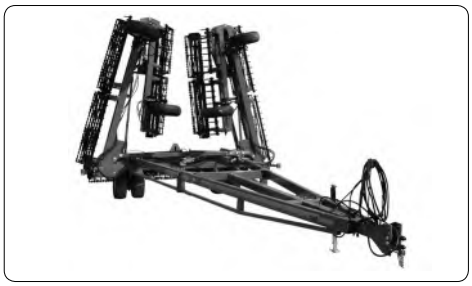


Seedbed Tillage

5-SECTION VERTICAL-FOLD ROLLING HARROW® 1245/1245D

Soil Conditioner
47-63 Ft. Models

Part No. 74927

Foreword

This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

Remember, safety instructions stated in this manual are for your protection. Read them carefully and follow them closely when working around or using this machine.

Read and study this manual completely before attempting to operate this implement. Take this manual to the field for handy reference when operating, adjusting, or servicing your machine.

When referenced, “Right-Hand” (RH) and “Left-Hand” (LH) side of the machine are determined by standing behind the machine and facing in the direction of travel.

Product Information

When ordering parts or when requesting further information or assistance, always give the following information:

- Machine name
- Serial number

All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number plate is located on the inside of the main frame near the hinge area (Fig. 1).

Purchase Date _____ Model _____Serial No._____

Dealer _____ City _____

Dealer Contact _____ Phone _____

FIG. 1 Base Shown

IMPORTANT

The information, specifications, and illustrations in the manual are on the basis of information available at the time it was written. Due to continuing improvements in the design and manufacture of Unverferth products, all specifications and information contained herein are subject to change without notice.

Table of Contents

SECTION I
Safety

Table of Contents

SECTION II
Set Up

Table of Contents

SECTION III
Operation

Table of Contents

SECTION IV
Maintenance

SECTION V
Parts

Notes

SECTION I
Safety

General Hazard Information

No accident-prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

A large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the field, or in the industrial plant, can be safer than the person who is at the controls. If accidents are to be prevented--and they can be prevented--it will be done by the operators who accept the full measure of their responsibility.

It is true that the designer, the manufacturer, and the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that, “the best kind of a safety device is a careful operator.” We, at Unverferth Mfg. Co., Inc. ask that you be that kind of operator.

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

DANGER

INDICATES AN EXTREMELY HAZARDOUS SITUATION OR ACTION THAT WILL RESULT IN SERIOUS INJURY OR DEATH.

WARNING

INDICATES A HAZARDOUS SITUATION OR ACTION THAT COULD RESULT IN SERIOUS INJURY OR DEATH.

CAUTION

INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

IMPORTANT

Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

PART NO. 901891

PART NO. 97575

PART NO. 95136

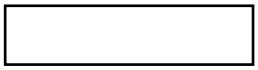
PART NO. 97961

PART NO. 95445

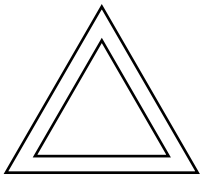
PART NO. 95605

PART NO. 94094

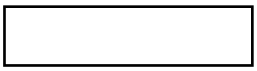
PART NO. 98229



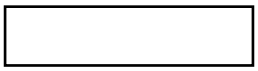
PART NO. 9003127
Amber Reflector



PART NO. 9829
SMV Emblem



PART NO. 9003125
Fluorescent Reflector

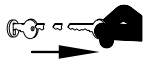


PART NO. 9003126
Red Reflector

Following Safety Instructions

- Read and understand this operator's manual before operating.

- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut tractor engine off and remove key before servicing.



- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.
- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating machine or towing vehicle.

- Never attempt to operate implement unless you are in driver's seat.

Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.

- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- Do not stand between towing vehicle and implement during hitching.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.

During Operation

- Regulate speed to field conditions. Maintain complete control at all times.
- Never service or lubricate equipment when in operation.
- Keep away from overhead power lines. Electrical shock can cause serious injury or death.

- Use extreme care when operating close to ditches, fences, or on hillsides.
- Do not leave towing vehicle unattended with engine running.

Before Transporting

- Secure transport chains to towing vehicle before transporting. DO NOT transport without chains.
- Install transport locks before transporting.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure that the SMV emblem and SIS decal are visible to approaching traffic.
- This implement may not be equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Maximum transport speed of this implement should never exceed 20 mph as indicated on the machine. Maximum transport speed of any combination of implements must not exceed the lowest specified speed of the implements in combination. Do not exceed 10 mph during off-highway travel.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- It is probable that this implement is taller, wider and longer than the towing vehicle. Become aware of and avoid all obstacles and hazards in the travel path of the equipment, such as power lines, ditches, etc.

Pressurized Oil

- Relieve the hydraulic system of all pressure before adjusting or servicing. See hydraulic power unit manual for procedure to relieve pressure.

- High-pressure fluids can penetrate the skin and cause serious injury or death. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.

- Hydraulic system must be purged of air before operating to prevent serious injury or death.

- Do not bend or strike high-pressure lines. Do not install bent or damaged tubes or hoses.

- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.

- Route hoses and lines carefully to prevent premature failure due to kinking and rubbing against other parts. Make sure that all clamps, guards and shields are installed correctly.

- Check hydraulic hoses and tubes carefully. Replace components as necessary if any of the following conditions are found:
  - End fittings damaged, displaced, or leaking.
  - Outer covering chafed/cut or wire reinforcing exposed.
  - Outer covering ballooning locally.
  - Evidence of kinking or crushing of the flexible part of a hose.

Preparing for Emergencies

- Keep a first aid kit and properly rated fire extinguisher nearby.

- Keep emergency numbers for fire, rescue, and poison control personnel near the phone.

Wearing Protective Equipment

- Wear clothing and personal protective equipment appropriate for the job.

- Wear steel-toed shoes when operating.

- Wear hearing protection when exposed to loud noises.

- Do not wear additional hearing impairing devices such as radio headphones, etc

Notes

SECTION II
Set Up

General Set Up Information

This section contains all of the instructions required for the complete assembly of the entire Rolling Harrow soil conditioner.

For your safety, and the safety of others, use proper tools and equipment and always use safe working procedures. Refer to these instructions before starting any work on your machine.

IMPORTANT

- *The procedures for assembling this unit were intended for two or more people.*

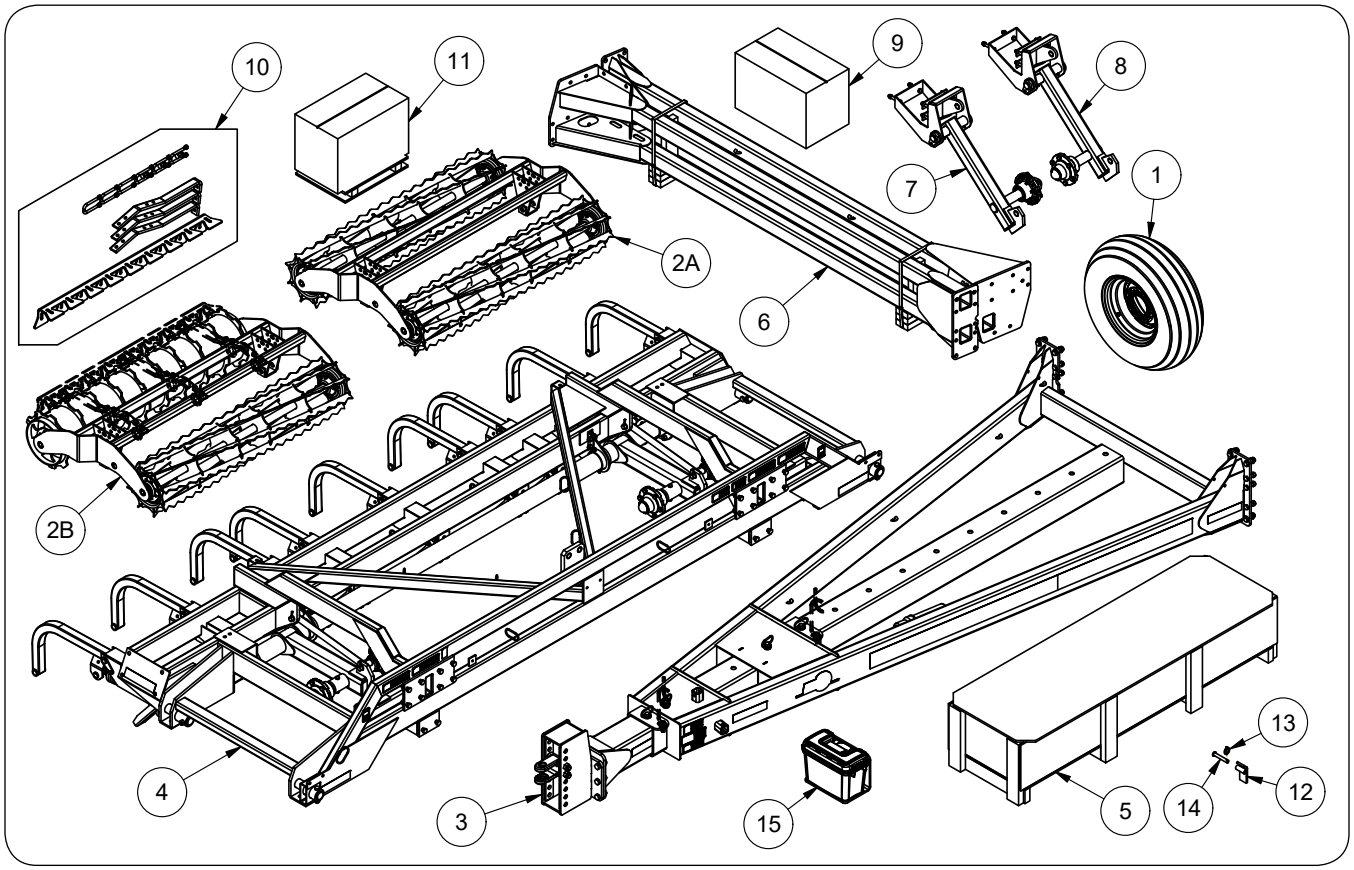
For ease of assembly, install all hardware loosely until assembly is complete and then tighten according to "Torque Chart" unless otherwise specified.

⚠ WARNING

- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**
- **MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 3,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

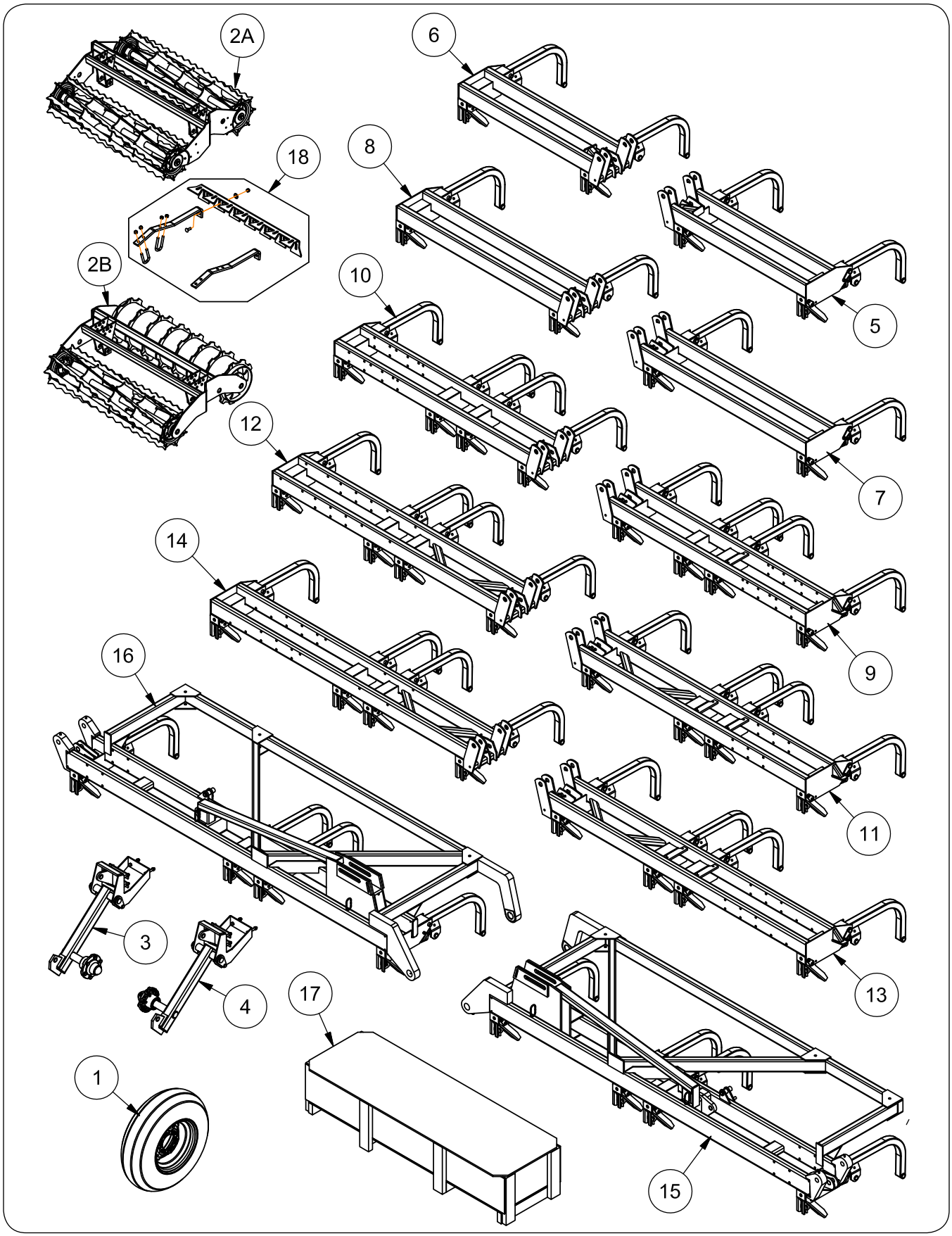
Depending on the model you ordered, you should have received the following bundles:

Rolling Harrow - 15' Base Shipping Bundles



ITEM	PART NUMBER	DESCRIPTION	QTY
1	17679SM	Mounted Tire & Wheel W815-6-08 TL11LB15 12Ply	6
2A	74828B	Basket & Frame 5' Assembly	3
2B	76008B	Basket/Drum & Frame 5' Assembly	
3	78572G	Hitch A-Frame 15' Assembly (Green)	1
	78572R	Hitch A-Frame 15' Assembly (Red)	
4	89861G	Main Frame Assembly (Green)	1
	89861R	Main Frame Assembly (Red)	
5	73972B	Base Parts Box for 1245	1
	76561B	Base Parts Box for 1245D	
6	78579G	Hitch Support Bundle (Green)	1
	78579R	Hitch Support Bundle (Red)	
7	73733B	Transport Gauge Wheel LH Assembly	1
8	73734B	Transport Gauge Wheel RH Assembly	1
9	88278B	Lights/Transport Marking Package	1
10	76541B	Scraper 5' Assembly (FOR 1245D)	3
11	76559B	Basket Rocker Kit (FOR 1245D)	1
12	77042B	Pin-Up Bushing (FOR 1245D)	6
13	9093	Klik Pin (FOR 1245D)	6
14	91523	Clevis Pin (FOR 1245D)	6
15	77401B	Storage Box & Mounting Bracket (FOR 1245D)	1

Rolling Harrow - 15’ Base 16’-20’ Wing Shipping Bundles

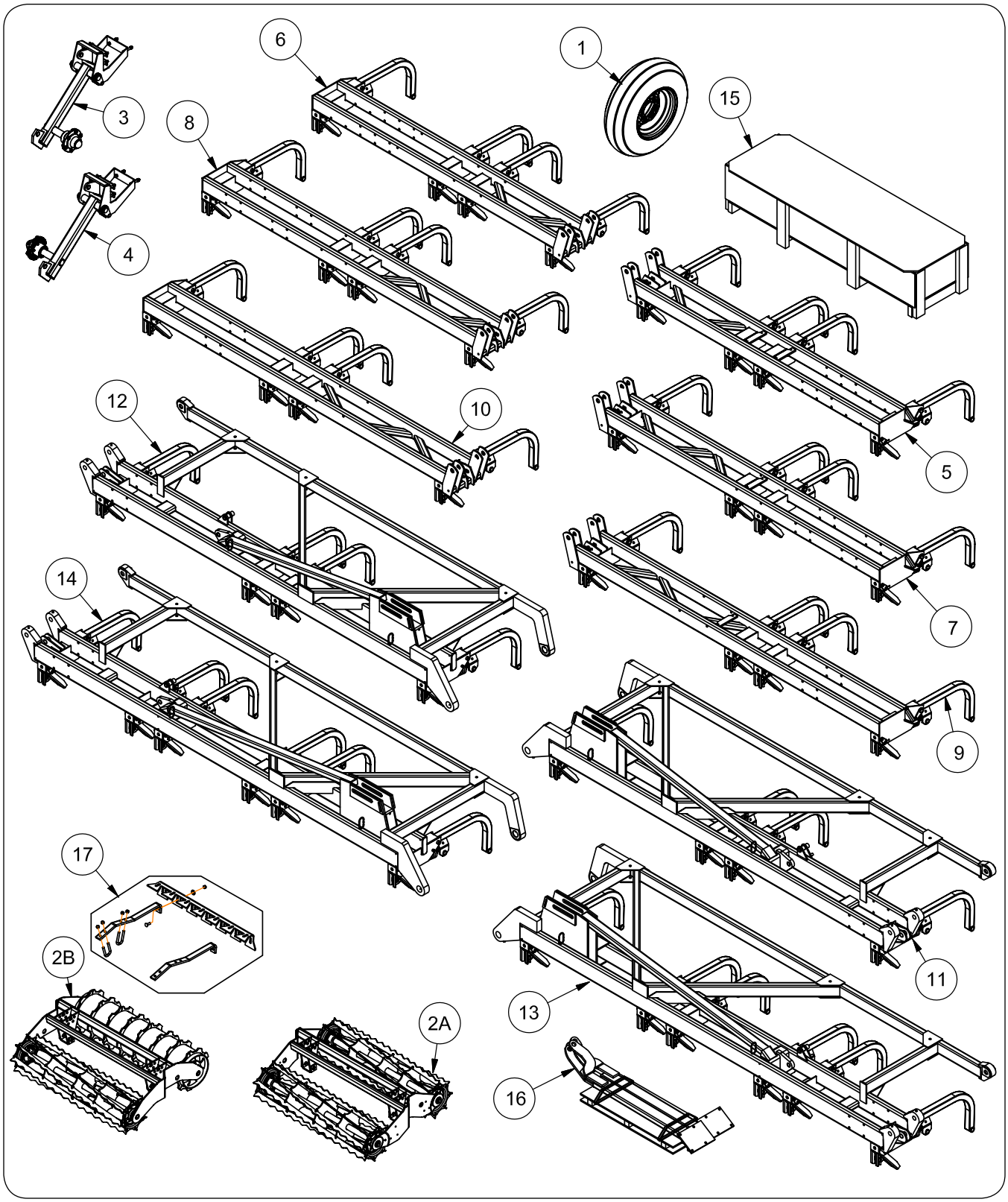


Rolling Harrow - 15' Base 16'-20' Wing Shipping Bundles

ITEM	PART NUMBER	DESCRIPTION	WING SIZE - QTY.				
			16'	17'	18'	19'	20'
1	60911SM	Mounted Tire & Wheel W815-6-08	-	-	2	2	2
2A	74602B	Basket & Frame 3' (Double) Assembly	-	-	2	-	-
	74603B	Basket & Frame 4' (Double) Assembly	-	-	2	4	2
	74581B	Basket & Frame 5' (Double) Assembly	4	2	2	2	4
	74604B	Basket & Frame 6' (Double) Assembly	2	4	2	2	2
2B	76030B	Roller Basket & Frame 3' (Double) Assembly	-	-	2	-	-
	76031B	Roller Basket & Frame 4' (Double) Assembly	-	-	2	4	2
	76008B	Roller Basket & Frame 5' (Double) Assembly	4	2	2	2	4
	76032B	Roller Basket & Frame 6' (Double) Assembly	2	4	2	2	2
3	73733B	Gauge Wheel LH Asy	-	-	1	1	1
4	73734B	Gauge Wheel RH Asy	-	-	1	1	1
5	75766G	Wing 5' LH Asy =Green=	1	-	-	-	-
	75766R	Wing 5' LH Asy =Red=					
6	75767G	Wing 5' RH Asy =Green=	1	-	-	-	-
	75767R	Wing 5' RH Asy =Red=					
7	75768G	Wing 6' LH Asy =Green=	-	1	-	-	-
	75768R	Wing 6' LH Asy =Red=					
8	75769G	Wing 6' RH Asy =Green=	-	1	-	-	-
	75769R	Wing 6' RH Asy =Red=					
9	75770G	Wing 7' LH Asy =Green=	-	-	1	-	-
	75770R	Wing 7' LH Asy =Red=					
10	75771G	Wing 7' RH Asy =Green=	-	-	1	-	-
	75771R	Wing 7' RH Asy =Red=					
11	75772G	Wing 8' LH Asy =Green=	-	-	-	1	-
	75772R	Wing 8' LH Asy =Red=					
12	75773G	Wing 8' RH Asy =Green=	-	-	-	1	-
	75773R	Wing 8' RH Asy =Red=					
13	75774G	Wing 9' LH Asy =Green=	-	-	-	-	1
	75774R	Wing 9' LH Asy =Red=					
14	75775G	Wing 9' RH Asy =Green=	-	-	-	-	1
	75775R	Wing 9' RH Asy =Red=					
15	73577G	Inner Wing 11' LH Asy =Green=	1	1	1	1	1
	73577R	Inner Wing 11' LH Asy =Red=					
16	73579G	Inner Wing 11' RH Asy =Green=	1	1	1	1	1
	73579R	Inner Wing 11' RH Asy =Red=					
17	73969B	Parts Box 47'-49' Wings	1	1	-	-	-
	73970B	Parts Box 51'-55' Wings	-	-	1	1	1
18	76539B	Drum Scraper Kit 3'	-	-	2	-	-
	76540B	Drum Scraper Kit 4'	-	-	2	4	2
	76541B	Drum Scraper Kit 5'	4	2	2	2	4
	76542B	Drum Scraper Kit 6'	2	4	2	2	2
	77042B	Basket Pin Up Bushing Weldment					
	91523	Clevis Pin 5/8" Dia. x 4"					
	9093	Klik Pin 3/16" Dia. x 1 9/16"					

NOTE: Refer to PARTS section for complete parts breakdown.

Rolling Harrow - 15’ Base 21’-24’ Wing Shipping Bundles



Rolling Harrow - 15' Base 21'-24' Wing Shipping Bundles

ITEM	PART NUMBER	DESCRIPTION	WING SIZE - QTY.			
			21'	22'	23'	24'
1	60911SM	Mounted Tire & Wheel W815-6-08	2	2	2	2
2A	74603B	Basket & Frame 4' (Double) Assembly	2	-	4	4
	74581B	Basket & Frame 5' (Double) Assembly	2	4	6	4
	74604B	Basket & Frame 6' (Double) Assembly	4	4	-	2
2B	76031B	Roller Basket & Frame 4' (Double) Assembly	2	-	4	4
	76008B	Roller Basket & Frame 5' (Double) Assembly	2	4	6	4
	76032B	Roller Basket & Frame 6' (Double) Assembly	4	4	-	2
3	73733B	Gauge Wheel LH Asy	1	1	1	1
4	73734B	Gauge Wheel RH Asy	1	1	1	1
5	75774G	Wing 9' LH Asy =Green=	1	-	-	-
	75774R	Wing 9' LH Asy =Red=				
6	75775G	Wing 9' RH Asy =Green=	1	-	-	-
	75775R	Wing 9' RH Asy =Red=				
7	75776G	Wing 10' LH Asy =Green=	-	1	1	-
	75776R	Wing 10' LH Asy =Red=				
8	75777G	Wing 10' RH Asy =Green=	-	1	1	-
	75777R	Wing 10' RH Asy =Red=				
9	75778G	Wing 11' LH Asy =Green=	-	-	-	1
	75778R	Wing 11' LH Asy =Red=				
10	75779G	Wing 11' RH Asy =Green=	-	-	-	1
	75779R	Wing 11' RH Asy =Red=				
11	73581G	Wing 12' LH Asy =Green=	1	1	-	-
	73581R	Wing 12' LH Asy =Red=				
12	73583G	Wing 12' RH Asy =Green=	1	1	-	-
	73583R	Wing 12' RH Asy =Red=				
13	73585G	Wing 13' LH Asy =Green=	-	-	1	1
	73585R	Wing 13' LH Asy =Red=				
14	73587G	Wing 13' RH Asy =Green=	-	-	1	1
	73587R	Wing 13' RH Asy =Red=				
15	73971B	Parts Box 57'-63' Wings (For 1245 Models ONLY)	1	1	1	1
	77070B	Parts Box 57'-63' Wings (For 1245D Models ONLY)				
16	88635G	Brace Bundle =Green=	1	1	1	1
	88635R	Brace Bundle =Red=				
17	76540B	Drum Scraper Kit 4'	2	-	4	4
	76541B	Drum Scraper Kit 5'	2	4	6	4
	76542B	Drum Scraper Kit 6'	4	4	-	2
18	77042B	Basket Pin Up Bushing Weldment				
19	91523	Clevis Pin 5/8" Dia. x 4"				
20	9093	Klik Pin 3/16" Dia. x 1 9/16"				

NOTE: Refer to PARTS section for complete parts breakdown.

Optional Shipping Bundles & Accessories

PART NO.	DESCRIPTION	NOTES
88280B	Straight Spiked-Tooth Leveler Bar	For Base & 16' Wing Set
88283B	Straight Spiked-Tooth Leveler Bar	For Base & 17' Wing Set
88286B	Straight Spiked-Tooth Leveler Bar	For Base & 18' Wing Set
88289B	Straight Spiked-Tooth Leveler Bar	For Base & 19' Wing Set
88292B	Straight Spiked-Tooth Leveler Bar	For Base & 20' Wing Set
88295B	Straight Spiked-Tooth Leveler Bar	For Base & 21' Wing Set
88298B	Straight Spiked-Tooth Leveler Bar	For Base & 22' Wing Set
88301B	Straight Spiked-Tooth Leveler Bar	For Base & 23' Wing Set
88304B	Straight Spiked-Tooth Leveler Bar	For Base & 24' Wing Set
76861B	Diagonal Round-Tooth Leveler Bar	For Base & 16' Wing Set
76862B	Diagonal Round-Tooth Leveler Bar	For Base & 17' Wing Set
76863B	Diagonal Round-Tooth Leveler Bar	For Base & 18' Wing Set
76864B	Diagonal Round-Tooth Leveler Bar	For Base & 19' Wing Set
76865B	Diagonal Round-Tooth Leveler Bar	For Base & 20' Wing Set
76866B	Diagonal Round-Tooth Leveler Bar	For Base & 21' Wing Set
76867B	Diagonal Round-Tooth Leveler Bar	For Base & 22' Wing Set
76868B	Diagonal Round-Tooth Leveler Bar	For Base & 23' Wing Set
76869B	Diagonal Round-Tooth Leveler Bar	For Base & 24' Wing Set
88282B	Coil-Tine Leveler Bar	For Base & 16' Wing Set
88285B	Coil-Tine Leveler Bar	For Base & 17' Wing Set
88288B	Coil-Tine Leveler Bar	For Base & 18' Wing Set
88291B	Coil-Tine Leveler Bar	For Base & 19' Wing Set
88294B	Coil-Tine Leveler Bar	For Base & 20' Wing Set
88297B	Coil-Tine Leveler Bar	For Base & 21' Wing Set
88300B	Coil-Tine Leveler Bar	For Base & 22' Wing Set
88303B	Coil-Tine Leveler Bar	For Base & 23' Wing Set
88306B	Coil-Tine Leveler Bar	For Base & 24' Wing Set
74964	Disc Plate/Reinforcing Disc (Weld-In)	
73903B	Wear Guard Kit	
73968BFS	Caster Wheel Option	For 47-49'
73792BFS	Caster Wheel Option	For 51-63'
91240	Check Valve	
73541GFS/73541RFS	Offset Tongue	
73544GFS/73544RFS	Retractable Tongue	
73542GFS/73542RFS	Offset/Retractable Tongue	
73393	Electric Control for Offset Tongue	
73395	Electric Control for Retractable Tongue	

Main Frame/Tire & Wheel

1. Using hoist or lifting devices rated at 2,500 lbs. minimum, lift main frame assembly onto stands rated at 1,250 lbs. each, approximately 30-36" tall, and will span the width of the frame as shown in FIG. 2-1.

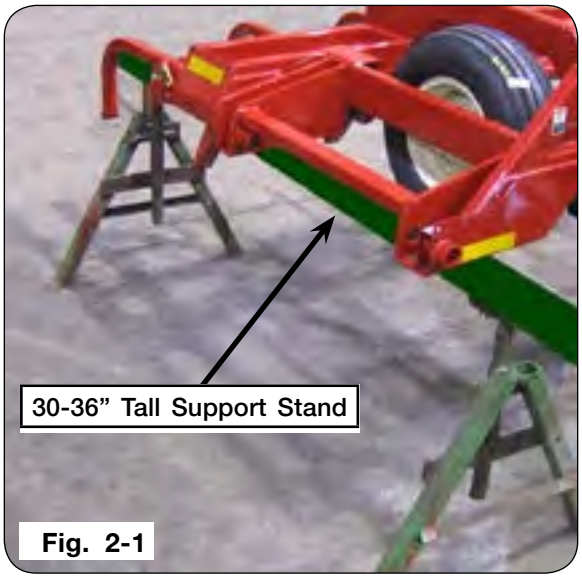


Fig. 2-1

2. Raise the axle weldment/rockshaft until shipping straps, spacers, and pins can be removed from the main frame assembly and axle weldment/rockshaft (FIG. 2-2).

   NOTE: Remove and discard all shipping stands from main frame (on frame tube above each axle leg).

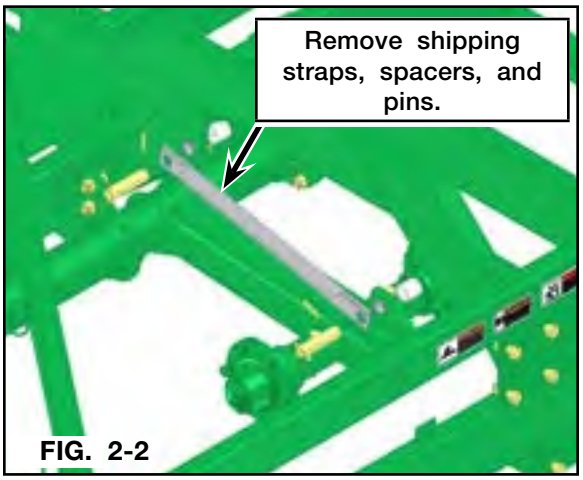


FIG. 2-2

3. Open the base parts box/crate (73972B - 1245 or 76561B - 1245D) and locate the two 3 1/2" x 8" hydraulic cylinders (902646) and parts bag (88590), which includes the four 1" Dia. x 4" pins (85631) and eight 1/4" Dia. x 1 7/8" spiral pins (91144-165). Check that retracted cylinder length is 20 1/4" (FIG. 2-3). Adjust both cylinders to this dimension as necessary.

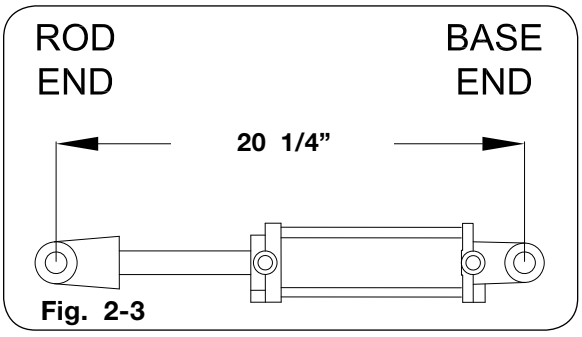


Fig. 2-3

Main Frame/Tire & Wheel (continued)

4. Install the outside mounted tire and wheel assemblies (17679 or 17679SM) to the main frame assembly as shown in FIG. 2-4. Torque wheel bolts according to "Wheel Torque Chart" in MAINTENANCE Section.

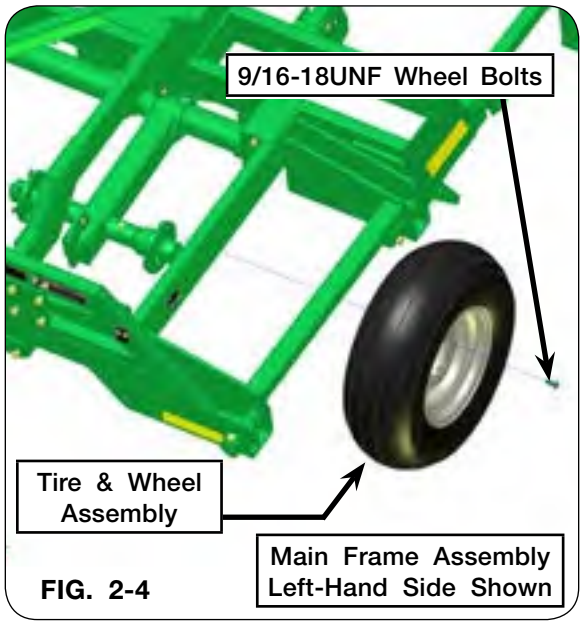


FIG. 2-4

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE "MAINTENANCE" SECTION FOR PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

5. Install 3 1/2" x 8" lift cylinders (902646) onto main frame assembly with the ports facing out. Secure base end of cylinders to the main frame assembly using the 1" dia. x 4" pins (85631) and 1/4" dia. x 1 7/8" spiral pins (91144-165). Before installing the rod end cylinder pin, see "Purging a Hydraulic System" in this section.

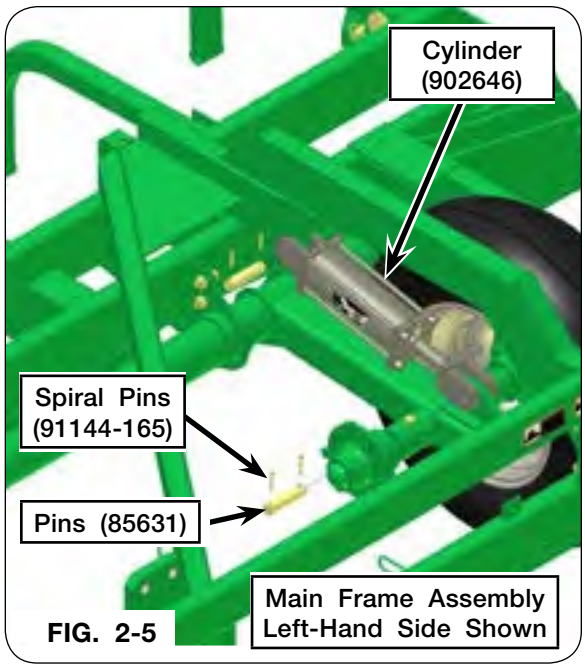


FIG. 2-5

Main Frame/Tire & Wheel (continued)

6. Install the inside mounted tire and wheel assemblies (17679 or 17679SM) to the main frame assembly as shown in FIG. 2-6. Torque wheel bolts according to “Wheel Torque Chart” in MAINTENANCE Section.

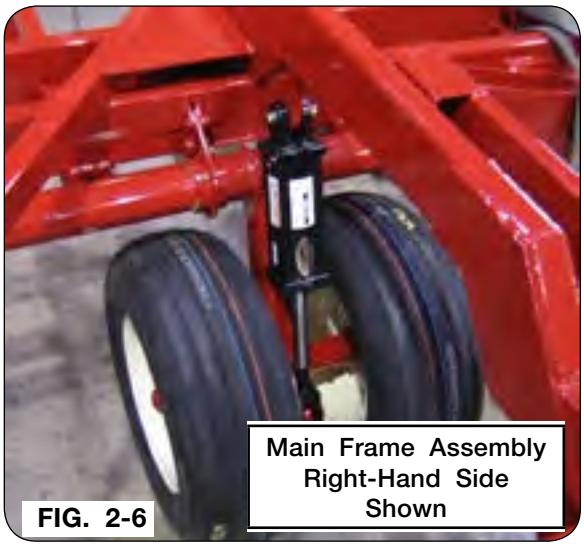


FIG. 2-6 Main Frame Assembly Right-Hand Side Shown

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE "MAINTENANCE" SECTION FOR PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

7. With the hoist or lifting devices rated at 2,500 lbs. minimum still attached to the main frame assembly, remove the 30-36” tall stands from under the frame and lower the frame to rest on the bent arms and additional stands rated at 1,500 lbs. minimum to support the front of the main frame (FIG. 2-7).

FIG. 2-7

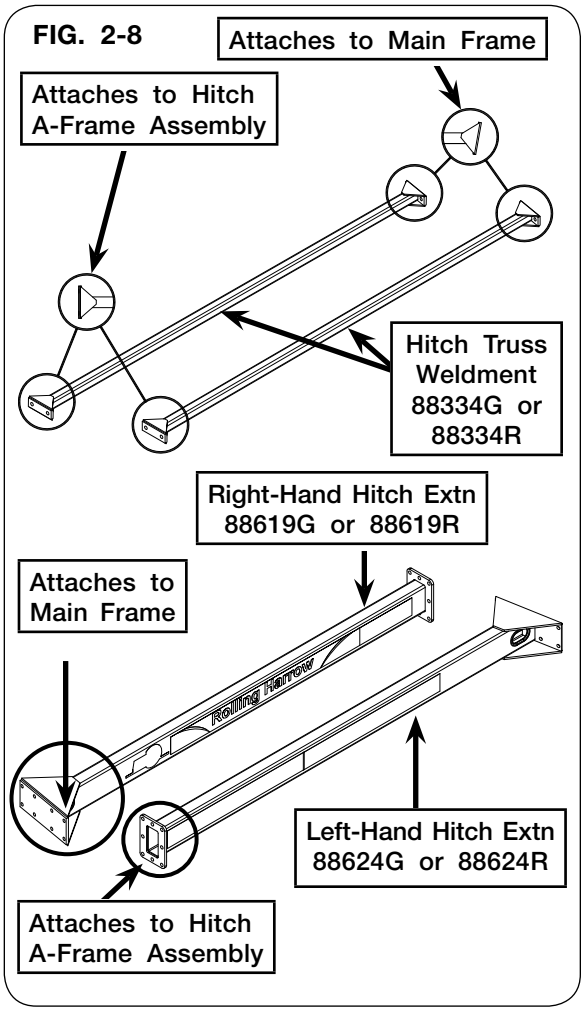
Hitch

If necessary, install optional leveler bar kits now. See optional leveler bar assembly in this section.

If no leveler bars will be installed on this machine, the mounting arms should be placed in the lock-up position to prevent dragging or accumulating of debris. See Adjustments Section for procedure to lock up the arms.

1. Remove the shipping straps from the hitch support bundle (88480G or 88480R). Separate the parts and note how they are to be assembled as shown in (FIG. 2-8).

FIG. 2-8



Hitch (continued)

2. Remove and save the hardware from the rear of the hitch A-frame assembly and main frame assembly hitch mounting area.

3. Using a hoist or lifting device rated at 150 lbs. minimum, lift and loosely attach the left-hand hitch extension (88624G or 88624R) to the main frame using the hardware previously removed (FIG. 2-9).

FIG. 2-9

4. Using a hoist or lifting device rated at 150 lbs. minimum, lift and loosely attach the right-hand hitch extension (88619G or 88619R) to the main frame using the hardware previously removed.

5. Loosely attach the angled end of the hitch truss weldments (88334G or 88334R) to the left-hand and right-hand side of the main frame using the hardware previously removed (FIG. 2-10).

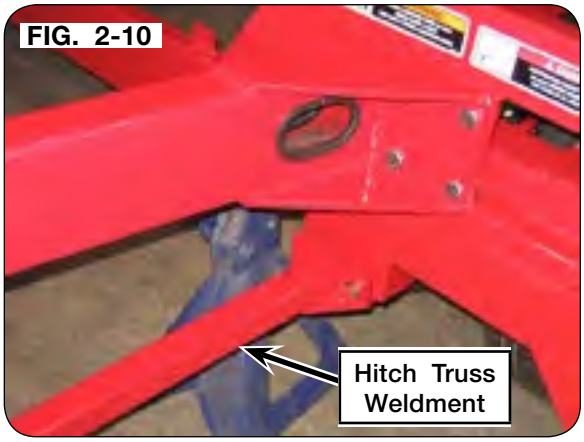


FIG. 2-10

6. Using hoist or lifting devices rated at 1,000 lbs. minimum, lift the hitch A-frame assembly and attach it to the hitch extensions and hitch truss weldments using the hardware previously removed (FIG. 2-11).

7. Torque all hitch hardware as specified in "Torque Chart" located in the MAINTENANCE section.


FIG. 2-11

Jack

1. Locate in the base parts box/crate (73972B - 1245 or 76561B - 1245D) the jack (901061) and parts bag (88590), which includes the bent pin with hairpin (84979) needed to secure the jack into position.

2. With the hoist or lifting devices still attached to the hitch A-frame assembly, attach the jack (901061), with the bent pin with hairpin (84979) as shown in FIG. 2-12.

3. Extend jack until it supports the weight of the hitch. Remove the hoist or lifting device from hitch A-frame.

Jack shown in "Parked" Position

FIG. 2-12

Transport Chain

⚠ CAUTION

- **ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE CHAINS COULD CAUSE PERSONAL INJURY OR DAMAGE IF IMPLEMENTS BECOME DISENGAGED.**

1. Locate in the base parts box/crate (73972B - 1245 or 76561B - 1245D) the transport chain (97436) and the parts bag (88591), which includes the washer (106941), 7/8-9UNC locknut (91141) and 7/8”-9UNC x 3 1/2” capscrew (9390-170) needed to secure the transport chain into position.

2. Attach the transport chain (97436) with a rating of 16,100 lbs. to the front, left-hand side of the tongue/hitch using large washer (106941), 7/8”-9UNC x 3 1/2” capscrew (9390-170), and 7/8”-9UNC locknut (91141) as shown in FIG. 2-13 and the fold linkage is shown in FIG. 2-14.

FIG. 2-13

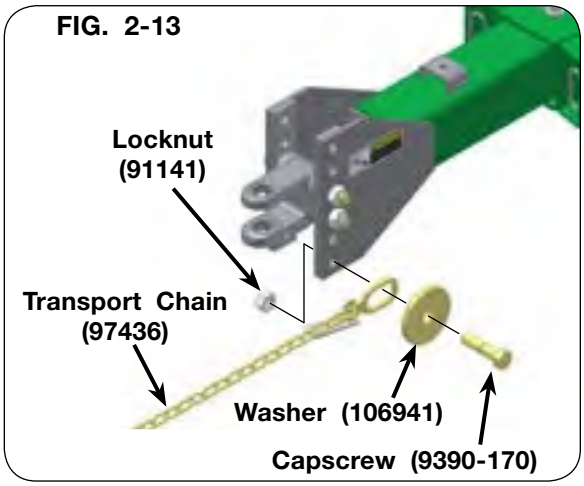


FIG. 2-14

Hose Holders

1. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the hose holder (79337B) and parts bag (88591), which includes the 1/2”-13UNC x 1 1/2” capscrew (9390-101), 1/2” flat washer (9405-088), and 1/2”-13UNC locknut (9800) needed to secure the hose holder into position.

2. Attach the hose holder (79337B) to the hitch assembly using 1/2”-13UNC x 1 1/2” capscrew (9390-101), 1/2” flat washer (9405-088), and 1/2”-13UNC locknut (9800) as shown in FIG. 2-15 and FIG. 2-16.

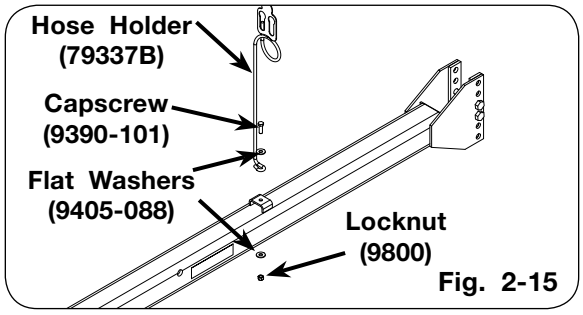
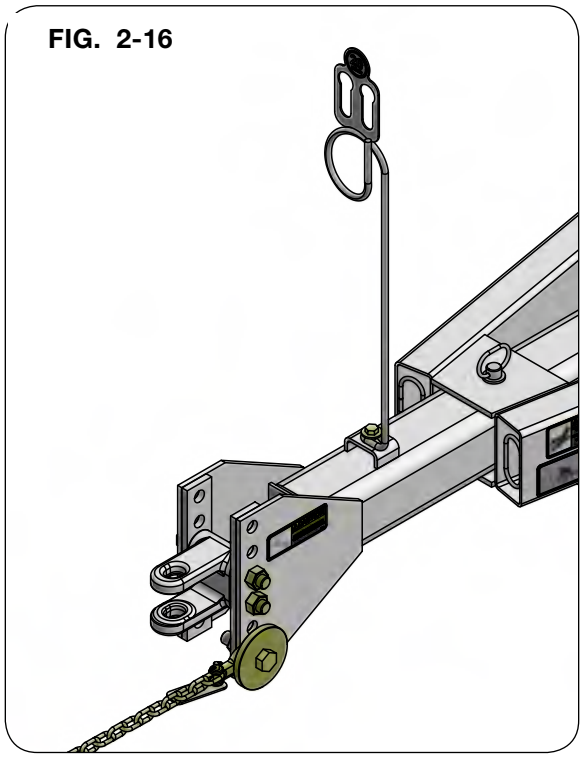


Fig. 2-15

FIG. 2-16



Inner Wings

1. Remove the capscrews and nuts from the hinge pins. Remove the front and rear hinge pins from the right-hand and left-hand sides of the main frame (FIG. 2-17).

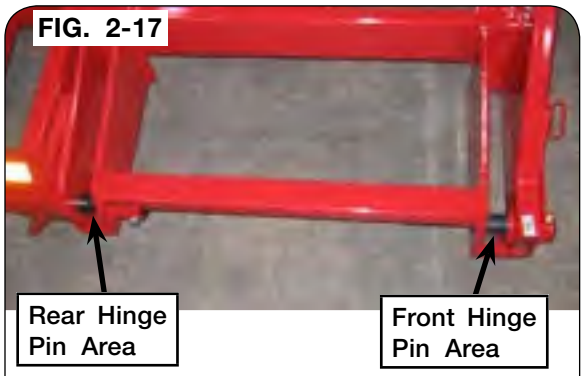


FIG. 2-17 Right-Hand of Main Frame Shown

2. Using hoist or lifting devices rated at 1,000 lbs. minimum, lift and align the left-hand wing assembly with the main frame assembly. Using the hardware previously removed from the wing hinge area, insert the rear hinge pin before the front hinge pin as shown in FIG. 2-18 and FIG. 2-19.

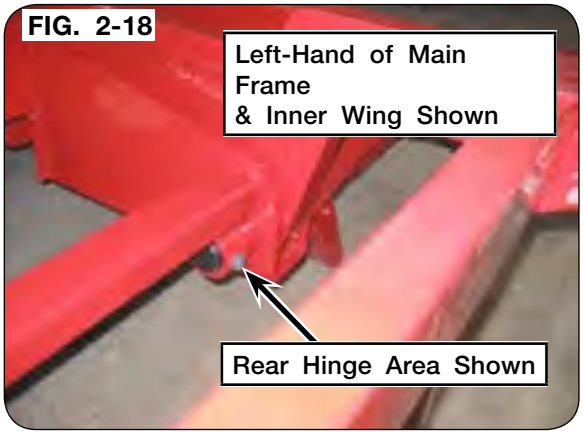


FIG. 2-18

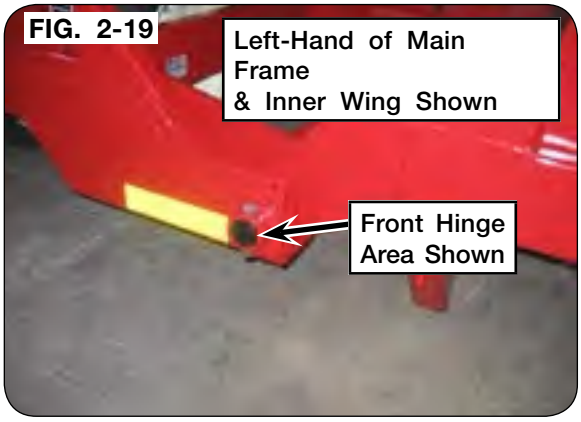


FIG. 2-19

Inner Wings (continued)

3. Place the end of the left-hand inner wing on a support stand rated at 500 lbs. minimum before removing hoist or lifting device (FIG. 2-20).

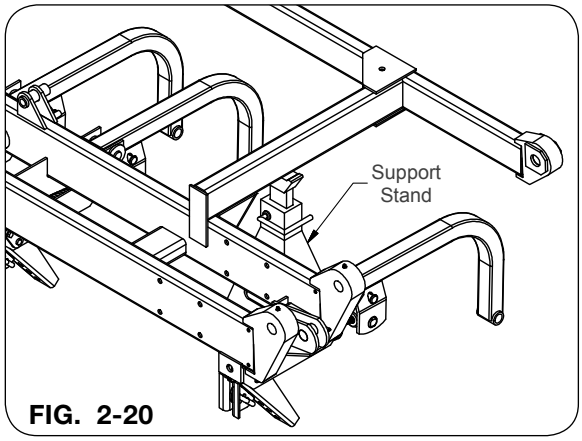


FIG. 2-20

4. Using hoist or lifting devices rated at 1,000 lbs. minimum, lift and align the right-hand wing assembly with the main frame assembly. Using the hardware previously removed from the wing hinge area, insert the rear hinge pin before the front hinge pin as shown in FIG. 2-18 and FIG. 2-19.

5. Place the end of the right-hand inner wing on a support stand rated at 500 lbs. minimum before removing hoist or lifting device (FIG. 2-20).

6. Torque hardware according to Torque Chart located in the MAINTENANCE section.

Outer Wings

IMPORTANT

- *Using the improper linkage and/or wing fold cylinders will damage your machine.*

1. Remove the rubber plugs (901869) from the outer wing frames. Discard the rubber plugs (FIG. 2-21).

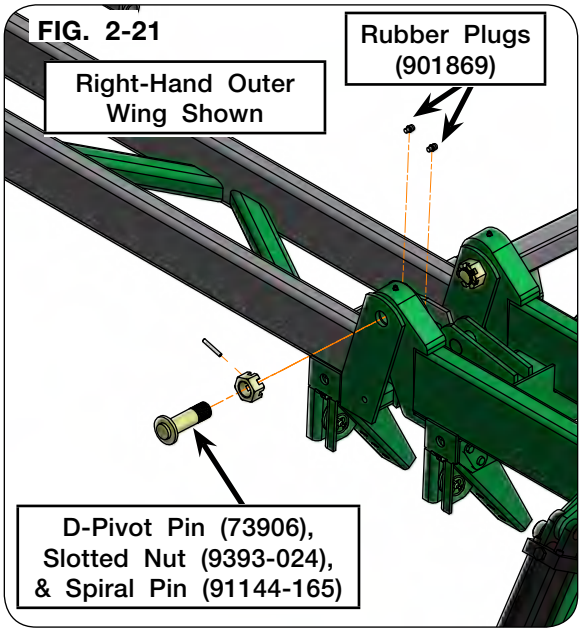


FIG. 2-21

Outer Wings (continued)

2. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the strap/linkage bars (87005B) and hardware bag (88576), which includes the two spacer tubes (81561), two D-pins (88575), two plates (88574), and four flange screws (901119).

3. Position the spacer tube (81561) between the two strap/linkage bars (87005B). Secure with D-pin (88575), plate (88574) and two 1/2"-13UNC x 3/4" flange screws (901119) (FIG. 2-23 and FIG. 2-24). Tighten flange screws. Repeat process to left-hand outer wing.

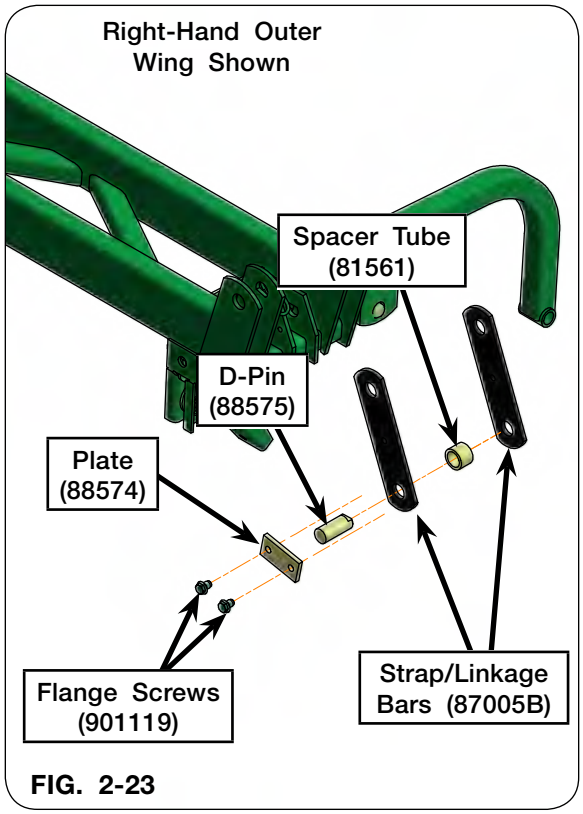


FIG. 2-23

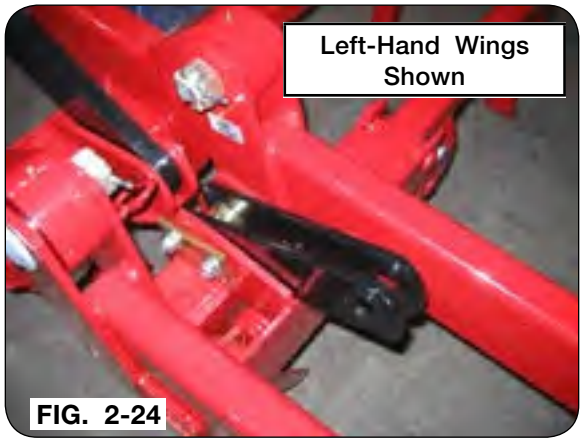


FIG. 2-24

Outer Wings (continued)

4. Remove and save the D-pin (87292) and spiral pin (91144-186) from the hinge area of both inner wings FIG. 2-25.

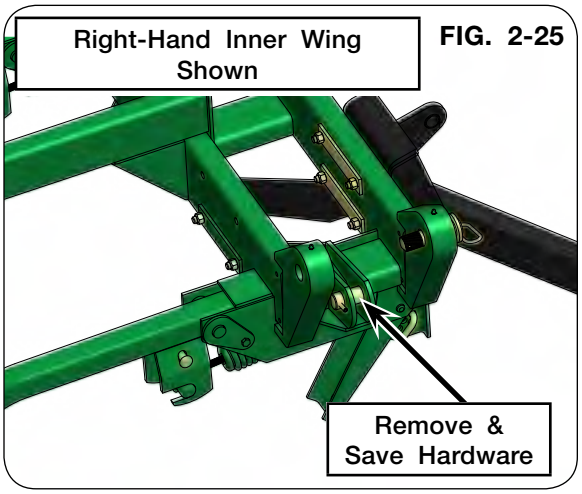


FIG. 2-25

5. Attach the arm/fold link (81504B) to the right-hand inner wing assembly with the D-pin (87292), two 1 1/4" flat washers (9405-128) and two 5/16" Dia. x 2" spiral pins (91144-186) as shown in FIG. 2-26 and FIG. 2-27. Repeat process to left-hand inner wing.

FIG. 2-26

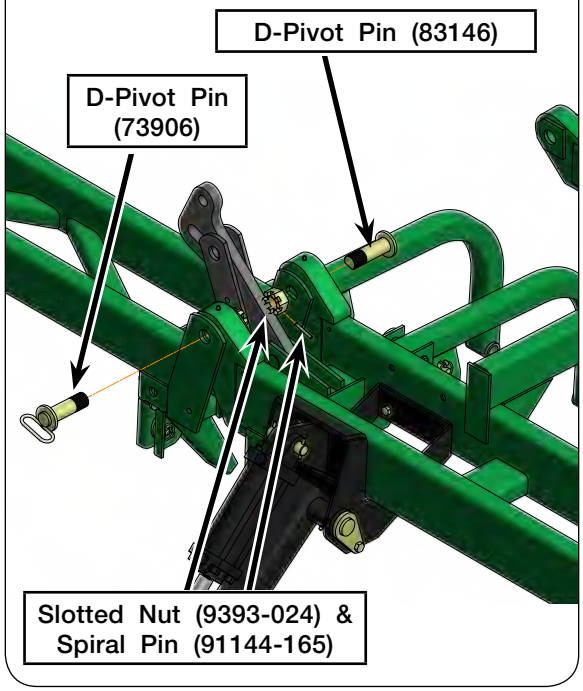
FIG. 2-27

Outer Wings (continued)

6. Find 1/4” dia. x 1 7/8” spiral pin (91144-165), 1 1/4”-12 UNF slotted nut (9393-024) and D-pivot pins (83146 & 73906) in wing parts box.

7. Secure the outer wings to the inner wings with the previously removed D-pivot pins (83146), 1 1/4”-12 UNF slotted nuts (9393-024) and 1/4” dia. x 1 7/8” spiral pins (91144-165). (FIG. 2-28).

FIG. 2-28



Outer Wings (continued)

8. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the parts bag (88590), and remove the four 1 1/4" flat washers (9405-128), two 1 1/4" Dia. x 3 5/8" pins (87283), and four 5/16" Dia. x 2" spiral pins (91144-186).

9. Place the right-hand outer wing strap/linkage bars (87005B) around the right-hand inner wing arm/fold link (81504B). Secure the links together with two 1 1/4" flat washers (9405-128), 1 1/4" Dia. x 3 5/8" pin (87283), and two 5/16" Dia. x 2" spiral pins (91144-186) as shown in FIG. 2-29 and FIG. 2-30. Repeat process to left-hand wings.

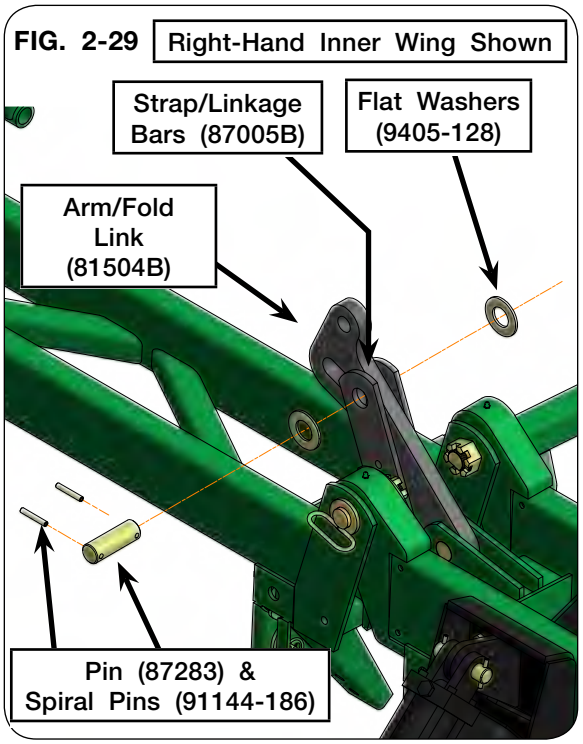
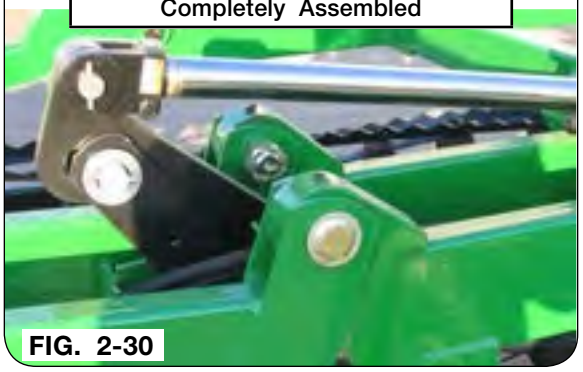


FIG. 2-29 Right-Hand Inner Wing Shown



Right-Hand Wings Shown Completely Assembled

FIG. 2-30

Inner Wing Tire & Wheel

NOTE: These instructions are for standard wing wheels only. For optional caster style wing wheels go to page 2-28.

1. Locate the wing wheel assemblies (73733B Left-Hand and 73734B Right-Hand), and wheel and tire assemblies (17679 or 17679SM) in the base shipping bundle. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the two 3 1/4" x 8" hydraulic cylinders (902647), and parts bag (88590), which includes the four 1" Dia. x 4" pins (85631) and eight 1/4" Dia. x 1 7/8" spiral pins (91144-165). Check that the retracted cylinder length is 20 1/4" (Fig. 2-31). Adjust both cylinders to this dimension, as necessary.

2. Remove and save the hardware and straps from the wing wheel assemblies. Attach the right-hand wing wheel (73734B) to the right-hand mid-wing using the previously removed hardware. The straps are to be placed against the back side of the front wing tube. See Fig. 2-32.

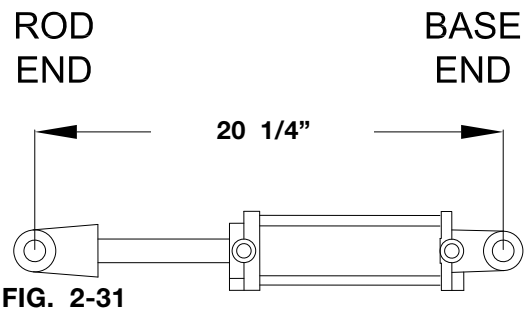


FIG. 2-31

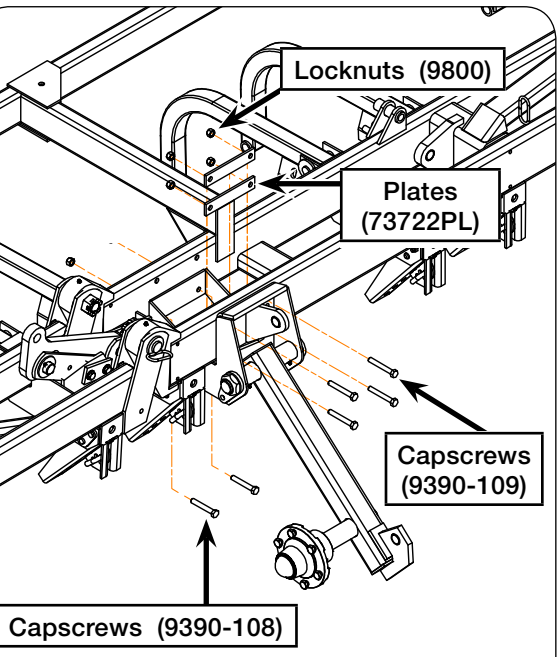
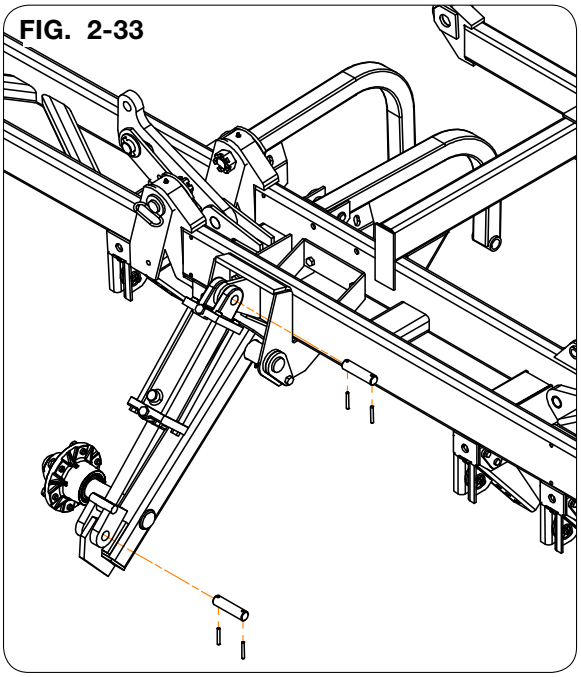


FIG. 2-32

Inner Wing Tire & Wheel (continued)

3. With the ports facing out, secure base end of the 3 3/4" x 8" cylinders (902647) to the wing assemblies and the rod end of cylinders to the wing wheel end using 1" Dia. x 4" pins (85631) and 1/4" Dia. x 1 7/8" spiral pins (91144-165) as shown in FIG. 2-33. Before installing the rod end cylinder pin, see "Purging a Hydraulic System", later in this section.

FIG. 2-33



Inner Wing Tire & Wheel (continued)

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE MAINTENANCE SECTION FOR THE PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

4. Mount the tire and wheel assemblies (17679 or 17679SM) to the wing wheel assemblies with the wheel bolts 9/16-18UNF (9231) located on the hub (FIG. 2-34). Torque wheel bolts according to “Wheel Torque Chart” in MAINTENANCE Section.

5. Repeat for the left-hand inner wing wheel assembly.

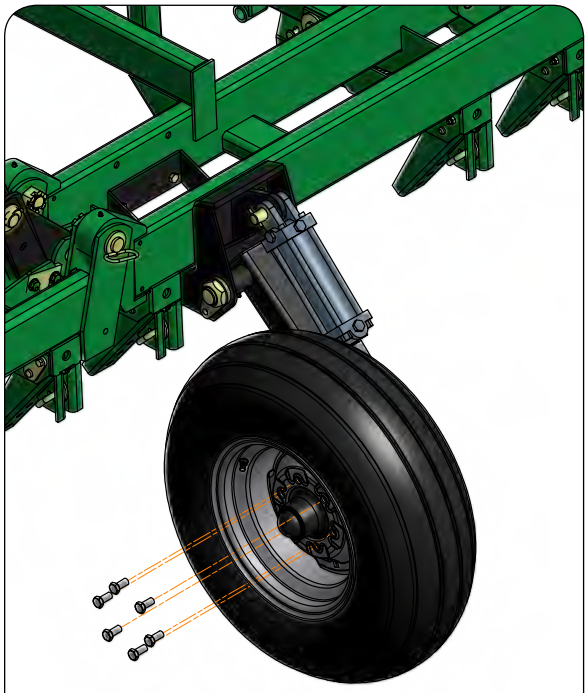


FIG. 2-34

Outer Wing Tire & Wheel

NOTE: 47' & 49' machines do not have outer wing wheels.

NOTE: These instructions are for standard wing wheels only. For optional caster style wing wheels, go to page 2-29.

1. Locate the wing wheel assemblies (73733B Left-Hand and 73734B Right-Hand), and wheel and tire assemblies (60911 or 60911SM) in the wing shipping bundle. Locate in the wing parts box/crate (73970B 51' - 55' model 1245/1245D machines, 73971B 57' - 63' model 1245 machines, & 77070B 57' - 63' model 1245D machines) the two 3" x 8" hydraulic cylinders (902648), two backing straps (73722PL), and parts bag (88594 51' - 55' machines and 88593 57' - 63' machines), which includes the four pins 1" Dia. x 4" (85631) and eight spiral pins 1/4" Dia. x 1 7/8" (91144-165). Check that the retracted cylinder length is 20 1/4" (Fig. 2-31). Adjust both cylinders to this dimension as necessary.

2. Remove and save the hardware and straps from the wing wheel assemblies. Attach the right-hand wing wheel (73734B) to the right-hand outer wing using the previously removed hardware. The straps are to be placed against the back side of the wing tubes at all mounting locations (FIG. 2-35).

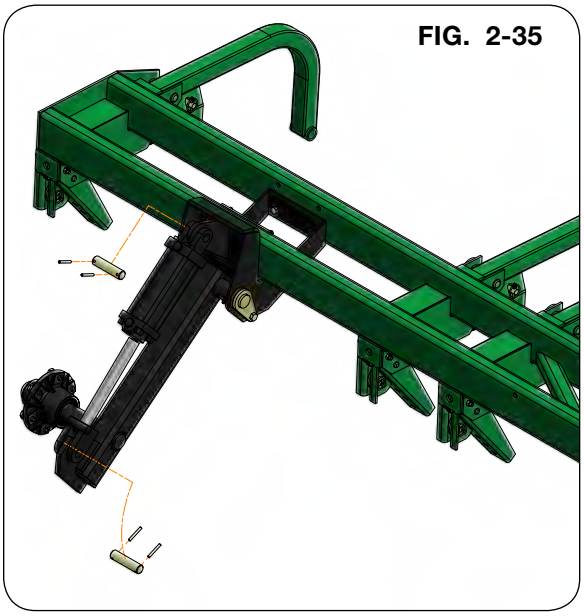


FIG. 2-35

3. With the ports facing out, secure the base end of the 3" x 8" cylinders (902648) to the wing assemblies and the rod end of the cylinders to the wing wheel end using 1" Dia. x 1 7/8" spiral pins (91144-165) as shown in Fig. 2-35. Before installing the rod end cylinder pin, see Purging a Hydraulic System later in this section.

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE MAINTENANCE SECTION FOR THE PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

FIG. 2-36

4. Mount the tire and wheel assemblies (60911 or 60911SM) to the wing wheel assemblies with the 9/16"-18UNF wheel bolts (9231) located on the hub (FIG. 2-36). Torque wheel bolts according to the Wheel Torque Chart in the Maintenance section.

5. Repeat for the left-hand outer wing wheel assembly.

Inner Wing/Tire & Wheel (Caster Option)

NOTE: These instructions are for the optional caster style wing wheels only. For standard wing wheels go to page 2-24.

1. Locate the caster wing wheel pallet (73980B) in the optional caster wing wheel shipping bundle, and wheel and tire assemblies (17679 or 17679SM) in the base shipping bundle. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the two 3 1/4" x 8" hydraulic cylinders (902647). Check that the retracted cylinder length is 20 1/4" (Fig. 2-31). Adjust both cylinders to this dimension as necessary.

2. Remove the metal banding from the caster assemblies on the pallet. Remove and save the hardware and straps from the wing wheel assemblies.

3. Using a safe lifting device rated for a minimum 250 lbs., attach one of the caster assemblies to the right-hand inner wing using the previously removed hardware. The straps are to be placed against the back side of the front wing tube. See FIG. 2-37 & 2-38.

4. Reposition the lifting device to the outer end of the caster wheel assembly. Lift the assembly until the shipping strap in the cylinder mounting location can be removed. Remove and save the hardware and pins for the strap.

5. With the ports facing up, secure the base end of the 3 1/4" x 8" cylinders (902647) to the mounting bracket and rod end of the cylinders to the wing wheel end using previously removed pins and hardware as shown in Fig. 2-33. Before installing the rod end cylinder pin, see Purging a Hydraulic System on page 2-34 in this section.

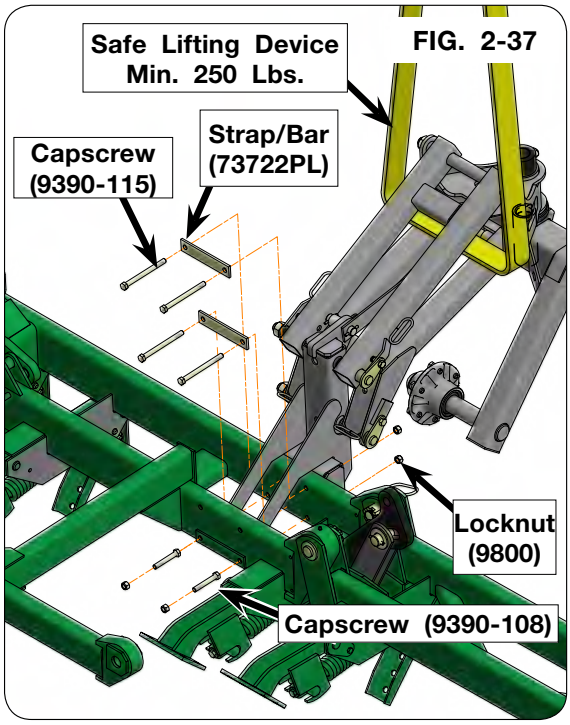


FIG. 2-37

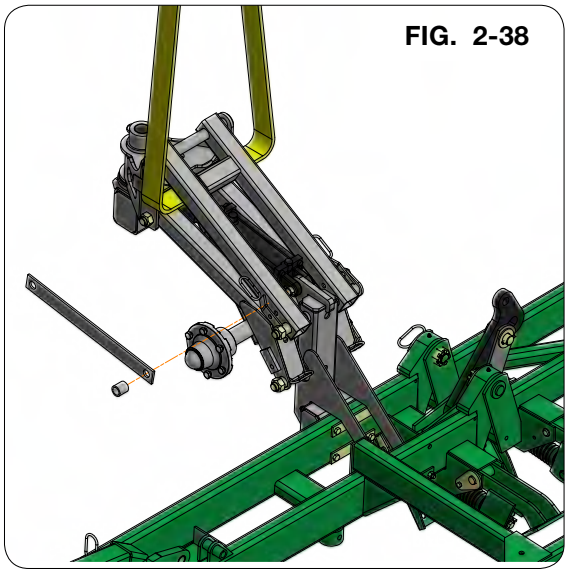


FIG. 2-38

Inner Wing/Tire & Wheel (Caster Option) (continued)

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. TORQUE PAGE IN THE MAINTENANCE SECTION FOR THE PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

6. Mount the tire and wheel assemblies (17679 or 17679SM) to the wing wheel assemblies with the 9/16"-18UNF wheel bolts (9231) located on the hub (Fig. 2-39). Torque the wheel bolts according to the Wheel Torque Chart in the Maintenance section.

7. Repeat for the left-hand outer wing wheel assembly.

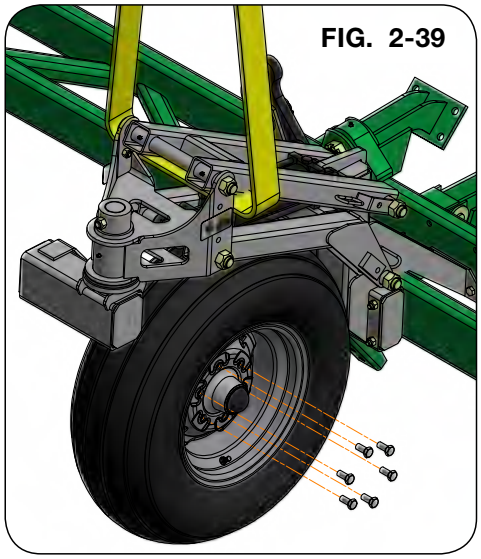


FIG. 2-39

Outer Wing/Tire & Wheel (Caster Option)

NOTE: 47' & 49' machines do not have outer wing wheels.

NOTE: These instructions are for the optional caster style wing wheels only. For standard wing wheels go to page 2-27.

1. Locate the caster wing wheel pallet (89976B) in the optional caster wing wheel shipping bundle, and wheel and tire assemblies (60911 or 60911SM) in the wing shipping bundle. Locate in the wing parts box/crate (73970B 51' - 55' model 1245/1245D machines, 73971B 57' - 63' model 1245 machines, & 77070B 57' - 63' model 1245D machines) the two 3" x 8" hydraulic cylinders (902648), two backing straps (73722PL). Check that retracted cylinder length is 20 1/4" (Fig 2-31). Adjust both cylinders to this dimension as necessary.

2. Remove the metal banding from the caster assemblies on the pallet. Remove and save the hardware and straps from the wing wheel assemblies.

Outer Wing/Tire & Wheel (Caster Option) (continued)

3. Using a safe lifting device rated for a minimum of 250 lbs., attach one of the caster assemblies to the right-hand outer wing using the previously removed hardware. The straps are to be placed against the back side of the wing tubes at all mounting locations. See Fig. 2-40.

4. Reposition the lifting device to the outer end of the caster wheel assembly. Lift the assembly until the shipping strap in the cylinder mounting location can be removed. Remove and save the hardware and pins for the strap (FIG. 2-41).

5. With the ports facing up, secure the base end of the 3" x 8" cylinders (902648) to the mounting bracket and the rod end of the cylinders to the wing wheel end using the previously removed pins and hardware as shown in Fig. 2-41. Before installing the rod end cylinder pin, see Purging a Hydraulic System in the Set-Up section.

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE MAINTENANCE SECTION FOR THE PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

6. Mount the tire and wheel assemblies (60911 or 60911SM) to the wing wheel assemblies with the wheel bolts 9/16"-18UNF (9231) located on the hub (FIG. 2-42). Torque the wheel bolts according to the Wheel Torque Chart in the Maintenance section.

7. Repeat for the left-hand outer wing wheel assembly.

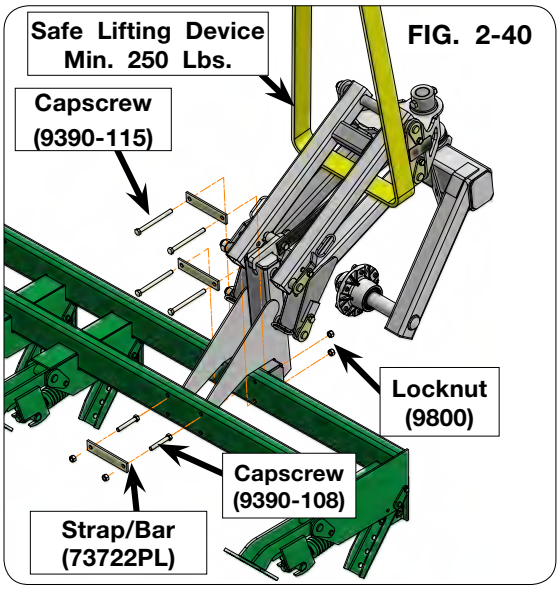


FIG. 2-40

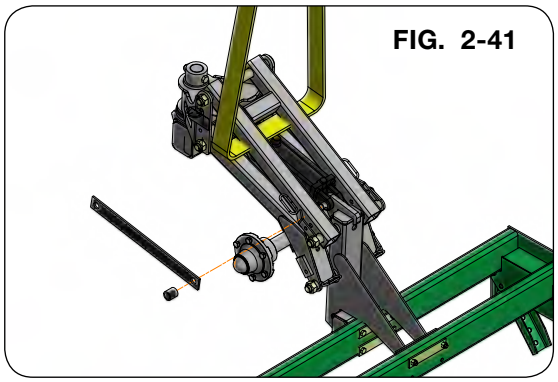


FIG. 2-41

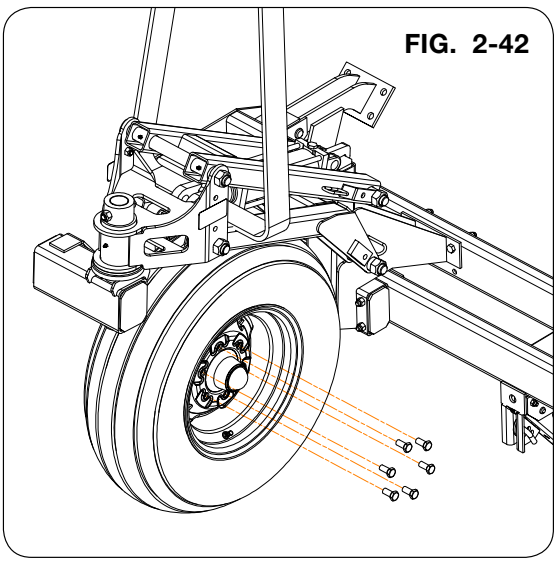


FIG. 2-42

Gravity Latches/Wing Stands

1. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the two plates/gravity latches (88570B) and parts bag (88591), which includes the two 3/4”-10UNC x 5” capscrews (9390-155) and two 3/4”-10UNC locknuts (9802) needed to secure the plates/gravity latches into position.

2. Mount the plates/gravity latches to the inner wings as shown in FIG. 2-43 & FIG. 2-44 using a 3/4”-10UNC x 5” capscrew (9390-155) and 3/4”-10UNC locknut (9802).

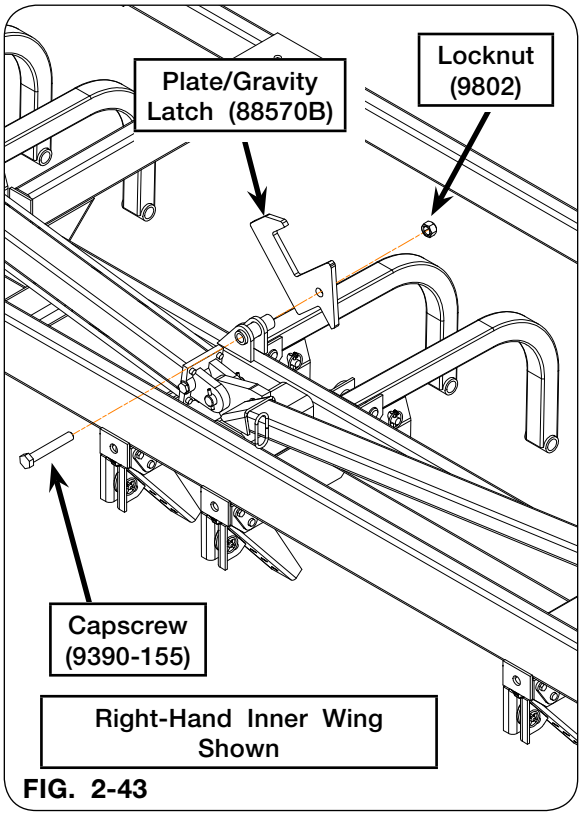


FIG. 2-43

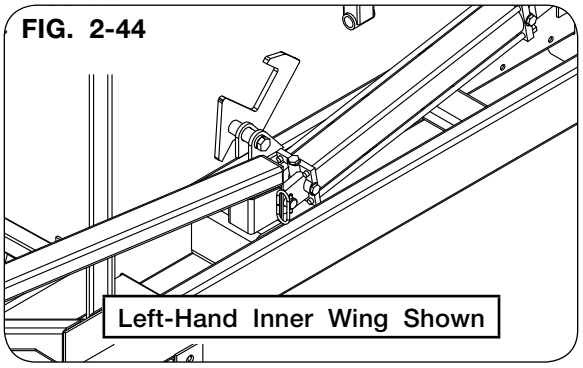


FIG. 2-44

Gravity Latches/Wing Stands (continued)

3. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the two wing stand weldments (88553B) and parts bag (88591), which includes the eight 1/2”-13UNC locknuts (9800).

   47-55’ MODELS ONLY
   Locate in the wing parts box/crate (73969B for 47-49’ models; 73970B for 51-55’ models) the parts bag, which includes the eight 1/2”-13UNC x 3 3/4” capscrews (9390-110).

   57-63’ MODELS ONLY
   Locate in the wing parts box/crate (73971B - model 1245; 77070B - model 1245D) the parts bag (88593B), which includes eight 1/2”-13UNC x 4 1/2” capscrews (9390-112).

4. **47-55’ MODELS ONLY**
   Measure 36” from both sides of the basket arm bracket and mark the mounting position of wing stand weldments (88553B) on the outer wings (FIG. 2-45). Secure the wing stand weldments (88553B) to the outer wings with four 1/2”-13UNC x 4 1/2” capscrews (9390-112) and four 1/2”-13UNC locknuts (9800) per side.

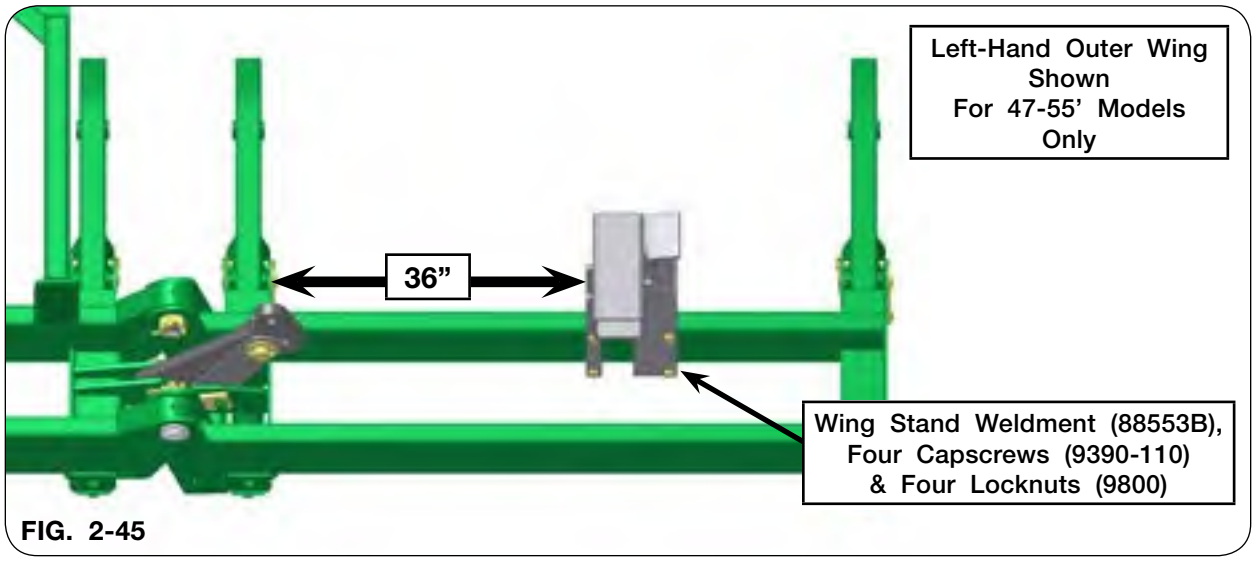


FIG. 2-45

Gravity Latches/Wing Stands (continued)

5. **57-63' MODELS ONLY**
Locate the brace bundle (88635G or 88635R) in the wing shipping bundle. Remove the shipping straps. Locate in the wing parts box/crate (73971B - model 1245; 77070B - model 1245D) the parts bag (88593B), which includes the two 1 1/4" Dia. x 5 1/4" pins (406437) and four 3/8" Dia. x 2" spiral pins (91144-207) needed to mount the braces to the frame and wings.

6. **57-63' MODELS ONLY**
Attach the arched end of the braces (88235G or 88235R - left-hand; 88234G or 88234R - right-hand) to the appropriate side of the unit with 1 1/4" Dia. x 5 1/4" pin (406437) and two 3/8" Dia. x 2" spiral pins (91144-207) (FIG. 2-46 and FIG. 2-47). Secure the opposite end of the braces (88235G or 88235R - left-hand; 88234G or 88234R - right-hand) and wing stand weldments (88553B) to the outer wings with the four 1/2"-13UNC x 4 1/2" capscrews (9390-112) and 1/2"-13UNC locknuts (9800) per side (FIG. 2-46 and FIG. 2-48).

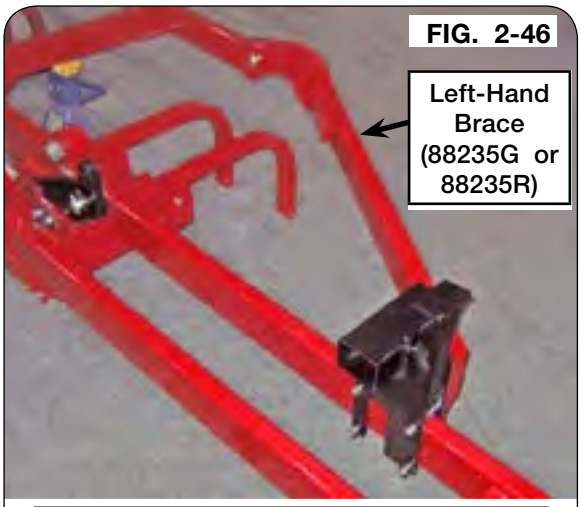
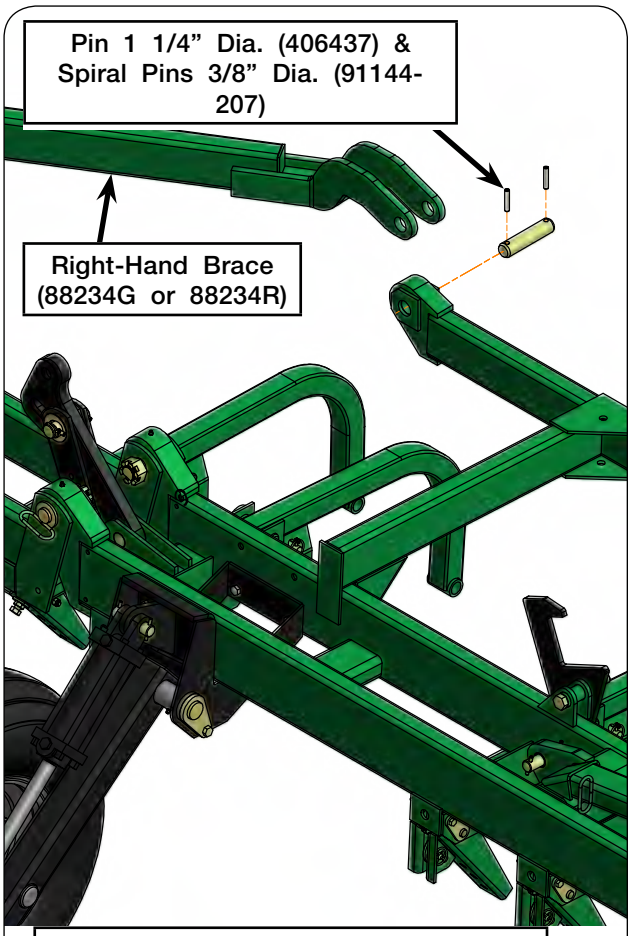


FIG. 2-46

Left-Hand Outer Wing Shown For 57-63' Models Only



Right-Hand Outer Wing Shown For 57-63' Models Only

FIG. 2-47

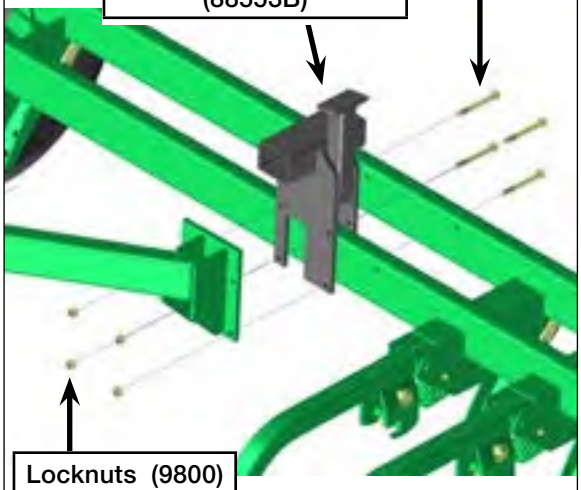


FIG. 2-48

Right-Hand Outer Wing Shown For 57-63' Models Only

SMV Emblem

1. Locate in base parts box/crate (73972B-1245, or 76561B-1245D) one strip (88259B), plate (88587B), SMV (9829), and parts bag (88591), which includes two 1/4"-20UNC x 3/4" capscrews (9390-003), two 1/4"-20UNC x 3" capscrews (9390-013), and four 1/4"-20UNC locknuts (9936).

2. Secure the strip (88259B) and plate (88587B) to the main frame assembly as shown FIG. 2-49 and FIG. 2-50 using two 1/4"-20UNC x 2 3/4" capscrews (9390-012) and 1/4"-20UNC locknuts (9936).

3. Attach SIS mounting plate (79340B) to the main frame assembly as shown FIG. 2-49 and FIG. 2-50 using bar (64157B), two 1/4"-20UNC x 2 3/4" capscrews (9390-012) and 1/4"-20UNC locknuts (9936).

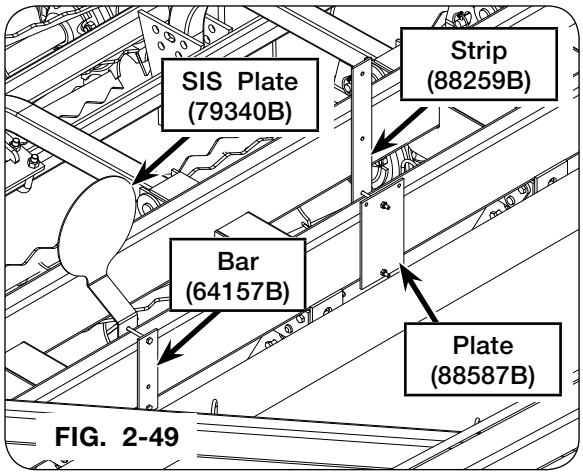


FIG. 2-49

4. Attach SMV (9829) to the strip (88259B) with two 1/4"-20UNC x 3/4" capscrews (9390-003) and 1/4"-20UNC locknuts (9936) as shown in FIG. 2-50.

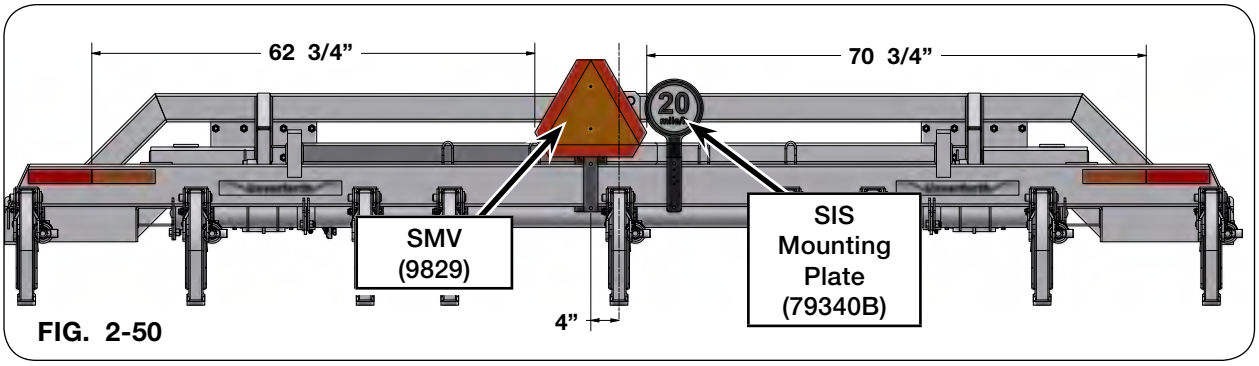


FIG. 2-50

Hydraulic Assembly

1. Install hydraulic components to the machine using the hydraulic overhead layouts.

IMPORTANT

- *Do not use any tape or thread sealant as all fittings have mechanical or o-ring seals. This prevents contamination from tape or thread sealants from entering the tractor's hydraulic system.*

NOTE: Refer to the "HOSE ROUTING DIAGRAMS" for routing and positioning of the hydraulic components onto the frame.

NOTE: Refer to the PARTS section for fitting type, hose size, and length required.

Hydraulic Assembly (continued)

NOTE: Refer to Purging A Hydraulic System in this section for purging instructions and warnings after assembly of the hydraulic components is completed.

2. Install Velcro hose wrap (75884).

3. With the wings unfolded and all hydraulic hoses assembled install hose wrap (75884) to each hinge area. Wrap all hoses passing through the hose retaining ring and center wrap on the ring. Use cable ties (94037) to fasten the hose wrap on the ends and 3"-4" on each side of the ring.

FIG. 2-51

Purging A Hydraulic System

⚠ WARNING

- **RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE HYDRAULIC POWER UNIT OPERATOR'S MANUAL FOR PROPER PROCEDURES.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

4. Purge air from system as follows:
   A. A. Clear all personnel and objects from the area, including where the machine will have full range of motion during the hydraulic movement. Remove transport locks from the machine.
   B. Pressurize the system and maintain the system at full pressure for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
   C. Check oil reservoir in the hydraulic power source and refill as needed.
   D. Pressurize the system again to reverse the motion of step B. Maintain pressure on the system for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
   E. Check for hydraulic oil leaks using cardboard or wood. Tighten connections according to directions in the Torque Specifications in the MAINTENANCE section.
   F. Repeat steps in B, C, D, and E 10-12 times.

IMPORTANT

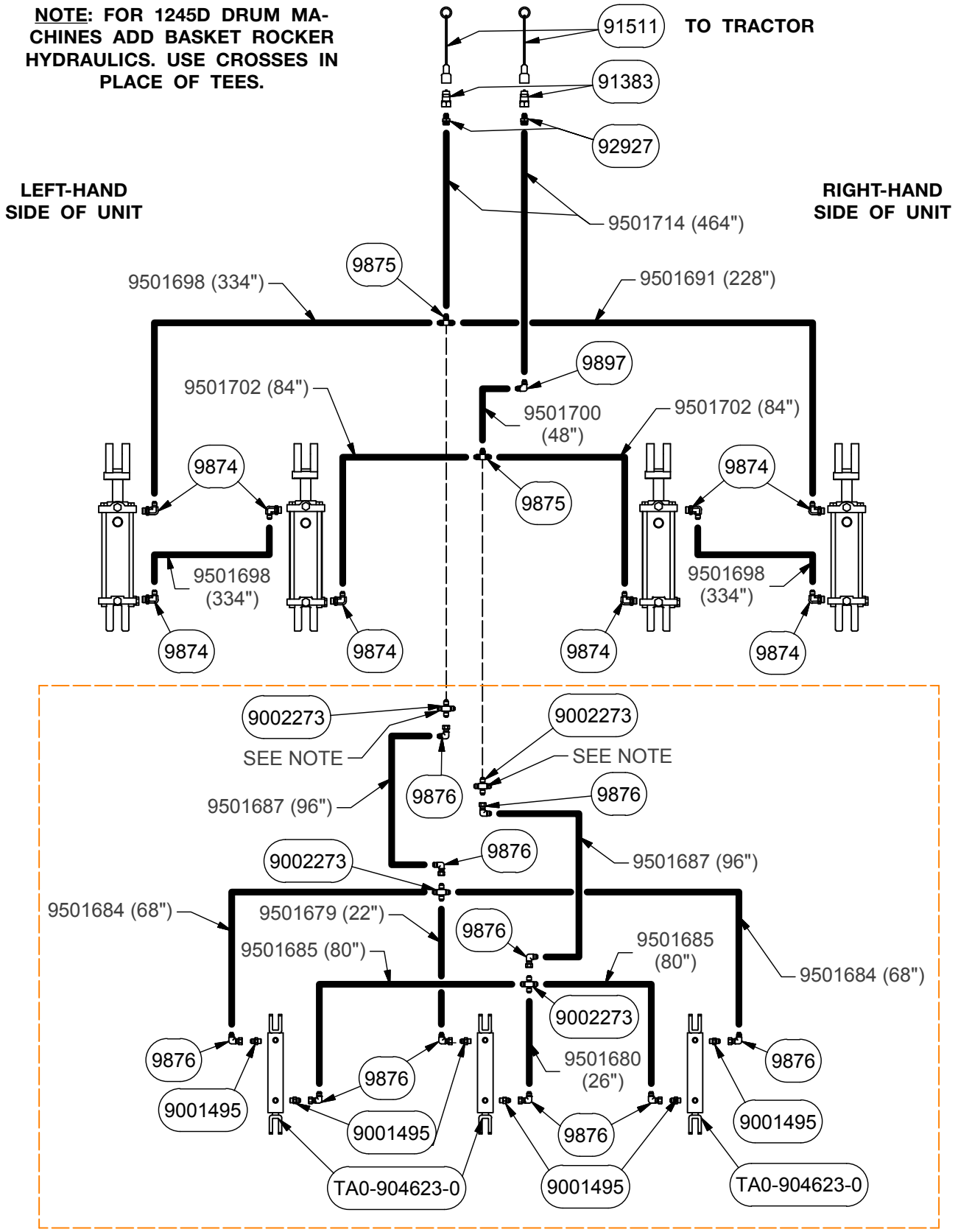
- *Do not fold the wings without the wing support stands attached.*

5. Raise unit and fully fold wings. Check clearances for hoses, etc. Check that wing fold linkage is not under tension when wings are fully folded. Adjust cylinder clevises if necessary to cylinders do not load linkage when wings are fully folded. See operations section for folding procedures.

Hydraulic Assembly (continued)

ROLLING HARROW 47-49' MODELS ONLY - RAISE & LOWER UNIT

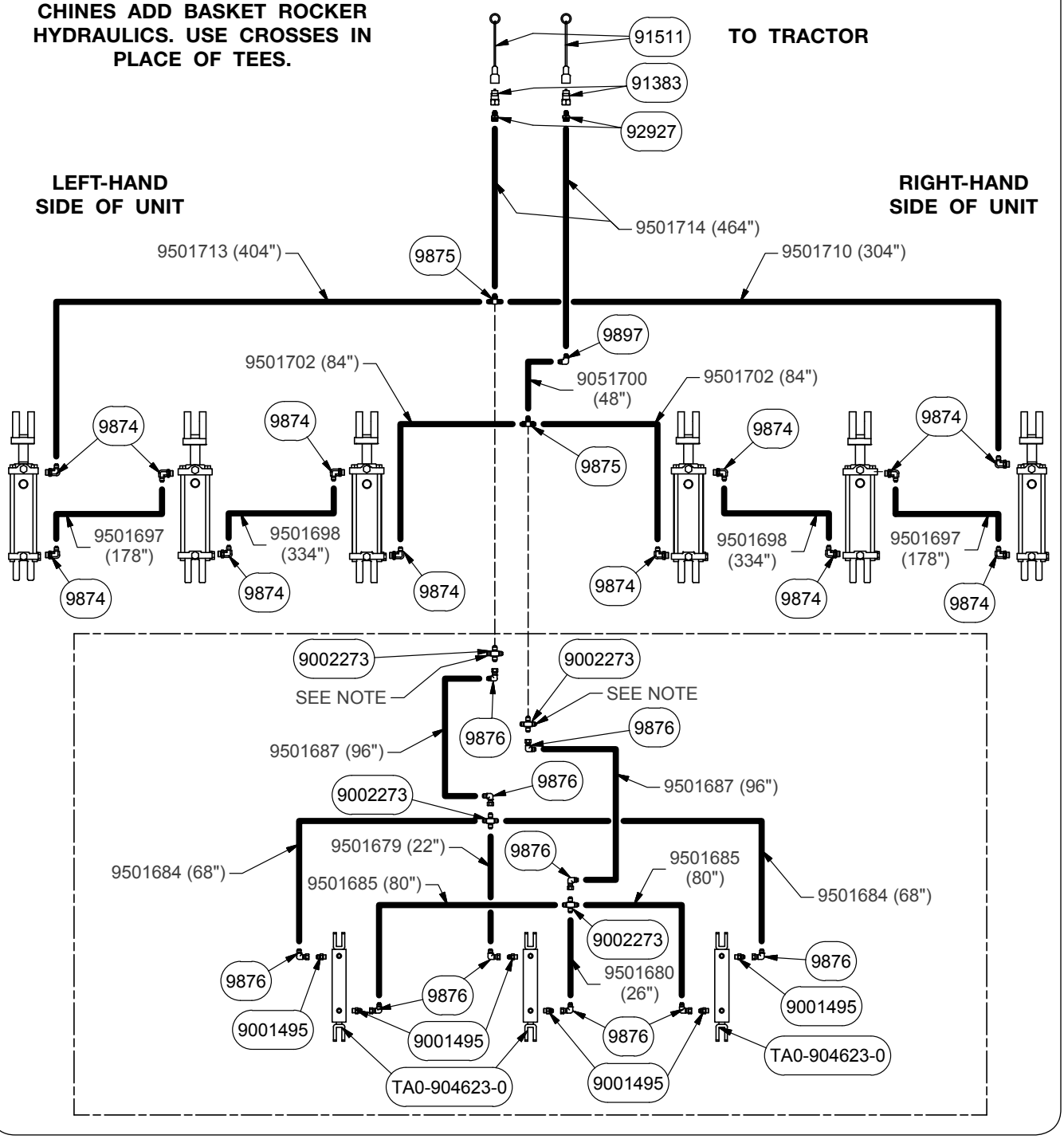
NOTE: FOR 1245D DRUM MACHINES ADD BASKET ROCKER HYDRAULICS. USE CROSSES IN PLACE OF TEES.



Hydraulic Assembly (continued)

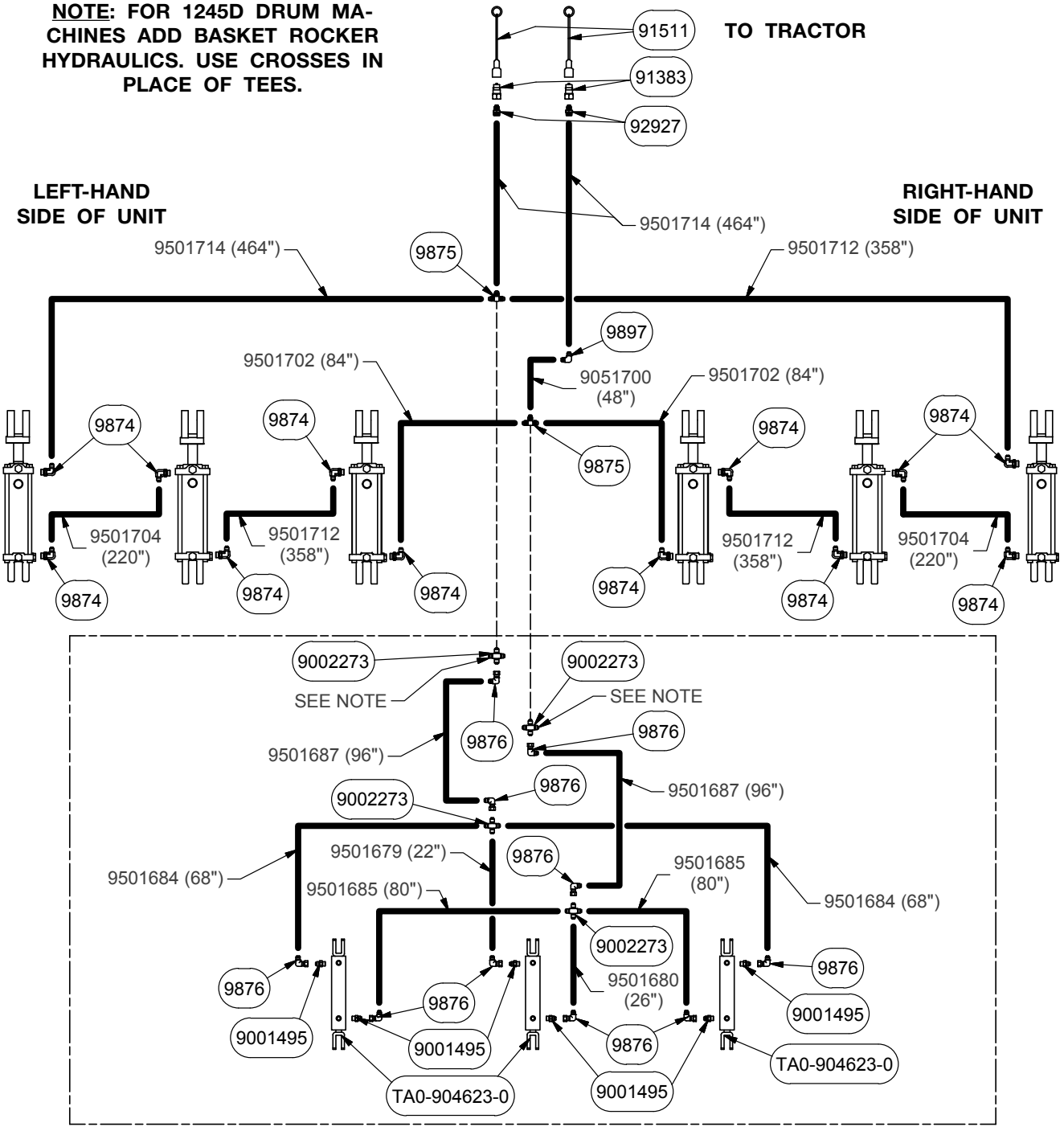
ROLLING HARROW 51-55' MODELS ONLY - RAISE & LOWER UNIT

NOTE: FOR 1245D DRUM MACHINES ADD BASKET ROCKER HYDRAULICS. USE CROSSES IN PLACE OF TEES.

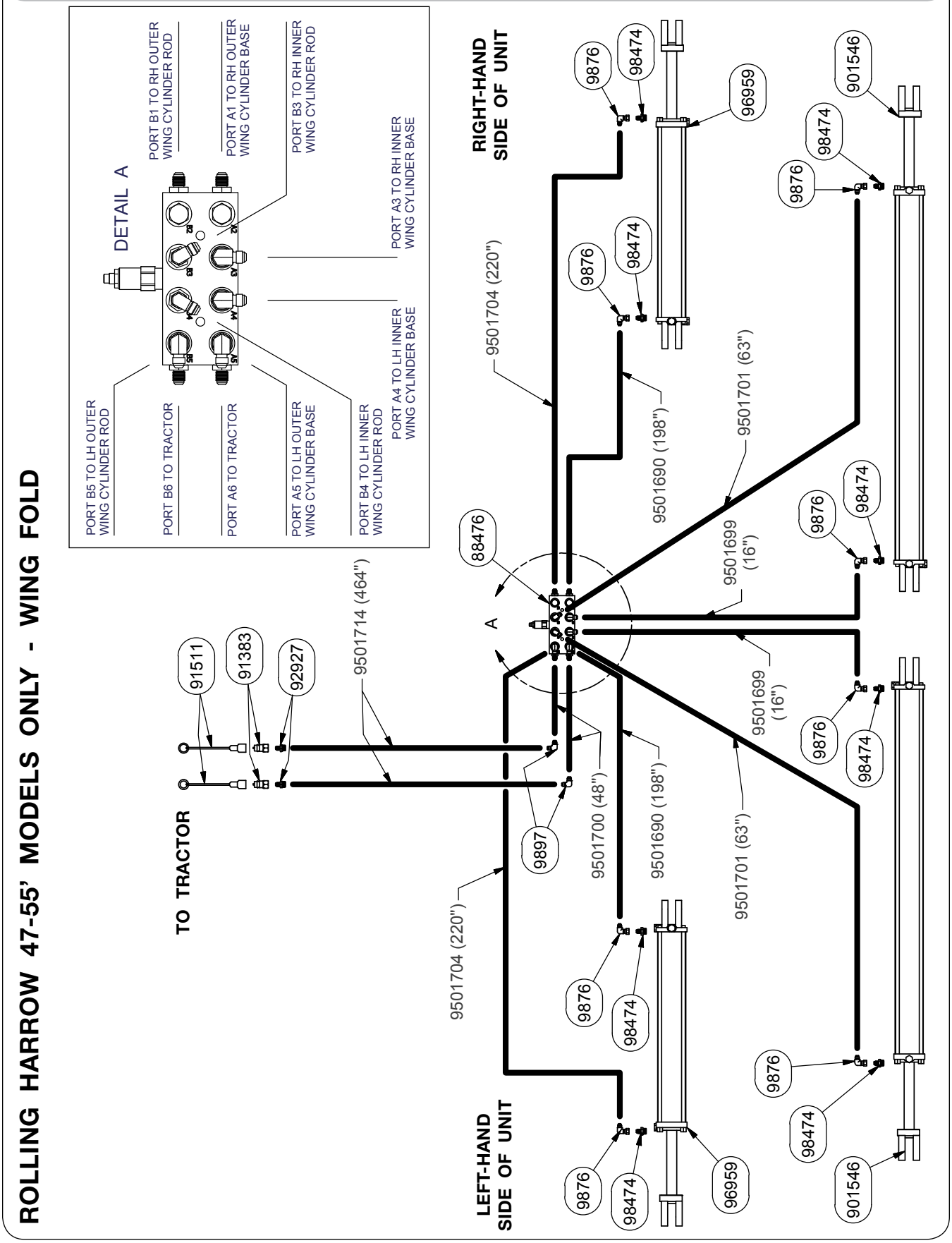


Hydraulic Assembly (continued)

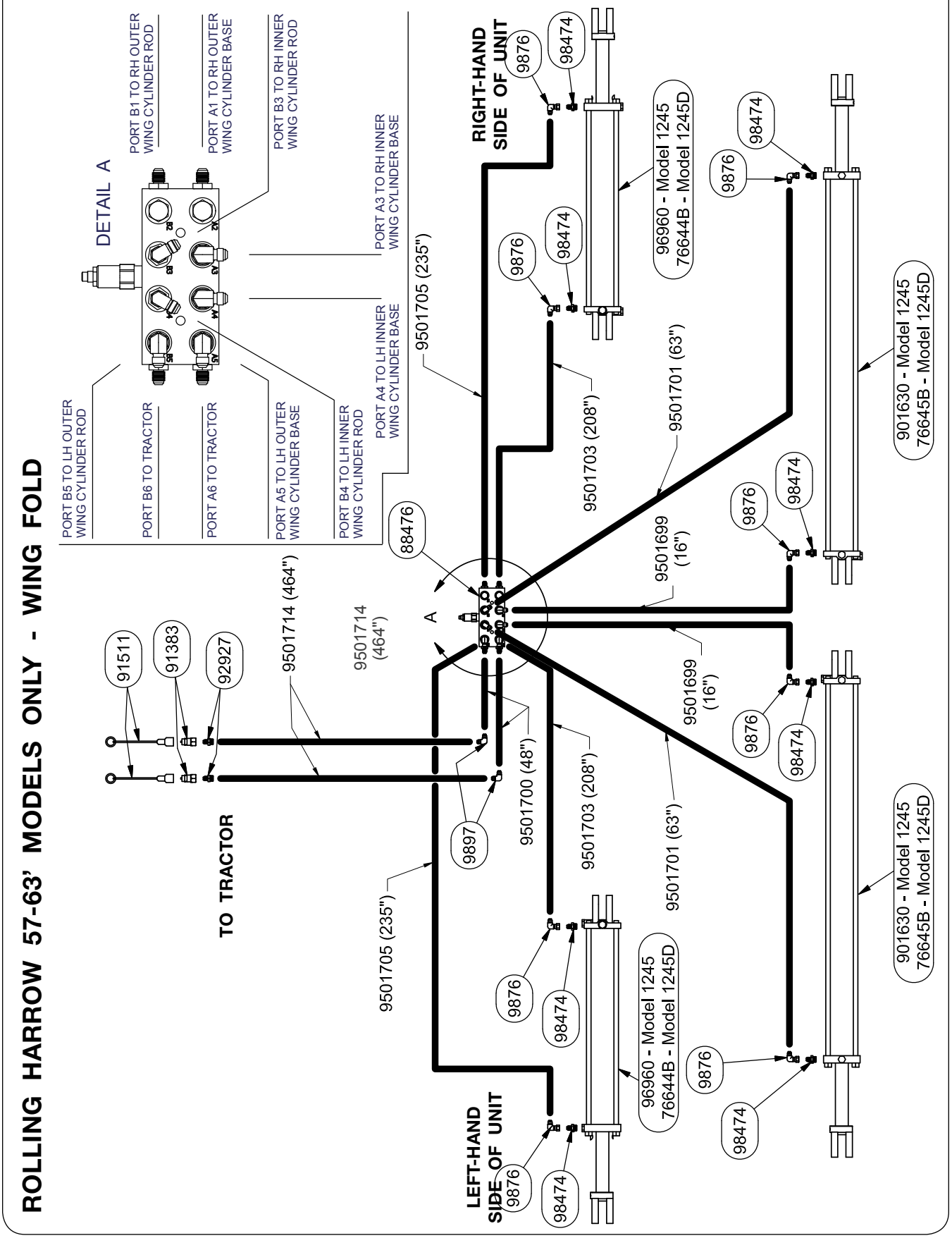
ROLLING HARROW 57-63' MODELS ONLY - RAISE & LOWER UNIT



Hydraulic Assembly (continued)



Hydraulic Assembly (continued)



Main Frame Basket Rocker Arm Assembly - Model 1245D Only

1. In parts box (12' Base - 76543B; 15' Base - 76556B) locate 1 1/2" x 6" cylinders (TA0-904623-0), cylinder mount weldments and hardware (76495B), link weldment basket rockers (75930B), 1/2"-13UNC x 2 1/4" capscrews (9390-104) and 1/2"-13UNC locknuts (9800). Install base end of cylinder with ports facing up to the mounting bracket of the basket rocker arms using capscrews and locknuts. (FIG. 2-51, FIG. 2-52, FIG. 2-53)
2. Attach the cylinder mount weldments and hardware (76495B) to the bent arm. (FIG. 2-51, FIG. 2-52, FIG. 2-53)
3. Attach base end of the cylinders to the cylinder mount weldment with 1/2"-13UNC x 2 1/4" capscrews (93990-104) and 1/2"-13UNC locknuts (9800). (FIG. 2-51, FIG. 2-52, FIG. 2-53)
4. Secure the rod end of the cylinders (TA0-9046230) to the link weldment basket rocker (75930B) using 1/2"-13UNC x 2 1/4" capscrews (9390-104) and 1/2"-13UNC locknuts (9800). (FIG. 2-51, FIG. 2-52, FIG. 2-53)

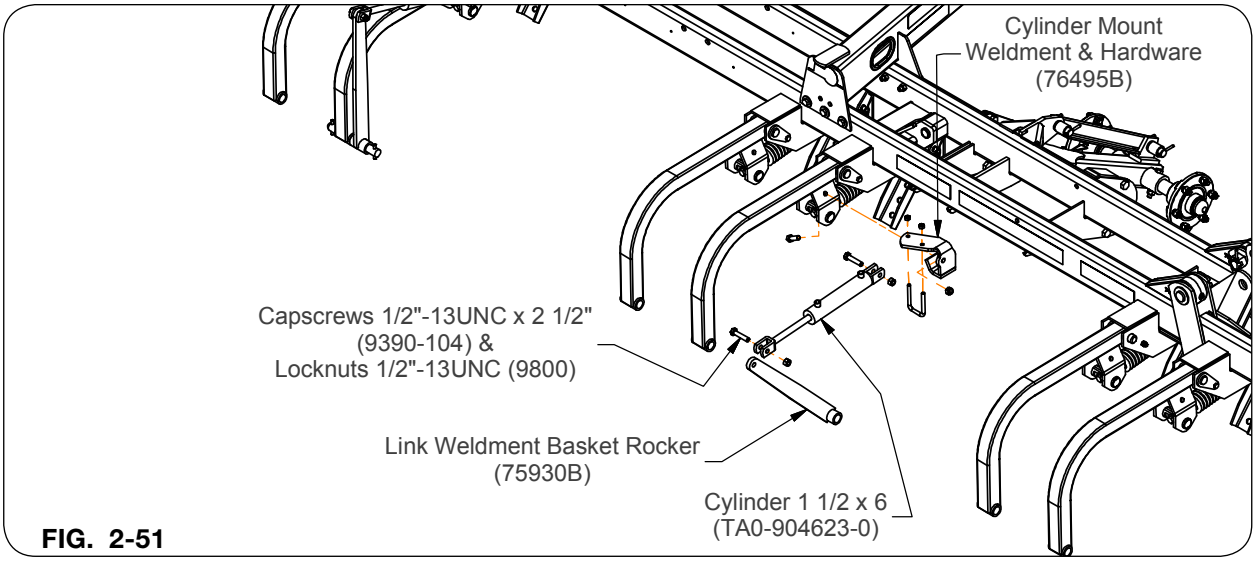


FIG. 2-51

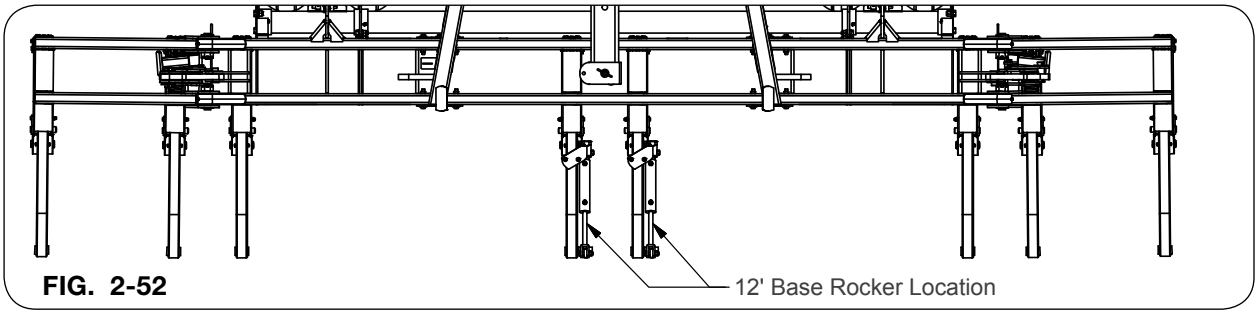


FIG. 2-52

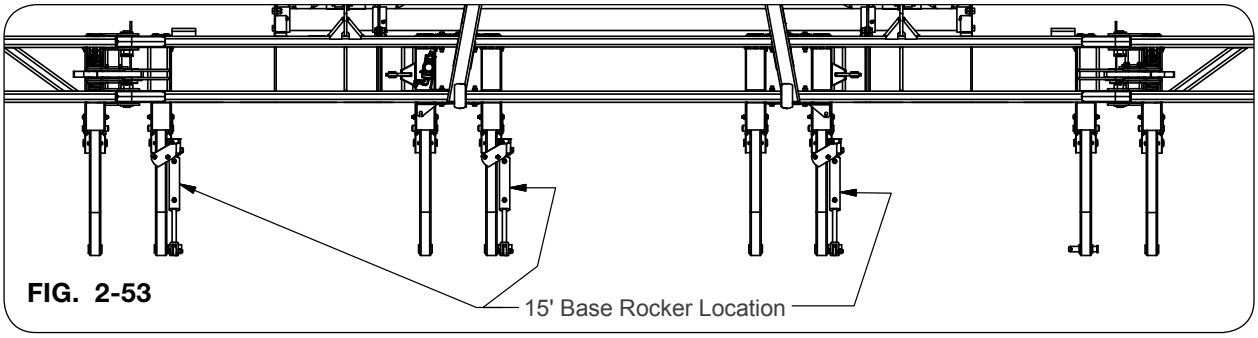


FIG. 2-53

Drum Scraper Assembly

WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

1. Locate scrapers, bar mounts and hardware bags.

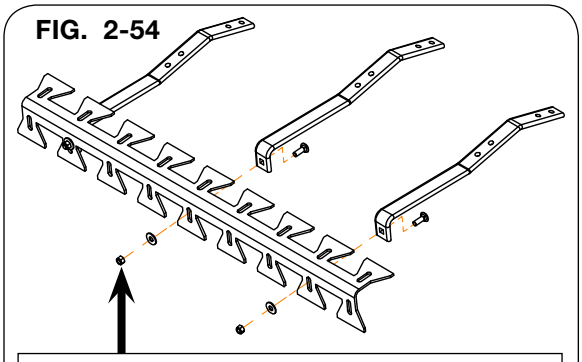
NOTE: When tightening the u-bolts for the scrapers, leave the same amount of threads exposed. Over tightening the nuts could result in excessive flex of the scraper arm which may affect the adjustment.

2. Install arm (75564B) to scraper using 1/2"-13UNC x 1 1/2" carriage bolts (9388-104) passing bolt through arm first. (FIG. 2-54)

NOTE: 3' baskets require 2 bar mounts.
4' baskets require 2 bar mounts.
5' Baskets require 3 bar mounts.
6' baskets require 4 bar mounts.

3. Install 1/2" flat washers (9405-088) and 1/2"-13UNC locknuts (9800) on scraper. (FIG. 2-54)
4. Slide arm all the way to the bottom of the scraper slot.
5. Lay bar mounts/scraper assembly on top of basket frame near working position. (FIG. 2-55)
6. Install U-bolts (901837) from bottom of basket frame through arm. (FIG. 2-55)
7. Center notch in scraper over ribs on drums and secure scraper assembly with four 1/2"-13UNC locknuts per bar mount. (FIG. 2-56)
8. Adjust scraper down to within 1/8" of the drum by loosening the locknuts on the carriage bolts, re-position scraper and secure with locknuts. (Some conditions may require the scraper to touch the drum to effectively scrape. Keep contact pressure to a minimum to prevent excessive wear to the scraper or drum.) Torque locknuts, refer to Torque Chart in MAINTENANCE section.

FIG. 2-54



Bar Mounts (75564B), Scraper, Carriage Bolts (9388-104), Flat Washers (9405-088), & Locknuts (9800)

U-Bolts (901837) & Locknuts (9800)

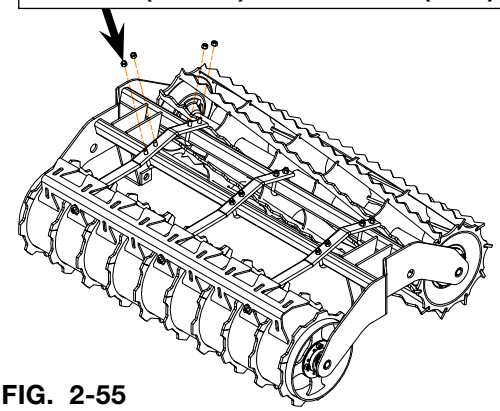
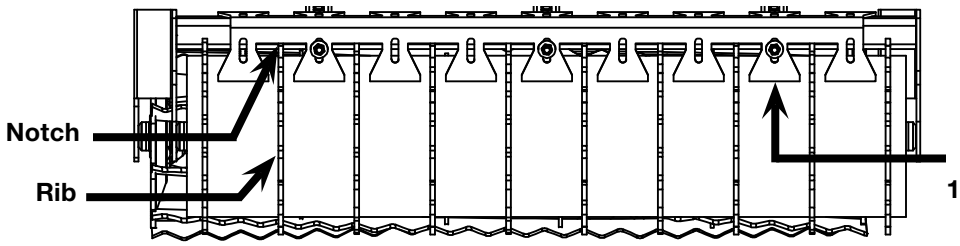


FIG. 2-55

Center Notch In Scraper Over Ribs On Drum Roller

FIG. 2-56



Drum/Basket & Frame Assemblies

⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 750 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Connect the Rolling Harrow to a tractor. Raise the machine, but keep the wings unfolded. Install transport locks on main frame axle cylinders. Block the wings to remain level with the main frame. Lower machine onto transport locks and blocking. Relieve hydraulic oil pressure, see the power unit Operator's Manual for the proper procedure. Block the wheels on the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.

2. Locate in parts box/crate (74121B) the rubber basket/arm pivot covers (88826). There is a rubber cover for each basket mounting arm on the machine. Install rubber basket arm pivot covers over bent arms. See FIG. 2-57.

3. Locate in the parts box (12' Base - 76543B; 15' Base - 76556B) the 1" Dia. x 8 1/8" basket mounting pins (9501583) and 5/16" Dia. x 2" spiral pins (91144-186). Locate in the parts box/crate (74121B) the 1" Dia. x 5 1/8" basket mounting pins (9500423) and 5/16" Dia. x 2" spiral pin (91144-186).

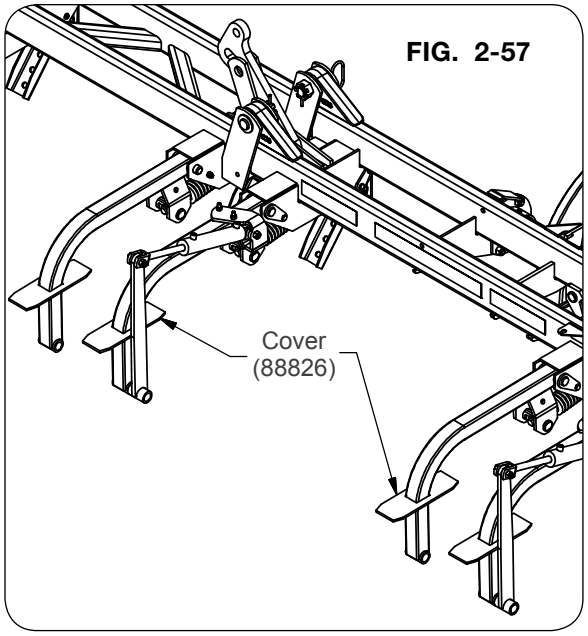


FIG. 2-57

Drum/Basket & Frame Assemblies (continued)

4. Using a safe lifting device rated at 750 lbs. minimum, lift basket assembly into position on the mounting arms. Identify baskets and mating wings using Table 2-4, FIG. 2-58, and FIG. 2-59. Units with drums have the drums mounted to the rear. Install the basket mounting pins and spiral pins. Also install attach the scrapers to the drum/basket frames with the U-bolts (901837) and 1/2"-13UNC locknuts (9800) provided.

5. Repeat for each drum/basket assembly.

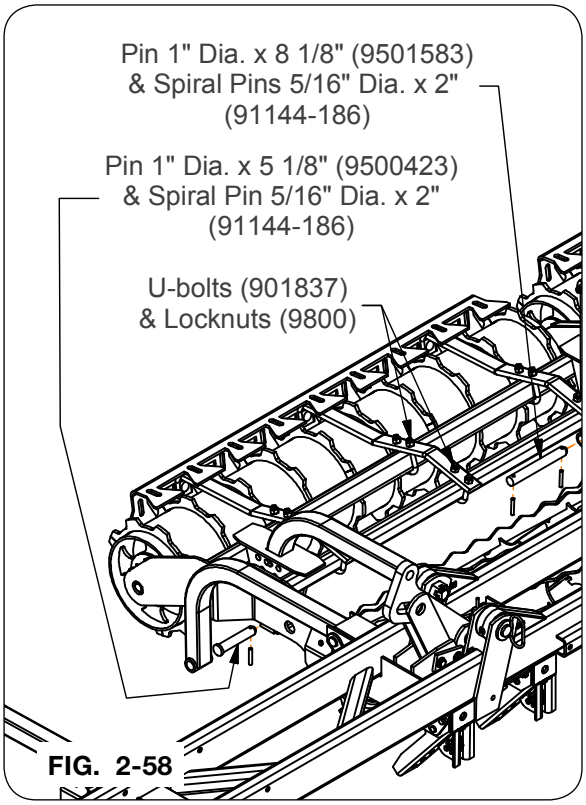
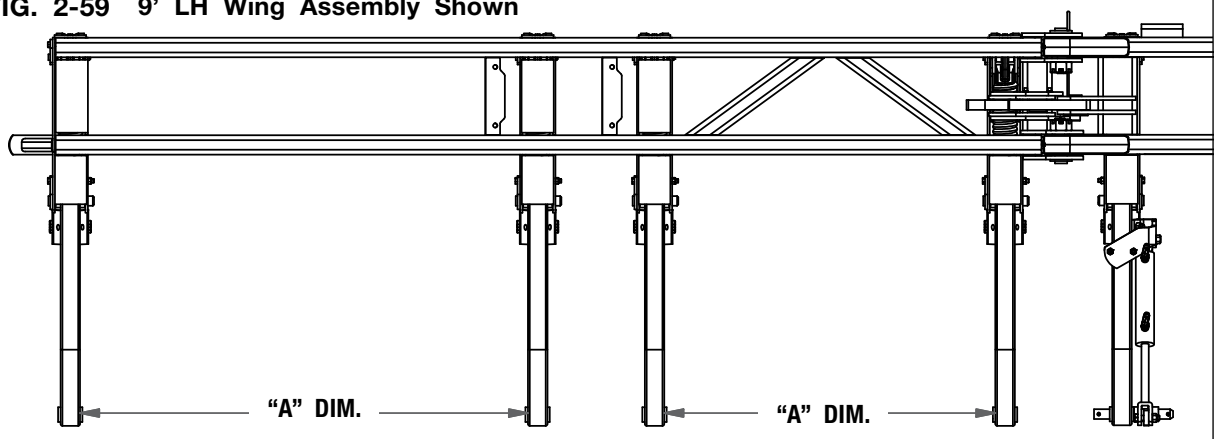


FIG. 2-58

TABLE 2-4		
"A" DIM. (FIG. 2-59)	BASKET WIDTH	FRAME WIDTH
22"	3'	35"
34"	4'	47"
46"	5'	59"
58"	6'	71"

FIG. 2-59 9' LH Wing Assembly Shown



Basket & Frame Assembly

1. Connect the Rolling Harrow to a tractor. Raise the machine, but keep the wings unfolded. Install the transport locks on the main frame axle cylinders. Block the wings to remain level with the main frame. Lower the machine onto the transport locks and blocking. Relieve the hydraulic oil pressure, see the power unit operator's manual for the proper procedure. Block the wheels on the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.

2. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) and wing parts box/crate (73969B 47'-49' machines, 73970B 51'-55' machines, 73971B - model 1245 57'-63' machines, & 77070B - model 1245D 57'-63' machines) the rubber basket/arm pivot covers (88826). There is a rubber cover for each basket mounting arm on the machine. Install the rubber basket arm pivot covers over the bent arms. See Fig. 2-60.

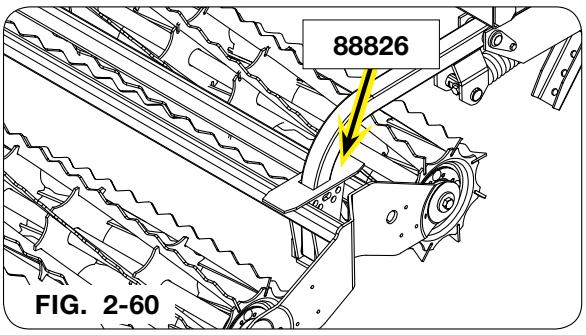


FIG. 2-60

3. Locate in the base parts box/crate (73972B-1245, or 76561B-1245D) the three bolt-on basket brackets (79921B) and three parts bags (88596), which includes the following parts per bag: one pin (9500423), four U-bolts (901837), one spiral pin (91144-186) and eight locknuts (9800).

4. Mount the bolt-on brackets loosely to the three main frame basket and frame 5' assemblies with four 1/2"-13UNC U-bolts (901837) and eight 1/2"-13UNC locknuts (9800) (Fig. 2-61).

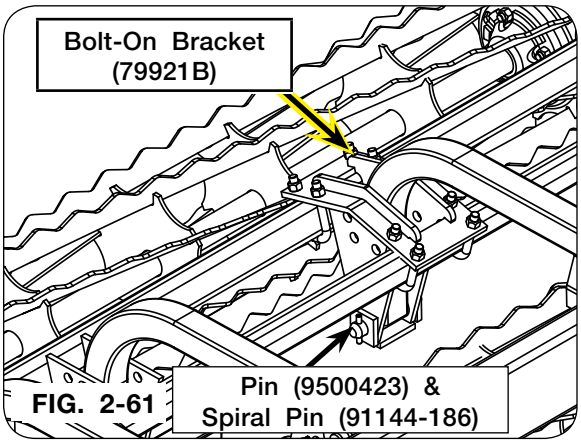


FIG. 2-61

5. Locate in the base parts box and wing parts box the 1" dia. x 5 1/8" basket mounting pins (9500423) and 5/16" dia. x 2" spiral pins (91144-186).

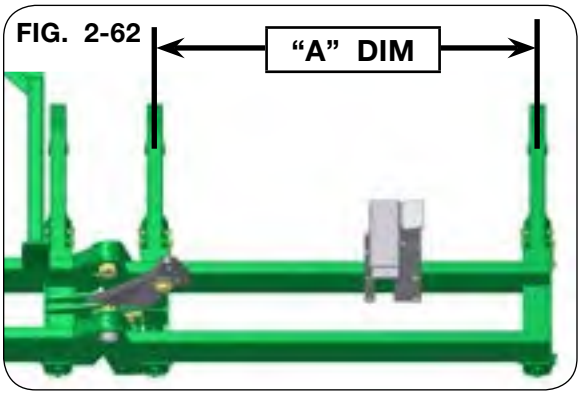
6. Using a safe lifting device rated at 350 lbs. minimum, lift basket assembly into position on the mounting arms. Identify baskets and mating wings using Table 2-5 and Fig. 2-62. Position the aggressive basket forward unless instructed otherwise. Install the basket mounting pins and spiral pins.

7. Repeat for each basket assembly.

TABLE 2-5

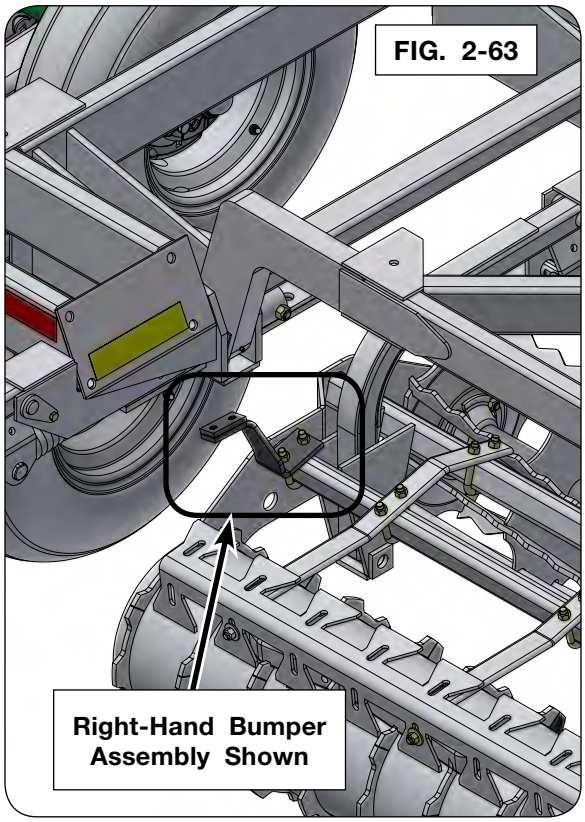
"A" DIM. (FIG. 2-62)	BASKET WIDTH	FRAME WIDTH
22"	3'	35"
34"	4'	47"
46"	5'	59"
58"	6'	71"

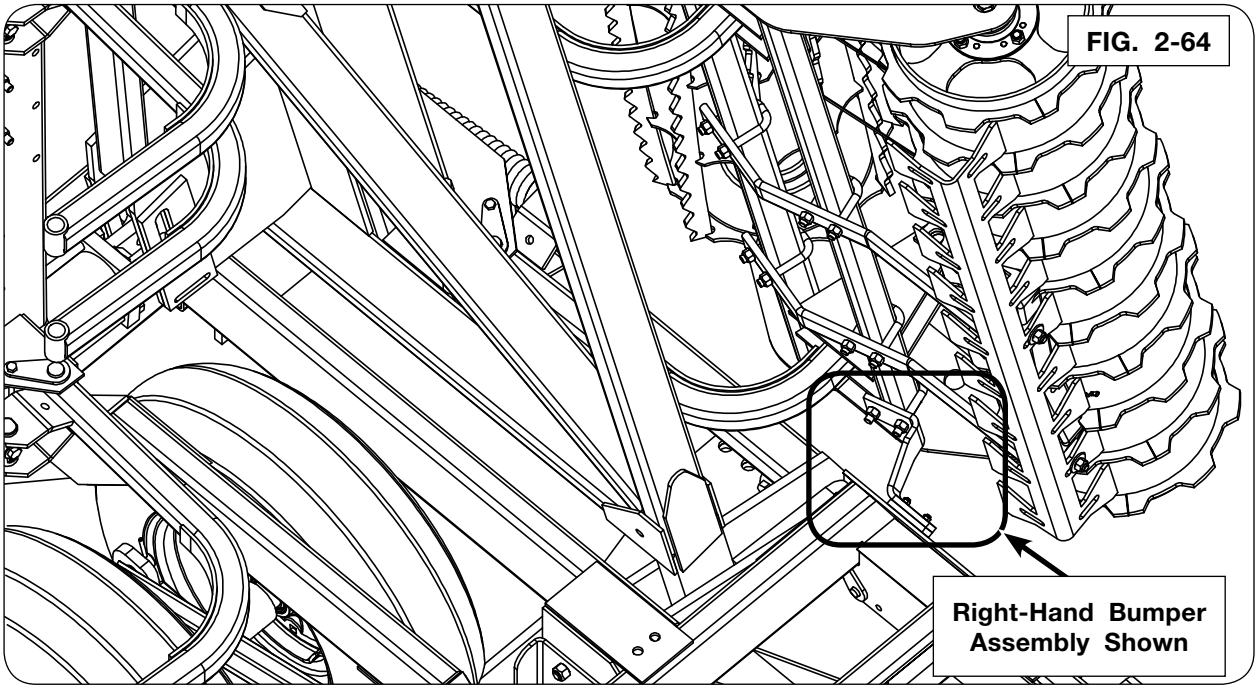
FIG. 2-62



Bumper Assembly

1. Attach the left-hand and right-hand bumper assemblies to the inner wing basket frame assembly as shown in FIG. 2-63 & FIG. 2-64.





Optional Leveler Bar Assembly

1. Connect the Rolling Harrow to a tractor. Raise the machine, but keep the wings unfolded. Install the transport locks on the main frame axle cylinders. Block the wings to remain level with the main frame. Lower the machine onto transport locks and blocking. Relieve the hydraulic oil pressure, see the power unit operator's manual for the proper procedure. Block the wheels on the machine to keep it from moving. Set the vehicle parking brake, shut off the engine and remove the ignition key.

⚠ WARNING

- **FALLING EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED.**

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

2. See Adjustments Section for procedure to adjust leveling bar tension.

3. Determine the style of leveler bar to be installed and follow instructions for that style. Unverferth Manufacturing does not recommend mixing leveler bar styles on a machine. See torque chart for proper tightening of all leveler bar hardware.

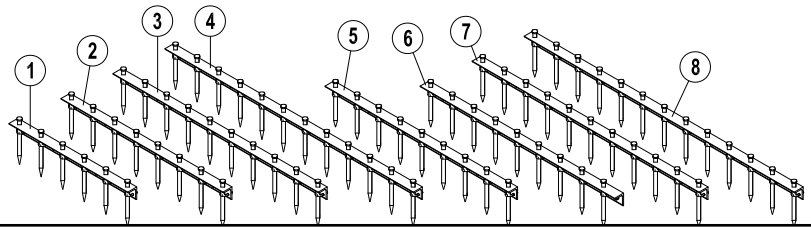
Optional Leveler Bar Assembly (continued)

Spike Tooth Leveler Bar

1. Refer to chart below for determining which leveler bars are required for each machine section.
2. Remove the 5/8"-11UNC x 1 1/2" capscrews (9390-122), square washers (83284), and 5/8"-11UNC locknuts (9801) from the angle of the leveler bar assembly (Fig. 2-65).
3. Center the leveler bar assembly between the mounting arms and align with the proper set of mounting holes. Mount the spike leveler bars in the lowest holes on the mounting arms unless directed otherwise. Place the flats of the angles against the mounting arms and insert the capscrews. Place the square washers inside the mounting arms and secure with the locknuts as shown in Fig 2-65.


Fig. 2-65

ITEM	PART NO.	DESCRIPTION	WING SIZES FOR 15' BASE UNITS								
			16'	17'	18'	19'	20'	21'	22'	23'	24'
1	71181	One Bar 3' Assembly	-	-	2	-	-	-	-	-	-
2	71182	One Bar 4' Assembly	-	-	2	4	2	2	-	3	3
3	71183	One Bar 5' Assembly	5	3	3	3	5	4	6	8	6
4	71579B	One Bar 6' Assembly	2	4	2	2	2	3	3	-	2
5	106919	One Bar 4 1/4' Assembly	-	-	-	-	-	-	-	1	1
6	72964B	One Bar 4 1/2' Assembly	1	1	1	1	1	1	1	1	1
7	72966B	One Bar 5 1/2' Assembly	1	1	1	1	1	-	-	-	-
8	72968B	One Bar 6 1/2' Assembly	-	-	-	-	-	1	1	-	-



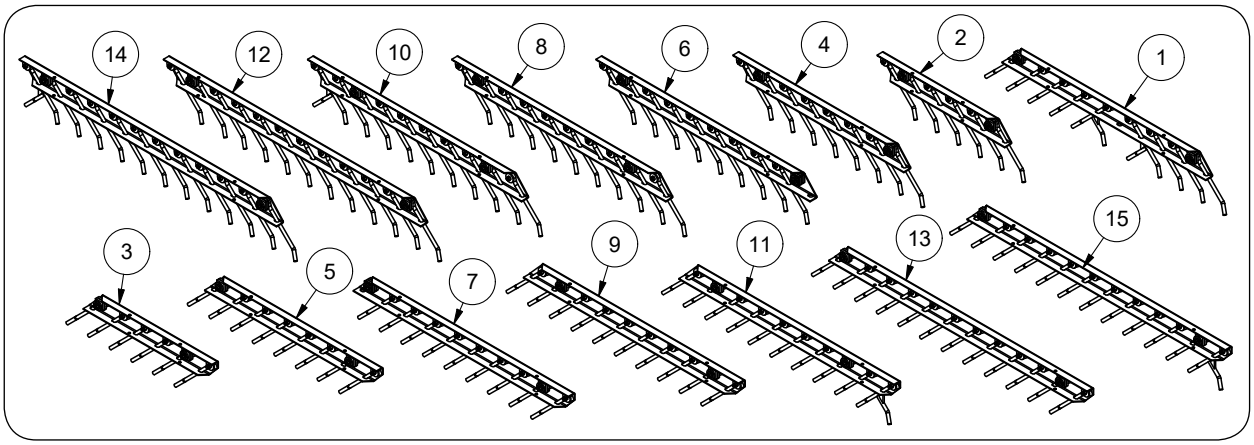
Optional Leveler Bar Assembly (continued)

Diagonal Tooth Leveler Bar

Diagonal tooth leveler bars come in right-hand and left-hand assemblies. The teeth will point diagonally to the outside of the machine on each assembly.

1. Use the chart below and the diagonal tooth leveler bar layouts to identify the bars needed for your machine.

ITEM	PART NO.	DESCRIPTION	WING SIZES FOR 15' BASE UNITS								
			16'	17'	18'	19'	20'	21'	22'	23'	24'
1	74688B	One Bar Diagonal 5 1/2' Center Assembly	1	1	1	1	1	1	1	1	1
2	74680B	One Bar Diagonal 3' RH Assembly	-	-	1	-	-	-	-	-	-
3	74679B	One Bar Diagonal 3' LH Assembly	-	-	1	-	-	-	-	-	-
4	74682B	One Bar Diagonal 4' RH Assembly	-	-	1	2	1	1	-	2	2
5	74681B	One Bar Diagonal 4' LH Assembly	-	-	1	2	1	1	-	2	2
6	76908B	One Bar Diagonal 4 1/2' RH Asy	1	1	1	1	2	1	2	1	2
7	76909B	One Bar Diagonal 4 1/2' LH Asy	1	1	1	1	2	1	2	1	2
8	74684B	One Bar Diagonal 5' RH Assembly	1	-	-	-	-	1	1	2	-
9	74683B	One Bar Diagonal 5' LH Assembly	1	-	-	-	-	1	1	2	-
10	76911B	One Bar Diagonal 5 1/2' RH-Y Asy	1	1	1	1	1	-	-	1	1
11	76912B	One Bar Diagonal 5 1/2' LH-Y Asy	1	1	1	1	1	-	-	1	1
12	74686B	One Bar Diagonal 6' RH Assembly	1	2	1	1	1	1	1	-	1
13	74685B	One Bar Diagonal 6' LH Assembly	1	2	1	1	1	1	1	-	1
14	74216B	One Bar Diagonal 6 1/2' RH-Y Assembly	-	-	-	-	-	1	1	-	-
15	76910B	One Bar Diagonal 6 1/2' LH-Y Assembly	-	-	-	-	-	1	1	-	-



Optional Leveler Bar Assembly (continued)

2. The dimensions on the diagonal tooth leveler bar layouts identify which holes must be used for mounting. The diagonal bars attach to the machine's mounting arms using the 1/2"-13UNC x 3" carriage bolts (9388-110), two square washers (3788B), 1/4" thick flat washers (91069B), 1/2" USS washers (9405-088), and 1/2"-13UNC locknuts (9800) (Fig. 2-66). Often, this mounting hardware will not be assembled to the diagonal bar at the correct location shown by the layouts. Switch mounting hardware to the position shown on Diagonal Tooth One-Bar Layouts in this section.

Fig. 2-66

Fig. 2-67

3. Mount the diagonal bar to the MIDDLE hole on the machine's mounting arms (Fig. 2-66).

IMPORTANT

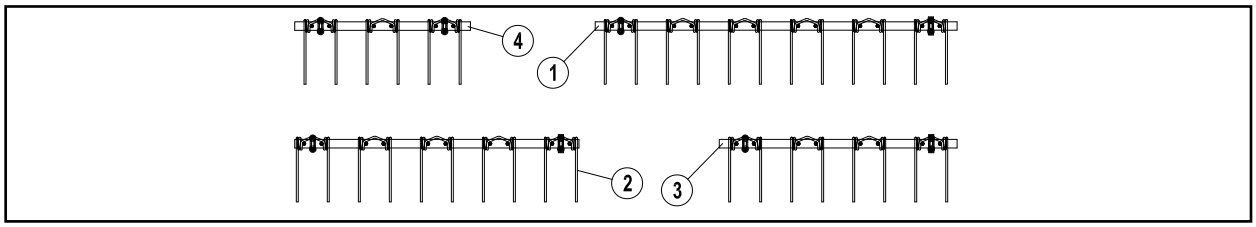
- *Machine damage will result if the diagonal leveler bars are installed in any hole in the machine's mounting arms other than the middle.*

Optional Leveler Bar Assembly (continued)

Coil Tine Leveler Bar

1. Refer to the chart below to identify the coil tine leveler bars needed for each section.

ITEM	PART NO.	DESCRIPTION	WING SIZES FOR 15' BASE UNITS								
			16'	17'	18'	19'	20'	21'	22'	23'	24'
1	86569B	One Bar Coil-Tine 6' Assembly	2	4	2	2	2	4	4	-	2
2	84480	One Bar Coil-Tine 5' Assembly	7	5	5	5	7	5	7	9	7
3	84481	One Bar Coil-Tine 4' Assembly	-	-	2	4	2	2	-	4	4
4	84482	One Bar Coil-Tine 3' Assembly	-	-	2	-	-	-	-	-	-



2. Remove the 7/16-14 locknuts (9799), 7/16 flat washers (9405-082), and U-bolts (95914) from the coil tine bar assemblies (Fig. 2-68).


Fig. 2-68

3. Mount the tine bar clamps in the lower two holes of the machine mounting arm unless directed otherwise. Place the clamp castings (84720) against the front of the machine mounting arms, put the tine bar assemblies in the clamps, and install the U-bolts (95914). Place the 7/16" flat washers (9405-082) against the back of the mounting arm and install the 7/16"-14UNC locknuts (9799). Center the tine bar between the machine mounting arms before tightening hardware.

4. Identify the tines behind the base frame tires and **wing transport tires** that could rotate forward into the tires. These tines must have the anti-rotation clips (84837) installed to prevent tire damage. Check the hydraulic base parts bundle and wing transport wheel parts bundle for the clips.

IMPORTANT

- *Operating coil tine leveler bars without tine anti-rotation clips installed may cause tire damage.*

Optional Leveler Bar Assembly (continued)

5. Remove both 5/16”-18UNC x 1 3/4” capscrews (9390-062) and 5/16”-18UNC locknuts (9928) on a tine directly behind a base frame or wing transport tire. See Fig 2-69.


Fig. 2-69

6. Attach clip, bushing, capscrew, and 3/8”-16UNC centerline locknut provided in hydraulic bundle (Fig 2-70). Then install the other capscrew and locknut previously removed. Tighten hardware.


Fig. 2-70

IMPORTANT

- *Clip 84837 must be assembled against the tine bar and hooked around the coil tine.*

7. Check that coil tine cannot rotate into tires when clip is properly installed. If tines can still rotate into tires, loosen U-bolts on tine bar mounts and rotate tine bar until tines cannot touch tires. Re-tighten U-bolts. Grind lip on clip to set clearance if necessary.

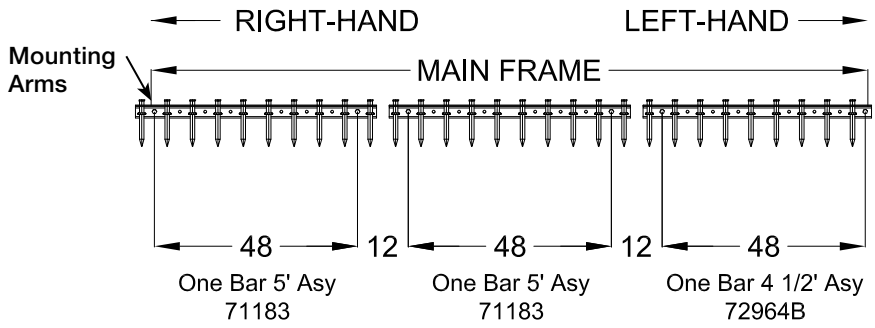
Spike Tooth One-Bar Layouts

Use these layouts to locate spike tooth one-bars as shown.

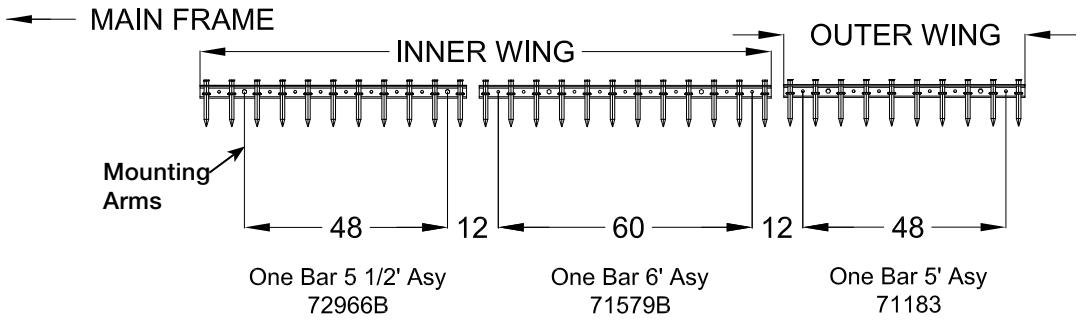
NOTE: Views are shown from the front of the unit. The dimensions represent the mounting arm locations.

NOTE: The center mount on the main frame is not used on the leveling bar. This should be pinned up, not connected to the leveling bar.

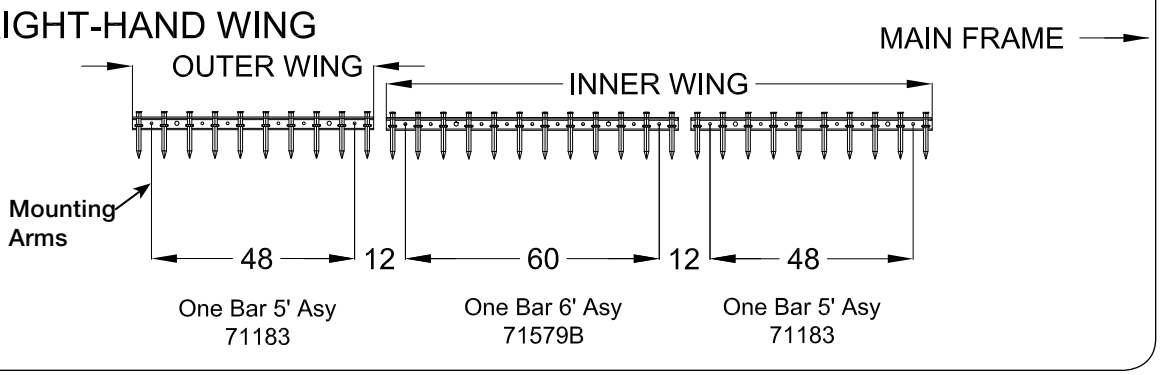
MAIN FRAME



16' LEFT-HAND WING

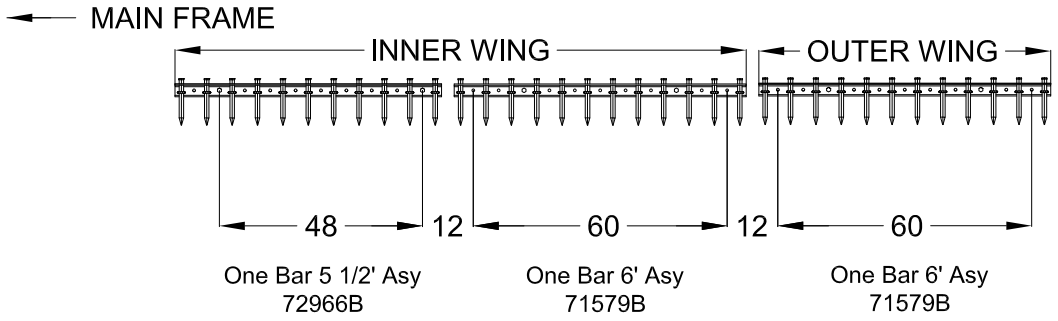


16' RIGHT-HAND WING

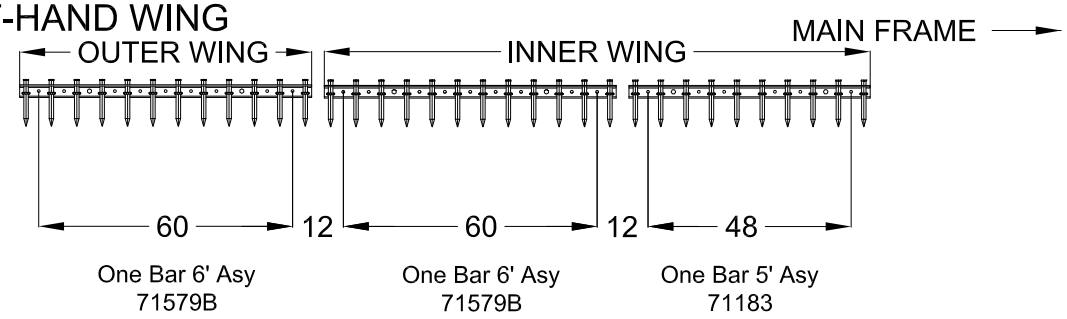


Spike Tooth One-Bar Layouts (continued)

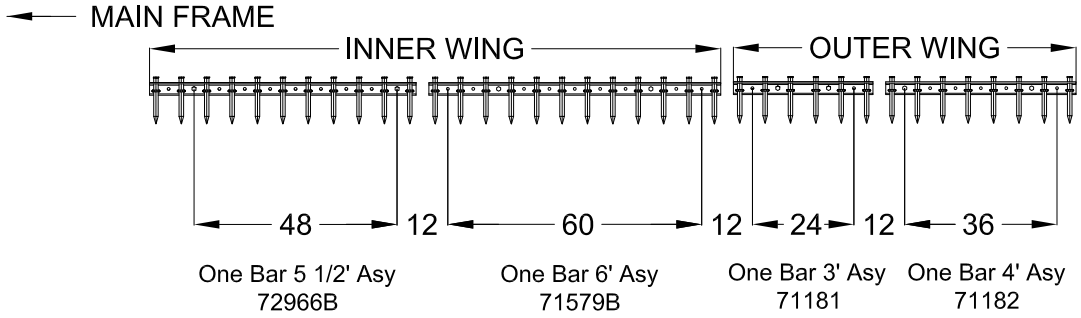
17' LEFT-HAND WING



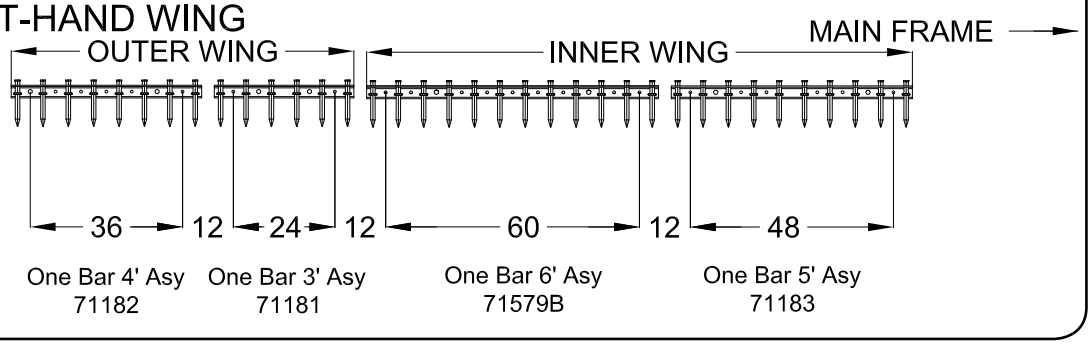
17' RIGHT-HAND WING



18' LEFT-HAND WING

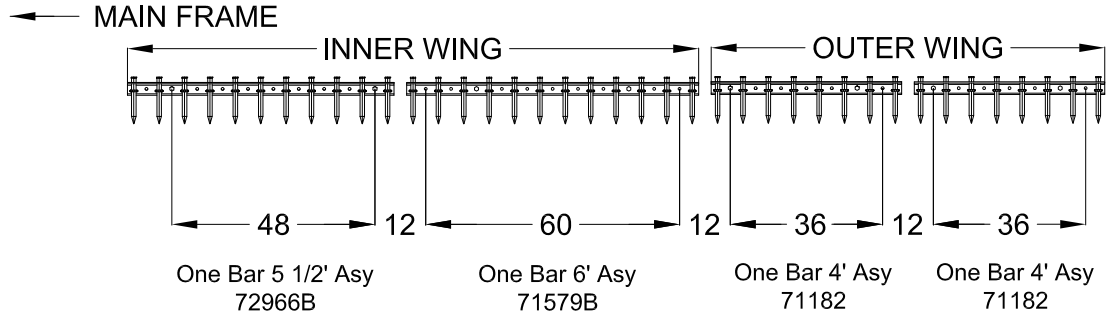


18' RIGHT-HAND WING

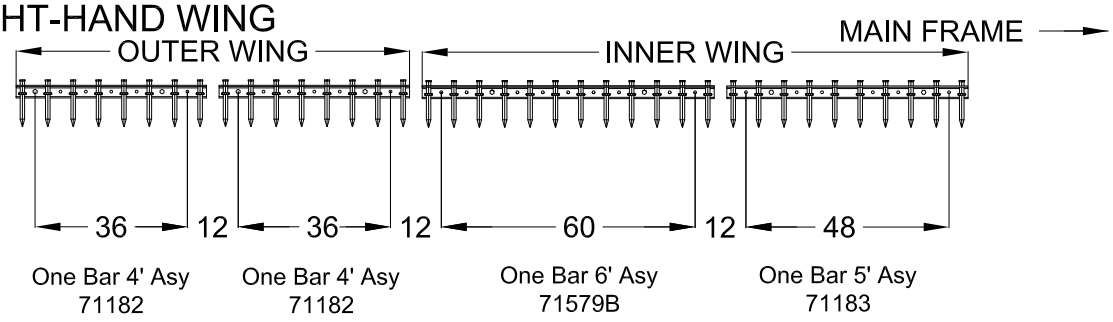


Spike Tooth One-Bar Layouts (continued)

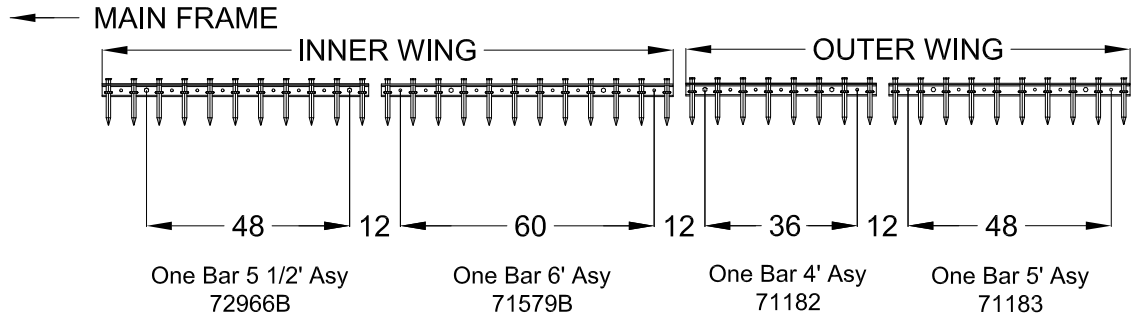
19' LEFT-HAND WING



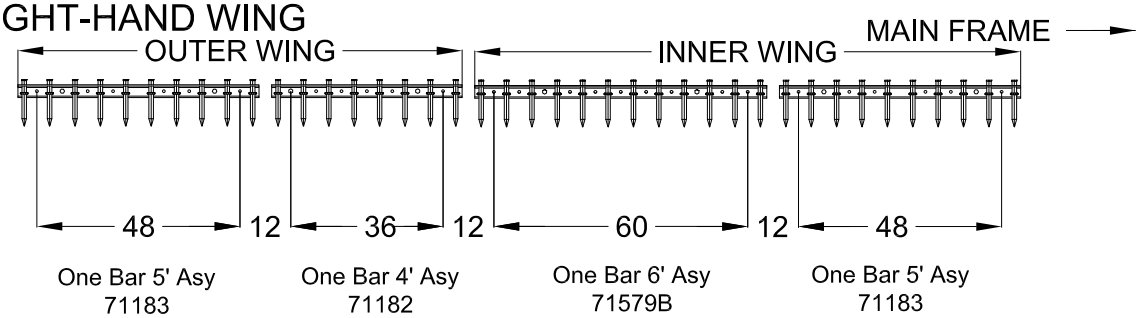
19' RIGHT-HAND WING



20' LEFT-HAND WING

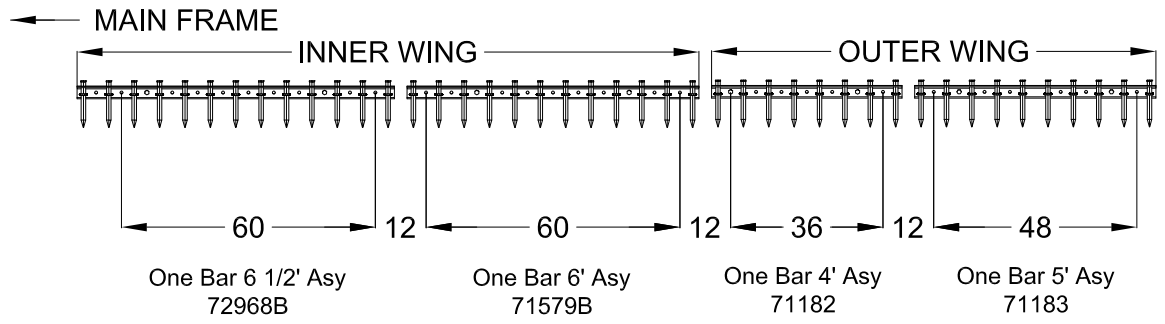


20' RIGHT-HAND WING

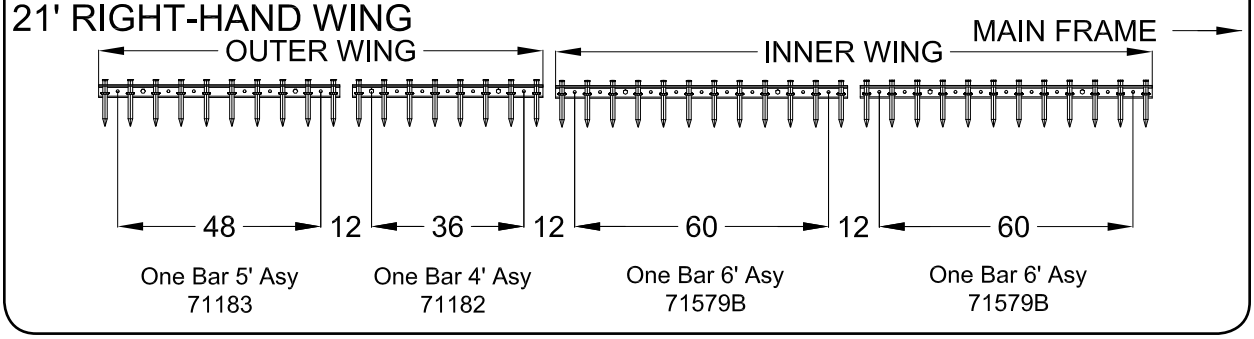


Spike Tooth One-Bar Layouts (continued)

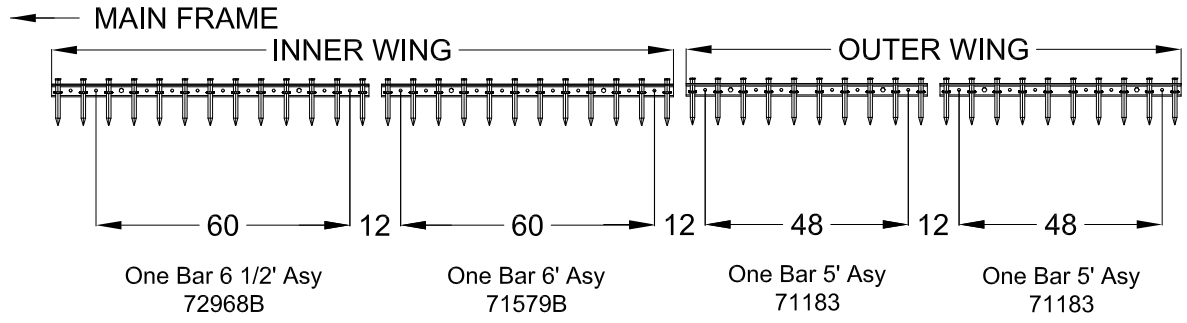
21' LEFT-HAND WING



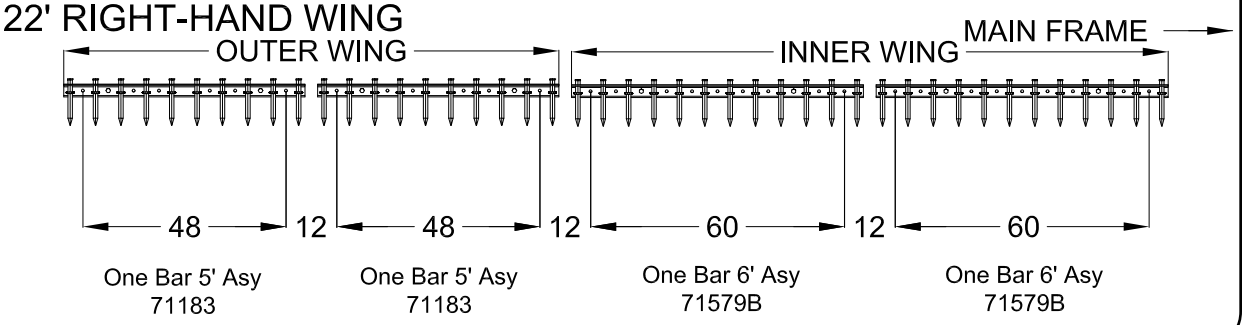
21' RIGHT-HAND WING



22' LEFT-HAND WING

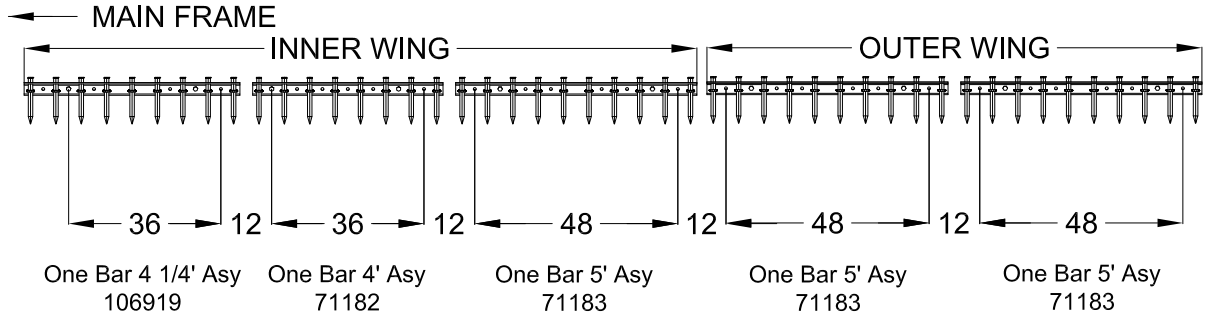


22' RIGHT-HAND WING

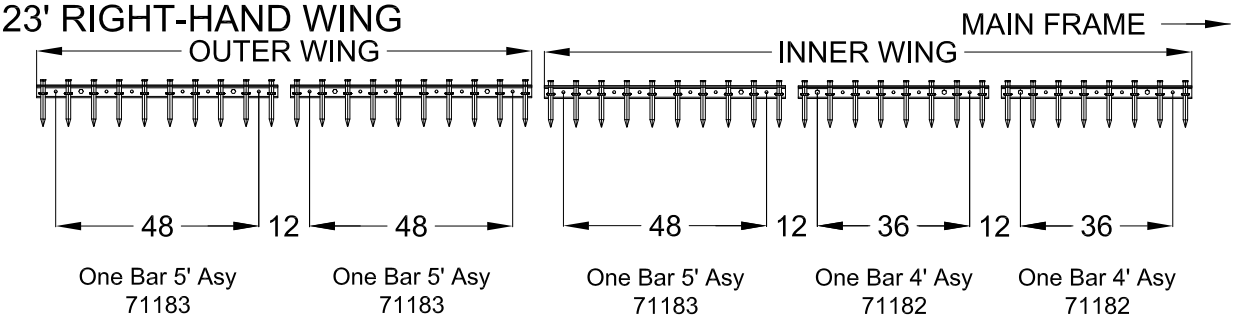


Spike Tooth One-Bar Layouts (continued)

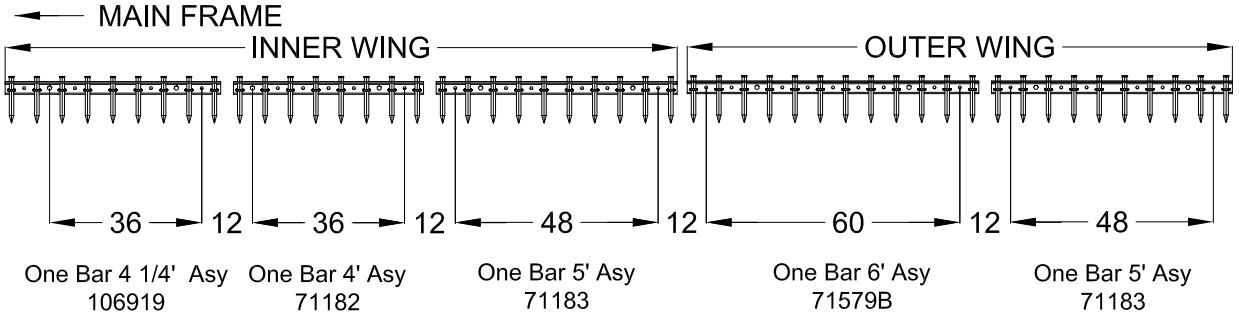
23' LEFT-HAND WING



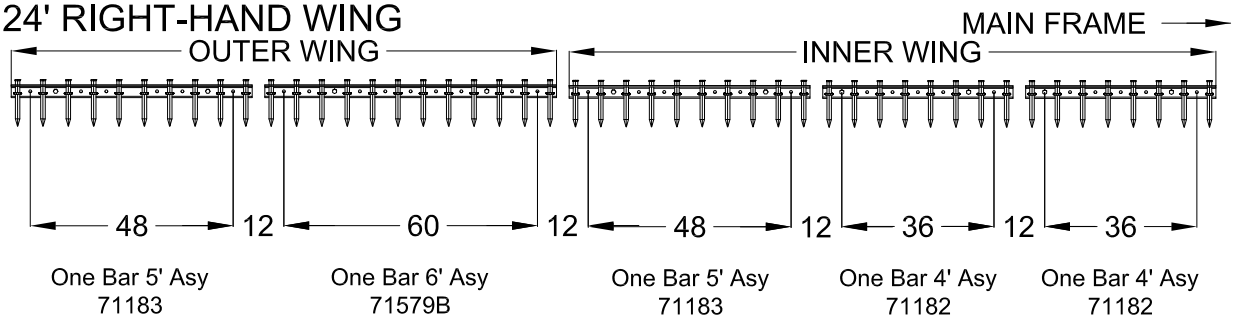
23' RIGHT-HAND WING



24' LEFT-HAND WING



24' RIGHT-HAND WING



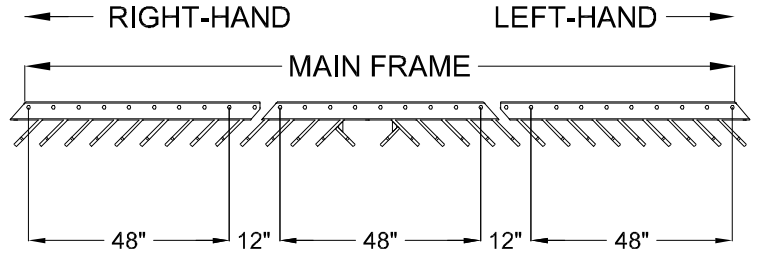
Diagonal Tooth One-Bar Layouts

Use these layouts to locate diagonal tooth one-bars with "Y" tooth as shown.

NOTE: Views are shown from the front of the unit. The dimensions represent the mounting arm locations.

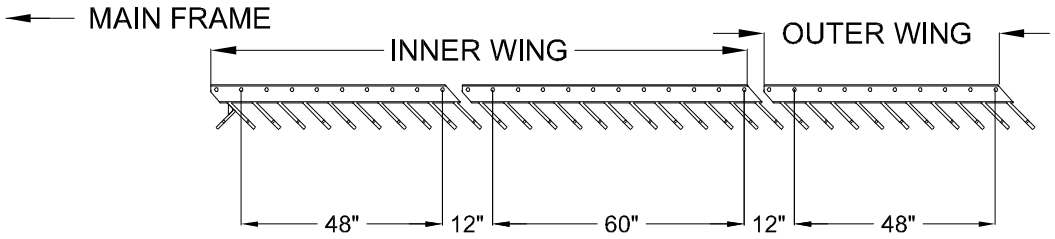
NOTE: The center mount on the main frame is not used on the leveling bar. This should be pinned up, not connected to the leveling bar.

MAIN FRAME



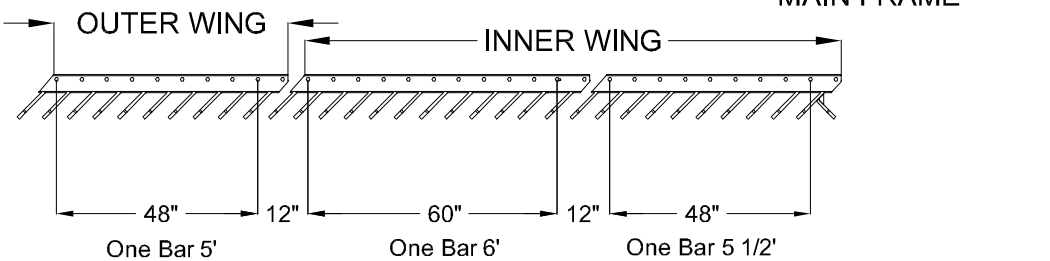
One Bar 4 1/2' RH Asy 76908B | One Bar 5 1/2' CTR Asy 74688B | One Bar 4 1/2' LH Asy 76909B

16' LEFT-HAND WING



One Bar 5 1/2' LH-Y Asy 76912B | One Bar 6' LH Asy 74685B | One Bar 5' LH Asy 74683B

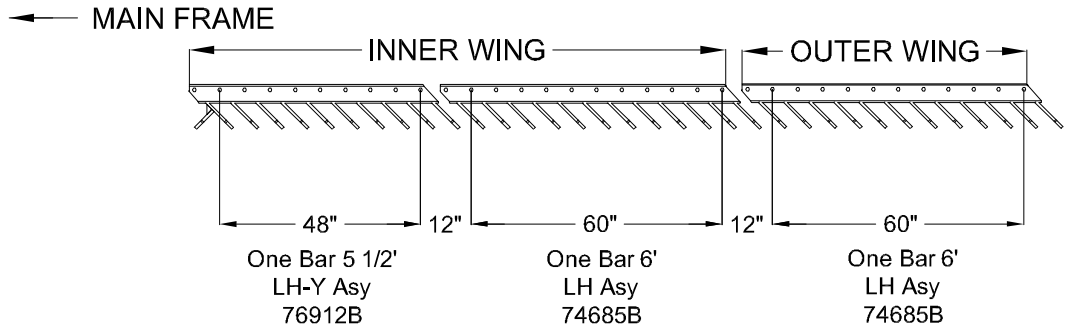
16' RIGHT-HAND WING



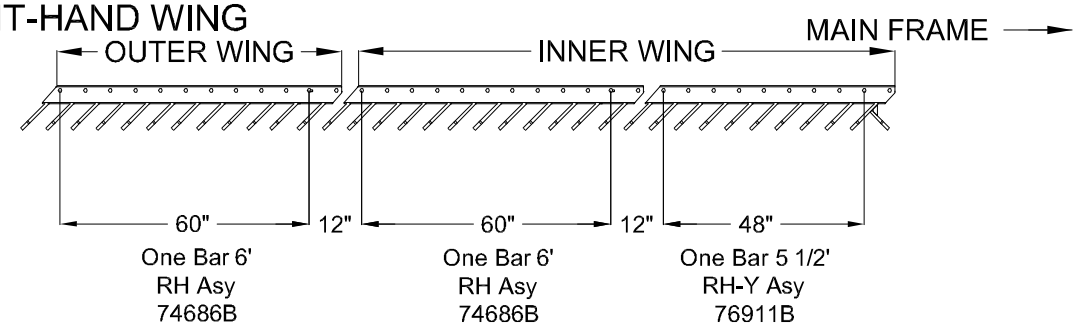
One Bar 5' RH Asy 74684B | One Bar 6' RH Asy 74686B | One Bar 5 1/2' RH-Y Asy 76911B

Diagonal Tooth One-Bar Layouts (continued)

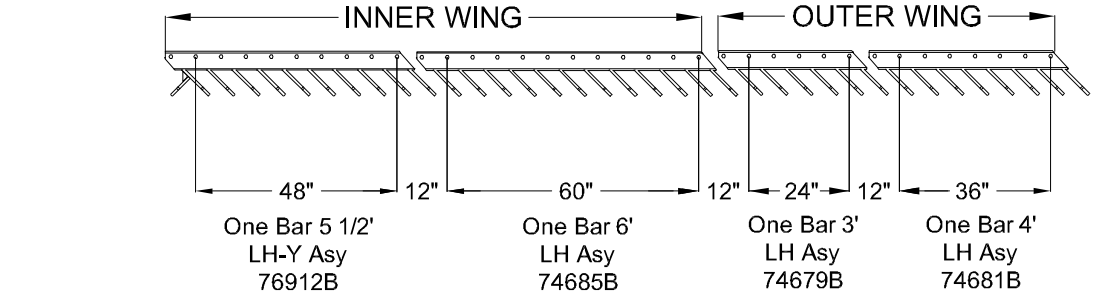
17' LEFT-HAND WING



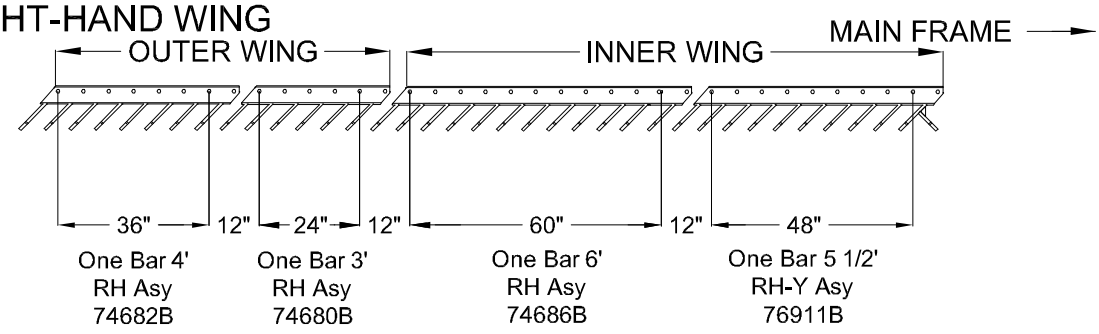
17' RIGHT-HAND WING



18' LEFT-HAND WING

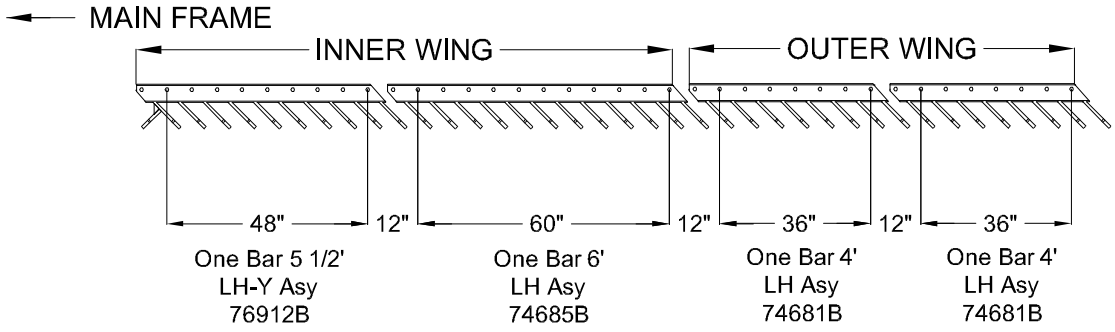


18' RIGHT-HAND WING

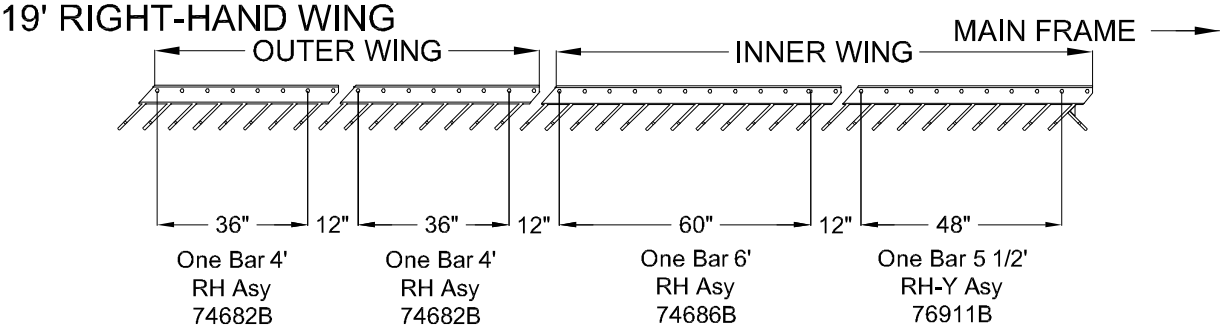


Diagonal Tooth One-Bar Layouts (continued)

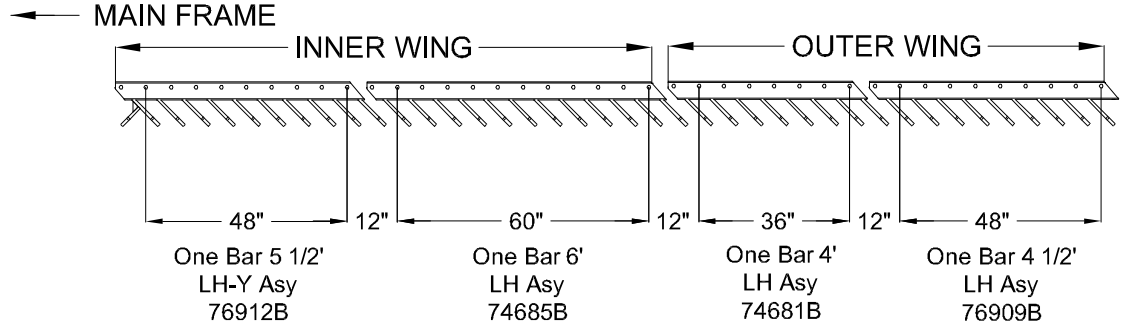
19' LEFT-HAND WING



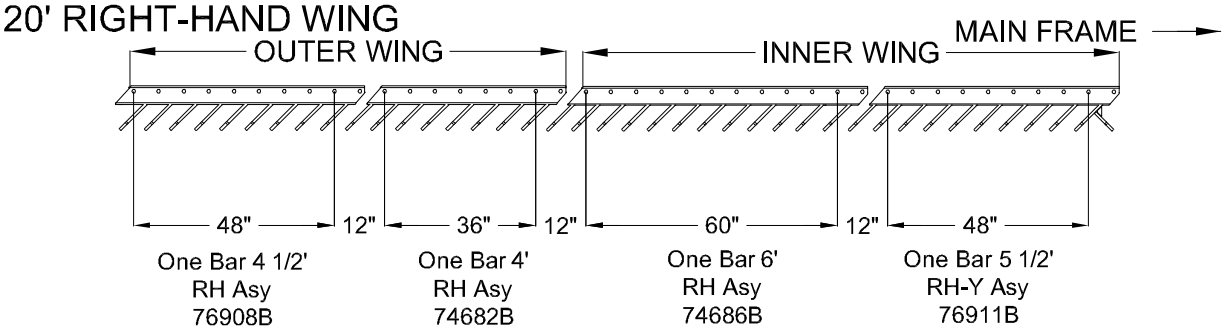
19' RIGHT-HAND WING



20' LEFT-HAND WING

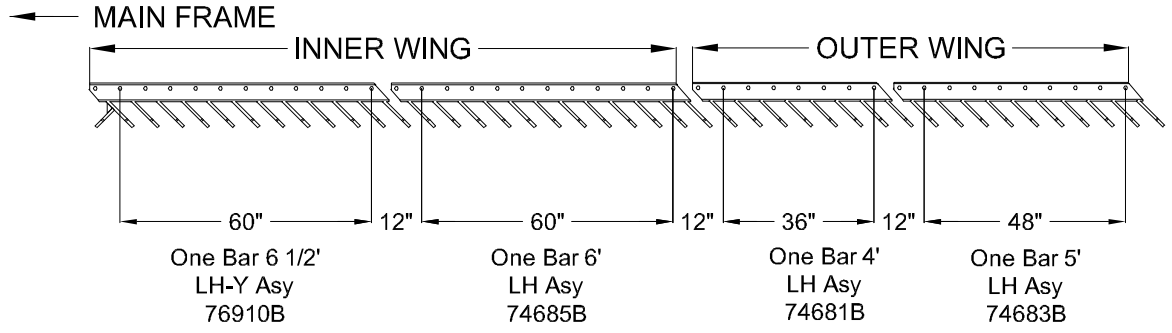


20' RIGHT-HAND WING

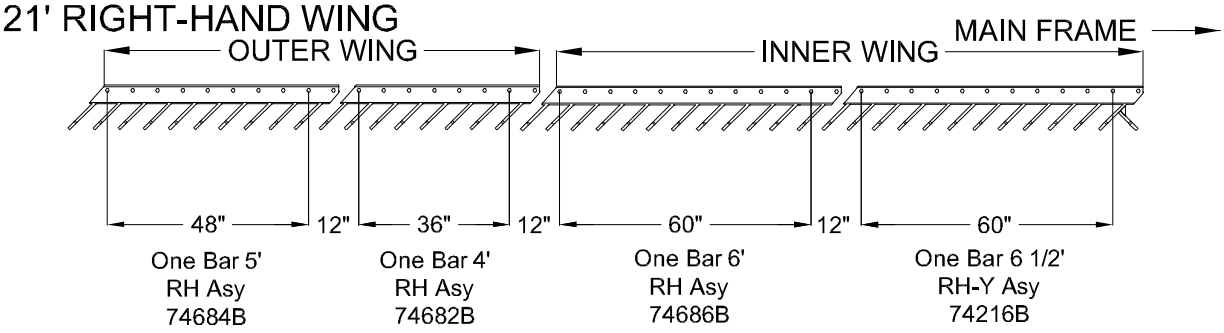


Diagonal Tooth One-Bar Layouts (continued)

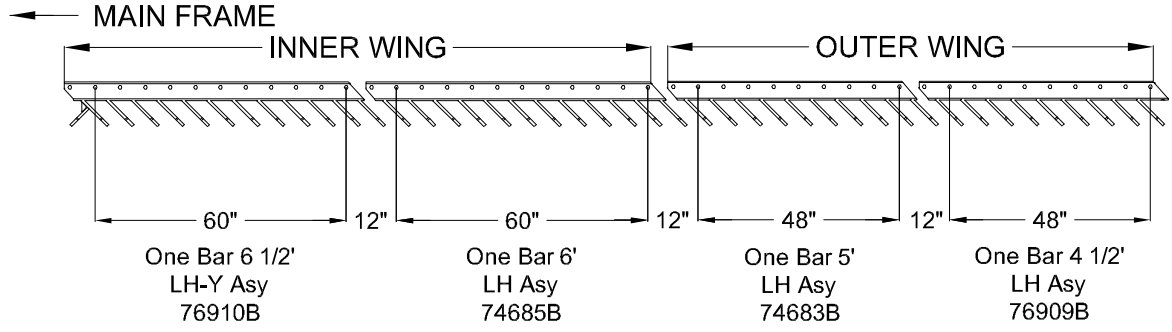
21' LEFT-HAND WING



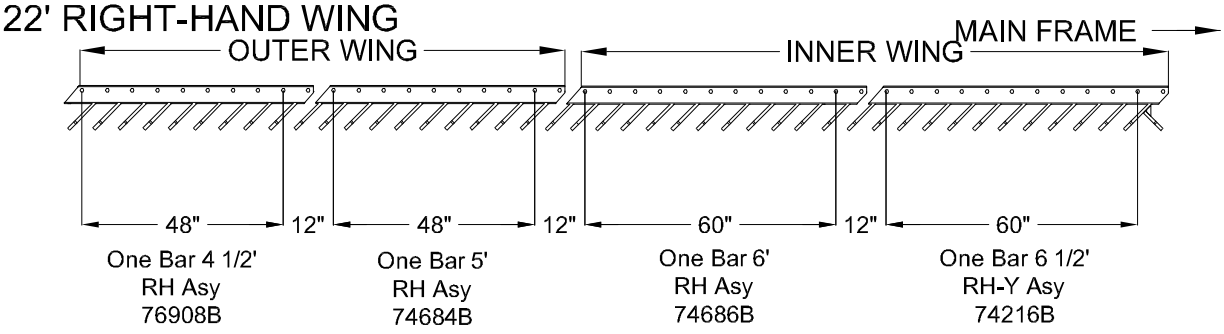
21' RIGHT-HAND WING



22' LEFT-HAND WING

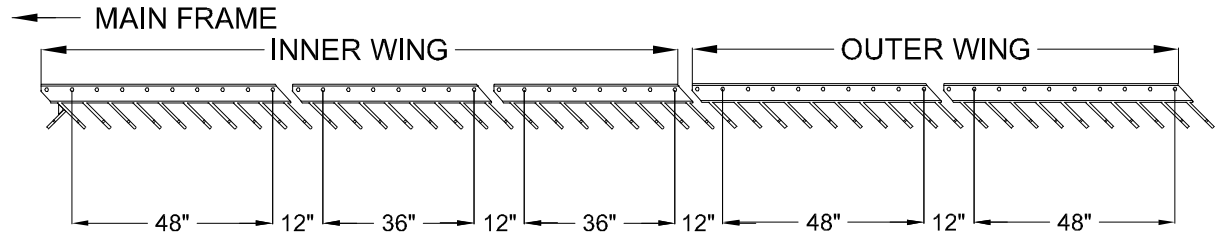


22' RIGHT-HAND WING



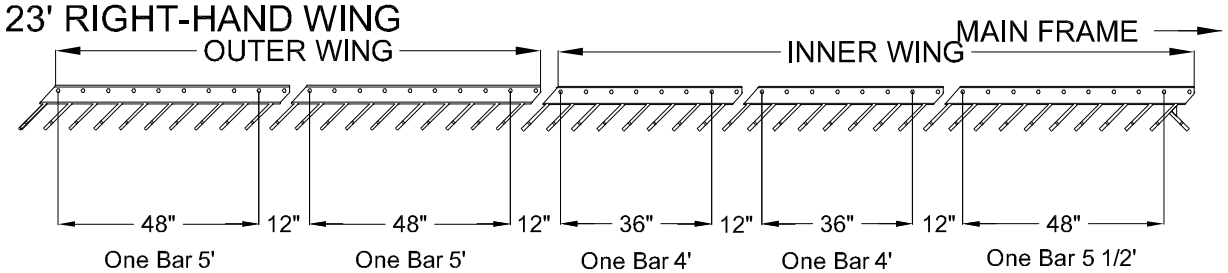
Diagonal Tooth One-Bar Layouts (continued)

23' LEFT-HAND WING



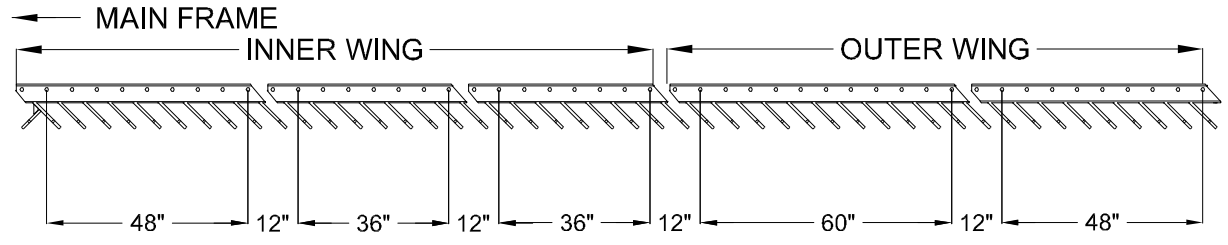
One Bar 5 1/2' LH-Y Asy 76912B	One Bar 4' LH Asy 74681B	One Bar 4' LH Asy 74681B	One Bar 5' LH Asy 74683B	One Bar 5' LH Asy 74683B

23' RIGHT-HAND WING



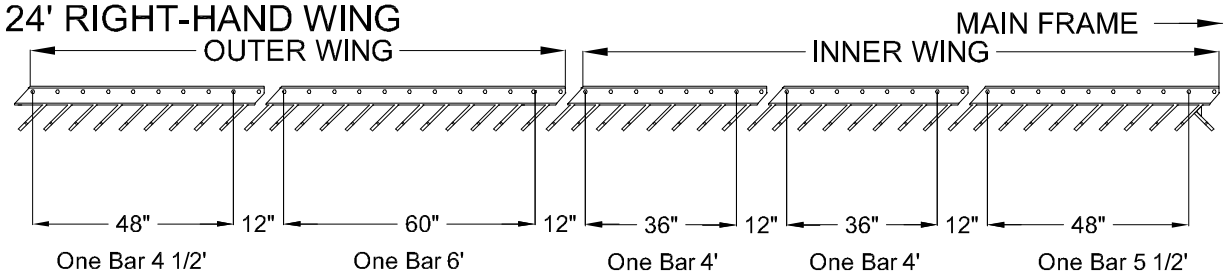
One Bar 5' RH Asy 74684B	One Bar 5' RH Asy 74684B	One Bar 4' RH Asy 74682B	One Bar 4' RH Asy 74682B	One Bar 5 1/2' RH-Y Asy 76911B

24' LEFT-HAND WING



One Bar 51/2' LH-Y Asy 76912B	One Bar 4' LH Asy 74681B	One Bar 4' LH Asy 74681B	One Bar 6' LH Asy 74685B	One Bar 4 1/2' LH Asy 76909B

24' RIGHT-HAND WING



One Bar 4 1/2' RH Asy 76908B	One Bar 6' RH Asy 74686B	One Bar 4' RH Asy 74682B	One Bar 4' RH Asy 74682B	One Bar 5 1/2' RH-Y Asy 76911B

Optional Reinforcement Disc Part #74964

This option is for reinforcing both the regular and aggressive basket in rocky soils. This accessory will provide additional stiffness to your basket.

⚠ WARNING

- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**

IMPORTANT

- *Disconnect harrow completely from tractor before welding on equipment. Damage may occur to the electrical system.*

1. Position discs inside of the basket by inserting horizontally between blades, and then rotating vertically.

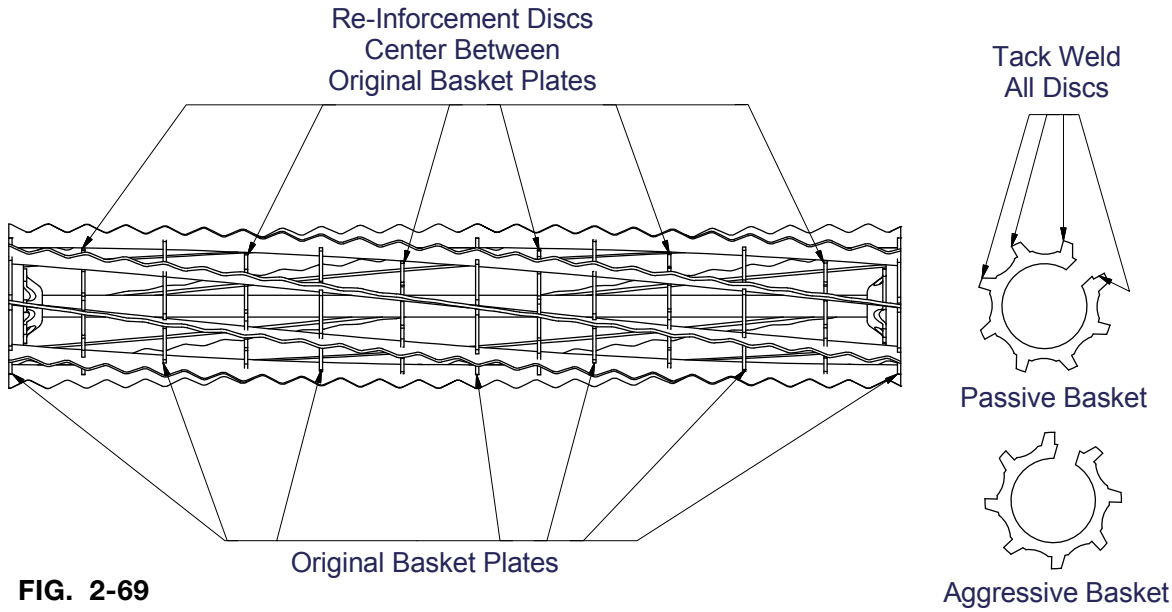


FIG. 2-69

2. Center reinforcement discs between original basket plates and hold into position using locking pliers or clamps (Fig. 2-70).

FIG. 2-70

IMPORTANT

- *Be sure that all welding is done by qualified personnel. Failure to do so could result in damage to your ROLLING HARROW.*

Optional Reinforcement Disc Part #74964 (continued)

3. Remove powder coating before welding. Secure discs into place by tack welding. Weld where discs and basket blades are in contact (Fig. 2-71 & 2-72).

Aggressive Basket

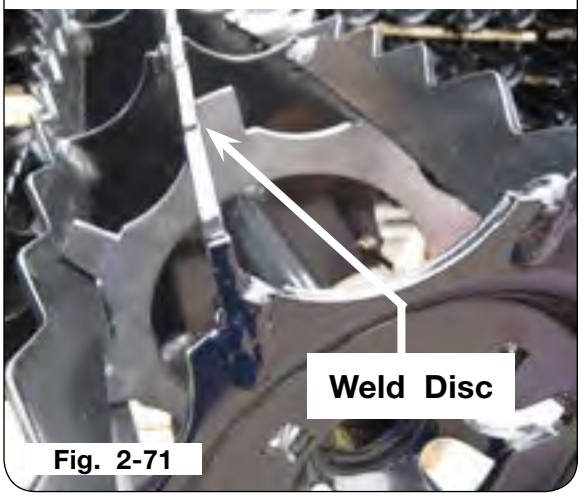


Fig. 2-71

Passive Basket

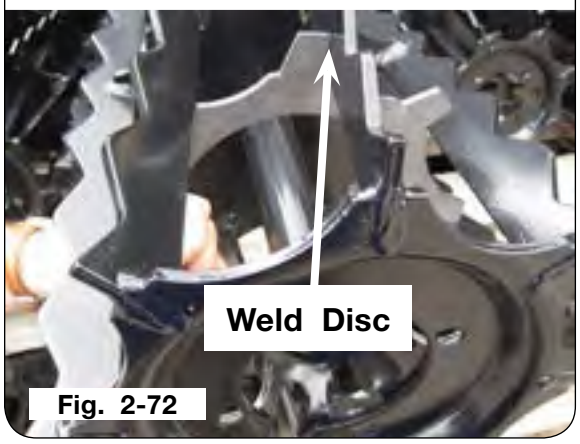


Fig. 2-72

4. Paint plates and repaint areas where welds have been made for rust protection.

Optional Pilot Check Valve (Part #91240)

This option is for use when teeing the Rolling Harrow hydraulics to the primary tillage tools having rephasing hydraulic cylinders. This option prevents the ROLLING HARROW from drifting down from the transport position.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING HYDRAULIC SYSTEM. SEE TRACTOR OPERATOR'S MANUALS FOR PROPER PROCEDURE.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

Depressurize the hydraulic systems of the primary tillage tool and the ROLLING HARROW before beginning valve installation.

Install the pilot operated check valve onto the rear of the primary tillage tool. Connections from the rephase system must be installed into the ports of the valve that are closest together. Connections to the ROLLING HARROW system go into the other two ports.

Purge hydraulic system before use. Refer to primary tillage tool manual to purge that system. Refer to Purging A Hydraulic System in this section.

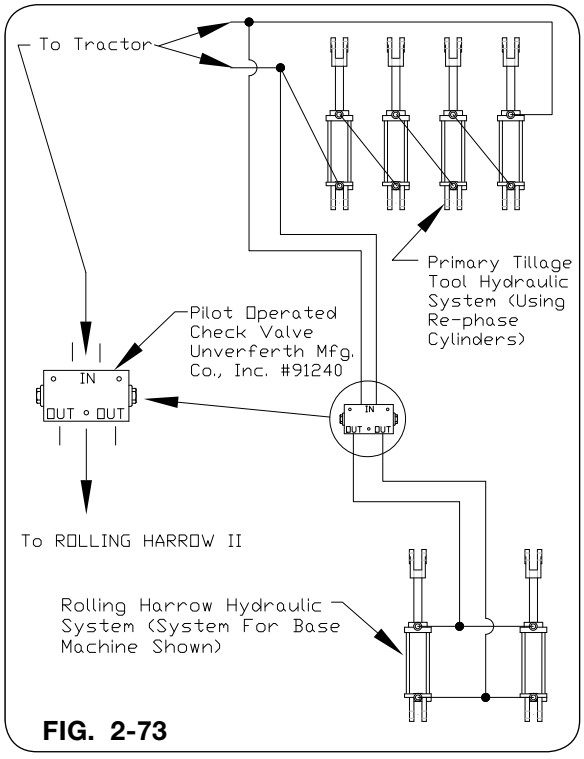


FIG. 2-73

Transport Marking & Light Kit (88278B)

Before installing this kit, lower machine completely to the ground and block securely. Set parking brake on tractor, release any pressure in hydraulic system, and shut tractor engine off.

Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

See your Unverferth dealer for additional brackets, reflectors, or lights to meet your requirements.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

Some frames may not have holes pre-drilled to receive light brackets. Customer must drill these holes per dimensions in these instructions.

NOTE: On some machines safety decals may be covered by light brackets. Contact your Unverferth dealer to order a new decal, and replace it on the machine in a visible location near the old decal in order to comply with ASABE standards.

Front, rear, left, and right are determined from the tractor operator's seat, facing forward.

Lights

1. Secure red lamp (9003877) and guard (73338B) to bracket, with red lens facing to the rear, using 1/2"-13UNC nut provided with lamp. Be careful not to overtighten and damage light. Repeat procedure on opposite side of machine.

FIG. 2-74

Transport Marking & Light Kit (88278B) (continued)

NOTE: Make certain the lights are clearly visible and no hoses or other components obstruct the view of the any lights from the rear of the machine and the amber lights from the front of the machine.

2. Secure light brackets (88824B) to the front, left-hand and right-hand side of the machine using 1/2”-13UNC x 1 1/4” capscrews (9390-100), and 1/2”-13UNC locknuts (9800) as shown in FIG. 2-75.

NOTE: Amber lens must always be to the outside of implement.

3. Secure double-sided amber lamp (9003876) to the light bracket (88042B) using 1/2”-13UNC nut provided, be sure not to overtighten (FIG. 2-75). Repeat procedure on opposite side of machine.

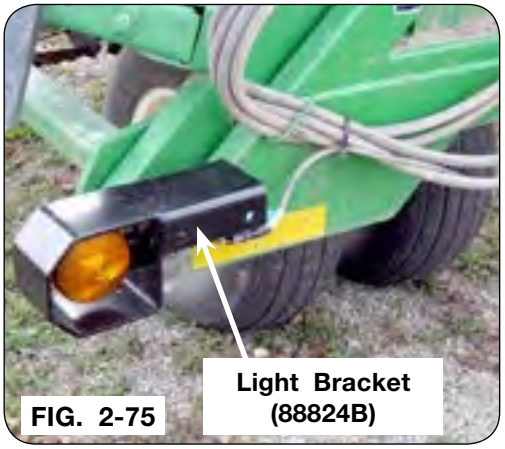


FIG. 2-75

Transport Markings

NOTE: Reflectors are as important as light locations in order to comply with ASABE standards. These reflectors measure 2” x 9”. Other reflectors will NOT comply with ASABE standards.

1. Inspect your Rolling Harrow for 2” x 9” amber (9003127), red (9003126), and fluorescent orange (9003125) transport markings.

Be sure reflectors are in locations shown in parts section of this manual.

These reflectors are required to comply with ASABE standards. If you do not meet the ASABE standard, contact your UNVERFERTH dealer to order reflectors needed.

Transport Marking & Light Kit (88278B) (continued)

Wiring Harness

When installing the harnesses, do not cut or break the wire coverings. Tie harnesses away from moving parts, such as cylinders and folding links. The wiring harnesses consist of four pieces, the main harness, the cross harness, and two extension harnesses.

The main harness has a 7-pin (round) plug conforming to SAE standards that connects to tractor or other towing vehicle. If your tractor or other towing vehicle does not have the mating socket connector, contact a respective dealer.

1. Route the main harness (22792) along the hitch frame. Allow sufficient slack at the hitch/tractor end for the machine to turn (approximately 4 ft.).

2. Attach the wiring extension (86467) to the main harness (22792).

The cross harness (22790) connects to the 6 pin connector of the main harness, both red taillights, and the extension harnesses.

3. Route the legs labeled “R” to the right side of machine, and the legs labeled “L” to the left side.

4. Connect the three pin connectors on the cross harness to the 3 pin connectors on the red taillights.

5. Coil up any excess and secure harness to frame with cable ties.

The extension harnesses (86700) connect the two pin connector of the cross harness to the two pin connectors on the amber extremity lights.

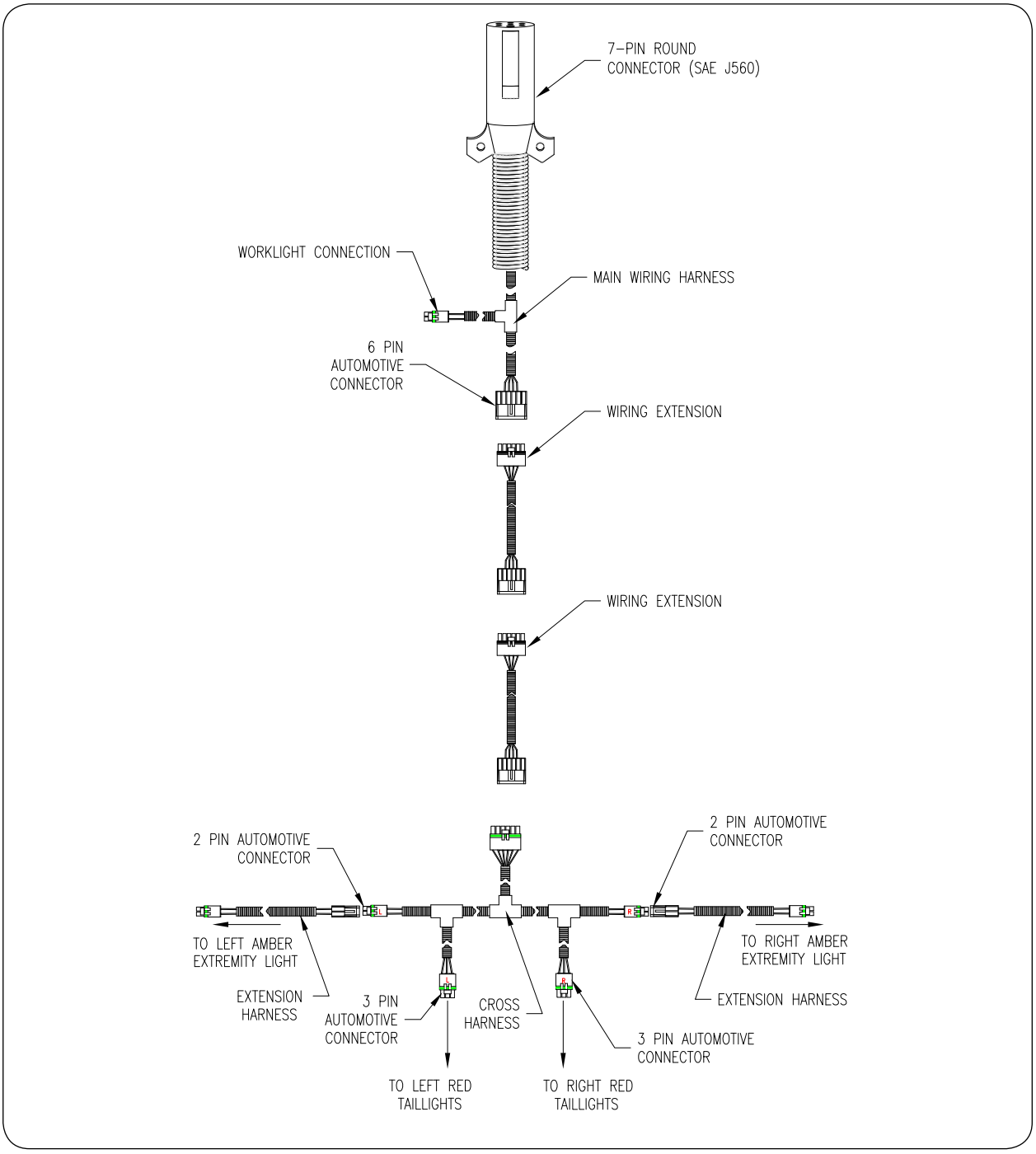
6. Route extension harnesses along the main frame and connect it to the amber extremity lights.

7. Tie the extension harnesses to the extremity light mounting bracket through the extra hole in the light bracket.

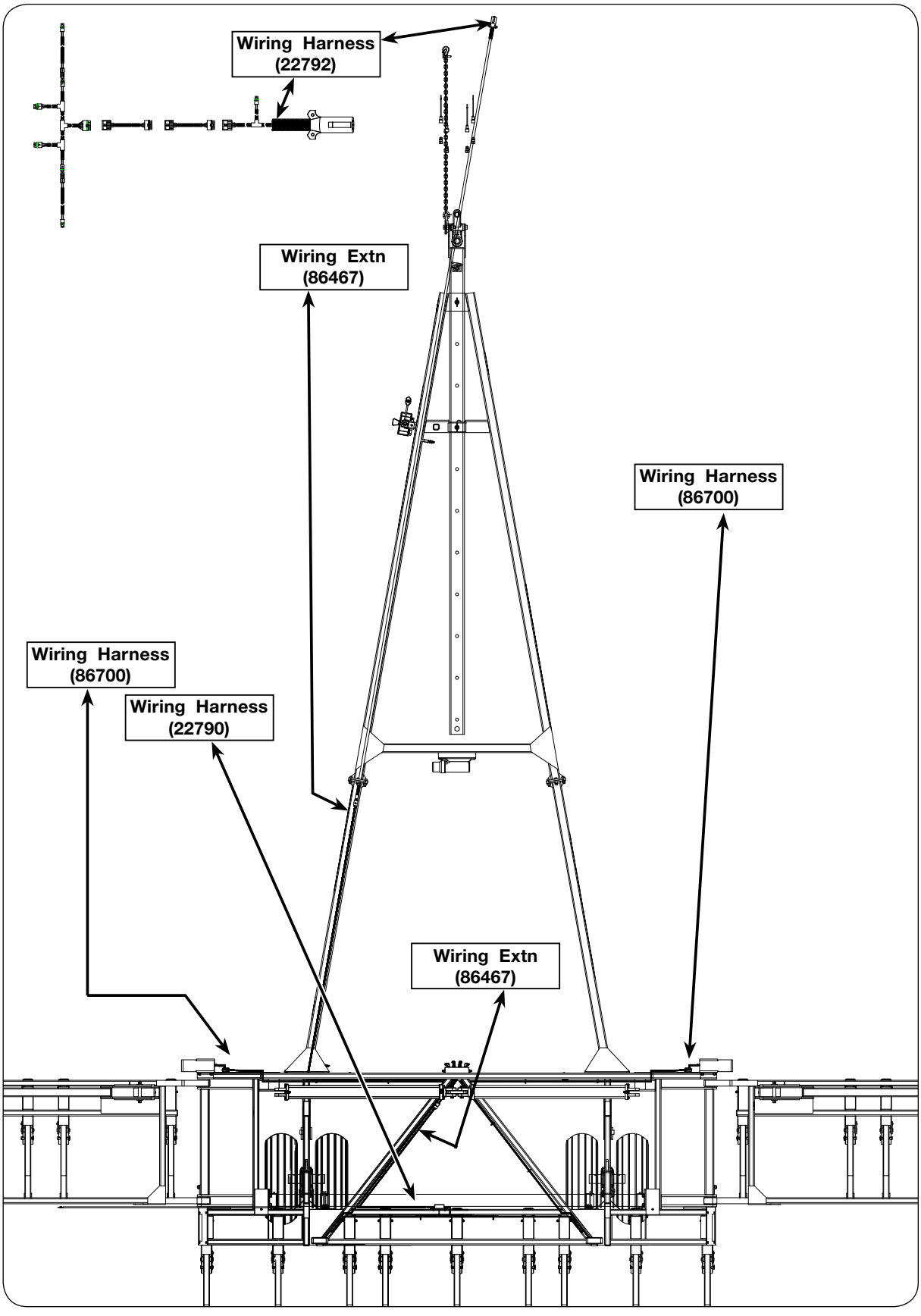
8. Coil up any excess and tie the remainder to the main frame with cable ties. Be sure to avoid contact with the fold cylinders, fold linkage, or any other moving parts.

Transport Marking & Light Kit (88278B) (continued)

Wiring Harness (continue)



Wiring Harness Layout



SECTION III
Operation

General Operation Information

WARNING

- **READ AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.**

Read this operation section thoroughly. Acquaint yourself with the adjustments required to obtain efficient and trouble-free operations.

Preparing Tractor

Follow these recommendations if the Rolling Harrow will be connected directly to a tractor.

Before operating implement refer to tractor operator's manual for information concerning safe methods of operation, hydraulics, hitch adjustment, tire inflation, wheel adjustments, and tractor weights.

Check tractor brakes and transporting lights. Make sure they are in proper working order.

Check tractor hydraulic oil reservoir and add oil if needed.

Be sure tractor drawbar has sufficient capacity to operate the Rolling Harrow.

Adjust the tractor drawbar vertically so the top side of the bar is approximately 17 inches from the ground, and lock on centerline of tractor.

Secure the tractor 3-Point linkage so that it does not swing into the tractor tires or onto the hoses.

Preparing Primary Tillage Tool

Follow these recommendations if the Rolling Harrow will be connected to another tillage tool.

Refer to the units "Operator's Manual" for specifications, setup, maintenance, and operating procedures of this unit.

Confirm that the rear hitch of the primary tillage tool has sufficient capacity to operate the Rolling Harrow.

Be sure the rear hitch is securely attached to the primary tillage tool frame. Check hitch every day of use for loose, broken, or worn components.

Rear Hitch Height On Primary Tillage Tool

For maximum performance and adjust ability of your ROLLING HARROW, it is recommended the rear hitch height of the primary tillage tool (Fig. 3-1) be approximately 16 to 24 inches (20" nominal) from the ground line when in the field.

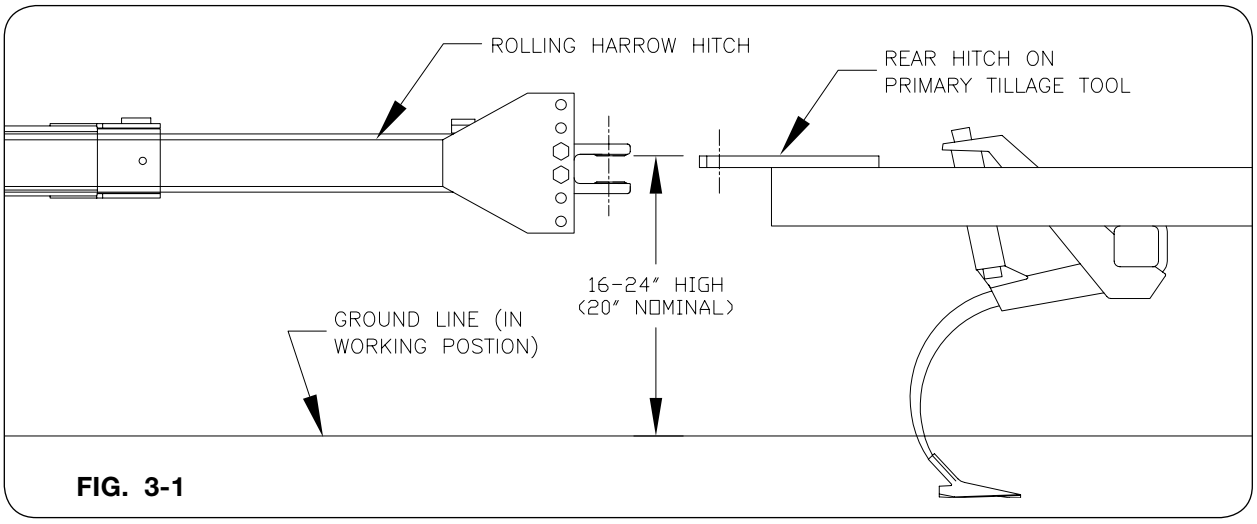


FIG. 3-1

Preparing Rolling Harrow

Perform the service checks as outlined below. Repair or replace any damaged or worn parts before operating.

Tires and Wheels

Check tire pressure, see “MAINTENANCE” section for recommended air pressure. Be sure tire pressure is equal in all tires.

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN THE "MAINTENANCE" SECTION FOR PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Tire manufacturers’ phone numbers and web sites are listed in the “MAINTENANCE” Section of this manual for your convenience.

Pins

Before going to the field, check that all pins are in place and are in good condition. Replace any worn, damaged, or missing pins.

Check that locking hardware for pins are in place and tight.

Leveler Bar Mounting Arms

Frame assemblies are shipped with mounting arms for leveler bars down. If the machine will be operated without leveler bars, the arms should be folded up for best performance. See “Leveler Bar Lock-Up” in this section for fold procedures.

Hydraulics

Check routing of all hydraulic hoses. Hoses should not be kinked, twisted, or rubbing against sharp edges. Hoses should be secure with tie straps.

Check hoses and fittings for hydraulic leaks. Tighten or replace as required.

Lubrication

Lubricate unit as outlined in MAINTENANCE section.

Attaching Rolling Harrow To Primary Tillage Tool or Tractor

Before attaching the ROLLING HARROW to your primary tillage tool or tractor, adjust the extended length of the hitch tube to allow adequate turning clearance between the two machines when turning on the ends.

To lengthen or shorten any tongue on a Standard A-Frame:

1. Unfold the machine and block the wheels from moving forward or backward.
2. Remove the two vertical hitch pins that retain the tongue to the A-Frame.
3. Drive the machine forward to extend or backward to shorten until the desired holes align between the tongue and A-Frame.
4. Reinstall both hitch pins between the tongue and A-Frame. Do not operate with less than two hitch pins installed between the tongue and A-Frame.

Attaching Rolling Harrow To Primary Tillage Tool or Tractor

Hydraulic Hook-Up

The unit's hydraulic system may be connected to a 2-way control valve on the back of a tractor or to an existing circuit on the primary tillage tool.

⚠ WARNING

- **ALWAYS RELIEVE HYDRAULIC SYSTEM PRESSURE BEFORE DISCONNECTING HOSES FROM TRACTOR OR SERVICING HYDRAULIC SYSTEM. SEE TRACTOR OPERATOR'S MANUAL FOR PROPER PROCEDURES.**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

NOTE: Refer to SETUP section for purging process.

NOTE: Refer to MAINTENANCE section when checking hydraulic circuit operation.

HYDRAULIC HOOK-UP INTO A CIRCUIT USING REPHASE CYLINDERS:

If the unit's hydraulic system is connected to an existing hydraulic circuit using rephase cylinders on the primary tillage tool, Unverferth Manufacturing recommends installing the optional #91240 pilot check valve between the two hydraulic systems. This valve prevents the unit's lift system from bypassing oil through the rephase system and leaking down from the transport position. See your Unverferth dealer to order this valve. See SETUP section for hydraulic hook-up.

Raise unit into transport position and install cylinder transport locks (Fig. 3-2).

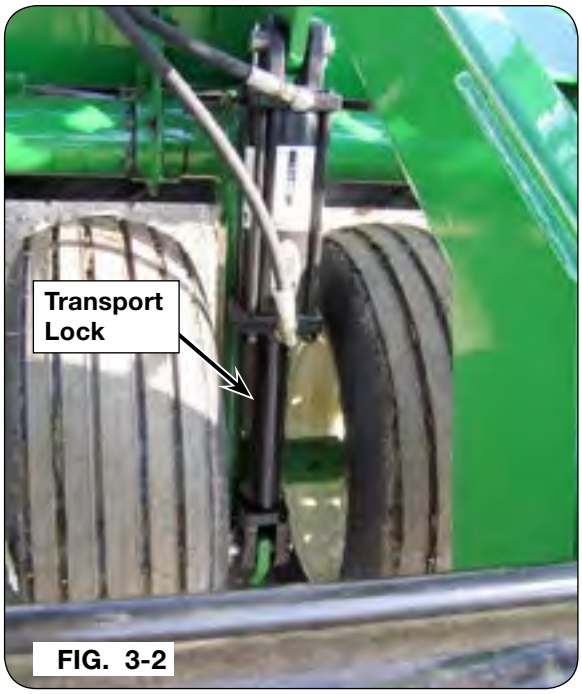


FIG. 3-2

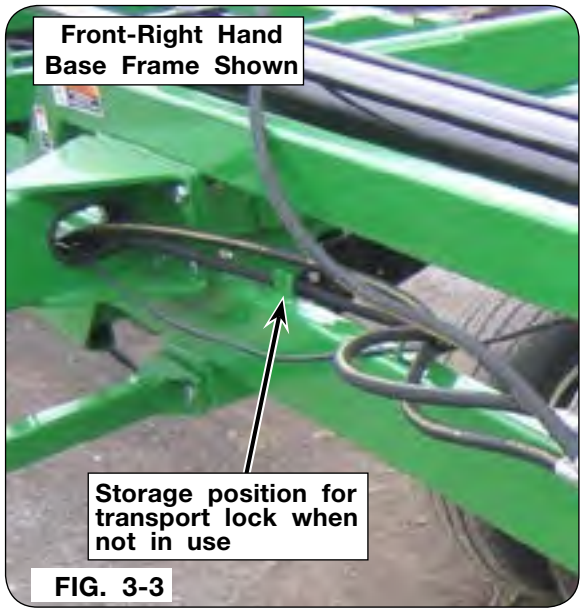


FIG. 3-3

Unfolding The Wings

DANGER

- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. THE ROLLING HARROW IS NOT INSULATED. KEEP AWAY FROM ALL ELECTRICAL LINES AND DEVICES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT.**

1. Keep machine raised.

2. Fully unfold the inner wings. If the outer wings are still locked by gravity latches, reverse the oil flow through the hydraulic system. Gravity latches should release. Stop before the wings start to fold.

3. Finish unfolding the outer wings.

NOTE: Gravity latch should automatically engage when wings fold-up.

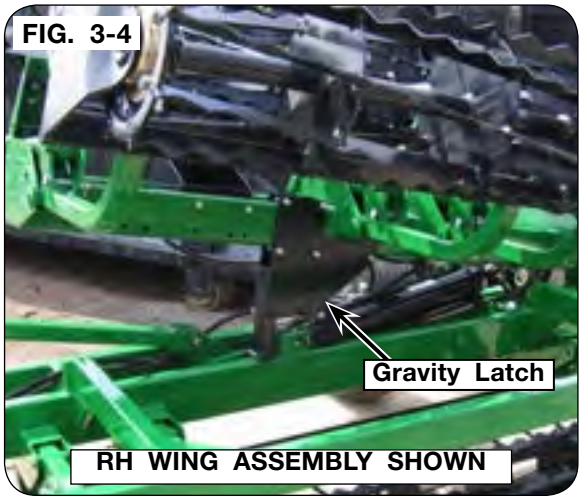


FIG. 3-4

Transport Chain

⚠ CAUTION

- **ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE CHAIN COULD CAUSE PERSONAL INJURY OR DAMAGE IF IMPLEMENTS BECOME DISENGAGED.**

Fig. 3-5 shown with hook-up between tractor and Rolling Harrow. Always use intermediate support when connecting the implement directly to a tractor. DO NOT use the intermediate support as the chain attaching point. Fig. 3-6 shows how the transport chain must be installed between primary tillage tool and ROLLING HARROW.

The transport chain should have a minimum rating equal to the gross weight of implement and all attachments. Use only ASABE approved chains. Allow no more slack in chain than necessary to permit turning.

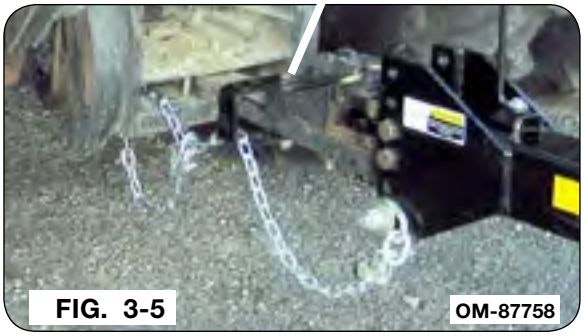


FIG. 3-5 OM-87758

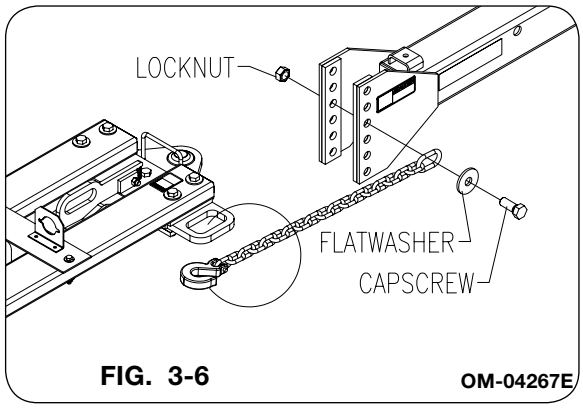


FIG. 3-6 OM-04267E

⚠ CAUTION

- **REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, OR DAMAGED. DO NOT WELD TRANSPORT CHAIN.**

IMPORTANT

- *Fig. 3-6 is a typical rear hitch representation. Actual rear hitch may vary.*

Transporting

⚠ WARNING

- **THE ROLLING HARROW WILL INCREASE THE OVERALL LENGTH OF THE PRIMARY TILLAGE TOOL. USE EXTREME CAUTION WHEN TURNING TO AVOID BYSTANDERS, OBSTACLES, ETC. REDUCE GROUND SPEEDS TO AVOID DAMAGE TO ROLLING HARROW OR PRIMARY TILLAGE TOOL.**

Before unit is transported, be sure the jack stand is in the "Transport Position" see "Jack Assembly" in SETUP section.

⚠ CAUTION

- **INSTALL HYDRAULIC CYLINDER TRANSPORT LOCKS BEFORE TRANSPORTING (FIG. 3-7).**

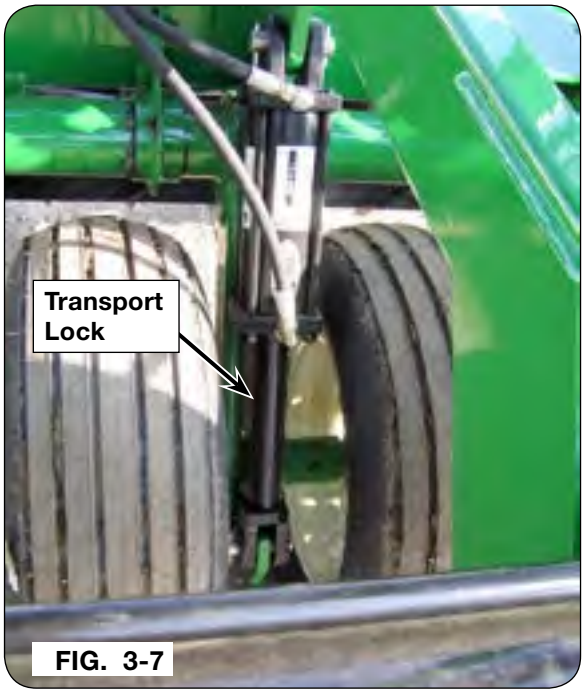


FIG. 3-7

Comply with all laws governing highway safety when moving machinery.

Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure that the SMV emblem and SIS decal are visible to approaching traffic. See SMV Emblem in SET UP section.

⚠ CAUTION

- **USE APPROVED ACCESSORY LIGHTS AND REFLECTORS WHEN TRANSPORTING AT NIGHT, DURING PERIODS OF POOR VISIBILITY AND AS REQUIRED BY LAW.**

Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

See your Unverferth dealer for additional brackets, reflectors, or lights to meet your requirements.

Transporting (continued)

For safe transporting of these implements, the transport speed should never exceed 10 M.P.H. in the field or over rough terrain. Reduce transport speed to maintain full control of the implement and tractor at all times.

Retroreflective and fluorescent tapes are provided with this implement. Red reflective tape should be in place on the back and outermost extremity of the rear frame tube on each side. Orange fluorescent should be next to red. Amber reflectors are on side of hitch tube and hitch frame. Be sure these reflectors are in place and clearly visible.

Unhitching

WARNING

- **RISING OR FALLING TONGUE CAN CAUSE SERIOUS INJURY OR DEATH. USE JACK TO SUPPORT IMPLEMENT BEFORE REMOVING HITCH PIN.**

- **IF UNIT IS TO BE UNHOOKED IN THE TRANSPORT POSITION, INSTALL HYDRAULIC CYLINDER TRANSPORT LOCKS (FIG. 3-9) AND LOWER JACK STAND TO GROUND BEFORE UNHOOKING UNIT.**

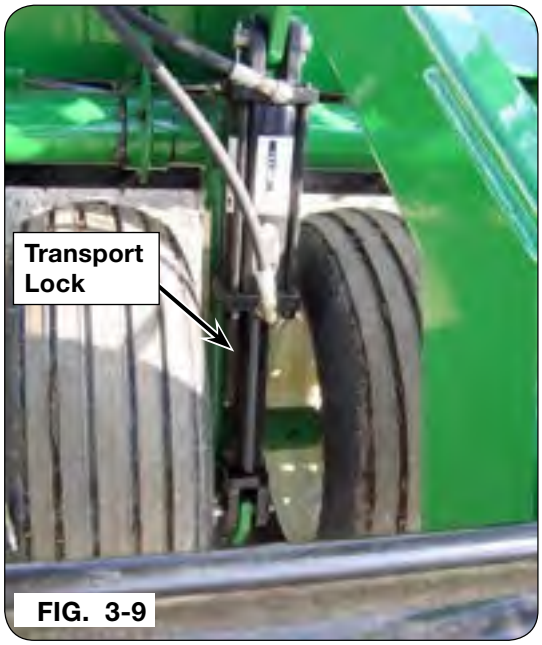


FIG. 3-9

Refer to Fig. 3-10 for positioning of jack stand into "Parked Position".

CAUTION

- **KEEP HANDS AND FEET AWAY FROM JACK STAND WHEN LOWERING.**

When parking the ROLLING HARROW onto the jack stand, lower jack down into position and turn handle to transfer the weight of the unit to the jack.

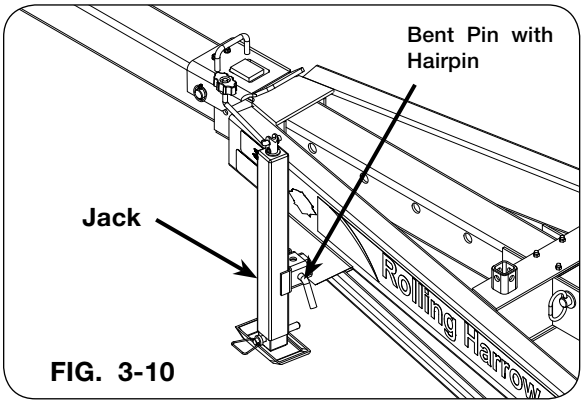


FIG. 3-10

Remove hitch pin.

WARNING

- **ALWAYS RELIEVE HYDRAULIC SYSTEM PRESSURE BEFORE DISCONNECTING HOSES FROM TRACTOR OR SERVICING HYDRAULIC SYSTEM. SEE TRACTOR OPERATOR'S MANUAL FOR PROPER PROCEDURES.**

Disconnect the hydraulic hoses. Install dust covers over the hose plugs and outlets.

Before unhitching the primary tillage tool, refer to the unit's operator's manual for unhitching procedures.

Field Adjustments

Rolling Harrow Basket

The Rolling Harrow basket is designed to provide an excellent seedbed when used with your primary tillage tool.

For maximum field performance, the Rolling Harrow should be run with the transport wheels in the “Raised” position. This allows maximum transfer of weight to the baskets, thus providing for better leveling and ground working action by allowing the unit to closely follow the ground contour.

Field Adjustments (continued)

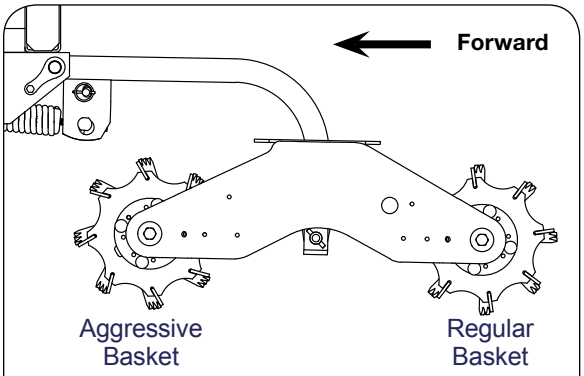
Basket Running Positions

The Rolling Harrow basket assemblies consist of an aggressive basket with the blades angled forward and a regular basket with the blades positioned perpendicular to the center shaft. The basket assemblies can operate with either basket in the forward or leading position.

NORMAL POSITION

In most cases, the unit runs with the aggressive basket positioned to the front (Fig 3-11) for maximum penetration in normal soil conditions.

A maximum amount of leveling and conditioning of the soil is obtained when the aggressive basket is positioned to the front (Fig. 3-11). This position also helps provide thorough mixing of chemicals into the top two to three inches of the soil, when used for incorporation.



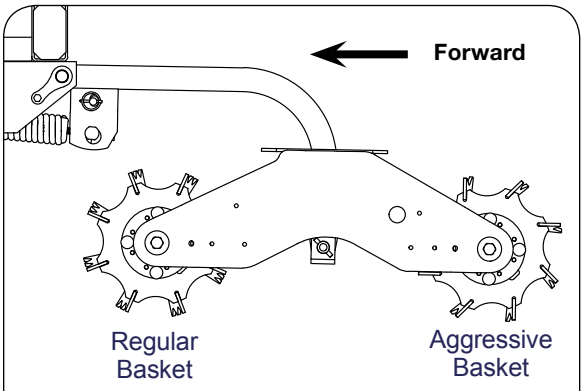
View Looking From LH Side

FIG. 3-11

ALTERNATE POSITION

A maximum amount of soil firming is obtained when the aggressive basket is positioned at the rear (Fig. 3-12).

To reverse Rolling Harrow baskets, remove mounting pin (9500423) and spiral pin (91144-186) (Fig. 3-12) connecting basket frame to spring arm, rotate basket frame and reinstall mounting pins and spiral pins.



View Looking From LH Side

FIG. 3-12

Leveler Bar

The optional level bar is designed to improve the seedbed leveling capabilities of your Rolling Harrow. This accessory can be ordered with your unit or added later; see your dealer for details. Spike tooth, diagonal tooth, and coil tine leveler bars are available. The spike tooth bar performs best in heavier soils under conventional tillage with lower amounts of residue. The diagonal tooth bar is recommended for lighter soils in a conventional or minimum tillage system with light to moderate residue. The coil tine bar is recommended for minimum tillage systems with higher amounts of residue. Spring pressure on the leveler bar controls the aggressiveness of the bar. For greater leveling action in heavier soils with little residue, increase the spring pressure. For better residue flow through the leveler bar, decrease the spring pressure.

Tool-Free — Spring Tension Adjustment

Spring pressure is adjusted by aligning different holes between the adjustment casting and the leveler bar arm as shown in Fig. 3-13, 3-14, and 3-15.

To adjust spring pressure:

1. Remove bent pin from arm.
2. To INCREASE spring pressure, align the arm to be in the most vertical position.
3. To DECREASE spring pressure, adjust the arm to be more horizontal.
4. Always adjust both leveler bar arms for the same leveler bar to the same setting.

FIG. 3-13

FIG. 3-14

FIG. 3-15

Leveler Bar (continued)

Spike Bar Adjustment

The spike tooth leveler bar can be mounted in any of the 3 holes of the hanger. Set the spike bar lower for more leveling action. The bar should be set to the same height on both hangers of each leveler bar section of the machine.

Tooth depth adjustment is provided, but should only be adjusted to compensate for tooth wear.

To adjust individual tooth depth:
1. Loosen the U-bolt on each tooth
2. Drive the tooth up or down, as desired
3. Re-tighten the U-bolts
4. Always set each tooth to the same height on each leveler bar


FIG. 3-16

Diagonal Bar Adjustment

Diagonal tooth leveler bars can mount ONLY in the center hole on each hanger arm (Fig. 3-17). Mounting in any other location will damage the machine. Control the aggressiveness of the diagonal bars by adjusting the spring pressure (see previous section).


Fig. 3-17

Coil Tine Bar Adjustment

Coil tine bars may be mounted in the lower two or upper two holes of the hanger. Mount the bars in the lower holes for greater leveling action.

The aggressiveness of the coil tines can be controlled by rotating the tine bars relative to the mounting U-bolts. For more leveling and mixing action, loosen the U-bolts and rotate the tine bar until the spacers hold the coil tines in a nearly vertical position (Fig 3-18) For better performance in high-residue conditions, rotate the tine bar so the tines have more room to rotate back before touching the spacers. When adjusting the coil tines, always be sure the tines will not contact the tires or tire damage could occur.

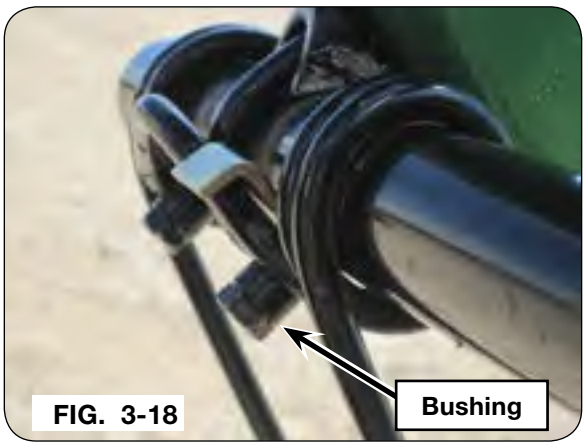


FIG. 3-18

Leveler Bar (continued)

Tool-Free — Leveler Bar Lock-Up

In very high residue conditions or when less tillage action is desired, all types of leveler bars may be locked up so they will not contact the ground.

To lock up tool-free leveler bars:

1. Remove bent pin from leveler arm.
2. Raise arm to highest setting where hole in arm matches hole in adjustment casting. (See Fig 3-19)
3. Reinstall bent pin.
4. Be sure both arms are in the same setting for each leveler bar.

Fig. 3-19

Basket Pitch Adjustment - 1245D Standard; 1245 Optional

In some conditions, it may be desirable to limit the float of the basket frame. Only limit the float sufficiently to improve performance. Excessive float limitation may damage the machine.

⚠ WARNING

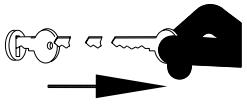
- **WHEN WORKING AROUND THE MACHINE, BE SURE IT IS SECURELY BLOCKED; FAILURE TO DO SO COULD RESULT IN TIPPING OR MOVEMENT OF MACHINE, CAUSING SEVERE BODILY HARM.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 100 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Park the unit on a firm, level surface. Unfold the wings into the field working position, and lower the machine onto the ground. Set the vehicle parking brake.

2. Raise the machine off the ground and insert the transport cylinder locks. Lower and rest the machine on the transport cylinder stops. Block the wheels on the machine to keep it from moving.

Fig. 3-20

3. Shut off the engine and remove the ignition key.



Basket Pitch Adjustment — 1245D Standard; 1245 Optional (continued)

4. Install pin and spacer in the second hole from the rear with the plate facing the mounting arm. Reposition into alternate holes as necessary for field conditions.

NOTE: Place the pins and spacers in the storage box when not in use.

IMPORTANT

- *Only install the pin and spacer on the rear side of the basket arm. Installation of the pins on the front side of the arm could result in damage to the basket, frame, or other components*

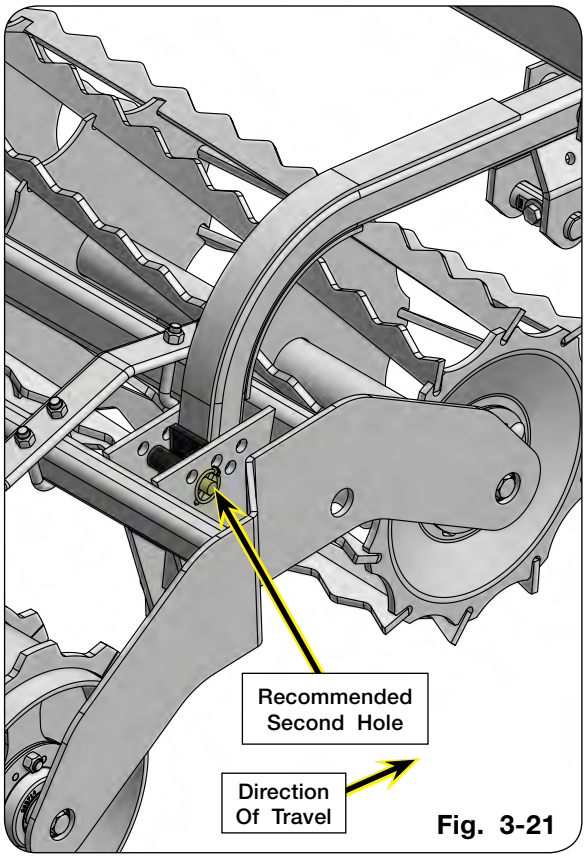


Fig. 3-21

SECTION IV
Maintenance

Storage

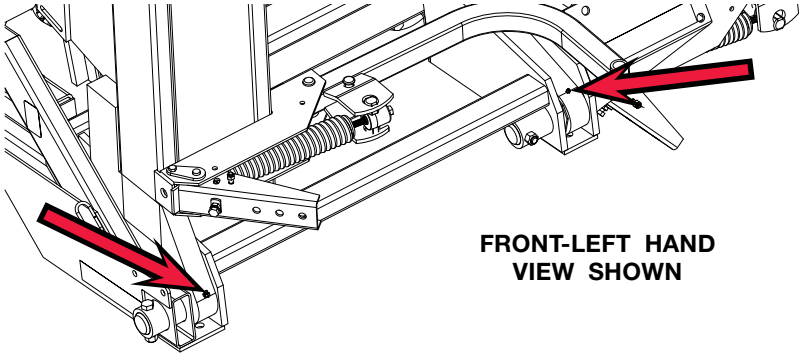
Your implement is an important investment. Spend a little time to protect it from destructive rust and corrosion. You will be repaid in longer service life and better performance.

Do the following before placing the implement in storage:

1. Remove dirt and trash which could cause rusting.
2. Repaint any chipped or scraped areas.
3. Lubricate wing pivots (FIG. 4-1).

Fig. 4-1

MAIN FRAME TO INNER WING POINTS



FRONT-LEFT HAND VIEW SHOWN

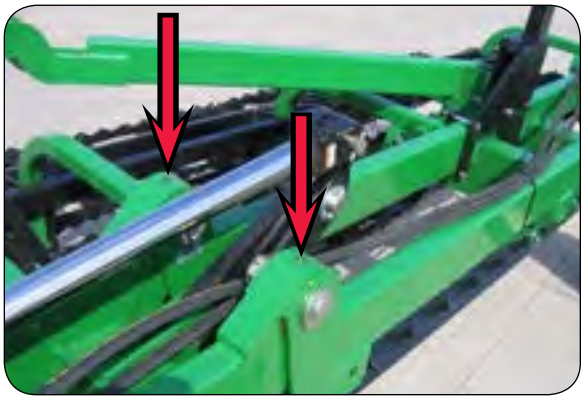
4. Coat all earth moving surfaces with grease or suitable rust preventative.
5. Inspect for damage or worn parts, replace before next season.
6. Store implement inside, away from livestock.
7. Block up implement to keep tires and ground tools off ground.
8. Replace all worn, torn or faded decals and reflectors.

To save storage space, the telescopic tongue may be pushed into the A-frame. The tongue will need to be lengthened to the proper working length when the machine is used again.

DO NOT store the machine with the wings folded and the base frame lowered to the ground. This can damage the base frame basket springs.

Lubrication

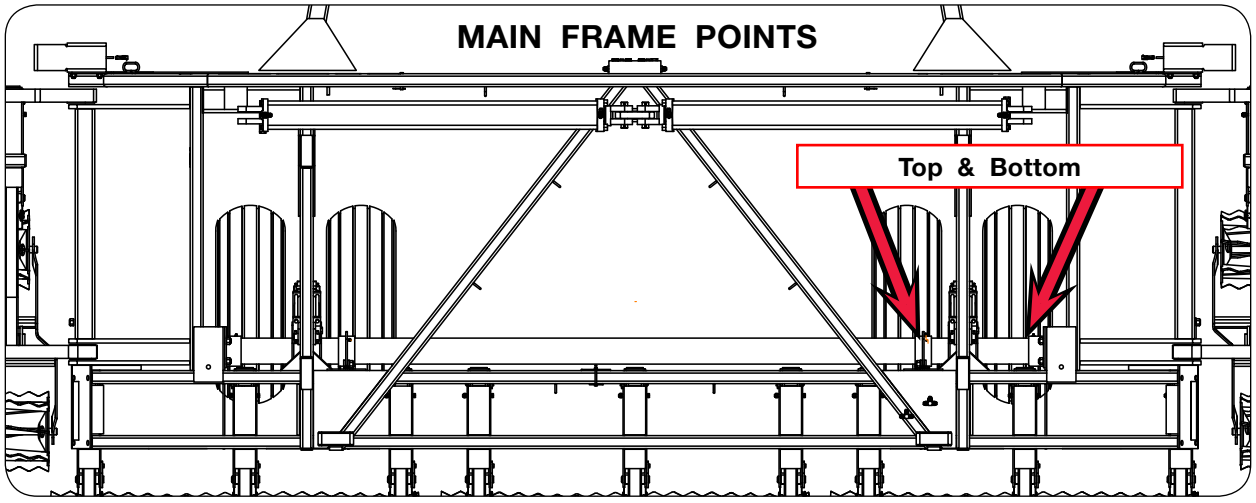
INNER WING TO OUTER WING POINTS



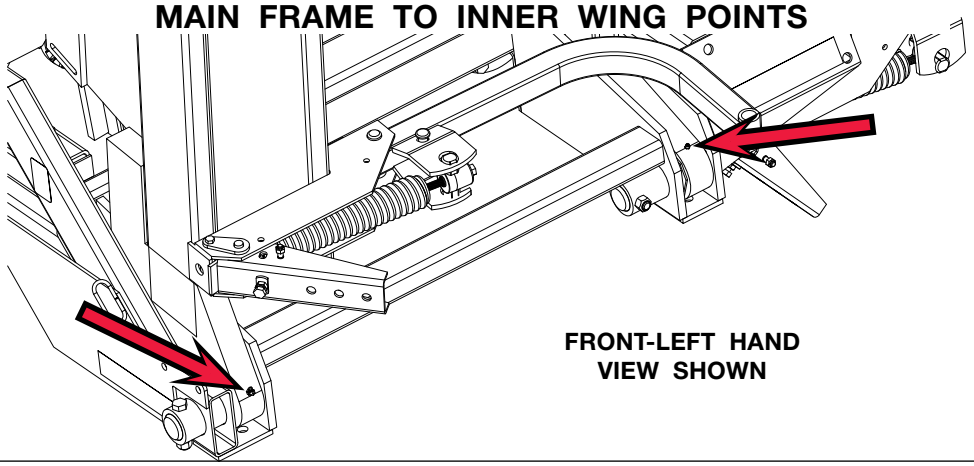
WING TRANSPORT WHEEL POINTS

Lubrication (continued)

MAIN FRAME POINTS

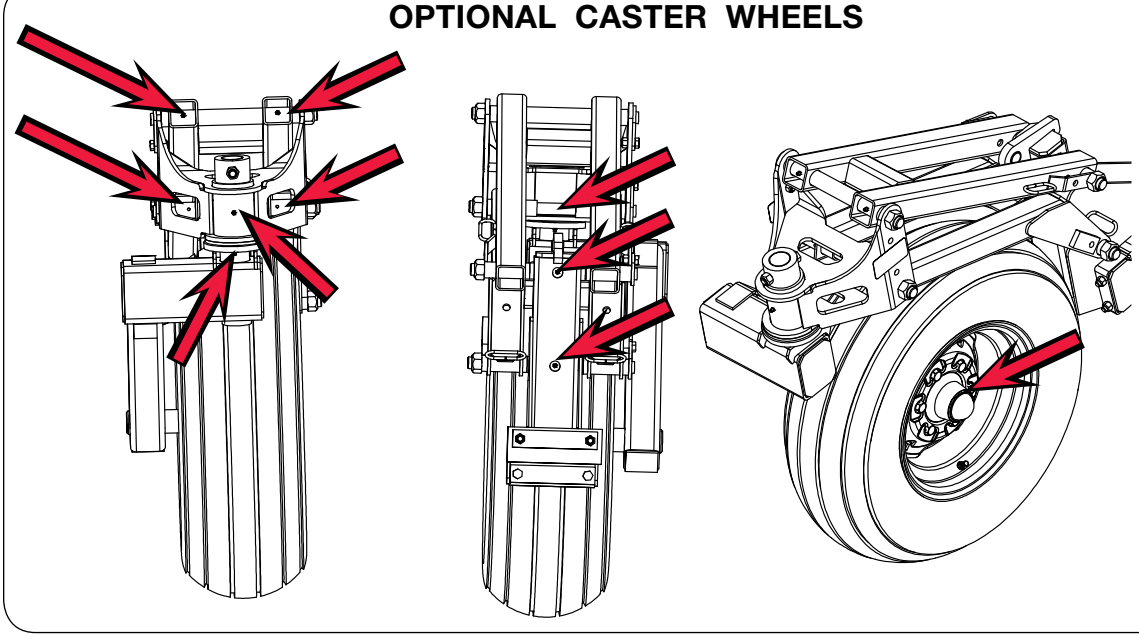


MAIN FRAME TO INNER WING POINTS



FRONT-LEFT HAND
VIEW SHOWN

OPTIONAL CASTER WHEELS

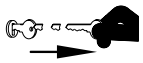


Replacing Rolling Harrow Basket Bearings (Kit #74006)

WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

1. Park unit on a firm level surface. Unfold wings, lower the ROLLING HARROW to the ground, set the tractor parking brake, depressurize the hydraulic system, shut off the engine, and remove the ignition key.



2. Remove pin (9500423) from the basket assembly with the worn bearing. Using the tractor hydraulic system, raise the unit to transport height. Install transport stops on lift cylinders. Set tractor parking brake, depressurize the hydraulic system, shut off the engine and remove the ignition key.
3. Roll the basket assembly from under the machine.
4. Remove the 5/8”-11UNC x 1 1/4” capscrew (900872) from the bearing bolt (74280) on the worn bearing. Place pry bar between the head of the bearing bolt and the basket weldment to prevent the head of the bearing bolt from turning.
5. Push the bearing bolt into the basket weldment so the shaft disengages the basket frame side plate.
6. It should be possible to move the basket so the worn bearing is clear of the side frame. If this is not possible, repeat steps 4 & 5 for the capscrew and bearing bolt on the other end of the basket and roll the basket away from the frame.
7. Remove the 1/2”-13UNC x 1 1/4” carriage bolts from the bearing and basket. Remove bearing from the basket and remove bearing bolt from bearing.
8. Inspect the square recess for the bearing bolt in the frame side plate. Remove dirt and debris from this area and make certain edges are not worn or rounded. Repair or replace frame as needed.
9. Discard worn bearing and used mounting hardware. Examine inner race of replacement bearing. If the inner race protrudes beyond the housing more on one side than the other, install the bearing in the basket such that this side is facing the frame side plate. Insert the bearing bolt into the bearing and mount the bearing to the basket with the new carriage bolts. Torque locknuts on carriage bolts to 70-75 ft.-lbs.

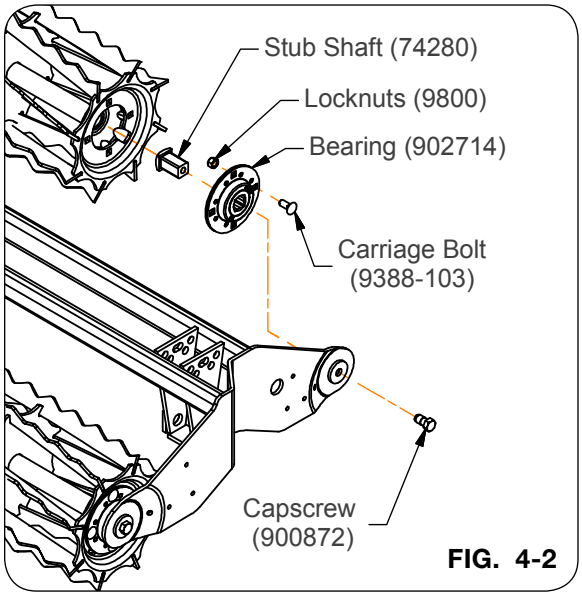


FIG. 4-2

10. Push the basket back into the frame. Align the hole in the bearing bolt with the hole in the frame side plate. Thread the new 5/8”-11UNC x 1 1/4” capscrew into the bearing bolt until the epoxy begins to engage.

Replacing Rolling Harrow Basket Bearings (continued)

11. Use a pry bar to force the head of the bearing bolt against the inner race of the bearing. This may flex the side plate of the frame away from the basket; this is acceptable. While maintaining pressure on the head of the bearing bolt, use the 5/8”-11UNC x 1 1/4” capscrew to rotate the bearing bolt until the end of it engages in the square recess of the frame side plate. Often there will be an audible click when the shaft engages and the side plate move toward the basket. Use the pry bar to prevent the bearing bolt from turning and torque the 5/8”-11UNC x 1 1/4” capscrew to 150-160 ft.-lbs.

IMPORTANT

- *The bearing bolt MUST fully engage the square recess in the frame side plate to prevent machine damage. Make certain the bearing bolt is fully engaged before tightening the 5/8”-11UNC x 1 1/4” capscrew.*

12. Reinstall basket assembly on machine with pins (9500423).

Replacing Spring Assemblies

If it is necessary to replace basket springs, be sure to replace with the comparable spring assembly. See FIG. 4-3 and FIG. 4-4.

FIG. 4-3

SPRING ASSEMBLY #75473B

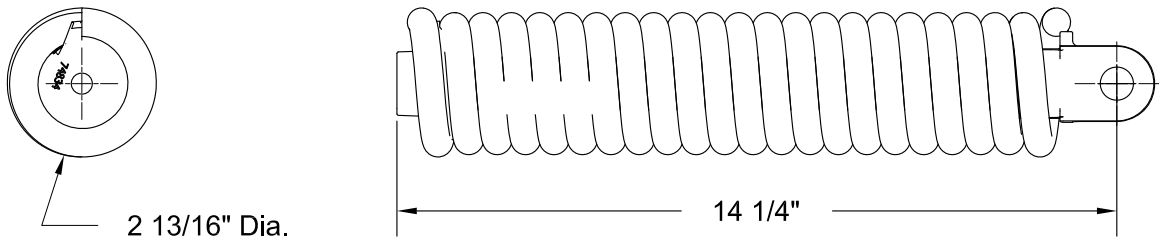
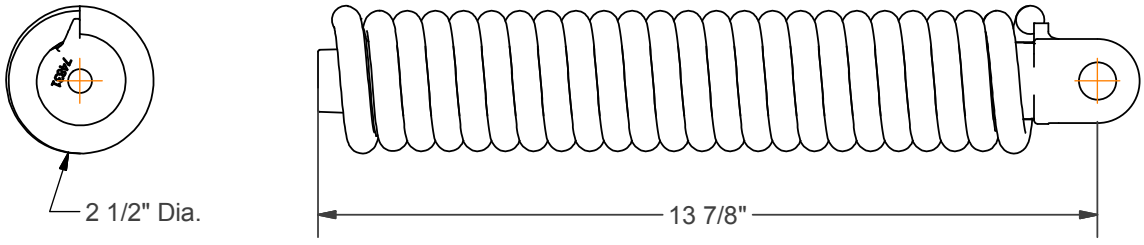


FIG. 4-4

SPRING ASSEMBLY #84260B



If trunnion (85741B) is used, be sure to assemble the cast trunnion according to FIG. 4-5.

SPRING ASSEMBLY #84260

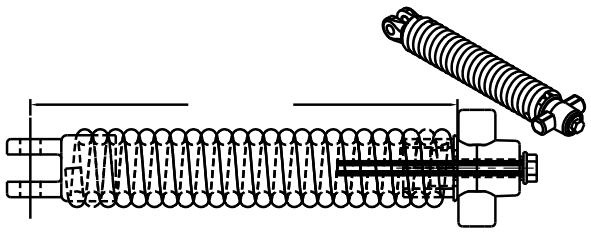


FIG. 4-3

Hub Maintenance

1. Use grease to lubricate the Seal Lip.
2. Assemble the hub onto the spindle. Rotate the hub while doing this so that the seal lip does not fold under as the lip goes on the seal lip of the spindle.
3. Be sure the outer bearing cone slides on the spindle and into the bearing cup.
4. Assemble the washer and the nut onto the spindle and tighten the nut to 20-25 ft-lbs. Rotate the hub while tightening the nut.
5. Back off the spindle nut until it becomes loose.
6. While rotating the hub retighten the nut to remove all CLEARANCE. Line up the next slot in the nut with the hole in the spindle. Insert the cotter pin and bend the cotter pin. Insert the hub cap.

Hydraulic System

NOTE: For plumbing diagram and hydraulic components, refer to “Hydraulic Layout”.

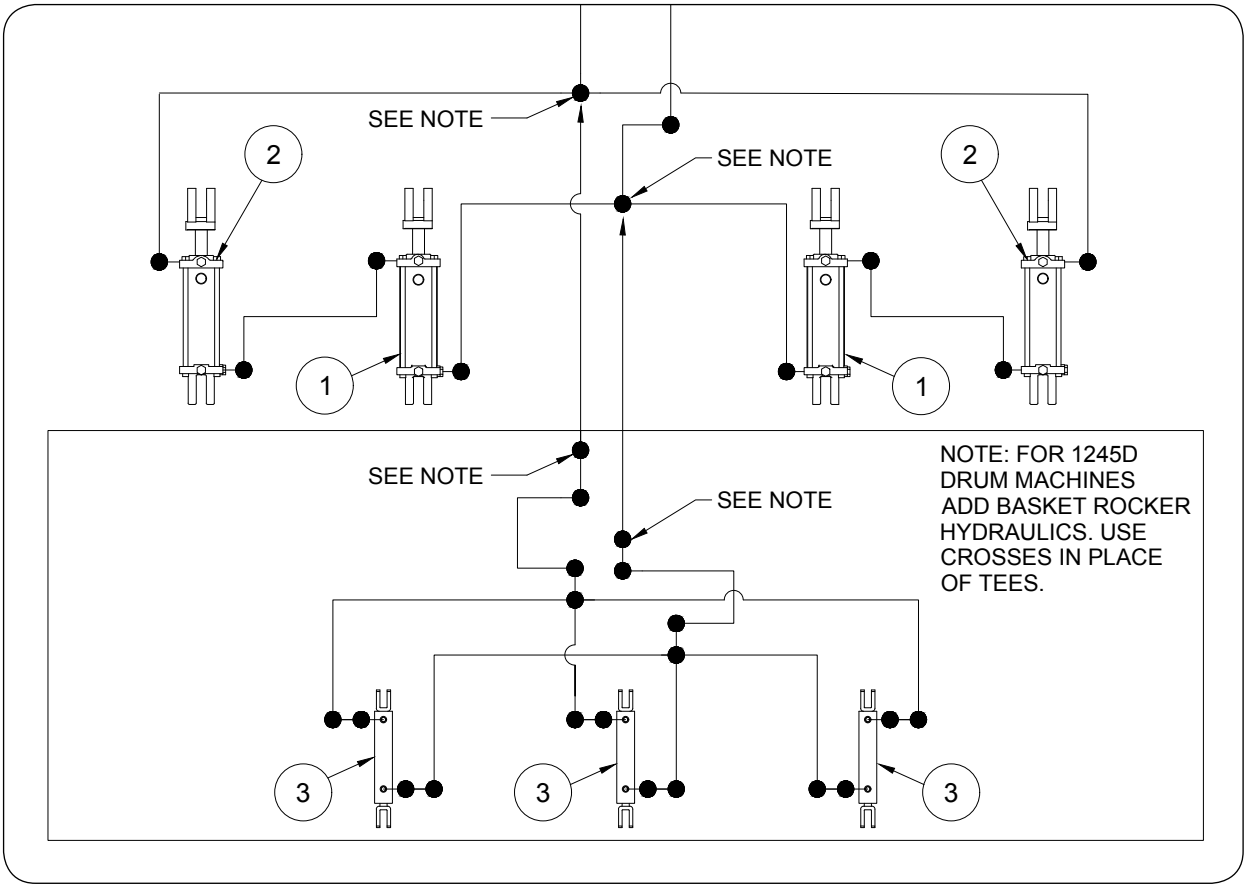
OPERATION

All cylinders on the ROLLING HARROW are double action cylinders.

The standard set-up is a dual hydraulic system that allows raising and lowering to be completely independent of the wings folding and unfolding.

All hoses, cylinders, and fittings are rated for a minimum of 3000PSI. Any replacement components must be rated for 3000PSI minimum.

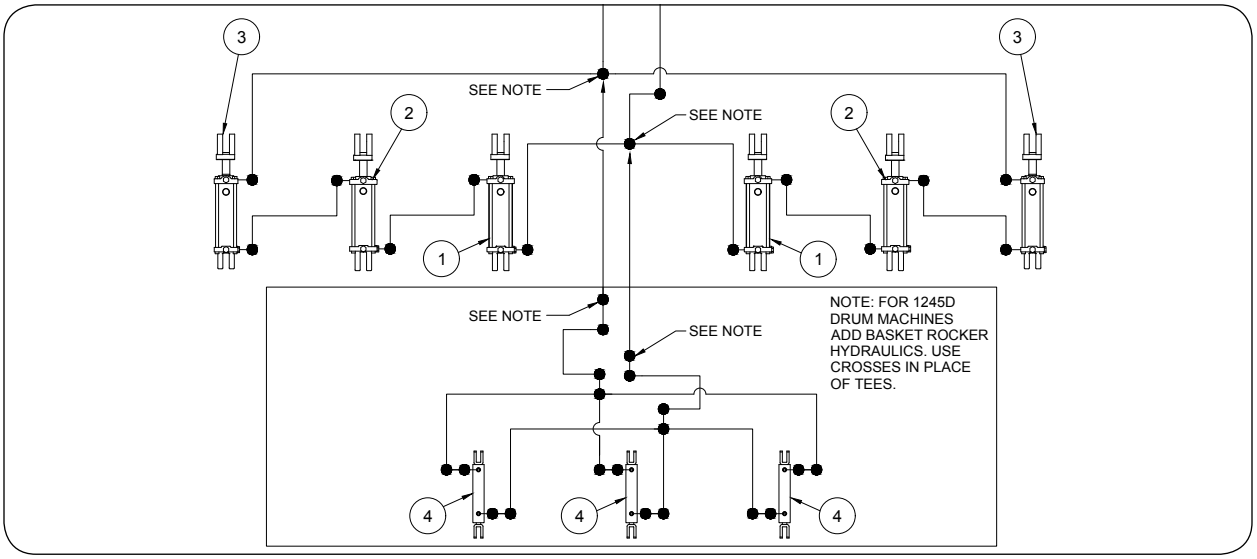
Raise & Lower Hydraulic System For 47-49’ Models



ITEM	DESCRIPTION	QTY	NOTES
1	Base Wheel Cylinder	2	Cylinder 3 1/2 x 8
2	Inner Wing Wheel Cylinder	2	Cylinder 3 1/4 x 8
3	Rocker Drum Cylinders	3	Cylinder 1 1/2 x 6

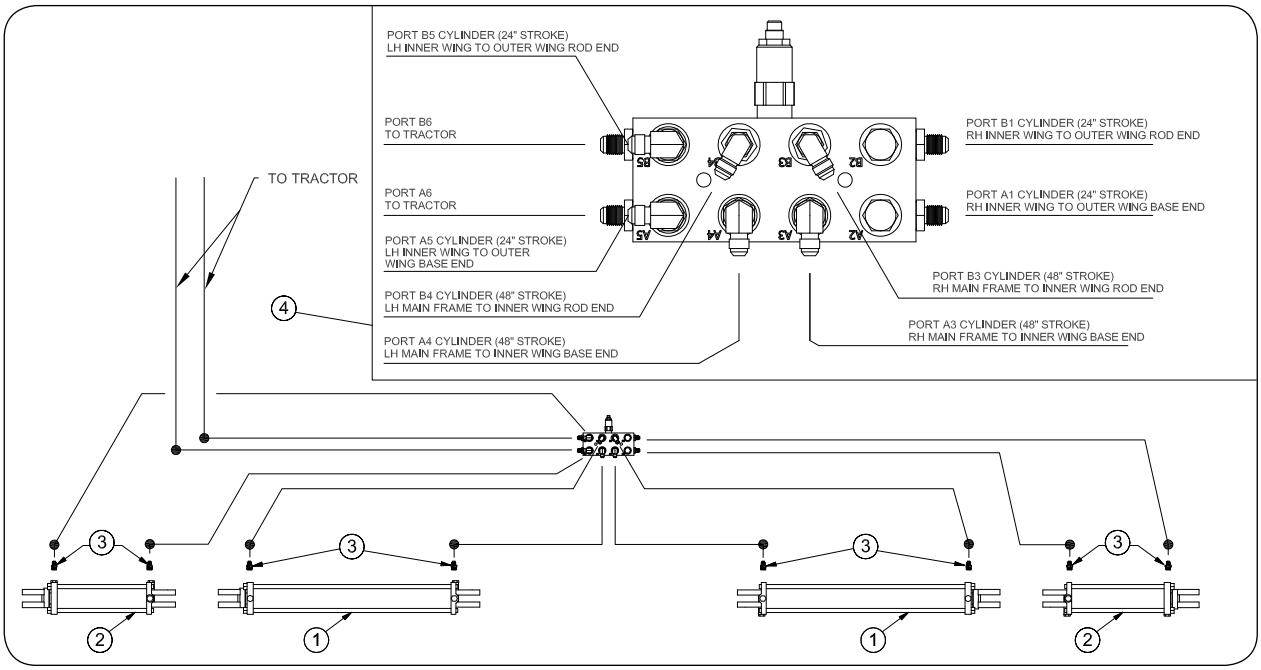
Hydraulic System (continued)

Raise & Lower Hydraulic System For 51-63' Models



ITEM	DESCRIPTION	QTY	NOTES
1	Base Wheel Cylinder	2	Cylinder 3 1/2 x 8
2	Inner Wing Wheel Cylinder	2	Cylinder 3 1/4 x 8
3	Outer Wing Wheel Cylinder	2	Cylinder 3 x 8
4	Rocker Drum Cylinders	3	Cylinder 1 1/2 x 6

Wing Hydraulic System - All Models



ITEM	DESCRIPTION	QTY	NOTES
1	Base Wing Cylinder	2	Cylinder with 48" Stroke
2	Outer Wing Cylinder	2	Cylinder with 24" Stroke
3	Orifices/Adapters	8	With 0.075 Restrictor
4	Block/Valve	1	Block & Valve Assembly

Troubleshooting — Hydraulics Not Functioning Properly

PROBABLE CAUSE	CORRECTION
Incorrect hose hook-up to tractor control levers	Refer to Tractor Operator's Manual for valve and control lever arrangement
Insufficient tractor hydraulic pressure	A. Check hydraulic reservoir oil level B. Refer to tractor "Operator's Manual" or hydraulic system recommendations
Hydraulic components leaking oil	Find cause and correct, see MAINTENANCE section hydraulic systems
Hydraulic hoses kinked or twisted	Find cause and correct
Malfunction of hydraulic cylinders	
A. Cylinder leakage	A. Repair or replace cylinders. See PARTS section for cylinder or seal kit part numbers
B. Orifice in wing-fold cylinders plugged	B. Remove contamination from system (flush system, change oil and filter)
Unit "Bleeding Down" when hooked into primary tillage tools hydraulic system (with rephase cylinders)	Install pilot operated check valve, refer to OPERATIONS section
Wings do not fold in sync.	A. Some discrepancy in wing fold is normal. B. For large discrepancy - check hose and valve routing.

Complete Torque Chart – Capscrews - Grade 5

NOTE: Grade 5 capscrews can be identified by three radial dashes on head.

NOTE: For wheel torque requirements, refer to **Wheels and Tires**.

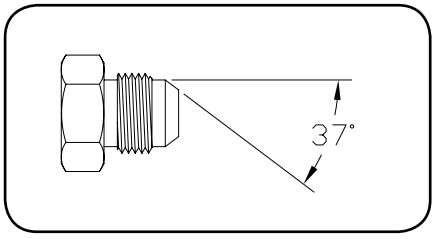
NOTE: Tighten U-bolts to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS	SIZE	FOOT POUNDS	NEWTON METERS
1/4-20 1/4-28	8-10 9-11	11-13 12-15	3/4-10 3/4-16	200-220 210-230	270-300 285-310
5/16-18 5/16-24	15-17 17-19	20-23 23-26	7/8-9 7/8-14	330-350 360-380	425-475 460-515
3/8-16 3/8-24	25-28 28-31	34-38 38-42	1-8 1-14	500-525 540-560	675-710 730-760
7/16-14 7/16-20	40-45 45-50	54-61 61-68	1 1/8-7 1 1/8-12	600-635 665-700	815-860 920-950
1/2-13 1/2-20	62-68 68-75	84-92 92-102	1 1/4-7 1 1/4-12	850-895 940-990	1150-1215 1275-1340
9/16-12 9/16-18	90-98 100-110	22-133 134-148	1 3/8-6 1 3/8-12	1125-1175 1280-1335	1525-1590 1735-1810
5/8-11 5/8-18	120-135 124-137	162-183 168-186	1 1/2-6 1 1/2-12	1500-1560 1685-1755	2035-2115 2285-2380

Hydraulic Fittings – Torque and Installation

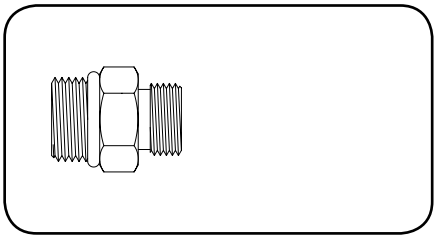
SAE FLARE CONNECTION (J. I. C.)

1. Tighten nut with finger until it bottoms the seat.
2. Using a wrench, rotate nut to tighten. Turn nut 1/3 turn to apply proper torque.



SAE STRAIGHT THREAD O-RING SEAL

1. Insure jam nut and washer are backed up to the back side of smooth portion of elbow adapter.
2. Lubricate o-ring -- VERY IMPORTANT!
3. Thread into port until washer bottoms onto spot face.
4. Position elbows by backing up adapter.
5. Tighten jam nut.



Wheels and Tires

Wheel Nut Torque

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. TORQUE WHEEL NUTS/BOLTS TO VALUES IN TABLE. CHECK TORQUE BEFORE INITIAL USE, AFTER ONE HOUR OF USE, AND EACH HOUR UNTIL WHEEL NUTS/BOLTS MAINTAIN TORQUE VALUE. CHECK TORQUE EVERY 10 HOURS OF USE THEREAFTER. AFTER EACH WHEEL REMOVAL START TORQUE PROCESS FROM BEGINNING. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

Failure to check torque before first use may damage wheel nut/bolt seats. Once seats are damaged, it will become impossible to keep nuts/bolts tight. Tighten nuts/bolts to the applicable torque value shown below. Start all nuts/bolts by hand to prevent cross threading. Torque nuts/ bolts in the recommended sequence as shown in Diagram 1.

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
1/2-20 (UNF)	75 Ft.-Lbs.
9/16-18 (UNF)	110 Ft.-Lbs.

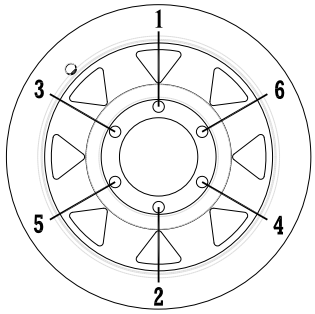


Diagram 1 - 6 bolt

Tire Pressure

- The following is to be used as a general guide for tire inflation and figures can vary depending on specific brand of tire used. **It is important that tires are inspected after unit is loaded.** Start with minimum pressure indicated. The tire should stand up with no side-wall buckling or distress as tire rolls. Record the pressure needed to support the full load and maintain this pressure to achieve proper tire life. **Do not exceed maximum recommended tire pressure.**

Recommended....44 PSI maximum

Wheels and Tires

Tire Warranty

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Following are phone numbers and Websites for your convenience:

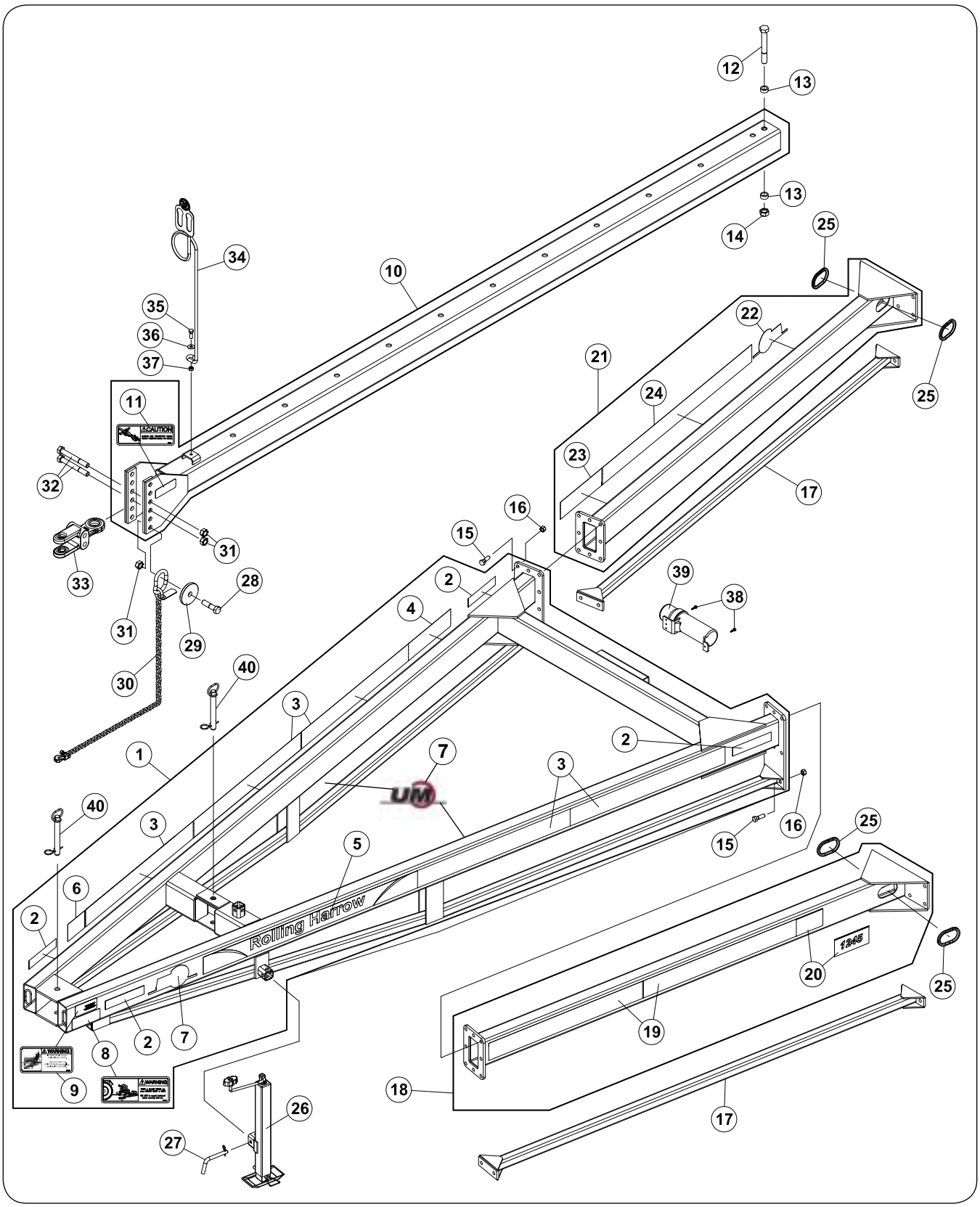
Carlisle
www.carlisletire.com
Phone 800-260-7959
Fax 800-352-0075

Greenball
www.greenball.com
Phone nearest location:
California 800-937-5204
Georgia 800-283-4569
Florida 800-935-0200
Indiana 800-426-4068
Tennessee 800-946-9412
Ohio 800-840-7295
Pennsylvania 800-869-6787

SECTION V
Parts

Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



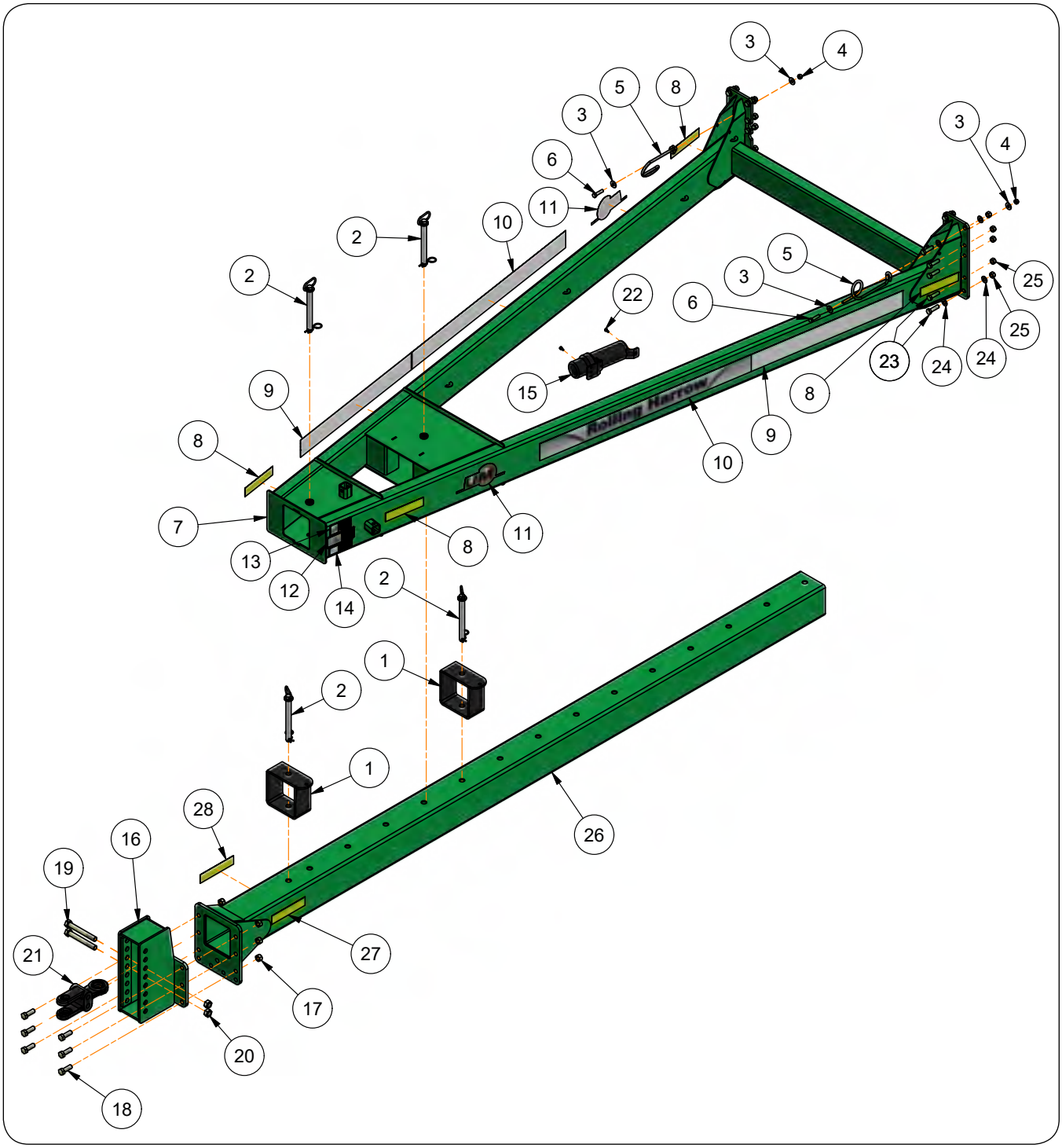
Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	88623G	Hitch A-Frame Assembly =Green=	Model 1245
	88623R	Hitch A-Frame Assembly =Red=	
2	9003127	Reflector 2" x 9" =Amber=	
3	900706	Decal, Stripe (4" x 36")	
4	900732	Decal, Stripe (4" x 14")	
5	901129	Decal, Rolling Harrow	
6	9501232	Decal, 1245	Model 1245
7	901607	Decal, UM Oval Logo	
8	94094	Decal, WARNING (Rising or Falling Tongue...)	
9	95445	Decal, WARNING (High-Pressure...)	
10	88617G	Tongue Weldment w/Decal =Green=	
	88617R	Tongue Weldment w/Decal =Red=	
11	97575	Decal, CAUTION (Transport Chain...)	
12	9390-198	Capscrew, 1"-8UNC x 7 1/2" G5	
13	87623	Tube/Bushing, 1 1/2" OD x 1 1/16" ID x 5/8"	
14	9663	Locknut 1"-8UNC	
15	9390-124	Capscrew, 5/8"-11UNC x 2" G5	
16	9801	Locknut/Top, 5/8"-11UNC	
17	88334G	Hitch Truss Weldment =Green=	
	88334R	Hitch Truss Weldment =Red=	
18	88624G	Extension Left-Hand Assembly w/Decals =Green=	Model 1245
	88624R	Extension Left-Hand Assembly w/Decals =Red=	
19	900706	Decal, Stripe (4" x 36")	
20	9501232	Decal, 1245	Model 1245
21	88619G	Extension Right-Hand Assembly w/Decals =Green=	
	88619R	Extension Right-Hand Assembly w/Decals =Red=	
22	901607	Decal, UM Oval Logo	
23	900732	Decal, Stripe (4" x 14")	
24	901129	Decal, Rolling Harrow	
25	87754	U-Channel/Trim-lok	
26	901061	Jackstand	
27	84979	Bent Pin, 5/8" Dia. w/Hairpin Cotter	
28	9390-170	Capscrew, 7/8"-9UNC x 3 1/2" G5	
29	106941	Washer	
30	97436	Transport Chain	
31	91141	Locknut/Center, 7/8"-9UNC	
32	9390-178	Capscrew, 7/8"-9UNC x 7" G5	
33	83301B	Hitch Clevis	
34	79337B	Hose Holder	
35	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" G5	
36	9405-088	Flat Washer, 1/2"	
37	9800	Locknut/Top, 1/2"-13UNC	
38	9512	Self-Drilling Screw, 1/4"-14 x 1"	
39	900552	Manual Holder	
40	93950	Hitch Pin, 1" Dia. w/Hairpin	

Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



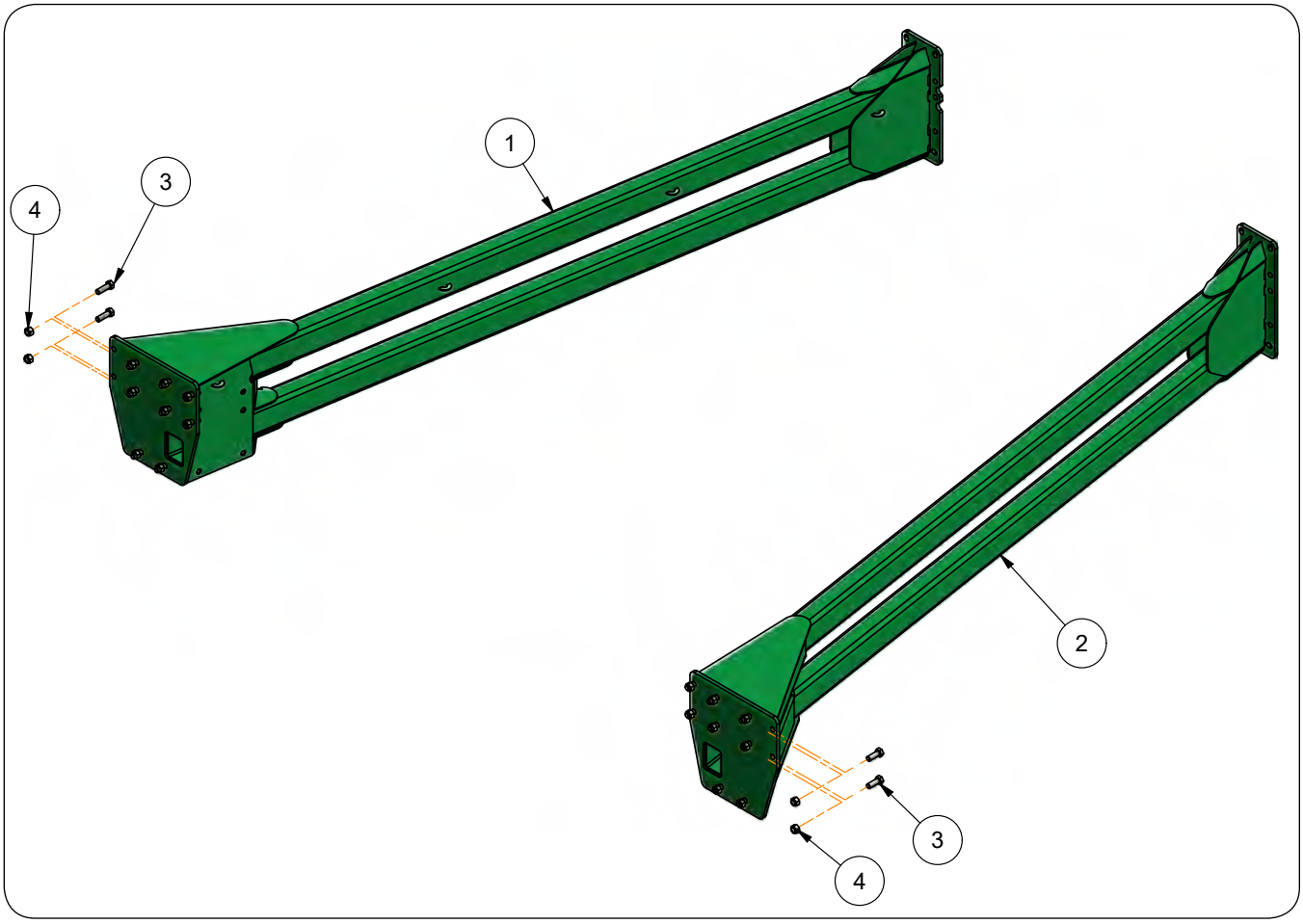
Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	78085B	Stop Weldment =Black=	2	
2	9502801	Hitch Pin, 1" Dia. w/Hairpin	4	
3	9405-088	Flat Washer, 1/2"	4	
4	9800	Locknut/Top, 1/2"-13UNC	2	
5	902979B	Hose Holder =Black=	2	
6	9390-103	Capscrew, 1/2"-13UNC x 2" G5	2	
7	78575G	Hitch A-Frame Assembly =Green=	1	Includes Items 8-14
	78575R	Hitch A-Frame Assembly =Red=		
8	9003127	Reflector 2" x 9" =Amber=	4	
9	900706	Decal, Stripe (4" x 36")	2	
10	901129	Decal, Rolling Harrow	2	
11	901607	Decal, UM Oval Logo	2	
12	94094	Decal, WARNING (Rising or Falling Tongue...)	1	
13	95445	Decal, WARNING (High-Pressure...)	1	
14	97575	Decal, CAUTION (Transport Chain)	1	
15	900552	Manual Holder	1	
16	78138G	Clevis Hitch Weldment =Green=	1	
	78138R	Clevis Hitch Weldment =Red=		
17	9802	Locknut/Top, 3/4"-10UNC	6	
18	9390-146	Capscrew, 3/4"-10UNC x 2 1/4" G5	6	
19	9390-178	Capscrew, 7/8"-9UNC x 7" G5	2	
20	91141	Locknut/Center, 7/8"-9UNC	2	
21	83301B	Hitch Clevis	1	
22	9473	Self Drilling Screw, 1/4"-14 x 3/4"	2	
23	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	20	
24	9405-098	Flat Washer, 5/8" SAE	16	
25	9801	Locknut/Top, 5/8"-11UNC	20	
26	79877G	Tongue Weldment w/Decal =Green=	1	Includes Item 27
	79877R	Tongue Weldment w/Decal =Red=		
27	9003127	Reflector 2" x 9" =Amber=	2	

Hitch Extension Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



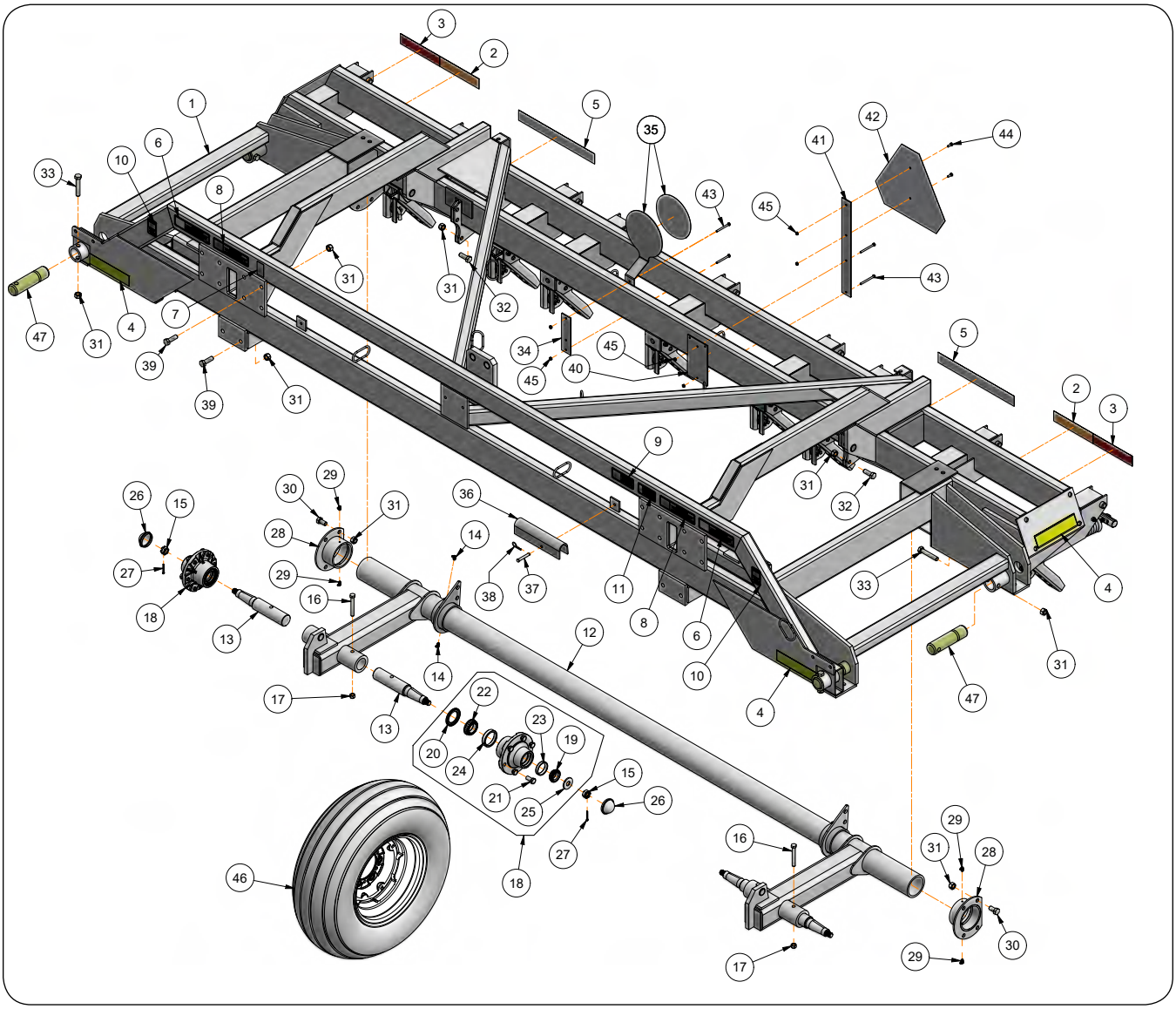
Hitch Extension Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	QTY	NOTES
1	78113G	Hitch Extension Weldment Left-Hand =Green=	1	
	78113R	Hitch Extension Weldment Left-Hand =Red=	1	
2	78091G	Hitch Extension Weldment Right-Hand =Green=	1	
	78091R	Hitch Extension Weldment Right-Hand =Red=	1	
3	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	20	
4	9801	Locknut/Top, 5/8"-11UNC	20	

Main Frame Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY
1	87970G	Main Frame Assembly =Green=	1
	87970R	Main Frame Assembly =Red=	
2	9003125	Fluorescent Strip 2" x 9" =Red/Orange=	2
3	9003126	Reflector 2" x 9" =Red=	2
4	9003127	Reflector 2" x 9" =Amber=	4
5	901576	Decal, Unverferth	2
6	901891	Decal, DANGER (Electrocution...)	2
7	91605	Decal, FEMA	1
8	95136	Decal, WARNING (Folding or Unfolding Wings...)	2
9	95605	Decal, WARNING (Falling Equipment...)	1
10	97048	Decal, WARNING (Pinch Point...)	2
11	97961	Decal, WARNING (Read & Understand)	1

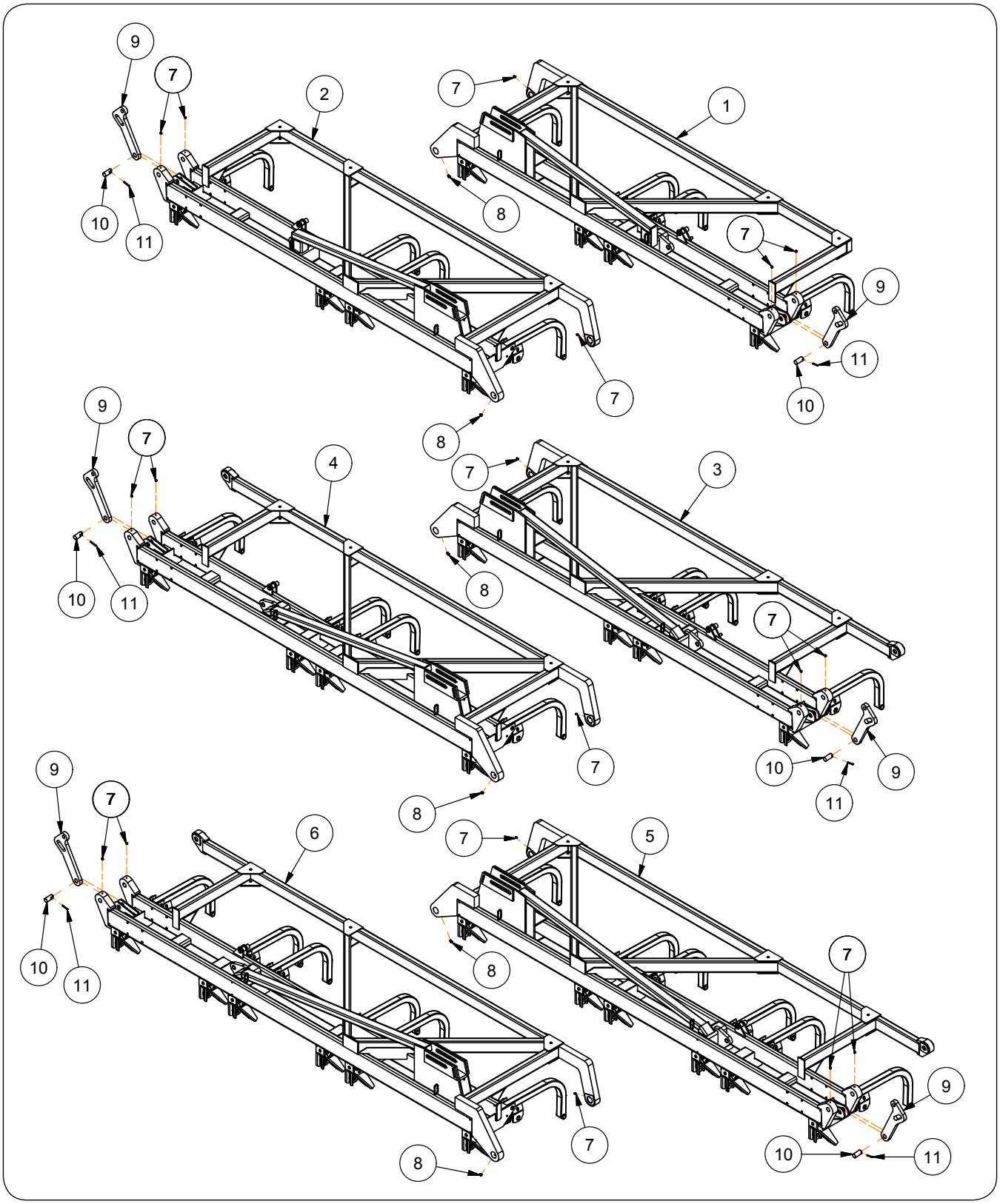
Main Frame Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY
12	88621B	Axle Assembly (Includes Items 13 through 17)	1
13	88361	Spindle, 2" Dia. x 12" w/3/4"-16UNF Threaded End	4
14	93415	Grease Zerk	4
15	9393-016	Slotted Nut, 3/4"-16UNF	4
16	9390-110	Capscrew, 1/2"-13UNC x 3 3/4" G5	4
17	9800	Locknut/Top, 1/2"-13UNC	4
18	9500003B	Hub 6 Bolt Assembly Complete (Includes Items 19 through 24)	4
19	9165	Bearing Cone 1.25 Bore (LM67048)	1
20	9230	Seal	1
21	9231	Wheel Bolt 9/16"-18UNF x 1 1/8" G5	6
22	9247	Bearing Cone 1.62" Bore (LM501349)	1
23	9345	Bearing Cup (LM67010)	1
24	9349	Bearing Cup (LM501310)	1
25	9234	Flat Washer, 13/16" ID	1
26	9162	Hub Cap =Black=	4
27	9391-035	Cotter Pin, 5/32" Dia. x 1 1/2"	4
28	87274B	Bearing Housing with Grease Zerk	2
29	93415	Grease Zerk	2
30	9390-121	Capscrew, 5/8"-11UNC x 1 1/4" G5	8
31	9801	Locknut/Top, 5/8"-11UNC	38
32	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	6
33	9390-130	Capscrew, 5/8"-11UNC x 3 1/2" G5	4
34	64157B	Bar, 2" x 7 1/4"	1
35	79340B	SIS Decal Plate with Decal	1
	9008714	Decal, Rear SIS 20 MPH	1
36	80080	Stop/Transport Lock	2
37	9828	Clevis Pin, 3/8" Dia. x 2 1/2"	2
38	9514	Hairpin Cotter, .092" Dia. x 1 7/8"	2
39	9390-124	Capscrew, 5/8"-11UNC x 2" G5	20
40	88587B	Plate, 4 1/2" x 8"	1
41	88259B	Strip/Bracket for SMV	1
42	9829	SMV Emblem	1
43	9390-012	Capscrew, 1/4"-20UNC x 2 3/4" G5	2
44	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	4
45	9936	Locknut/Top, 1/4"-20UNC	6
46	17679	Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Off White)	4
	17679SM	Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Silver Mist)	
	9002500	Valve Stem Only	-
	W815-6-08	Implement Wheel Only	-
47	88375	Pin, 2" Dia. x 7 5/8"	4

Inner Wing Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



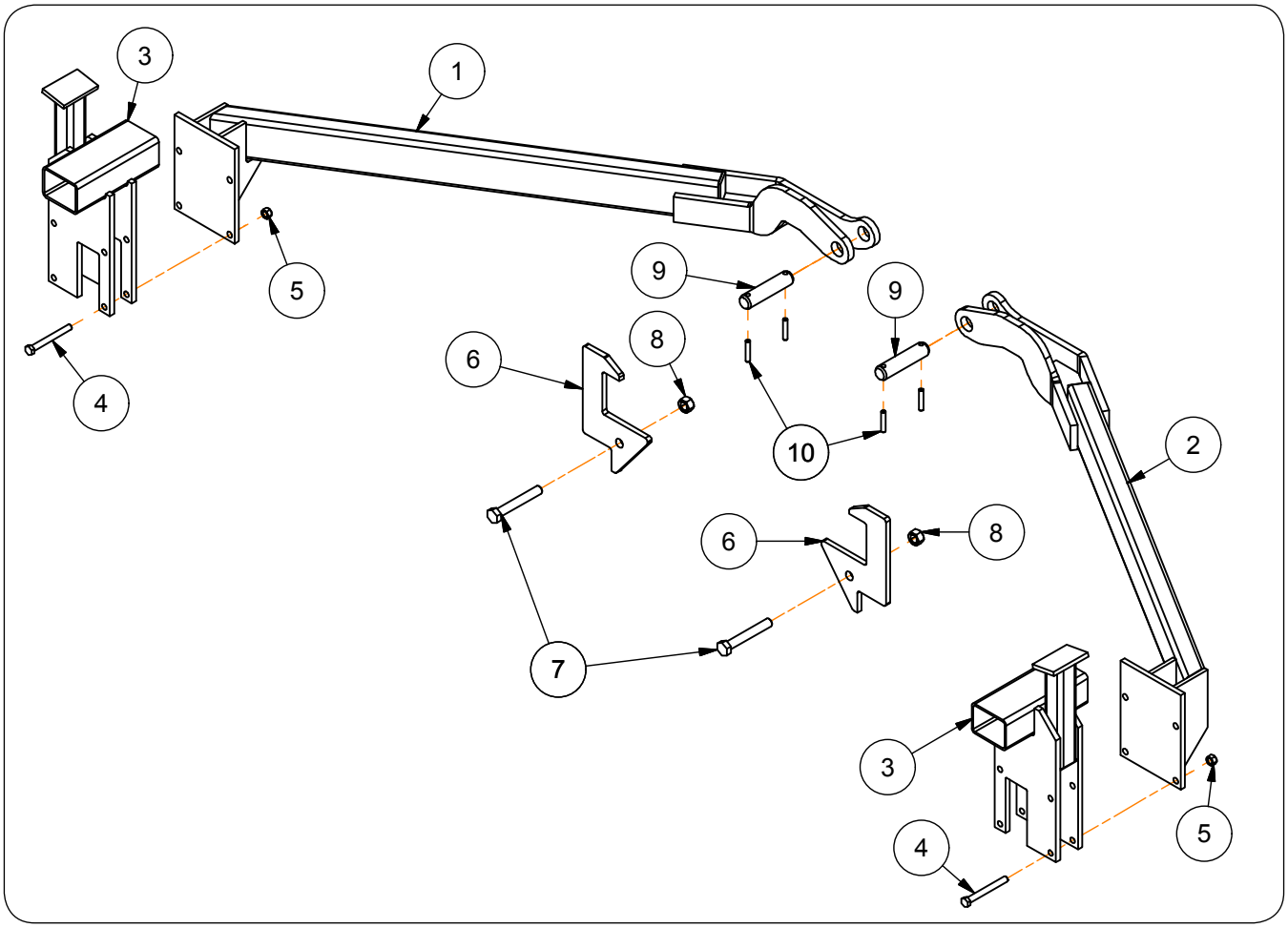
Inner Wing Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	73577G	Wing 11' LH Weldment =Green=	Includes Items 7 & 8
	73577R	Wing 11' LH Weldment =Red=	
2	73579G	Wing 11' RH Weldment =Green=	Includes Items 7 & 8
	73579R	Wing 11" RH Weldment =Red=	
3	73581G	Wing 12' LH Weldment =Green=	Includes Items 7 & 8
	73581R	Wing 12' LH Weldment =Red=	
4	73583G	Wing 12' RH Weldment =Green=	Includes Items 7 & 8
	73583R	Wing 12' RH Weldment =Red=	
5	73585G	Wing 13' LH Weldment =Green=	Includes Items 7 & 8
	73585R	Wing 13' LH Weldment =Red=	
6	73587G	Wing 13' RH Weldment =Green=	Includes Items 7 & 8
	73587R	Wing 13' RH Weldment =Red=	
7	91160	Grease Zerk	
8	93415	90° Grease Zerk	
9	81504B	Arm/Fold Link	
10	87292	D-Pin, 1 1/4" Dia. x 2 5/8"	
11	91144-186	Spiral Pin, 5/16" Dia. x 2"	

Gravity Latch/Wing Stand/Wing Brace Components

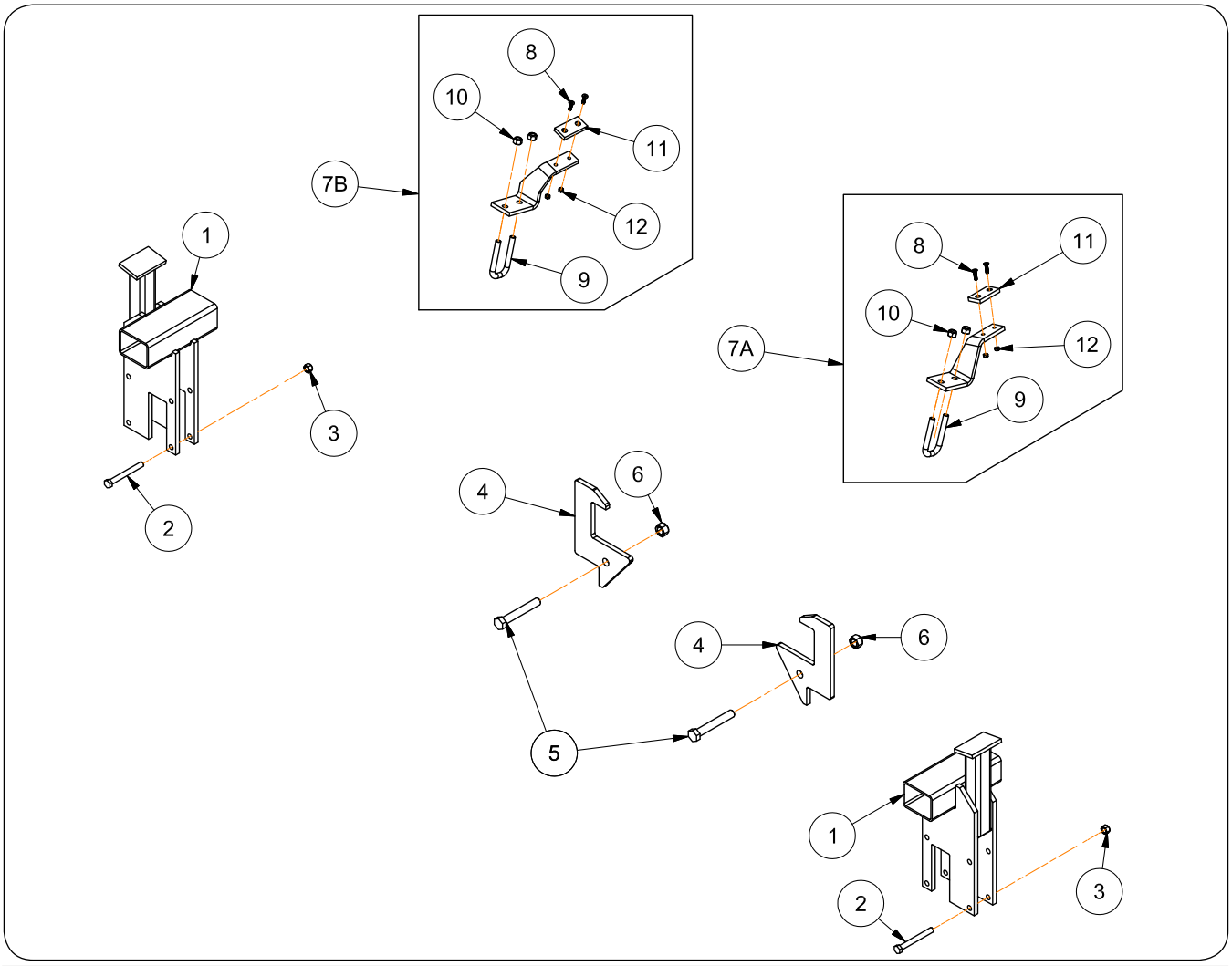
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	NOTES
1	88234G	Wing Truss RH Weldment =Green=	Models 57-63' Only
	88234R	Wing Truss RH Weldment =Red=	
2	88235G	Wing Truss LH Weldment =Green=	Models 57-63' Only
	88235R	Wing Truss LH Weldment =Red=	
3	88553B	Wing Stand Weldment	
4	9390-112	Capscrew, 1/2"-13UNC x 4 1/2" G5	Models 57-63'
	9390-110	Capscrew, 1/2"-13UNC x 3 3/4" G5	Models 47-55'
5	9800	Locknut/Top, 1/2"-13UNC	
6	88570B	Gravity Latch Plate	
7	9390-155	Capscrew, 3/4"-10UNC x 5" G5	
8	9802	Locknut/Top, 3/4"-10UNC	
9	406437	Pin, 1 1/4" Dia. x 5 1/4"	
10	91144-207	Spiral Pin, 3/8" Dia. x 2"	

Bumper Assembly Components

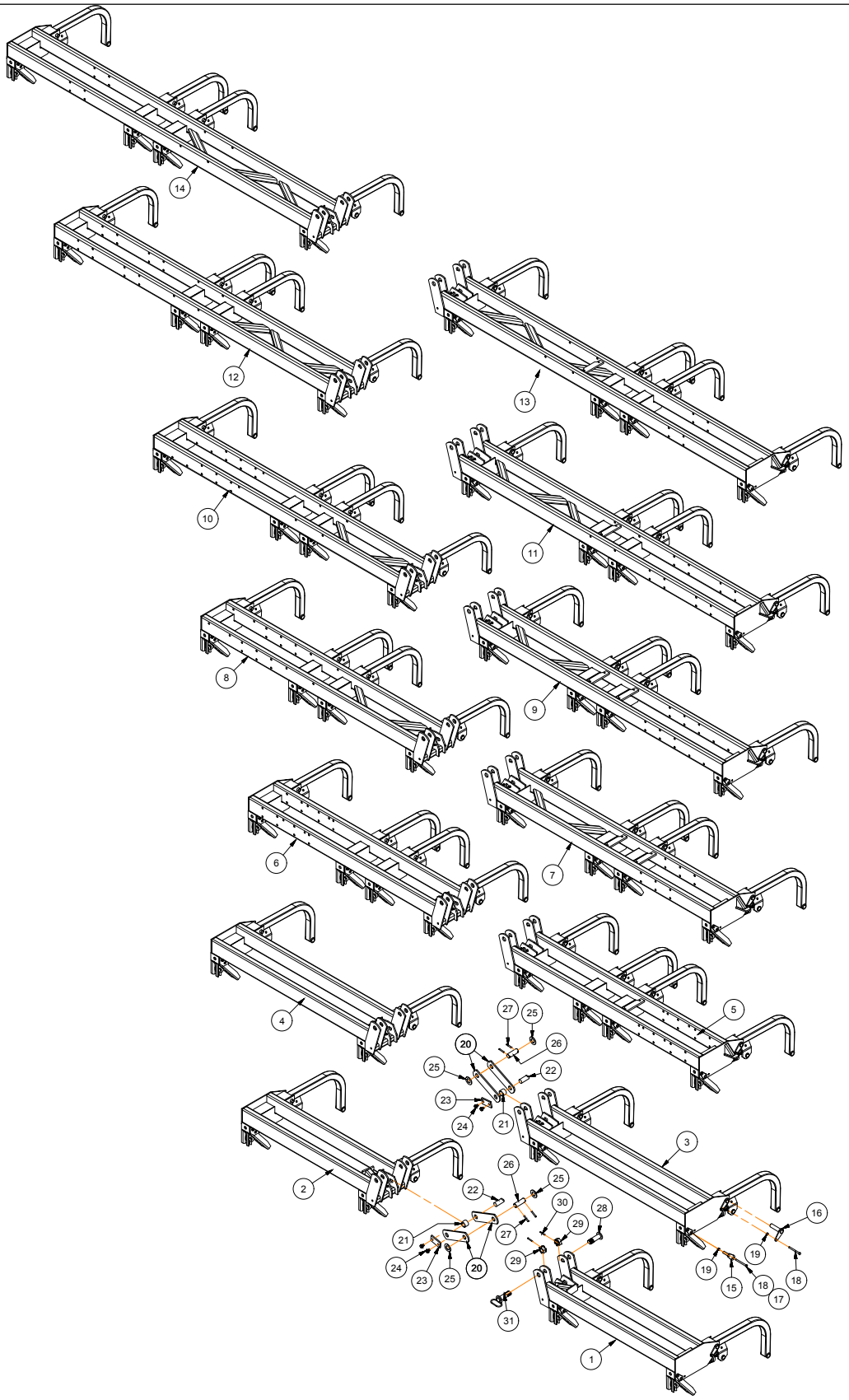
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	NOTES
1	88553B	Wing Stand Weldment	
2	9390-112	Capscrew, 1/2”-13UNC x 4 1/2” G5	Models 57-63’ / Grade 5
	9390-110	Capscrew, 1/2”-13UNC x 3 3/4” G5	Models 47-55’ / Grade 5
3	9800	Locknut/Top, 1/2”-13UNC	
4	88570B	Gravity Latch Plate	
5	9390-155	Capscrew, 3/4”-10UNC x 5” G5	Grade 5
6	9802	Locknut/Top, 3/4”-10UNC	
7A	76508B	Bumper Assembly Left-Hand	
7B	76509B	Bumper Assembly Right-Hand	
8	902703-021	Capscrew, 1/4”-20UNC x 1” w/Socket Flat Head	
9	901837	U-Bolt, 1/2”-20UNC	
10	9800	Locknut/Top, 1/2”-20UNC	
11	2005110	Wear Pad	
12	9936	Locknut/Top, 1/4”-20UNC	

Outer Wing Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



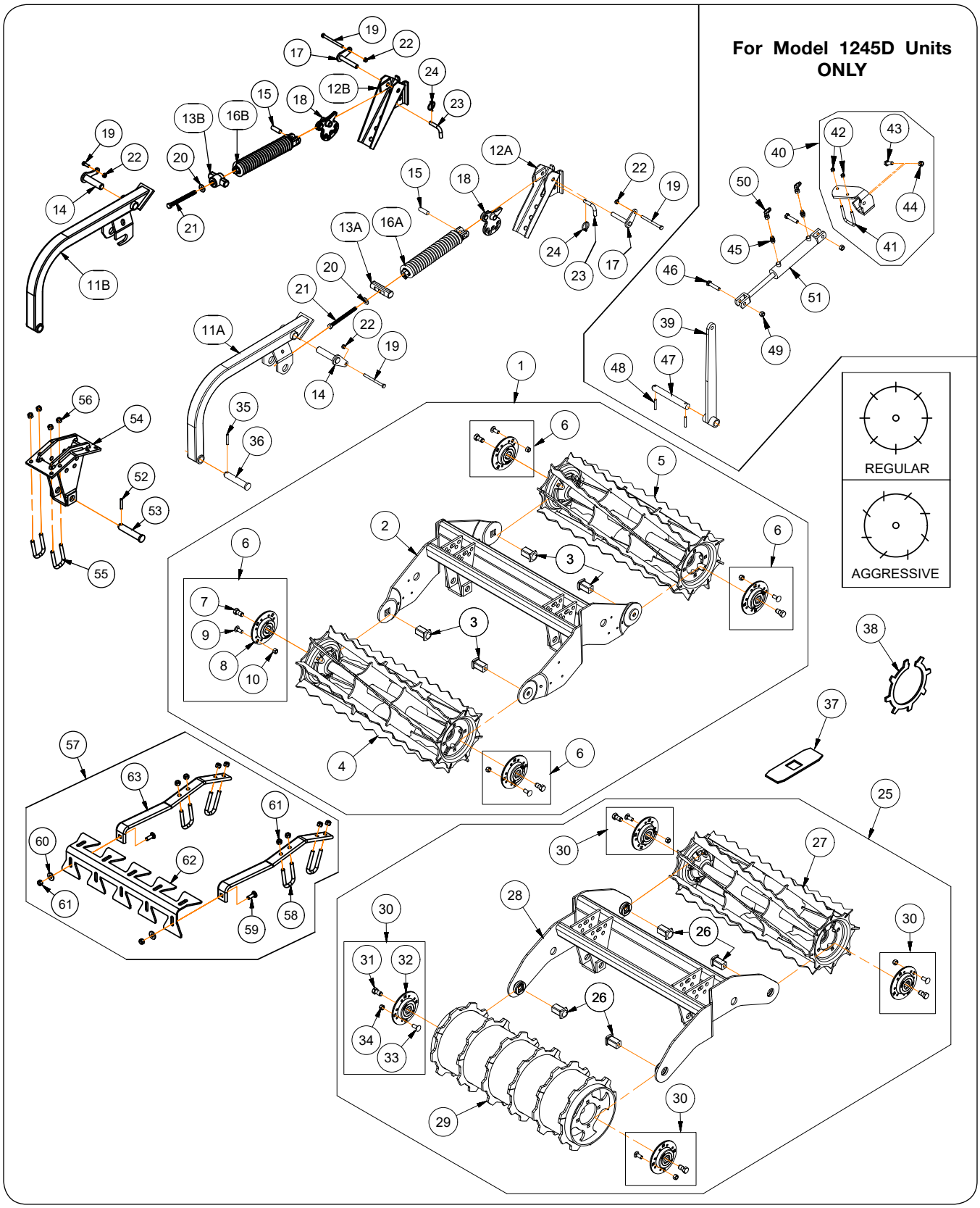
Outer Wing Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	75766G	Wing 5' LH Assembly =Green=	Includes Items 15 through 19
	75766R	Wing 5' LH Assembly =Red=	
2	75767G	Wing 5' RH Assembly =Green=	Includes Items 15 through 19
	75767R	Wing 5' RH Assembly =Red=	
3	75768G	Wing 6' LH Assembly =Green=	Includes Items 15 through 19
	75768R	Wing 6' LH Assembly =Red=	
4	75769G	Wing 6' RH Assembly =Green=	Includes Items 15 through 19
	75769R	Wing 6' RH Assembly =Red=	
5	75770G	Wing 7' LH Assembly =Green=	Includes Items 15 through 19
	75770R	Wing 7' LH Assembly =Red=	
6	75771G	Wing 7' RH Assembly =Green=	Includes Items 15 through 19
	75771R	Wing 7' RH Assembly =Red=	
7	75772G	Wing 8' LH Assembly =Green=	Includes Items 15 through 19
	75772R	Wing 8' LH Assembly =Red=	
8	75773G	Wing 8' RH Assembly =Green=	Includes Items 15 through 19
	75773R	Wing 8' RH Assembly =Red=	
9	75774G	Wing 9' LH Assembly =Green=	Includes Items 15 through 19
	75774R	Wing 9' LH Assembly =Red=	
10	75775G	Wing 9' RH Assembly =Green=	Includes Items 15 through 19
	75775R	Wing 9' RH Assembly =Red=	
11	75776G	Wing 10' LH Assembly =Green=	Includes Items 15 through 19
	75776R	Wing 10' LH Assembly =Red=	
12	75777G	Wing 10' RH Assembly =Green=	Includes Items 15 through 19
	75777R	Wing 10' RH Assembly =Red=	
13	75778G	Wing 11' LH Assembly =Green=	Includes Items 15 through 19
	75778R	Wing 11' LH Assembly =Red=	
14	75779G	Wing 11' RH Assembly =Green=	Includes Items 15 through 19
	75779R	Wing 11' RH Assembly =Red=	
15	86251B	Pin-Link Weldment, 5/8" Dia. x 3 7/8"	
16	76331PL	Pin-Link Weldment, 1" Dia. x 4 11/16"	
17	9390-055	Capscrew, 3/8"-16UNC x 1" G5	
18	9390-068	Capscrew, 3/8"-16UNC x 4 1/2" G5	
19	9928	Locknut/Top, 3/8"-16UNC	
20	87005B	Strap/Linkage Bar	
21	81561	Spacer Tube, 1 3/4" OD x 1 5/16" ID x 1 1/4"	
22	88575	D-Pin, 1 1/4" Dia. x 2 15/16"	
23	88574	Plate, 2" x 3 7/8"	
24	901119	Flange Screw, 1/2"-13UNC x 3/4" G5	
25	9405-128	Flat Washer, 1 1/4"	
26	87283	Pin, 1 1/4" Dia. x 3 5/8"	
27	91144-186	Spiral Pin, 5/16" Dia. x 2"	
28	83146	D-Pivot Pin, 1 1/4" Dia. w/1 1/4"-12UNF Threaded End	
29	9393-024	Slotted Nut, 1 1/4"-12UNF G2	
30	91144-165	Spiral Pin, 1/4" Dia. x 1 7/8"	
31	73906	Pivot Pin, 1 1/4" Dia. x 4 5/8"	

Rolling Harrow Basket Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



Rolling Harrow Basket Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTE
1	74602B	Basket & Frame 3' Assembly	
	74603B	Basket & Frame 4' Assembly	
	74581B	Basket & Frame 5' Assembly	
	74604B	Basket & Frame 6' Assembly	
2	74183B	Frame 3' Weldment	
	74184B	Frame 4' Weldment	
	74185B	Frame 5' Weldment	
	74076B	Frame 6' Weldment	
3	74280	Bearing Bolt	
4	74596B	Basket 3' Regular Weldt	
	74597B	Basket 4' Regular Weldt	
	74576B	Basket 5' Regular Weldt	
	74598B	Basket 6' Regular Weldt	
5	74599B	Basket 3' Aggressive Weldment	
	74600B	Basket 4' Aggressive Weldment	
	74579B	Basket 5' Aggressive Weldment	
	74601B	Basket 6' Aggressive Weldment	
6	74006	Flange Bearing Kit	
7	900872	Capscrew, 5/8"-11UNC x 1 1/4" G5	
8	902714	Flange Bearing	
9	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4" G5	
10	9800	Locknut/Top, 1/2"-13UNC	
11A	74793G	Bent Arm Weldt =Green=	
	74793R	Bent Arm Weldt =Red=	
11B	86096G	Bent Arm Weldt =Green=	
	86096R	Bent Arm Weldt =Red=	
12A	74848G	One-Bar Arm/Saddle Weldt =Green=	
	74848R	One-Bar Arm/Saddle Weldt =Red=	
12B	89260G	One-Bar Arm/Saddle Weldt =Green=	
	89260R	One-Bar Arm/Saddle Weldt =Red=	
13A	74850	Trunnion	
13B	85741B	Trunnion	
14	76331PL	Pin Weldment, 1" Dia. x 4 11/16"	
15	81321	Pin, 5/8" Dia. x 1 7/8"	
16A	75473B	Spring Assembly, 2 13/16" Dia. x 14 1/4"	
16B	84260B	Spring Assembly, 2 1/2" Dia. x 13 7/8"	
17	86251B	Pin-Link Weldment, 5/8" Dia. x 3 7/8"	
18	89256	Adjustable Link	
19	9390-068	Capscrew, 3/8"-16UNC x 4 1/2" G5	
	9390-055	Capscrew, 3/8"-16UNC x 1" G5	
20	9405-082	Flat Washer, 7/16 USS	
21	97171	Capscrew, 1/2-13UNC x 6" G5	

(Continued on next page)

Rolling Harrow Basket Components (continued)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
22	9928	Locknut/Top, 3/8"-16UNC	
23	902450	Bent Pin	
24	9093	Klik Pin, 3/16" Dia. x 1 9/16" w/Lock Ring	
25	76030B	Drum & Frame 3' Assembly	
	76031B	Drum & Frame 4' Assembly	
	76008B	Drum & Frame 5' Assembly	
	76032B	Drum & Frame 6' Assembly	
26	74280	Bearing Bolt, 1.125" Sq. x 2 1/16"	
27	74599B	Basket 3' Aggressive Weldment	
	74600B	Basket 4' Aggressive Weldment	
	74579B	Basket 5' Aggressive Weldment	
	74601B	Basket 6' Aggressive Weldment	
28	74842B	Frame 3' Weldment	
	74843B	Frame 4' Weldment	
	74822B	Frame 5' Weldment	
	74844B	Frame 6' Weldment	
29	76024B	Drum/Basket 3' Weldment	
	76025B	Drum/Basket 4' Weldment	
	76009B	Drum/Basket 5' Weldment	
	76026B	Drum/Basket 6' Weldment	
30	74006	Flange Bearing Kit	
31	900872	Capscrew, 5/8"-11UNC x 1 1/4" G5	
32	902714	Flange Bearing	
33	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4" G5	
34	9800	Locknut/Top, 1/2"-13UNC	
35	91144-186	Spiral Pin, 5/16" Dia. x 2"	
36	9500423	Pin, 1" Dia. x 5 1/8"	
37	88826	Cover - Rubber	
38	74964	Reinforcing Disc Weld-In	
39	75930B	Link Weldment - Basket Rocker	
40	76495B	Cylinder Mount Weldment & Hardware	
41	9004680	U-Bolt, 3/8"-16UNC x 3 1/4"	
42	9928	Locknut/Top, 3/8"-16UNC	
43	9390-101	Capscrew. 1/2"-13UNC x 1 1/2" G5	
44	9800	Locknut/Top, 1/2"-13UNC	
45	9001495	Adapter 9/16-18 JIC Male x 9/16-18 JIC Male-O-Ring	
46	9390-104	Capscrew, 1/2"-13UNC x 2 1/4" G5	
47	9501583	Pin, 1" Dia. x 8 1/8"	
48	91144-186	Spiral Pin, 5/16" Dia. x 2"	
49	9800	Locknut/Top, 1/2"-13UNC	

(Continued on next page)

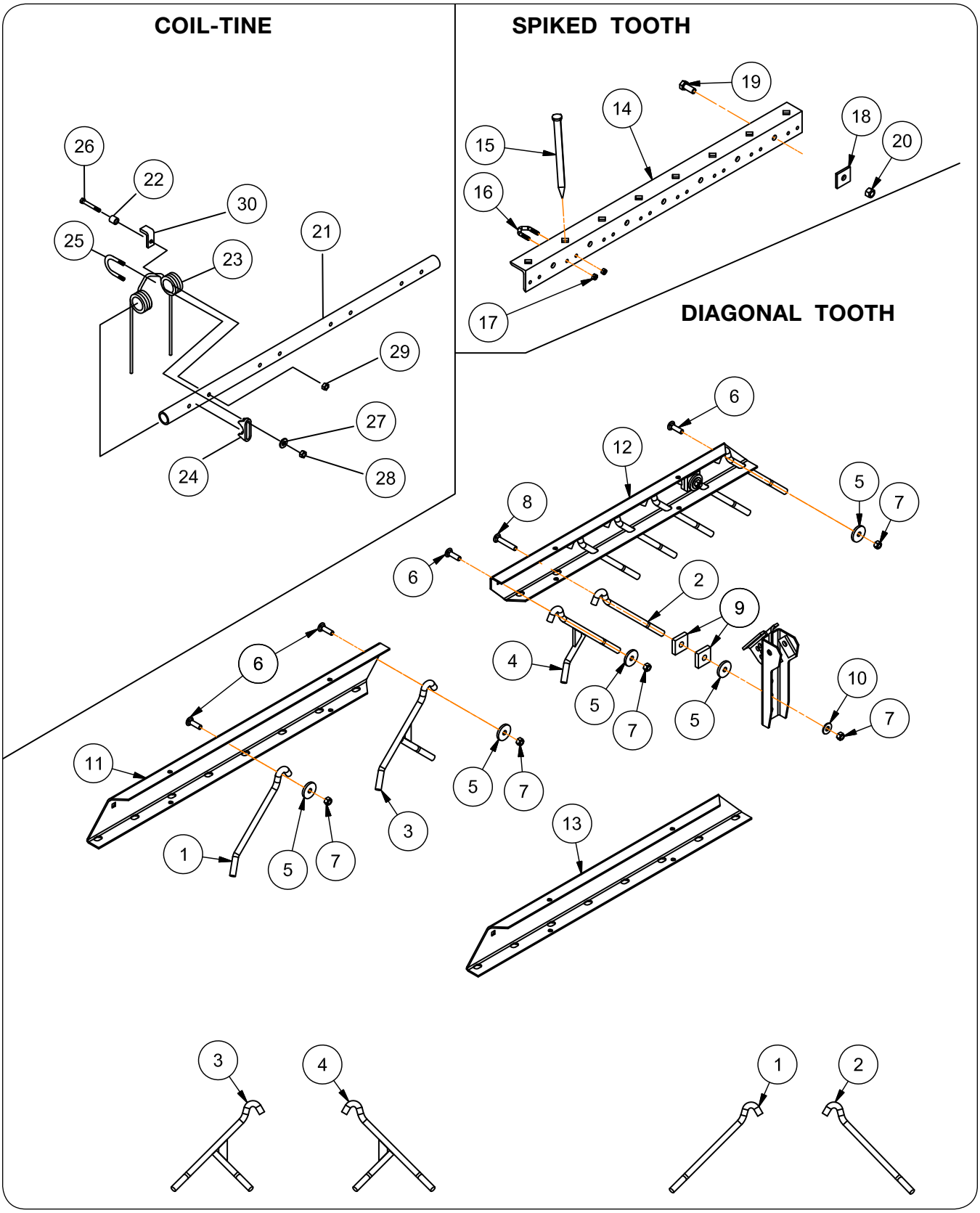
Rolling Harrow Basket Components (continued)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
50	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	
51	TA0-904623-0	Hydraulic Cylinder 1 1/2 x 6	
52	91144-186	Spiral Pin, 5/16" Dia. x 2"	
53	9500423	Pin, 1" Dia. x 5 1/8"	
54	79921B	Bolt-On Basket Bracket Weldment	
55	901837	U-Bolt, 1/2"-13UNC x 3 3/4", 2 1/16" C/C	
56	9800	Locknut/Top, 1/2"-13UNC	
57	76539B	Drum Scraper Kit 3'	
	76540B	Drum Scraper Kit 4'	
	76541B	Drum Scraper Kit 5'	
	76542B	Drum Scraper Kit 6'	
58	901837	U-Bolt, 1/2"-13UNC x 3 3/4", 2 1/16" C/C	
59	9388-104	Carriage Bolt, 1/2"-13UNC x 1 1/2" G5	
60	9405-088	Flat Washer, 1/2" USS	
61	9800	Locknut/Top, 1/2"-13UNC	
62	75598B	Drum Scraper 3'	
	75599B	Drum Scraper 4'	
	75561B	Drum Scraper 5'	
	75600B	Drum Scraper 6'	
63	75564B	Drum Scraper Bar Mount	
64	77660B	Basket Pivot Limit Option (Pair)	
65	77042B	Basket Pitch Adjustment Bushing	
66	91523	Clevis Pin, 5/8" Dia. x 4"	
67	9093	Klik Pin, 3/16" Dia.	

Leveler Bar Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



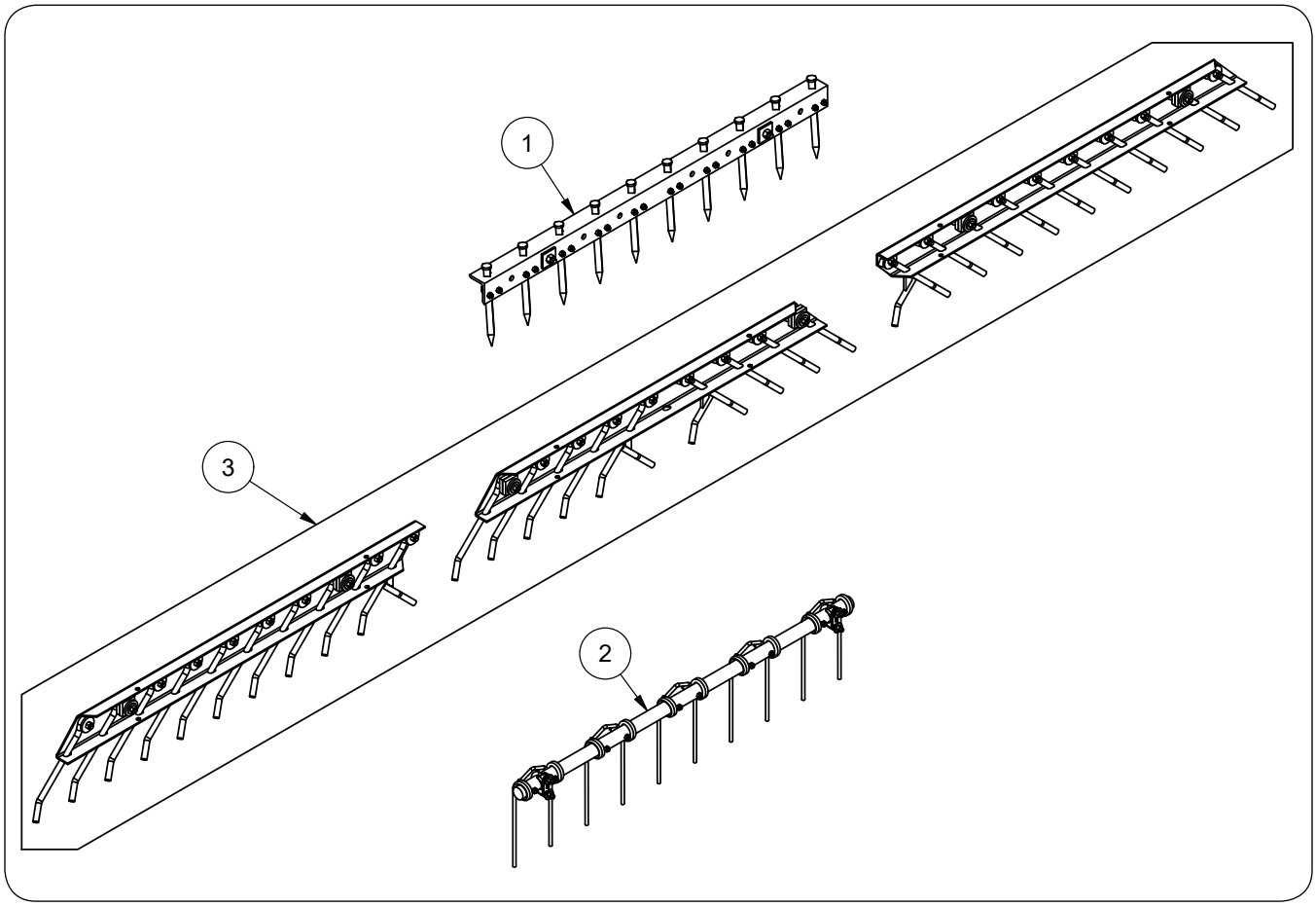
Leveler Bar Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NUMBER	DESCRIPTION	NOTES
1	74676B	Diagonal Bent Left-Hand Tooth	
2	74672B	Diagonal Bent Right-Hand Tooth	
3	74671B	Diagonal Bent Left-Hand "Y" Tooth	
4	74670B	Diagonal Bent Right-Hand "Y" Tooth	
5	91069PL	Flat Washer, 2" OD	
6	9388-105	Carriage Bolt, 1/2"-13UNC x 1 3/4" G5	
7	9800	Locknut/Top, 1/2"-13UNC	
8	9388-110	Carriage Bolt, 1/2"-13UNC x 3" G5	
9	3788B	Spacer (Required In Two Places)	
10	9405-088	Flat Washer, 1/2" USS	
11	71257B	3 Ft. Diagonal Tooth One-Bar Left-Half	
	71259B	4 Ft. Diagonal Tooth One-Bar Left-Hand	
	71261B	5 Ft. Diagonal Tooth One-Bar Left-Hand	
	72147B	6 Ft. Diagonal Tooth One-Bar Left-Hand	
12	71256B	3 Ft. Diagonal Tooth One-Bar Right-Half	
	71258B	4 Ft. Diagonal Tooth One-Bar Right-Half	
	71260B	5 Ft. Diagonal Tooth One-Bar Right Half	
	72144B	6 Ft. Diagonal Tooth One-Bar Right-Half	
13	71255B	5 Ft. Diagonal Bent Tooth Leveler-Bar Center	
14	71184B	3 Ft. Spike Tooth Leveler-Bar	
	71185B	4 Ft. Spike Tooth Leveler-Bar	
	71186B	5 Ft. Spike Tooth Leveler-Bar	
	71580B	6 Ft. Spike Tooth Leveler-Bar	
15	9634P	Diamond-Shaped Spike Tooth	
16	9635	V-Bolt, 3/8"-16UNC x 2", 1.50" C/C	
17	9928	Locknut/Top, 3/8"-16UNC	
18	83284B	Square Washer	
19	9390-122	Capscrew, 5/8"-11UNC x 1 1/2" G5	
20	9801	Locknut/Top, 5/8"-11UNC	
21	86570B	6 Ft. Tine One-Bar	
	84477B	5 Ft. Tine One-Bar	
	84478B	4 Ft. Tine One-Bar (Shown)	
	84479B	3 Ft. Tine One-Bar	
22	84531B	Tube/Bushing	
23	84724B	Spring/Coil Tine	
24	84735B	Clamp	
25	95914	U-Bolt, 7/16"-14UNC x 3.12", 2.12" C/C	
26	9390-062	Capscrew, 3/8"-16UNC x 2 3/4" G5	
27	9405-082	Flat Washer, 7/16"	
28	9799	Locknut/Top, 7/16-14UNC	
29	9928	Locknut/Top, 3/8"-16UNC	
	902875	Locknut/Center, 3/8"-16UNC (With Clip ONLY)	
30	84837	Clip (Behind Wheels ONLY)	

Leveler Bar Assemblies

Please visit www.unverferth.com/parts/ for the most current parts listing.



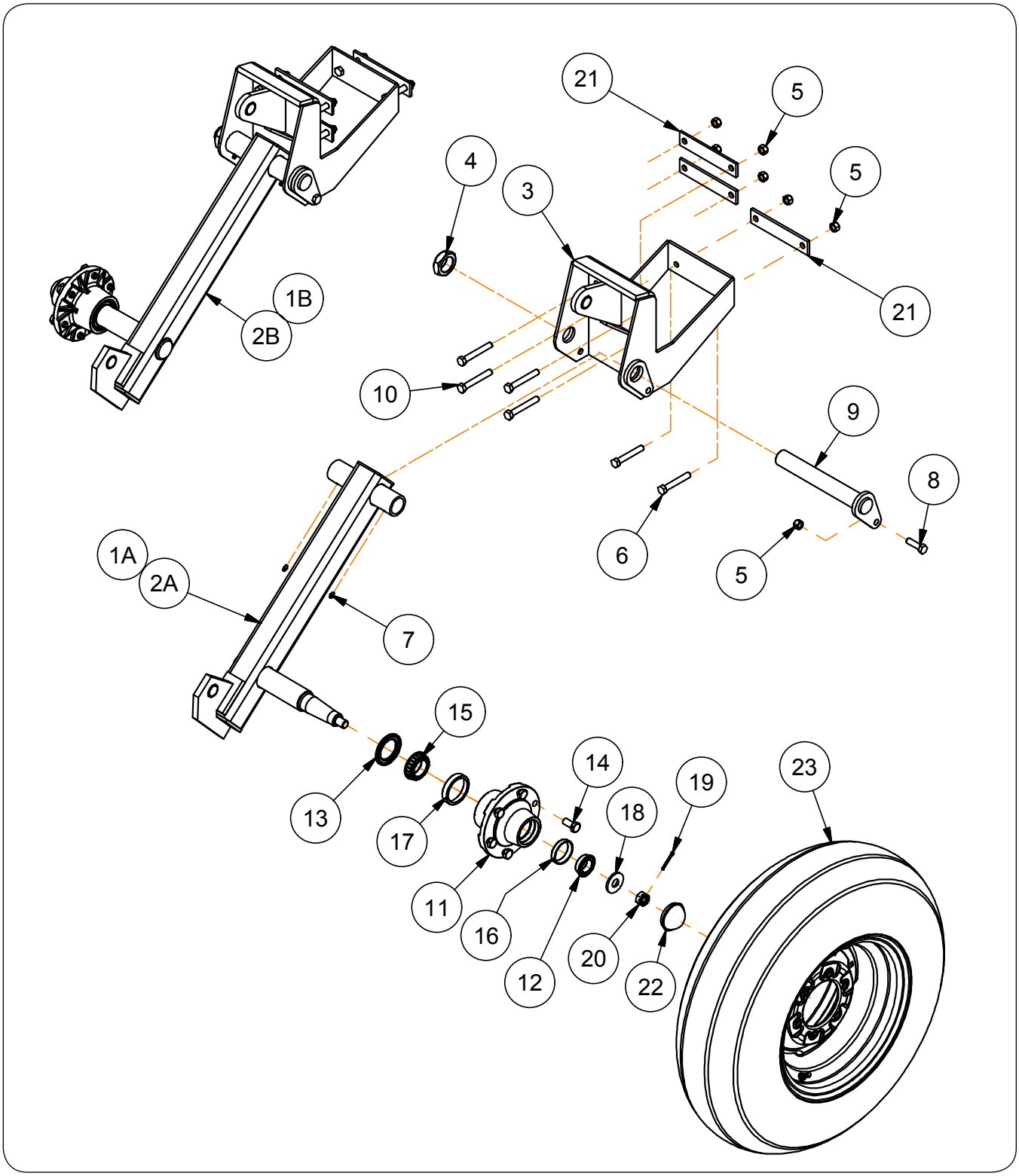
Leveler Bar Assemblies

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION
1	71181	Straight Spike-Tooth One Bar 3' Assembly
	71182	Straight Spike-Tooth One Bar 4' Assembly
	106919	Straight Spike-Tooth One Bar 4 1/2' Assembly
	72964B	Straight Spike-Tooth One Bar 4 1/2' LH Assembly
	71183	Straight Spike-Tooth One Bar 5' Assembly
	72966B	Straight Spike-Tooth One Bar 5 1/2' Assembly
	71579B	Straight Spike-Tooth One Bar 6' Assembly
	72968B	Straight Spike-Tooth One Bar 6 1/2' Assembly
2	84482	Coil-Tine One Bar 3' Assembly
	84481	Coil-Tine One Bar 4' Assembly
	84480	Coil-Tine One Bar 5' Assembly
	86569B	Coil-Tine One Bar 6' Assembly
3	74680B	Diagonal-Tooth One Bar 3' RH Assembly
	74679B	Diagonal-Tooth One Bar 3' LH Assembly
	74682B	Diagonal-Tooth One Bar 4' RH Assembly
	74681B	Diagonal-Tooth One Bar 4' LH Assembly
	76908B	Diagonal-Tooth One Bar 4 1/2' RH Assembly
	76909B	Diagonal-Tooth One Bar 4 1/2' LH Assembly
	74684B	Diagonal-Tooth One Bar 5' RH Assembly
	74683B	Diagonal-Tooth One Bar 5' LH Assembly
	74688B	Diagonal-Tooth One Bar 5 1/2' CTR Assembly
	76911B	Diagonal-Tooth One Bar 5 1/2' RH Y Assembly
	76912B	Diagonal-Tooth One Bar 5 1/2' LH Y Assembly
	74686B	Diagonal-Tooth One Bar 6' RH Assembl
	74685B	Diagonal-Tooth One Bar 6' LH Assembly
	74216B	Diagonal-Tooth One Bar 6 1/2' RH Y Assembly
	76910B	Diagonal-Tooth One Bar 6 1/2' LH Y Assembly

Wing Gauge Wheel & Hub Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



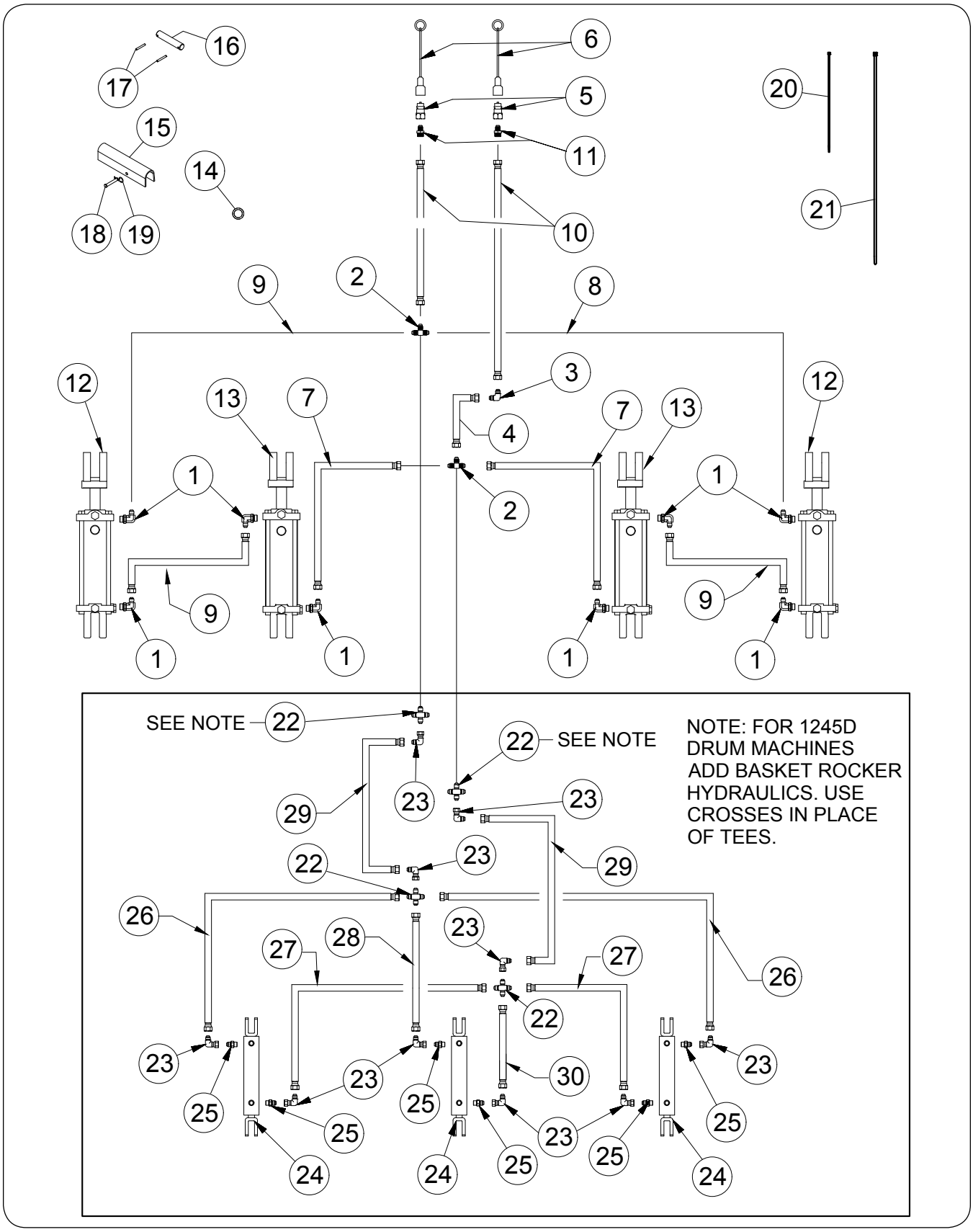
Wing Gauge Wheel & Hub Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION
1A	73733B	Gauge Wheel Assembly LH
1B	73734B	Gauge Wheel Assembly RH
2A	89400B	Axle Wweldment LH (Less Zerks)
2B	89401B	Axle Wweldment RH (Less Zerks)
3	73723B	Wheel Bracket Weldment
4	9397-022	Elastic Jam Nut, 1 1/2"-12UNF (For Service ONLY)
5	9800	Locknut/Top, 1/2"-13UNC
6	9390-108	Capscrew, 1/2"-13UNC x 3 1/4" G5
7	91160	Grease Zerk 1/4-28
8	9390-102	Capscrew, 1/2"-13UNC x 1 3/4" G5
9	89261	Pin Weldment & Nut
10	9390-109	Capscrew, 1/2"-13UNC x 3 1/2" G5
11	9500003B	Hub Assembly w/Grease Zerk
12	9165	Bearing Cone #LM67048
13	9230	Seal
14	9231	Wheel Bolt, 9/16"-18UNF x 1 1/8" G5
15	9247	Bearing Cone #LM501349
16	9345	Bearing Cup #LM67010
17	9349	Bearing Cup #LM501310
18	9234	Flat Washer, 13/16" ID
19	9391-035	Cotter Pin, 5/32" Dia. x 1 1/2"
20	9393-016	Slotted Nut, 3/4"-16UNF
21	73722PL	Plate/Bar
22	9162	Hub Cap
23	17679	Inner Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Includes Valve Stem) (Off-White)
	17679SM	Inner Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Includes Valve Stem) (Silver Mist)
	60911	Outer Mounted Tire & Wheel (TL9.5LB15 8-Ply) Includes Valve Stem (Off-White)
	60911SM	Outer Mounted Tire & Wheel (TL9.5LB15 8-Ply) Includes Valve Stem (Silver Mist)
	9002500	Valve Stem Only
	W815-6-08	Implement Wheel Only

Raise & Lower Hydraulic Components For 47-49' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.



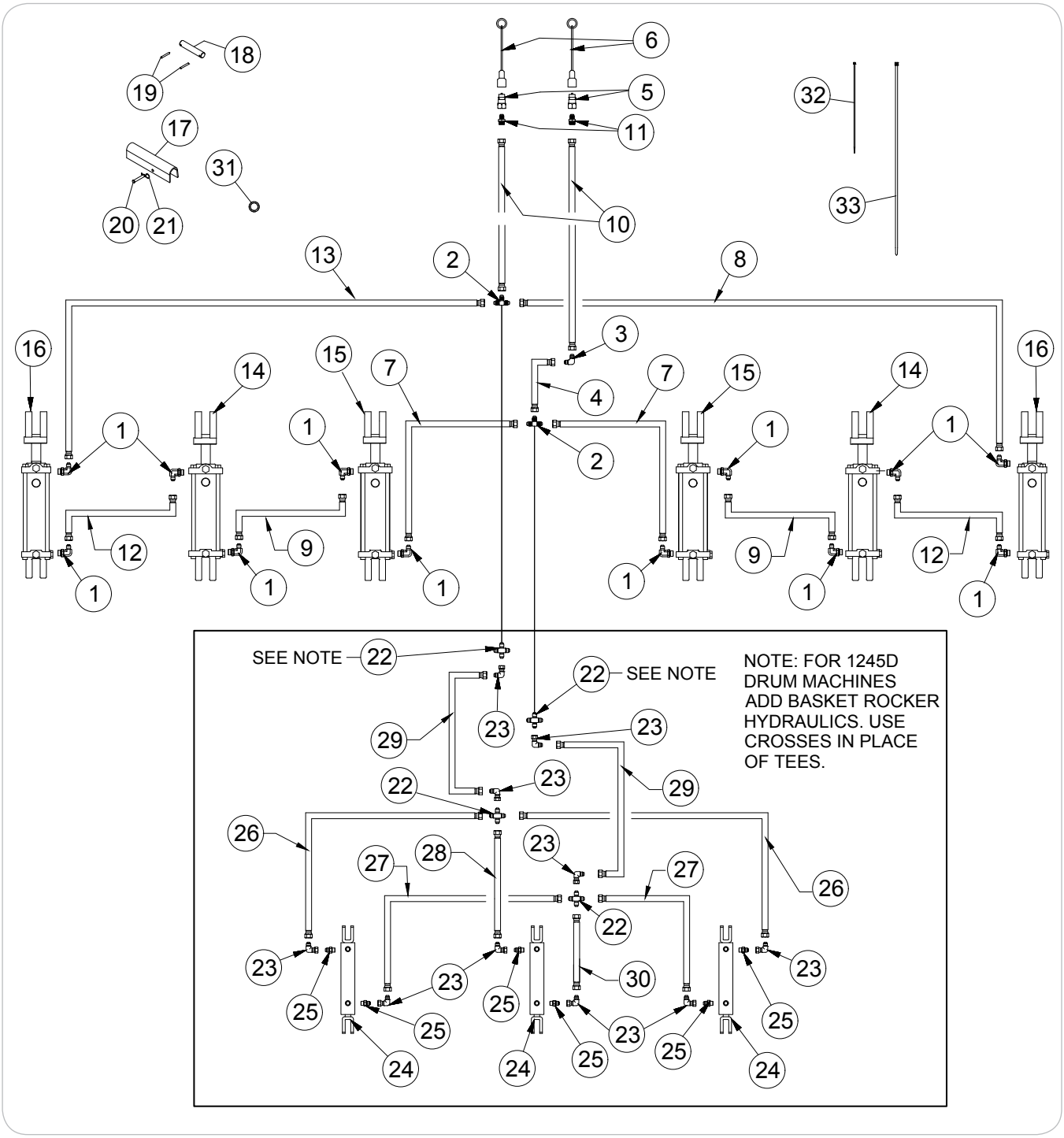
Raise & Lower Hydraulic Components For 47-49' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO	DESCRIPTION	QTY	NOTES
1	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	8	
2	9875	Tee 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	2	Model 1245 ONLY
3	9897	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Male	1	
4	9501700	Hose 3/8 x 48 (3000 PSI)	1	
5	91383	Male Tip Coupling 3/4-16 O-Ring Female Thread (3000 PSI)	2	
6	91511	Dust Cap	2	
7	9501702	Hose 3/8 x 84 (3000 PSI)	2	
8	9501691	Hose 3/8 x 228 (3000 PSI)	1	
9	9501698	Hose 3/8 x 334 (3000 PSI)	3	
10	9501714	Hose 3/8 x 464 (3000 PSI)	2	
11	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	2	
12	902647	Cylinder 3 1/4 x 8 (3000 PSI)	2	
	902654	Seal Kit	-	
13	902646	Cylinder 3 1/2 x 8 (3000 PSI)	2	
	902653	Seal Kit	-	
14	9840	"O"-Ring (For Repairs ONLY - NOT SHOWN)	-	
15	80080	Stop (For Main Frame Wheel Cylinders)	2	
16	85631	Pin, 1" Dia. x 4"	8	
17	91144-165	Spiral Pin 1/4" Dia. x 1 7/8	16	
18	9828	Clevis Pin 3/8" Dia. x 2 1/2 (For Main Frame Wheel Cylinders)	2	
19	9514	Hairpin Cotter (For Main Frame Wheel Cylinders)	2	
20	94037	Cable Tie, 15 1/2"	6	
21	94038	Cable Tie, 32"	12	
22	9002273	Cross 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	4	Model 1245D ONLY
23	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	10	Model 1245D ONLY
24	TA0-904623-0	Hydraulic Cylinder 1 1/2 x 6	3	Model 1245D ONLY
25	9001495	Adapter 9/16-18 JIC Male x 9/16-18 JIC Male-O-Ring	6	Model 1245D ONLY
26	9501684	Hose 3/8 x 68	2	Model 1245D ONLY
27	9501685	Hose 3/8 x 80	2	Model 1245D ONLY
28	9501679	Hose 3/8 x 22	1	Model 1245D ONLY
29	9501687	Hose 3/8 x 96	2	Model 1245D ONLY
30	9501680	Hose 3/8 x 26	1	Model 1245D ONLY

Raise & Lower Hydraulic Components For 51-55' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.



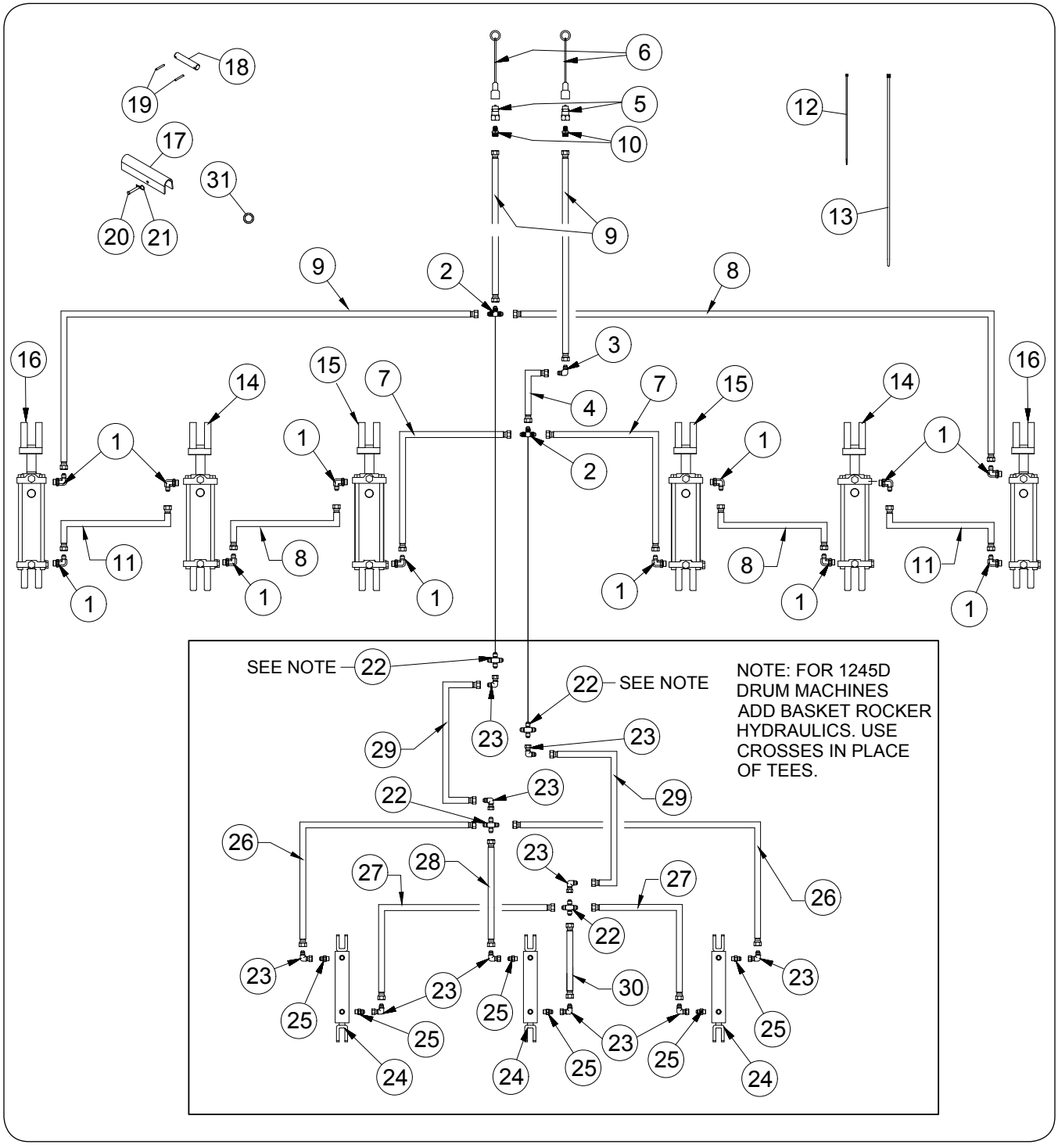
Raise & Lower Hydraulic Components For 51-55' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	12	
2	9875	Tee 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	2	Model 1245 ONLY
3	9897	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Male	1	
4	9501700	Hose 3/8 x 48 (3000 PSI)	1	
5	91383	Male Tip Coupling 3/4-16 O-Ring Female Thread (3000 PSI)	2	
6	91511	Dust Cap	2	
7	9501702	Hose 3/8 x 84 (3000 PSI)	2	
8	9501710	Hose 3/8 x 304 (3000 PSI)	1	
9	9501698	Hose 3/8 x 334 (3000 PSI)	2	
10	9501714	Hose 3/8 x 464 (3000 PSI)	2	
11	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	2	
12	9501697	Hose 3/8 x 178 (3000 PSI)	2	
13	9501713	Hose 3/8 x 404 (3000 PSI)	1	
14	902647	Cylinder 3 1/4 x 8 (3000 PSI)	2	
	902654	Seal Kit	-	
15	902646	Cylinder 3 1/2 x 8 (3000 PSI)	2	
	902653	Seal Kit	-	
16	902648	Cylinder 3 x 8 (3000 PSI)	2	
	902655	Seal Kit	-	
17	80080	Stop (For Main Frame Wheel Cylinders)	2	
18	85631	Pin, 1" Dia. x 4"	12	
19	91144-165	Spiral Pin, 1/4" Dia. x 1 7/8"	24	
20	9828	Clevis Pin 3/8" Dia. x 2 1/2 (For Main Frame Wheel Cylinders)	2	
21	9514	Hairpin Cotter (For Main Frame Wheel Cylinders)	2	
22	9002273	Cross 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	4	Model 1245D ONLY
23	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	10	Model 1245D ONLY
24	TA0-904623-0	Hydraulic Cylinder 1 1/2 x 6	3	Model 1245D ONLY
25	9001495	Adapter 9/16-18 JIC Male x 9/16-18 JIC Male-O-Ring	6	Model 1245D ONLY
26	9501684	Hose 3/8 x 68	2	Model 1245D ONLY
27	9501685	Hose 3/8 x 80	2	Model 1245D ONLY
28	9501679	Hose 3/8 x 22	1	Model 1245D ONLY
29	9501687	Hose 3/8 x 96	2	Model 1245D ONLY
30	9501680	Hose 3/8 x 26	1	Model 1245D ONLY
31	9840	"O"-Ring (For Repairs ONLY)	-	
32	94037	Cable Tie, 15 1/2"	6	
33	94038	Cable Tie, 32"	12	

Raise & Lower Hydraulic Components For 57-63' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.



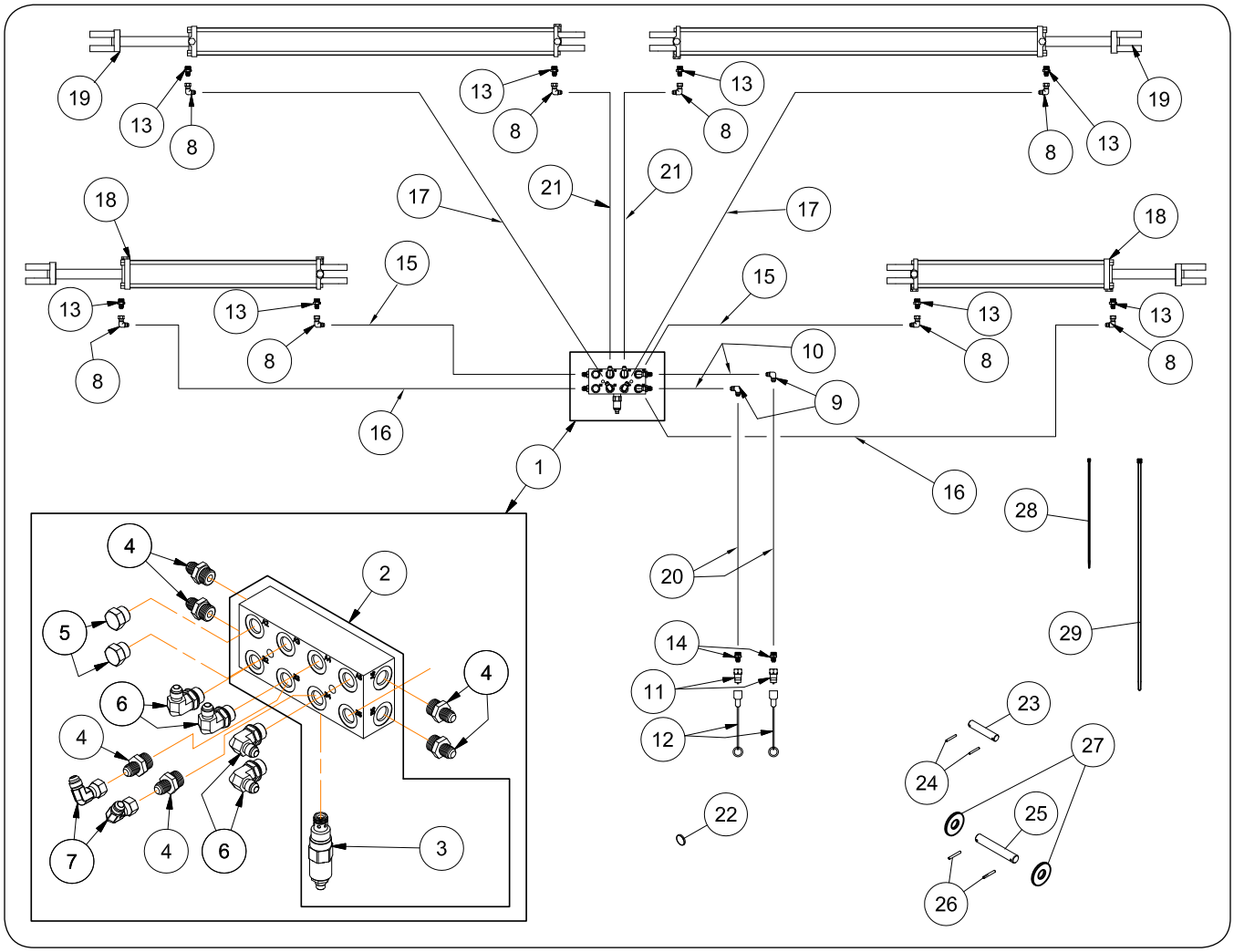
Raise & Lower Hydraulic Components For 57-63' Models

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	12	
2	9875	Tee 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	2	Model 1245 ONLY
3	9897	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Male	1	
4	9501700	Hose 3/8 x 48 (3000 PSI)	1	
5	91383	Male Tip Coupling 3/4-16 O-Ring Female Thread (3000 PSI)	2	
6	91511	Dust Cap	2	
7	9501702	Hose 3/8 x 84 (3000 PSI)	2	
8	9501712	Hose 3/8 x 358 (3000 PSI)	3	
9	9501714	Hose 3/8 x 464 (3000 PSI)	3	
10	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	2	
11	9501704	Hose 3/8 x 220 (3000 PSI)	2	
12	94037	Cable Tie, 15 1/2"	6	
13	94038	Cable Tie, 32"	12	
14	902647	Cylinder 3 1/4 x 8 (3000 PSI)	2	
	902654	Seal Kit	-	
15	902646	Cylinder 3 1/2 x 8 (3000 PSI)	2	
	902653	Seal Kit	-	
16	902648	Cylinder 3 x 8 (3000 PSI)	2	
	902655	Seal Kit	-	
17	80080	Stop (For Main Frame Wheel Cylinders)	2	
18	85631	Pin, 1" Dia. x 4"	12	
19	91144-165	Spiral Pin, 1/4" Dia. x 1 7/8"	24	
20	9828	Clevis Pin, 3/8" Dia. x 2 1/2" (For Main Frame Wheel Cylinders)	2	
21	9514	Hairpin Cotter (For Main Frame Wheel Cylinders)	2	
22	9002273	Cross 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male x 9/16-18 JIC Male	4	Model 1245D ONLY
23	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	10	Model 1245D ONLY
24	TA0-904623-0	Hydraulic Cylinder 1 1/2 x 6	3	Model 1245D ONLY
25	9001495	Adapter 9/16-18 JIC Male x 9/16-18 JIC Male-O-Ring	6	Model 1245D ONLY
26	9501684	Hose 3/8 x 68	2	Model 1245D ONLY
27	9501685	Hose 3/8 x 80	2	Model 1245D ONLY
28	9501679	Hose 3/8 x 22	1	Model 1245D ONLY
29	9501687	Hose 3/8 x 96	2	Model 1245D ONLY
30	9501680	Hose 3/8 x 26	1	Model 1245D ONLY
31	9840	"O"-Ring (For Repairs ONLY)	-	

Wing Fold Hydraulic Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



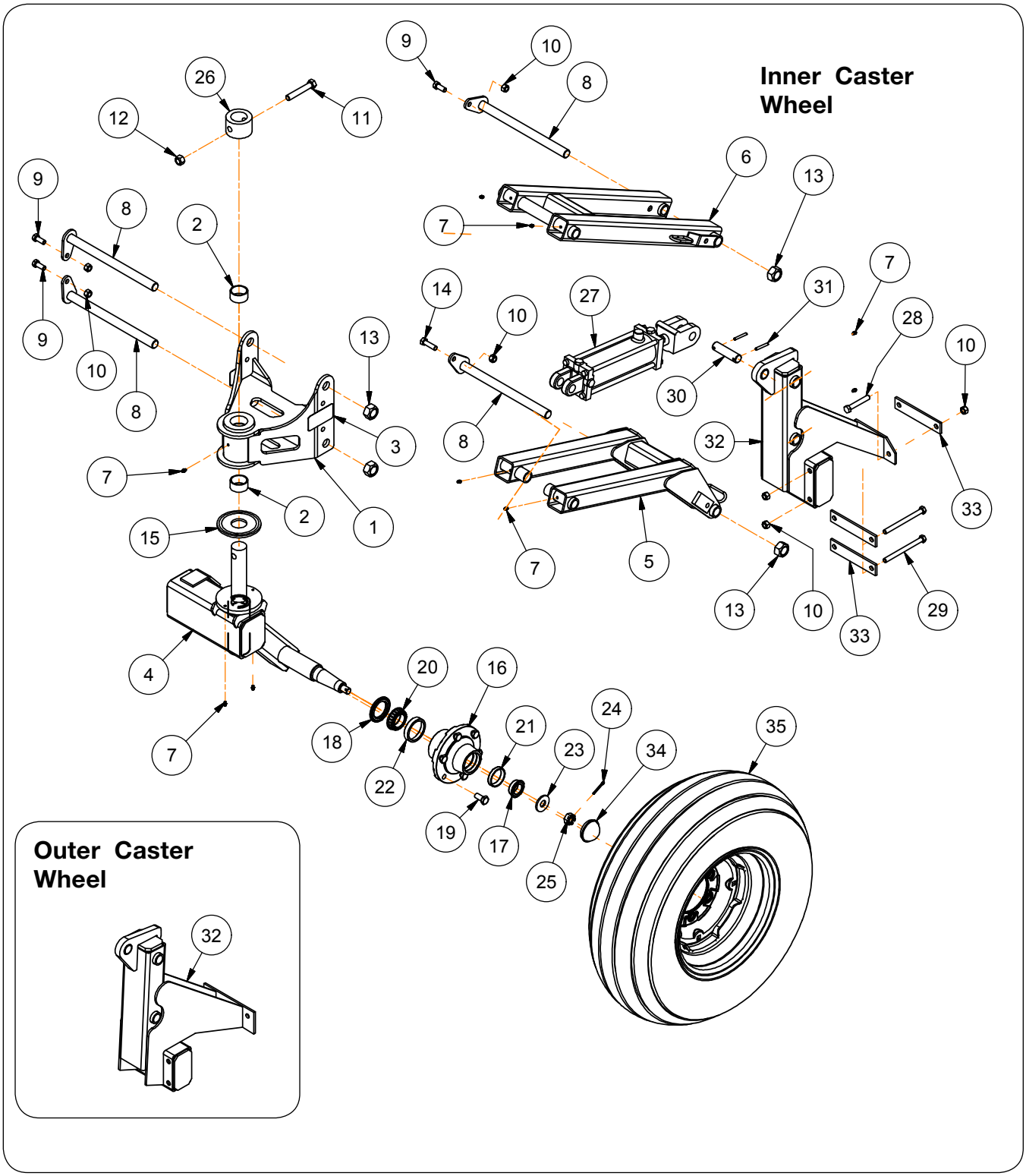
Wing Fold Hydraulic Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	88476	Block & Valve Assembly	1	
2	903146	Valve Assembly	1	Includes Item #3
3	903076	Cartridge Relief Valve 7/8-14UNF	1	
	903097	Seal Kit for Cartridge Relief Valve		
4	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	6	
5	93657	Plug 3/4-16 O-Ring	2	
6	9874	90° Elbow 9/16-18 JIC Male x 3/4-16 O-Ring Male	4	
7	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	2	
8	9876	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Female	8	
9	9897	90° Elbow 9/16-18 JIC Male x 9/16-18 JIC Male	2	
10	9501700	Hose 3/8 x 48 (3000 PSI)	2	
11	91383	Male Tip Coupling 3/4-16 O-Ring Female Thread (3000 PSI)	2	
12	91511	Dust Cap	2	
13	98474	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss w/.078 Restrictor	8	
14	92927	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	2	
15	9501690	Hose 3/8 x 198 (3000 PSI)	2	For 47-55' Models
	9501703	Hose 3/8 x 208 (3000 PSI)		For 57-63' Models
16	9501704	Hose 3/8 x 220 (3000 PSI)	2	For 47-55' Models
	9501705	Hose 3/8 x 235 (3000 PSI)		For 57-63' Models
17	9501701	Hose 3/8 x 63 (3000 PSI)	2	
18	96959	Cylinder 3 1/2 x 24 (3000 PSI)	2	For 47-55' Models
	95393	Seal Kit for Cylinder 3 1/2 x 24		
	96960	Cylinder 4 x 24 (3000 PSI)		For 57-63' Models 1245
	95407	Seal Kit for Cylinder 4 x 24		
	76644B	Cylinder 4 1/2 x 24 (3000 PSI)		For 57-63' Models 1245D
	9502596	Seal Kit for Cylinder 4 1/2 x 24		
19	901546	Cylinder 3 1/2 x 48 (3000 PSI)	2	For 47-55' Models
	95393	Seal Kit for Cylinder 3 1/2 x 48		
	901630	Cylinder 4 x 48 (3000 PSI)		For 57-63' Models 1245
	95407	Seal Kit for Cylinder 4 x 48		
	76645B	Cylinder 4 1/2 x 48 (3000 PSI)		For 57-63' Models 1245D
	9502596	Seal Kit for Cylinder 4 1/2 x 48		
20	9501714	Hose 3/8 x 464 (3000 PSI)	2	
21	9501699	Hose 3/8 x 16 (3000 PSI)	2	
22	9840	"O"-Ring (For Repairs ONLY)	-	
23	85631	Pin, 1" Dia. x 4"	6	
24	91144-165	Spiral Pin 1/4" Dia. x 1 7/8"	12	
25	88376	Pin, 1" Dia. x 7"	2	
26	91144-207	Spiral Pin, 3/8" Dia. x 2"	4	
27	9405-116	Flat Washer, 1"	4	
28	94037	Cable Tie, 15 1/2"	6	
29	94038	Cable Tie, 32"	12	
30	75884	Velcro Wrap (NOT SHOWN)	4	

Inner & Outer Wing/Tire & Wheel (Caster Option)

Please visit www.unverferth.com/parts/ for the most current parts listing.



Inner & Outer Wing/Tire & Wheel (Caster Option)

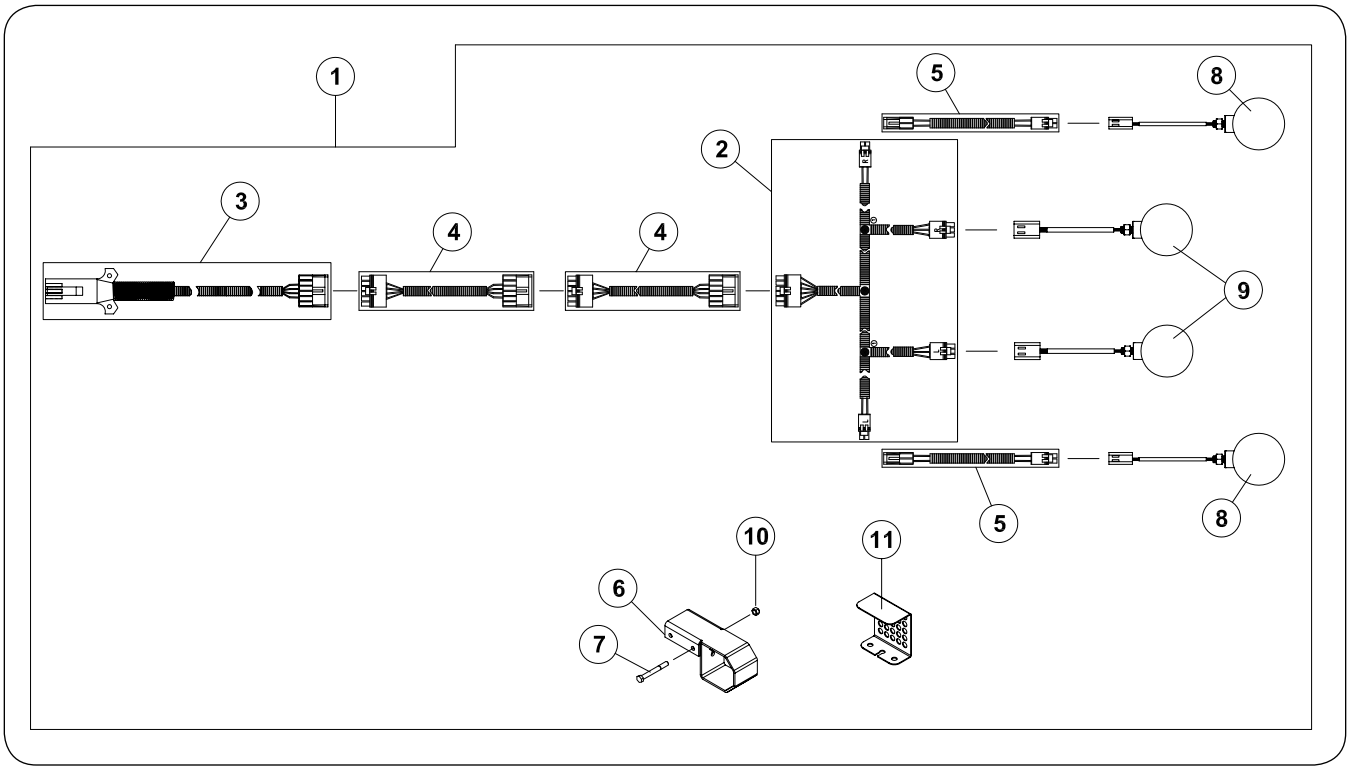
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION
1	73965B	Pivot Weldment with Bushings & Decal
2	9502723	Split Tension Bushings, 2" OD x 1 3/4" ID x 1"
3	95839	Decal, WARNING "Pinch Point"
4	89453B	Caster Wheel Pivot with Zerks
5	74050B	Tube Weldment w/Zerks
6	74051B	Tube Weldment w/Zerks
7	91160	Grease Zerk
8	89596	Pin Weldment
9	9390-100	Capscrew (Grade 5) 1/2"-13UNC x 1 1/4"
10	9800	Locknut/Top, 1/2"-13UNC
11	9390-131	Capscrew (Grade 5) 5/8"-11UNC x 3 3/4"
12	9801	Locknut/Top 5/8"-11UNC
13	9663	Locknut/Top, 1"-8UNC
14	9390-102	Capscrew (Grade 5) 1/2"-13UNC x 1 3/4"
15	87307B	Thrust Washer
16	9500003B	Hub Assembly
17	9165	Bearing Cone (LM67048)
18	9230	Seal
19	9231	Wheel Bolt 9/16"-18UNF x 1 1/8"
20	9247	Bearing Cone (LM501349)
21	9345	Bearing Cup (LM67010)
22	9349	Bearing Cup (LM501310)
23	9234	Flat Washer, 13/16" ID
24	9391-035	Cotter Pin, 5/32" Dia. x 1 1/2"
25	9393-016	Slotted Nut, 3/4"-16UNF

ITEM	PART NO.	DESCRIPTION
26	73977B	Collar
27	902647	Inner Cylinder 3 1/4 x 8
	902654	Seal Kit for Inner Cylinder
	902648	Outer Cylinder 3 x 8
	902655	Seal Kit for Outer Cylinder
28	9390-108	Capscrew (Grade 5) 1/2"-13UNC x 3 1/4"
29	9390-115	Capscrew (Grade 5) 1/2"-13UNC x 6"
30	85632	Pin, 1" Dia. x 3 3/4"
31	91144-165	Spiral Pin, 1/4" Dia. x 1 7/8"
32	73967B	Inner Caster Wheel Mount with Zerks
	73966B	Outer Caster Wheel Mount with Zerks
33	73722PL	Plate/Bar, 1 1/2" x 7 1/4"
34	9162	Hub Cap
35	17679	Inner Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Includes Valve Stem) (Off-White)
	17679SM	Inner Mounted Tire & Wheel (TL 11LB15 12-Ply I-1) (Includes Valve Stem) (Silver Mist)
	60911	Outer Mounted Tire & Wheel (TL9.5LB15 8-Ply) Includes Valve Stem (Off-White)
	60911SM	Outer Mounted Tire & Wheel (TL9.5LB15 8-Ply) Includes Valve Stem (Silver Mist)
	9002500	Valve Stem Only
	W815-6-08	Implement Wheel Only

Transport Marking & Light Kit (88278B)

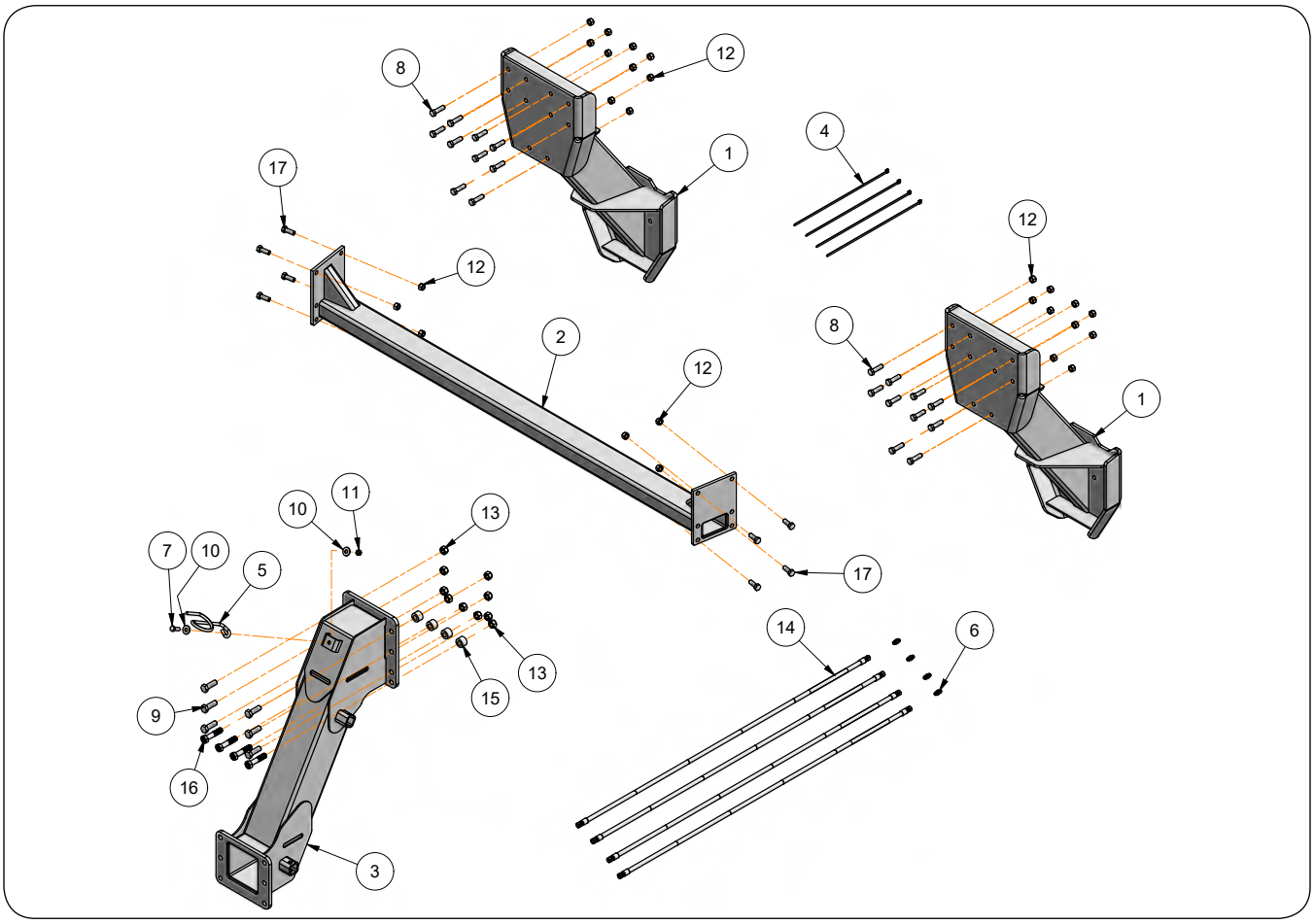
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	NOTES
1	88278B	Lights/Transport Marking Package	
2	22790	Wiring Harness/132" 3-T	
3	89467	Wiring Harness/336" Main	
4	86467	Wiring Extension 120" - 6 Pin	
5	86700	Wiring Extension 120" - 2 Pin	
6	88824B	Light Bracket Weldment	
7	9390-100	Capscrew 1/2-13UNC x 1 1/4	Grade 5
8	9003876	Light - Amber	
9	9003877	Light - Red	
10	9800	Locknut 1/2-13UNC	
11	73338B	Guard	

Gooseneck Hitch Components (Optional)

Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NUMBER	DESCRIPTION	QTY
1	77944G	Gooseneck Extension Weldment =Green=	2
	77944R	Gooseneck Extension Weldment =Red=	
2	77947G	Cross Tube Weldment =Green=	1
	77947R	Cross Tube Weldment =Red=	
3	79870G	Gooseneck Drop-down Hitch Weldment =Green=	1
	79870R	Gooseneck Drop-Down Hitch Weldment =Red=	
4	9000104	Cable Tie 21 1/2"	A/R
5	902979B	Hose Holder =Black=	1
6	92295	Adapter, 9/16"-18 JIC Male x 9/16"-18 JIC Male	4
7	9390-101	Capscrew, 1/2"-13UNC x 1 1/2" G5	1
8	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	20
9	91299-146	Capscrew, 3/4"-10UNC x 2 1/4" G8	6
10	9405-088	Flat Washer 1/2"	2
11	9800	Locknut/Top, 1/2"-13UNC	1
12	9801	Locknut/Top, 5/8"-11UNC	28
13	9802	Locknut/Top, 3/4"-10UNC	10
14	9504072	Hydraulic Hose, 3/8" Dia. x 66" (9/16"-18 JIC Female x 9/16"-18 JIC Female)	4
15	79873	Bushing, 1 1/2" OD x 0.812" ID x 1"	4
16	91299-151	Capscrew, 3/4"-10UNC x 3 1/2" G8	4
17	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	8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