

FREE FORM TB2000 SWATH ROLLER

A DIVISION OF BOURGAULT INDUSTRIES LTD.

ASSEMBLY INSTRUCTIONS & OPERATION

Effective L/N: 37039SR01 - 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. For this manual the drawings and instructions are given for the assembly.

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 Incorporated (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 authorised 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.

FREE FORM WARRANTY POLICY (CONT'D)

- 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 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 authorised 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 practise 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.

TABLE OF CONTENTS

- FREE FORM WARRANTY POLICY.....2
- 1 SAFETY5
 - 1.1 GENERAL SAFETY6
 - 1.2 OPERATING SAFETY6
 - 1.3 MAINTENANCE SAFETY6
 - 1.4 TRANSPORT SAFETY6
- 2 TB2000 ASSEMBLY7
 - 2.1 FRAME ASSEMBLY7
 - 2.2 WHEEL ASSEMBLY8
 - 2.3 ROLLER ASSEMBLY8
 - 2.4 ROLLER HEIGHT ADJUST9
 - 2.5 FINAL ASSEMBLY10
- 3 TB2000 - OPERATION.....11
 - 3.1 FIXED HEIGHT11
 - 3.2 FLOAT11
 - 3.3 WIDTH ADJUSTMENT11

PARTS BOOK

1 SAFETY

SAFETY ALERT SYMBOL

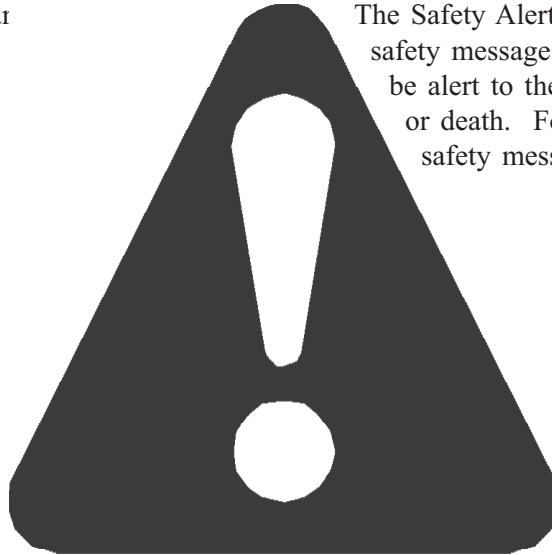
This Safety Alert symbol means

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?

3 Big Reasons

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 -

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

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 TB2000 ASSEMBLY

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.

using two ½" x 3-1/8" u-bolts (#15), and to the legs (#2 & #3) with ½"x2-1/8"x4¼" u-bolts (#16). Use ½" locknuts (#13) with the u-bolts.

2.1 FRAME ASSEMBLY

Refer to *Figure 2.1* for this step. This step will cover the assembly of the swath roller frame.

Locate the main beam (#1), the hitch extension (#11), the two legs (#2 & #3), and two braces (#14).

1. Secure the main beam (#1) to the hitch extension (#11) with four ½" x 1¾" bolts (#17) and ½" locknuts (#13).
2. Continue to assemble the frame upside down, as shown in the figure below. Secure each leg (#2 & #3) to the endplates of the main beam (#1) with four ½" x 1½" bolts (#12) and ½" locknuts (#13).

Important: When the legs are bolted onto the endplates, the arc-shaped adjustment plates should be towards the middle of the frame. Item #3 is the right leg, and #2 is the left leg.

3. Mount each brace (#14) to the main beam (#1)

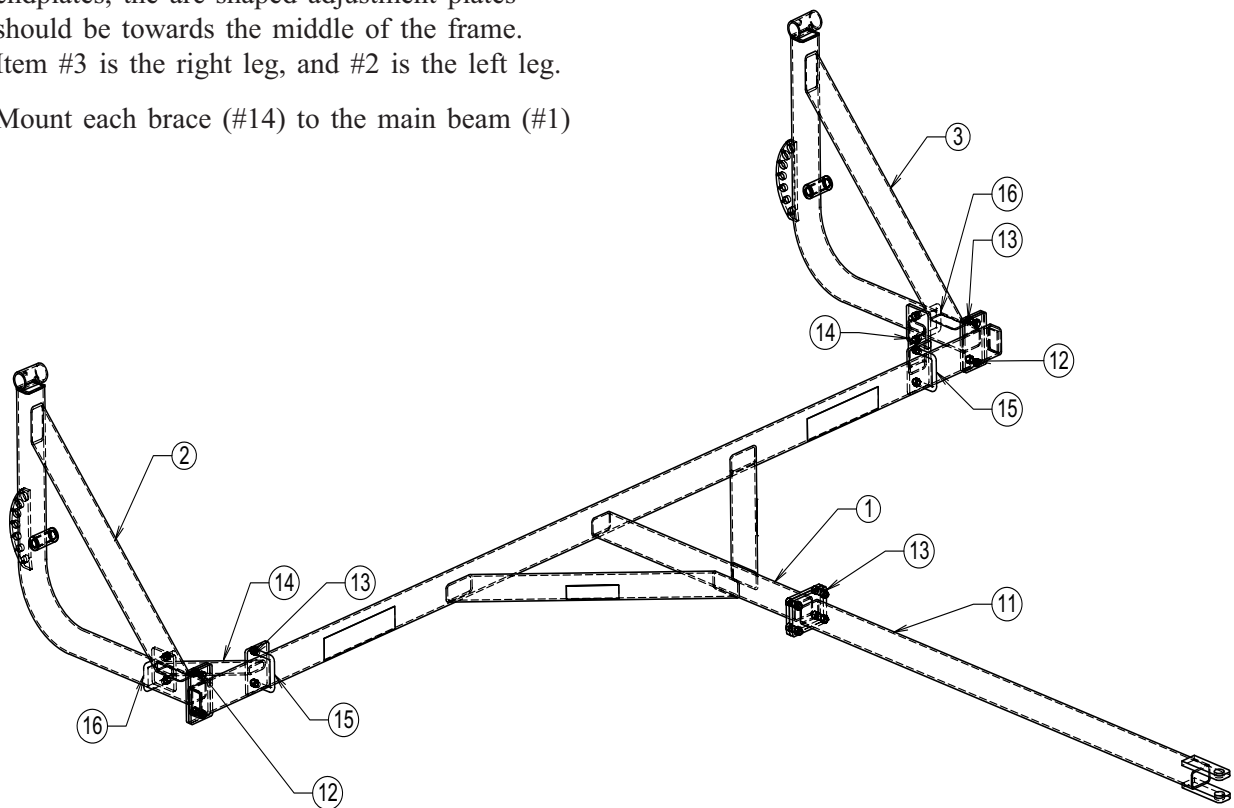


Figure 2.1 - Frame Assembly

2.2 WHEEL ASSEMBLY

Refer to *Figure 2.2*. This section will cover the mounting of the wheel assemblies. Locate the wheel assembly (#17), the spindle/hub assembly (#19), and 1/2"x3" bolts (#7).

1. Secure the hub/spindle assembly (#19) to each swath roller leg using 1/2"x3" bolts (#7) and 1/2" locknuts (#6).
2. Bolt the wheel assembly (#17) to the hub (#23) with four WB10 wheel bolts.

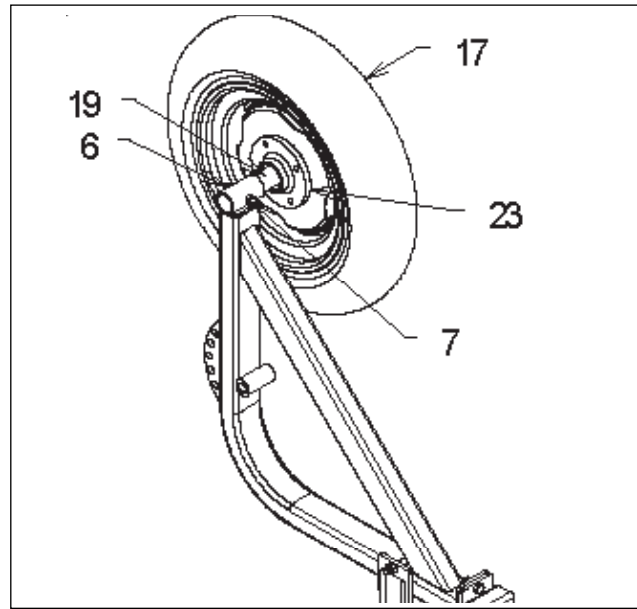


Figure 2.2 - Frame with Wheel FRAME&WHEEL.CAD

2.3 ROLLER ASSEMBLY

Refer to *Figures 2.3 & 2.4*. The roller is preassembled at the factory. Refer to *Figure 2.3* for roller components.

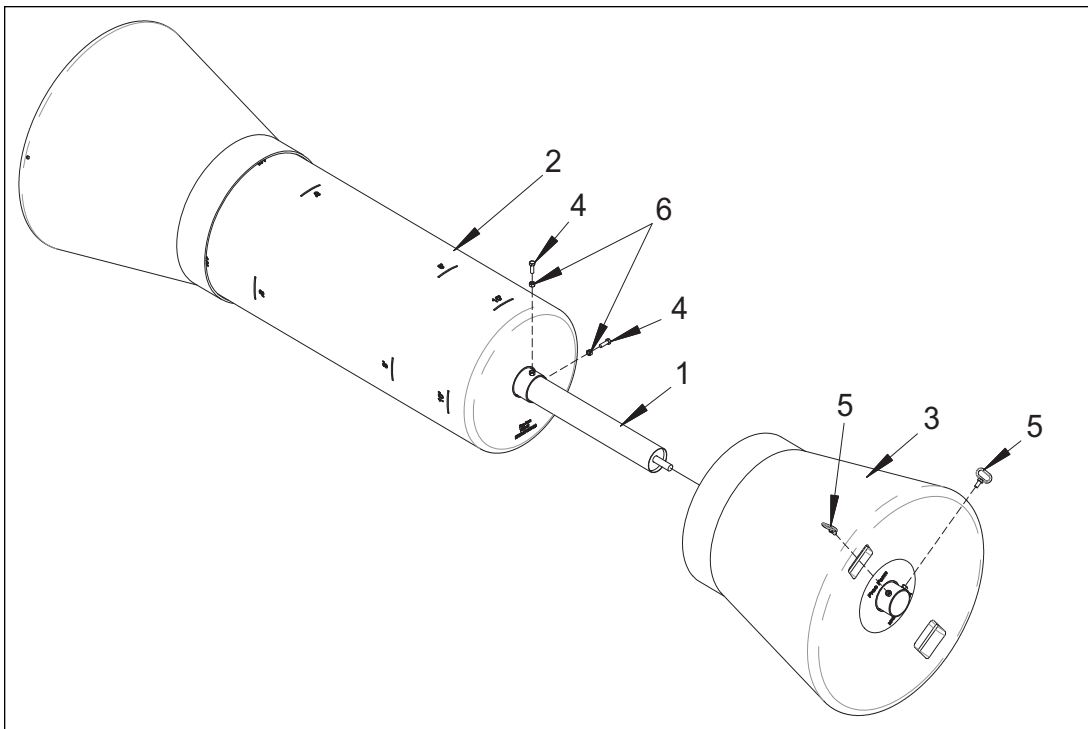


Figure 2.3 - Roller Assembly ROLLER_ASSY.CAD

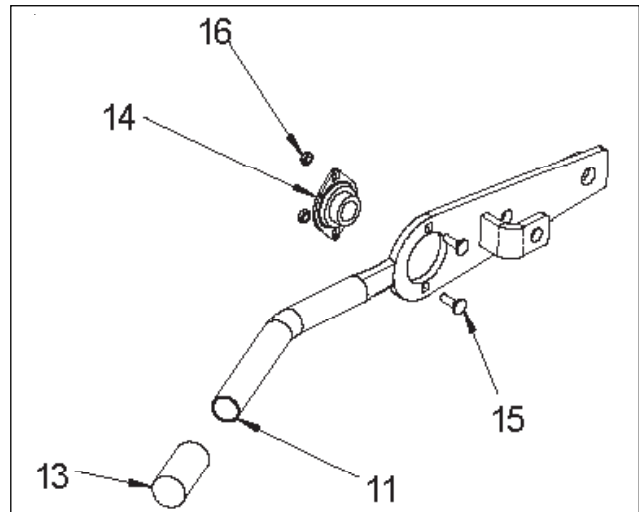
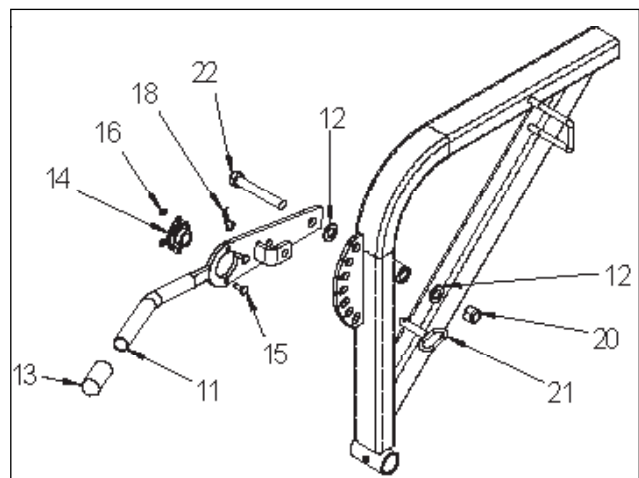


Figure 2.4 - Wing Bolts

2.4 ROLLER HEIGHT ADJUST

Refer to *Figures 2.5 & 2.6*. This section will cover the assembly of the roller height adjust. Locate the pivot adjust (#11), the rubber moulding (#13), pressed bearings (#14), pins (#21) and hair pins (#18).

1. Secure the pressed bearings (#14) to the pivot adjust (#11) with two 5/16"x1" carriage bolts (#15) and 5/16" nuts (#16).
2. Slide the rubber mouldings (#13) onto each pivot adjust (#11).
3. Slide the handle assembly onto the roller shaft. Do not tighten the locking collars yet. Check that handles bend to the outside of the swath roller.
4. Refer to *Figure 2.6*. Lift each end of the roller assembly so the end of the handle assembly can be secured to the bushing on the leg using a 3/4"x5" bolt (#22), two 3/4" SAE washers (#12) and a 3/4" locknut (#20). Repeat this on the second side. **DO NOT OVERTIGHTEN.**
5. Lift each handle and lock the height of the roller using the height adjustment pin (#21) and hair pin (#18).

Figure 2.5 - Handle Assembly HANDLE.CADFigure 2.6 - Handle Assembly, Right Leg HANDLE ASSY.CAD

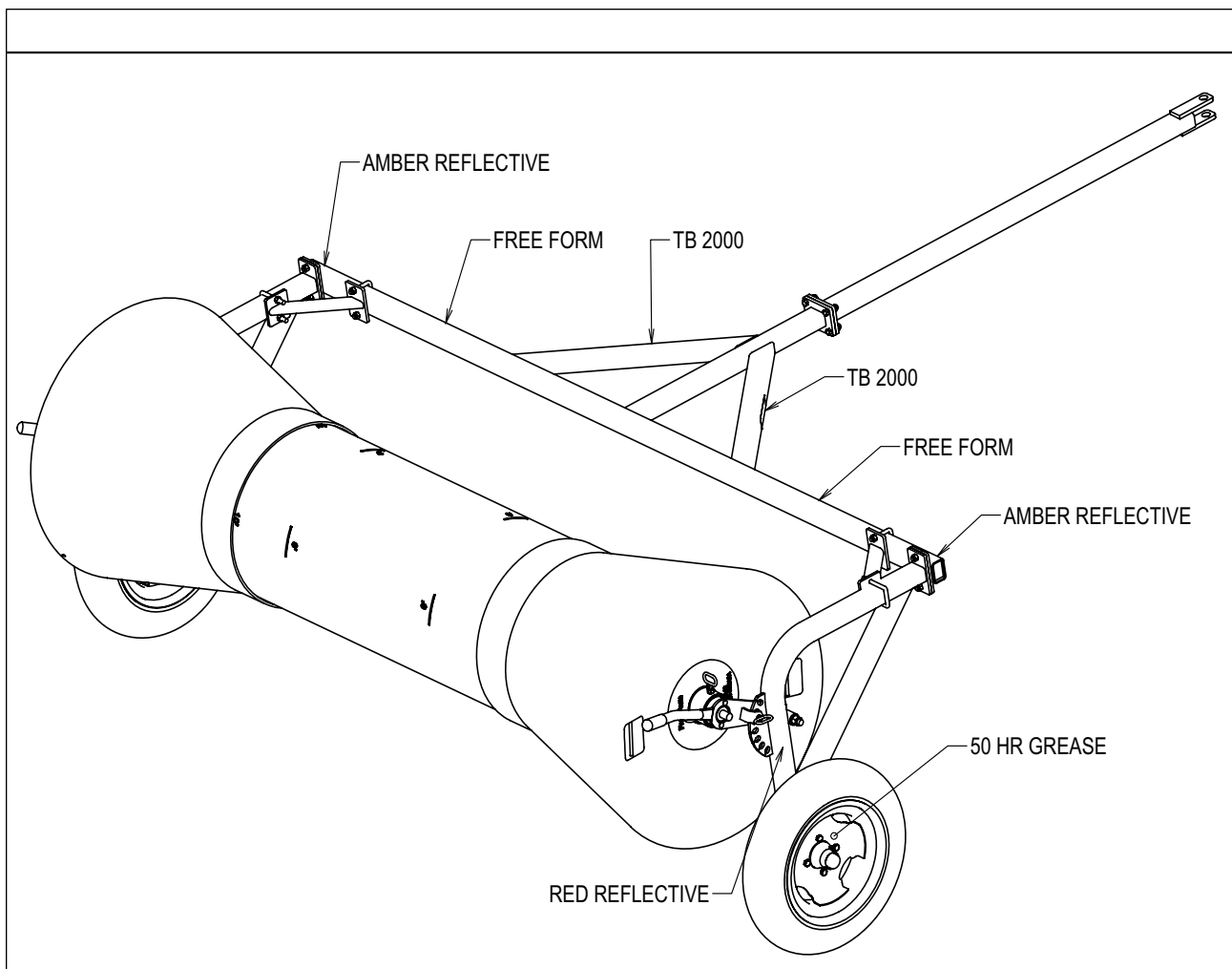


Figure 2.7 - Final Assembly

ASSMBLDSR.CAD

2.5 FINAL ASSEMBLY

Refer to *Figures 2.7 & 2.8*.

1. Adjust the position of the roller assembly so the roller core does not rub against the height adjust handles.
2. Lock the locking collars on the pressed bearings and turn down the set screws.
3. Apply decals supplied as shown in *Figure 2.7*.
4. Grease hubs on wheel assemblies.



Figure 2.8 - Pressed Bearing

3 TB2000 - OPERATION

3.1 FIXED HEIGHT

Adjust the height of the roller by lifting on the pivot adjust handle and securing the position with the height adjust pin. Lock pin in with hair pin.



Figure 3.1 - Height Position

3.2 FLOAT

The roller may be operated in the float position. Remove the height adjust pins and allow the roller to float over the swaths during operation.

3.3 WIDTH ADJUSTMENT

The operational width of the roller may be adjusted from 6' to 10'.

Loosen the two wing bolts on either cone and slide to the desired width.

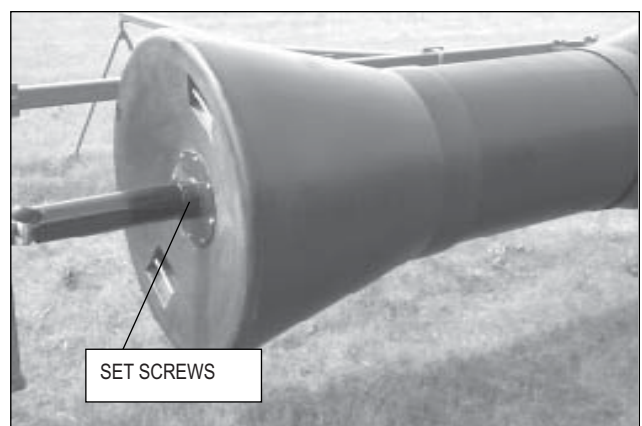


Figure 3.2 - Width Adjustment