

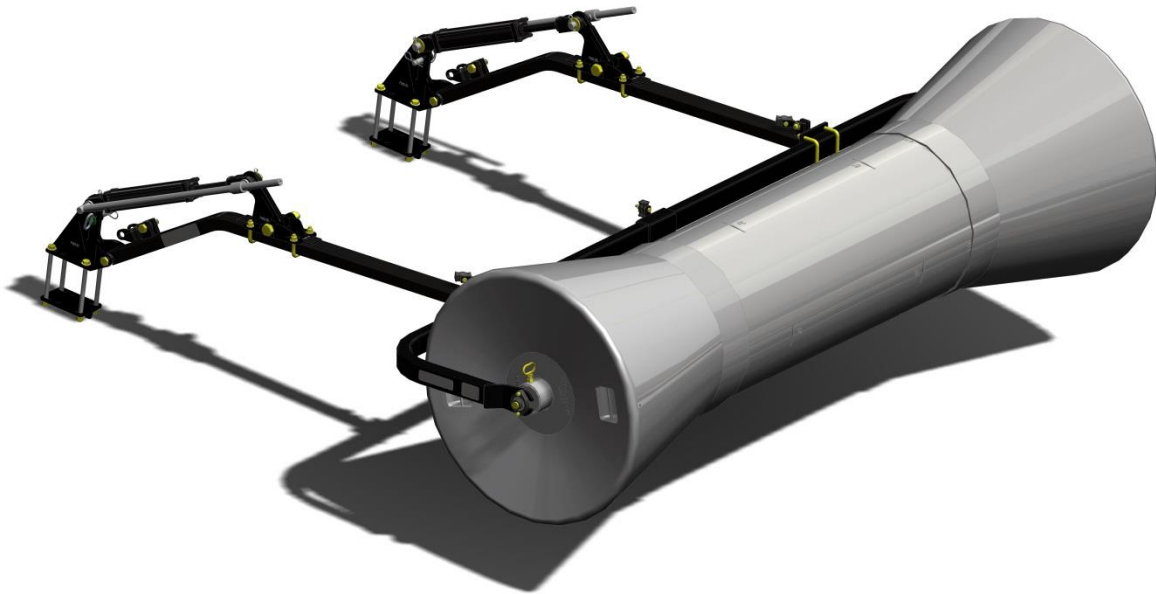


A Division of Bourgault Industries Ltd.

MT3000 HYDRAULIC SWATH ROLLER ASSEMBLY

7102-02 & 7102-40

ASSEMBLY INSTRUCTIONS & OPERATION



It is recommended to carefully follow the detailed steps of the assembly manual for the simplest and quickest assembly of the kit. Please check crate packing list against contents to be sure all parts have been received.

On all Free Form equipment, left and right are determined by standing behind the machine and looking forward.

All information, illustrations and specifications in this manual are based on the latest product information. Free Form updates products continually to improve quality. We reserve the right to make changes at any time.

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WARRANTY POLICY

FREE FORM WARRANTY POLICY

Free Form Plastic Products (Referred to as Free Form) warrants its new, unused, equipment to be free of defects in material and workmanship at time of the delivery according to the Free Form Warranty Policy.

LIMITED WARRANTY REPAIR PERIOD AND REMEDIES

Free Form will repair or replace, at its option, without charge for parts or labour, any parts that fail due to defects in the workmanship of the equipment for a period of twelve (12) months from delivery to the first retail purchaser. This warranty does not cover failure due to abuse or misapplication of the product.

NOTE: A Free Form Manufactured Part is any part which has been manufactured by Free Form. Parts purchased from an outside supplier are not considered to be manufactured by Free Form.

Any parts that are covered by an Extended Warranty published by Free Form are an exception to the Basic Policy and are to be warranted as per the details of the extended warranty. The extended warranty policy may change from time to time without prior notice from Free Form.

EXTENDED WARRANTY

Cultivator shanks are warranted 100% against breakage for five (5) years from date of machine delivery to the first retail customer. Breakage after the fifth year will be covered at 50% warranty. Shanks are not warranted against bending; however, a bent shank policy is in place to cover bent shanks at 50% warranty for the lifetime of the machine. All replacement shanks are warranted as per original delivery date of the machine to the first retail customer.

Fenders are warranted 100% against defects in materials and workmanship for a period of thirty six (36) months from the delivery to the first retail purchaser.

Polytoons are warranted 100% against defects in materials and workmanship for a period of twenty-four (24) months from the delivery to the first retail purchaser.

Standard duty tanks are warranted 100% against defects in materials and workmanship for a period of thirty-six (36) months from delivery to the first retail purchaser.

Heavy duty tanks are warranted 100% against defects in materials and workmanship for a period of sixty (60) months from delivery to the first retail purchaser.

EXCEPTIONS TO THIS WARRANTY

- a) In no event shall the owner be entitled to recover costs for incidental, special or consequential damages such as, but not limited to: loss of crop, loss of profit or revenue, other commercial losses, inconvenience or replacement equipment rental cost.
- b) Repair, Maintenance, and Service items not related to defects:
- 1) Loss or damage during shipment (see Free Form Whole goods Shipping Policy)
 - 2) Failure resulting from lack of or improper maintenance.
 - 3) Damage caused by operator abuse, negligence, or improper operation.
 - 4) Non-defective items replaced due to customer demand unless authorized by Free Form.
 - 5) Non-reimbursable maintenance items including but not limited to oil, grease, chains, etc.
 - 6) Any and all costs for repairs or replacement of parts not shown to be defective.
 - 7) Damage due to accidents.
- c) Cultivator Sweeps, Reversible Chisels, and Ground Engaging Tools are not covered under this warranty policy, but by the warranty policy of their manufacturer.
- d) Rubber Tires are warranted directly by the tire manufacturer's agents only, and not by Bourgault.
- e) Replacement Parts will be warranted for the balance of the first 12 month warranty period or 90 days from the date of installation, whichever is longer; providing the bill of sale is attached to the warranty claim.
- f) The warranty period for equipment purchased by a "custom operator" is limited to 6 months from the date of delivery to the custom operator or as per the requirements as set out by law in the jurisdiction of the retail customer. A "custom operator" means a person/corporation who purchases a new farm implement and uses or permits the use of that farm implement for hire or for service to others for valuable consideration to the extent of at least 50% of the annual use of that farm implement. Free Form extended warranty does not apply to custom operators.
- g) The terms of this warranty are subject to Provincial and State Legislation. Free Form reserves the right to make changes in accordance with these Acts at any time without notification or obligation. The stated warranty contained in the Free Form Warranty Policy applies in all situations, unless the law provides a greater warranty in the jurisdiction of the retail customer.
- h) Free Form reserves the right to continually improve its equipment, and reserves the right to change products or specifications at any time without notice or obligation.

OWNER'S OBLIGATION

It is the responsibility of the owner, at the owner's expense, to transport the equipment to the service shop of an authorized Free Form Dealer (place of purchase) or alternately to reimburse the dealer for any travel or transportation expense involved in fulfilling this warranty.

It is the responsibility of the owner to read, understand and practice the maintenance, safety, and operational guidelines as set out in the operator's manual furnished with the equipment. It is the owner's responsibility to ensure that the Pre-delivery Inspection sheet, which must be signed by the owner, is completed and returned to Free Form by the dealer. The completed and signed Pre-delivery Inspection sheet and the appropriate Assembly Inspection Checklist are required to register a new unit for warranty.

SAFETY



SAFETY ALERT SYMBOL

This Safety Alert symbol means:

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

WHY IS SAFETY IMPORTANT TO YOU?

Accidents Disable and Kill

Accidents Cost

Accidents Can Be Avoided

SIGNAL WORDS

Note the use of the signal words **DANGER**, **WARNING**, and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

DANGER

This indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION

This indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

You are responsible for the safe operation and maintenance of your Free Form equipment. You must ensure that you and anyone else, who is going to operate, maintain or work around the equipment be familiar with the operating and maintenance procedures and related safety information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the unit.

Remember, you are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- The most important safety device on this equipment is a safe operator. It is the operator's responsibility to read and understand all Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **Think SAFETY! Work SAFELY!**

GENERAL SAFETY

1. Read and understand this manual.
2. Have a first-aid kit available for use should the need arise and know how to use it.
3. Wear appropriate protective gear. This list may include but is not limited to:
 - A hard hat
 - Protective shoes with slip resistant soles
 - Protective goggles
 - Heavy gloves
 - Hearing protection

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
2. Attach securely to towing unit using a pin with a retainer.
3. Do not exceed a safe travel speed.
4. Use hazard flasher on towing unit when transporting.
5. Review safety instructions annually.

MAINTENANCE SAFETY

1. Follow good shop practices:

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.

2. Use only tools, jacks and hoists of sufficient capacity for the job.

TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when operating the swath roller in the field and/or on the road.

2. Always travel at a safe speed. Use caution when making corners or meeting traffic.

3. Make sure the reflectors required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.

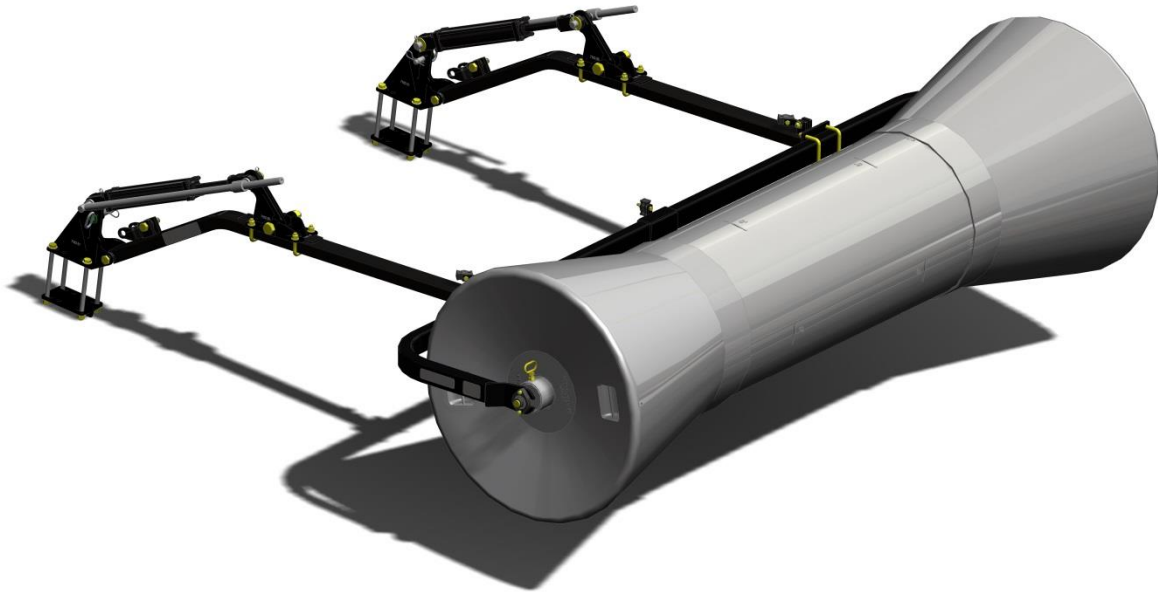
Note: The slow moving vehicle sign and flashing lights on the swather must be visible from behind when the MT3000 is secured in the transport position.

4. Be sure that the TB2000 is hitched positively to the towing vehicle and a retainer is used through the drawbar pin. Be sure that the MT3000 is secured properly with both transport locks and the pins are secured.

5. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.

6. Do not exceed 32 km/h. (20 mph). Reduce speed on rough roads and surfaces.

MT3000 ASSEMBLY



The MT3000 shown above is an improved and simplified version of our popular MT2000. This unit has been standardized to be hydraulic only and utilize all existing hydraulic model specific packages to complete the installation.



CONFIRM COMPONENTS

Refer to the *Parts Section* to check the packing list against the components received in the package prior to assembly. Contact your Free Form dealer if there are any components missing.

TOWER MOUNTS

Refer to *Figure 1* for this step. Locate the two tower mounts (#1) and the tower mount plates (#2).

1. Secure the towers (#1) to the swather's rear axle on the left and right sides. Check that the hole pattern on the top of the tower is oriented as shown on *Figure 1*. As well, ensure the tower mount plate (#2) is oriented as shown. Bolt each tower onto the axle using the tower mount plate (#2) and four (4) of the supplied 5/8" x 9" bolts (#3) and 5/8" locknuts (#4). Place 5/8" SAE washers (#5) between the bolt head and the mount, and again between the plate and nut. Do not tighten; Leave the nuts loose enough to position the tower prior to final assembly.

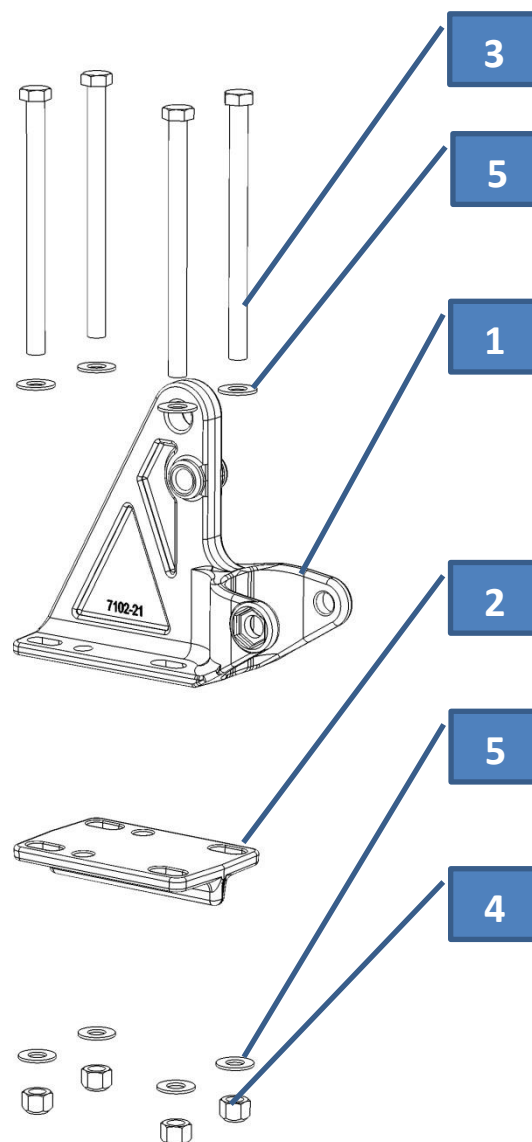


Figure 1 - TOWER MOUNT

CONNECTOR ARMS

Refer to *Figure 2* for this step. Locate the two connector arms (#1).

1. Secure each of the connector arms (#1) to the mount towers using 3/4" x 5 1/2" bolts (#2) and 3/4" locknuts (#3). The head of the bolt should rest in the notched tab on the tower.

Note: Both connector arms, towers, and tower mount plates are identical.

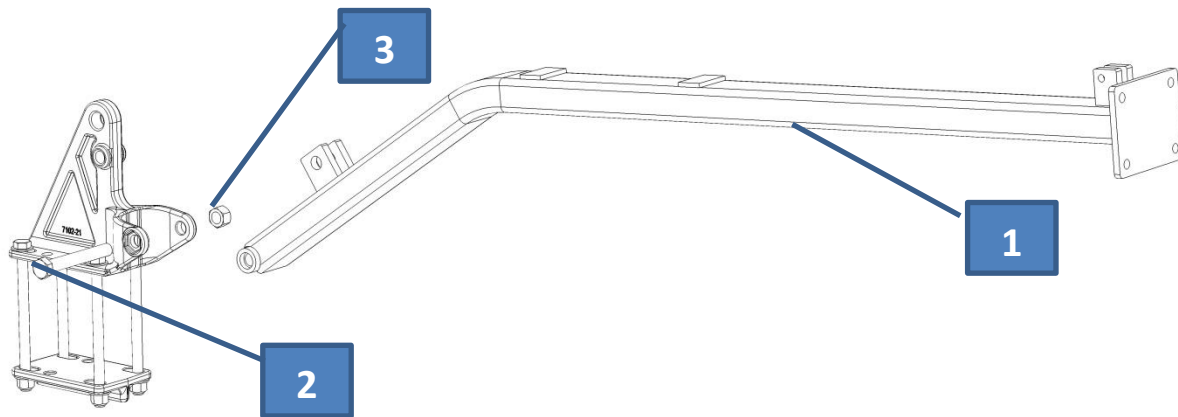


Figure 2 - CONNECTOR ARMS FIXED AXLE

If you are installing a split axle kit 7102-40 then please follow *Figure 3* for this step.

1. Secure each of the connector split axle arms (#1) to the mount towers using 3/4" x 5 1/2" bolts (#2) and 3/4" locknuts (#3). Use the spacer bushings (#4) provided to locate the arm on the bolt. The head of the bolt should rest in the notched tab on the tower.

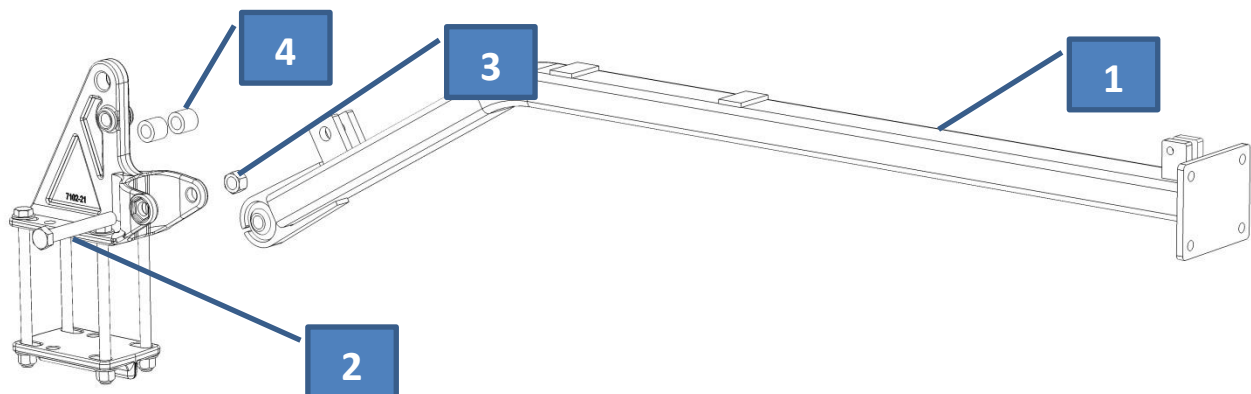


Figure 3 - CONNECTOR ARMS SPLIT AXLE

TRANSPORT LOCKS

Refer to *Figure 4* for this step.

1. When transporting the swather or while driving the unit on roadways, use the roller assembly's transport locks. This will take the weight off of the hydraulic components and increase service life.
2. Install the pin (#1) in the tower which was installed earlier, at location "A" and lock it in place with a retaining pin (#2).
3. Insert the locking tab (#3) on the arm using a $\frac{1}{4}$ x 3-1/2" bolt (#4) and $\frac{3}{4}$ " nut (#5).

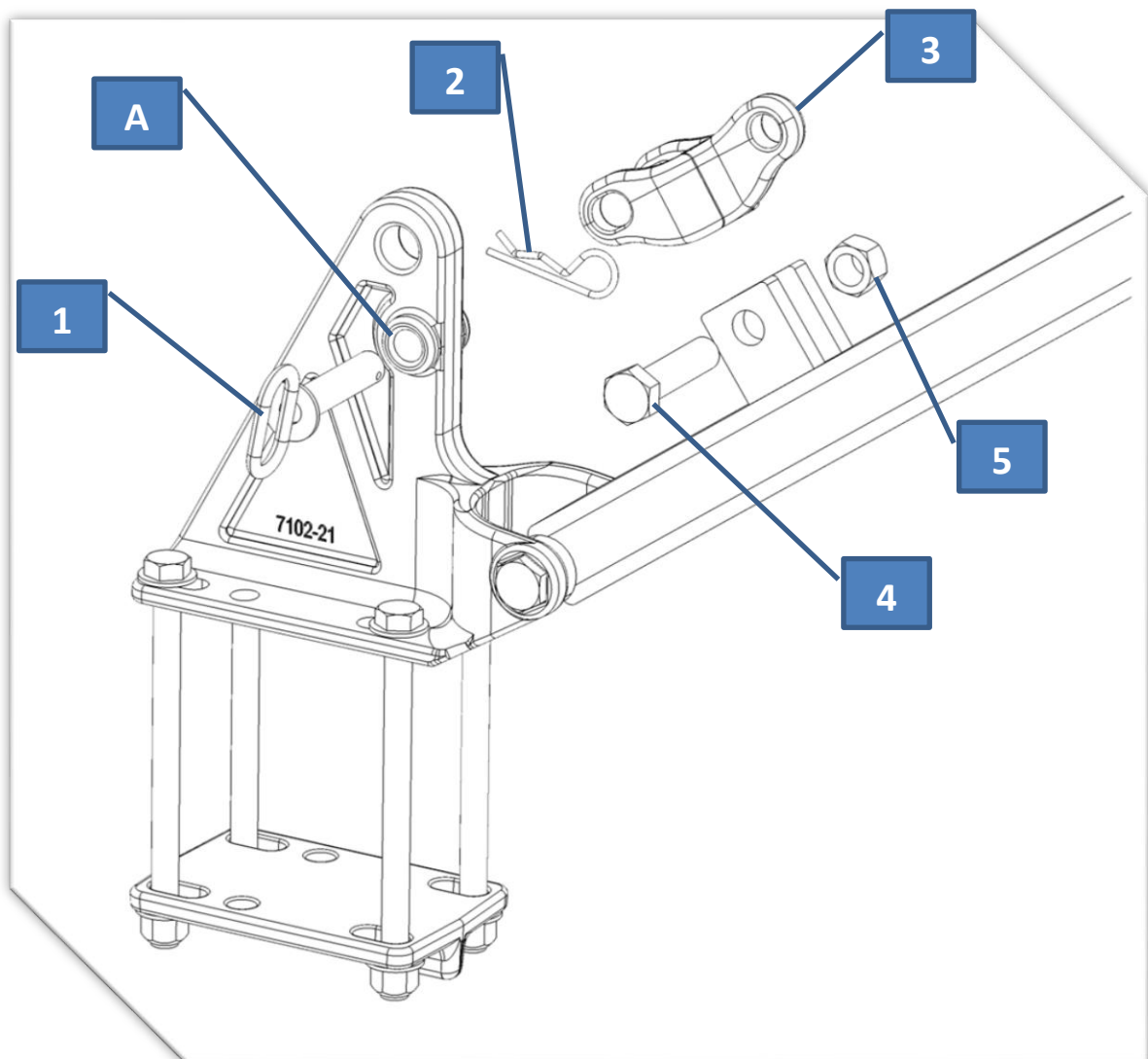


Figure 4 - TRANSPORT LOCKS

FLOATING TAB INSTALLATION

Refer to *Figure 5* for this step.

1. Place the tab bracket (#1) on the connector arm. Ensure that it sits between the two locating tabs. Secure the bracket with two 1/2" x 3-1/8" x 3 1/8" U-bolts (#2) and four 1/2" nuts (#3) and 1/2" washers (#4).
2. Secure the floating tab (#5) using a 1" x 6-1/2" bolt (#6) and a 1" stover nut (#7).
3. After tightening the bolt, ensure that the tab bracket (#5) can still move freely.

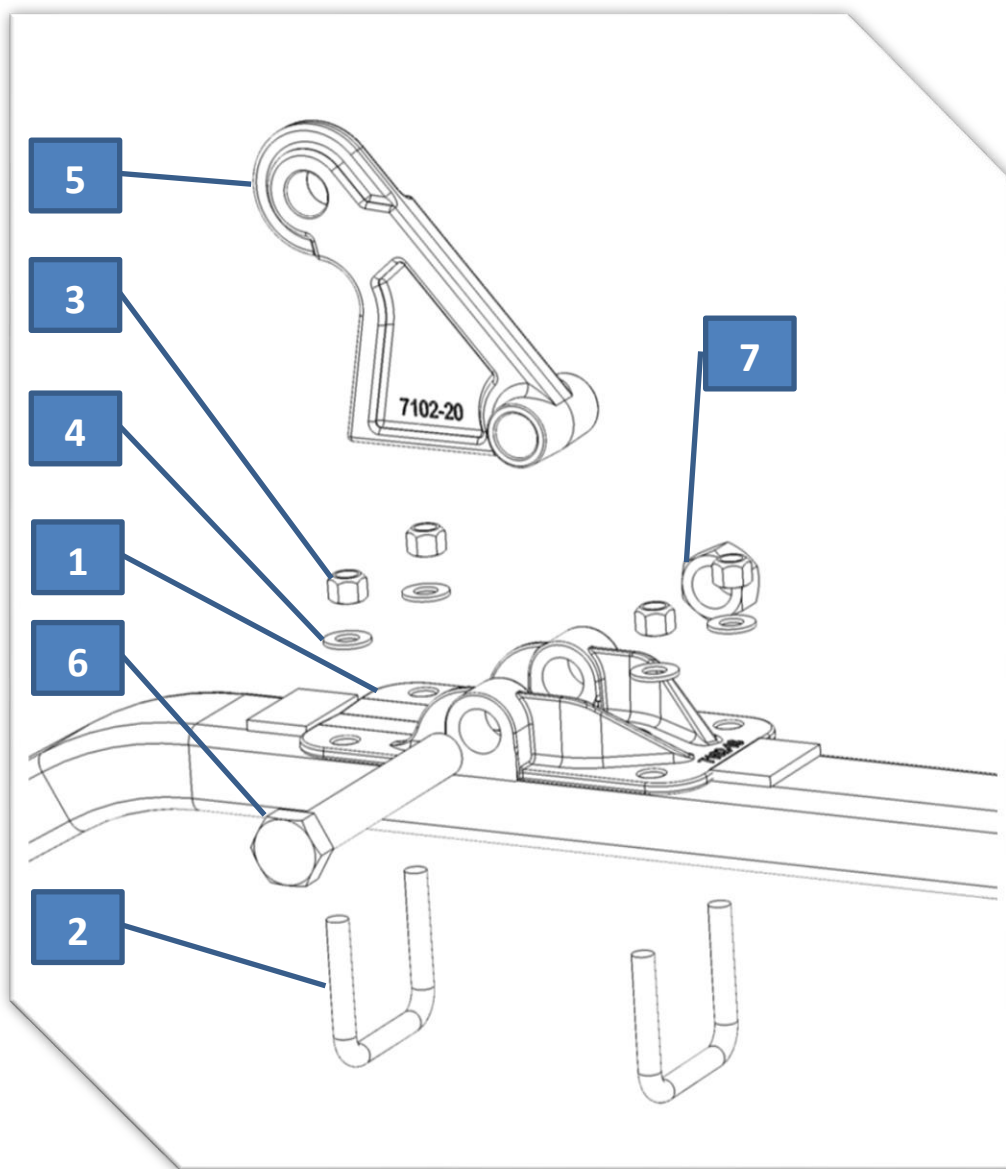


Figure 5- FLOATING TAB INSTALLATION

DEPTH CONTROL & CYLINDER ASSEMBLY

Refer to *Figure 6* for this step.

1. Slide the hydraulic stop (#1) onto the pin hydraulic stop (#2) and secure it in place by locking the hydraulic depth stop adjustment (#3) with a pin lock (#4) on the end.
2. Slide the assembly into locations A and B after passing through one side of the cylinder's (#5) clevises. Then secure with two 1" washers (#6) a cotter pin (#7) after sliding through the other half of the clevises.

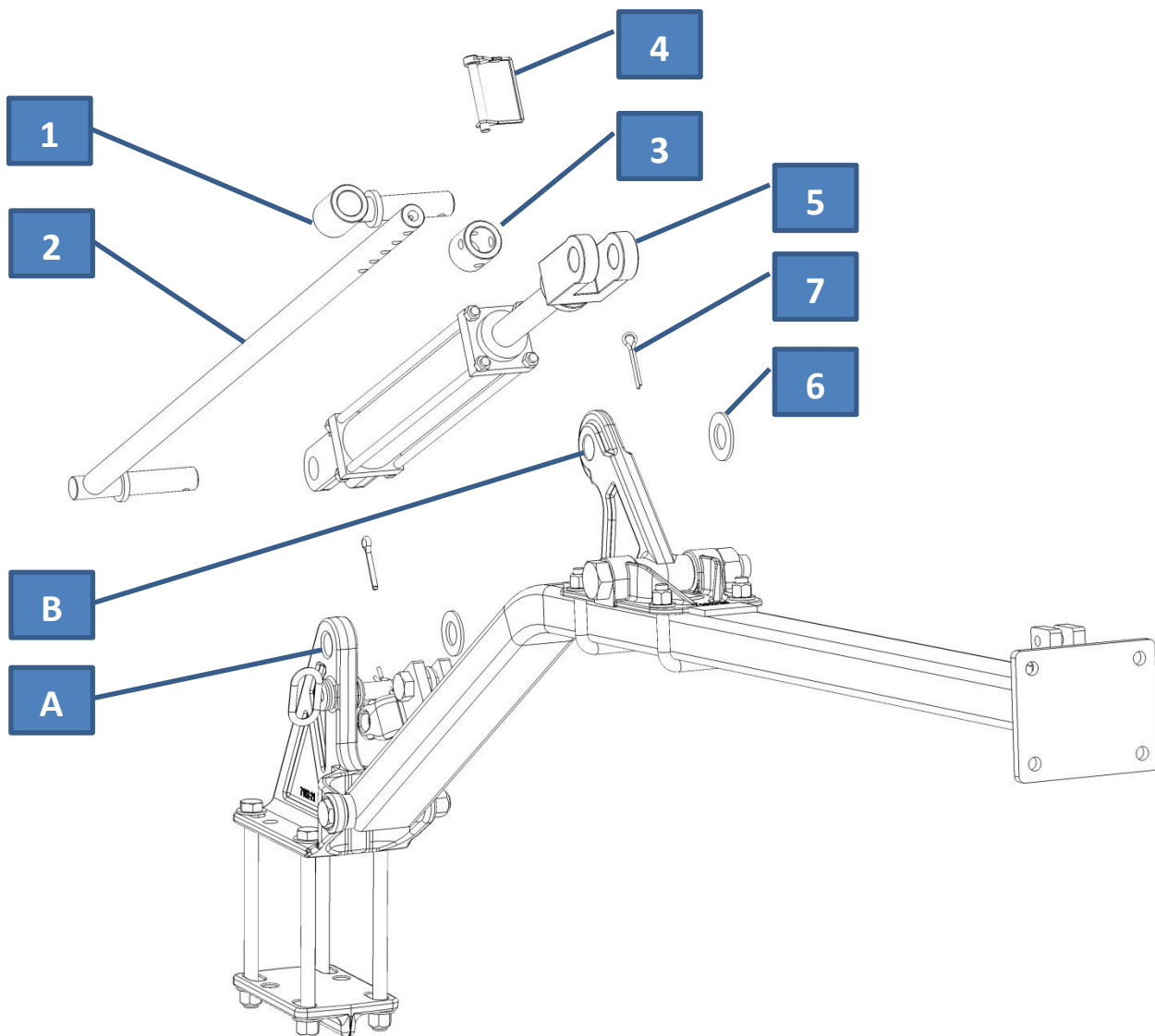


Figure 6 - DEPTH CONTROL & CYLINDER ASSEMBLY

MOUNTING MAIN BEAM

Refer to *Figure 7* for this step.

1. Orient the main beam (#1) so the tab is pointing upwards. Secure the main beam (#1) to each connector arm (#2) with two 1/2" x 3-1/8" x 3-1/8" square U-bolts (#3) and 1/2" locknuts (#4) on each Connector Arm. Do not tighten the nuts down on the U-Bolts at this time; the position of the main beam will have to be adjusted.
2. Check that the tower mounts are an equal distance apart from the ends of the axle, and that the connector arms will clear the swather body. Maximum distance between the arms should be no more than 78"; this may be made wider, but new hoses will be required at the customer's expense.
3. Centre the main beam to the swather. Ensure it is centered by measuring to ensure it is symmetrical.
4. Rotate the arrangement to see if it will come in contact with the swather body. If there is no interference, tighten the mounting.

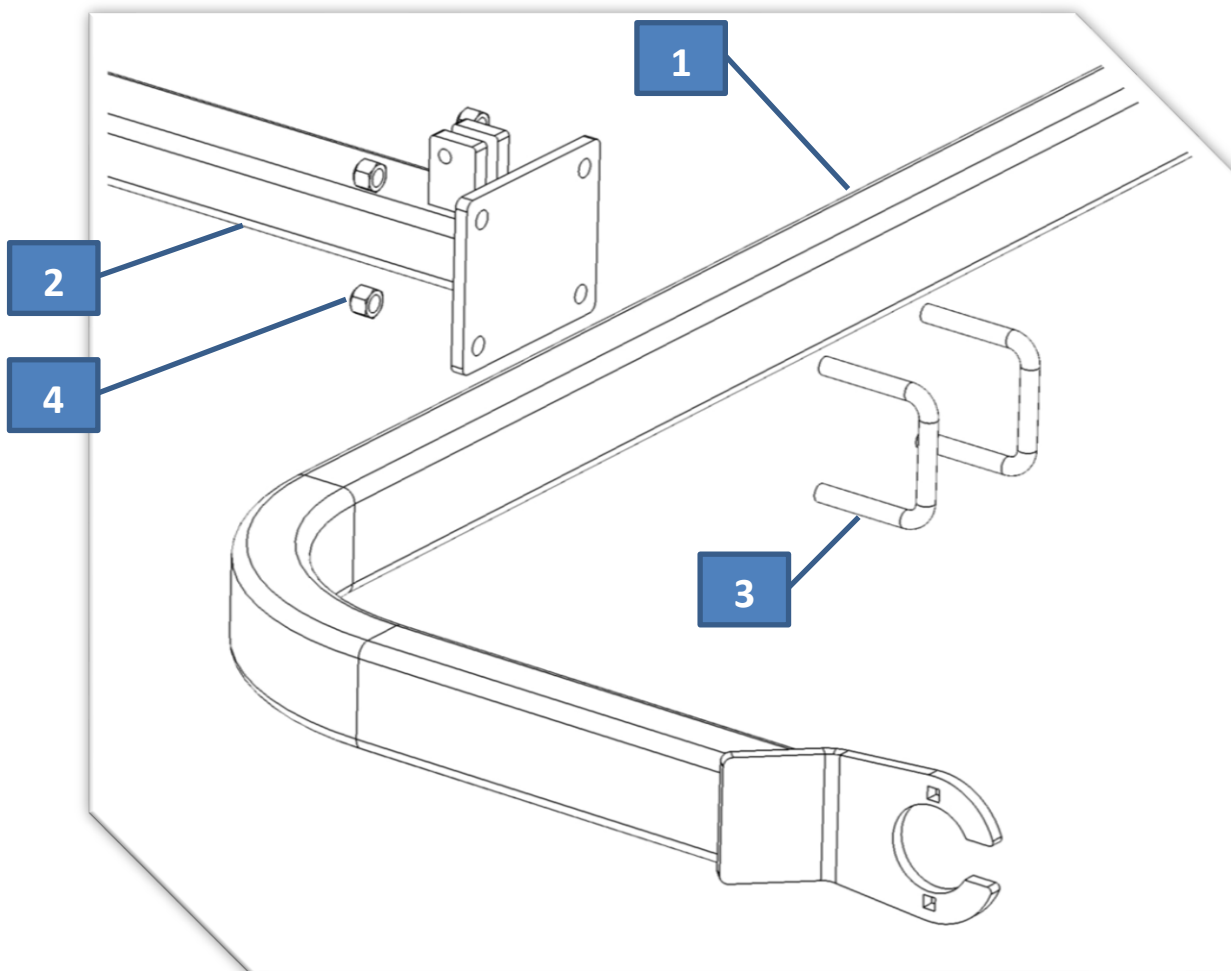


Figure 7 - MOUNTING MAIN BEAM

HYDRAULIC HOSE CLAMP INSTALL

Refer to *Figure 8* for this step.

1. The middle clamp mounts with a $\frac{3}{8}$ " x 2-1/4" bolt (#1) through the welded tab then slide the plastics clamp pieces (#2) onto the bolt.
2. For now thread the nut (#3) on the end of the bolt by only a few threads. Ensure that the clamps pieces can move freely to allow a hose to be placed between them.
3. For the connector arms, mount the clamp tab (#4) to the straight tabs on the connector arm. Secure with a $\frac{3}{8}$ " x 2 1/4" bolt (#1), $\frac{3}{8}$ " washer (#5) and locknut (#3). Tighten this bolt now.
4. Slide a $\frac{3}{8}$ " x 2- 1/4" bolt (#1) thru the other hole and slide the plastic clamps (#2) onto the bolt.
5. For now thread the nut (#3) on the end of the bolt by only a few threads. Ensure that the clamps pieces can move freely to allow a hose to be placed between them.

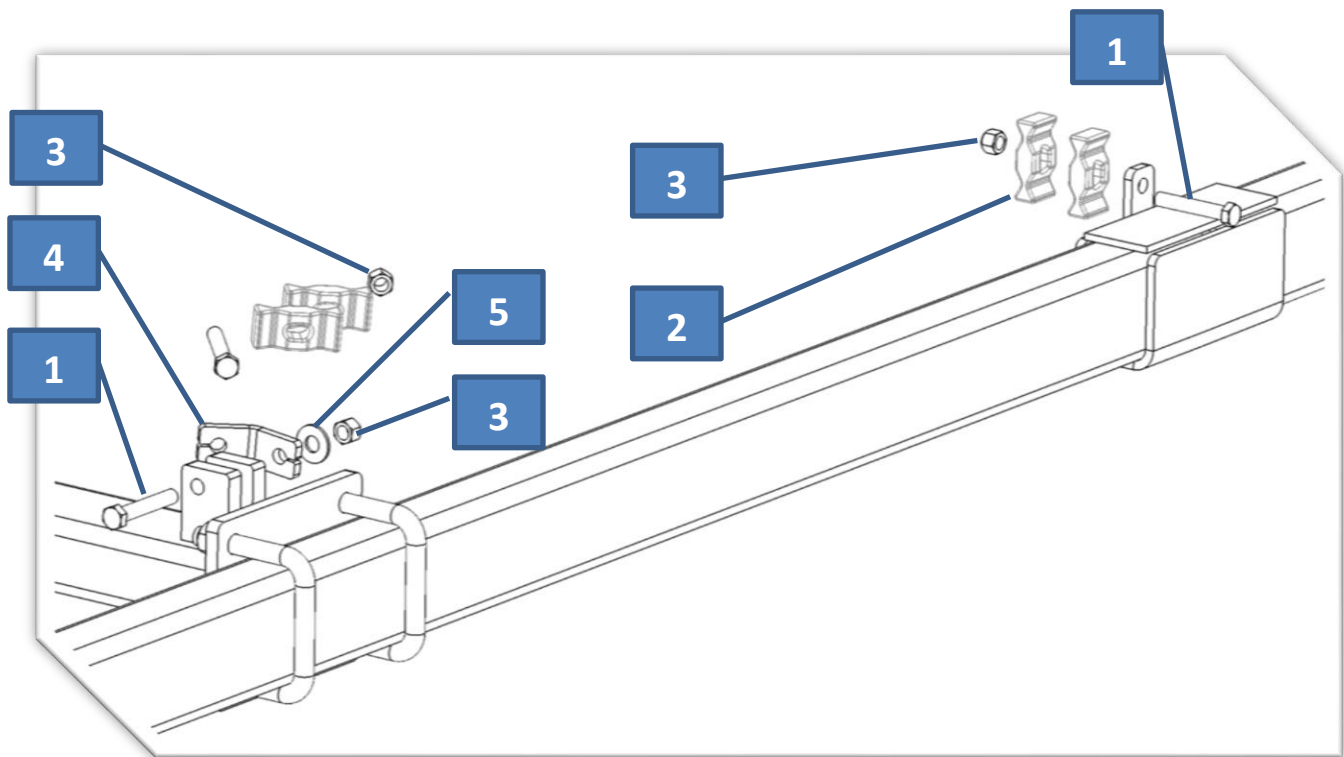


Figure 8 - HYDRAULIC HOSE CLAMP INSTALL

ROLLER ASSEMBLY

Refer to *Figure 9* for this step.

1. Slide each bearing (#1) on the end of the roller core (#2). Then bolt each bearing (#1) to both ends of the main beam (#3) using 5/16" x 1-1/2" carriage bolts (#4) and 5/16" nuts (#5).
2. Once both bearings are secured in place, check that the roller core is not interfering with the main beam (#6). Then lock the bearing collars on the roller.

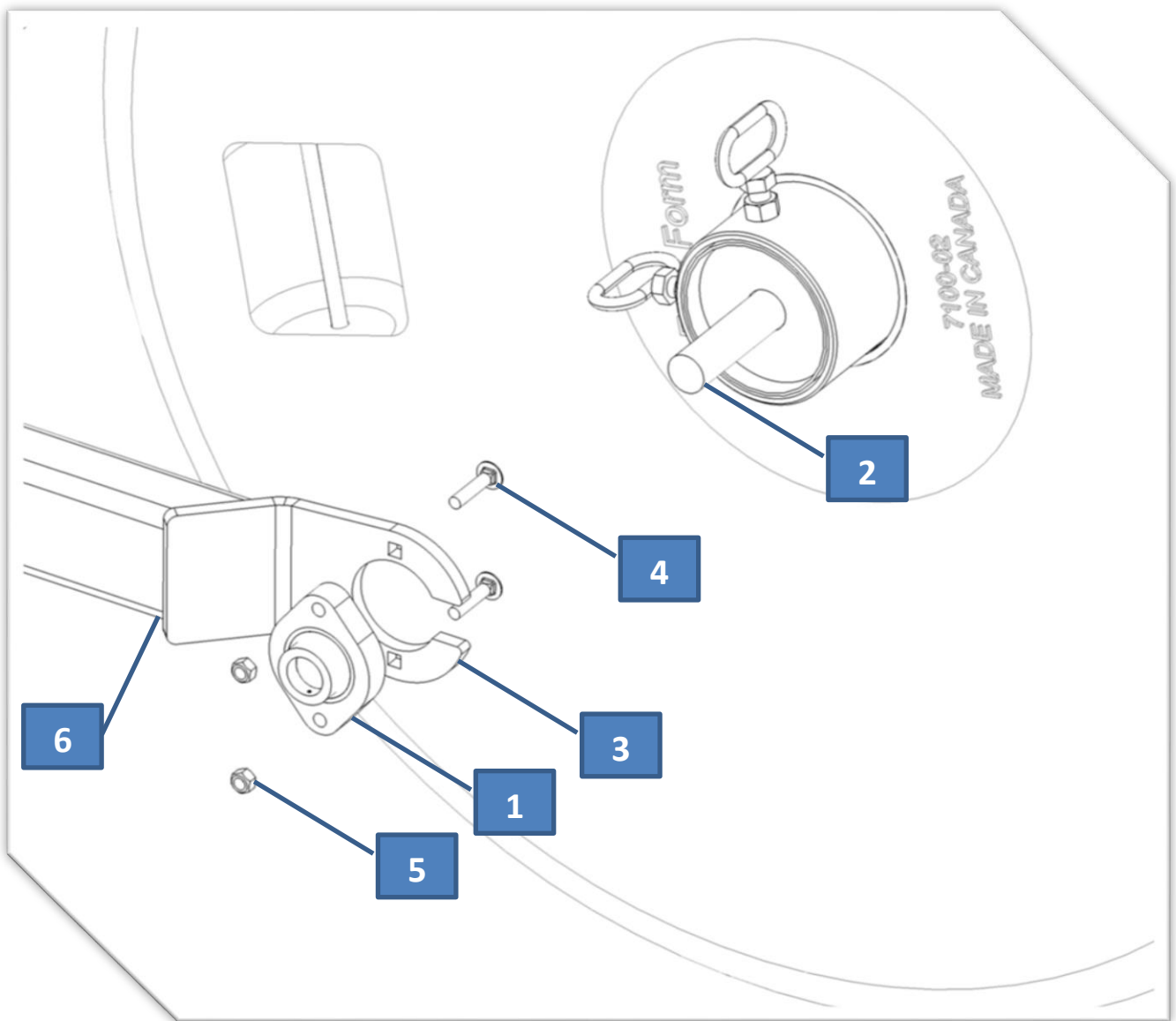


Figure 9 - ROLLER ASSEMBLY

APPLY DECALS

Refer to *Figure 10* for this step.

1. Follow the guideline below when applying the reflective decals. Apply the reflective amber (#1), and the MT3000 (#2) decals on the main arm. And the Free Form decal (#3) on the side of the arm; both sides.

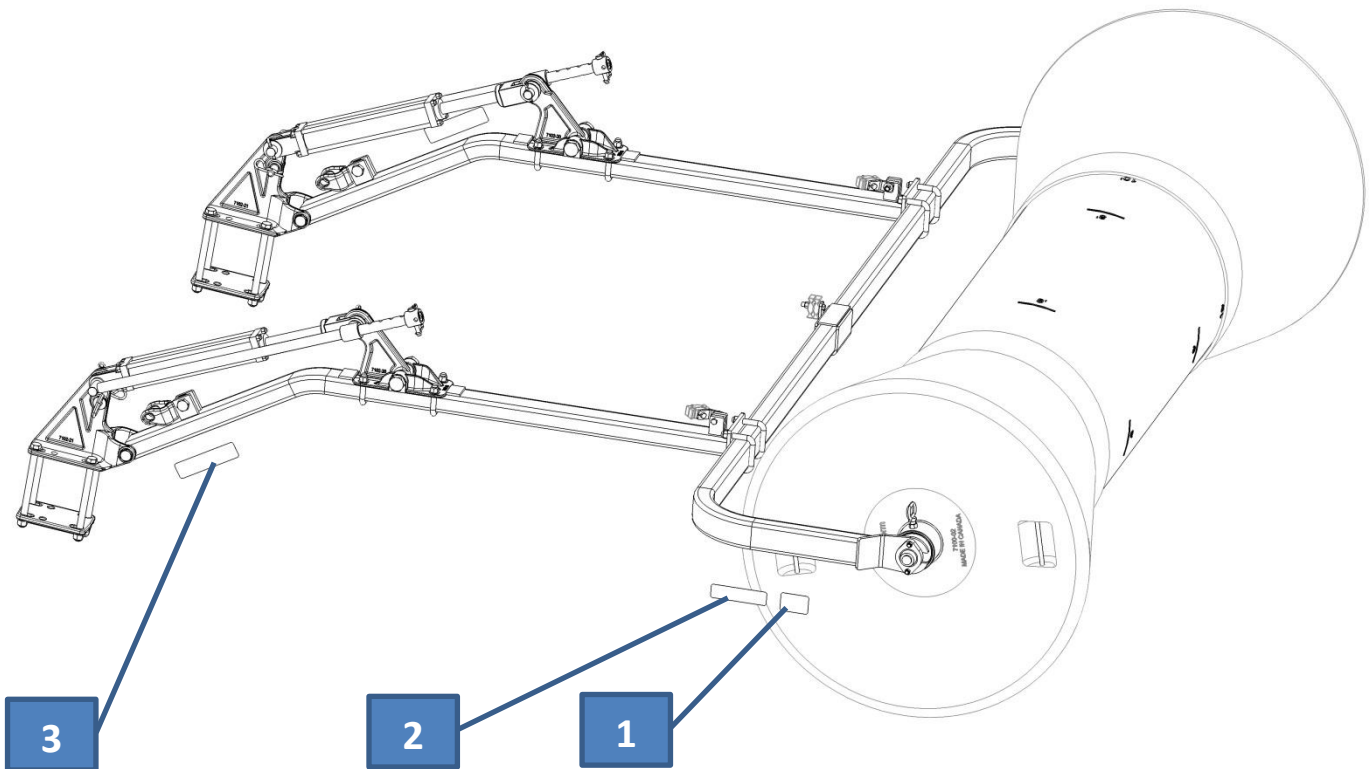


Figure 10 - APPLY DECALS

MT3000 USE AND OPERATION

ADJUSTING THE SWATH ROLLER

Refer to *Figure 11*.

1. To adjust the width of your swath roller, loosen the two pins on each end of the swath roller.
2. Slide the ends in or out to the desired width. The width of the roller is marked on the main drum.
3. Tighten the pins once the width is set.

NOTE: To set the adjustable width roller correctly, slide the ends out so the swath runs in the middle of the angles cone. This will allow for variation in width and ensure you roll with our “tucked in” philosophy. We want to ensure the sides of your swath are anchored into the stubble.

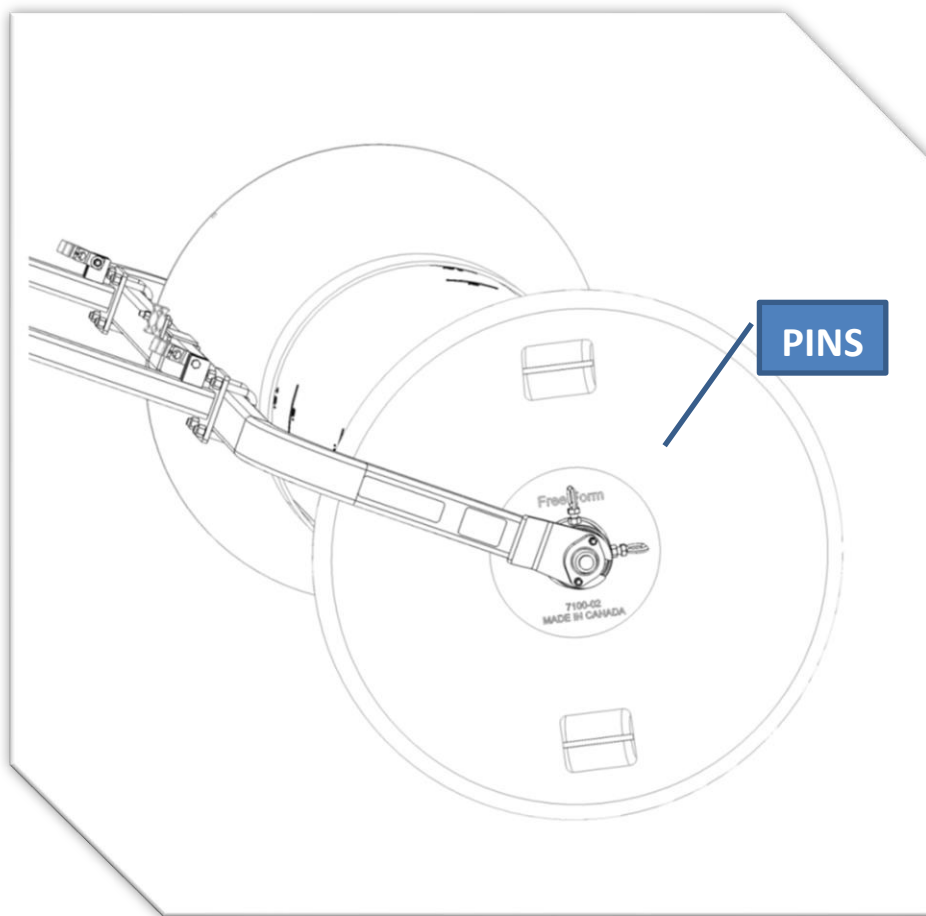


Figure 11 - ADJUSTING THE SWATH ROLLER

SETTING THE DEPTH

Refer to *Figure 12*.

1. The roller assembly can be set to lower to a predetermined stop point using the bars next to the hydraulic rams.
2. By using a combination of the holes on the main bar and the holes of the sliding collar (#1), you can set the roller's minimum height.
4. Secure the collar (#1) with the supplied locking pin (#2).

Note: If you would like to get maximum downforce on swath set the depth stops so the roller is just about touching the ground. Then as you swath the full weight of the roller will be on the swath and mechanically float up and down as the swath varies.

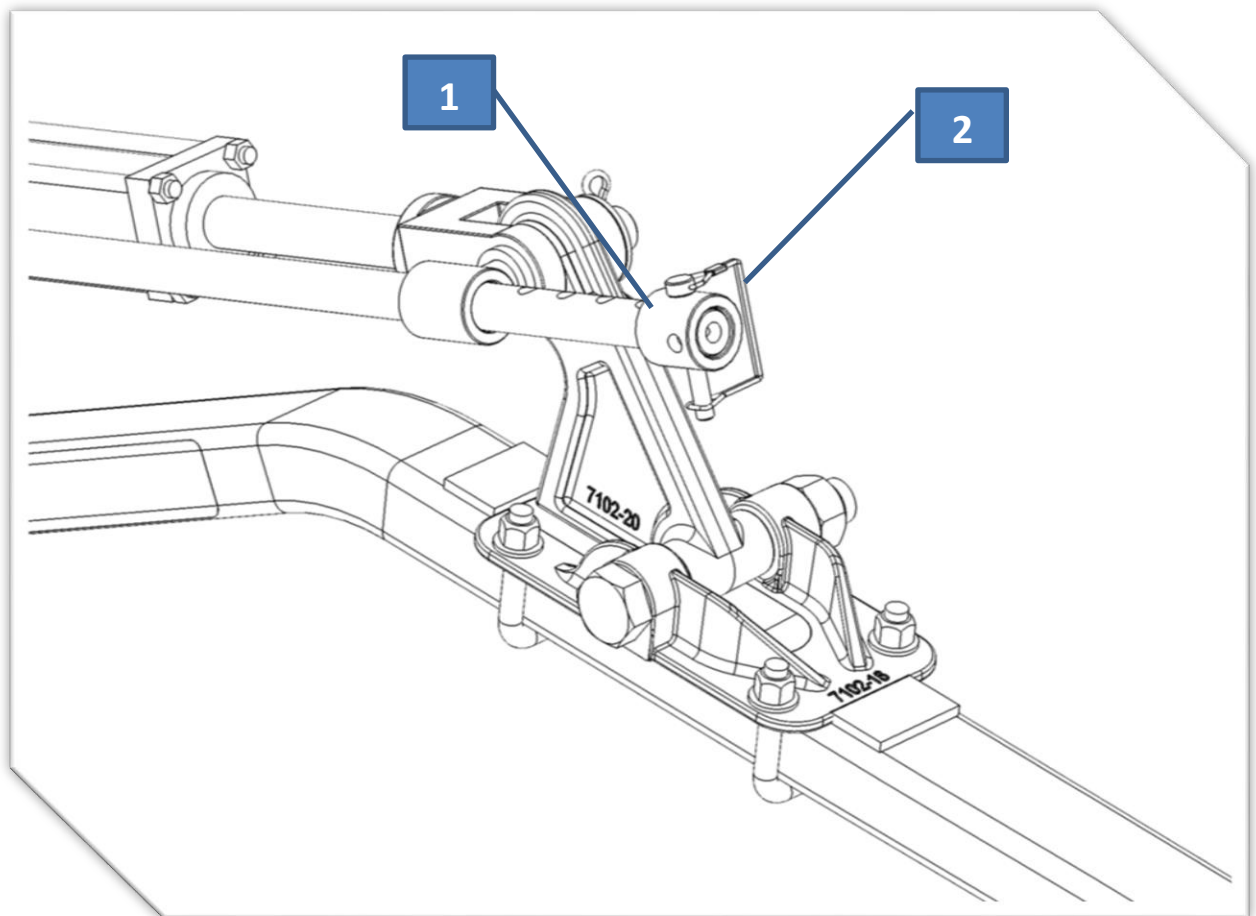


Figure 12 - SETTING THE DEPTH

TRANSPORT LOCKS

Refer to *Figure 13*.

1. When transporting the swather or while driving the unit on roadways, use the roller assembly's transport locks. This will take the weight off of the hydraulic components and increase service life.
2. Remove the pin (#2) from the tower (#3), at location "A".
3. Raise the swath roller until the hole in transport lock lever (#4) lines up with the holes on the tower (#3).
4. Insert the pin (#2) through all holes and secure with a cotter pin (#1).
5. Lower the roller to relieve pressure on the hydraulics. If you are having trouble to get the lock to locate properly you can thread the clevis onto the cylinder more to fix this.

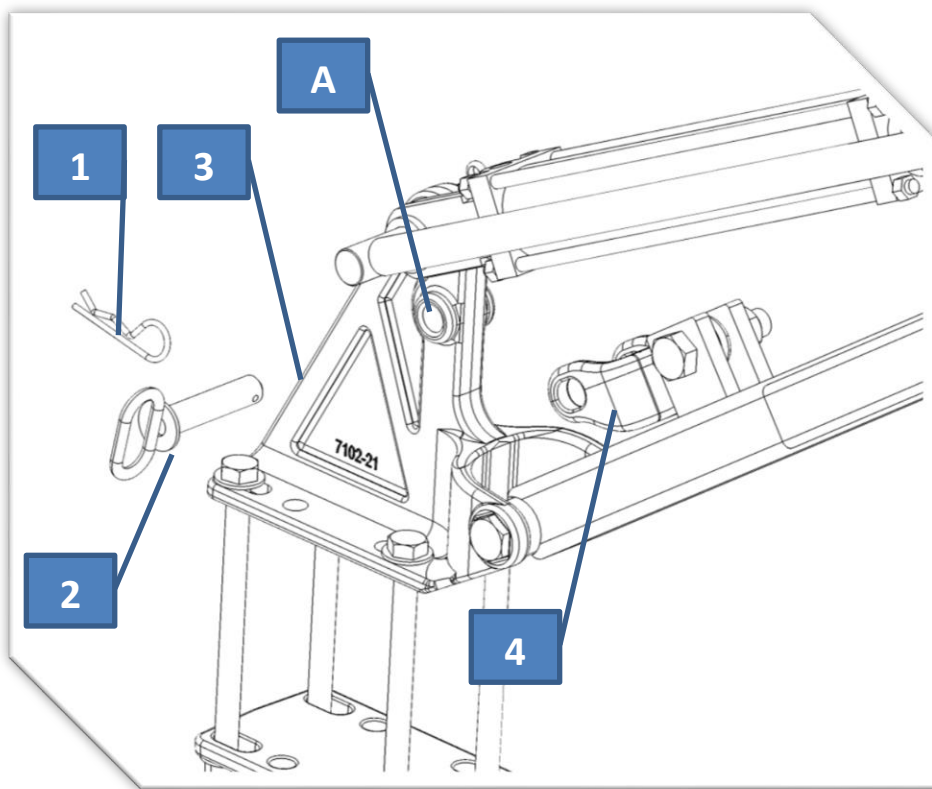


Figure 13 - TRANSPORT LOCKS

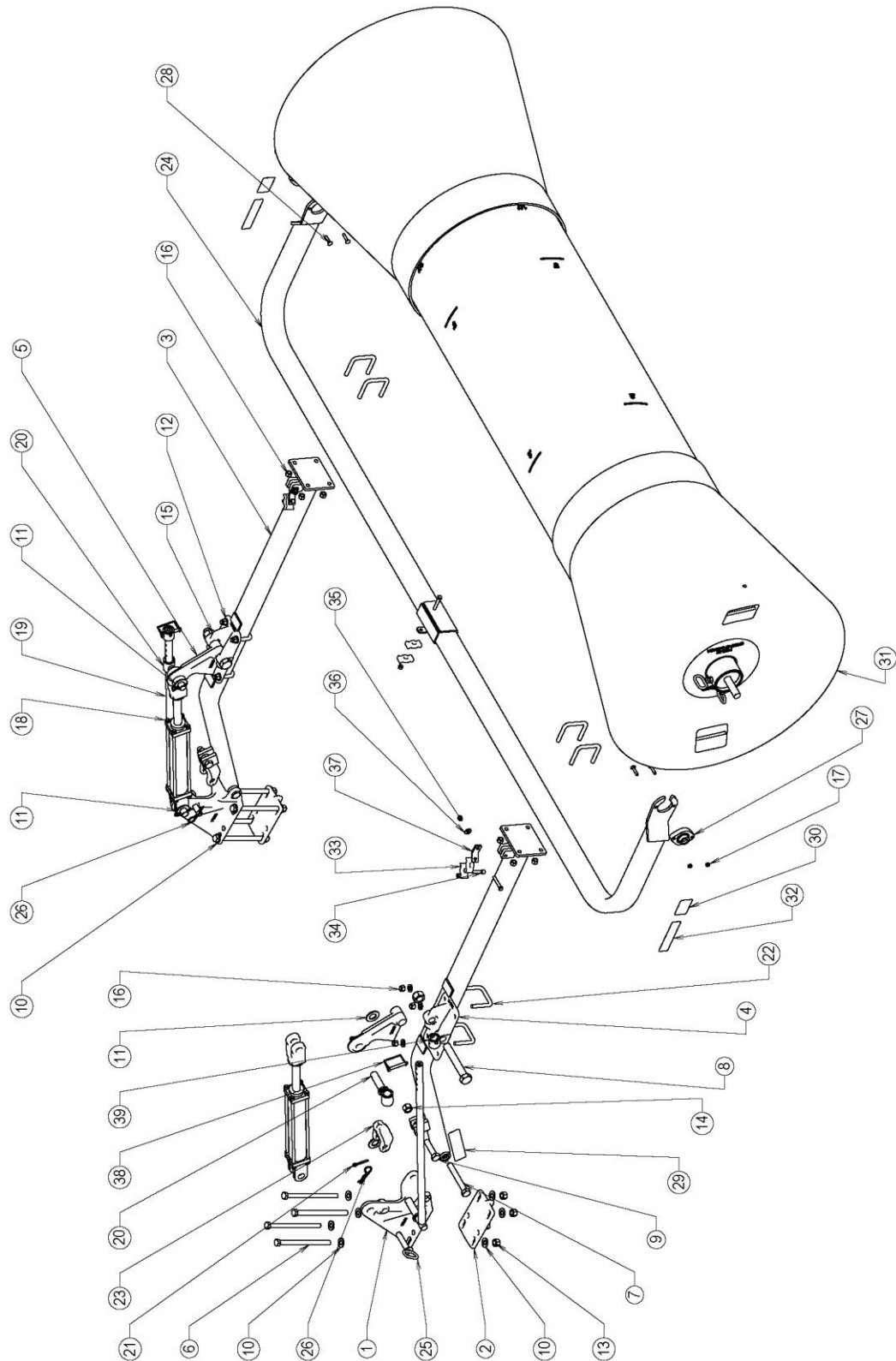


Caution: Before use ensure adequate distance between the roller and the exhaust pipe. Exposure to extreme heat can cause roller deformation and will void the warranty.

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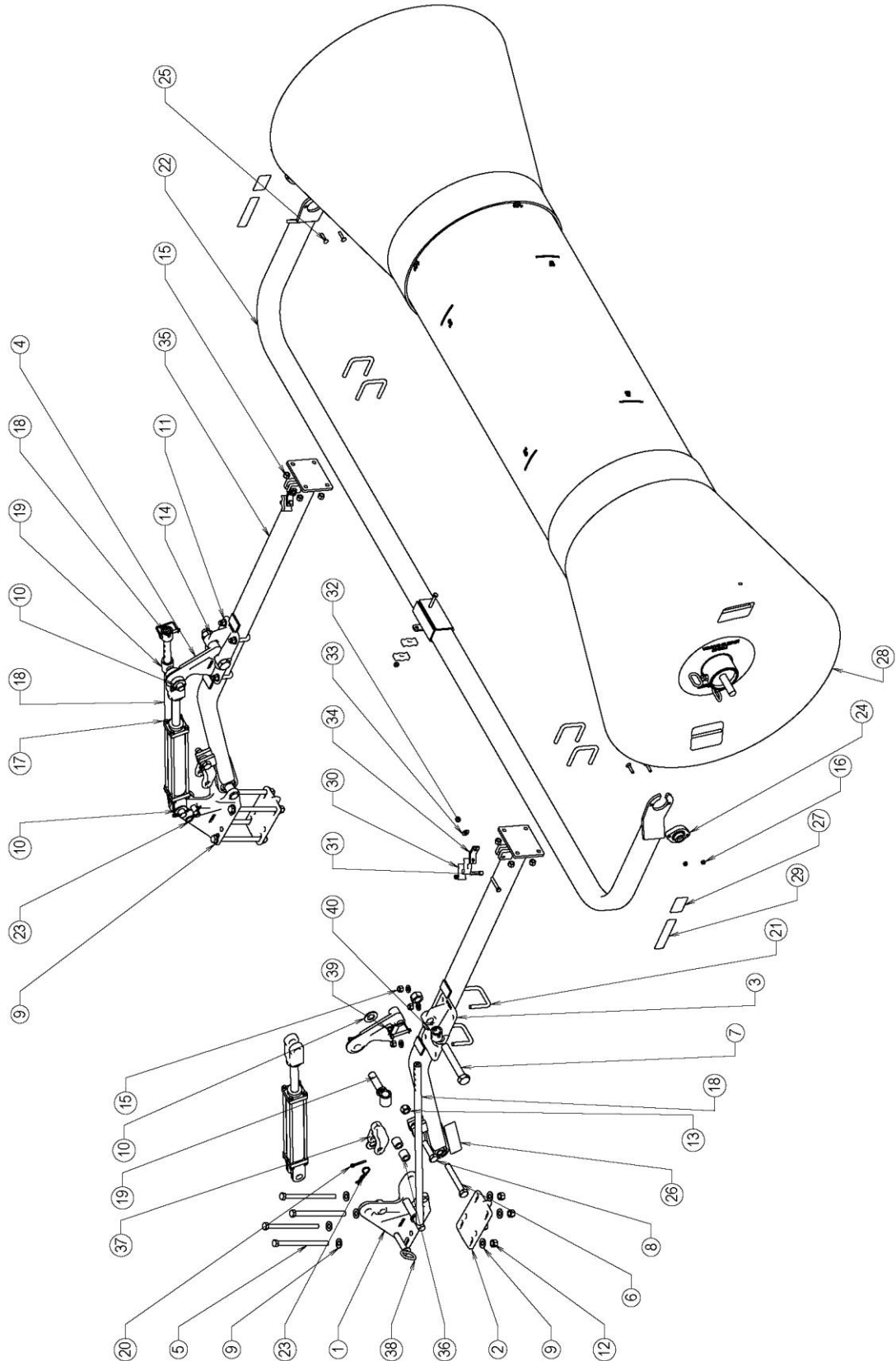
PARTS

MT3000 FIXED AXLE (7102-02)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	7102-21	CAST TOWER ASSEMBLY	2
2	7102-58	CAST TWR BACK PLATE	2
3	7102-08	MT3000 ARM EXT MNT COM FF SW	2
4	7102-18	CAST FLOAT TAB PVT	2
5	7102-20	CAST CYL LUG FLOATING	2
6	1010-75	BOLT 5\8X9 UNC GR5 PLD	8
7	1012-45	BOLT 3\4X5-1\2 UNC GR5 PLD	2
8	1015-40	BOLT 1X6-1\2 UNC GR5 PLD	2
9	1012-15	BOLT 3\4X3 UNC GR5 PLD	2
10	1325-33	WSHR 5\8 SAE PLD	16
11	1325-45	WSHR 1 SAE PLD	4
12	1325-27	WSHR 1\2 SAE PLD	8
13	1206-07	NUT PTRQ TL 5\8 UNC GR B ZDW	8
14	1207-07	NUT PTRQ TL 3\4 UNC GR B CDW	4
15	1209-07	NUT PTRQ TL 1 UNC GR B ZDW	2
16	1204-05	NUT PTRQ PLD 1\2 UNC GR B ZDW	16
17	1201-18	NUT PTRQ TL 5\16 UNC GR B ZDW	4
18	3300-73	CYL HYD 2X12X1-1/8	2
19	7101-14	PIN HYD STOP ADJ PLD	2
20	7101-15	PIN WITH CLR HYD STOP PLD	2
21	1500-23	PIN COT 1/4X2 PLD	4
22	1180-19	UBLT SQ 1\2X3-1\8X3-1\8 UNC G5	8
23	7102-22	CAST TRNPT LOCK, HIGH LIFT	2
24	7100-50	MAIN BEAM MT RLR	1
25	7102-43	PIN 3/4X3	2
26	1500-35	PIN HAIR #9	2
27	2120-04	BRG ASSY 1IN PILLOW W/ COLLAR	2
28	1102-16	BOLT CRG 5\16X1-1\2 UNC GR5 PLD	4
29	3904-26	DCL FREE FORM 1-3/4 X 7	2
30	3900-33-01	DECAL AMBER REF 2X3	2
31	7100-05	SWATH RLR ASSY	1
32	3904-21-01	DCL MT 3000	2
33	1800-25	MOULDING PLSTC LINE HLDN	6
34	1004-23	BOLT 3\8X2-1\4 UNC GR5 PLD	5
35	1202-30	NUT PTRQ TL 3\8 UNC GR B ZDW	5
36	1325-15	WSHR 3\8 PL PLD	2
37	7101-17	PL 1/4X1 HYD HOSE BRKT	2
38	1600-44	PIN LK 3/8X2-1/2 PLD	2

MT3000 SPLIT AXLE (7102-40)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	7102-21	CAST TOWER ASSEMBLY	2
2	7102-58	CAST TWR BACK PLATE	2
3	7102-18	CAST FLOAT TAB PVT	2
4	7102-20	CAST CYL LUG FLOATING	2
5	1010-75	BOLT 5\8X9 UNC GR5 PLD	8
6	1012-45	BOLT 3\4X5-1\2 UNC GR5 PLD	2
7	1015-40	BOLT 1X6-1\2 UNC GR5 PLD	2
8	1012-15	BOLT 3\4X3 UNC GR5 PLD	2
9	1325-33	WSHR 5\8 SAE PLD	16
10	1325-45	WSHR 1 SAE PLD	4
11	1325-27	WSHR 1\2 SAE PLD	8
12	1206-07	NUT PTRQ TL 5\8 UNC GR B ZDW	8
13	1207-07	NUT PTRQ TL 3\4 UNC GR B CDW	4
14	1209-07	NUT PTRQ TL 1 UNC GR B ZDW	2
15	1204-05	NUT PTRQ PLD 1\2 UNC GR B ZDW	16
16	1201-18	NUT PTRQ TL 5\16 UNC GR B ZDW	4
17	3300-73	CYL HYD 2X12X1-1/8	2
18	7101-14	PIN HYD STOP ADJ PLD	2
19	7101-15	PIN WITH CLR HYD STOP PLD	2
20	1500-23	PIN COT 1/4X2 PLD	4
21	1180-19	UBLT SQ 1\2X3-1\8X3-1\8 UNC G5	8
22	7100-50	MAIN BEAM MT RLR	1
23	1500-35	PIN HAIR #9	2
24	2120-04	BRG ASSY 1IN PILLOW W/ COLLAR	2
25	1102-16	BOLT CRG 5\16X1-1\2 UNC GR5 PLD	4
26	3904-26	DCL FREE FORM 1-3/4 X 7	2
27	3900-33-01	DECAL AMBER REF 2X3	2
28	7100-05	SWATH RLR ASSY	1
29	3904-21-01	DCL MT 3000	2
30	1800-25	MOULDING PLSTC LINE HLDN	6
31	1004-23	BOLT 3\8X2-1\4 UNC GR5 PLD	5
32	1202-30	NUT PTRQ TL 3\8 UNC GR B ZDW	5
33	1325-15	WSHR 3\8 PL PLD	2
34	7101-17	PL 1/4X1 HYD HOSE BRKT	2
35	7102-41	MT3000 ARM SPLIT AXLE WINDROWER	2
36	7101-41-05	SPLIT AXLE BUSHING	4
37	7102-22	CAST TRNPT LOCK, HIGH LIFT	2
38	7102-43	PIN 3/4X3	2
39	1600-44	PIN LK 3/8X2-1/2 PLD	2
40	7101-16	HYD DEPTH ADJ STOP	2

