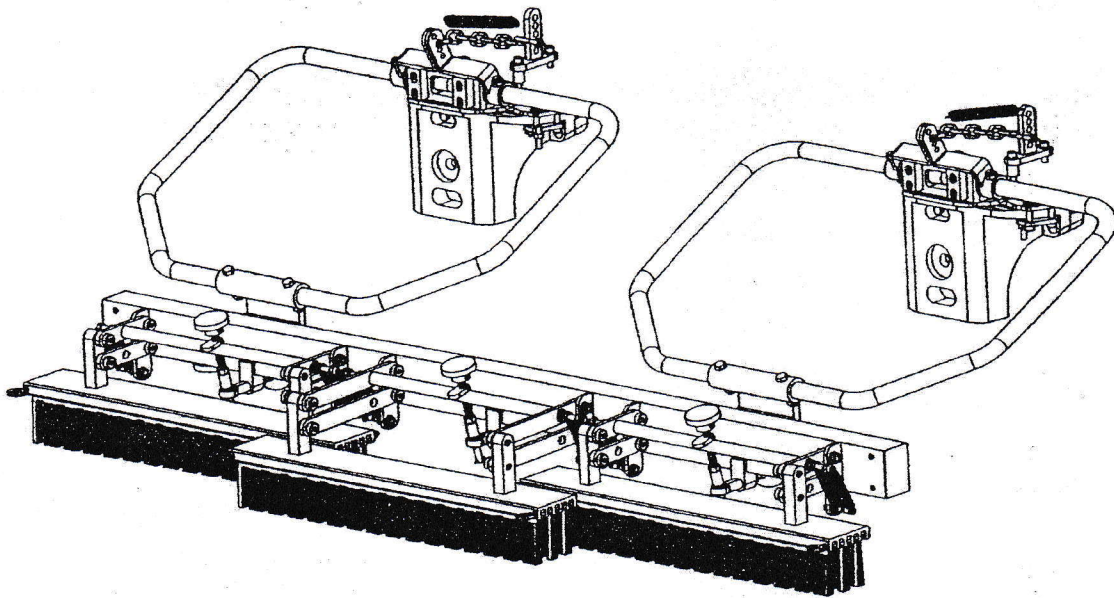


**FLEX BRUSH  
FOR  
TORO 3300,3320,3400,3420  
TRIPLEX UNITS**



**JUNE 30, 2017**

## FLEX BRUSH SPECIFICATIONS AND SETTINGS

- EFFECTIVE WIDTH :** 60 Inches ( 3 Heads 23 Inches Each )
- WEIGHT :** 55 Pounds
- CONSTRUCTION :** 6061 T6 Aluminum and 303 Stainless Steel
- INDEPENDENT HEADS :** 23 Inch Heads, Twin Arm Mounted ( For best Parallel Following of Contours)  
Mounts for One, up to Five Brush Strips in Any Combination of the Following.
- BRUSHES :** BLACK - Firm, 0.032" dia. crimped Polypropylene material 3/8" wide x 3" Long.  
BLUE - Soft, 0.020" dia. crimped Polypropylene material 3/8" wide x 3" Long.  
Both Available in Solid or Notched Strips.
- USES :** Pre-Mowing / Topdressing / Aerification Fill / Debris Removal

There are several ways to achieve the desired down pressure for you situation. The concept is to limit down travel of the brushes while allowing them to float up when necessary.

Downward force can range from: Minimal auxiliary help, up to being locked in a solid position. At the bottom of the adjuster shaft base there is a small hole that a cotter pin may be installed in that would lock the brushes so they could not float, should that be necessary.

The amount of debris or material to be moved, moisture content, grass type and height of cut will all determine what amount of downward force you will require.

The least amount of downward force is with the auxiliary springs disconnected on the end units, and one each light/soft spring on the center unit. The springs are permanently mounted, and can swing free when not in use. To fix the heads, install cotter pin in adjuster shaft just below spherical rod end to "LOCK" head and stop them from floating.

Following the attached chart will allow you to estimate the amount of downward force that each setting will achieve. Due to the leverage and length of the arms on the center unit, spring type and amount connected varies from the end units to achieve equal down pressure on all three units.

Brush strips can be moved around, removed, and even more added to achieve nearly any result you require.

Pressures	Center Brush	End Brushes
Fixed	Fixed	Fixed
10 lbs.	1 Soft Spring	No Springs
15 lbs.	1 Firm Spring	1 Soft Spring
18 lbs.	1 Soft & 1 Firm	2 Soft Springs
25 lbs.	2 Firm Springs	1 Firm Spring



## **TORO TRIFLEX 3300 through 3420 FLEX-BRUSH MOUNTING INSTRUCTIONS**

Upon receiving and locating these instructions, familiarize yourself with the parts in the detail view and parts lists. All items will be referenced by the item number on the TRI-FLEX BRUSH MOUNT DETAIL VIEW schematic.

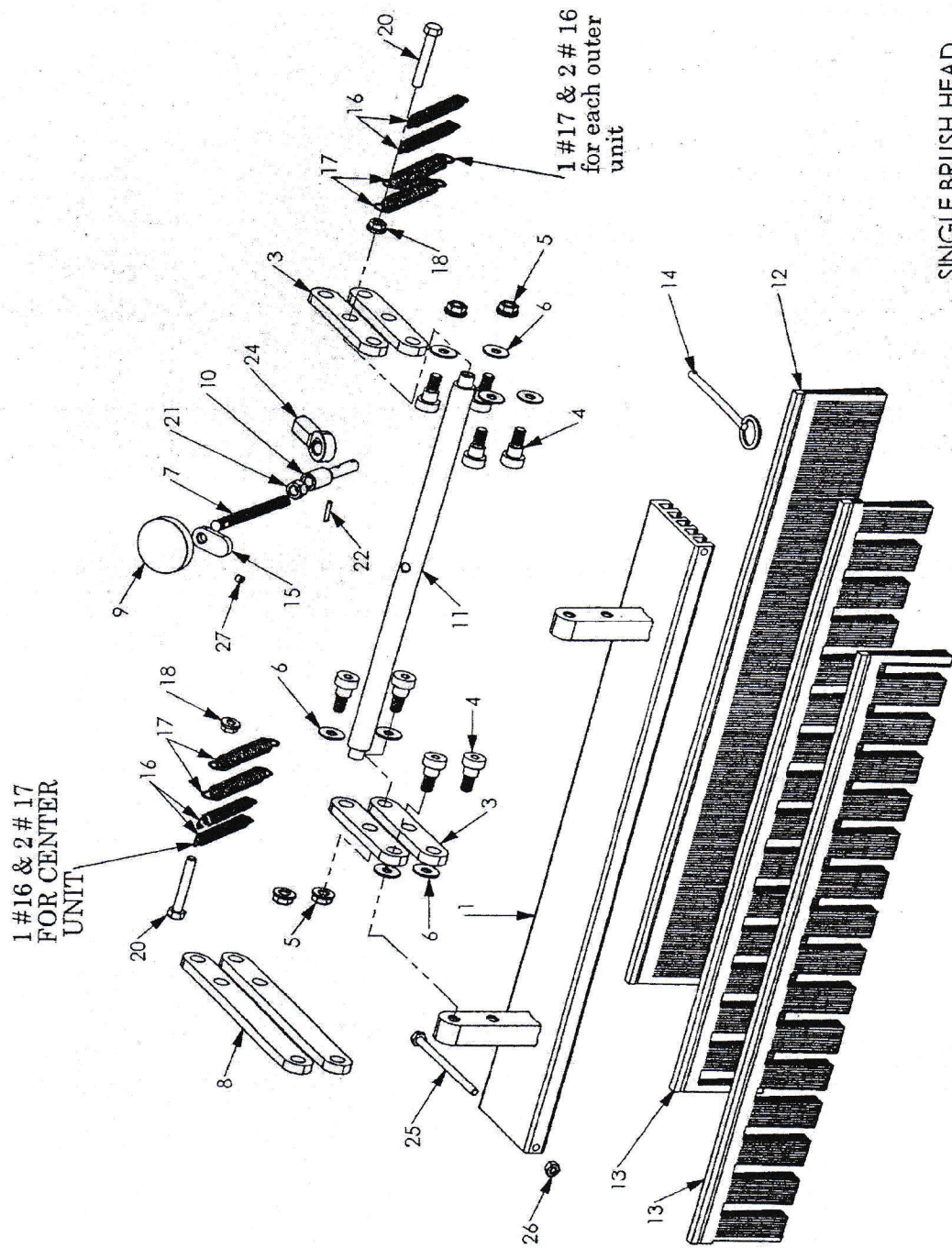
1. Position mower in a work area with several feet of room in front of the clipping baskets, lower units to the ground and turn off engine.
2. Starting with either front unit, release the lifting clamps from the cutting reel and allow the head to rise up via the factory torsion springs.
3. Remove the top ball joint mounting bolt to the left of the stud as you are facing the machine as shown by # 29 on the exploded view. A slight lift and rotation of the head may be necessary to completely remove the bolt.
4. Remove the lock nuts # 4 and bolts # 27 from the Brush Attachment Plate # 23 as well as the Attachment Plate Clamps # 24.
5. Set Attachment Plate # 23 on top of mower head, 90 degree downward tab should line up where bolt was removed in step #3. Long slot should fit snug over raised edge on the front of mower head.
6. Install supplied bolt # 29 into Attachment Plate # 23 and back through ball joint clamp, install nut # 4 and leave loose.
7. Install Attachment Plate Clamps # 24 under lip of mower head and thread bolts # 27 into Attachment Plate # 23. (NOTE: Loosen the pointed set screw # 26 as far as possible before installing clamps).
8. With both Clamps installed, tighten bolts # 27 securely with 1/4" hex key wrench, install flanged jam nuts # 4 and tighten.
9. Tighten bolt # 29, and then tighten pointed set screw # 26 till Clamp Plate begins to tilt slightly, and secure with jam nut # 25.
10. Remove the two socket head screws that secure the anchor plate for either the motor cable or the hydraulic hoses depending on mower type. NOTE: for Hydraulic units 3300 & 3400, remove the hydraulic hose mounting blocks from the factory plate and replace to supplied Mounting Plate # 35. Then proceed to line # 11. This will provide clearance for the hose mounting blocks. Electric units 3320 & 3420 have no need to change cable mounting plate.
11. Add Lifting Post # 20 to this point and on top of anchor plate using Spacer # 21 and the longer bolts # 17 in the forward hole, and bolt # 18 in the rear hole and tighten.
12. Repeat steps # 3 through # 11 for the other side of the machine.
13. Re-attach both cutter heads and secure lifting clamps.
14. Make sure washer # 12 and Hairpin Cotter # 13 are removed from the post on Attachment Plate # 23. Slide entire Connection Loop Assembly over post until fully down and install washer # 12 and Hairpin Cotter # 13. (These will fit either side)

15. Attach Chain using shackles # 14 to Lift post #20 in the fourth hole from the top, and into Lift Arm # 10 in the second hole down, using six of the seven links of chain # 15.
16. By manually lifting the front of Connection Hoop at # 34, raise as high as possible, and attach Spring # 16 into the top hole of each the Lift Post # 20 and Lift arm # 10, and lower hoop.
17. Remove bolts # 30, lock washers # 31, bushings # 32 and flat washers # 33 from the back of the Brush Head.
18. Align Brush head Tool Bar to the Mounting Brackets # 34, reinstall bolts, lock washer, flat washers, and bushings, and tighten.
19. Remove ring head pins from each Brush Head and install two notched firm strips, one in the forward slot and one in the center slot of each head, be sure to install the notched strips swapping ends so that the notches ARE NOT aligned within the head. Then install the full soft strip into the last (fifth) slot, and replace ring head pins. ( stop tip of pin in center head flush to the surface of the head to prevent interference with adjoining head).
20. Pivot Stop Blocks # 7 are preset at the factory to hold the Brush Head at a predetermined position. These may need to be adjusted, Do so by loosening all four screws # 5 and sliding them equally to a new position and tightening.
21. BASE SETTING FOR BRUSH BEAM: With cutter heads fully lowered, adjust each individual brush head up until they are clear of the floor and all weight is suspended on the beam. Put a 5 inch tall block under each end of main brush beam. Adjust Pivot Stop Blocks #7 as explained in step #20 so that all four are making contact with Lift Arm #10 and tighten. Now remove 5 inch blocks, beam should rest with approximately 4 inches of clearance from bottom of beam to floor.
22. From this position, adjust all brush heads till they are barely touching the floor, to about 1/8" above.
23. Hold this position by tightening locking tab against the cross bar as a jam nut.
24. Follow the "BRUSH SPECS PAGE" for further information to set the desired position and downward force of the brush heads.

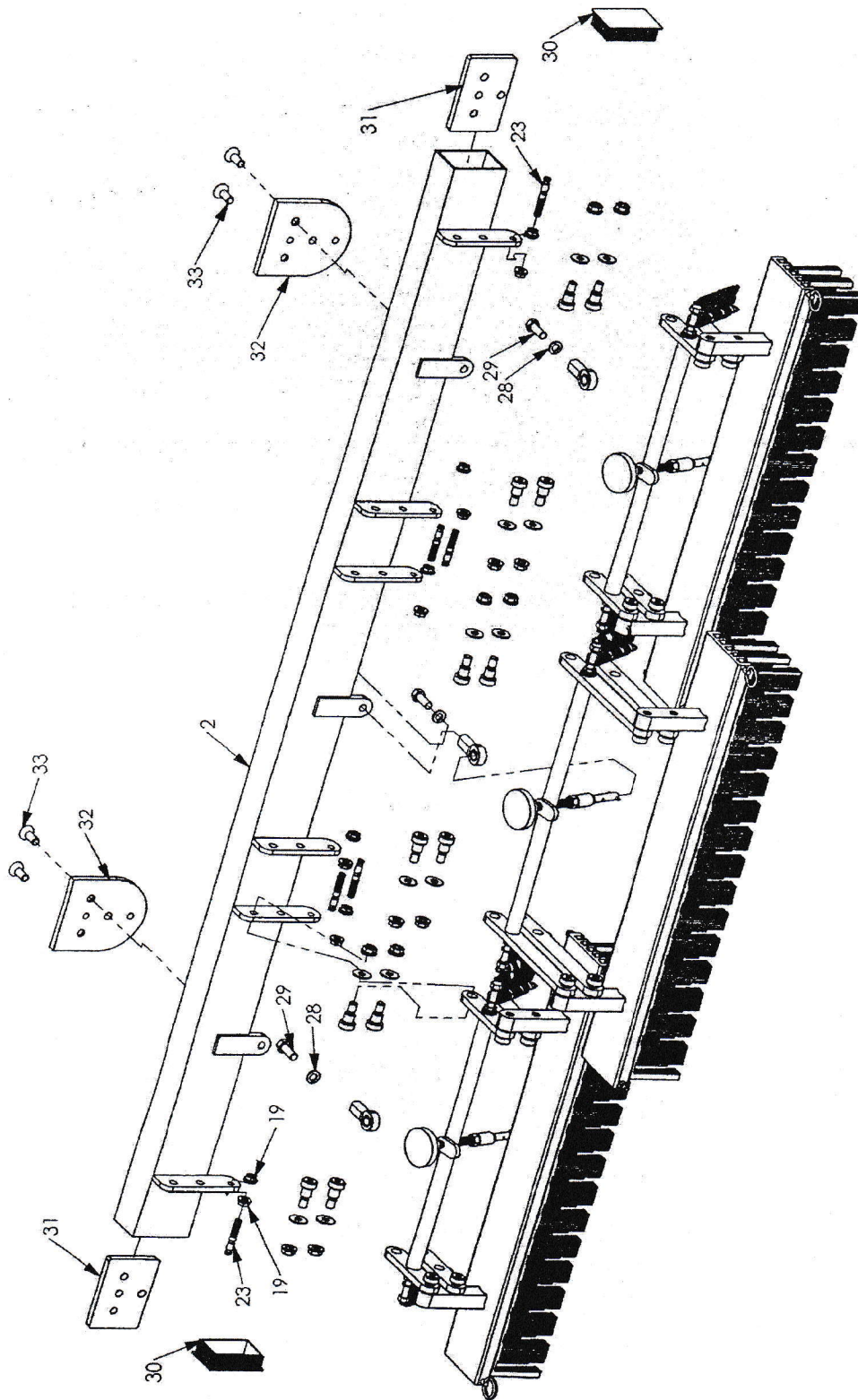
To remove brush, remove chain shackle from lift posts # 20, remove spring # 16, hair pin Cotter # 13, and washer # 12 from each side. Two men may be required, but gently lifting and wiggling will allow the entire Unit to be removed from the mower.

Attachment Plate # 23 can remain mounted





SINGLE BRUSH HEAD  
FOR 3-WAY TOOL BAR  
END UNIT SHOW  
02/28/14 :: 03/09/16  
05/20/16



(5)

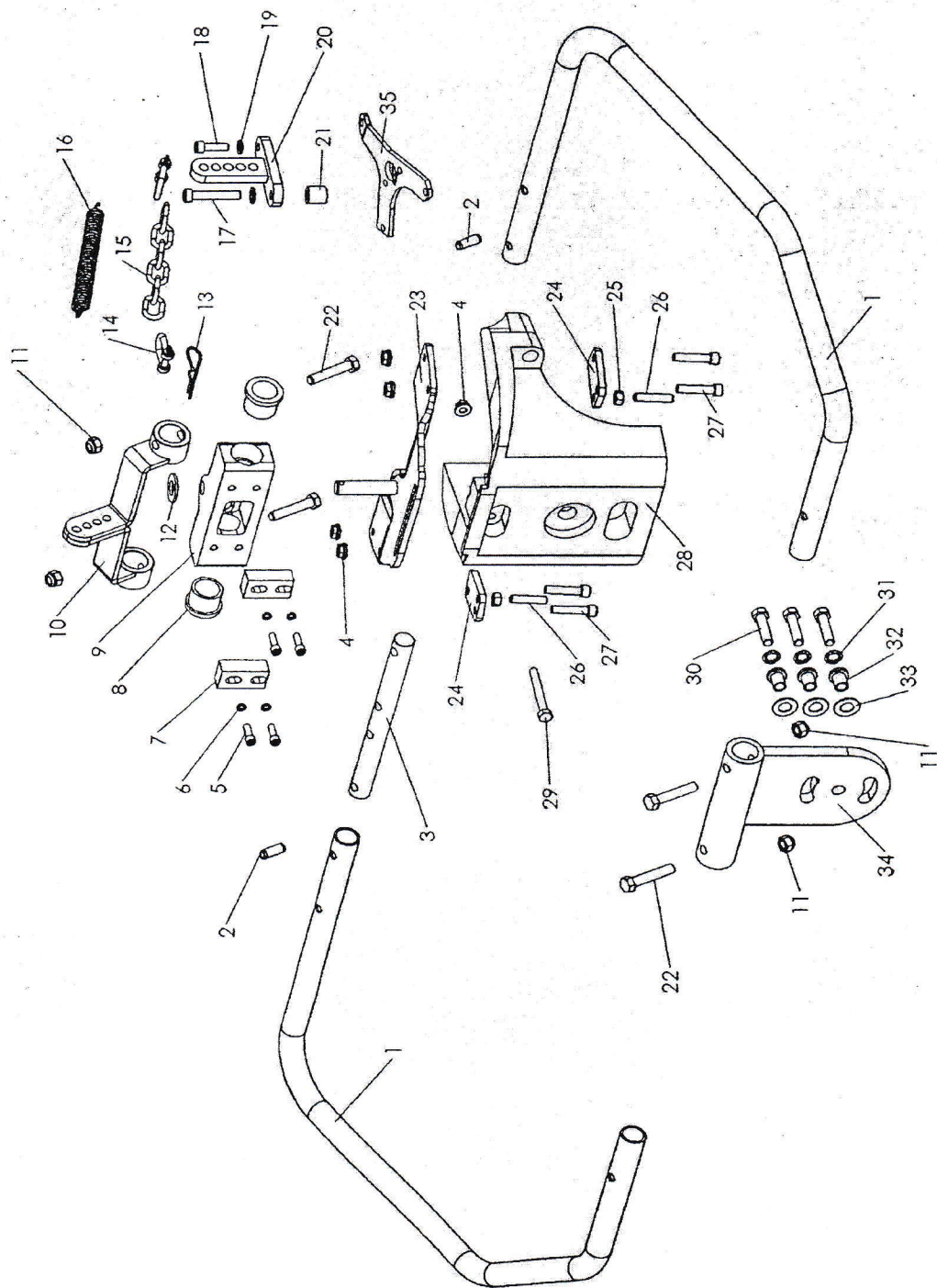
BRUSH HEAD STANDARD  
02/28/14  
UPDATED 04/15/14,  
03/09/16



**BRUSH HEAD PARTS LIST (covers two views, pages 4 & 5)**

**10/23/2015 - 03/09/16 - 05/20/16 - 06/23/17**

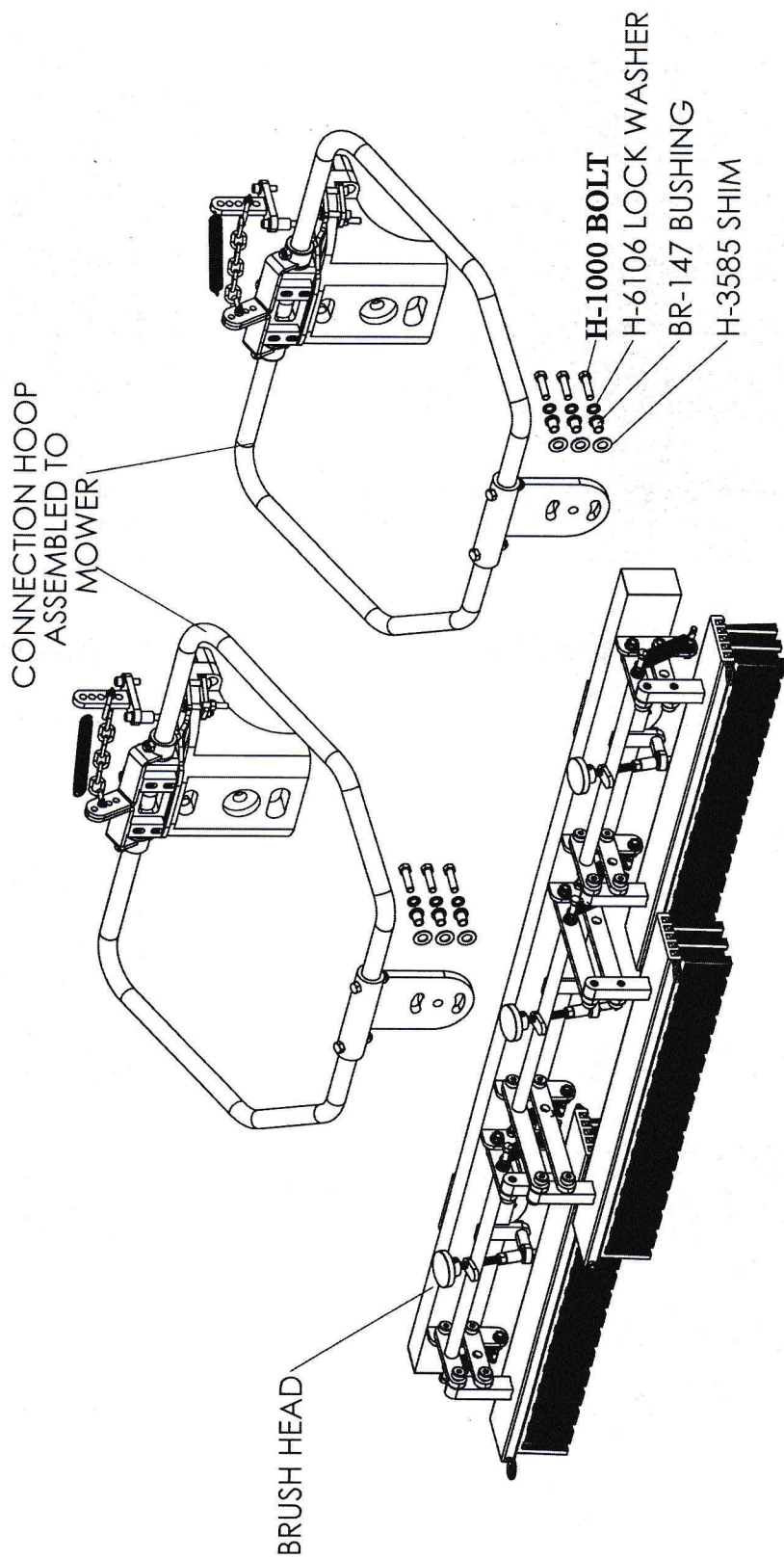
ITEM #	DEPT#	PART #	DESCRIPTION	QTY. FOR FULL HEAD
1	61P	BR-105-1	BRUSH STRIP HEAD (REV "A")	3
2	61P	BR-133-3	MAIN TOOL BAR	1
3	61P	BR-104	HORIZONTAL ARM (SHORT) FOR END UNITS	8
4	H	BR-072	.5" x .375" x 3/8-16 SHOULDER BOLT	24
5	H	1016	3/8-16 SERRATED FLANGE NUT	12
6	H	5013	3/8" MIL SPEC. # MS15795-814 FLAT WASHER	24
7	61P	BR-111	ADJUSTMENT SHAFT	3
8	61P	BR-102	HORIZONTAL ARM (LONG) CENTER UNIT	4
9	61P	BR-112	ADJUSTMENT KNOB	3
10	61P	BR-121	ADJUSTMENT SHAFT MOUNT BASE	3
11	61P	BR-119	ADJUSTMENT CROSS BAR	3
12	61P	BR-114S	BRUSH STRIP (SOFT)	3
13	61P	BR-114FS	BRUSH STRIP (FIRM - SLOTTED)	6
14	H	BR-071	BRUSH STRIP RETAINING PIN	3
15	61P	BR-123	ADJUSTMENT SHAFT LOCK TAB	3
16	61P	BR-124	LOAD SPRING (LIGHT) 2 PER SIDE ON EACH END UNIT. 1 PER SIDE FOR CENTER UNIT	10
17	61P	BR-125	LOAD SPRING (HEAVY) 2 PER EACH SIDE ON CENTER UNIT. 1 PER EACH SIDE ON END UNITS	8
18	H	3147	5/16-18 SMOOTH FLANGE NUT	6
19	H	1147	5/16-18 SERRATED FLANGE NUT	12
20	H	2503	5/16-18 x 2" GR. 5 HEX BOLT	6
21	H	1015	3/8-16 JAM NUT	3
22	H	BR-073	1/8" x 3/4" SPLIT SPRING PIN	3
23	61P	BR-151	SPRING ATTACHMENT STUD	6
24	61P	BR-7127	3/8" FEMALE ROD END	3
25	H	BR-076	1/-20 x 4" GR. 5 HEX BOLT	3
26	H	1153	1/4-20 NYLON LOCKNUT	3
27	H	6013	1/4-20 x 1/4" SET SCREW	3
28	H	1010	3/8" SPLIT LOCKWASHER	3
29	H	2502	3/8-24 x 1-3/4" GR. 5 HEX BOLT	3
30	H	BR-079	TUBE PLUG	2
31	H	BR-154	PLATE NUT	2
32	61P	BR-142	MOUNT / PIVOT PLATE (REV"B")	2
33	H	6105	3/8-16 x 1" FLAT HEAD S.C.S.	4



TRI-FLEX BRUSH MOUNT  
 DETAIL VIEW 06/26/14,  
 02/04/15



FLEX BRUSH MOUNTING LIST TORO TRIFLEX 3300 MARCH 29, 2016				
ITEM#	DEPT.#	PART#	DESCRIPTION	QTY.
1	61P	BR-164	One Half Connection Loop	4
2	H	OO19	3/8" x 1" Split Spring Pin	4
3	61P	BR-179	Connection Loop Joing Bar	2
4	H	1147	5/16-18 Serrated Flange Nut	10
5	H	1505	1/4-20 x 3/4" Socket Head Cap Screw	8
6	H	6110	1/4" Hi-Collar Lock Washer	8
7	61P	BR-171	Pivot Stop	4
8	61P	BR-170	Pivot Bushing	4
9	61P	BR-163A	Hitch Block	2
10	61A	BR-177	Brush Lift Arm Assembly	2
11	H	1180	3/8-16 Nylon Lock Nut	4
12	H	OO28	9/16" x 1" x 0.048" Zinc Washer	2
13	H	OO21	Hairpin Cotter 11/64" Dia.	2
14	29P	TAS208	Chain Shackle	4
15	61P	BR-181	Lift Chain (2/0 passing x 7 links)	2
16	61P	BR-182	Lowering Assist Spring	2
17	H	6010	5/16-18 x 2" Socket Head Cap Screw	2
18	H	OO22	5/16-18 x 1" Socket Head Cap Screw	2
19	H	1013	5/16" Split Lock Washer	4
20	61A	BR-175	Lift Post Assembly	2
21	61P	BR-176	Lift Post Spacer	2
22	H	1108	3/8-16 x 2" Gr. 5 Hex Bolt	8
23	61A	BR-180	Brush Attachment Plate	2
24	61P	BR-165	Attachment Plate Clamp	4
25	H	1020	5/16-18 Hex Nut	4
26	H	OO23	5/16-18 x 1" Cone Point Set Screw	4
27	H	1404	5/16-18 x 1-1/2" Socket Head Cap Screw	8
28	N/A	N/A	TRIFLEX HEAD	2
29	H	7129	5/16-18 x 3" Gr. 5 Hex Bolt	2
30	H	1000	3/8-16 x 1-3/4" Gr. 5 Hex Bolt	6
31	H	6106	3/8" Internal Tooth Lock Washer	6
32	61P	BR-147	Frame Pivot Bushing	6
33	H	3585	1/2" x 0.048" Shim	6
34	61A	BR-178	Toolbar Mounting Bracket	2
35	61P	BR-183	Hose Reposition Plate (3300 & 3400)	2



TRIFLEX 3300  
BRUSH MOUNTING  
06/30/14