



**MASTODON PRO & COMP | TRAVEL GUIDE 2019+**



# MANITOU

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888.686.3472

Support: [manitoumtb.com/support](http://manitoumtb.com/support)

**HAYES**

**m**  
manitou

**PROTAPER**

  
**REYNOLDS**

  
**SUN**  
ringle

  
WHEELSMITH  
SPOKES


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 **HAYES**  
PERFORMANCE SYSTEMS

# INTRODUCTION

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This manual is intended to guide the user through the steps necessary to change travel on the Mastodon Pro & Comp suspension forks.

 **WARNING** We highly recommend that service to this fork be performed by a certified bicycle mechanic. Failure to follow instructions presented in this manual could lead to serious injury or death. Any questions about the servicing of this fork or the manual itself should be directed to Manitou Customer Support at:  
**Phone: 888-686-3472**  
**Email: [techsupport@hayesbicycle.com](mailto:techsupport@hayesbicycle.com)**

 **WARNING** Suspension forks by design can contain preloaded springs, gases and fluids under extreme pressures. Warnings contained in this manual must be observed to avoid damage to fork, serious injury or even death.

# HAYES PERFORMANCE SYSTEMS WARRANTY

## **Limited Warranty:**

HAYES warrants its products to be free from defects in materials or workmanship under normal intended use for a period of one year (two years in European Union countries) from the date of purchase, subject to normal wear and tear. Unless otherwise prohibited by law, any such defective products will be repaired or replaced at the option of HAYES when received with proof of purchase, freight prepaid. This warranty does not cover breakage, bending, or damage that may result from crashes or falls. This warranty does not cover any defects or damage caused by alterations or modifications of HAYES products or by normal wear, accidents, improper maintenance, damages caused by the use of HAYES products with parts of different manufacturers, improper use or abuse of the product, application or uses other than those set forth in the HAYES instruction manual or failure to follow the instructions contained in the applicable HAYES instruction manual. Instruction manuals can be found on-line at [www.https://hayesbicycle.zendesk.com/hc/en-us](http://www.https://hayesbicycle.zendesk.com/hc/en-us). Any modifications made by the BUYER or any subsequent user will render the warranty null and void. This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed from the product. The cost of normal maintenance or replacement of service items, which are not defective, shall be the BUYER's responsibility. If permitted by local law, this warranty is expressly in lieu of all other warranties (except as to title), express or implied, and in particular and without limitation HAYES disclaims the implied warranties of merchantability or fitness for purpose. If for any reason warranty work is necessary, return the component to the place of purchase or contact your dealer or local HAYES distributor. In the USA, contact HAYES for a return authorization number (RA#) at (888) 686-3472 or [techsupport@hayesbicycle.com](mailto:techsupport@hayesbicycle.com). In Canada, Manitou service and warranty is available through Smithtech [ (778) 987-6827 or [manitouzac@gmail.com](mailto:manitouzac@gmail.com)] or S4 Suspension [ (450) 504-1148 or [myriam@s4suspension.com](mailto:myriam@s4suspension.com)]. In Europe, HAYES can be reached directly at +49 89 203237450 or [techsupporteu@hayesbicycle.com](mailto:techsupporteu@hayesbicycle.com). European customers can also contact their dealer or local HAYES distributor. Customers in countries not listed should contact their local HAYES dealer or distributor

## **Limitation of Liability:**

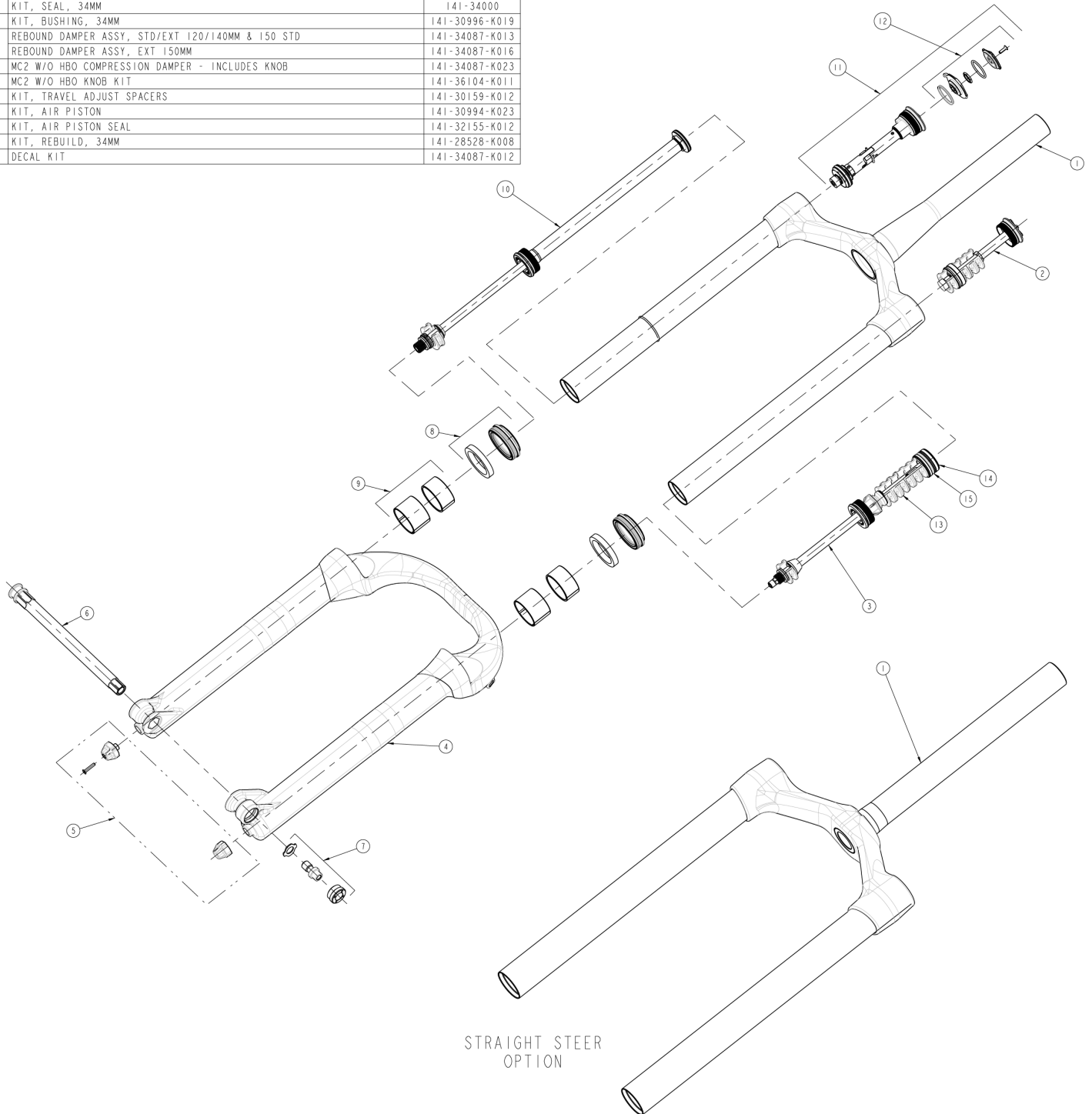
Unless required by mandatory law, HAYES shall not be liable for any incidental, indirect, special or consequential damages.

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage through normal use, failure to service according to recommendations or riding in conditions other than recommended. The cost of normal maintenance or replacement of service items, which are not defective, shall be paid for by the original purchaser. Wear and tear parts that will not be replaced under warranty include but are not limited to the following:

Bushings	Dust Seals	Stripped or Worn Bolts
Rear Shock Mount Hardware	Air Seals and/or O-rings	Remote Lockout Cable
Handlebar grips	Upper Stanchion Tubes	Lower Stanchion Tubes(Dorado)
Tubeless Valves	Tubeless Tape	Pads
Rotors	Bearings	Gloves

# MASTODON PRO STD & EXT EXPLODED VIEW

MASTODON PRO 26/27.5		
ITEM	PART DESCRIPTION	PART NUMBER
1	SERVICE, MY19 MASTODON PRO CSA M31x0.8 BLK 100-150 STD, 100-140 EXT	141-34087-K021
	SERVICE, MY19 MASTODON PRO CSA M31x0.8 BLK 150 STD EXT	141-34087-K022
2	AIR CAP/VOLUME ADJUST	141-35384-K006
3	PRO STD/EXT AIR SPRING ASSEMBLY	141-30996-K005
4	OUTER CASTING (INCLUDES SEALS AND BUSHINGS)	141-34078-K009
5	REBOUND ADJUST & AIR CAP KNOBS	141-32155-K016
6	HEXLOCK SL 150MM AXLE (INCL HARDWARE)	141-33147-K004
7	HEXLOCK SL AXLE HARDWARE	141-33147-K003
8	KIT, SEAL, 34MM	141-34000
9	KIT, BUSHING, 34MM	141-30996-K019
10	REBOUND DAMPER ASSY, STD/EXT 120/140MM & 150 STD	141-34087-K013
	REBOUND DAMPER ASSY, EXT 150MM	141-34087-K016
11	MC2 W/O HBO COMPRESSION DAMPER - INCLUDES KNOB	141-34087-K023
12	MC2 W/O HBO KNOB KIT	141-36104-K011
13	KIT, TRAVEL ADJUST SPACERS	141-30159-K012
14	KIT, AIR PISTON	141-30994-K023
15	KIT, AIR PISTON SEAL	141-32155-K012
	KIT, REBUILD, 34MM	141-28528-K008
	DECAL KIT	141-34087-K012



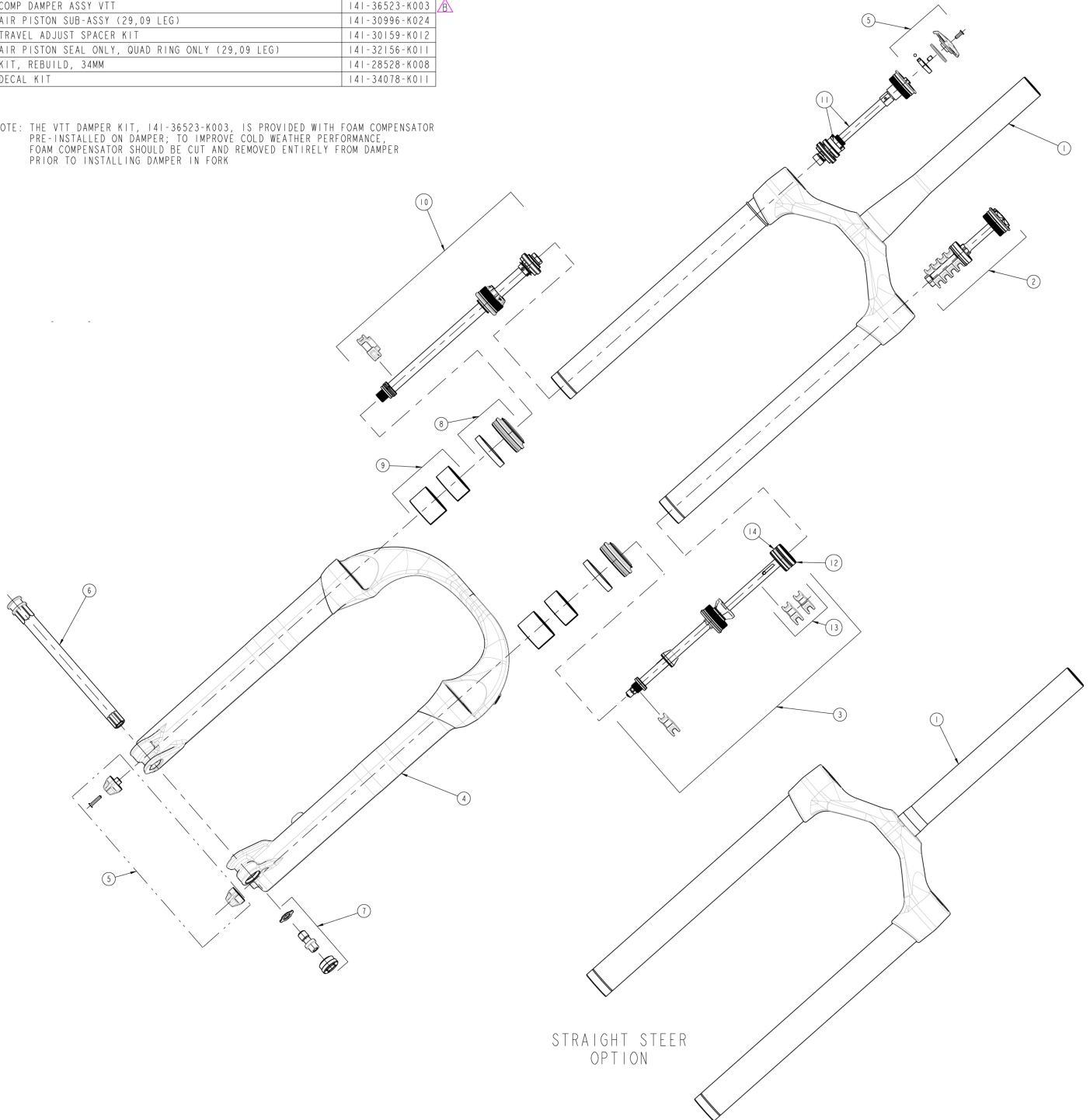
STRAIGHT STEER  
OPTION

# MASTODON COMP STD & EXT EXPLODED VIEW

MY19 MASTODON COMP 26/27.5		
ITEM	PART DESCRIPTION	PART NUMBER
1	CROWN/STEER/LEG 80/100 - 1.50 TAPER STEER	141-34078-K017
2	AIR CAP/VOLUME ADJUST IVA MATTOC COMP 29	141-32668-K007
3	AIR SPRING ASSEMBLY STD	141-32405-K002
4	OUTER CASTING (INCLUDES SEALS AND BUSHINGS) WITHOUT AXLE	141-34078-K009
5	COMP AND REBOUND KNOB KIT - VTT	141-35488-K001
6	COMP AND REBOUND KNOB KIT - VTT REMOTE	141-35488-K002
7	HEXLOCK SL 150MM AXLE (INCL. HARDWARE)	141-33147-K004
8	KIT, HEXLOCK SL AXLE HARDWARE	141-33147-K003
9	KIT, SEAL, 34MM	141-34000
10	KIT, BUSHING, 34MM	141-30996-K019
11	REBOUND DAMPER ASSEMBLY	141-34078-K010
12	COMP DAMPER ASSY VTT	141-36523-K003
13	AIR PISTON SUB-ASSY (29,09 LEG)	141-30996-K024
14	TRAVEL ADJUST SPACER KIT	141-30159-K012
15	AIR PISTON SEAL ONLY, QUAD RING ONLY (29,09 LEG)	141-32156-K011
16	KIT, REBUILD, 34MM	141-28528-K008
17	DECAL KIT	141-34078-K011

MUST ORDER AXLE AND/OR HARDWARE SEPARATELY

NOTE: THE VTT DAMPER KIT, 141-36523-K003, IS PROVIDED WITH FOAM COMPENSATOR PRE-INSTALLED ON DAMPER. TO IMPROVE COLD WEATHER PERFORMANCE, FOAM COMPENSATOR SHOULD BE CUT AND REMOVED ENTIRELY FROM DAMPER PRIOR TO INSTALLING DAMPER IN FORK



# MASTODON TRAVEL CHANGE

In order to change the travel of the Mastodon Pro/Comp (STD & EXT), first refer to the corresponding Mastodon service guide found on the service page of Manitoumtb.com. Change the spacer configuration of the rebound and compression rods using the information provided in the guide. As per the service guide remember to check and adjust the damper oil height after changing the forks travel. For complete service instructions, damper oil heights and other information refer to the corresponding Mastodon service guide found on the service page of [www.Manitoumtb.com](http://www.Manitoumtb.com).

**NOTE: THE SAME AMOUNT OF SPACERS ARE REQUIRED ON THE REBOUND AND COMPRESSION SIDE.**

## STD vs EXT Ride Height & Travel

Travel (mm)	Mastodon STD		Mastodon EXT	
	Pro	Comp	Pro	Comp
80	-	492.5	-	513.2
100	511	511	531	530.3
120	531	530.6	551	550
140	551	551	571	571
150	561	-	581	-

## Allowable Tire Sizes Per Fork

Mastodon STD	Mastodon EXT
Max Overall Diameter	Max Overall Diameter
756mm	796mm
Max Casing Width	Max Casing Width
131mm	131mm

# MASTODON SIZE TIRE CHART

Brand	Tire	Size	Mastodon STD	Mastodon EXT	Max. Overall Diameter	Max Casing Width
<b>45NRTH1</b>						
	Dillinger 4	26X4	X	X	745mm	106mm
	Dillinger 5	26X4		X	759mm	102mm
	Dunderbeist	26X4.6		X	760mm	116mm
	Flowbeist	26X4.6		X	760mm	115mm
	Husker Du	26X4	X	X	728mm	105mm
	Vanhelga	26X4	X	X	744mm	108mm
<b>Bontrager</b>						
	Barbegazi2	27.5X4.5		X	791mm	116mm
<b>Kenda</b>						
	Juggernaut2	26X4.5		X	778mm	117mm
<b>Maxxis</b>						
	Minion FBF3	27.5X3.8	X	X	755mm	97.5mm
<b>Surly1</b>						
	Big Fat Larry	26X4.7		X	756.5mm	118mm
	Black Floyd	26X3.8	X	X	735.5mm	111mm
	Bud	26X4.8		X	775.5mm	125mm
	Endomorph	26X3.7	X	X	736mm	106mm
	Knard 3.8	26X3.8	X	X	742mm	107mm
	Knard 4.8	26X4.8		X	771.5mm	126mm
	Larry	26X3.8	X	X	745mm	111mm
	Lou	26X4.7		X	778mm	124mm
	Nate	26X3.8	X	X	745mm	112mm
<b>Schwalbe</b>	Jumbo Jim	26X4.8		X	775.9	123.2
	Jumbo Jim	26x4.4	X	X	759.5	111.2
	Jumbo Jim	26X4.0	X	X	743.1	103.8
<b>Vee Rubber</b>						
	Snowshoe 2XL4	26X5.05		X	791mm	116mm

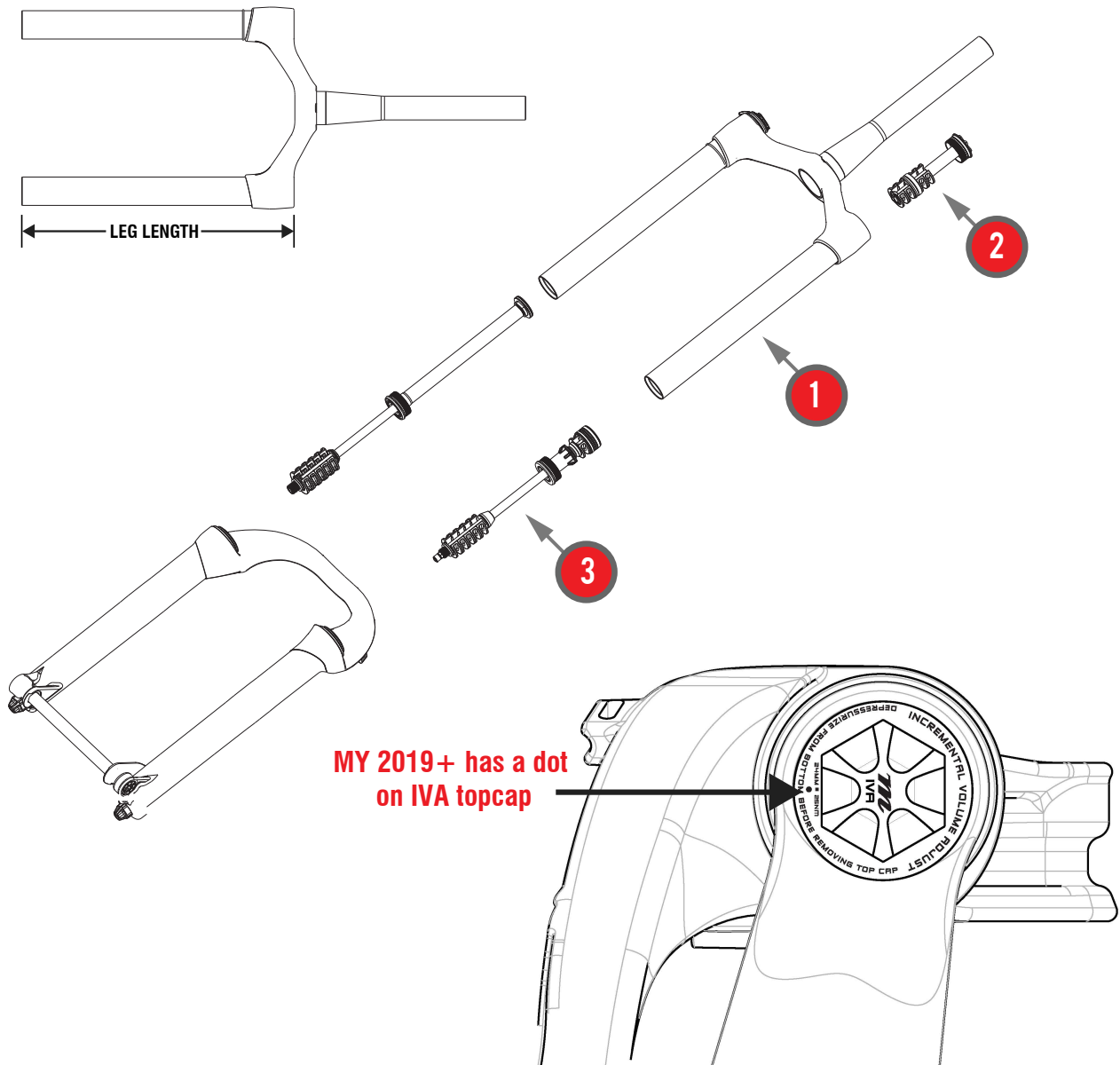


# MASTODON IVA & GUIDE

## MASTODON PRO/COMP CSA GUIDE **1**

Model year 2019 to present all Pro and Comp travel configurations use 367mm leg lengths besides the Pro EXT 150mm travel configuration, which uses 377mm. 2019 to present Mastodon forks will have a dot on the IVA top cap. (see below for example.) If there is no dot present, or the travel spacer configuration found in the fork does not match this chart please consult the older travel adjust guide. Before modifying travel, confirm that leg length (shown below) matches the leg length of the desired travel setting. Measured leg length may vary slightly due to manufacturing Tolerances and measurement method.

**FAILURE TO USE THE CORRECT CSA FOR A GIVEN TRAVEL MAY CAUSE STRUCTURAL DAMAGE TO THE FORK AND RESULT IN SERIOUS INJURY TO THE RIDER.**



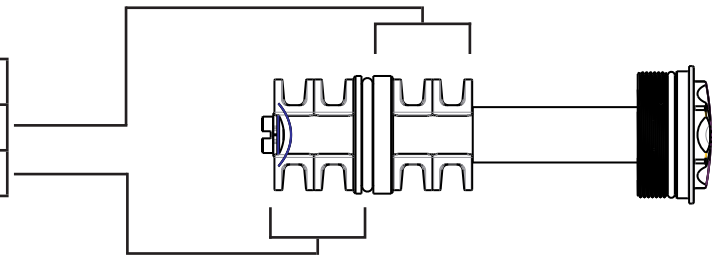
# MASTODON SPACER GUIDE

## MASTODON PRO/COMP CSA GUIDE 2

All Mastodon assemblies are equipped with incremental volume adjust (IVA) air spring volume may be adjusted by moving the piston up or down to modify the ramp-up of the air spring. If the travel is adjusted, the IVA piston height should also be adjusted to maintain the air spring rate. Factory settings are shown below.

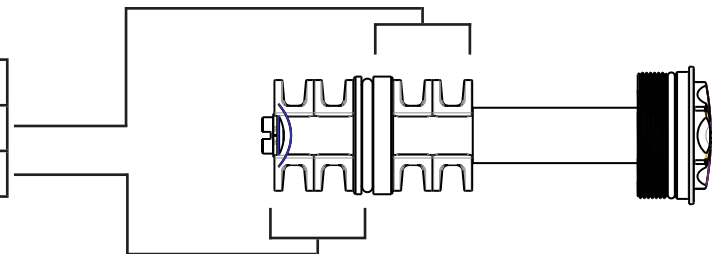
### PRO

TRAVEL (mm)	100	120	140	150
SPACERS ABOVE PISTON	3	2	1	0
SPACERS BELOW PISTON	1	2	3	4



### COMP

TRAVEL (mm)	80	100	120	140
SPACERS ABOVE PISTON	3	2	1	0
SPACERS BELOW PISTON	1	2	3	4



# MASTODON SPACER GUIDE

Depending on the crown steerer assembly (CSA) your fork was built with you may have a few travel change options. Pro STD models are adjustable from 100-150mm, and Pro EXT from 100-140mm. The Pro EXT 150 is adjustable from 100-150mm

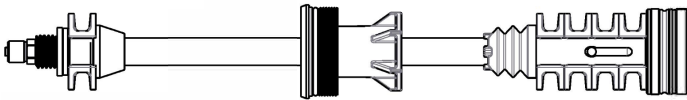
**EXAMPLE:** The Mastodon Pro STD is set at 120 with four travel spacers. Removing one 10mm spacer will set it at 130. Removing two 10mm will set the fork at 140mm as seen below.

## MASTODON PRO STD/EXT SPACER GUIDE 3

### PRO STD

BOTTOM-OUT SPACER

TOP-OUT SPACERS

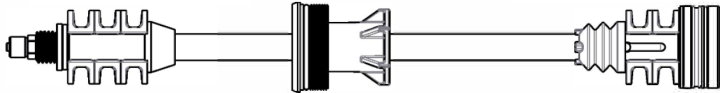


TRAVEL (mm)	100	120	140	150
LEG LENGTH (mm)	367	367	367	367
BOTTOM-OUT SPACERS (P/N 121-29113)	1	1	1	1
TOP-OUT SPACERS (P/N 121-29113)	6	4	2	1

### PRO EXT

BOTTOM-OUT SPACERS

TOP-OUT SPACERS

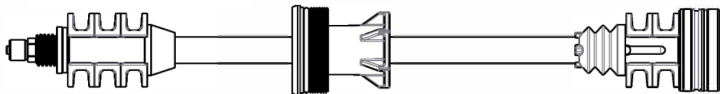


TRAVEL (mm)	100	120	140	150
LEG LENGTH (mm)	367	367	367	377
BOTTOM-OUT SPACERS (P/N 121-29113)	3	3	3	2
TOP-OUT SPACERS (P/N 121-29113)	4	2	0	0

### PRO EXT 150

BOTTOM-OUT SPACERS

TOP-OUT SPACERS



TRAVEL (mm)	100	120	140	150
LEG LENGTH (mm)	377	377	377	377
BOTTOM-OUT SPACERS (P/N 121-29113)	2	2	2	2
TOP-OUT SPACERS (P/N 121-29113)	5	3	1	0

**NOTE: THE SAME NUMBER OF BOTTOM-OUT SPACERS SHOULD BE PRESENT ON BOTH THE AIR SPRING AND REBOUND ASSEMBLIES FOR A GIVEN TRAVEL.**

# MASTODON SPACER GUIDE

Depending on the crown steerer assembly (CSA) your fork was built with you may have a few travel change options. Comp models are adjustable from 80-140mm.

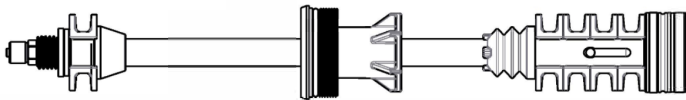
**EXAMPLE:** The Mastodon Pro STD is set at 120 with four travel spacers. Removing one 10mm spacer will set it at 130. Removing two 10mm will set the fork at 140mm as seen below.

## MASTODON COMP STD/EXT SPACER GUIDE 3

### COMP STD

BOTTOM-OUT SPACER

TOP-OUT SPACERS

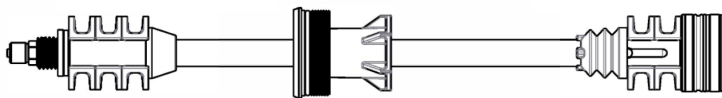


TRAVEL (mm)	80	100	120	140	150
LEG LENGTH (mm)	367	367	367	367	N/A
BOTTOM-OUT SPACERS (P/N 121-29113)	1	1	1	1	N/A
TOP-OUT SPACERS (P/N 121-29113)	8	6	4	2	N/A

### COMPEXT

BOTTOM-OUT SPACERS

TOP-OUT SPACERS



TRAVEL (mm)	80	100	120	140	150
LEG LENGTH (mm)	367	367	367	367	N/A
BOTTOM-OUT SPACERS (P/N 121-29113)	3	3	3	3	N/A
TOP-OUT SPACERS (P/N 121-29113)	6	4	2	0	N/A

**NOTE: THE SAME NUMBER OF BOTTOM-OUT SPACERS SHOULD BE PRESENT ON BOTH THE AIR SPRING AND REBOUND ASSEMBLIES FOR A GIVEN TRAVEL.**

## GLOBAL HEADQUARTERS & HAYES BICYCLE GROUP USA

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