRU AXLE

- Manitou exclusive featured on Sherman and Dorado models
- Proprietary hex axle locks lower legs in place
 - Provides unsurpassed stiffness with standard hubs and parts
 - Replaceable Sherman screw inserts eliminate possibility of damaging casting



MICROLUBE

- Featured on all Axel and SIX model forks
- Easy and convenient lubrication via external ports
 - No disassembly required
 - Uses standard grease gun applicators
 - Microlube uses grease Motorex Prep M