

# 2019

TECH BOOK



cannondale

# Lefty, Headshok



# Required Maintenance

Required maintenance items noted in the following tables must be followed. The items listed are based upon expected normal riding conditions and an average rider. All the items shown must be completed as directed and within the time frame noted. Performing the required maintenance is necessary for detecting/preventing damage and maintaining the safe operating condition of the product. It is also required to meet the conditions of the applicable limited warranty.

## Lefty Ocho, Oliver, Olaf

SERVICE ITEM	FREQUENCY **	PERFORMED BY
Damage Inspection	Before Every Ride	Owner
Check Fastener Torque	First Ride/Every 4-5 Rides	Owner
Manual Reset	50 Hours	Owner
100-Hour Service (Telescope Lubrication, Air Spring Service, Damper Inspection)	Every 100 Hours/Annually	Authorized Cannondale Dealer or Authorized Headshok Service Center
Full Service (Telescope Rebuild, Air Spring Service, Damper Service)	Every 200 Hours/Bi-annually	Authorized Headshok Service Center or Factory Tech Room

## Headshok DL50

SERVICE ITEM	FREQUENCY **	PERFORMED BY
Damage Inspection	Before Every Ride	Owner
Boot Inspection	Before Every Ride	Owner
Clean/Re-Grease Telescope	Every 25 Hrs	Authorized Cannondale Dealer
Needle Bearing Reset	Every 25 Hours	Authorized Cannondale Dealer
Service Spring /Damper System Inspection	Every 100 Hours	Authorized Cannondale Dealer
Professional Service	Annually (minimum)	Authorized Headshok Service Center or Factory Tech Room

PLEASE NOTE:

\*\* Shorter service intervals are recommended for riders seeking the highest possible performance or who experience the following situations:

- High frequency of riding
- Adverse conditions while riding
- Bicycle storage in an area of high humidity, large temperature changes or outdoor conditions

# Troubleshooting

## Lefty Ocho

Symptom	Cause	Solution
Front hub has side-to-side play	Tolerance variance in hub	Install 1 -3 shims from K86068 behind non-drive side bearing
Threads pulling out of Lefty Spindle	Thread insert or axle bolt is damaged	Replace thread insert with K54128 (kit of 10x thread inserts only) or KH057/ (installation tool and 10x thread inserts) Replace hub bolt with axle cap and bolt kit (KH124/)
Loss of air pressure	Damaged valve core or air seals	Perform 100 hour service replacing all air seals and valve core with K57009
Lockout blowoff is too firm or light	No issue	Leftys have a factory set lockout blow-off per bicycle type. Lockout thresholds can be adjusted by Headshok Service Centers and Cannondale Factory Tech Rooms
Cannot achieve full travel	Improper spring settings	Reduce air pressure or remove Ramp Clamps
	Bearing migration	Bearing reset - See " <b>Manual Reset</b> " for instructions
Achieve full travel too easily	Improper spring settings	Increase air pressure or install Ramp Clamps (K51009)
Harsh or noisy top out	Air spring not balanced	Cycle fork 5-10 times to balance air spring system Perform 100 hour service replacing all air seals and valve core with K57009
	Bearing migration	Bearing reset - See "Manual Reset" page for instructions
No lockout function	Remote setup is incorrect	See "Lefty Ocho Lockout Set Up" page for instructions
No lockout function with no rebound adjustment	Damper has lost oil	Service damper or replace damper
No rebound adjustment		
Oil leaking at wiper seal	Inner leg or wiper seal is compromised	Send to Headshok Service Center or Cannondale Factory Tech Room
Brake mount appears loose	Hourglass bolt not at proper depth in fork leg	See "Hourglass Bolt Setup Procedure" Tech Note.

# Troubleshooting

## Lefty Oliver / Lefty Olaf

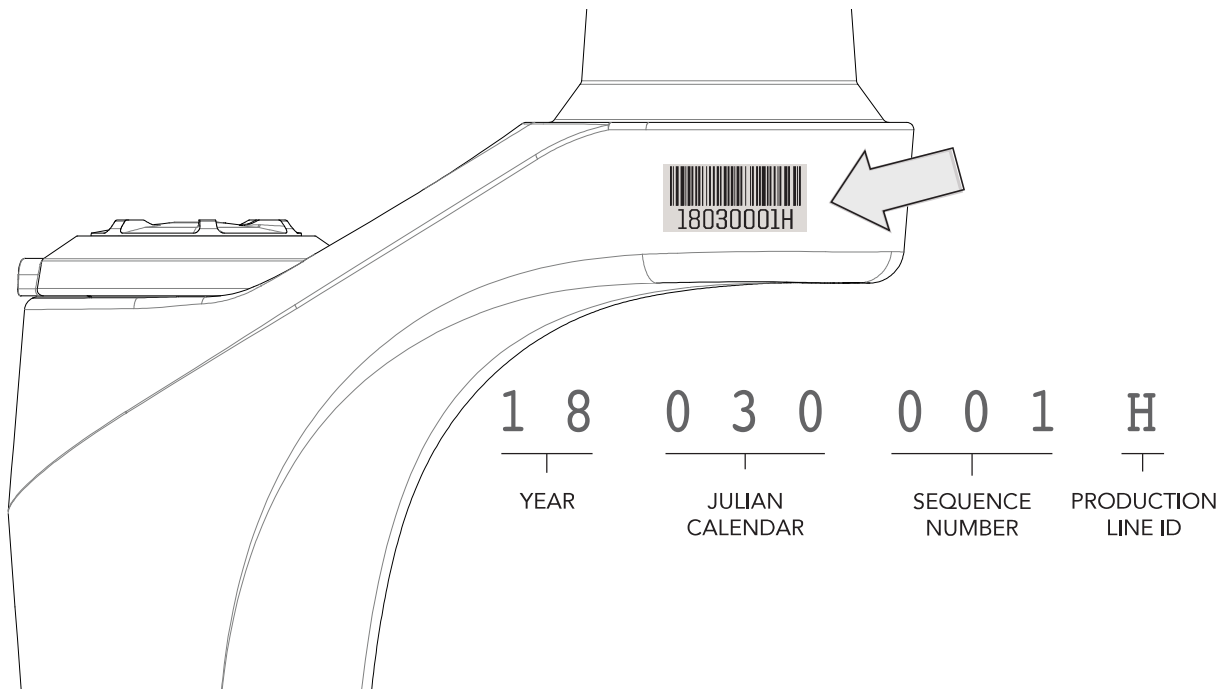
Symptom	Cause/s	Solution
Front hub has side-to-side play	Tolerance variance in hub	Install 1 -3 shims from K86068 behind non-drive side bearing
Threads pulling out of Lefty Spindle	Thread insert or axle bolt is damaged	Replace thread insert with K54128 (kit of 10x thread inserts only) or KH057/ (installation tool and 10x thread inserts) Replace hub bolt with axle cap and bolt kit QC117/ (Oliver) or KH162/ (Olaf)
Loss of air pressure	Damaged valve core or air seals	Perform 100 hour service replacing all air seals and valve core with CK5407U00OS (Olaf), KH203/ (Oliver)
Lockout blowoff is too firm or light	No issue	Leftys have a factory set lockout blowoff per bicycle type. Lockout thresholds can be adjusted by Headshok Service Centers and Cannondale Factory Tech Rooms
Cannot achieve full travel	Improper spring settings	Reduce air pressure. Reduce volume reducers.
	Bearing migration	Bearing reset - See "Maunal Reset" page for instructions
Harsh or noisy top out	Air spring not balancing	Perform 100 hour service replacing all air seals and valve core with CK5407U00OS (Olaf), KH203/ (Oliver)
	Bearing migration	Bearing reset - See "Maunal Reset" page for instructions
No lockout function with no rebound adjustment	Damper has lost oil	Service damper or replace damper
No rebound adjustment	Damper has lost oil	Service damper or replace damper
Sinking into travel during riding	Air assembly is sealing inconsistently	Replace with new 2Spring assembly (Olaf), Perform 100 hour service replacing all air seals and valve core with KH203/ (Oliver)
Rebounds very slowly		
Does not rebound after being compressed		
Oil leaking at wiper seal	Inner leg or wiper seal is compromised	Send to Headshok Service Center or Cannondale Factory Tech Room

# Troubleshooting

## Headshok DL50

Symptom	Cause	Solution
Not using all fork travel	Spring is too firm	Replace with softer spring
Harsh or noisy top out	Damper has lost oil	Service or replace damper
	Spring is too firm	Replace with softer spring
Going through all fork travel	Spring is too soft	Replace with firmer spring
Lockout not functioning	Damper has lost oil	Service or replace damper

# Lefty Serial Number



The 9-character serial number system consists of the following definitions:

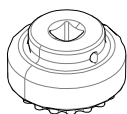
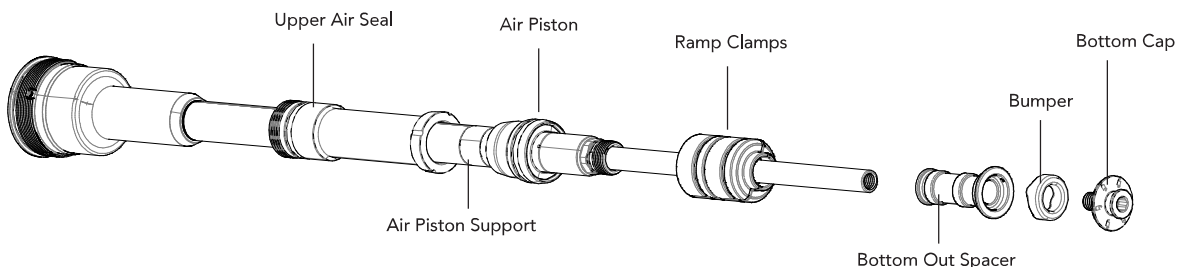
YEAR	The last two digits of the calendar year produced.
JULIAN CALENDAR	A successive number for each day of the year
SEQUENCE NUMBER	A successive independent numbers that create an individual number per fork built on the given production line that day.
PRODUCTION LINE ID	The identification part number (A,B,C, etc.) of which production line was used by our factory.

In the example...

The Lefty was the 1st Lefty produced on production line H on January 30, 2018.

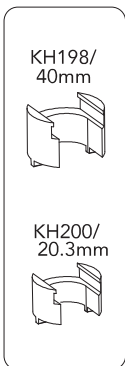
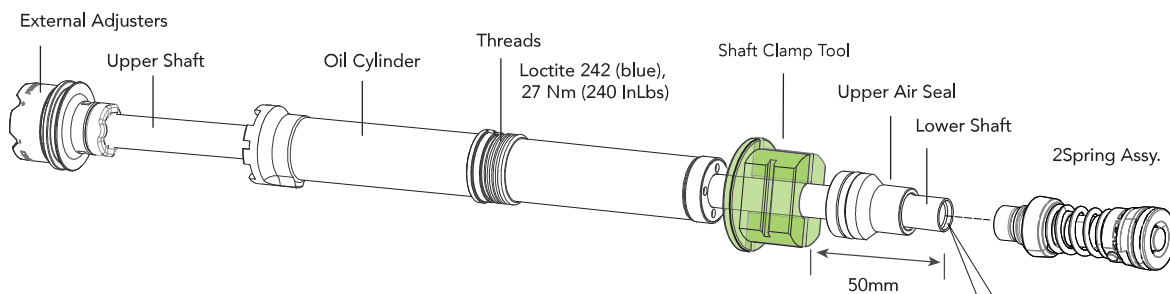
# Dampers

## Ocho Chamber Damper



CK9108U000S - 39mm 18 Point Lefty Damper Tool

## Oliver, Olaf Cartridge

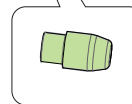


HDTL187/  
1/2" Shaft Clamps

KH135/  
16mm Shaft Clamps

Use with a bench vice or vice grip to hold lower shaft for installation of the SOLO AIR or 2Spring assembly.

**NOTICE:**  
Position shaft clamp 50mm from shaft end.



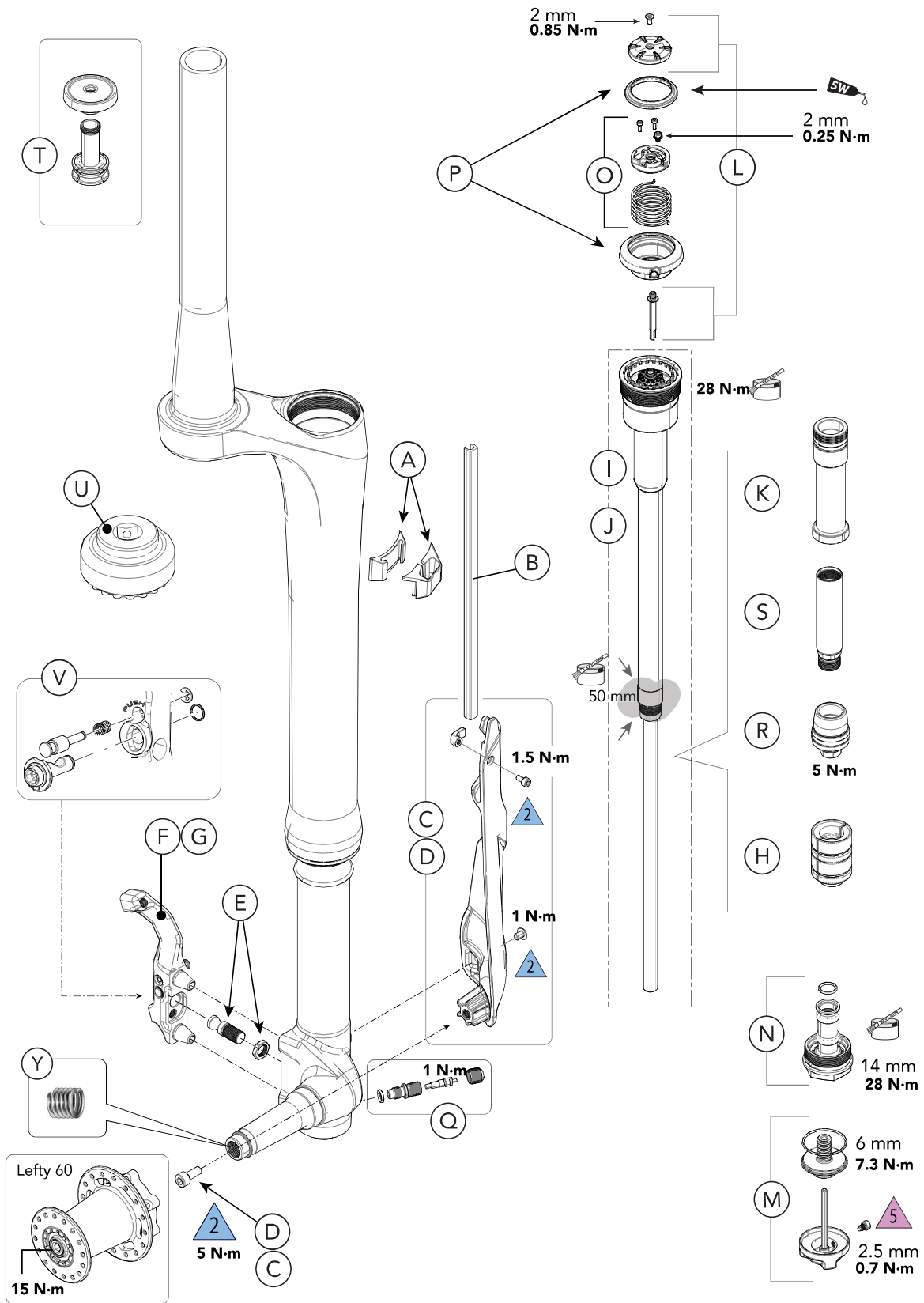
HDTL168/  
1/2" Bullet

KH136/  
16mm Bullet

Insert into end of lower shaft to prevent damage of O-rings during upper air seal installation.



# Lefty Ocho (2019)



# Lefty Ocho (2019)

## Service Parts

ID	Part Number	Structure Parts
A	K53089	Lefty Ocho Cable Guide
B	K54029	Lefty C Tube Kit 200 mm
C	K5307929	Lefty Ocho Guideguard 29
D	K5307927	Lefty Ocho Guideguard 27.5
E	K31039	Lefty Stoplock Adapter Hourglass Bolt
F	K31019	Lefty Stoplock Brake Adapter 160mm
G	K31029	Lefty Stoplock Brake Adapter 180mm
V	K31069	Lefty StopLock Hardware
Y	K54128	Lefty Helicoils (QTY 10)

ID	Part Number	Damper And Air Spring Parts
H	K51009	Lefty Oppo Ramp Clamps
I	K5203927	Lefty Chamber Damper 100mm 27.5
J	K5203929	Lefty Chamber Damper 100mm 29
K	K51019	Lefty Oppo Upper Air Seal 97mm
L	K36019	Lefty Compression Knob
M	K36029	Lefty Rebound Knob Assembly
N	K51029	Lefty Bottom Cap
O	K36039	Lefty Lockout Pulley
P	K36049	Lefty Remote Housing
Q	K51039	Lefty Sidecar Valve Assembly
R	K51049	Lefty Oppo Air Piston
S	K51059	Lefty Oppo Air Piston Support
--	K57009	Lefty Oppo 100 Hour Seals

ID	Part Number	Steerer And Headset Parts
T	K35009	SL Compression Plug w/ Top Cap Required for carbon models
--	K35019	Headset Si to Tapered w/ Drop-in Cup

ID	Part Number	Service Tools
U	CK9108U000S	39mm 18 Point Lefty Damper Tool

## Specification

Item	Specification			
	Carbon		Alloy	
Wheel Size	27.5 in	29 in	27.5 in	29 in
External Adjustments	Air Pressure, Rebound, Compression, Lockout			
Remote Compatibility	FOX 2 POS (p/n 820-0701250, R), RockShox OneLoc			
Recommended Sag - 25%	25 mm			
Axle-to-Crown	490 mm	510 mm	490 mm	510 mm
Travel Length	100 mm			
Minimum Tire-to-Crown Clearance	3 mm			
Fork Offset	50 mm	55 mm	50 mm	55 mm
StopLock Brake Brake Mount (disc dia./adapter )	Minimum: 160 mm / K31019 Maximum: 180 mm / K31029			
Hub Compatibility	Lefty 60			
Bike Models:	F-Si, Scalpel			
Maximum Tire Size: (Width/Dia.)	63 mm x 720 mm	63 mm x 760mm	63 mm x 720 mm	63 mm x 760 mm
Headset Compression Assy.	Only Cannondale® p/n - K35009		1-1/8 in Star Nut Aheadset® - ASN8	
Maximum Stack Hieght	55 mm		55 mm	
Stem Clamp Dia.	28.6 mm			
Steerer: Type/Taper Length	Tapered 1.5 in - 1-1/8 in / 86 mm			
Crown Race: Type/ Bearing / Degree	Bonded 1.5 in / 36 °		1.5 in / 36 °	
Manual Reset Length +/- 5 (mm)	0 mm	20 mm	0 mm	20 mm
Air Pressure Limits	Minimum: 50 psi / 2.4 bar Maximum: 250 psi / 17 bar			
▲ Intended Use	ASTM CONDITION 3, Hardtails.			
▲ Max. Weight Limit Total (Rider+All Equipment):	305 lbs / 150 kg			

# Lefty Ocho Brake Routing

1. Loosen the 2.5mm hex bolt at the top of the GuideGuard so the hose clamp can move freely. Let the hose clamp hang downwards.

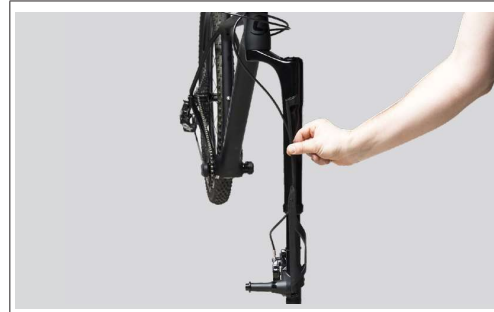


2. Route the brake hose through the channel at the top of the GuideGuard. Rotate the hose clamp so it covers the brake hose. Torque the hose clamp to 1.5 Nm with a 2.5mm hex wrench.

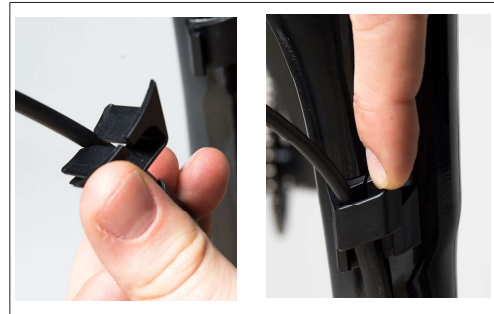


3. Check the brake hose and ensure that it does not contact the Lefty lower leg, brake rotor or wheel spokes.
  - a. If the brake hose contacts the Lefty lower leg, remove the StopLock brake mount, rotate the brake caliper 360 degrees clockwise and reinstall the brake mount.
  - b. If the brake hose contacts the brake rotor or wheel spokes, adjust the brake banjo angle and/or loosen the hose clamp and draw more brake hose above the GuideGuard.

4. Unclip the upper cable guide from the fork by pushing it upwards.
5. Clip the bottom end of the C-tube over the brake hose. Slide the C-tube downwards until it bottoms out on the GuideGuard then clip onto brake hose.

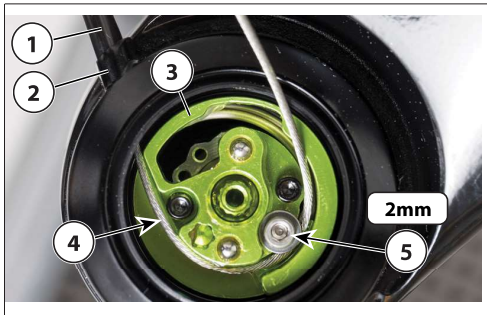


6. Insert the brake hose through the split in the back of the upper cable guide. Insert the upper cable guide into the base and push down to fully seat it.

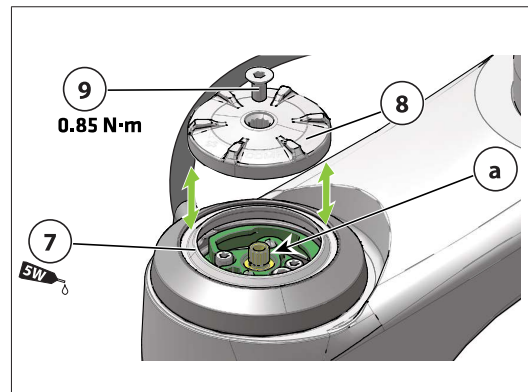
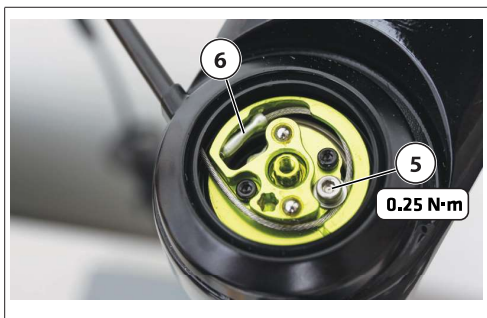


# Lefty Ocho Lockout Set Up

1. Cut a length of 4mm derailleur housing (1) to extend between the handlebar lockout remote lever and remote housing (2) stop. Install an inline barrel adjuster 20-30mm from the lever end.
2. Set handlebar lockout remote to descend mode.
3. Remove compression knob screw (9) and lift off the compression knob (8) to expose the lockout pulley (3).
4. At the lockout lever, feed the shift cable (4) end through to the remote housing. Pull the cable tight to seat the housing in the housing stop.
5. Loosen anchor bolt (5) and feed the cable under the bolt and in the channel as shown.
6. Pull the cable tight and tighten the anchor bolt (5) to 0.25Nm.
7. Use the barrel adjuster to remove cable slack.
8. Trim the cable 30mm from the cable anchor bolt, install a cable crimp (6) and tuck the cable into the pulley pocket as shown. The cable end must not protrude above the lockout pulley. This will interfere with the compression adjuster knob.
9. Lubricate the adjuster seal (7) with 5w or lighter suspension oil. Do not use grease
10. Insert the compression adjuster knob (8) over the splines (a) on the compression rod. Lightly tighten the compression knob screw (9). Rotate the compression adjuster knob fully clockwise then fully counter clockwise to seat the compression adjuster seal.
11. Hold the compression adjuster knob stationary with your fingers, tighten the screw (9) to 0.85 Nm.



6. Pull the cable tight and tighten the anchor bolt (5) to 0.25Nm.



11. Hold the compression adjuster knob stationary with your fingers, tighten the screw (9) to 0.85 Nm.

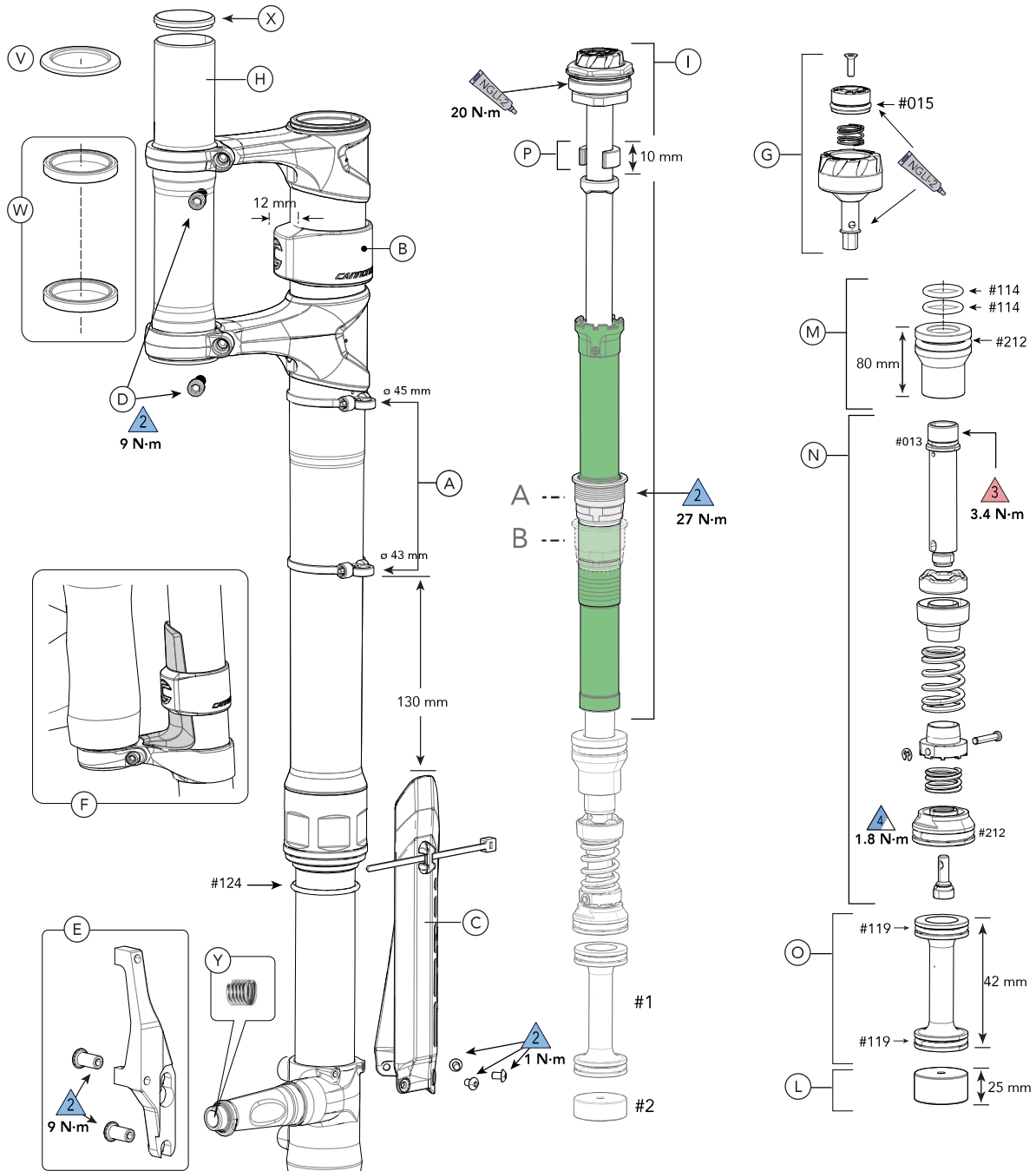
## NOTICE

Over-tightening the screw (9) will result in compression knob being difficult to turn or damaged.

# Lefty Olaf

PBR 100 - 26 in FAT

Recommended Sag	25-30 mm
Travel Length	100 mm
Manual Reset Length	35 mm +/- 3
Pressure Limits	Minimum 50 psi, Maximum 225 psi
Offset	60 mm
Intended Use	ASTM CONDITION 3, XC Cross-Country
Bike Model:	Fat CAAD



Head Tube Length	97 mm	110 mm	122 mm	134 mm
Travel Reducer	10 mm			
Upper Air Seal Length	80 mm			
Threaded Ring Position	A	A	B	B
#1 Volume Reducer - Dogbone	42 mm			
#2 Volume Reducer - Puck(S)	--	--	25 mm	25 mm
Frame Bumper Size	12 mm			



# Lefty Olaf

## PBR 100 - 26 in FAT

ID	Part Number	Structure Parts	Comment
A	CK3417U00OS	Lefty Brake Hose Guides	Contains multiple clamp types/size , use 45 mm and 43 mm.
B	KH172/	Lefty Frame Bumper 12 mm	
C	KH137/	Lefty Hybrid 36 140 Fork Guard	
D	KH161/	Lefty Clamp Bolts 20 mm	
E	KH112/	Supermax Brake Adapter 29 60/55OS 180	
F	KH219/05	Lefty Olaf Cable Guard	
Y	K54128	Lefty Helicoils (QTY 10)	

ID	Part Number	Damper And Air Spring Parts	Comment
G	KH188/	Lefty 2.0 PBR Knob RED/GRN	
I	KH132/	Lefty Supermax 2.0 Damper PBR GRN	
J	KH143/	Lefty Supermax Schrader Plug	
K	KH047/	Lefty Valve Cores (QTY 10)	
L	KH117/	Lefty 36 Volume Reducer Pucks	
M	CK3437U0080	Lefty 36 Upper Air Seal 16 mm Shaft 80 mm	
N	CK5057U00OS	Lefty 36 16mm 2Spring Air Assembly	
O	CK3447U0042	Lefty 36 Volume Reducer 42 mm	This is the Dog Bone reducer #1
--	CK5407U00OS	Lefty 2Spring Universal 100 Hour Seal Kit	100 Hour Seal Kit
P	CK3497U00OS	Lefty Travel Reducers 16 mm Shaft	
Q	CK3487U00OS	Lefty Valve Cap	

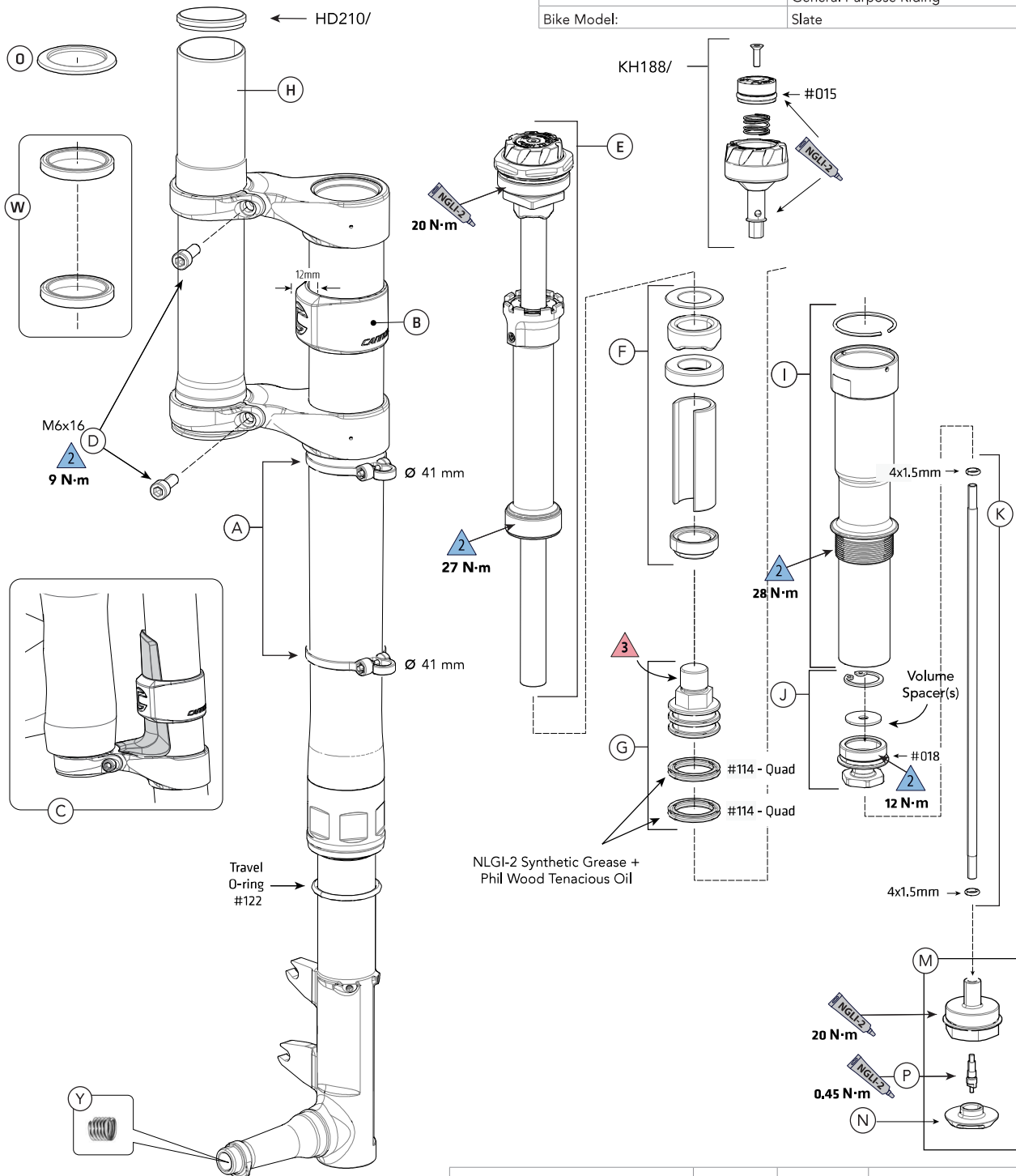
ID	Part Number	Steerer And Headset Parts	Comment
H	KH197/097	Lefty Steerer L20 Thick Flange 097	For 97 mm Headtube Length
	KH197/110	Lefty Steerer L20 Thick Flange110	For 110 mm Headtube Length
	KH197/122	Lefty Steerer L20 Thick Flange122	For 122 mm Headtube Length
	KH197/134	Lefty Steerer L20 Thick Flange134	For 134mm Headtube Length
V	QSCSEAL/	Lefty Upper Bearing Seal 60mm O.D.	
W	HD169/	Bearings, Headset - 2	includes 2 bearings
X	KP068/	Kit Plug XC3 Stem Steerer	

ID	Part Number	Service Tools	COMMENT
--	KT020/	Lefty Steerer Install Tool	Install/remove steerer
--	KH127/	Lefty Outer Cap Tool 36mm	Install/remove outer cap
--	KH198/	Lefty Castle Slider 40mm	Install/remove damping cartridge
--	KH135/	Lefty Shaft Clamp 16mm ORG	Install/remove air piston assy.
--	KH136/	Lefty Bullet Tool 16mm Shaft	Install upper air seal assy.
--	KH057/	Lefty Spindle Repair Tool	Repair spindle threads
--	KH164/	Lefty 73 Truing Axle Need QCTL108/	Also required - QCTL108/
--	QCTL108/	Lefty Truing Axle	

# Lefty Oliver

PBR 30 650B

Recommended Sag	N/A
Travel Length	30 mm
Manual Reset Length	3 mm +/- 3
Pressure Limits	Minimum 50 psi, Maximum 250 psi
Offset	45 mm
Intended Use	ASTM CONDITION 2, General Purpose Riding
Bike Model:	Slate



Head Tube Length	110 mm	134 mm	160 mm
Air Cylinder Adapter Length (X)	70 mm	95 mm	120 mm
Air Transfer Tube Length (Y)	219.5 mm	244.2 mm	269.6 mm
Volume Spacer QTY	0	1	2
Frame Bumper Size	12 mm		

# Lefty Oliver

## PBR 30 650B

ID	Part Number	Structure Parts	Comment
A	CK3417U00OS	Lefty Brake Hose Guides	Contains Multiple Clamp Types/Size , Select Appropriate. Use 41 mm.
B	KH172/	Lefty Frame Bumper 12 mm	
C	KH219/01	Lefty 1.0/Oliver CRB Cable Guard	
D	LEFTYBOLTS	Lefty Caliper Clamp Bolts	
Y	K54128	Lefty Helicoils (QTY 10)	

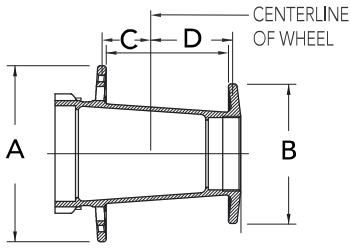
ID	Part Number	Damper And Air Spring Parts	Comment
E	KH199/	Lefty Oliver Damper PBR ORG	
F	CK3507U0063	Lefty Oliver Topout Spacers 63 mm	
G	CK3517U00OS	Lefty Oliver Air Piston	
I	CK3527U00SM	Lefty Oliver Air Cylinder Sm	
	CK3527U00MD	Lefty Oliver Air Cylinder Md	
	CK3527U00LG	Lefty Oliver Air Cylinder L/XI	
J	CK3537U00OS	Lefty Oliver Air Cap	
	CK3547U00SM	Lefty Oliver Air Transfer Tube Sm	
K	CK3547U00MD	Lefty Oliver Air Transfer Tube Md	
	CK3547U00LG	Lefty Oliver Air Transfer Tube L/XI	
L	KH203/	Lefty Oliver 100 Hr Service Seal Kit	
M	KH201/	Lefty Oliver Schrader Plug	
N	CK3487U00OS	Lefty Valve Cap	
P	KH047/	Lefty Valve Cores (QTY 10)	

ID	Part Number	Steerer And Headset Parts	Comment
H	KH193/110	Lefty Steerer L10 110	For 110 mm Headtube
	KH193/134	Lefty Steerer L10 134	For 134 mm Headtube
	KH193/160	Lefty Steerer L10 160	For 160 mm Headtube
O	QSISEAL/	Lefty Seal Upper Bearing 58 mm O.D.	
W	HD169/	Bearings, Headset - 2	Includes 2 Bearings

ID	Part Number	Service Tools	Comment
--	KT020/	Lefty Steerer Install Tool	Install/Remove Steerer
--	KH127/	Lefty Outer Cap Tool 36 mm	Install/Remove Outer Cap
--	KH200/	Lefty Castle Slider 20.3 mm	
--	HDTL187/	Lefty Shaft Clamps 1/2 Inch BLK	
--	HDTL168/	Lefty Bullet Tool 1/2 Inch Shaft	
--	KH057/	Lefty Spindle Repair Tool	Repair Spindle Threads
--	QCTL108/	Lefty Truing Axle	
--	KH240/	Lefty Cylinder Tool 29 mm	

# Lefty Wheel Hubs

## Dimensions for Wheel Building

	ID	Description	Lefty 50	Lefty 60	Lefty 73
	A	Disc Flange Diameter	58 mm	58 mm	58 mm
	B	Non-disc Flange Diameter	45 mm	45 mm	58 mm
	C	Disc Flange to Center	18.8 mm	25.8 mm	36.5 mm
	D	Non-disc Flange to Center	31.6 mm	34.6 mm	36.5 mm

Spoke hole diameter = 2.5 mm

## Brake Adapter Chart

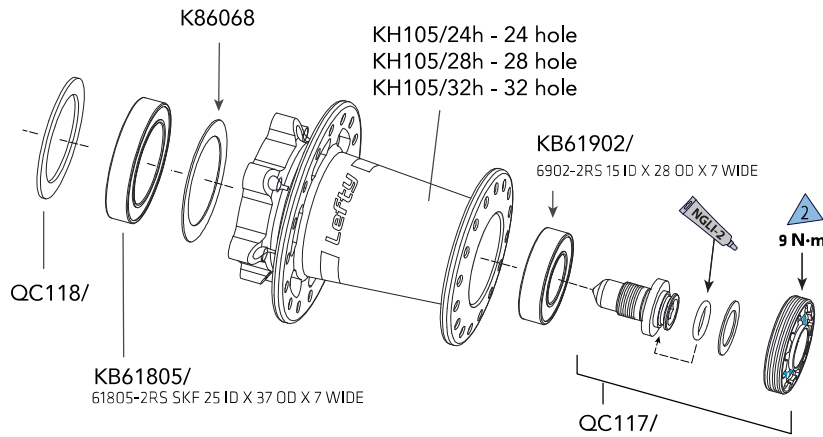
Use the table below to determine the correct LEFTY brake adapter to use with your model. Brake adapter kits are available through your Authorized Cannondale Dealer.

Part Number	Fork Platform	Hub Type	Wheel Size	Fork Offset (mm)	Rotor Size* (mm)
KH112/	<b>Olaf</b>	Lefty 73	26 in Fat	60	180
N/A	<b>Oliver</b>	Lefty 50	650b	45	160
K31019	<b>Ocho</b>	Lefty 60	29 in / 27.5 in	55 / 50	160
K31029	<b>Ocho</b>	Lefty 60	29 in / 27.5 in	55 / 50	180

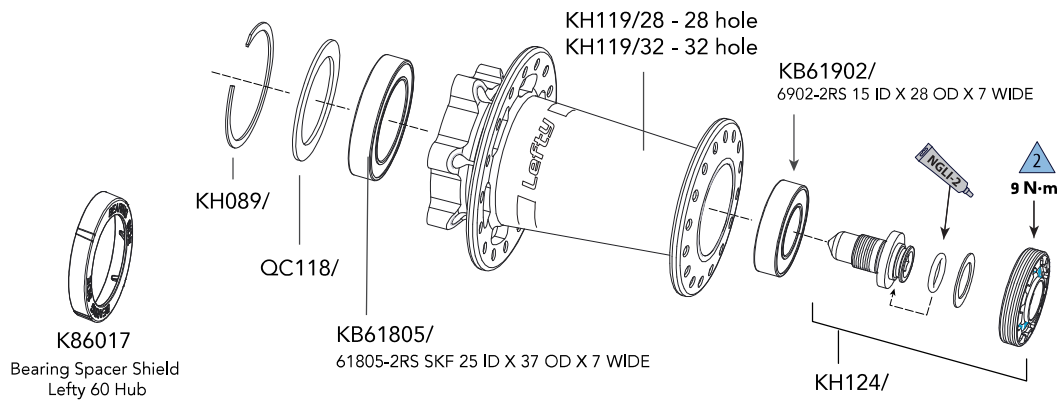
\*ROTOR SIZE is the smallest size diameter brake rotor that can be used for a given model/wheel hub combination. For example, a LEFTY 2.0 adapter supports a minimum 160 mm rotor and a 140 mm cannot be used. A 180 mm may be used with a compatible 180 mm rotor adapter mounted on the LEFTY adapter.

# Lefty Wheel Hubs

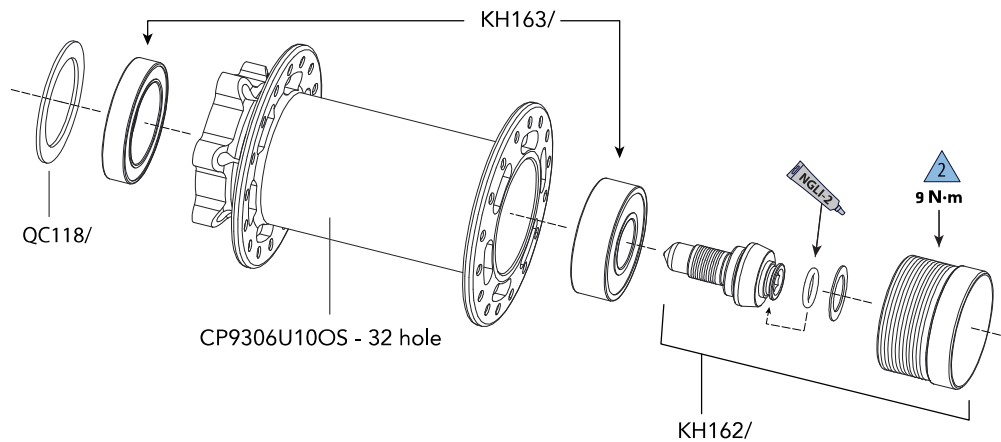
## Lefty 50



## Lefty 60



## Lefty 73

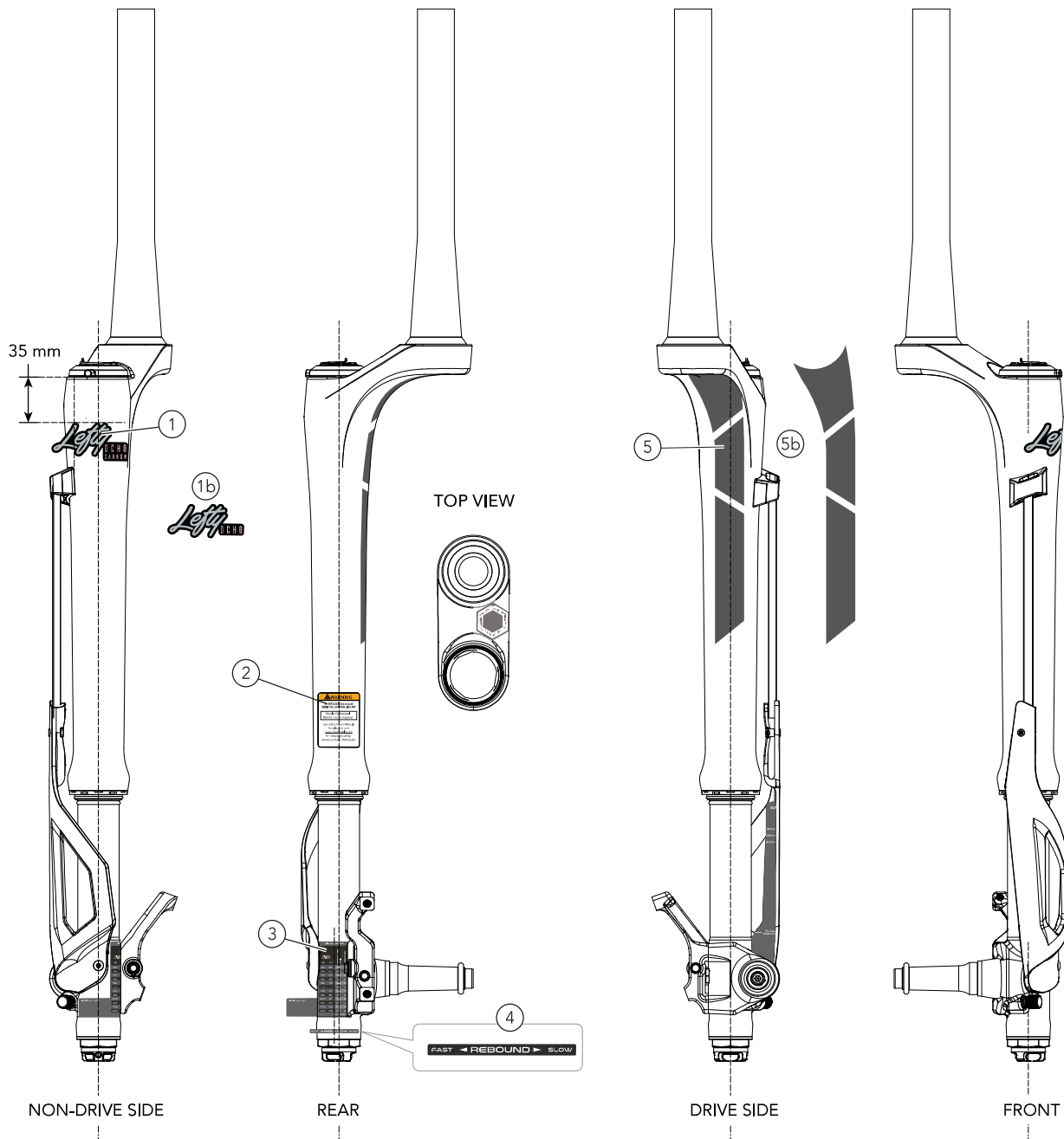




# Lefty Decals

Bike Model	Lefty	Part Numbers	Description
Scalpel-Si Womens CRB 1 Scalpel-Si World Cup Scalpel-Si Limited Edition Scalpel-Si HM 1 F-Si HM World Cup F-Si HM Limited Edition F-Si HM 1	<b>Ocho Carbon</b>	K15009	Lefty Decals Ocho Carbon Upper 2019 <b>Items: 1, 5</b>
		K15029	Lefty Decals Ocho Tech Info 2019 <b>Items: 2,3,4</b>
Scalpel-Si Womens CRB 2 Scalpel-Si CRB 2 Scalpel-Si CRB 3 Scalpel-Si CRB 4 Scalpel-Si AI 5 F-Si Womens CRB 2 F-Si CRB 2 F-Si CRB 3 F-Si CRB 4 Trail NEO 1	<b>Ocho Alloy</b>	K15019	Lefty Decals Ocho Alloy Upper 2019 <b>Items: 1b, 5b</b>
		K15029	Lefty Decals Ocho Tech Info 2019 <b>Items: 2,3,4</b>
Slate SE Force 1 Slate SE Apex 1	<b>Oliver</b>	K15049	Lefty Decals Oliver 2019
Fat CAAD 1	<b>Olaf</b>	K15039	Lefty Decals Olaf 2019

# Lefty Ocho Decal Placement



## Application:

Before applying a replacement decal, prepare the fork surface by cleaning it with ordinary dish soap and water followed by a shop towel dampened with isopropyl alcohol.

Align the decals on the fork as shown above.

# Manual Reset - Ocho, Oliver, Olaf

Perform the following procedure with the bike on the floor.

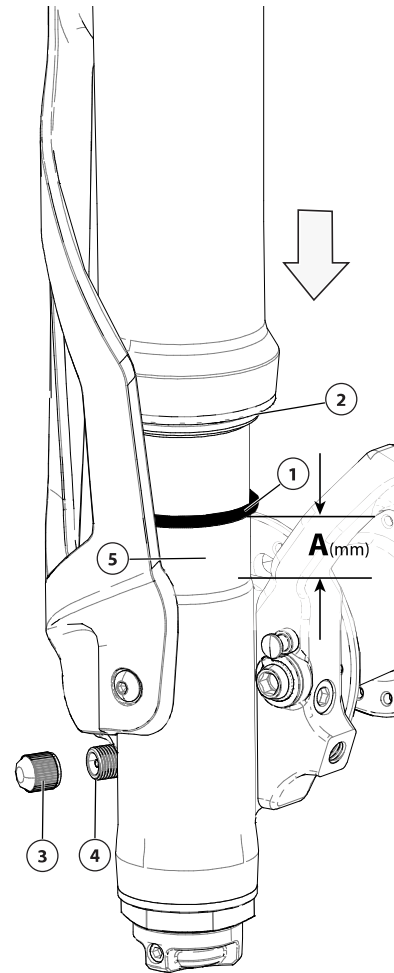
1. Slide the travel indicator o-ring (1) against the wiper seal (2).
2. Remove the valve cap (3) from the Schrader valve (4) and thread a shock pump onto the valve. Record the air pressure and use the shock pump bleed valve to deflate the Lefty.
3. Hold the shock pump bleed valve open and fully compress the Lefty by pushing down on the handlebars.
4. Firmly bottom out the Lefty several times.
5. Measure the glossy stanchion tube (5) below the travel indicator o-ring (1). Repeat step 4 until that measurement matches the stanchion length that corresponds to your Lefty in the table below.

Lefty	Travel / Wheel	(A) Manual Reset Length +/- 3
Ocho	100 mm / 27.5 in	0 mm
	100 mm / 29 in	20 mm
Olaf	100 mm / 26 in	35 mm
Oliver	30 mm / 650b	3 mm

6. Thread a shock pump onto valve and pump your Lefty up to the air pressure recommended for your riding weight.
7. Unthread the shock pump from the valve.

(Ocho only)

Compress the Lefty 10 times to allow the positive and negative air pressures to equalize.

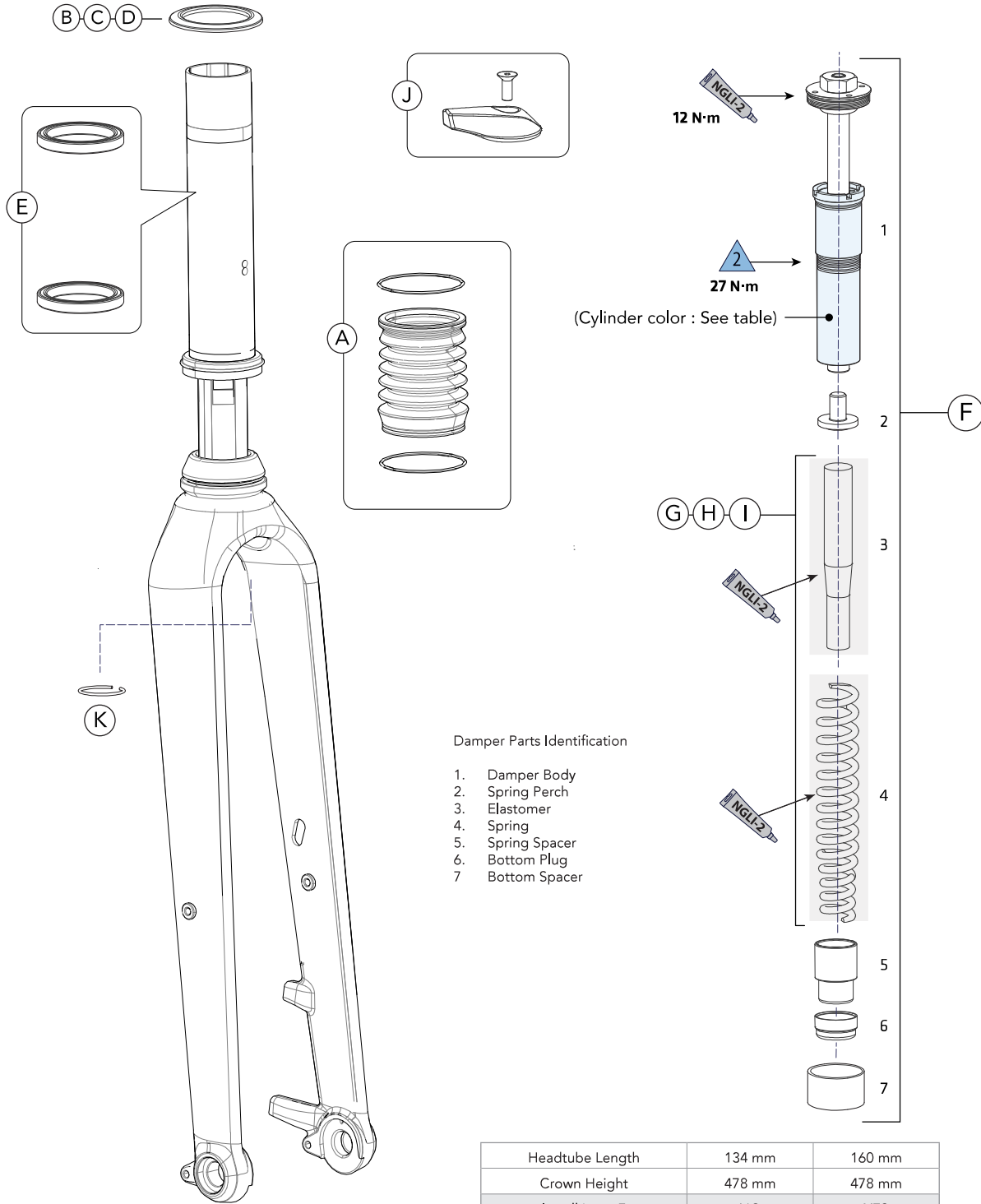


Take measurement while compressed.

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# Headshok DL50

Recommended Sag	10-20 mm
Travel	50 mm
Manual Reset Length	N/A
Pressure Limits	N/A
Offset	45 mm
Intended Use	ASTM CONDITION 2, General Purpose Riding
Bike Model:	TESORO





# Headshok DL50

ID	Part Number	Structure Parts
--	KF119/	Race Clip, Metric
A	HD191/BLK	Headshok Boot
B	QSMSEAL/	Lefty Upper Bearing Seal 50mm O.D
C	QSISEAL/	SLefty Upper Bearing Seal 58mm O.D.
D	QSCSEAL/	Lefty Upper Bearing Seal 60mm O.D.
E	HD169/	Bearings, Headset (QTY 2)
K	HD170/	Cirdlips Headshok (QTY 12)

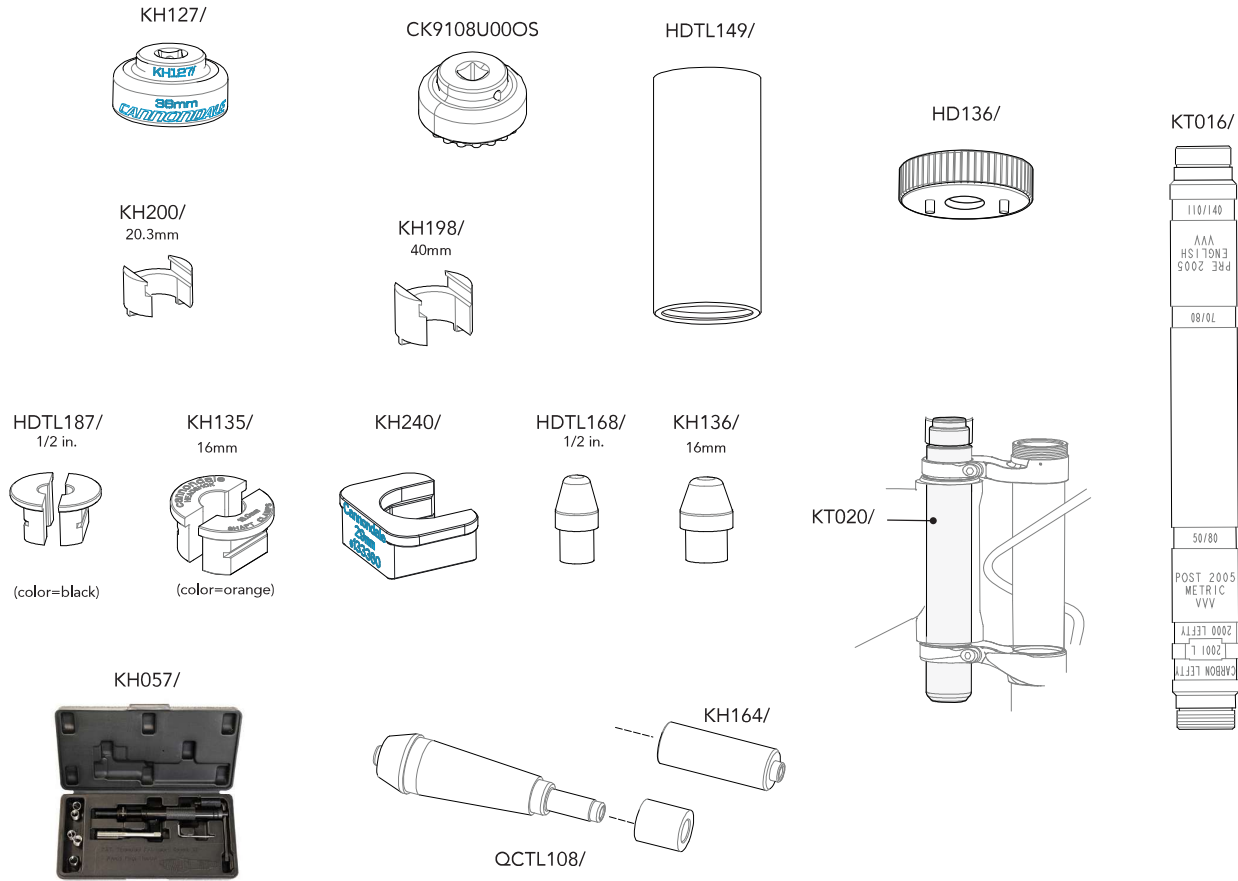
ID	Part Number	Damper And Spring Parts
F	KF239/XL	Headshok DL50 Damper XL <b>color :GRN</b>
G	KF241/	Headshok DL/MC50 Spring Soft <b>color: GRN/BLK</b>
H	KF242/	Headshok DL/MC50 Spring Standard <b>color: GRN</b>
I	KF243/	Headshok DL/MC50 Spring Firm <b>color: RED</b>
J	KF258/	Headshok Lever Lo DL80/50
--	KF236/	Headshok DL50 DL80 DLR80 Damper Seals

ID	Part Number	Service Tools
--	HDTL149/	Headshok Bearing Crown Race Install Tool
--	HD136/	Headshok Outer Cap Pin Tool
--	KH031/	Super Castle Tool BLK
--	KT016/	Headshok Bearing Reset Tool

## NOTES:

- Apply a small amount of grease to cap threads (a) and tighten to 12Nm (8.9 Ft-lbs) using Cannondale tool HD136/.
- Apply grease to entire outer diameter of spring (6) and elastomer (1).
- Apply grease to entire outer diameter of plug (2) and install using a hollow plastic rod until firmly seated.
- Clean cartridge threads with acetone and apply 90 x 3 mm wide bead of Loctite 243 (blue) and install to 27nm (20ft-lbs) using a Cannondale castle tool KH031/.
- Apply layer of grease to entire O.D.of (9) prior to installtion.

# Service Tools



Part Number	Description	Use
KT016/	Headshok Bearing Reset Tool	Headshok/Solo Needle Bearing Reset
HDTL168/	Lefty Bullet Tool 1/2 Shaft	Prevent Damage Of O-Rings During Re-Assembly Of Upper Air Seals
KH136/	Lefty Bullet Tool 16mm Shaft	Prevent Damage Of O-Rings During Re-Assembly Of Upper Air Seals
KH200/	Lefty Castle Slider 20.3mm	Oliver Damper Remove/Install
KH198/	Lefty Castle Slider 40 mm	Lefty 2.0, Supermax, Olaf Damper Removal
HDTL149/	Headshok Bearing Crown Race Install Tool	Install Headshok Headset Bearings
KT020/	Lefty Steerer Install Tool	Install Lefty Steerer Into Frame
QCTL108/	Lefty Truing Axle	Truing Of Lefty 50 Hub & Lefty 60 Hub Equipped Wheels
KH127/	Lefty Outer Cap Tool 36 mm	Removal Of Outer Cap Of Lefty 2.0, Supermax, Olaf, And Oliver
HDTL187/	Lefty Shaft Clamp 1/2 Inch BLK	Clamp Lower Shaft Of Lefty 1.0 And Oliver Damper
KH135/	Lefty Shaft Clamp 16 mm ORG	Clamp Lower Shaft Of Lefty 2.0, Supermax, And Olaf Damper
KH164/	Lefty 73 Truing Axle Need QCTL108/	Truing Of Lefty 73 Hub Equipped Wheel
KH240/	Lefty Cylinder Tool 29 mm	Lefty Oliver 100 Service, Cartridge Assembly/Disassembly And All 32 2.0 If Damper Needs To Be Changed.
KH057/	Lefty Spindle Repair Tool	Replacement of helicoil
K54128	Lefty Helicoils QTY=10	Replacement helicoils for Lefty Spindle
HD136/	Headshok Outer Cap Pin Tool	Headshok Top Cap Remove/Install
CK9108U00OS	39 mm 18 Point Lefty Damper Tool	Lefty Ocho Damper Remove/Install