#### V1 April 2021



# **Ox Brake Hydra Install** 2021 KTM 690 Enduro R

#### **Bike configuration**

Install was completed on a 2021 KTM 690 Enduro R. Modifications that affect the install: Fasst Company Flexx Handlebars Probend hand guards Sicass Racing multifunction switch Rade Garage aux fuel tank KTM Hard Parts Heated Grips

\*OxBrake can not guarantee operation of the Hydra Brake with the factory ABS System (antilock brake system). The OxBrake is to be used for off highway / racing purposes only and is not intended for use on public roads.

\*OxBrake has been designed to work with the stock rear brake pedal. OxBrake cannot guarantee fitment with any other aftermarket brake pedals at this time.

### 2 Handlebar

Numerous configurations are available, here are the most popular:

Install Note: Do not install OxBrake hand master cylinder until the foot brake Hydra-Cylinder has been installed in the factory footpeg bracket. Extra "slack" in the line is needed while installing in Footage Bracket.

- Make room on the handlebars so that the LHRB can fit where the rider prefers. At this time we recommend using a Sicass Racing multifunction switch (or similar design) to help keep the switch closer to the grip for ease of use. The switch is narrower than the stock stitch and may be necessary for use with Flexx Handlebars.

\* OxBrake.com offers a **longer Hydra Brake lever** which may allow for a thinner aftermarket switch to be mounted next to the grip.

- Some customers with stock handlebars and a stock switch, have rotated the factory switch forward (with turn signals horizontal). This allows for clearance of the OxBrake line, and keeps the factory switch closer to the hand grip.

\*Photo at right shows the installed Sicass switch vs the larger stock switch.

\*The Hydra Cylinder is pre-bled, so make sure you do not actuate the brake handle.

-Determine the best location of the LHRB based on your cockpit setup. **[Again, do not mount on** handlebar at this time].

\*Photo at right shows test fit location for LHRB for this install.







Remove headlight **[Loosen factory screws on side of headlight]** to find routing for the Hydra Cylinder. The cylinder can be routed without cutting the plastic headlight support.



Remove the two bolts holding the headlight support to the fork brace.



Pull the headlight support bracket out so that you have enough room to route the Hydra Cylinder.



Unplug and remove all the wires that go from the left side of the handlebar into the headlight support. Multi function switch, MAP switch, brake wire, heated grips (if installed). This will give you just enough room to route the Hydra Cylinder. Photo above shows the empty access hole.



Another look at the empty access hole. The grey wire goes to the ABS light/switch. That wire does not need to be removed.



It is a tight fit, so position the OX Brake Hydra Cylinder as shown (with the hydraulic line coming in from the right side) in order to get it though the plastic support without cutting anything.



Photo shows how the Hyrda Cylinder fits though the headlight support bracket.



Photo shows Hydra Cylinder through the access hole. The disconnected wires will be reconnected at the final step.



The Hydra Cylinder will follow the brake lines and electrical conduit out the bottom right hand side of the headlight support bracket. Cut all the zip ties and move wires out of the way.



Photo shows the opening on the lower right hand side of the headlight support bracket with the zip ties cut and wires moved out of the way.



It might be helpful to lift the wire bundle out of the way so that you can route the Hydra Cylinder.



Photo shows Hydra Cylinder routing through lower right hand side of the headlight support.



Hydra Cylinder routing along side brake lines.



Remove Rectifier and plastic support in order to route Hydra Cylinder into the trellis frame.



Remove the inertial sensor



Remove the triangular mounting bracket.

![](_page_11_Picture_1.jpeg)

Route the Hydra Cylinder into the inside of the trellis frame. Check the routing to make sure the hydraulic line will not chafe or rest on anything hot and that it can be neatly secured.

![](_page_11_Picture_3.jpeg)

Fish the Hydra Cylinder through the hoses and find a logical path that leaves the hydraulic line pretty much resting on the frame rail, or following the factory ABS lines.

![](_page_12_Picture_1.jpeg)

Routing along frame rail.

![](_page_12_Picture_3.jpeg)

Unbolt and move obstructions, such as the SAS valve. \* [See the factory ABS lines pictured as a potential locations to secure the OXBrake line after Hydra-Cylinder installation]

Routing the Hydra Cylinder over the frame cross brace and in front of the shock is very tight. Though **NOT** necessary, for ease of installation, we encourage you compress the suspension, the shock will move rearward enough to allow the Hydra Cylinder to pass through the gap.

![](_page_13_Picture_2.jpeg)

One method for compressing the shock is to use a ratchet strap from the rear wheel to the seat or luggage rack.

![](_page_13_Picture_4.jpeg)

Route the cylinder over the frame cross brace so that it will track more neatly alongside the factory brake line.

# 4 Shock Routing

![](_page_14_Picture_1.jpeg)

Slot the Hydra Cylinder in front of the shock

Cylinder may fit best down the left side in front of the shock.

# 4 Shock Routing

![](_page_15_Picture_1.jpeg)

Move the hydraulic line to the right side of the frame so that it rests next to the brake lines and away from the shock. Also, we recommend marking where the factory rear master cylinder is positioned. Typically done with a pencil or marker next to the two mounting bolts.

# **5** Final Routing

![](_page_16_Picture_1.jpeg)

Remove the right side swing arm bolt and footrest bolts. Note, the rear brake heim joint will slide out of the rubber sleeve. Remove the factory pin

![](_page_16_Picture_3.jpeg)

Measure the length from center of the eye to the tip. You will then remove the factory pin from the spherical bearing. Next install the factory pin into the Hydra-Cylinder adding approximately 1-2mm of length to the factory pin length.

# **5** Final Routing

![](_page_17_Picture_1.jpeg)

![](_page_17_Picture_2.jpeg)

The hydraulic line will route towards the back of the bike and then bend forward. The Hydra-Cylinder will take the place of the stock heim joint [Picture taken before factory pin has been installed to the Hydra Cyli.

Photo shows Hydra-Cylinder installed with rubber sleeve covering stock rubber boot and safety wire securing it at both ends. Hydraulic line routes alongside, and is zip tied to, the stock rear brake line.

# 6 Tidying up

The hydraulic line and the brake handle should be left loose during the routing process so that twists in the line can be worked back. When fitting the Hydra Cylinder it should naturally rest in the installed position without twisting tension on the hose. The best way to achieve this is to leave the hydraulic lic line loose during the routing and then working any twisting force back up the line until it dissipates. That way there is no twisting force on the threaded hydraulic fitting into the Hydra Cylinder.

Once the Hydra Cylinder is fitted, you can go back along the hydraulic one and install the provided hose clamps.

![](_page_18_Picture_3.jpeg)

![](_page_18_Picture_4.jpeg)

![](_page_18_Picture_5.jpeg)

Clean routing along frame

# 6 Tidying up

Reinstall any removed or repositioned components. Leave some slack near the front of the motorcycle to account for movement of the line when the handlebars are moved back and forth to full lock.

Leave room in the headlight support frame for the hydraulic cable to move

![](_page_19_Picture_3.jpeg)

Reconnect all disconnected wires. Zip tie securely and out of the way of the headlight.

![](_page_19_Picture_5.jpeg)

Leave enough room for the the OX Brake Hydraulic line to move. In this picture you can see one loose zip tie guides the hydraulic line and will keep it off of the headlight.

# 6 Tidying up

![](_page_20_Picture_1.jpeg)

Button it all up. Make sure that nothing binds and everything that you disconnected and reconnected still works.

# 7 Go Ride

![](_page_21_Picture_1.jpeg)