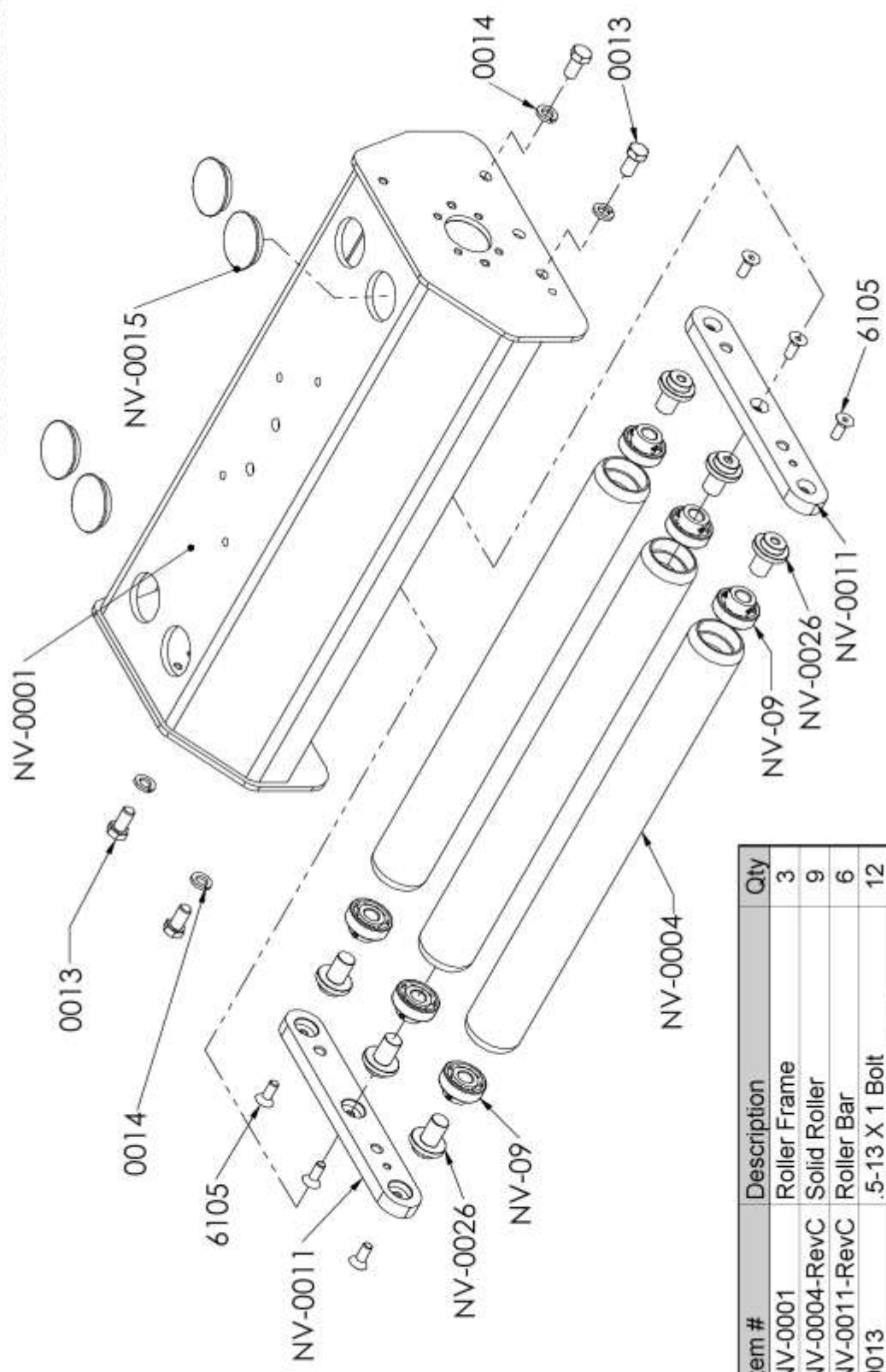


**Base Unit Schematic**  
**True-Surface® NV 3x3™**  
**To Fit All Model Greens Mowers**



Dept.	Item #	Description	Qty
33P	NV-0001	Roller Frame	3
33P	NV-0004-RevC	Solid Roller	9
33P	NV-0011-RevC	Roller Bar	6
H	0013	.5-13 X 1 Bolt	12
H	0014	.5" Split Lock Washer	12
33P	NV-0015	Snap-In Black Plugs	12
33P	NV-0026	Roller Axle	18
33P	NV-09	CSB-204-12 3/4" Bearing	18
H	6105	3/8 -16 x 1 Flat Head SCS	18

# NV 3 X 3 ASSEMBLY INSTRUCTIONS

**The following 9 steps apply to ALL TRIPLEX MODELS (refer to page 1)**

- 1) Any roller base can be attached to any frame assembly.
- 2) Locate four ½"-13x1" bolts (NV-0013) and four ½" split lock washers (NV-0014) for each frame.
- 3) Set the frame assembly over top of the roller base so that the fore and aft ½" holes align, as well as the 5/16" holes near the forward holes.
- 4) Install the bolts and the washers as shown, and leave slightly loose.
- 5) Flip the unit upside down, and loosen all the bearing set screws (NV-09).
- 6) Tighten all four ½" bolts (NV-0013)
- 7) Position the rollers in the center of any free end-to-end travel there may be, and tighten all the set screws.
- 8) Return unit to upright position, and attach mower specific hardware.
- 9) Repeat for the remaining units.

## TORO UNITS

**Toro GM3 through GM3150 (refer to page 6)**

- 1) Install the ball studs (7126-1) into the 5/16" threaded holes on each side of each unit.
- 2) Remove one flange nut (1026) from each side of the lift hook (7090), and install the lift hook through the protection plate (7802) and then through the two ½" holes in the top of the frame. Install the flanges nuts to the bottom of lift hook and tighten. (The hook height can be adjusted to best suit your ground and machine clearance needs).
- 3) Slide the roller under machine allowing the lift arm to pass through the lift hook, and then attach the ball couplers to ball studs (7126-1).
- 4) Mount the drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

**Toro GM 3200 A or B STYLE (refer to page 7 & 8)**

- 1) Your rollers will come set up as either a 3200A or a 3200B: The difference between the A & B styles are the center point couplers. If the ball stud portion of the coupler is attached to the cutting or roller unit, it is considered an "A" STYLE. If the coupler or socket portion is attached to the cutting or roller unit, it is considered a "B" STYLE.
- 2) Remove one flange nut (1026) from each side of the lift hook (7090), and install the lift hook through the protection plate (7802) and then through the two ½" holes in the top of the frame. Install the flanges nuts to the bottom of lift hook and tighten. (The hook height can be adjusted to best suit your ground and machine clearance needs).
- 3) Attach the assembled tow bracket (NV-0023) to the front of the unit with 3/8" bolts (1000) provided. The "A" STYLE brackets will mount into the holes that will offset the bracket from the center. The "B" STYLE units will mount in the holes in the center of the frame.
- 4) Slide the roller under machine allowing the lift arm to pass through the lift hook (7090), and then attach the ball couplers to ball studs (7126-1).
- 5) Mount the drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

**TORO GM 3250 (refer to page 9)**

- 1) While performing task #4 in the main instructions, locate and install one tow bracket # NV-0024 to each side facing forward, and install ½" frame bolt through it and then into roller base.
- 2) Install the 5/16" bolt and lock washer through the bracket and thread it into the roller base. Now, tighten all the bolts.
- 3) Install the ball stud (7126-1) through the front hole of mount with nut on the backside and tighten.

- 4) Remove one flange nut from each side on lift hook, and install lift hook through #7802 protection plate and then through the two ½” holes in the top of the frame, install flanges nuts on the bottom of lift hook and tighten. (Hook height can be adjusted to best suit your needs for ground and machine clearances).
- 5) Slide under machine allowing lift arm to pass through lift hook, and then attach the ball couplers to ball studs.
- 6) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

## **JACOBSEN UNITS**

### **Jacobsen Greensking III & IV (refer to page 10)**

- 1) Locate lift bracket # 7056B, remove the four loose 5/16” bolts, set on top of roller frame into matching holes. Install nuts to the bottom of the bolts and tighten.
- 2) Remove ½” pivot bolt # 1004 from lift bracket, insert lift pin # 7518 into channel with the 3/8” pivot limiter bolt facing towards the forward portion of the roller, and reinstall bolt making sure that one spacer is on either side of lift pin. Install nut and tighten. (DO NOT OVERTIGHTEN, the pin needs to remain free for pivoting.)
- 3) Slide rollers under machine into respective positions, (LEFT, RIGHT or CENTER if applicable). Raise lift arm of machine and slide down over lift pin # 7518, and install retainer pin.
- 4) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

### **Jacobsen Greensking V & VI (refer to page 11)**

- 1) Locate the lift bracket (7056B), remove the four loose 5/16” bolts, set on top of roller frame into matching holes. Install nuts to the bottom of the bolts and tighten.
- 2) Remove ½” pivot bolt # 1004 from lift bracket, insert lift pin # 7518 into channel with the 3/8” pivot limiter bolt facing towards the forward portion of the roller, and reinstall bolt making sure that one spacer is on either side of lift pin. Install nut and tighten. (DO NOT OVERTIGHTEN, the pin needs to remain free for pivoting.)
- 3) Slide rollers under machine into respective positions, (LEFT, RIGHT or CENTER if applicable). Raise lift arm of machine and slide down over lift pin (7518), and install retainer pin.
- 4) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

## **JACOBSEN/RANSOME UNITS**

### **Jacobsen G-Plex II or III and ALL Ransome Units (refer to page 12)**

- 1) Locate lift bracket (7086), remove the four loose 5/16” bolts, set on top of roller frame into matching holes. Install nuts to the bottom of the bolts and tighten.
- 2) Remove ½” pivot bolt # 1004 from lift bracket, insert lift pin (7517 or 7518) (depending on model) into channel with the 3/8” pivot limiter bolt facing towards the forward portion of the roller, and reinstall bolt making sure that one spacer is on either side of lift pin. Install nut and tighten. (DO NOT OVERTIGHTEN, the pin needs to remain free for pivoting.)
- 3) Install rubber bumpers and mounts into respective positions as shown in diagrams, so that the step in the mounting bracket rests on top of the frame end, install bolts provided and tighten.
- 4) Slide rollers under machine into respective positions, (LEFT, RIGHT or CENTER if applicable). Raise lift arm of machine and slide down over lift pin (7518 or 7517), and install retainer pin. (1 inch diameter washers included with units requiring a 1 inch diameter lift pin for spacing purposes between lift tube and lift pin if necessary).
- 5) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

# JOHN DEERE UNITS

## **John Deere 2500 & 2500E (refer to page 13)**

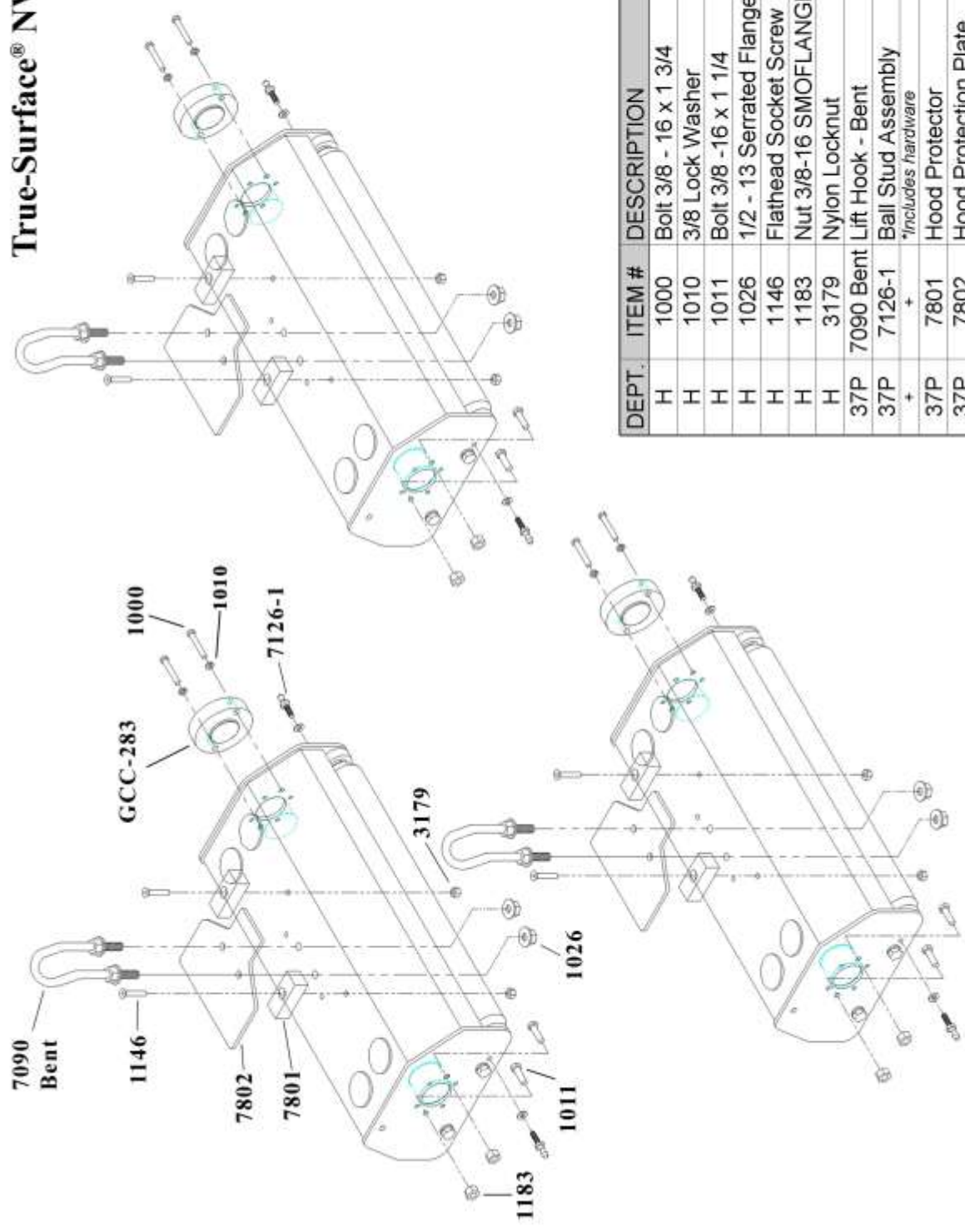
- 1) Locate the hitch assembly (7250-1), remove nuts from the four 5/16 loose bolts, align bracket and bolts with corresponding holes in roller frame, install nuts to bolts on underside of frame and tighten.
- 2) Slide rollers under machine into respective LEFT, RIGHT, and CENTER position, align (7254) swivel shaft with lift tube of machine, insert and install retainer pin.
- 3) Remove nut and washer from lifting bar at the rear of hitch assembly and attach lift chain at the appropriate length to allow optimal ground and machine clearance, and reinstall washer and nut.
- 4) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

## **John Deere 2243 (refer to page 14)**

- 1) The front units (LEFT & RIGHT) are similar except for the lift bars (7602L & 7602R). Locate attachment bracket assembly for each, remove the nut from the loose 5/16 bolts and align with the corresponding holes in top of roller frame.
- 2) Install the nuts on the underside of frame to the forward (1 inch long ) bolts first, then align lift bar over the rear holes, install longer (1-1/2 inch long) bolts through lift bar, mounting plate and frame, and install nuts to the bottom and tighten all.
- 3) For center unit, do the same with all four bolts through the 7606 hitch assembly.
- 4) Slide rollers under machine into respective LEFT/RIGHT and CENTER position. For front units, align extension shaft (T-300) with swivel lift pin of machine, insert and install retainer pin.
- 5) For center unit, slide lift tube assembly (7609) over lift pin of machine and install retainer pin. Remove lock nut and washer from lifting bar, attach lift chain at the appropriate length to allow optimal ground and machine clearance, replace washer and nut.
- 6) Mount drive motors to frame end and secure. No drive power is required to run the unit, but it needs to be attached to protect the motor.

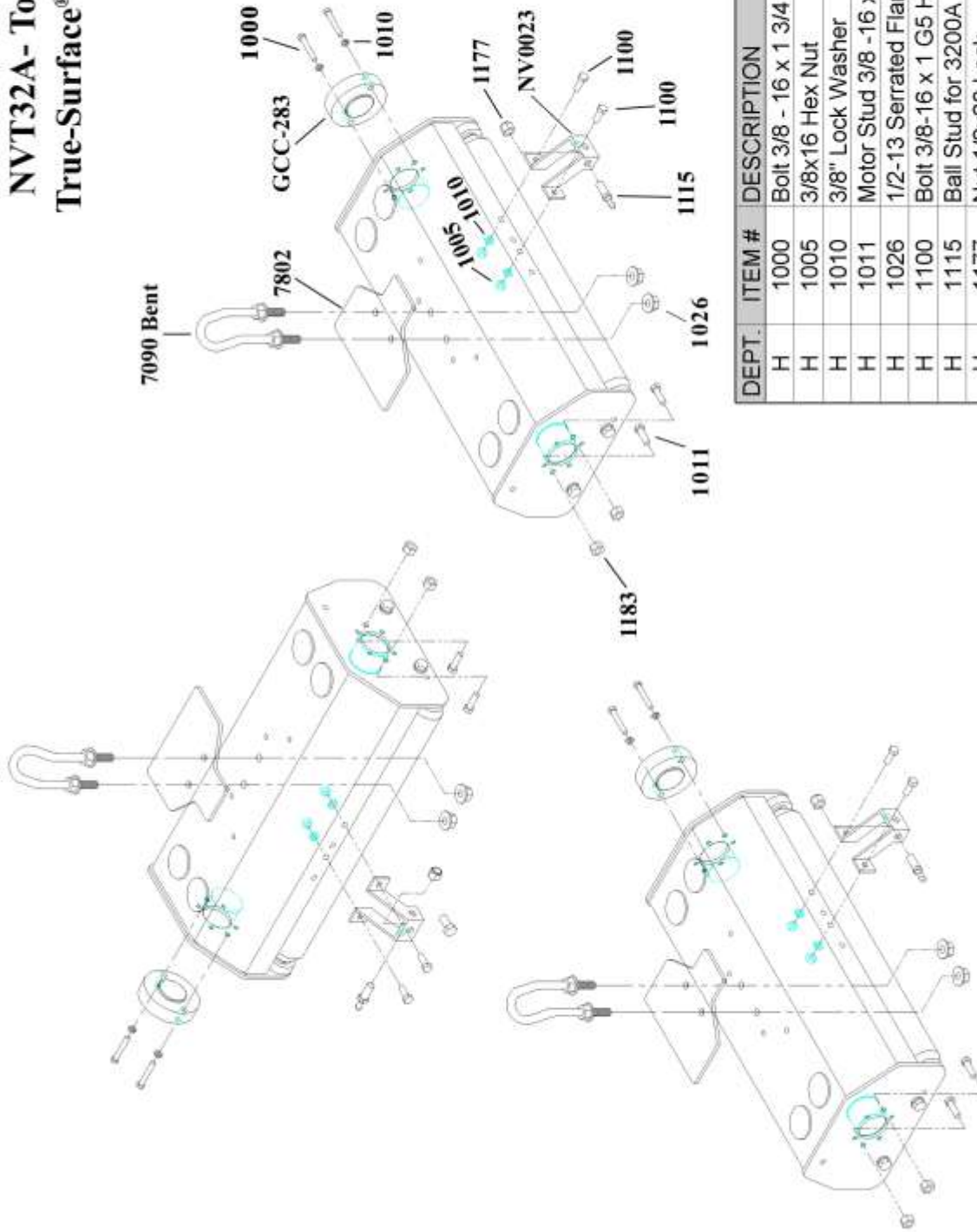
*Refer to page 15 for your weight kit schematic (sold separately)*

# **NVT - Toro GM3 - 3150** **True-Surface® NV 3x3™**



DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8 - 16 x 1 3/4	6
H	1010	3/8 Lock Washer	6
H	1011	Bolt 3/8 - 16 x 1 1/4	6
H	1026	1/2 - 13 Serrated Flange Nut	12
H	1146	Flathead Socket Screw	18
H	1183	Nut 3/8-16 SMOFLANGE	6
H	3179	Nylon Locknut	12
37P	7090 Bent	Lift Hook - Bent	3
37P	7126-1	Ball Stud Assembly	6
+	+	*Includes hardware	+
37P	7801	Hood Protector	6
37P	7802	Hood Protection Plate	3
21P	GCC-283	3 lb Counter Weight	3

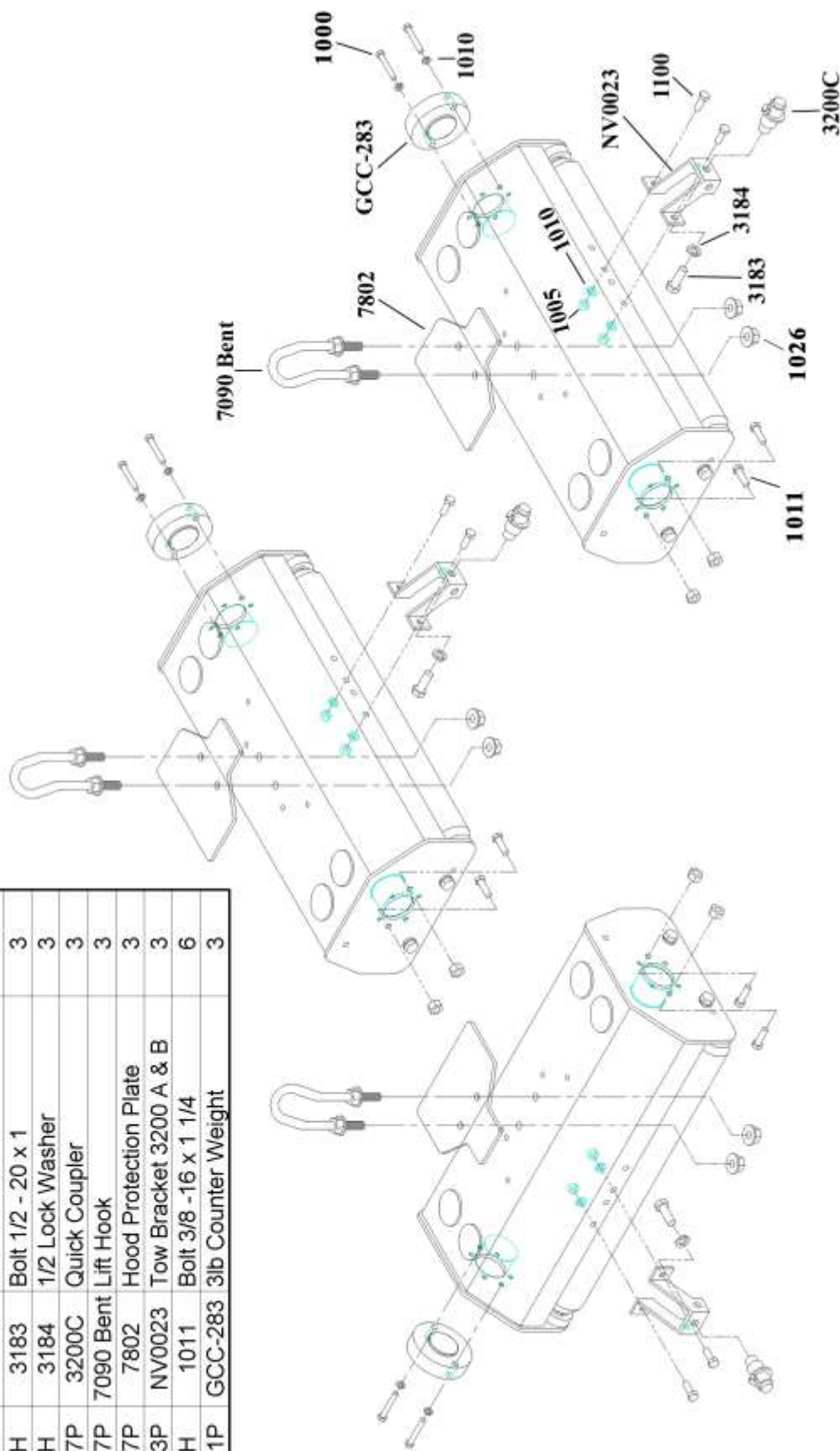
# **NVT32A- Toro 3200A** **True-Surface® NV 3x3™**



DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8 - 16 x 1 3/4	6
H	1005	3/8x16 Hex Nut	6
H	1010	3/8" Lock Washer	12
H	1011	Motor Stud 3/8 -16 x 1 1/4	6
H	1026	1/2-13 Serrated Flange Nut	12
H	1100	Bolt 3/8-16 x 1 G5 Hex	6
H	1115	Ball Stud for 3200A	6
H	1177	Nut 1/2x20 Lock	3
37P	7090 Bent	Lift Hook	3
37P	7802	Hood Protection Plate	3
33P	NV0023	Tow Bracket 3200 A & B	3
21P	GCC-283	3 lb Counter Weight	3

# **NVT32B- Toro 3200B** **True-Surface® NV 3x3™**

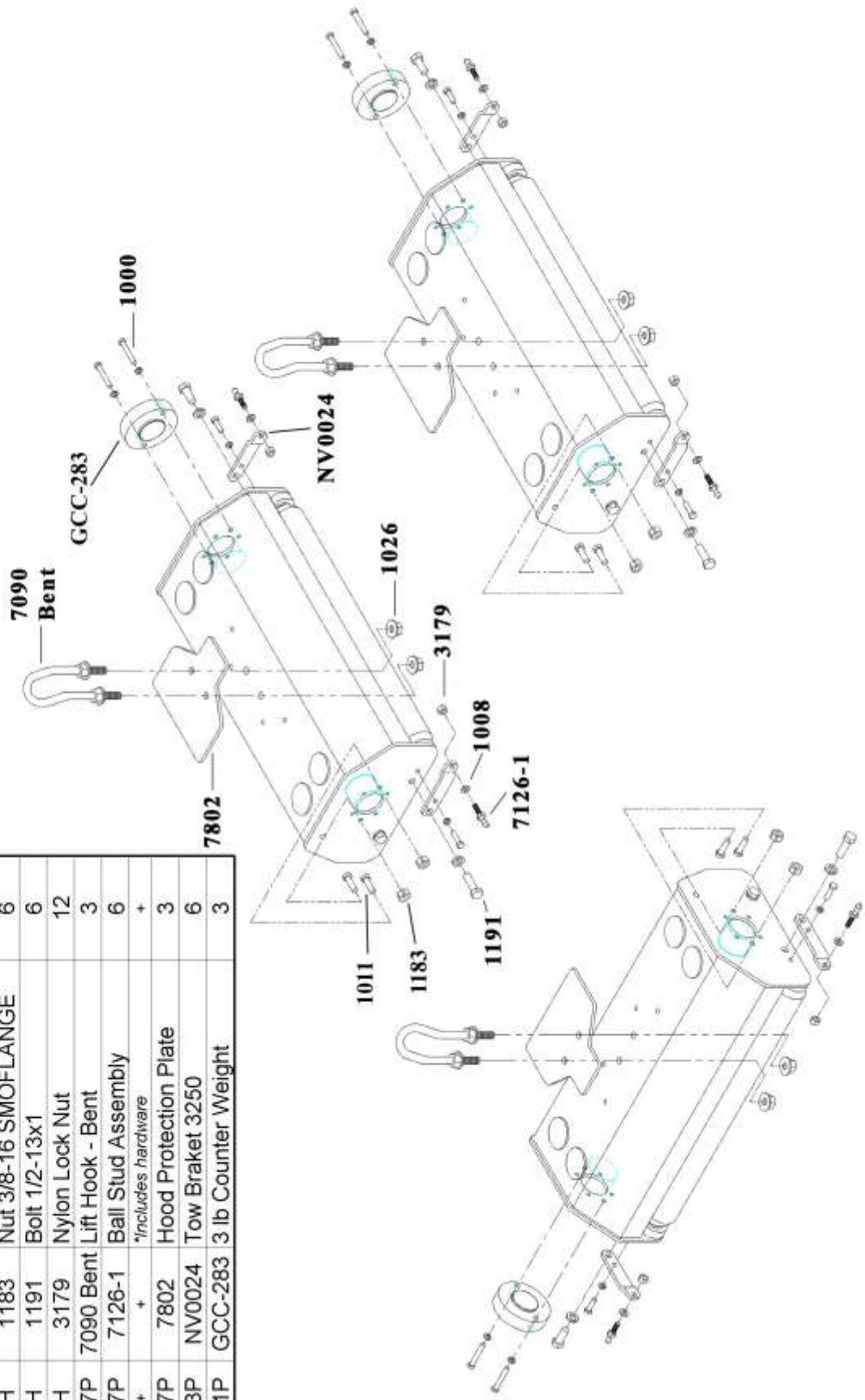
DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8-16 x 1 3/4	6
H	1005	3/8x16 Hex Nut	6
H	1010	3/8 Lock Washer	12
H	1026	1/2-13 Serrated Flange Nut	12
H	1100	Bolt 3/8-16 x 1 G5 Hex	6
H	1183	Nut 3/8-16 SMOFLANGE	6
H	3183	Bolt 1/2 - 20 x 1	3
H	3184	1/2 Lock Washer	3
37P	3200C	Quick Coupler	3
37P	7090 Bent	Lift Hook	3
37P	7802	Hood Protection Plate	3
33P	NV0023	Tow Bracket 3200 A & B	3
H	1011	Bolt 3/8 -16 x 1 1/4	6
21P	GCC-283	3lb Counter Weight	3





# **NVT325- Toro 3250** **True-Surface® NV 3x3™**

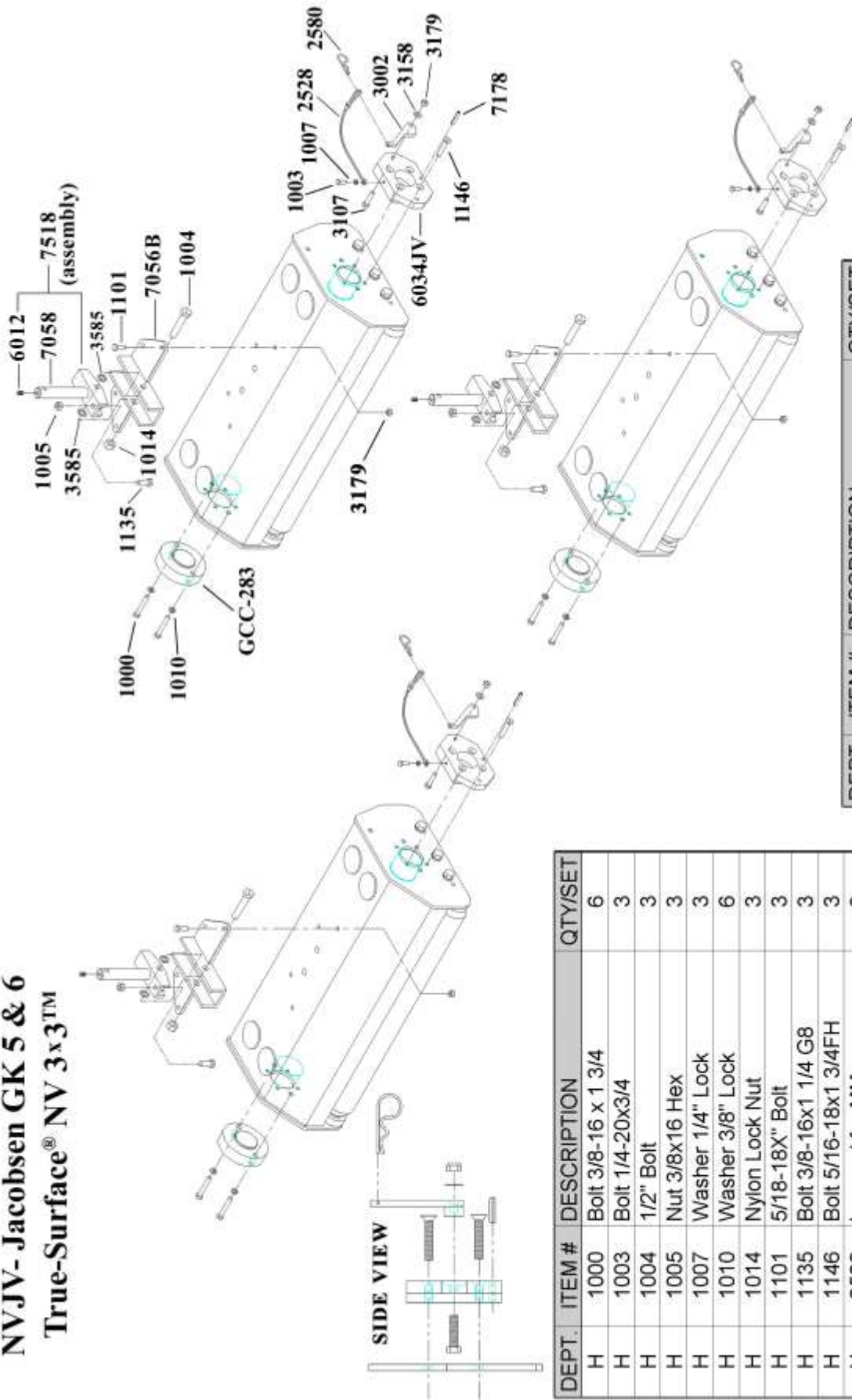
DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8-16 x 1 3/4	6
H	1008	Washer 1/4" Flat	6
H	1010	3/8 Lock Washer	6
H	1011	Bolt 3/8 -16 x 1 1/4	6
H	1026	1/2-13 Serrated Flange Nut	12
H	1146	Flathead Socket Screw	18
H	1183	Nut 3/8-16 SMOFLANGE	6
H	1191	Bolt 1/2-13x1	6
H	3179	Nylon Lock Nut	12
37P	7090 Bent	Lift Hook - Bent	3
37P	7126-1	Ball Stud Assembly	6
+	+	*Includes hardware	+
37P	7802	Hood Protection Plate	3
33P	NV0024	Tow Braket 3250	6
21P	GCC-283	3 lb Counter Weight	3





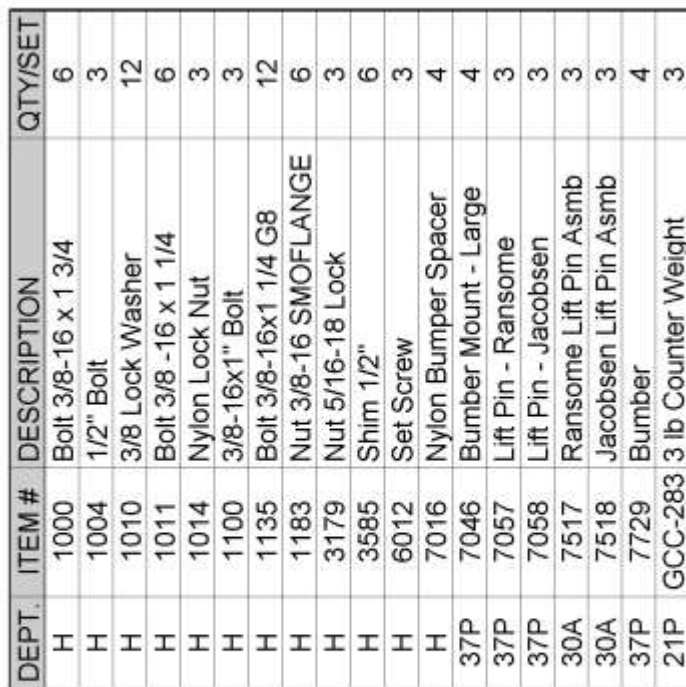


# **NVJV- Jacobsen GK 5 & 6** **True-Surface® NV 3x3™**



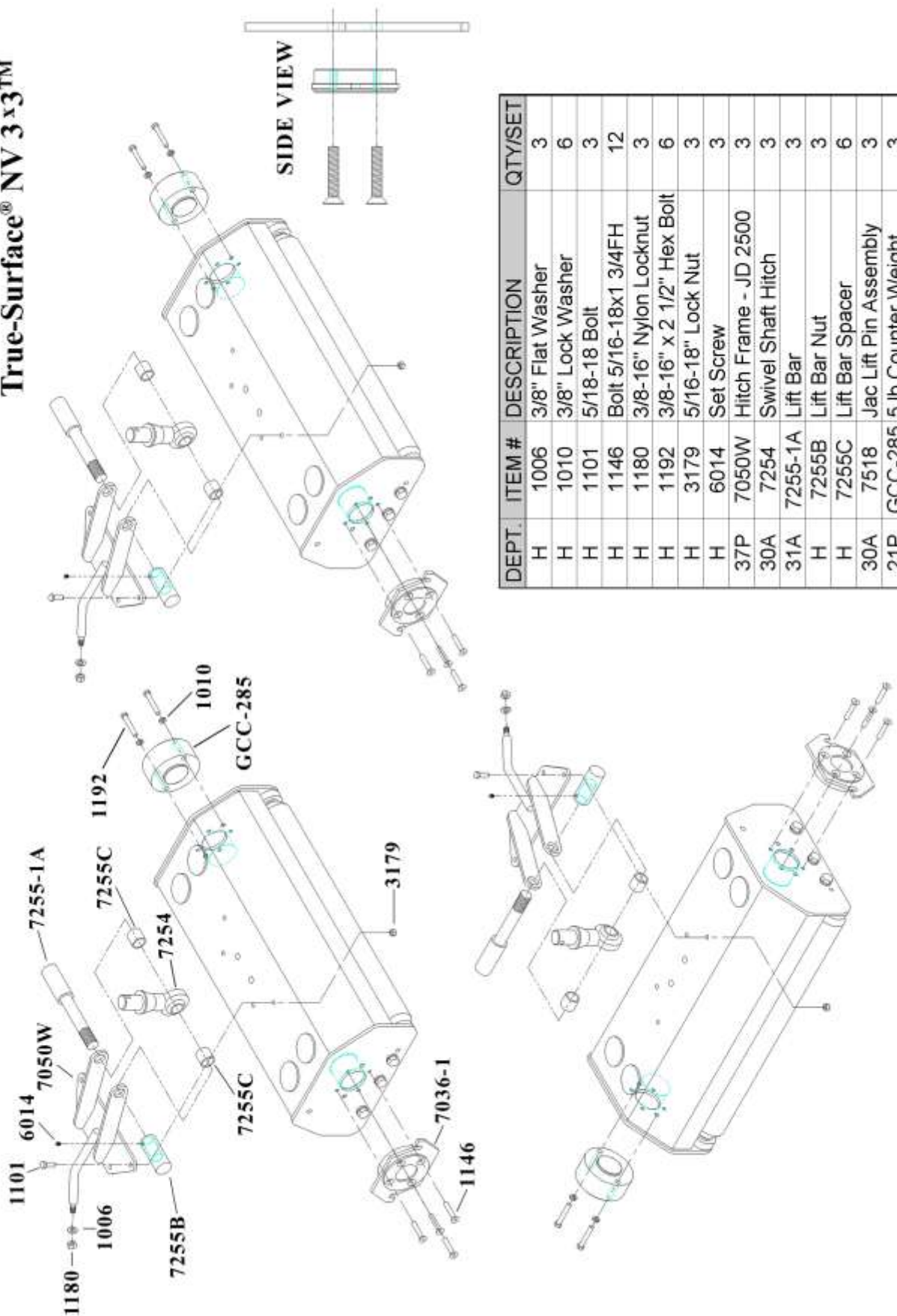
DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8-16 x 1 3/4	6
H	1003	Bolt 1/4-20x3/4	3
H	1004	1/2" Bolt	3
H	1005	Nut 3/8x16 Hex	3
H	1007	Washer 1/4" Lock	3
H	1010	Washer 3/8" Lock	6
H	1014	Nylon Lock Nut	3
H	1101	5/18-18X" Bolt	3
H	1135	Bolt 3/8-16x1 1/4 G8	3
H	1146	Bolt 5/16-18x1 3/4FH	3
H	2528	Lanyard for MM	3
30A	2580	Cotter Pin 2"	3
30A	3002	Lock Arm	3
H	3107	Bolt 5/16-18x1.5 TRD	3
H	3158	Washer 5/16" Wave	3
H	3179	Nut 5/16-18 Lock	6
H	3585	Shim 1/2"	6

DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	6012	Set Screw	3
37P	6034JV	MM Adaptor for Jac 5/6	3
37P	7056B	Lift Bracket Black	3
37P	7058	Lift Pin - Jacobsen	3
30A	7518	Jac Lift Pin Assembly	3
21P	GCC-283	3 lb Counter Weight	3

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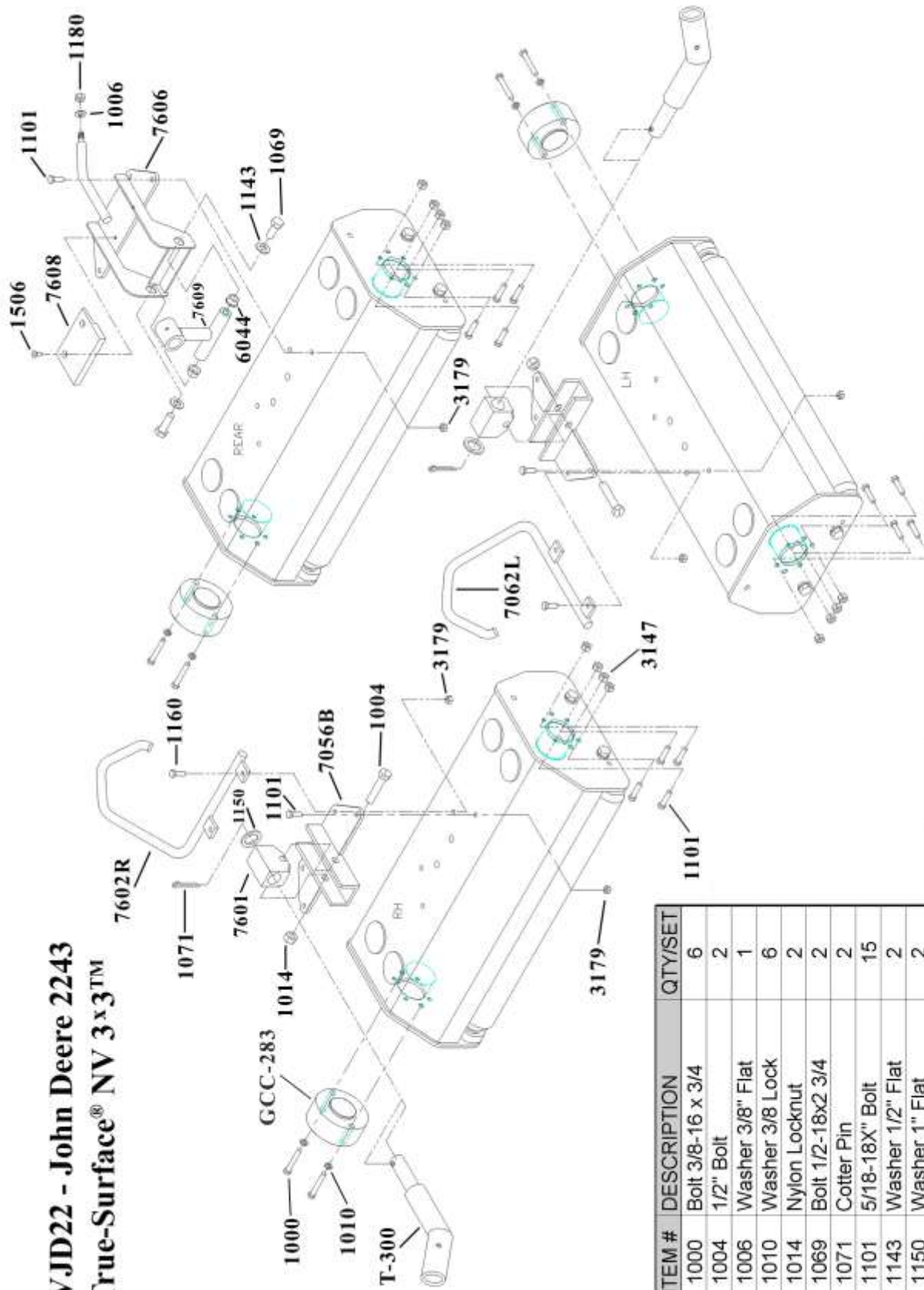
# **NVJD25 - John Deere 2500** **True-Surface® NV 3x3™**



DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1006	3/8" Flat Washer	3
H	1010	3/8" Lock Washer	6
H	1101	5/18-18 Bolt	3
H	1146	Bolt 5/16-18x1 3/4FH	12
H	1180	3/8-16" Nylon Locknut	3
H	1192	3/8-16" x 2 1/2" Hex Bolt	6
H	3179	5/16-18" Lock Nut	3
H	6014	Set Screw	3
37P	7050W	Hitch Frame - JD 2500	3
30A	7254	Swivel Shaft Hitch	3
31A	7255-1A	Lift Bar	3
H	7255B	Lift Bar Nut	3
H	7255C	Lift Bar Spacer	6
30A	7518	Jac Lift Pin Assembly	3
21P	GCC-285	5 lb Counter Weight	3

# NVJD22 - John Deere 2243

## True-Surface® NV 3x3™

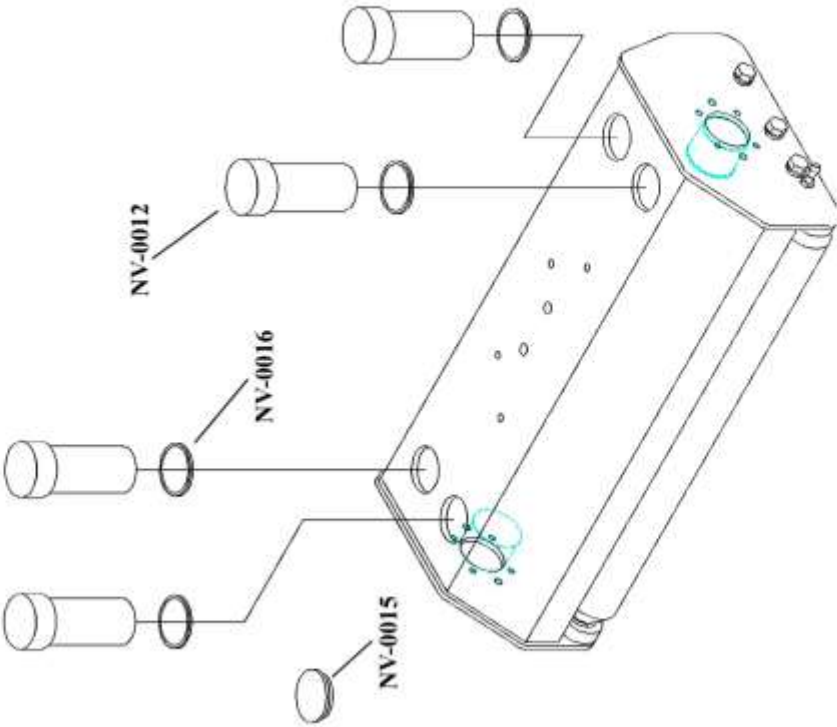
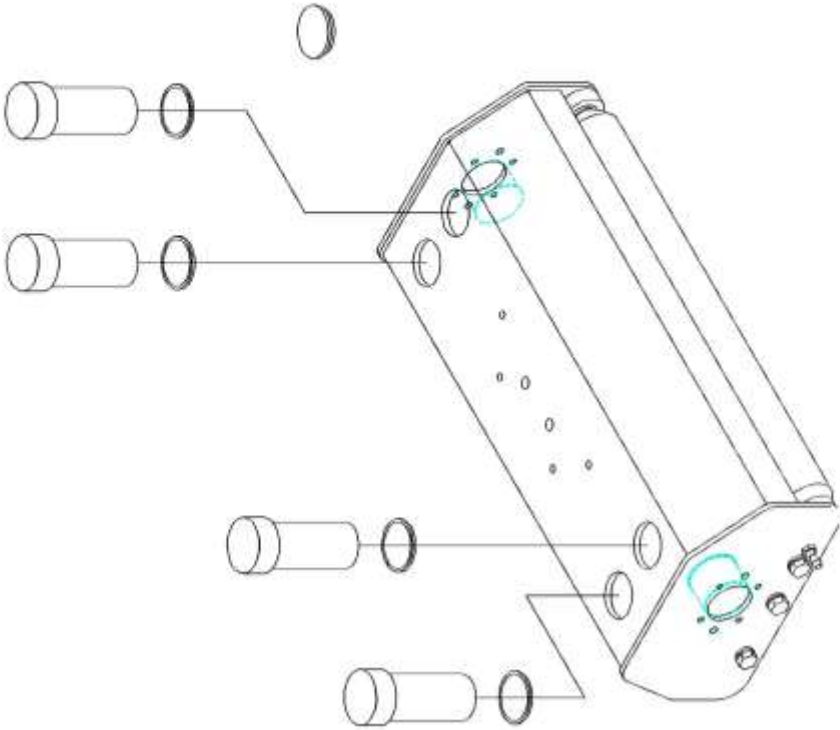


DEPT.	ITEM #	DESCRIPTION	QTY/SET
H	1000	Bolt 3/8-16 x 3/4	6
H	1004	1/2" Bolt	2
H	1006	Washer 3/8" Flat	1
H	1010	Washer 3/8 Lock	6
H	1014	Nylon Locknut	2
H	1069	Bolt 1/2-18x2 3/4	2
H	1071	Cotter Pin	2
H	1101	5/16-18X" Bolt	15
H	1143	Washer 1/2" Flat	2
H	1150	Washer 1" Flat	2
H	1160	Bolt 5/16-18x1	2
H	1180	Nut 3/8-16 Nylon	1
H	1506	Screw 11/4-20x1	1
H	3147	Nut 5/16-18 Flange	12
H	3179	Nut 5/16-18 Lock	5
H	6044	Bushing 1/2"	2

DEPT.	ITEM #	DESCRIPTION	QTY/SET
37P	7056B	Lift Bracket Black	2
37P	7601	Pivot Block	2
30A	7602R	Lift Bar Asmb RH	1
30A	7602L	Lift Bar Asmb LH	1
30A	7606	Hitch Bracket Center	1

DEPT.	ITEM #	DESCRIPTION	QTY/SET
37P	7608	Nylon Spacer	1
30A	7609	Lift Tube Asmb Center	1
37P	T-300	Extension Tubes	2
21P	GCC-283	3 lb Counter Weight	3

**Base Unit Schematic**  
**True-Surface® NV 3x3™**



DEPT.	ITEM #	DESCRIPTION	QTY/SET
33P	NV-0012	5lb Weight	12
33P	NV-0015	Snap in Black Plug	12
33P	NV-0016	O-Ring 1-7/8x1/8	12