

Freeform



PLASTICS

A Division of Bourgault Industries Ltd.

MT2000 SWATH ROLLER

FFP SWTH RLR MT2000 COMMON ASSY

ASSEMBLY INSTRUCTIONS & OPERATION

EFFECTIVE S/N: FFO01SR-01 - DATE

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.

FREE FORM WARRANTY POLICY

Effective April 16, 2001

Free Form Plastic Products (referred to as Free Form), a Division of Bourgault Industries Ltd., warrants its **new**, unused, Agricultural Equipment to be free of defects in material and workmanship at time of the delivery to the first retail purchaser according to the Free Form Warranty Policy.

1) BASIC WARRANTY REPAIR PERIOD AND REMEDIES

- a) Free Form will repair or replace, at its option, without charge for parts or labour, **any defective part** of the equipment for a period of twelve (12) months from delivery to the first retail purchaser.
- b) Free Form will repair or replace, at its option, without charge for parts, any **Free Form manufactured part** that is found to be defective for the period of thirteen (13) months to twenty-four (24) months from delivery to the first retail purchaser.
- c) Free Form will repair or replace, at its option, for a charge of 50% of the parts, any **Free Form manufactured part** that is found to be defective for the period of twenty-five (25) months to thirty-six (36) months from delivery to the first retail purchaser.

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. Purchased parts would include bearings, bolts, etc...

- d) 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 document. The extended warranty policy may change from time to time without warning from Free Form.

2) EXTENDED WARRANTY

- a) **CULTIVATOR SHANKS** are warranted 100% for five years from date of manufacture against breakage. 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 provide Free Form customers with replacement shanks for 50% of list price.

3) EXCEPTIONS TO THIS WARRANTY

- a) In no event shall the owner be entitled to recover 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 cost of rental of replacement equipment.
- b) **Repair, Maintenance, and Service items not related to defects:**
 - 1. Loss or damage during shipment (see: Free Form Wholegoods 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. Nonreimbursable maintenance items including but not limited to oil, 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 Free Form.
- e) **Replacement Parts** will be warranted for twelve months from the repair date, providing the bill of sale is attached to the warranty claim.
- f) 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

FREE FORM WARRANTY POLICY

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.

- g) 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.

4) 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 set out in the operator's manual** furnished with the equipment.

It is the owner's responsibility to ensure that the Warranty Registration, which must be signed by the owner, is completed and returned to Free Form by the dealer. The completed and signed Warranty Registration is required to register a new unit for warranty.

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1 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

3 Big Reasons

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 -

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 -

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.

1 SAFETY (CONT'D)

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!**

1.1 GENERAL SAFETY

1. Read and understand the Operator's 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

1.2 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.

1.3 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.

1.4 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 MT2000 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 MT2000 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 20 m.p.h. (32 km/h). Reduce speed on rough roads and surfaces.

2 MT2000 COMMON STATE ASSEMBLY



The common state as shown above is designed to be the basis for the winch and hydraulic versions of the MT2000 swath roller. This allows units equipped with the winch operation to be converted to hydraulic operation at a later date and vice versa if so desired.



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.

2.1 TOWER MOUNTS

Refer to *Figure 2.1* for this step. Locate the two tower mounts (#21) and the tower mount plates (#19).

1. Secure the towers (#21) 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 2.1*. As well, ensure the tower mount plate (#19) is oriented as shown. Bolt each tower onto the axle using the tower mount plate (#19) and four (4) of the supplied 5/8" x 9" bolts (#1) and 5/8" locknuts (#8). Place 5/8" SAE washers (#10) 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.

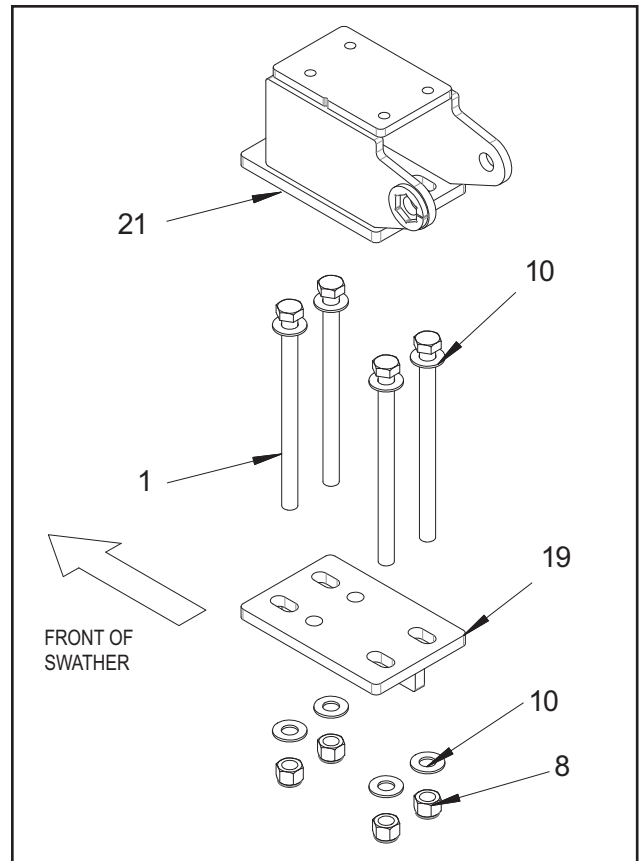


Figure 2.1 - Tower Mounting

2.2 CONNECTOR ARMS

Refer to *Figure 2.2* for this step. Locate the two connector arms (#20).

1. Secure each of the connector arms (#20) to the mount towers using 3/4" x 5 1/2" bolts (#2) and 3/4" locknuts (#9). 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.

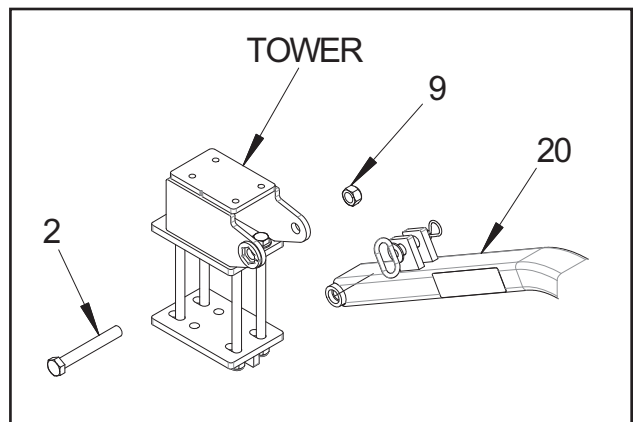


Figure 2.2 - Connector Arm Mounting

2.3 ROLLER ASSEMBLY

Refer to *Figures 2.3 & 2.4*. The roller is pre-assembled at the factory.

1. Refer to *Figure 2.3*. Slide each bearing (#12) on the end of the roller core (#1). Bolt each bearing (#12) to each end of the main beam (#18) using 5/16" x 1-1/2" carriage bolts (#3) and 5/16" nuts (#6).
2. Once both bearings are secured in place, check that the roller core is not interfering with the main beam (#18). Lock the bearing collars on the roller.

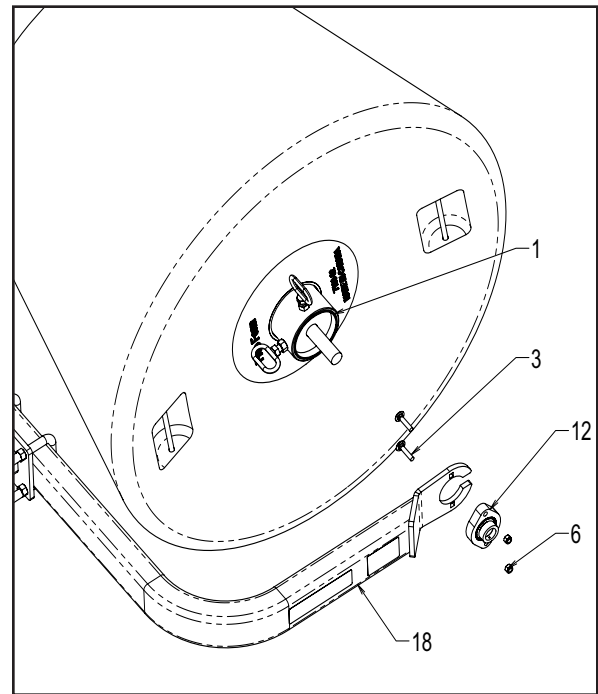


Figure 2.3 - Main Beam Bearings

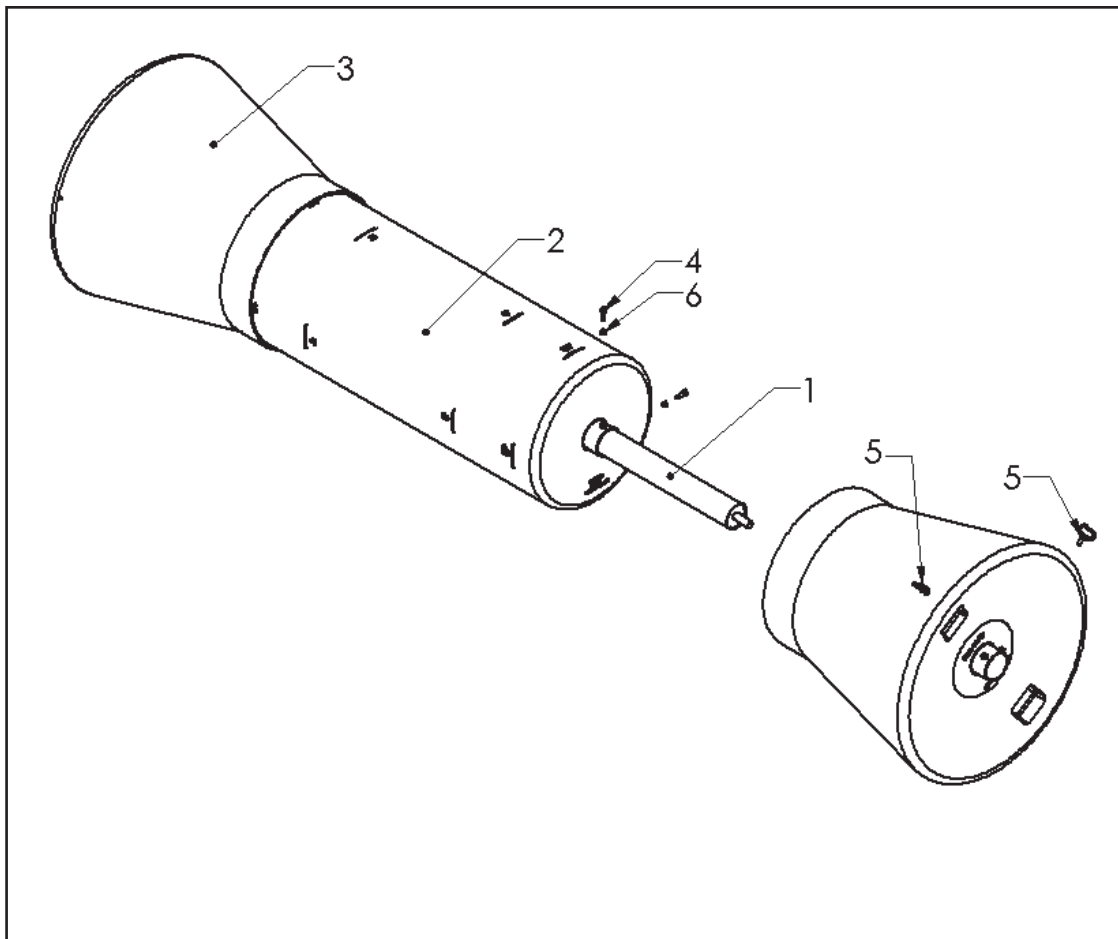


Figure 2.4 - Roller Assembly

shaft (#1).

2.4 MOUNTING MAIN BEAM

Refer to *Figures 2.5 & 2.6* for this step.

1. Orient the main beam (#18) so the joiner plate in the middle of the beam is on the top side and the exposed beam side is facing downward. Secure the main beam (#18) to each connector arm (#20) with two 1/2" x 3-1/8" square u-bolts (#5) and 1/2" locknuts (#7) on each Connector Arm. **DO NOT TIGHTEN THE NUTS DOWN ON THE U-BOLTS.** The position of the main beam will have to be adjusted.

Refer to *Figure 2.6*.

2. Check that the tower mounts are an equal distance apart from the ends of the axle (Dist. A = Dist. B), and that the connector arms will clear the swather body. Maximum distance between the arms should be no more than 78".
**see note below
3. Centre the main beam to the swather. Check that distance C & D are equal.
4. Rotate the arrangement to see if it will come in contact with the swather body. (Distance E) If there is no interference, tighten the mounting

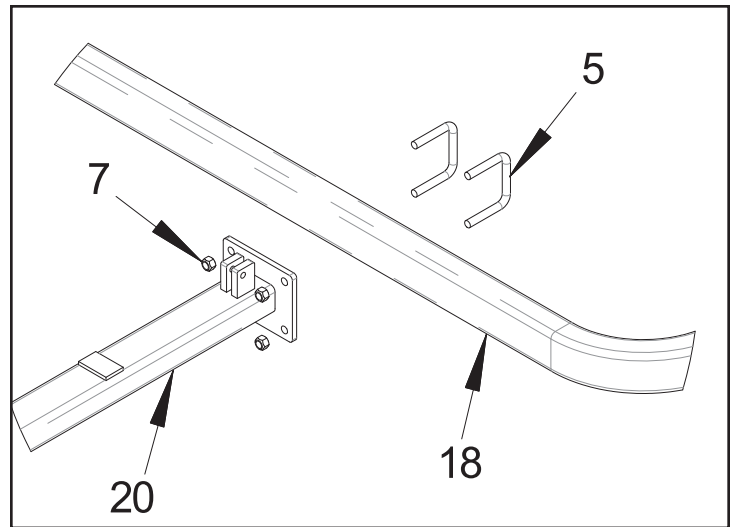


Figure 2.5 - Mounting Main Beam

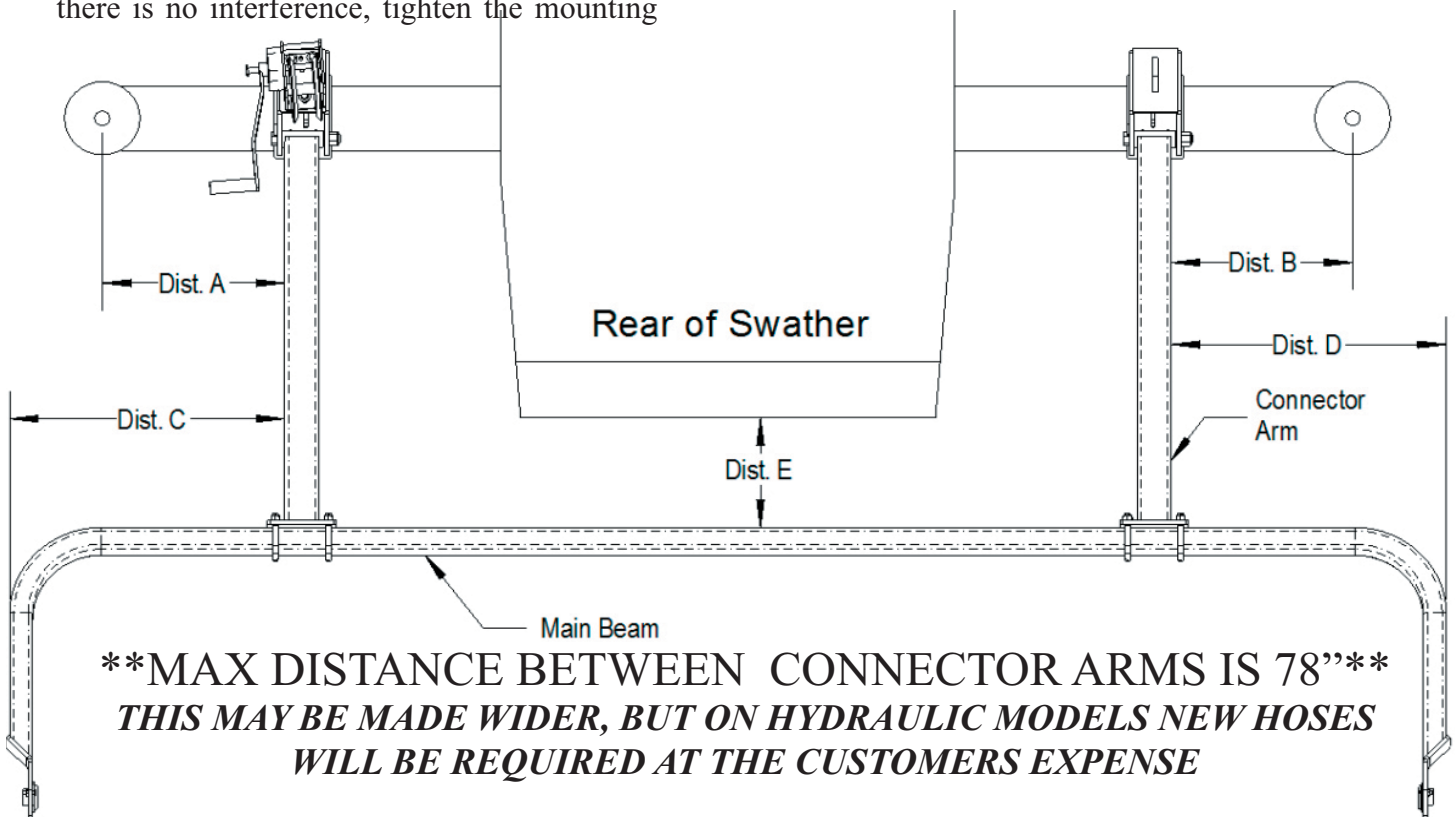
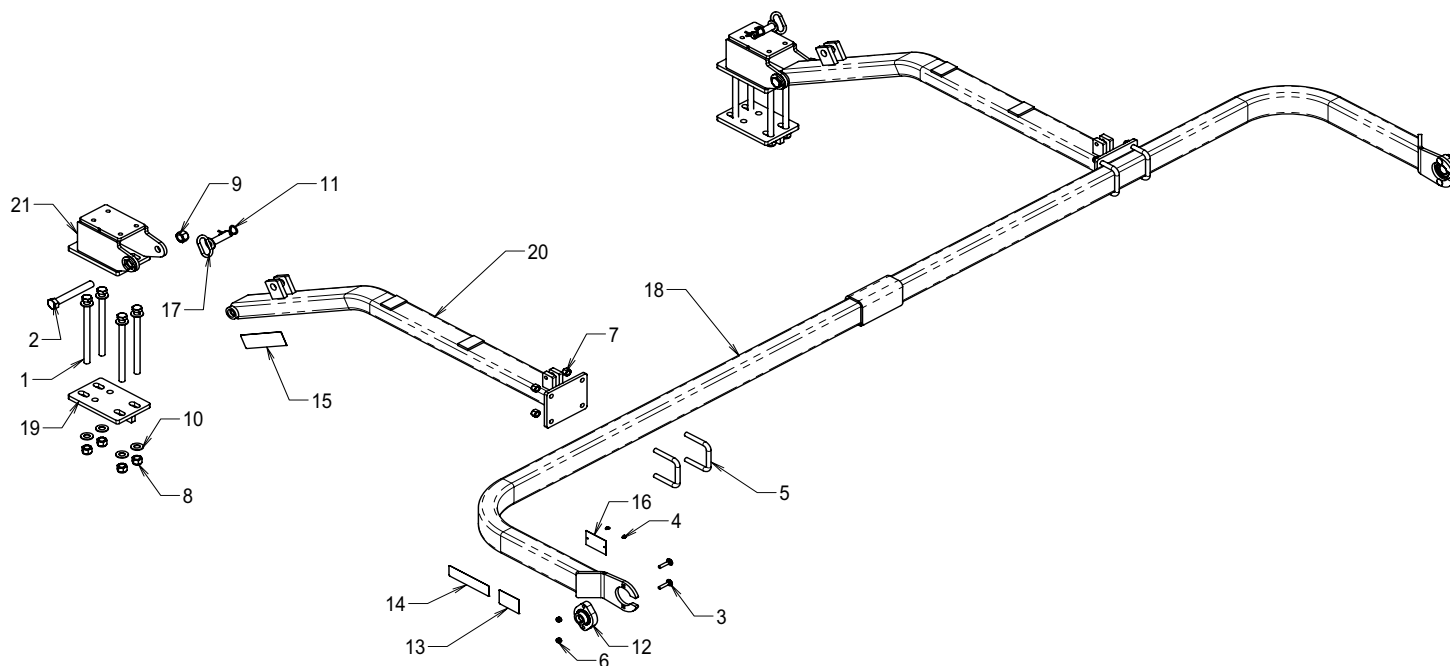


Figure 2.6 - Mounting Main Beam

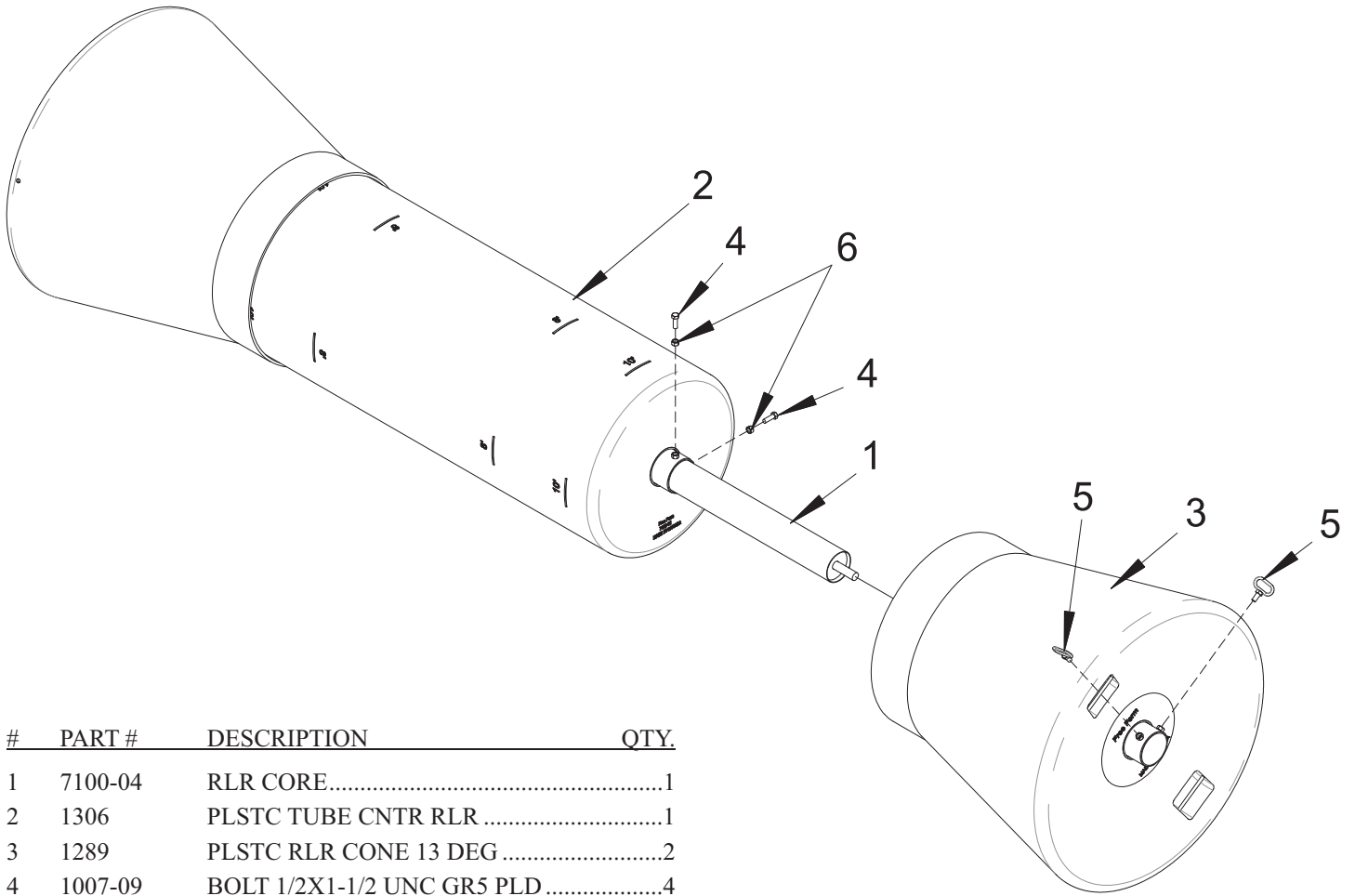
3 PARTS

3.1 SWATHROLLER COMMON ASSEMBLY



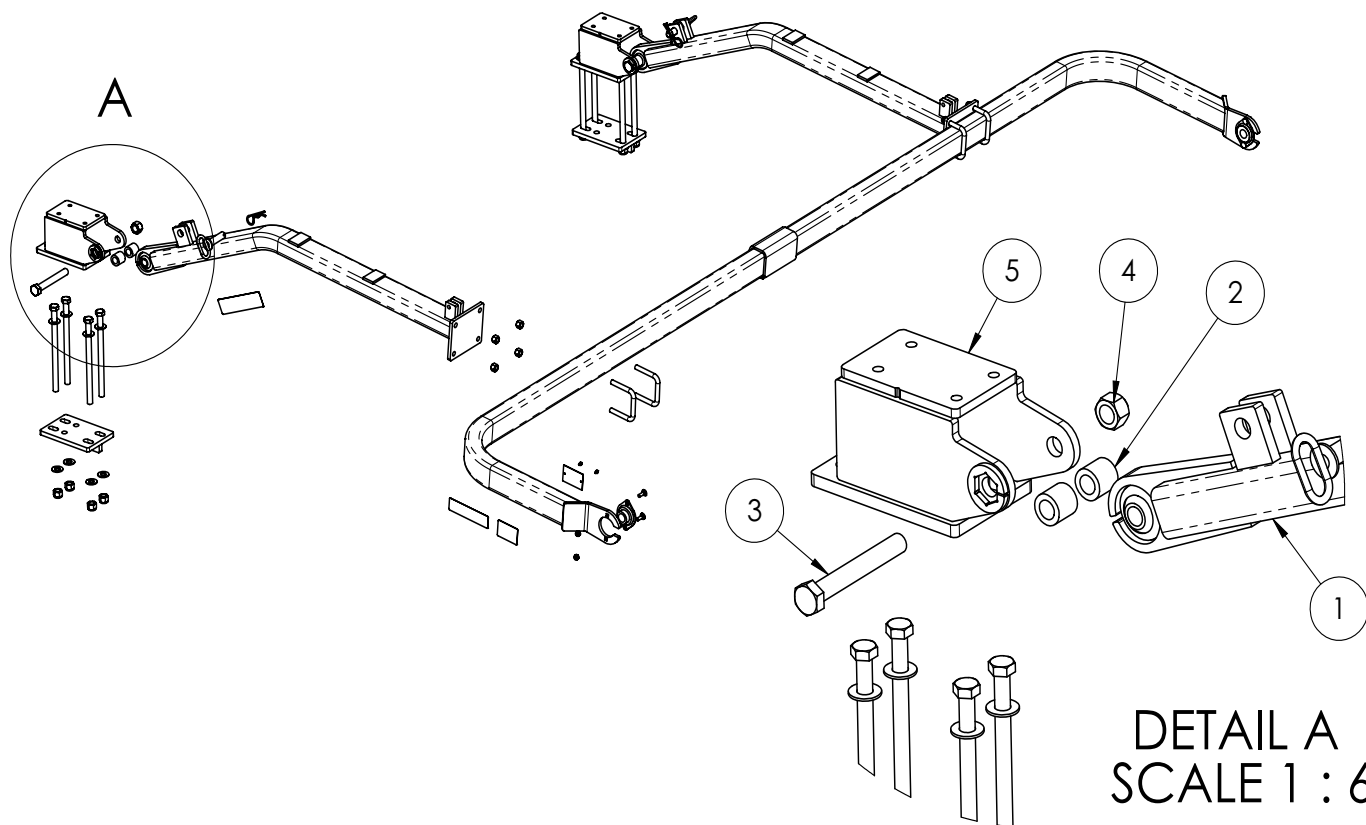
#	PART #	DESCRIPTION	QTY.
1	1010-75	BOLT 5/8X9 UNC GR5 PLD.....	8
2	1012-45	BOLT 3/4X5-1/2 UNC GR5 PLD	2
3	1102-16	BOLT CRG 5/16X1-1/2 UNC GR5 PLD.....	4
4	1112-20	SCR TYPE F TPG #6-32 X 1/4.....	2
5	1180-19	UBLT SQ 1/2X3-1/8X3-1/8 UNC G5.....	4
6	1201-05	LKNT NYL 5/16 UNC PLD	4
7	1204-05	NUT PTRQ PLD 1/2 UNC GR B ZDW	8
8	1206-07	NUR PTRQ TL 5/8 UNC GR8 ZDW	8
9	1207-07	NUT PTRQ TL 3/4 UNC GR B CDW	2
10	1325-33	WSHR 5/8 SAE PLD	16
11	1500-35	PIN HAIR #9.....	2
12	2120-04	BRG ASSY 1IN PILLOW W/ COLLAR.....	2
13	3900-33-01	DECAL AMBER REF 2X3.....	2
14	3904-21	DCL MT 2000	2
15	3904-26	DCL FREE FORM 1-3/4 X 7.....	2
16	3910-03	PL SN FREE FORM STAMPED.....	1
17	7100-43	PIN 3/4X2-1/2	2
18	7100-50	MAIN BEAM MT RLR	1
19	7100-58	TWR BACK PL.....	2
20	7101-08	ARM EXT MNT COM FF SW	2
21	7101-19	TWR ASSY, HIGH LIFT	2

3.2 SWATHROLLER DRUM ASSEMBLY



#	PART #	DESCRIPTION	QTY.
1	7100-04	RLR CORE.....	1
2	1306	PLSTC TUBE CNTR RLR.....	1
3	1289	PLSTC RLR CONE 13 DEG.....	2
4	1007-09	BOLT 1/2X1-1/2 UNC GR5 PLD.....	4
5	6280-85	WING BOLT 1/2X1 PLD.....	4
6	1204-15	NUT 1/2 UNC PLD.....	4

3.3 SWATHROLLER SPLIT AXLE ASSEMBLY



DETAIL A
SCALE 1 : 6

#	PART #	DESCRIPTION	QTY.
1	7101-41	ARM SPLIT AXLE WINDROWER.....	2
2	7101-41-05	SPLIT AXLE BUSHING	4
3	1012-45	BOLT 3/4X5-1/2 UNC GR5 PLD	2
4	1207-07	NUT PTRQ TL 3/4 UNC GR B CDW	2
5	7101-19	TWR ASSY, HIGH LIFT	2

SPLIT AXLE ASSEMBLY

Refer to *Figure 3.3* for this step. Locate the two split axle connector arms (#1).

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

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



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