

INSTALLATION INSTRUCTIONS
TC BROS. CHOPPERS®
PART #102-0090 (No Pegs) & #102-0091
MID CONTROLS KIT FOR 1991-2017 HARLEY DAVIDSON® DYNA® MODELS

IF YOUR BIKE HAS FORWARD CONTROLS, REFER TO TABLES ON PAGE 3 LISTING ADDITIONAL PARTS THAT MAY BE REQUIRED TO INSTALL THIS MID CONTROL KIT. 2006-2017 MODELS THAT CAME WITH FACTORY FORWARD CONTROLS REQUIRE REMOVAL AND INSTALLATION OF INNER & OUTER PRIMARY COVERS (SOLD SEPARATELY).

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 (torque values given are for dry fasteners)
- 3.) Standard Hex Key Wrenches (a.k.a. "Allen Wrenches")
- 4.) Ratchet and Socket set
- 5.) Loctite #243 Medium Strength Threadlocker (Blue) or equivalent
- 6.) Adjustable wrench with minimum 1" capacity (a.k.a. "Crescent Wrench")
- 7.) Soft faced mallet (rubber or plastic is preferred)

MID CONTROLS INSTALLATION INSTRUCTIONS:

- 1.) 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.**
- 2.) Remove your exhaust. 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). If your bike has forward controls you need to refer to one of the tables on page 3. **2006-2017 models that came with factory forward controls do not have a hole in the inner or outer primary covers for the mid control shifter shaft. They will require removal and installation of proper inner and outer primary covers as well as the additional parts listed in the table on page 3 (sold separately). Refer to service manual for removal and installation of parts listed in tables on page 3.**
- 3.) Install new shift lever (part #MC175BT) to the splined shifter shaft protruding from your primary cover by tapping it into position with a soft face mallet until it is fully seated onto the shaft. Use lockwasher (part# 119-0017) and 5/16-18x1" (part# 119-0033) hex bolt to securely clamp shift lever to shift shaft.
- 4.) Insert 3/8-16 x 1" bolt (part #119-0285) from the back side top hole of the LH mount (part #MC170BT). You need to do this before you bolt the mount to the bike due to interference once it's mounted on bike. **See figure 1.**
- 5.) Install LH mount (part #MC170BT) loosely to bike using quantity two 3/8-16x1-1/4" bolts (part # 119-0187) & lockwashers (part# 119-0286). *Remember to apply threadlocker.* It will install in the same location as your stock shifter side mid control mount. Using a torque wrench, torque the 3/8" bolts (part #119-0187) to 30 ft-lbs (40.7 N-m).
- 6.) Install the footpeg mounting clevis (part #FC219XL) to the LH mount (part #MC170BT) using 3/8-16x1" bolt (part #119-0285). This is the bolt you inserted in mount on step 4. *Remember to apply threadlocker.* Be sure to orient the footpeg mounting clevis (part #FC219XL) 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. Use crescent wrench to hold clevis at 45 degree angle and torque to 23 ft-lbs (31.2 N-m). **See figure 2.**
- 7.) If you purchased part #102-0091, you can skip this step. If you purchased part #102-0090 (mid 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).
- 8.) Assemble the RH mount (part# MC168BT) to the brake pivot (part# MC169BT) using 3/8-16x1.75" flat head screw (part# 119-0292), spacer (part# MC171BT), thrust washer (part#119-0065), 3/8" washer (part# 119-0291), and thin

locknut (part# 119-0155). Install the footpeg mounting clevis (part #FC219XL) to the RH mount (part # MC168BT) using 3/8-16 x 1" bolt (part #119-0293). *Remember to apply threadlocker.* Be sure to orient the footpeg mounting clevis (part #FC219XL) 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. Torque to 23 ft-lbs (31.2 N-m). **See figure 2.**

- 9.) If you purchased part #102-0091, you can skip this step. If you purchased part #102-0090 (mid 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).
- 10.) Install supplied 5/16-24 hex jam nuts (part #119-0103) onto either end of brake linkage rod (part #MC172BT). Follow by installing supplied 5/16 heim joint (part #119-0009) onto one end. Take the opposite end and thread it into the master cylinder. Now attach the end with the heim joint to the brake pivot using 5/16-18 x 1" bolt (part #119-0034) and 5/16" thin nylock nut (part #119-0290).
- 11.) While seated on the bike, check that the shifter 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 #119-0033 bolt that you installed in step 3. You can adjust the position of the brake pedal by unbolting the heim joint (part #119-0009) from the brake pivot (part #MC169BT) and adjusting the length of the linkage rod by threading it in or out, then reinstalling the linkage to the brake pivot. **Warning: You must maintain a minimum of 5/16" of linkage rod thread engagement in both the heim joint and the master cylinder. Any less than minimum thread engagement in the linkage rod could cause the threads to fail, resulting in loss of rear brake function.** After adjustments are made, remember to tighten the #119-0103 jam nuts to the master cylinder and heim joint as well.
- 12.) Reinstall exhaust.
- 13.) Now that both sides of the mid controls have been installed, and the linkages have been adjusted properly, take a moment **BEFORE RIDING YOUR MOTORCYCLE** to double check that all fasteners were tightened securely and threadlocker was applied during installation.



FIGURE 1



FIGURE 2

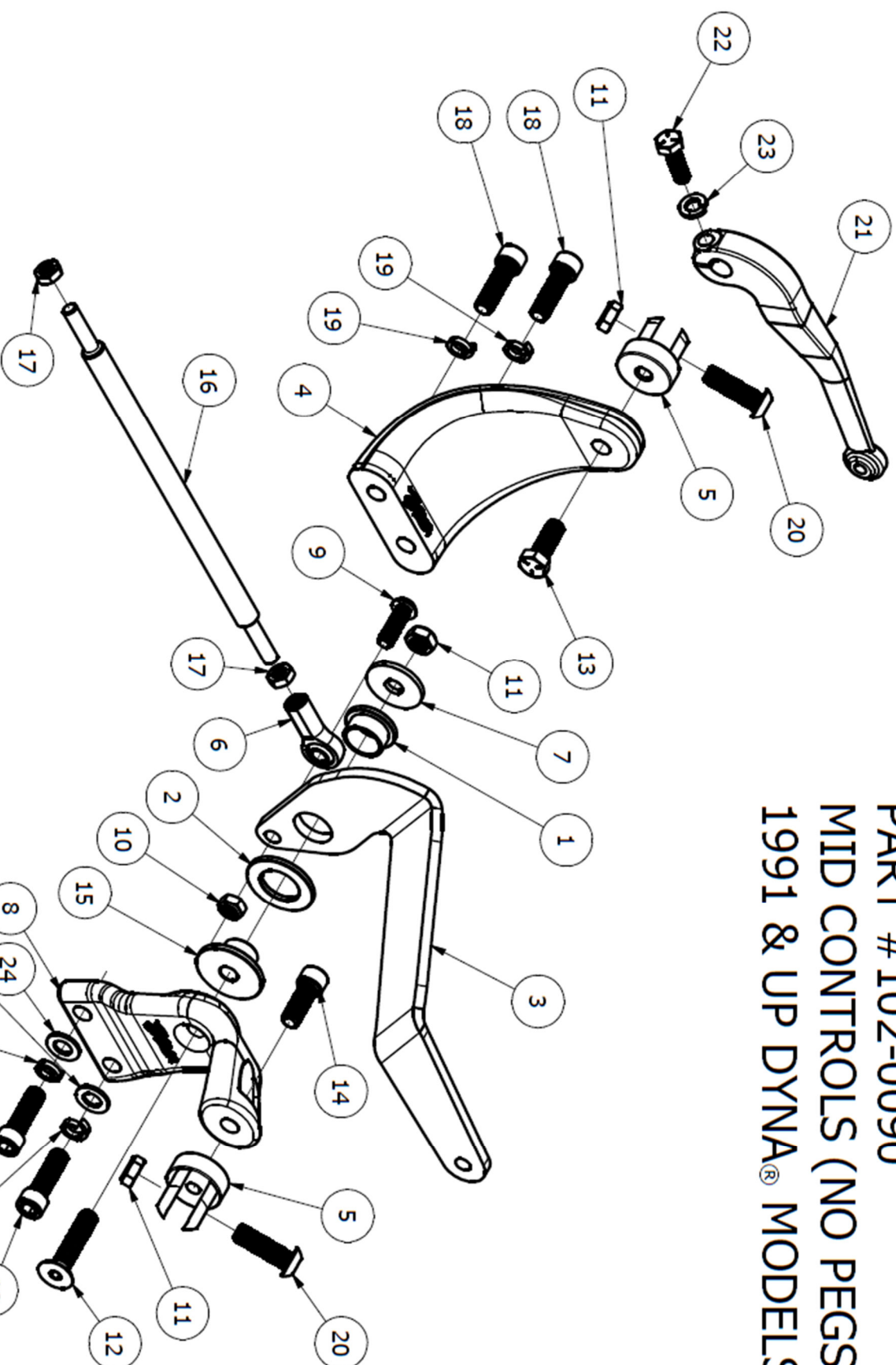
ADDITIONAL PARTS REQUIRED (SOLD SEPARATELY) FOR MODELS THAT CAME WITH FACTORY FORWARD CONTROLS

1991- 2005 With Forward Controls		
Qty	HD Part #	Description
3	11117A	O-Ring
1	3926	Bolt
1	7041	Washer
1	34632-84B	Sleeve, Shift Lever
1	34561-84	Sleeve Locator Plate
1	34625-90	Wave Washer
1	34621-90	Shift Lever
1	7507	Acorn Nut
1	6016	Washer (As Required)
1	4017	Bolt
1	33728-90B	Shifter Rod
1	60529-90A	Cover Inspection (Chrome)
1	60567-90C	Gasket, Inspection Cover

2006-2017 With Forward Controls		
Qty	HD Part #	Description
1	7078	Spacer
1	34621-06	Shift Lever
1	33728-06	Shifter Rod
1	60790-06C	Inner Cover Assembly (Textured Black)
1	34934-06	Gasket, Housing Cover
1	60758-06A	Outer Cover Assembly (Textured Black)
1	60547-06	Gasket, Primary Cover

Please note that the parts in these tables are just an example of parts that work for the conversion. There are other alternatives, both OEM and aftermarket, that can work as well. For example, a chrome “mid control” Harley primary cover does not have the same part number as the black cover listed above.

SHIFTER SIDE



TC BROS.®
PART #102-0090
MID CONTROLS (NO PEGS)
1991 & UP DYNA® MODELS

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BRAKE SIDE

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PART #102-0090

MID CONTROLS (NO PEGS) PARTS LIST

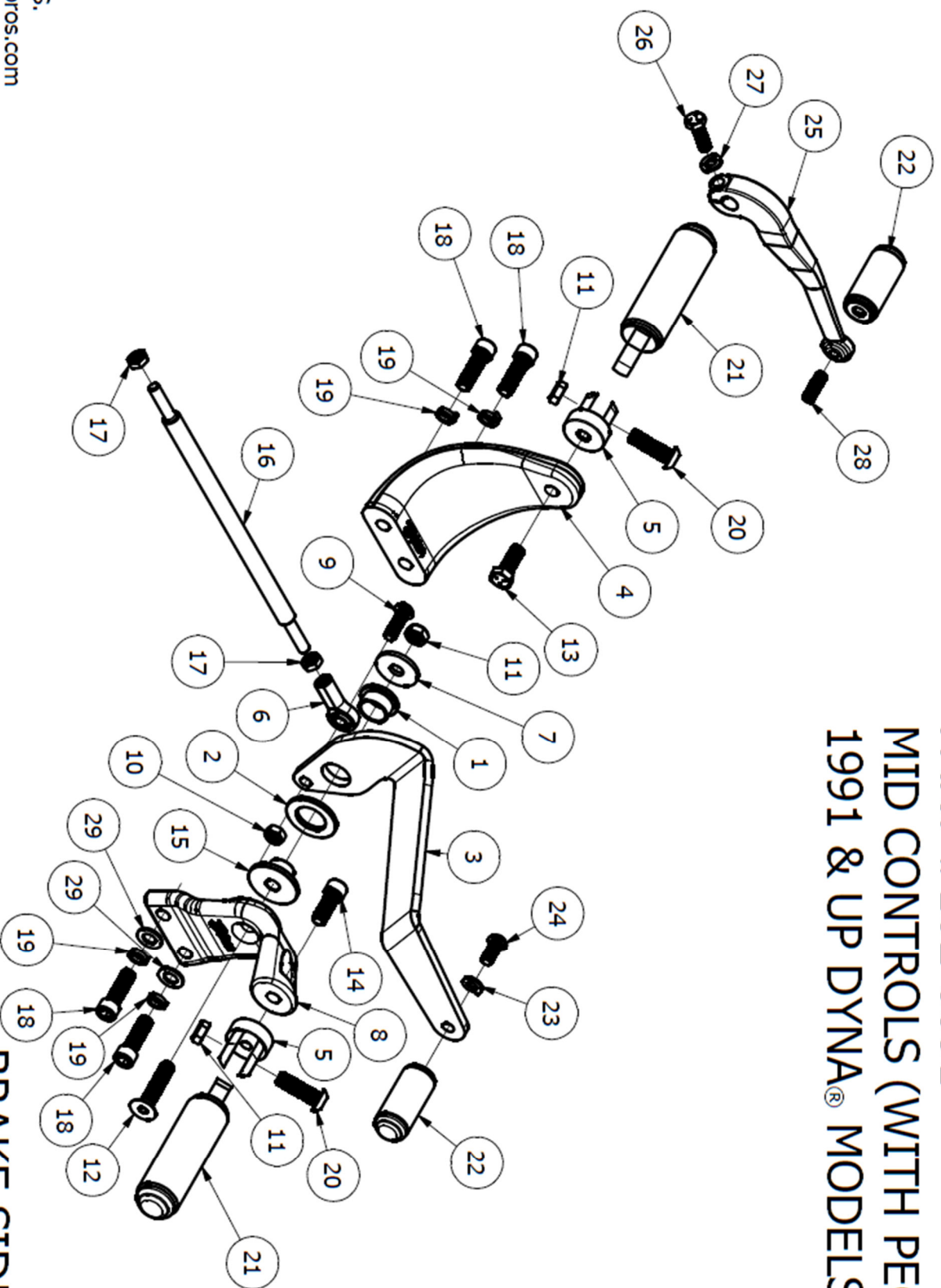
1991 & UP DYNA® MODELS

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	119-0064	3/4 IDx7/8 ODx1/2 LG BRONZE FLG BUSHING
2	1	119-0065	7/8 IDx1-1/2 ODx1/8 TH BRONZE THRUST WASHER
3	1	MC169BT	BRAKE PIVOT
4	1	MC170BT	LH MOUNT
5	2	FC219XL	FC CLEVIS
6	1	119-0009	5/16-24 FEMALE HEIM JOINT
7	1	119-0291	3/8" SAE WASHER
8	1	MC168BT	RH MOUNT
9	1	119-0034	5/16-18x1 SS BUTTON HEAD BOLT
10	1	119-0290	5/16-18 THIN HEX LOCKNUT S.S.
11	3	119-0155	3/8-16 THIN HEX LOCKNUT SS
12	1	119-0292	S.S. 3/8"-16x1.75" FLAT HEAD SCREW
13	1	119-0285	3/8-16x1 HEX BOLT
14	1	119-0293	3/8"-16x1.00" SOCKET HEAD CAP SCREW
15	1	MC171BT	SPACER
16	1	MC172BT	BRAKE ROD
17	2	119-0103	5/16-24 SS JAM NUT
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	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
21	1	MC175BT	SHIFT LEVER 86-90
22	1	119-0033	5/16-18x1" HEX BOLT
23	1	119-0017	5/16" LOCK WASHER
24	2	119-0225	3/8" NARROW SAE WASHER

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PART #102-0091

MID CONTROLS (WITH PEGS) PARTS LIST 1991 & UP DYNA® MODELS

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	119-0064	3/4 IDx7/8 ODx1/2 LG BRONZE FLG BUSHING
2	1	119-0065	7/8 IDx1-1/2 ODx1/8 TH BRONZE THRUST WASHER
3	1	MC169BT	BRAKE PIVOT
4	1	MC170BT	LH MOUNT
5	2	FC219XL	FC CLEVIS
6	1	119-0009	5/16-24 FEMALE HEIM JOINT
7	1	119-0291	3/8" SAE WASHER
8	1	MC168BT	RH MOUNT
9	1	119-0034	5/16-18x1 SS BUTTON HEAD BOLT
10	1	119-0290	5/16-18 THIN HEX LOCKNUT S.S.
11	3	119-0155	3/8-16 THIN HEX LOCKNUT SS
12	1	119-0292	S.S. 3/8"-16x1.75" FLAT HEAD SCREW
13	1	119-0285	3/8-16x1 HEX BOLT
14	1	119-0293	3/8"-16x1.00" SOCKET HEAD CAP SCREW
15	1	MC171BT	SPACER
16	1	MC172BT	BRAKE ROD
17	2	119-0103	5/16-24 SS JAM NUT
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	2	119-0040	3/8-16x1-1/4 SS BUTTON HEAD BOLT
21	2	FP883XL	HD FOOTPEG
22	2	FP884XL	HD TOE PEG
23	1	119-0018	5/16 SS LOCK WASHER
24	1	119-0157	5/16-24x3/4 SS BUTTON HEAD BOLT
25	1	MC175BT	SHIFT LEVER 86-90
26	1	119-0033	5/16-18x1" HEX BOLT
27	1	119-0017	5/16" LOCK WASHER
28	1	119-0302	5/16"-24 x 1" SET SCREW
29	2	119-0225	3/8" NARROW SAE WASHER

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