

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.) Torque Wrench that measures in ft-lbs or N-m
- 3.) Standard Hex Key Wrenches (a.k.a. "Allen Wrenches")
- 4.) Ratchet and Socket set
- 5.) Soft faced mallet (Rubber or plastic is preferred)
- 6.) Loctite #243 Medium Strength Threadlocker (Blue) or equivalent
- 7.) Grease (Multi-purpose Automotive, wheel bearing, or marine grade are sufficient)

FORWARD CONTROLS INSTALLATION INSTRUCTIONS:

- 1.) Remove Exhaust.
- 2.) If your bike has factory mid controls, remove shifter, brake pedal, footpegs, mounting brackets, and brake linkage rod. No need to remove rear master cylinder, but keep the pin used to attach the linkage rod.
- 3.) If your bike has factory forward controls, first disconnect linkage rods, then remove all forward controls mounts and hardware. No need to remove rear master cylinder, but keep the pin used to attach the linkage rod.
- 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.) Insert ½-13x2½" bolt (part #119-0210) through shifter side forward control mount (part #MB204XL-L). It will pass all the way through the welded spacer and threads will protrude out the other side.
- 6.) Install shifter side forward control mount (part #MB204XL-L) loosely to bike using quantity two 3/8-16x3" bolts (part #119-0170) and quantity two 3/8 Flat Washers (part #119-0026). *Remember to apply threadlocker.* It will install in the same location as your stock shifter side forward control mount that you removed in step 3. **See figure 1.** Using a torque wrench, torque the 3/8" bolts (part #119-0170) to 30 ft-lbs (40.7 N-m).
- 7.) Begin installing the shifter side forward control assembly by liberally applying threadlocker to the threads of the ½-13x2½" bolt (part #119-0210) and loosely threading it into the footpeg mounting clevis (part #FC888XL). 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 up toward rider if it were ever to contact the ground while riding. You most likely will not be able to reach the head of the 119-0210 bolt with a torque wrench, so just tighten securely using a ¾" combination wrench.
- 8.) Install the shift lever assembly (part #120-0024) 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. Be sure to orient the shift lever so that the threaded linkage attachment hole is in the 6:00 position (pointing straight down). Tighten supplied socket head bolt securely to clamp shift lever to shift shaft.
- 9.) Install supplied 5/16-24 hex jam nuts (part #119-0103) onto either end of shift linkage rod (part #FC208XL). Follow by installing supplied 5/16" heim joints (part #119-0009) onto either end of linkage rod as well.

- 10.) Attach shift linkage rod to shift lever installed in step 8 by passing supplied button head mounting bolt through heim joint and threading into shift lever. Follow by loosely installing remaining end of shift linkage rod to forward control pivot plate (part #FC204XL) using 5/16-18x1¼" socket head bolt (part #119-0209) and 5/16-18 locknut (part #119-0004). Be sure to install so that both heim joints are on the outer faces of both the pivot plate and the shift lever. This will ensure that there is no contact with the engine case, and the heim joints are not binding. Please refer to parts diagram for orientation.
- 11.) If you purchased part #102-0080, you can skip this step. If you purchased part #102-0079 (forward controls without pegs), now is time to install your footpeg (not included) using the supplied 3/8-16x1¼ (part #119-0040) button head bolt and 3/8-16 (part #119-0155) locknut. Follow by installing toe peg (not included).
- 12.) While seated on the bike, check that the shifter pedal is in a comfortable position and you can operate it easily with your foot. You can adjust the position of the pedal by unbolting the heim joint (part #119-0009) from the pivot plate (part #FC204XL) and adjusting the length of the linkage rod by threading it in or out of the heim joints, then reinstalling the linkage to the forward control. Take care to maintain a minimum of ½" (12.7mm) of linkage rod thread engagement in both heim joints. Once proper adjustments have been made, apply threadlocker to linkage bolts and tighten securely to 11 ft-lbs (14.9 N-m). Remember to tighten the #119-0103 jam nuts to the #119-0009 heim joints as well. At this time, the shifter side forward control installation is complete.
- 13.) Install brake side forward control mount (part #MB204XL-R) loosely to bike using quantity two 3/8-16x3" bolts (part #119-0170) and quantity two 3/8 Flat Washers (part #119-0026). *Remember to apply threadlocker.* It will install in the same location as your stock brake side forward control mount that you removed in step 3. **See figure 2.** Using a torque wrench, torque the 3/8" bolts (part #119-0170) to 30 ft-lbs (40.7 N-m).
- 14.) Apply a light coating of grease to the outer surface of the #FC222XL Pivot Shaft. Take care to avoid getting inside threaded holes or your threadlocker may not adhere properly. Install pivot shaft to MB204XL-R mounting bracket using 5/16-18 x 1¼ socket head bolt (part #119-0209) and #119-0207 split lock washer. **It is very important that you liberally apply threadlocker to the #119-0209 bolt even though you are using a lockwasher for added safety.** Torque the bolt to 11 ft-lbs (14.9 N-m).
- 15.) Carefully slide brake pivot (part #FC226XL) over pivot shaft (part #FC222XL) as shown in supplied parts diagram. Continue brake pivot installation by sliding FC Extension (part #FC221XL) onto pivot shaft (part #FC222XL) in the orientation shown in supplied parts diagram. Complete brake pivot installation by securing FC Extension to pivot shaft in the same manner as step 14 (threadlocker, hardware, torque value, etc.).
- 16.) Install footpeg mounting clevis (part #FC219XL) to FC Extension (part #FC221XL) in the same manner (45 degree angle) as step 7 using supplied 3/8-16 x ¾" hex head bolt (part #119-0038). Apply threadlocker to bolt before installation, and torque to 23 ft-lbs (31.2 N-m).
- 17.) Begin assembly of the brake linkage rod by first installing a 5/16-24 jam nut (part #119-0103) onto the end of the part #119-0203 5/16" male heim joint. Note that brake linkage rod (part #FC901XL) is only threaded on one end. Make sure that the threaded end is facing towards the front of the bike and install heim joint into linkage rod as shown in supplied parts diagram.
- 18.) Attach brake linkage rod (part #FC901XL) to master cylinder using the OEM pin removed in step 2 or 3. Replace original 3/16 retaining ring with new supplied side mount external retaining ring (part #119-0249).
- 19.) Loosely attach the front of the linkage rod to the hole in the bottom of the forward control brake pivot (part #FC226XL) using 5/16-18x2" socket head bolt (part #119-0208), 7/8" long aluminum spacer (part #119-0202), and 5/16-18 locknut (part #119-0004) as shown in the included parts diagram.
- 20.) If you purchased part #102-0080, you can skip this step. If you purchased part #102-0079 (forward controls without pegs), now is time to install your footpeg (not included) using the supplied 3/8-16x1¼ (part #119-0040) button head bolt and 3/8-16 (part #119-0155) locknut. Follow by installing toe peg (not included).
- 21.) While seated on the bike, check that brake pedal is in a comfortable position and you can operate it easily with your foot. You can adjust the position of the pedal by unbolting the heim joint (part #119-0203) from the pivot plate (part #FC226XL) and adjusting the length of the linkage rod by threading it in or out, then reinstalling the linkage to the forward control. Take care to maintain a minimum of ½" (12.7mm) of linkage rod thread engagement in the heim joint.

22.) Now that both sides of the forward controls have been installed, and the linkages have been adjusted properly, it is time to apply threadlocker and tighten all remaining hardware securely. Once completed, reinstall exhaust and double check that both the shifter and brake operate smoothly and comfortably before use.



FIGURE 1

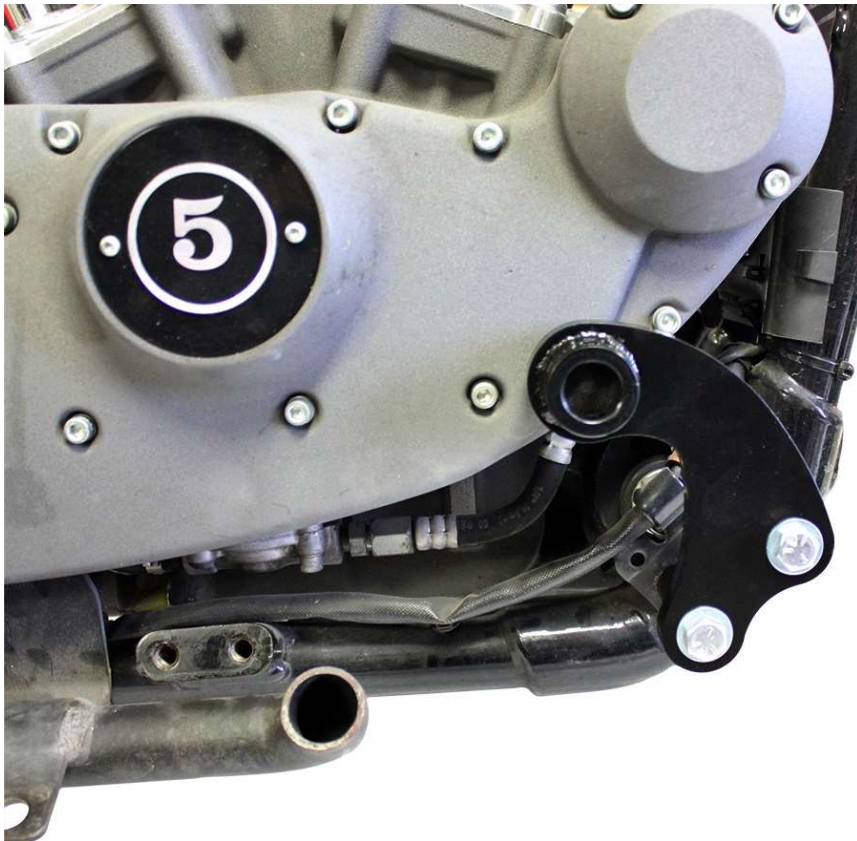
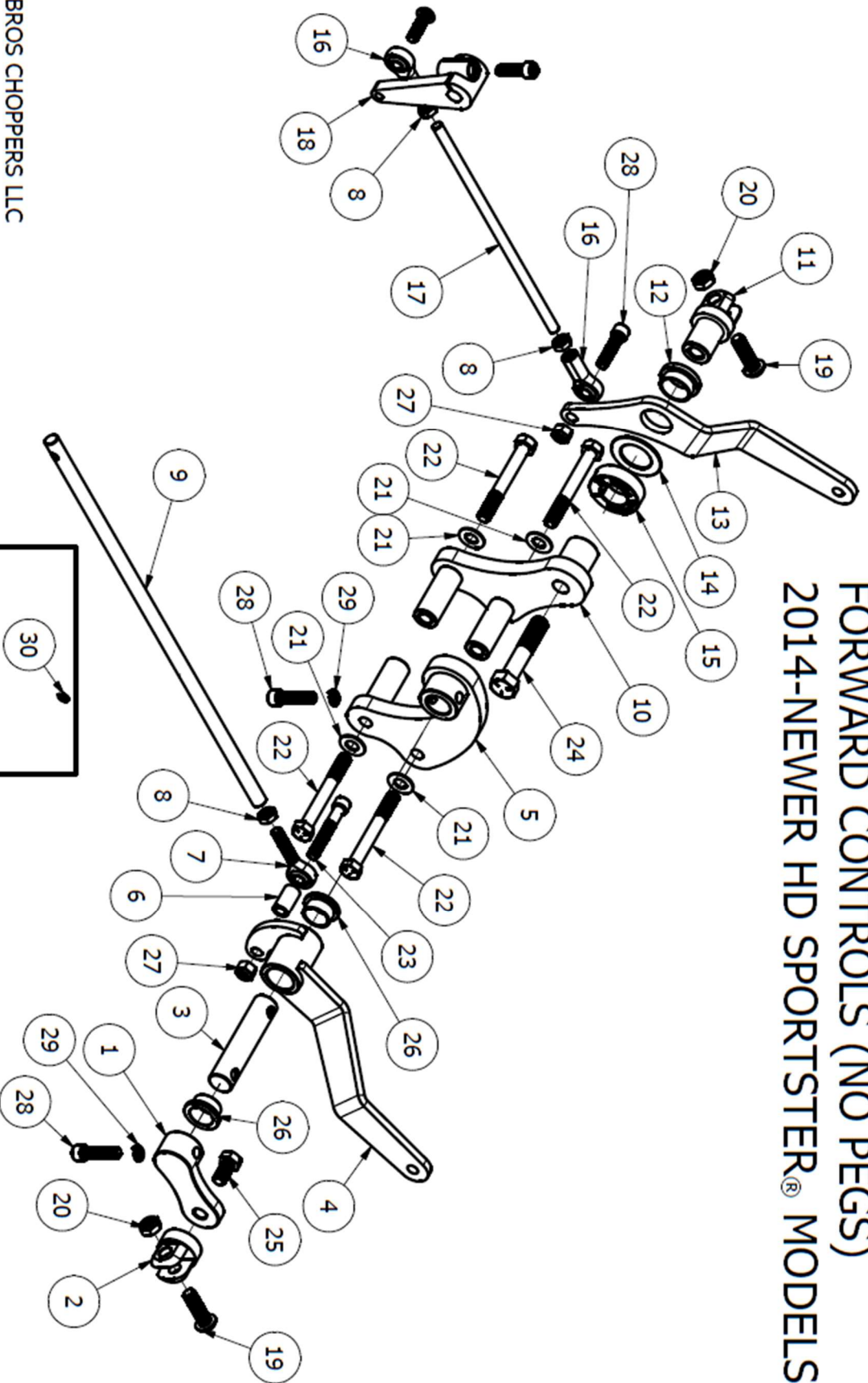


FIGURE 2

SHIFTER SIDE

PART #102-0079

FORWARD CONTROLS (NO PEGS)
2014-NEWER HD SPORTSTER® MODELS



REPLACE ORIGINAL
3/16 RETAINING
RING SEE STEP 18

BRAKE SIDE

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PART #102-0079

FORWARD CONTROLS (NO PEGS) PARTS LIST

2014-NEWER HD SPORTSTER® MODELS

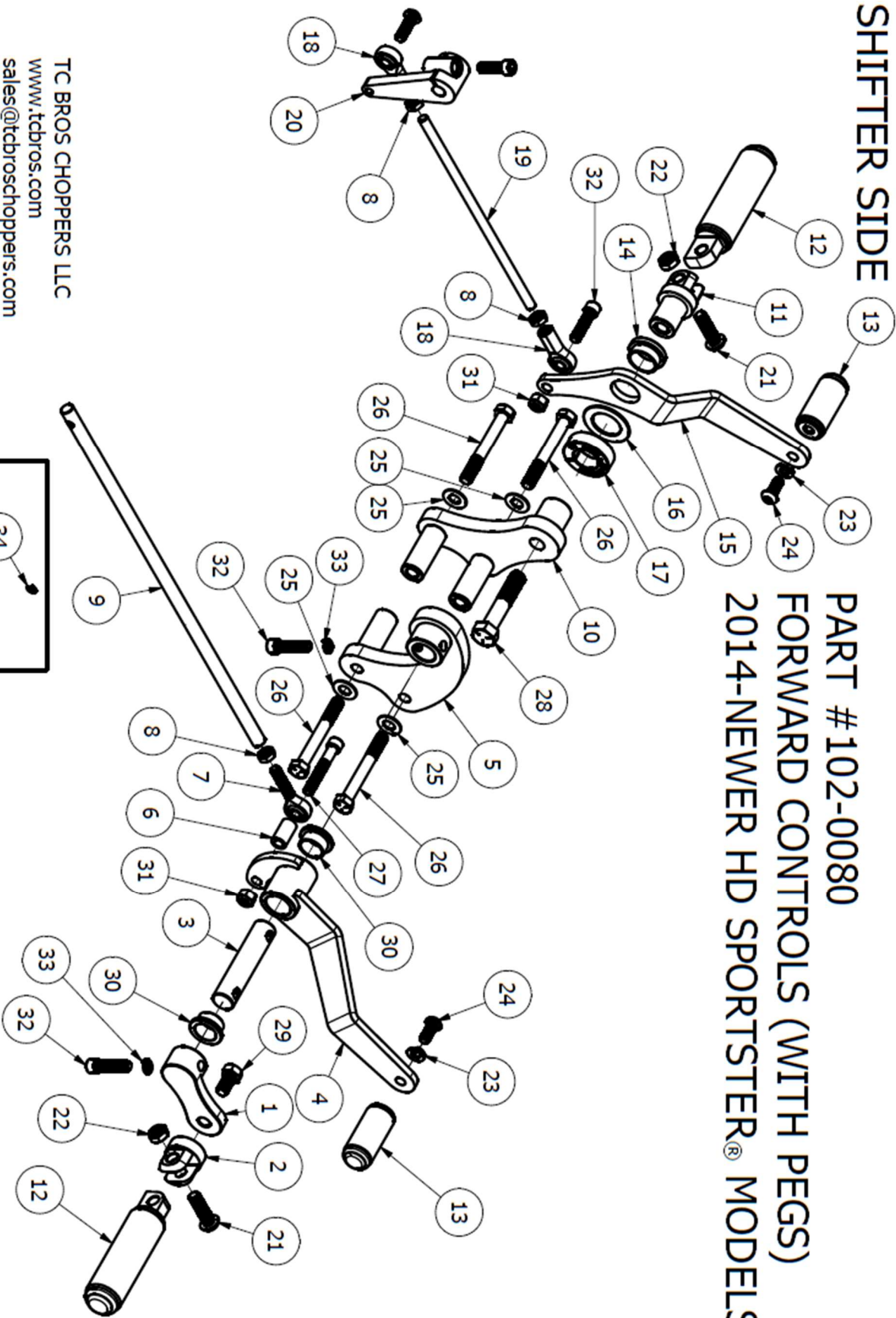
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	FC221XL	FC EXTENSION
2	1	FC219XL	CLEVIS
3	1	FC222XL	PIVOT SHAFT
4	1	FC226XL	BRAKE PIVOT
5	1	MB204XL-R	RH MOUNT
6	1	119-0202	.319 ID x 1/2 OD x 7/8 LG ALUMINUM SPACER
7	1	119-0203	5/16-24 MALE HEIM JOINT STEEL ZINC PLT
8	3	119-0103	5/16-24 SS JAM NUT
9	1	FC901XL	BRAKE ROD
10	1	MB204XL-L	LH MOUNT
11	1	FC888XL	FC CLEVIS
12	1	119-0153	7/8"IDx1"ODx1/2"LG BRONZE FLANGE BUSHING
13	1	FC204XL	SHIFT SIDE PIVOT
14	1	119-0154	1"ID x1-5/8"OD x1/16"TH BRONZE THRUST WASHER
15	1	119-0152	7/8 IDx1-5/8 OD ALUMINUM SHAFT COLLAR
16	2	119-0009	5/16-24 FEMALE HEIM JOINT
17	1	FC208XL	SHIFT LINKAGE
18	1	120-0024	SHIFT LEVER ASSEMBLY (WITH BOLTS)
19	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
20	2	119-0155	3/8-16 THIN HEX LOCKNUT SS
21	4	119-0026	3/8 SAE WASHER
22	4	119-0170	3/8-16 x3" HEX BOLT
23	1	119-0208	5/16-18x2 STAINLESS SOCKET HEAD CAP SCREW
24	1	119-0210	1/2-13x2-1/2 HEX BOLT
25	1	119-0038	3/8-16x3/4 HEX BOLT
26	2	119-0064	3/4 IDx7/8 ODx1/2 LG BRONZE FLG BUSHING
27	2	119-0004	5/16-18 SS NYLOCK NUT
28	3	119-0209	5/16-18x1.25 STAINLESS SOCKET HEAD CAP SCREW
29	2	119-0207	5/16 SS SPLIT LOCK WASHER FOR SHCS
30	1	119-0249	3/16 SIDE MOUNT EXTERNAL RETAINING RING

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SHIFTER SIDE

PART #102-0080

FORWARD CONTROLS (WITH PEGS)
2014-NEWER HD SPORTSTER® MODELS



BRAKE SIDE

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REPLACE ORIGINAL
3/16 RETAINING
RING SEE STEP 18

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PART #102-0080

FORWARD CONTROLS (WITH PEGS) PARTS LIST

2014-NEWER HD SPORTSTER® MODELS

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	FC221XL	FC EXTENSION
2	1	FC219XL	CLEVIS
3	1	FC222XL	PIVOT SHAFT
4	1	FC226XL	BRAKE PIVOT
5	1	MB204XL-R	RH MOUNT
6	1	119-0202	.319 ID x 1/2 OD x 7/8 LG ALUMINUM SPACER
7	1	119-0203	5/16-24 MALE HEIM JOINT STEEL ZINC PLT
8	3	119-0103	5/16-24 SS JAM NUT
9	1	FC901XL	BRAKE ROD
10	1	MB204XL-L	LH MOUNT
11	1	FC888XL	FC CLEVIS
12	2	FP883XL	HD FOOTPEG
13	2	FP884XL	HD TOE PEG
14	1	119-0153	7/8"IDx1"ODx1/2"LG BRONZE FLANGE BUSHING
15	1	FC204XL	SHIFT SIDE PIVOT
16	1	119-0154	1"ID x1-5/8"OD x1/16"TH BRONZE THRUST WASHER
17	1	119-0152	7/8 IDx1-5/8 OD ALUMINUM SHAFT COLLAR
18	2	119-0009	5/16-24 FEMALE HEIM JOINT
19	1	FC208XL	SHIFT LINKAGE
20	1	120-0024	SHIFT LEVER ASSEMBLY (WITH BOLTS)
21	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
22	2	119-0155	3/8-16 THIN HEX LOCKNUT SS
23	2	119-0018	5/16 SS LOCK WASHER
24	2	119-0157	5/16-24x3/4 SS BUTTON HEAD BOLT
25	4	119-0026	3/8 SAE WASHER
26	4	119-0170	3/8-16 x3" HEX BOLT
27	1	119-0208	5/16-18x2 STAINLESS SOCKET HEAD CAP SCREW
28	1	119-0210	1/2-13x2-1/2 HEX BOLT
29	1	119-0038	3/8-16x3/4 HEX BOLT
30	2	119-0064	3/4 IDx7/8 ODx1/2 LG BRONZE FLG BUSHING
31	2	119-0004	5/16-18 SS NYLOCK NUT
32	3	119-0209	5/16-18x1.25 STAINLESS SOCKET HEAD CAP SCREW
33	2	119-0207	5/16 SS SPLIT LOCK WASHER FOR SHCS
34	1	119-0249	3/16 SIDE MOUNT EXTERNAL RETAINING RING

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TC BROS. CHOPPERS

PART #102-0079 & #102-0080
HD SPORTSTER FORWARD CONTROLS
HARDWARE DIAGRAM (FULL SIZE)

