



HARLEY

FLT, HERITAGE, OR SOFTAIL TRIKE CONVERSION KIT



Phone: 913.710.2225

Fax: 866.737.0818

Email: sales@casscountychoppers.com

PO Box 446

Pleasant Hill, MO 64080

CUSTOM TRIKE AND MOTORCYCLE PARTS



We want to thank you for your purchase of a Cass County Choppers Harley-Davidson Softail Trike Conversion Kit.

If you have questions or comments, please feel free to email or call using the contact information at the bottom of this page.

Cass County Choppers, LLC will not be held responsible for any damage that occurs during disassembly or reassembly. If you are unsure about anything in the assembly process, please call or consult a qualified mechanic. We also offer the service of converting your bike into a trike; contact our support team for details and pricing.

CONTENTS

Sales and Return Policy	3
Purchase Agreement	3
Parts List	5
Differential Assembly	5
Wheel Hub (Box 1).....	5
Wheel Hub (Box 2).....	5
Axe Housing LS (Box 1)	5
Axe Housing RS (Box 2)	5
Mounting Plate Box 1	6
Fastener Box - located in Mounting Plate Box 1.....	6
Shock Mounting Plate Parts Box.....	6
Assembly Instructions.....	7
Assembly Pictures.....	12



SALES AND RETURN POLICY

All sales are final. If damage has occurred during transit, contact Cass County Choppers, LLC. immediately for details on processing a replacement. Any damage claims must be made within 5 calendar days of item receipt. No returns or exchanges will be provided unless a Return Authorization Request has been previously approved by Cass County Choppers, LLC. and products will be subject to a forty percent restocking fee. Any return shipping charges are the responsibility of the purchaser. If you are shipping an item over \$75, we recommend purchasing shipping insurance and/or sending with a trackable service as we don't guarantee receipt of your returned item. Cass County Choppers, LLC. is not responsible for lost or stolen packages confirmed to be delivered to the address entered for an order. Upon inquiry, Cass County Choppers, LLC. will confirm delivery to the address provided, date of delivery, tracking information and shipping carrier information for the customer to investigate.

PURCHASE AGREEMENT

This Hold Harmless and Indemnification Agreement ("Agreement") is entered into by and between the customer(purchaser) hereinafter "Promisor", and Cass County Choppers, LLC., hereinafter "Promisee".

The intent of this Agreement is to indemnify Promisee from any claims arising from and related to the purchase, installation and/or use of any Cass County Choppers, LLC. product(s).

FOR VALUABLE CONSIDERATION, the receipt of which is hereby acknowledged, Promisor and Promisee agree as follows:

Promisor will indemnify and hold harmless Promisee from any and all claims, actions, and judgments, including all costs of defense and attorney's fees incurred in defending against same, arising from and related to the purchase, installation and/or use of any Cass County Choppers, LLC. product(s) either directly and/or indirectly. Promisor's actions include the acts of Promisor's agents and employees. By examining our products online, in a brochure, at the showroom, and/or in person, you have satisfied to your expectations to accept the product as-is and with any and all faults.

In the event any claim or suit is brought against Promisee within the scope of this Agreement, Promisor shall pay for legal counsel chosen by Promisee to defend against the same.

This Agreement shall encompass claims resulting from any actions that may give rise to a claim against the promise including, but not limited to:

Normal usage of the product. Normal usage defined by, but not necessarily defined in full by, a person 18 years or older being the sole pilot of a Cass County Choppers, LLC. product, not riding on state, county, city, town or village legal streets, roads, and/or highways in an improper manner.

Misuse of the product. Misuse is defined by, but not necessarily defined in full by, any person under the age of 18 operating a Cass County Choppers, LLC. product, and/or more than one (1) person on a Cass County Choppers, LLC. product at any given time, and/or not operating on public streets, roads and/or highways, and/or operation on rough surfaces and/or in dark conditions, including fog in any way, and/or not consistent with applicable laws of governing state, and/or operation on slippery surfaces including but not limited to water, ice and/or snow covered surfaces, and/or jumping, and/or excessive speeds, and/or excessive weight, and/or standing operation, and/or one wheel



operation, and/or fueling with product other than that specified by the engine Manufacturer, and/or operation on rough surfaces, and/or failure to maintain the product in a proper manner. Maintenance is the sole responsibility of the Promisor, its agents and employees.

Note: Installing any Cass County Choppers, LLC. product to your bike may affect the warranty the Manufacturer provides. Consult the manufacturer prior to installation; you accept any nullification of warranty by continuing with installation.

Any purchase, use, and/or installation of this product by the promisor, including its agents and employees is considered an agreement to the terms and conditions of this agreement and shall be construed as a signature. By signing, you signify understanding and agreement to all warnings, statements and claims presented in this document. You also signify that you are legally able to provide signature. If you are unsure about releasing any and all claims or do not wish to proceed by using or installing a Cass County Choppers, LLC product, STOP now and send the parts back. All products are custom manufactured by Cass County Choppers, LLC. All sales are final; no refunds will be given for parts and/or shipping. Replacement parts may be available based on manufacturing capabilities. Shipping time may vary; all quoted delivery dates are estimated and are subject to change.

In the event either party files suit in a court of law to interpret or to enforce the terms of this Agreement, the party prevailing in such action shall be entitled, in addition to any legal fees incurred in defending against any third party claim, to its reasonable legal fees and costs incurred in such action to interpret or to enforce the terms of this agreement. If a term or condition is found to be unenforceable, the rest of the agreement still remains in effect.

This agreement shall be interpreted under the laws of the State of Missouri.

Signature: _____

Printed Name: _____ Date: _____

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com

PARTS LIST

HARLEY DAVIDSON SOFTAIL TRIKE CONVERSION KIT

DIFFERENTIAL ASSEMBLY

- | | |
|---|--|
| 1 - Differential Axle Assembly w/sptr03 Sprocket
Spacer Attached
(Pre-filled with 1/3 Cup 90W Gear Oil DO
NOT OVERFILL) | 5 - 7/16 x 2-1/2 HH
5 - 7/16 Lock Washers
10 - Flat Washers
1 - Brake Rotor Spacer Attached (Flanged Sptr)
5 - Brake Rotor Washers  |
| 2 - 3/4 Nuts (Threaded onto axle) | 5 - 5/16 x 1-1/4 HH Screws |
| 1 - 2.343 Axle Spacer - Single Groove - (Left Axle
of Differential) | 5 - 5/16 Lock Washers |
| 1 - 2.655 Axle Spacer - (Right Axle of Differential) | 5 - Flat Washers |
| 1 - Drive Gear Spacer Attached (03-Older Sptr) | |
| 4 - 3/8 x 3/4 AH Screws | |

WHEEL HUB (BOX 1)

- 1 - Wheel Hub Assembly
5 - 1/2-20 Wheels Studs w/Lug Nuts
1 - 1/8 Wheel Hub/Bearing Spacer

WHEEL HUB (BOX 2)

- 1 - Wheel Hub Assembly
5 - 1/2-20 Wheels Studs w/Lug Nuts
1 - 1/8 Wheel Hub/Bearing Spacer

AXLE HOUSING LS (BOX 1)

- | | |
|---|--------------------------|
| 1 - Axle Housing Assembly (3 bearings each end) | 13 - Flat Washers |
| 1 - Slide Plate (Pre-assembled to Axle Housing) | 6 - 3/8 Lock Washers |
| 6 - 3/8 x 1-3/4 HH Screws | 1 - Tension Bar |
| 1 - 3/8 x 3-1/2 HH Screw | 2 - 3/8 x 1-1/4 HH Bolts |
| 1 - 3/8 Nyloc Nut | |

AXLE HOUSING RS (BOX 2)

- | | |
|---|--------------------------|
| 1 - Axle Housing Assembly (3 bearings each end) | 13 - Flat Washers |
| 1 - Slide Plate (Pre-assembled to Axle Housing) | 6 - 3/8 Lock Washers |
| 6 - 3/8 x 1-3/4 HH Screws | 1 - Tension Bar |
| 1 - 3/8 x 3-1/2 HH Screw | 2 - 3/8 x 1-1/4 HH Bolts |
| 1 - 3/8 Nyloc Nut | |



MOUNTING PLATE BOX 1

- | | |
|--|---|
| 2 - Axle Housing Mounting Plates | 1 - Caliper Mounting Plate |
| 1 - LS Swing-arm Pivot Plate (Bearing Installed
W/Wire Tie)
(Has cutout for belt.) | 1 - Upper Rear Support Bar (Engraved "Cass
County") |
| 1 - RS Swing-arm Pivot Plates (Bearing Installed
W/Wire Tie) | 1 - Lower Rear Support Bar (Engraved "Trikes"
Or "Choppers") |
| 1 - RH Caliper | 8 - 3/8 x 1-1/2 HH Screws |
-

FASTENER BOX - LOCATED IN MOUNTING PLATE BOX 1

LEAVE THESE FASTENERS IN THE BAGS WE WILL REFERENCE THE BAG NUMBERS LATER.

- | | |
|---|---|
| Bag 1 - 2 pins, 2 3/8 x 2-1/2 HH, 2 - 3/8 lock
washer, 2 - Washers | Bag 6 - 2 pins, 2 3/8 x 1-1/4 AH |
| Bag 2 - 2 pins, 2 3/8 x 3 HH, 2 - 3/8 lock washer,
2 - Washers | Bag 7 - 2 pins, 2 3/8 x 2-1/4 HH, 2 - 3/8 lock
washer, 2 - Washers |
| Bag 3 - 2 pins, 2 3/8 x 2-1/2 HH, 2 - 3/8 lock
washer, 2 - Washers | Bag 8 - 4 Threaded pins |
| Bag 4 - 2 pins, 2 3/8 x 1-1/2 HH, 2 - 3/8 lock
washer, 2 - Washers | 1 - Support Rod |
| Bag 5 - 2 pins, 2 3/8 x 1-1/4 AH | 1 - Caliper spacer |
| | 2 - 3/8 x 1-1/4 HH |
| | 2 - 3/8 Lock Washers |
| | 2 - 3/8 SAE Flat Washers |
-

SHOCK MOUNTING PLATE PARTS BOX

- | | |
|--------------------------|--------------------|
| 1 - Shock Mounting Plate | 3 - Flat Washers |
| 1 - Upper Bumper Plate | 1 - Bumper Bracket |
| 3 - 3/8 x 2 HH Screws | |

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com

ASSEMBLY INSTRUCTIONS

HARLEY DAVIDSON SOFTAIL TRIKE CONVERSION KIT

Cass County Choppers, LLC will not be held responsible for any damage that occurs during disassembly or reassembly. If you are unsure about anything in the assembly process please call or consult a qualified mechanic. We also offer the service of converting your bike into a trike call for details and pricing.

ASSEMBLY TIP: *Clean off a workbench and lay ALL parts out onto workbench. Place fasteners with each corresponding part using the parts list as a guide. Some fasteners may be not bagged together with parts in some kits for ease of shipment. Take time to measure and separate fasteners before beginning assembly to avoid using incorrect bolts, etc. Read ENTIRE installation instruction booklet before beginning assembly. You will gain a better understanding of the entire process and assembly time will be GREATLY reduced.*

Step 1:

Secure your bike using a front wheel vise and straps. A qualified motorcycle lift is recommended.

Step 2:

Remove exhaust system. (Some Exhaust systems do not work with the Softail Kit. You may need to replace your Exhaust System if it interferes with the Trike Conversion Kit.)

Step 3:

Remove upper and lower belt guards; loosen axle adjusters, axle nut.

Step 4:

Raise the rear end of bike using center kickstand or preferably a center jack. (Bike front wheel should be securely in vise.)

Step 5:

Remove axle nut, remove axle from wheel and swing arm.

Step 6:

Slide belt off of pulley and to outside of bike, remove banjo bolt from caliper that holds brake line to rear caliper and hang brake line out of the way.

Step 7:

Remove rear wheel, caliper, splashguard, and rear shock bolts only.

Step 8:

Loosen and remove swing arm pivot bolts, lay bolts aside, remove swing arm. (Now would be a good time to check condition of belt)

Step 9:

Remove Drive Gear sprocket from rear wheel assembly.



Step 10: YOU WILL NEED HELP DURING THIS STEP!

Remove Cass County Choppers Soft Tail trike conversion kit from box and lay on bench or suitable surface. Be careful not to scratch or mark the surface of the aluminum. Lay all loose parts next to kit so they are readily available.

Step 11:

Remove two shock plate bolts and locating pins from right side of the trike conversion kit. (See assembly picture #1) You may need to thread a 7/16 bolt into hole of pin to pull pin from plate. Make sure you keep bolts and locating pins together.

Step 12:

Remove two bumper mounting plate bolts and locating pins from right side of the trike conversion kit. (See assembly picture #2 and #3) You may need to thread a 7/16 bolt into hole of pin to pull pin from plate. Make sure you keep bolts and locating pins together.

Step 13:

Remove support rod bolt and locating pin from right side of the trike conversion kit. (See assembly picture #4) You may need to thread a 7/16 bolt into hole of pin to pull pin from plate. Make sure you keep bolts and locating pins together. Remove the 4 bolts holding the support bars in place behind the tensioner assembly. (Left 4 bolts in assembly picture #7)

Step 14:

Remove $\frac{3}{4}$ nut from right side wheel hub. Pull wheel hub off of axle. Lay wheel hub aside with $\frac{3}{4}$ nut and 1/8 wheel hub/bearing spacer. (See assembly picture #11)

Step 15:

Remove $\frac{3}{4}$ nut from left side wheel hub. Pull wheel hub off of axle. Lay wheel hub aside with $\frac{3}{4}$ nut and 1/8 wheel hub/bearing spacer. (See assembly picture #11)

Step 16:

Remove the RS swingarm assembly by pulling it off of the RS axle. **DO NOT FORCE! Do not mix up or remove the axle spacers that are on each axle!** Remove the differential axle from the trike conversion kit by carefully pulling it out of left side axle housing bearings.

Step 17:

With differential on bench install your original sprocket onto differential using the 5 - 7/16 Hex Head bolts, washers, and lock washers, supplied. (See assembly picture #10) Slide sprocket over axle assembly (on correct side) and attach to differential with spacer between the sprocket and the differential housing. (Torque to 55-60 foot-pounds.)

Step 18:

Remove brake rotor from rear wheel assembly. Assemble brake rotor to the brake side of the differential. The Brake Rotor bolts directly through the brake rotor spacer, to the differential assembly. This is on the opposite side of the sprocket. Use 5-5/16 bolts, 5 - lock washers, 5 - flat washers, and 5 - Brake Rotor washers supplied. (See assembly picture #10) Make sure the steel Brake rotor washers go through the brake rotor from the outside. The Brake Rotor Washers go into the brake rotor sitting in



the 5 counter-sunk holes, the flat washer on top of the Brake Rotor Washer, the lock washer, and then the 5/16 HH bolt.

Step 19: YOU WILL NEED HELP DURING THIS STEP!

Carefully set the trike conversion kit behind bike. Carefully slide the kit close to the frame and put drive belt over top of the shock mounting plate and on top of bumper mounting bracket and support rod.

Step 20:

Remove the three bolts holding the bumper to the bumper mounting bracket. (See assembly picture #5) The bumper is shipped on the bottom side of the bumper mounting bracket so no damage is done while in transit. (See assembly picture #6) Mount bumper to top of bumper mounting bracket installing bolts from bottom side of bumper mounting bracket.

Step 21:

Install differential by sliding the left hand axle (axle closest to sprocket) into the axle housing bearings until axle spacer is directly next to the bearings. **DO NOT FORCE!** Make sure the axle goes through the belt and that the axle spacer is on the axle next to the differential housing. The left axle spacer should have 1 wide groove and measure 2.343 in length.

Step 22:

Install wheel hub onto left side of trike assembly by placing 1/8 aluminum wheel hub spacer over axle between wheel hub and bearing. Slide wheel hub onto axle and reinstall the $\frac{3}{4}$ nut removed earlier. (See assembly picture #11) **DO NOT FORGET THE WHEEL HUB SPACER!**

Step 23:

Mount RS swing arm assembly to LS swingarm assembly by sliding the axle housing bearings over the RS axle. Slide axle housing bearings onto axle, make sure spacer (3 thin grooves measures 2.655) is directly next to the bearings. **DO NOT FORCE!** Make sure the brake rotor does not contact the caliper. If it does re-adjust the caliper or remove the caliper/bracket assembly by removing the 2 - 3/8 Allen Head bolts holding it in place.

Step 24:

Carefully line up locating pins (DO NOT FORCE or BEAT ON LOCATING PINS) sliding them in until they are fully engaged in both plates. Install screws removed in steps 11, 12, and 13 (See assembly pictures #1 to #4, #7, and #9)

Step 25: YOU WILL NEED HELP DURING THIS STEP!

Slide assembly forward until the pivot bearings line up with the pivot bolt holes in frame. Use original swing arm bolts and supplied bearings. (Torque bolts to 90-115 Ft. Lbs for 2000 and up, 120-150 ft Lbs for 99 and down) You may need to cut the wire tie holding bearing in pivot plate. You may need a block of wood to support the back of the trike conversion kit.

Step 26:

Install the 2 rear shock bolts that attach shocks to Shock Mounting Plate. Tighten to 115 Ft Lbs.



Step 27:

Install wheel hub onto right side of trike assembly by placing 1/8 aluminum wheel hub spacer over axle between wheel hub and bearing. Slide wheel hub onto axle and reinstall the $\frac{3}{4}$ nut removed earlier. (See assembly picture #11) DO NOT FORGET THE WHEEL HUB SPACER!

Step 28:

Adjust the belt Tension on drive belt by using the left and right side Tension Bar bolts. The 3/8 nut protruding out of the tension is used to create tension by pulling the slide plate to the rear of the trike. Loosen the 6- bolts on the slide plates on EACH side. Tighten EVENLY until desired belt tension is achieved. Measure between the tensioner mount and the axle housing sliding plates. These should be the same dimension on both sides.

Step 29:

Check to make sure all steps have been completed so far.

Step 30:

Make sure rear sprocket lines up in exact line with front sprocket again. A straightedge may be used to aid in lining up front and rear sprocket. **DIFFERENTIAL IS PRE-FILLED WITH OIL DO NOT ADD OIL AT THIS TIME!**

Step 31:

You will use the original brake line bolted to the brake caliper included with trike conversion assembly. The brake line may be installed easier on caliper BEFORE installing onto inside of RIGHT side Axle Housing Mounting Plate. Install caliper assembly over inside of right side plate by hand. Line up 2-3/8 Hex Head bolts and thread on using lock washer and flat washers provided. Tighten brake line by placing line on caliper and align brake line so it will not interfere with normal motion of trike swing arm. Adjust caliper over the brake rotor to desired location. Bleed brakes as per owner's manual.

Step 32:

Tighten set screws in wheel hubs. It works best to remove all 6 locking setscrews ($3/8 \times \frac{1}{2}$) that are in the top of each threaded hole in wheel hub housing and loosen but do not remove lower 6 set screws in bottom of each threaded hole in the wheel hub housing. After sliding the axle hub over the axle, tighten the $\frac{3}{4}$ inch nuts provided locking the wheel hub to axle using Loctite. Re-tighten all 6 setscrews one at a time in bottom of each hole securely. Then install the locking setscrew in all 6 holes using Loctite tightening each one securely. You must use Loctite on all locking setscrews. **FAILURE TO INSTALL CORRECTLY CAN CAUSE INJURY OR DEATH FROM WHEEL FAILURE**. Repeat process for opposite side. **Check these before riding, before each use.**

Step 33:

Install wheel studs. You MUST make sure wheel studs are installed correctly. Wheel stud locking nut should be installed on end of wheel stud with Allen head wrench socket. The wheel stud should be installed from the back side of wheel hub. (Opposite side of wheel face.) Tighten wheel stud and locking nut using Allen wrench and a wrench so stud WILL NOT MOVE. Incorrect installation can cause wheel stud failure. There are two hole patterns made into this wheel hub. The 5 x 4-3/4 pattern (Chevrolet) is marked with a "----" and the 5 x 4-1/2 pattern (Ford) is marked with an "o." Since there are only 5



studs you CANNOT measure straight across from each other. Match wheels with the correct pattern in the wheel hubs by holding wheel hub up to wheels prior to assembly.

Step 34:

Tighten ALL bolts in the Cass County Choppers Trike Conversion assembly. Use Loctite or equivalent on any and all bolts that do not have a lock washer. Check these at least every 250 miles of riding.

Step 35:

Install wheels and tighten to proper specs.

Step 36:

Refer to Steel or fiberglass fender mounting instructions for mounting fenders. Then send out to paint shop of your choice. Use care when re-installing painted fenders.

Step 37:

Reinstall the exhaust system while bike is resting on wheels and tires. Use care when re-installing exhaust system on engine. Make sure all gaskets and brackets are lined up before tightening screws. Damage to engine can occur if not installed correctly. This is NOT covered under warranty.

Step 38:

Test bike while still on stand to make sure all steps are completed and bike is functioning properly. Spin trike kit by hand; be careful to avoid pinch points. Rear wheels should spin freely and belt should be straight between front and rear sprocket.

Step 39:

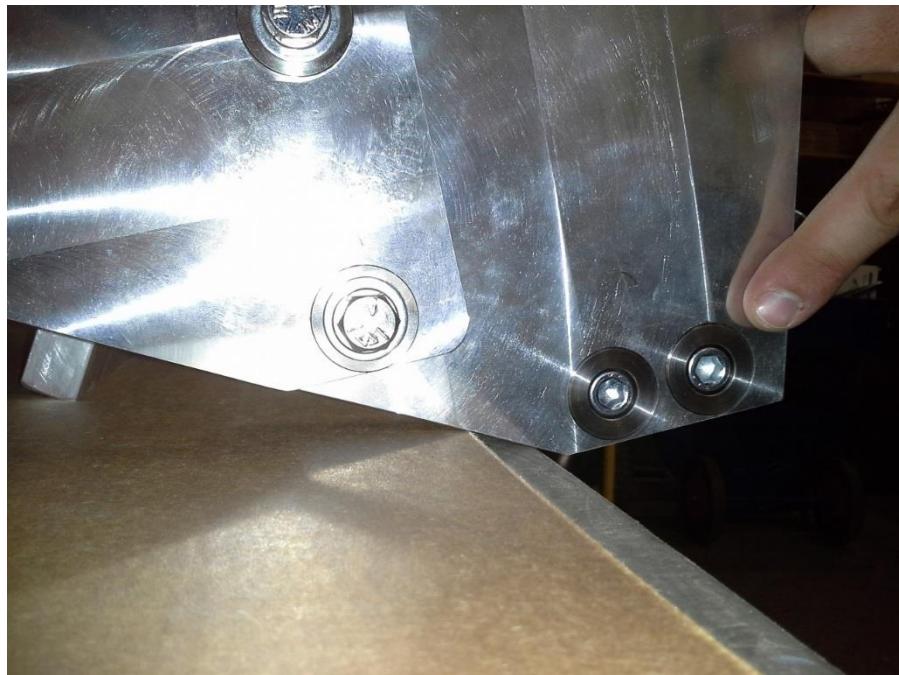
This instruction sheet is designed as a guide. You may need to complete additional steps not listed here. These are not omitted on purpose but you must use common sense when installing parts on your bike. Inspect all aspects of installation and make sure every step is completed to ensure your safety before testing bike. Test bike slowly and close to home to make sure all steps are completed and the installation is complete. Re-check tightness of screws after first use, after 100 miles and periodically every 250 miles.

ENJOY YOUR NEW TRIKE.



ASSEMBLY PICTURES

HARLEY DAVIDSON SOFTAIL TRIKE CONVERSION KIT



Assembly Picture #1



Assembly Picture #2

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com



Assembly Picture #3

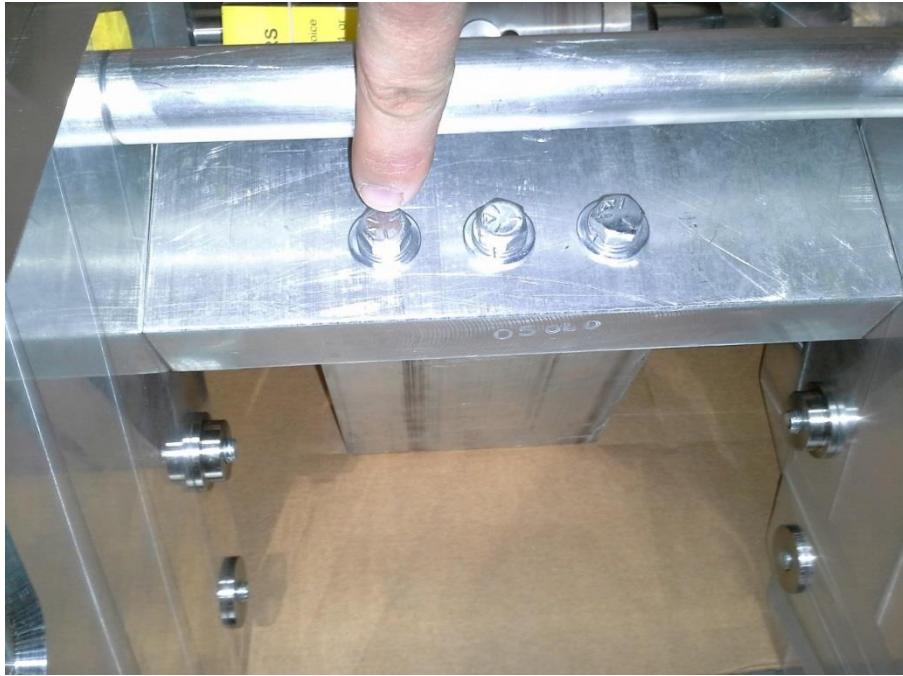


Assembly Picture #4

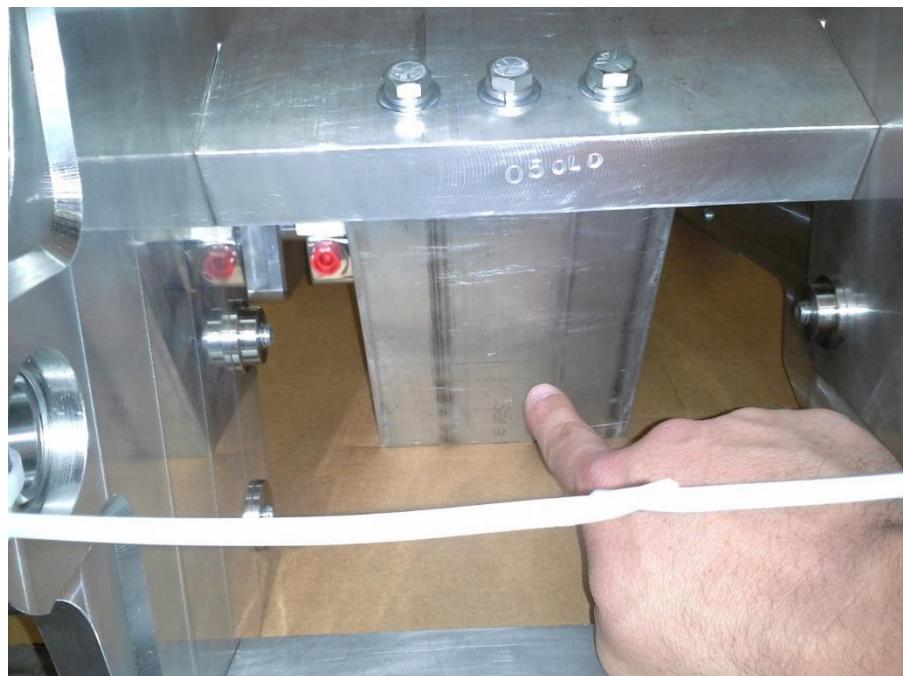
Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com



Assembly Picture #5



Assembly Picture #6

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com



Assembly Picture #7

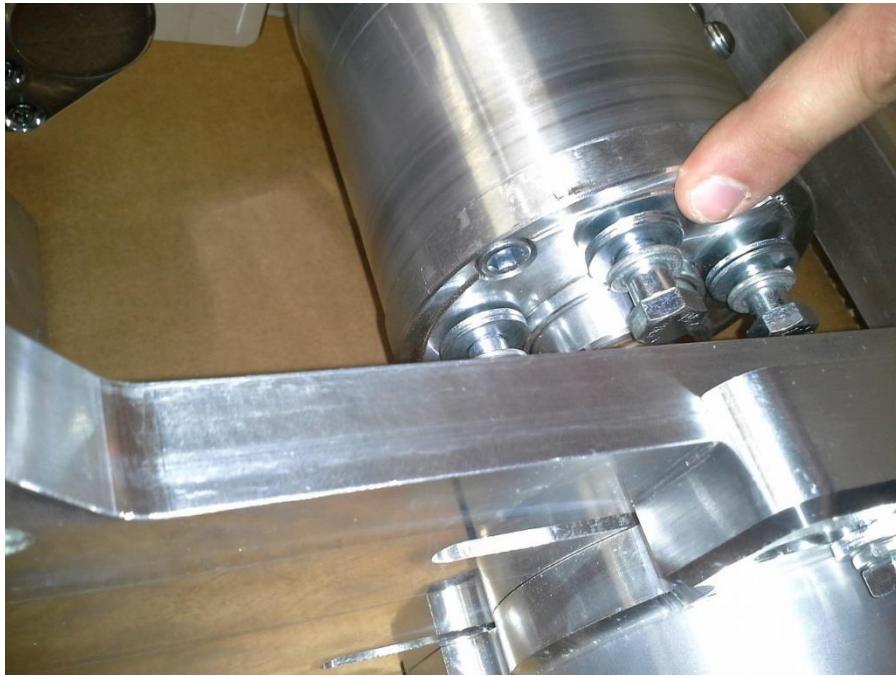


Assembly Picture #9

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com



Assembly Picture #10



Assembly Picture #11

Cass County Choppers
19420 S Rafferty Road
Pleasant Hill, MO 64080



913.710.2225
sales@casscountychoppers.com
www.casscountychoppers.com