

**INSTALLATION INSTRUCTIONS**  
**TC BROS.® PART #102-0088 (No Pegs) & #102-0089**  
**MID CONTROLS KIT FOR ALL 2004-2013 HARLEY DAVIDSON® SPORTSTER® MODELS**

**Note:** Please be aware that this procedure may exceed your technical abilities. Please read instructions completely and carefully before attempting installation. If you are unsure of your abilities, please consult a service professional.

**WARNING: INSTALL & USE AT YOUR OWN RISK!** Always wear and use all proper safety gear at all times when installing this product. We have made every attempt to ensure that these instructions are concise and easy to follow, but if any mistakes are found, or you require additional information, we can be reached M-F from 8:00am-5:00pm EST by calling 419-265-9399 or via email at sales@tcbroschoppers.com. TC Bros Choppers LLC assumes no liability for any personal injury or property damage caused by the installation and/or use or misuse of this or any other product.

**Recommended Tools for Installation:**

- 1.) Combination Wrenches in 7/16", 1/2", 9/16" and 3/4" sizes
- 2.) Adjustable Wrench with minimum 1" capacity (a.k.a. "Crescent Wrench")
- 3.) Torque Wrench that measures in ft-lbs or N-m (torque values given are for dry fasteners)
- 4.) Standard Hex Key Wrenches (a.k.a. "Allen Wrenches")
- 5.) Ratchet and Socket set
- 6.) Soft faced mallet (Rubber or plastic is preferred)
- 7.) Loctite® #243 Medium Strength Threadlocker (Blue) or equivalent

**MID CONTROLS INSTALLATION INSTRUCTIONS:**

- 1.) Some exhaust systems may require removal in order to install this product. Remove only if necessary.
- 2.) If your bike has factory mid controls, remove shifter, brake pedal, brake rod, footpegs and mounting brackets.
- 3.) If your bike has factory forward controls, first disconnect linkage rods, then remove all forward controls mounts and hardware.
- 4.) Please refer to supplied parts diagrams on following pages for part number references for remainder of installation instructions. **NOTE: Apply threadlocker to all threaded mounting hardware during installation.**
- 5.) Install the shift lever (part #MC173XL) to the splined shifter shaft protruding from your engine by tapping it into position with a soft faced mallet until it is fully seated onto the shaft. Apply threadlocker to 5/16-18x3/4" socket head bolt (part #119-0301) and loosely install into hole in shift lever. Using a torque wrench, torque the part #119-0301 socket head bolt to 18ft-lbs (24.4 N-m) to securely clamp shift lever to shift shaft.
- 6.) Install LH mount (part# MC167XL) onto the bike. You must first insert hex bolt (part# 119-0285) through top hole on LH mount before you mount to bike. You need to do this before you bolt the mount to the bike otherwise it cannot be installed due to lack of clearance. **See figure 1.**
- 7.) Now mount LH mount to bike using 2 3/8-16x1.25" socket head cap screws (part #119-0187). Apply thread locker to bolt threads. Tighten both 3/8-16 bolts (part #119-0187) torque to 30 ft-lb (40.7 N-m).
- 8.) Next install the footpeg mounting clevis (part # FC219XL) to LH mount (part # MC167XL) using 3/8-16x1 hex bolt (part #119-0285). This is the bolt inserted in mount on step 6. Apply thread locker to threads on 3/8-16x1 hex bolt before threading it into clevis. Tighten the footpeg mounting clevis (part #FC219XL) being sure to orient it so that the milled slot of the clevis is approximately at a 45 degree angle to the ground. This angle will assist the peg in folding if it were ever to contact the ground while riding. **Reference figure 2.** Torque to 30 ft-lbs (40.7 N-m).
- 9.) If you purchased TC Bros. Choppers part #102-0089 Mid Controls Kit including footpegs, it is time to begin installation of the toe peg (part #FP884XL) to the shift lever (part # MC173XL). First apply threadlocker to the inside of the hole in the FP884XL toe peg and thread the 5/16-24x1¼" set screw (part #119-0198) into the toe peg until there is 5/8" (15.9mm) of thread (half the length of the set screw) protruding from the peg. It is helpful to use a 5/32" hex key wrench (a.k.a. "Allen Wrench") to thread the screw into the toe peg. After allowing the threadlocker to dry in the toe peg for at least 5 minutes, apply threadlocker to the remaining threads protruding from the toe peg and loosely install to shift lever (part # MC173XL). Finish installation by securely tightening toe peg to shift lever by hand. You may want to wear a leather glove to protect your hand from the knurled surface

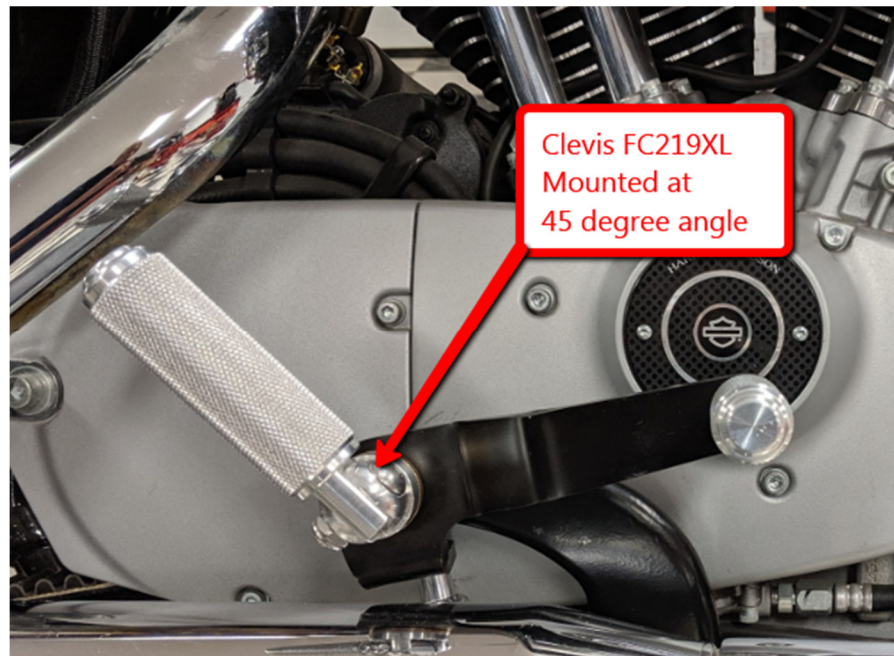
of the toe peg. If you purchased part #102-0088 Mid Controls Kit with no footpegs, install your toe peg to the manufacturer's recommended specifications.

- 10.) Begin installation of the brake side mid control assembly by first inserting ½-13x1-1/2" hex bolt (part #119-0219) through RH support (part #MC160XL). You need to do this before you bolt the mount to the bike due to interference once its mounted to the bike. **See figure 3.**
- 11.) Now loosely attach RH support (part #MC160XL) to the bike using 2 3/8-16x1.25" socket head cap screws (part #119-0187). Apply thread locker to bolt threads. Tighten both 3/8-16 bolts (part #119-0187) torque to 30 ft-lb (40.7 N-m).
- 12.) Connect the 5/16-24 heim joint (part #119-0203) to the brake pivot assembly (part #MC165XL) using the 5/16-18x3/4" socket head cap screw (part #119-0284), aluminum spacer (part #119-0287) and 5/16-18 nylock nut (part #119-0003). Torque to 16 ft-lbs (21.7 N-m)
- 13.) Now connect the brake pivot assembly to the RH support using footpeg clevis (part #FC888XL) and the ½-13x1-1/2" bolt (part #119-0219) you inserted in step 10. Use thread locker on the threads. Be sure to orient the footpeg mounting clevis (part #FC888XL) so that the milled slot of the clevis is approximately at a 45 degree angle to the ground. This angle will assist the peg in folding if it were ever to contact the ground while riding. **See figure 2.** Tighten securely using a torque wrench to 30 ft-lbs (40.7 N-m). While you are tightening the 119-0219 bolt, it is helpful to hold the footpeg mounting clevis (part #FC888XL) from rotating with an adjustable wrench placed against the outer machined flat surfaces of the clevis.
- 14.) Install supplied 5/16-24 hex jam nut (part #119-0103) by fully threading onto the 5/16-24 heim joint (part #119-0203). Install supplied ¼-28 hex jam nut (part# 119-0205) onto ¼-28 heim joint (part #119-0204). Thread brake linkage rod (part# MC166XL) onto heim joint (part #119-0203) be sure that the heim joint threads are engaged at least 5/16" into the linkage brake rod. Repeat using the ¼-28 heim joint (part #119-0204) on the opposite end of the brake linkage rod being sure to engage at least ¼" of threads into the heim joint. These thread engagement lengths are minimums for safe operation. The heim joint threads are often engaged further when doing final adjustments in step 16.
- 15.) Using a 7/16" combination wrench, secure the ¼-28 heim joint to the threaded hole in the OEM brake pivot located just in front of the rear brake master cylinder.
- 16.) While seated on the bike, check that the shift and brake levers are in a comfortable position and you can operate them easily with your feet. You can adjust the position of the shift lever by first removing part #119-0301 socket head bolt that you installed in step 5. Once the bolt is removed, you can remove the lever from the splined shifter shaft, rotate it to the desired position, and reinstall as described in step 5. You can adjust the position of the brake pedal by first removing the heim joint (part #119-0204) from the pivot in front of the rear master cylinder. The position of the pedal is determined by the length of linkage rod. A longer linkage rod raises the brake pedal toe peg height, whereas a shorter linkage rod lowers it. Be sure the thread engagement is equal on both ends of the brake linkage rod! **Warning: You must keep a safe amount of thread engagement on both heim joints as described in step 14. Any less than minimum thread engagement in the linkage rod could cause the threads to fail, resulting in loss of rear brake function.** Once you have the pedal in a comfortable position that allows you to easily actuate your rear brake while seated on the bike, it is time to secure the linkage rod length. This is done by first tightening both the part #119-0103 5/16-24 jam nut and the part #119-0205 ¼-28 jam nut against the part #MC166XL brake rod. At this time, the mid control installation is complete.
- 17.) Now that both sides of the mid controls have been installed and adjusted properly, take a moment **BEFORE RIDING YOUR MOTORCYCLE** to double check that all fasteners were tightened securely and threadlocker was applied during installation.



Insert Bolt 119-0285  
before mounting  
bracket to bike.

FIGURE 1



Clevis FC219XL  
Mounted at  
45 degree angle

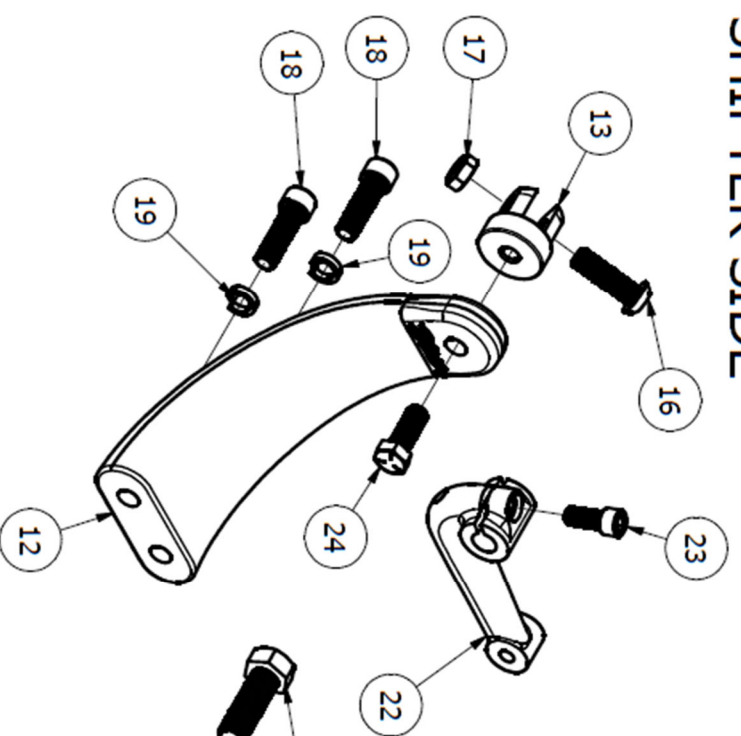
FIGURE 2



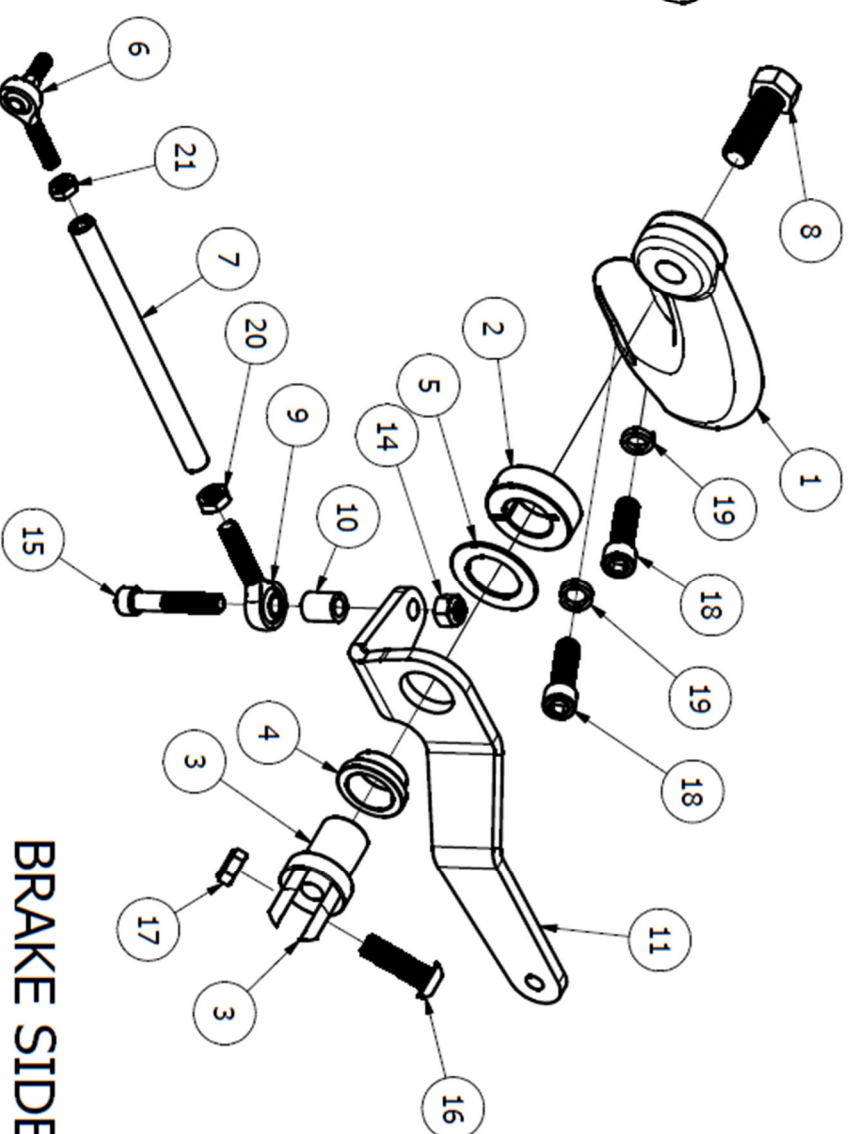
Insert Bolt 119-0219  
before mounting  
bracket to bike.

FIGURE 3

# SHIFTER SIDE



TC BROS.®  
PART #102-0088  
MID CONTROLS (NO PEGS)  
2004-2013 HD SPORTSTER® MODELS



# BRAKE SIDE

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# TC BROS.®

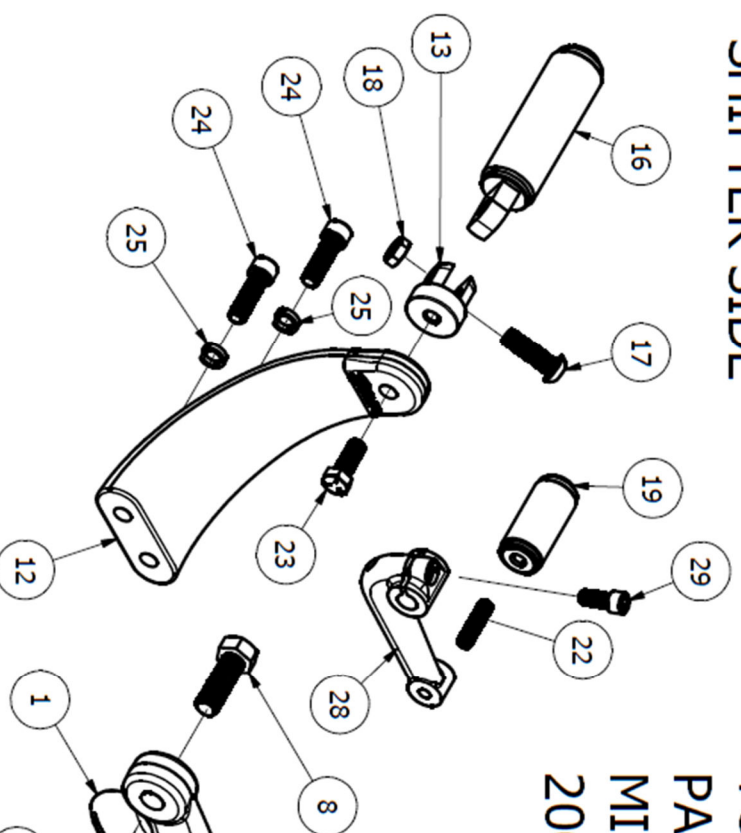
PART #102-0088

## MID CONTROLS (NO PEGS) PARTS LIST 2004 - 2013 HD SPORTSTER® MODELS

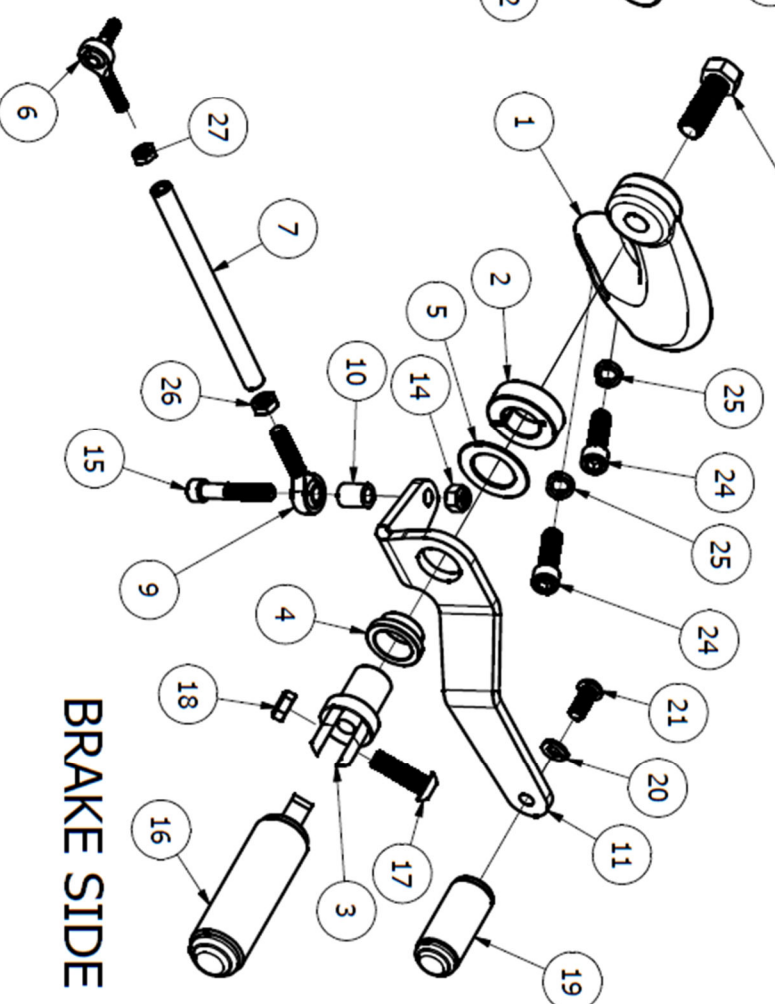
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	MC160XL	RH SUPPORT
2	1	119-0152	7/8 IDx1-5/8 OD ALUMINUM SHAFT COLLAR
3	1	FC888XL	FC CLEVIS
4	1	119-0153	7/8"IDx1"ODx1/2"LG BRONZE FLANGE BUSHING
5	1	119-0154	1"ID x1-5/8"OD x1/16"TH BRONZE THRUST WASHER
6	1	119-0204	1/4-28 MALE HEIM JOINT W/ STUD ZINC PLT
7	1	MC166XL	BRAKE ROD
8	1	119-0219	1/2-13x1-1/2 HEX BOLT
9	1	119-0203	5/16-24 MALE HEIM JOINT STEEL ZINC PLT
10	1	119-0287	.319 ID x 1/2 OD x 5/8 LG ALUMINUM SPACER
11	1	MC165XL	BRAKE PIVOT
12	1	MC167XL	LH MOUNT
13	1	FC219XL	FC CLEVIS
14	1	119-0003	5/16-18 NYLOCK NUT
15	1	119-0284	5/16-18x1-3/4 SOCKET HEAD CAP SCREW
16	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
17	2	119-0155	3/8-16 THIN HEX LOCKNUT SS
18	4	119-0187	3/8-16 x1-1/4 SOCKET HEAD CAP SCREW
19	4	119-0286	3/8 SOCKET HEAD CAP SCREW LOCK WASHER
20	1	119-0103	5/16-24 SS JAM NUT
21	1	119-0205	1/4-28 SS JAM NUT
22	1	MC173XL	BLACK SHIFT LEVER
23	1	119-0301	5/16-18 x 3/4 SOCKET HEAD CAP SCREW
24	1	119-0285	3/8-16x1 HEX BOLT

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# SHIFTER SIDE



**TC BROS.®**  
**PART #102-0089**  
**MID CONTROLS (WITH PEGS)**  
**2004-2013 HD SPORTSTER® MODELS**



# BRAKE SIDE

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# TC BROS.®

PART #102-0089

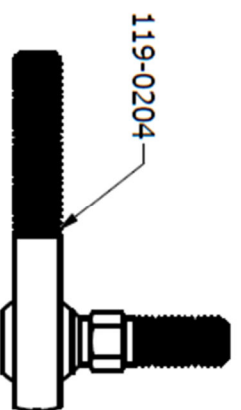
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PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
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5	1	119-0154	1"ID x1-5/8"OD x1/16"TH BRONZE THRUST WASHER
6	1	119-0204	1/4-28 MALE HEIM JOINT W/ STUD ZINC PLT
7	1	MC166XL	BRAKE ROD
8	1	119-0219	1/2-13x1-1/2 HEX BOLT
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12	1	MC167XL	LH MOUNT
13	1	FC219XL	FC CLEVIS
14	1	119-0003	5/16-18 NYLOCK NUT
15	1	119-0284	5/16-18x1-3/4 SOCKET HEAD CAP SCREW
16	2	FP883XL	HD FOOTPEG
17	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
18	2	119-0155	3/8-16 THIN HEX LOCKNUT SS
19	2	FP884XL	HD TOE PEG
20	1	119-0018	5/16 SS LOCK WASHER
21	1	119-0157	5/16-24x3/4 SS BUTTON HEAD BOLT
22	1	119-0198	5/16-24x1.25 SET SCREW
23	1	119-0285	3/8-16x1 HEX BOLT
24	4	119-0187	3/8-16 x1-1/4 SOCKET HEAD CAP SCREW
25	4	119-0286	3/8 SOCKET HEAD CAP SCREW LOCK WASHER
26	1	119-0103	5/16-24 SS JAM NUT
27	1	119-0205	1/4-28 SS JAM NUT
28	1	MC173XL	BLACK SHIFT LEVER
29	1	119-0301	5/16-18 x 3/4 SOCKET HEAD CAP SCREW

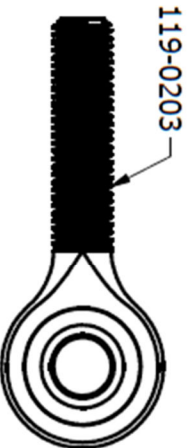
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# TC BROS.®

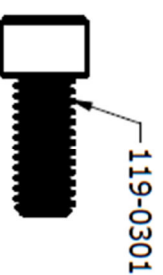
PART #102-0088 & #102-0089  
2004-2013 HD SPORTSTER® MID CONTROLS  
HARDWARE DIAGRAM (FULL SIZE)



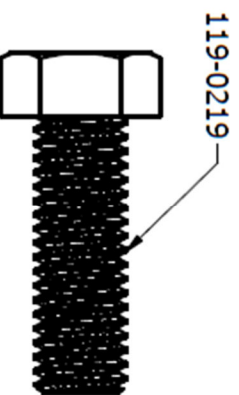
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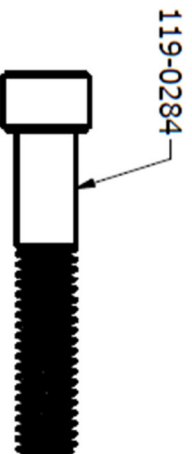
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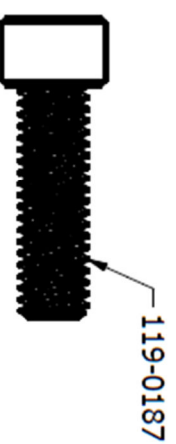
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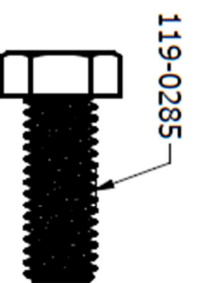
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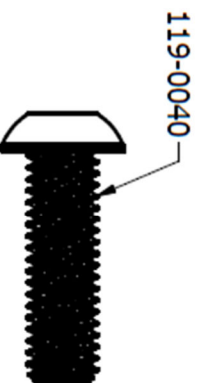
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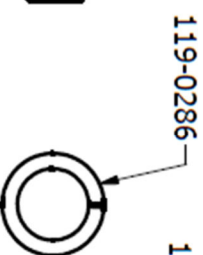
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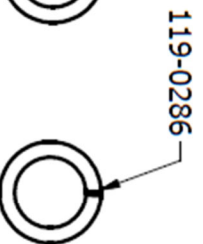
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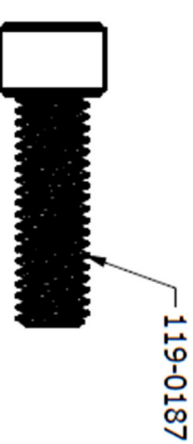
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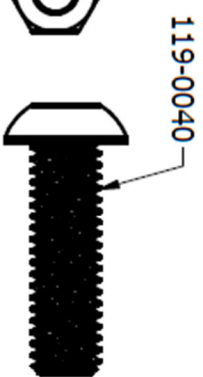
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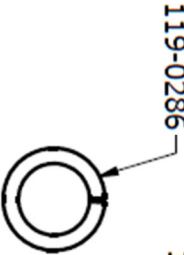
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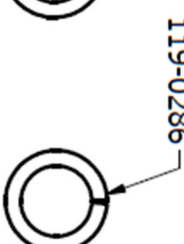
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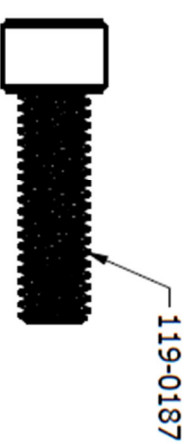
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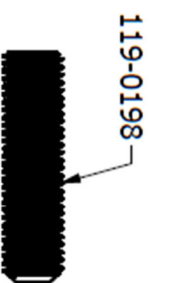
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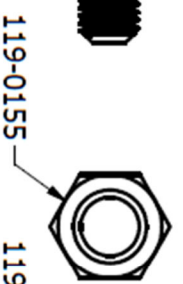
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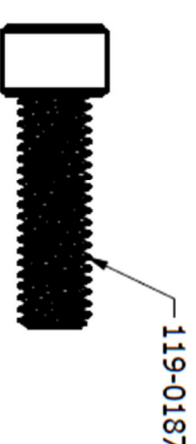
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