



UM Seedbed Tillage

Rigid Perfecta®
Folding Perfecta® up to 28'
Bedded Crop Perfecta®
Models 10 / 12 / 14
Size 10'-28'

Serial Number A59300100 & Up

Part No. 74279

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:

- Model Number
- Serial Number

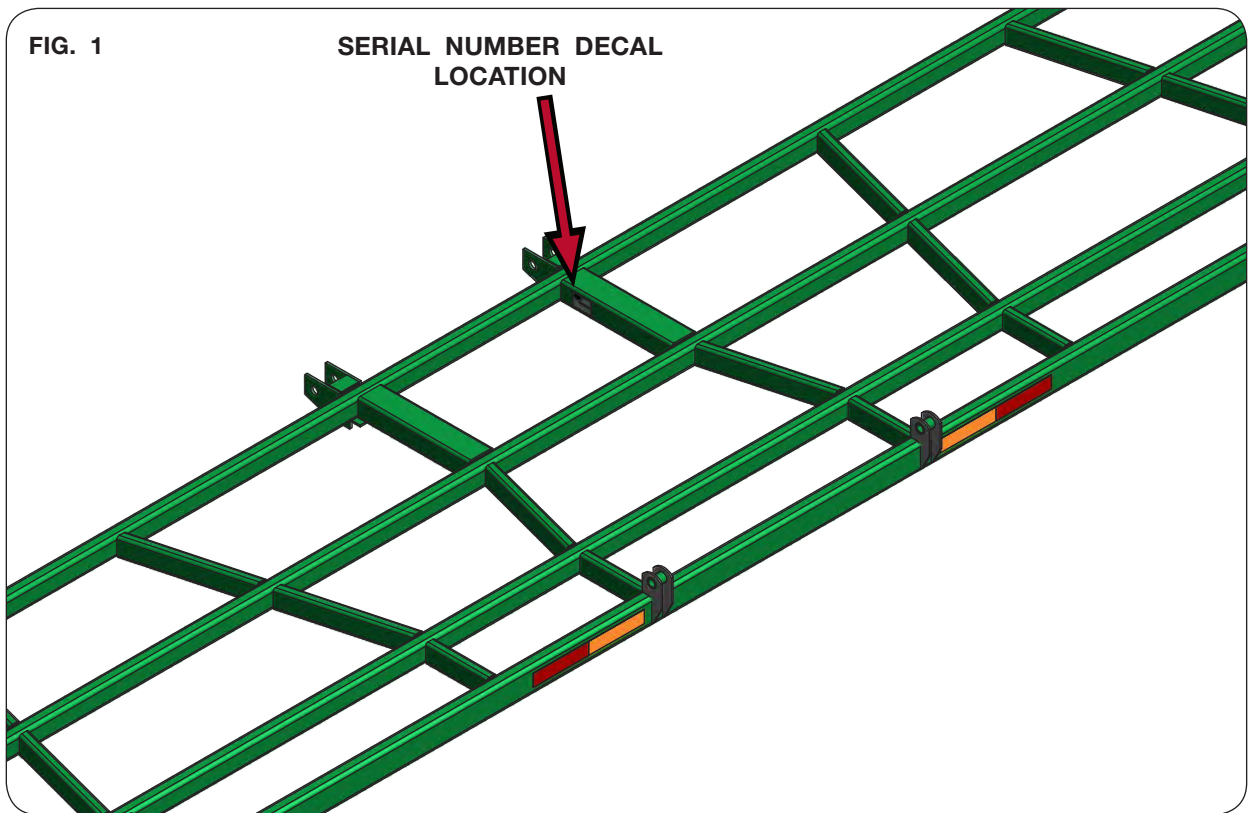
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number plate is located on the tube at the center of the machine (Fig. 1).

Purchase Date _____ Model _____ Serial No. _____

Dealer _____ City _____

Dealer Contact _____ Phone _____



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.

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SECTION I

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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.

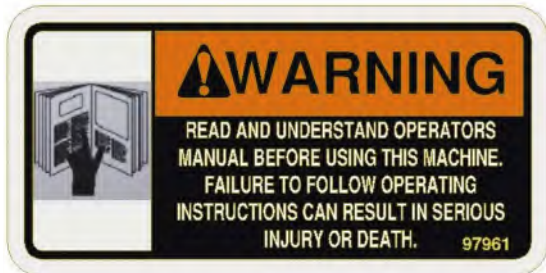
Safety Decals



PART NO. 95136



PART NO. 95445



PART NO. 97961



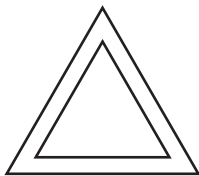
PART NO. 900751



PART NO. 97972



PART #9003127
AMBER REFLECTOR



PART NO. 9829
SMV EMBLEM



PART NO. 99507



PART #9003125
FLUORESCENT REFLECTOR



PART #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

- 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.
- 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.
- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.

Before Operating

- 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.

- Ensure that all applicable safety decals are installed and legible.

- When working around the implement, be careful not to be cut by sharp edges.

- Add sufficient ballast to tractor to maintain steering and braking control at all times. Do not exceed tractor's lift capacity or ballast capacity.

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

- 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.

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.
- Use good judgment when transporting equipment on highways. 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. 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



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Notes

General Set Up Information

This section contains all of the instructions required for the complete assembly of the entire field cultivator.

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 in the Maintenance section unless otherwise specified.

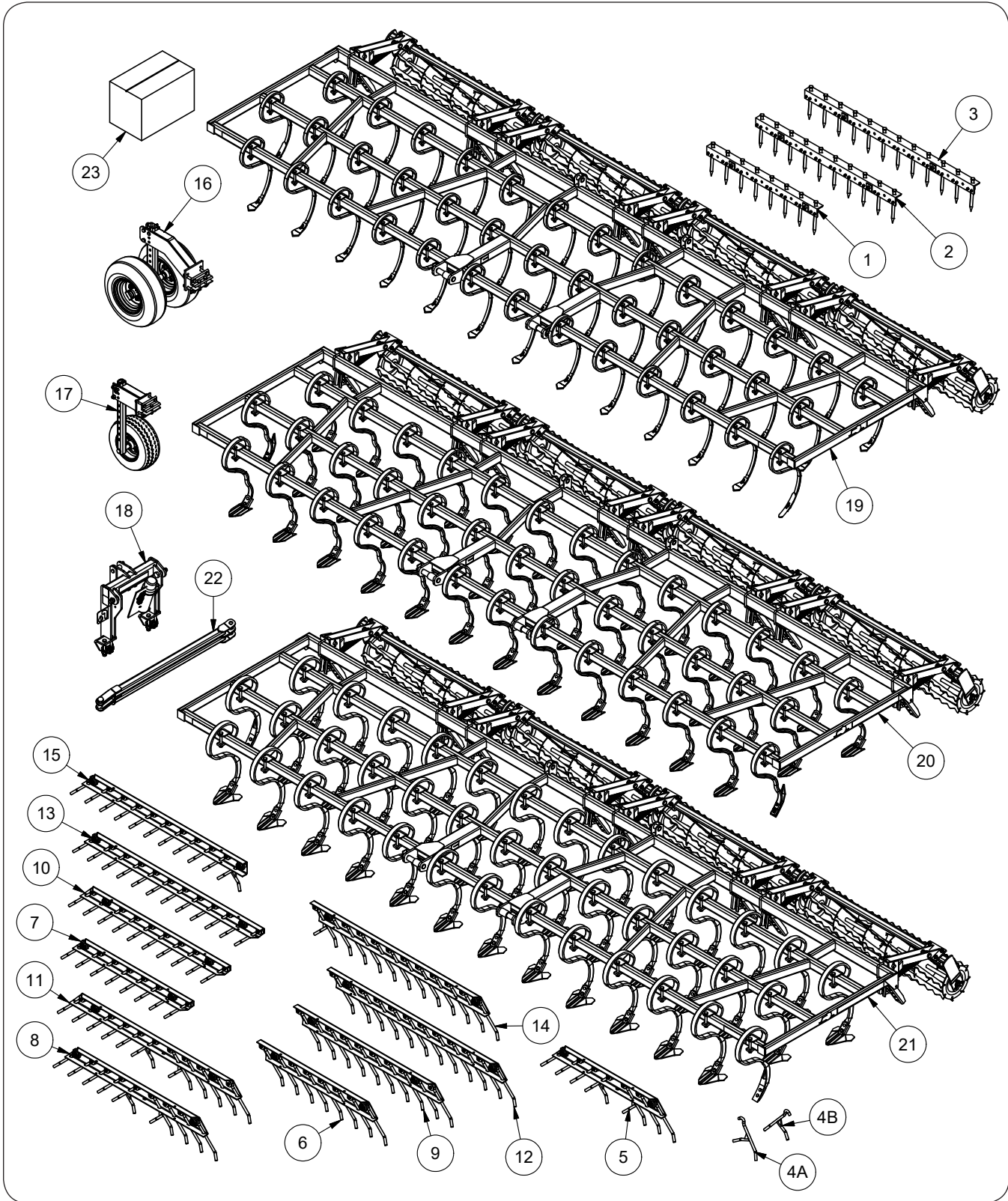
WARNING

- **KNOW 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.**
- **TO PREVENT MACHINE FROM TIPPING BACKWARDS, UNIT MUST BE HOOKED TO TRACTOR.**
- **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 IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

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

FIELD CULTIVATORS — Set Up

Rigid Perfecta — Shipping Bundles



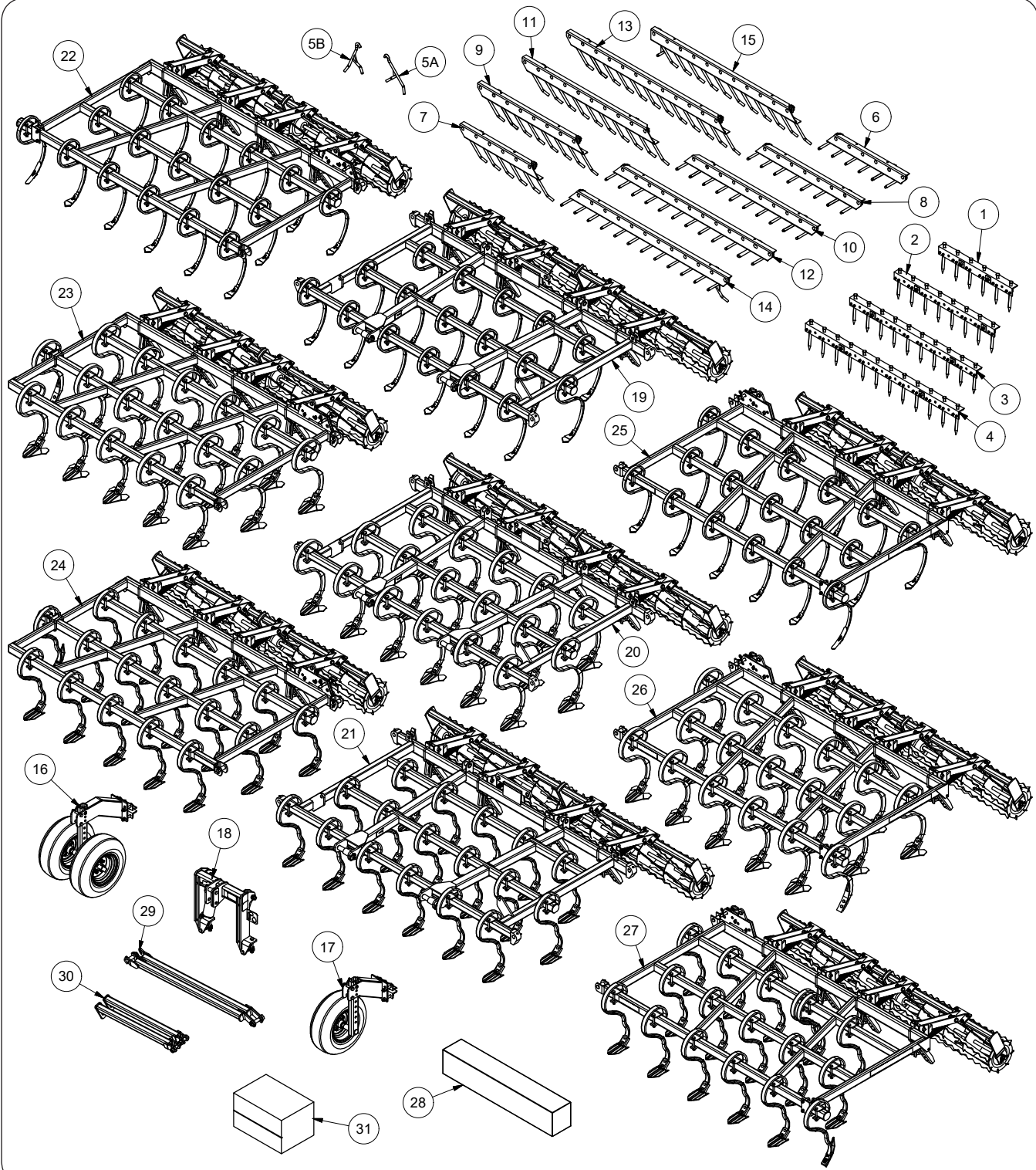
FIELD CULTIVATORS — Set Up

Rigid Perfecta — Shipping Bundles

ITEM	PART NO.	DESCRIPTION	NOTES	
1	71182	Spike One Bar 4' Assembly	For Rigid Perfecta Models with Spike Leveler Option	
2	71183	Spike One Bar 5' Assembly		
3	71579B	Spike One Bar 6' Assembly		
4A	74670B	Diagonal Bent Right-Hand "Y" Tooth	For Rigid Perfecta Models with Diagonal Leveler Option	
4B	74671B	Diagonal Bent Left-Hand "Y" Tooth		
5	74687B	Diagonal-Tooth One Bar 4' CTR Assembly		
6	74682B	Diagonal-Tooth One Bar 4' RH Assembly		
7	74681B	Diagonal-Tooth One Bar 4' LH Assembly		
8	74688B	Diagonal-Tooth One Bar 5' CTR Assembly		
9	74684B	Diagonal-Tooth One Bar 5' RH Assembly		
10	74683B	Diagonal-Tooth One Bar 5' LH Assembly		
11	76692B	Diagonal-Tooth One Bar 6' CTR Assembly		
12	74686B	Diagonal-Tooth One Bar 6' RH Assembly		
13	74685B	Diagonal-Tooth One Bar 6' LH Assembly		
14	74216B	Diagonal-Tooth One Bar 6' RH Y Assembly		
15	74215B	Diagonal-Tooth One Bar 6' LH Y Assembly		
16	73956B	Dual Gauge Wheel Bundle		For 18' & 20' Main Frames
17	83824	Single Gauge Wheel Bundle		For 10', 12', 13', 14', & 15' Main Frames
18	74862B	3-Point Bolt-On Heavy Mast Asy W/Cast Clamps	For All Rigid Perfecta Models	
19	N/A	Main Frame Assembly (Green)	With Standard S-Tines - Model 10	
		Main Frame Assembly (Red)	With Standard S-Tines - Model 10	
20	N/A	Main Frame Assembly (Green)	With Heavy-Duty S-Tines - Model 12	
		Main Frame Assembly (Red)	With Heavy-Duty S-Tines - Model 12	
21	N/A	Main Frame Assembly (Green)	With Heavy-Duty Edge Bent S-Tines - Model 14	
		Main Frame Assembly (Red)	With Heavy-Duty Edge Bent S-Tines - Model 14	
22	75179B	Brace Tube Pair w/Hardware		
23	86763B	Lights/Transport Marking Bundle		

FIELD CULTIVATORS — Set Up

Folding Perfecta — Shipping Bundles



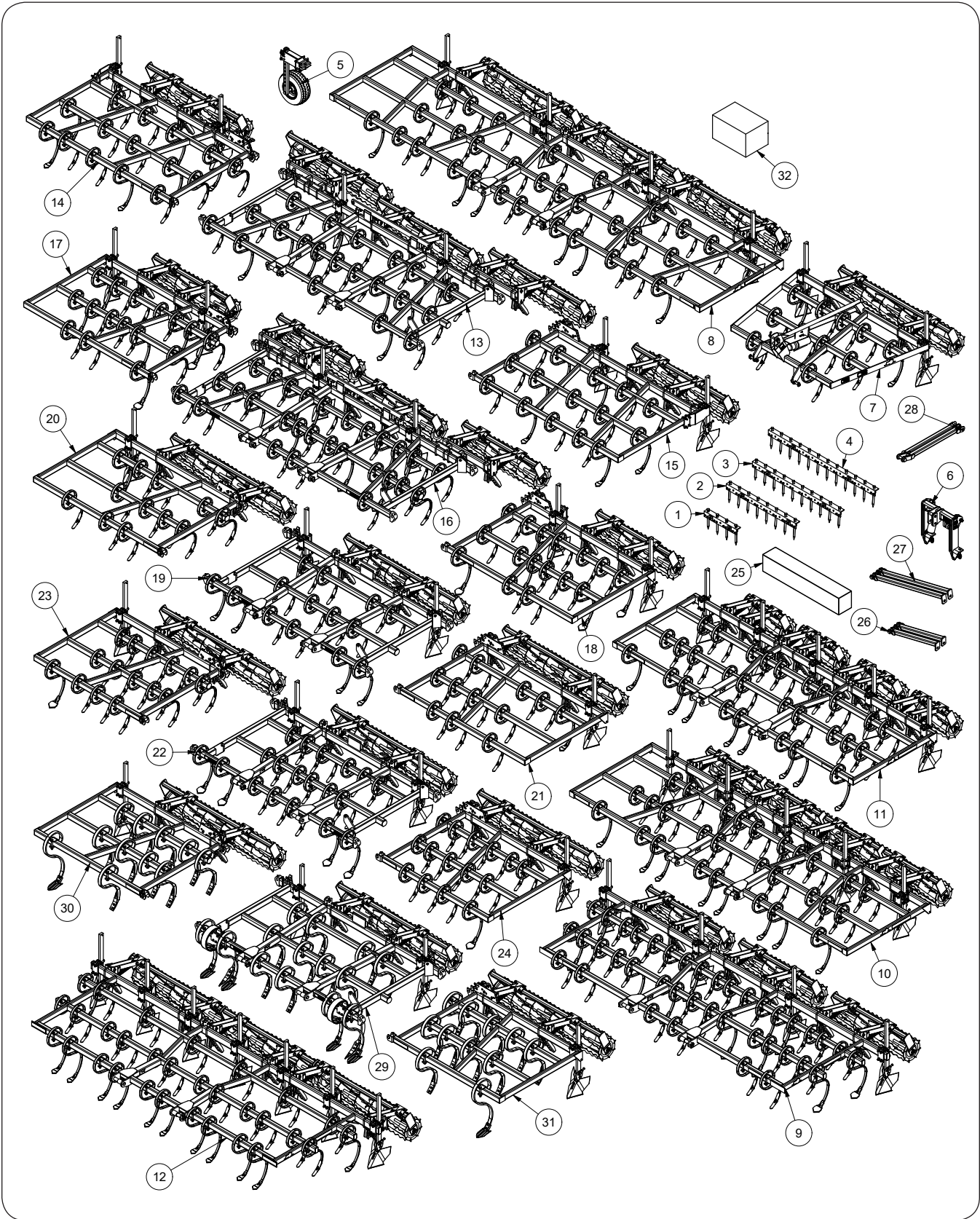
FIELD CULTIVATORS — Set Up

Folding Perfecta — Shipping Bundles

ITEM	PART NO.	DESCRIPTION	NOTES
1	71181	Spike One Bar 3' Assembly	For Folding Perfecta Models with Spike Leveler Option
2	71182	Spike One Bar 4' Assembly	
3	71183	Spike One Bar 5' Assembly	
4	71579B	Spike One Bar 6' Assembly	
5A	74670B	Diagonal Bent Right-Hand "Y" Tooth	For Folding Perfecta Models with Diagonal Leveler Option
5B	74671B	Diagonal Bent Left-Hand "Y" Tooth	
6	74680B	Diagonal-Tooth One Bar 3' RH Assembly	
7	74679B	Diagonal-Tooth One Bar 3' LH Assembly	
8	74682B	Diagonal-Tooth One Bar 4' RH Assembly	
9	74681B	Diagonal-Tooth One Bar 4' LH Assembly	
10	74684B	Diagonal-Tooth One Bar 5' RH Assembly	
11	74683B	Diagonal-Tooth One Bar 5' LH Assembly	
12	74686B	Diagonal-Tooth One Bar 6' RH Assembly	
13	74685B	Diagonal-Tooth One Bar 6' LH Assembly	
14	74216B	Diagonal-Tooth One Bar 6' RH Y Assembly	
15	74215B	Diagonal-Tooth One Bar 6' LH Y Assembly	
16	73956B	Dual Gauge Wheel Bundle	For Folding Perfecta Models with 7' & 8' Wings
17	74606B	Single Gauge Wheel Bundle	For Folding Perfecta Models with 4', 5', & 6' Wings
18	74862B	3-Point Bolt-On Heavy Mast Asy W/ Cast Clamps	
19	N/A	Main Frame Assembly (Green)	With Standard S-Tines - Model 10
		Main Frame Assembly (Red)	With Standard S-Tines - Model 10
20	N/A	Main Frame Assembly (Green)	With Heavy-Duty Edge Bent S-Tines - Model 14
		Main Frame Assembly (Red)	With Heavy-Duty Edge Bent S-Tines - Model 14
21	N/A	Main Frame Assembly (Green)	With Heavy-Duty S-Tines - Model 12
		Main Frame Assembly (Red)	With Heavy-Duty S-Tines - Model 12
22	N/A	Right-Hand Wing Assembly (Green)	With Standard S-Tines - Model 10
		Right-Hand Wing Assembly (Red)	With Standard S-Tines - Model 10
23	N/A	Right-Hand Wing Assembly (Green)	With Heavy-Duty Edge Bent S-Tines - Model 14
		Right-Hand Wing Assembly (Red)	With Heavy-Duty Edge Bent S-Tines - Model 14
24	N/A	Right-Hand Wing Assembly (Green)	With Heavy-Duty S-Tines - Model 12
		Right-Hand Wing Assembly (Red)	With Heavy-Duty S-Tines - Model 12
25	N/A	Left-Hand Wing Assembly (Green)	With Standard S-Tines - Model 10
		Left-Hand Wing Assembly (Red)	With Standard S-Tines - Model 10
26	N/A	Left-Hand Wing Assembly (Green)	With Heavy-Duty Edge Bent S-Tines - Model 14
		Left-Hand Wing Assembly (Red)	With Heavy-Duty Edge Bent S-Tines - Model 14
27	N/A	Left-Hand Wing Assembly (Green)	With Heavy-Duty S-Tines - Model 12
		Left-Hand Wing Assembly (Red)	With Heavy-Duty S-Tines - Model 12
28	N/A	Hydraulic Parts Box	
29	75179B	Brace Tube Pair w/Hardware	
30	74926B	Front Strut 12' Pair w/Hardware	For 12' Base Folding Perfecta Models
	74925B	Front Strut 9' Pair w/Hardware	For 9' Base Folding Perfecta Models
31	86764B	Lights/Transport Marking Bundle	

FIELD CULTIVATORS — Set Up

Bedded Crop Perfecta — Shipping Bundles



FIELD CULTIVATORS — Set Up

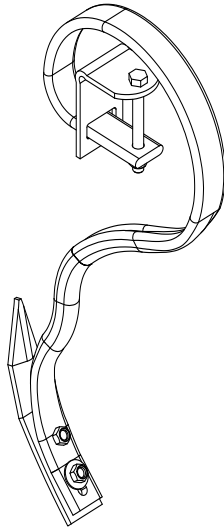
Bedded Crop Perfecta — Shipping Bundles

ITEM	PART NO.	DESCRIPTION	NOTES	
1	71299	Spike One Bar 2' Assembly	For All Bedded Crop Perfecta Models	
2	71182	Spike One Bar 4' Assembly		
3	71183	Spike One Bar 5' Assembly		
4	71579B	Spike One Bar 6' Assembly		
5	83824	Single Gauge Wheel Bundle	For All Bedded Crop Perfecta Models	
6	74862B	3-Point Bolt-On Heavy Mast Asy W/Cast Clamps	For All Bedded Crop Perfecta Models	
7	86311G	Main Frame 7' Assembly (Green)	For 1-80" Beds Rigid Frame	
	86311R	Main Frame 7' Assembly (Red)		
8	85740G	Main Frame 20' Assembly (Green)	For 3-66" Beds Rigid Frame	
	85740R	Main Frame 20' Assembly (Red)		
9	83321G	Main Frame 15' Assembly (Green)	For 3-60" Beds Rigid Frame	
	83321R	Main Frame 15' Assembly (Red)		
10	84532G	Main Frame 15' Assembly (Green)	For 4-38/39/40" Beds Rigid Frame	
	84532R	Main Frame 15' Assembly (Red)		
11	84599G	Main Frame 12' Assembly (Green)	For 4-36" Beds Rigid Frame	
	84599R	Main Frame 12' Assembly (Red)		
12	86300G	Main Frame 15' Assembly (Green)	For 6-30" Beds Rigid Frame	
	86300R	Main Frame 15' Assembly (Red)		
13	87237G	Main Frame 12' Assembly (Green)	For 28' Bedded Crop Perfecta; 5-66" Beds Folding Frame	
	87237R	Main Frame 12' Assembly (Red)		
14	87239G	Wing 8' RH Assembly (Green)		
	87239R	Wing 8' RH Assembly (Red)		
15	87238G	Wing 8' LH Assembly (Green)		
	87238R	Wing 8' LH Assembly (Red)		
16	87049G	Main Frame 12' Assembly (Green)		
	87049R	Main Frame 12' Assembly (Red)		
17	87057G	Wing 7' RH Assembly (Green)		
	87057R	Wing 7' RH Assembly (Red)		
18	87058G	Wing 7' LH Assembly (Green)		
	87058R	Wing 7' LH Assembly (Red)		
19	87639G	Main Frame 9' Assembly (Green)	For 22' Bedded Crop Perfecta; 3-84" Beds Folding Frame	
	87639R	Main Frame 9' Assembly (Red)		
20	87637G	Wing 7' RH Assembly (Green)		
	87637R	Wing 7' RH Assembly (Red)		
21	87638G	Wing 7' LH Assembly (Green)		
	87638R	Wing 7' LH Assembly (Red)		
22	88660G	Main Frame 9' Assembly (Green)	For 22' Bedded Crop Perfecta; 3-80" Beds Folding Frame	
	88660R	Main Frame 9' Assembly (Red)		
23	88658G	Wing 6' RH Assembly (Green)		
	88658R	Wing 6' RH Assembly (Red)		
24	88659G	Wing 6' LH Assembly (Green)		
	88659R	Wing 6' LH Assembly (Red)		
25	N/A	Hydraulic Parts Box		For All Folding Bedded Crop Perfecta Models
26	74925B	Front Strut 9' Pair w/Hardware		For 9' Base Folding Bedded Crop Perfecta Models
27	74926B	Front Strut 12' Pair w/Hardware	For 12' Base Folding Bedded Crop Perfecta Models	
28	75179B	Brace Tube Pair w/Hardware	For All Bedded Crop Perfecta Models	
29	75475G	Main Frame 9' Assembly (Green)	For 22' Bedded Crop Perfecta; Heavy-Duty; 3-80" Beds Folding Frame	
	75475R	Main Frame 9' Assembly (Red)		
30	75477G	Wing 6' RH Assembly (Green)		
	75477R	Wing 6' RH Assembly (Red)		
31	75478G	Wing 6' LH Assembly (Green)		
	75478R	Wing 6' LH Assembly (Red)		
32	86763B	Lights/Transport Marking Bundle	For Rigid Frame Bedded Crop Perfecta	
	86764B	Lights/Transport Marking Bundle	For Folding Frame Bedded Crop Perfecta	

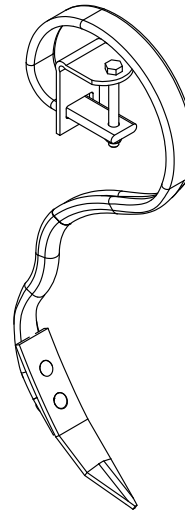
Basic Set Up

Models 12 and 14, outer S-tines on each end of the machine are equipped with 2" wide point shovel. Units are shipped as shown to prevent damage to shovel in shipment. Point must be reversed before beginning operation.

Shipping Position



Working Position

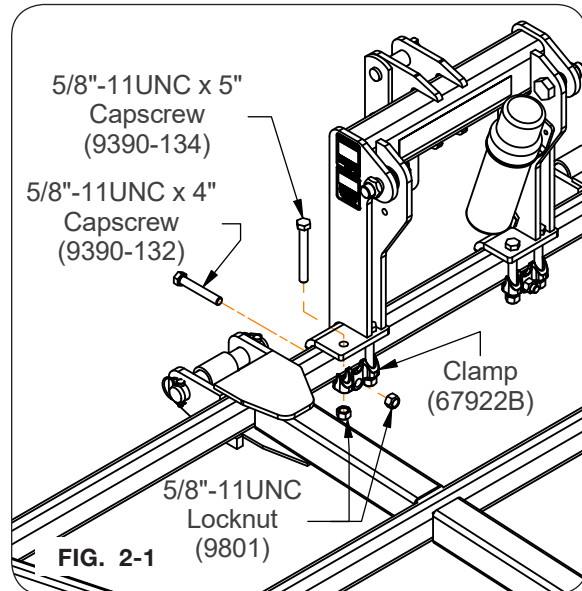


Mast Assembly

1. Position the mast on top of the mainframe hitch area.
2. Insert 5/8"-11UNC x 4" capscrew (9390-132) horizontally through bottom hole in mast, passing under front 3" x 2" frame tube.

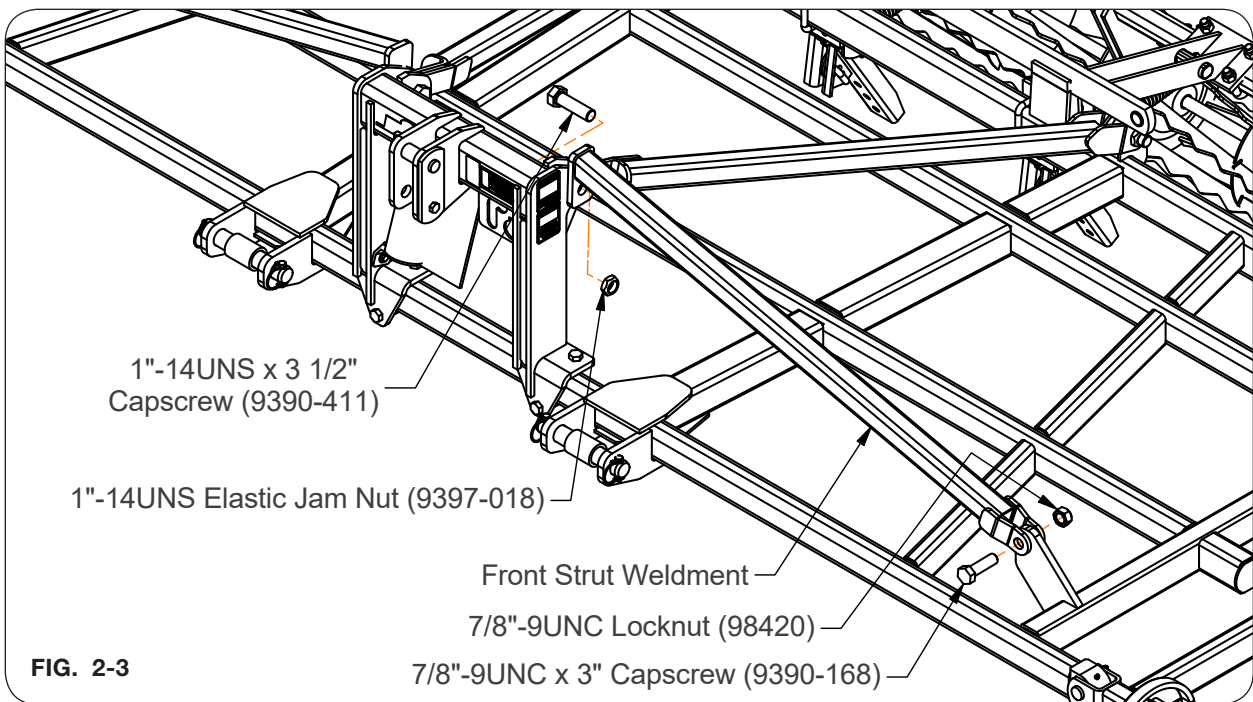
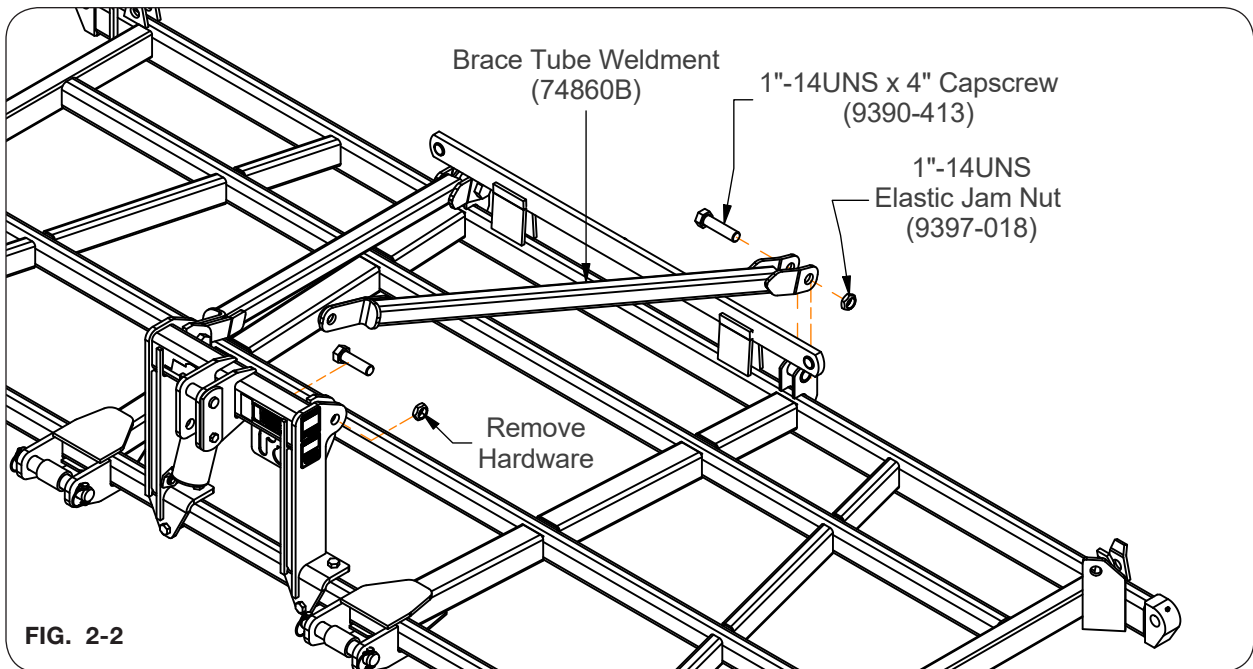
NOTE: Mast hole locations provide tight tolerance to frame tube. Bolts will temporarily be at an angle until connected to cast clamp and drawn tight to the frame tube. Once tightened, the mast is firmly attached to the frame to eliminate movement during operation.

3. Attach clamp casting (67922B) to 5/8"-11UNC x 4" capscrew (9390-132) and thread locknut (9801) on 2 turns.
4. Insert 5/8"-11UNC x 5" capscrews (9390-134) vertically down through bottom mast plate, insert through clamp casting (67922B), attach two locknuts (9801). Do not tighten at this time.



Mast Assembly (continued)

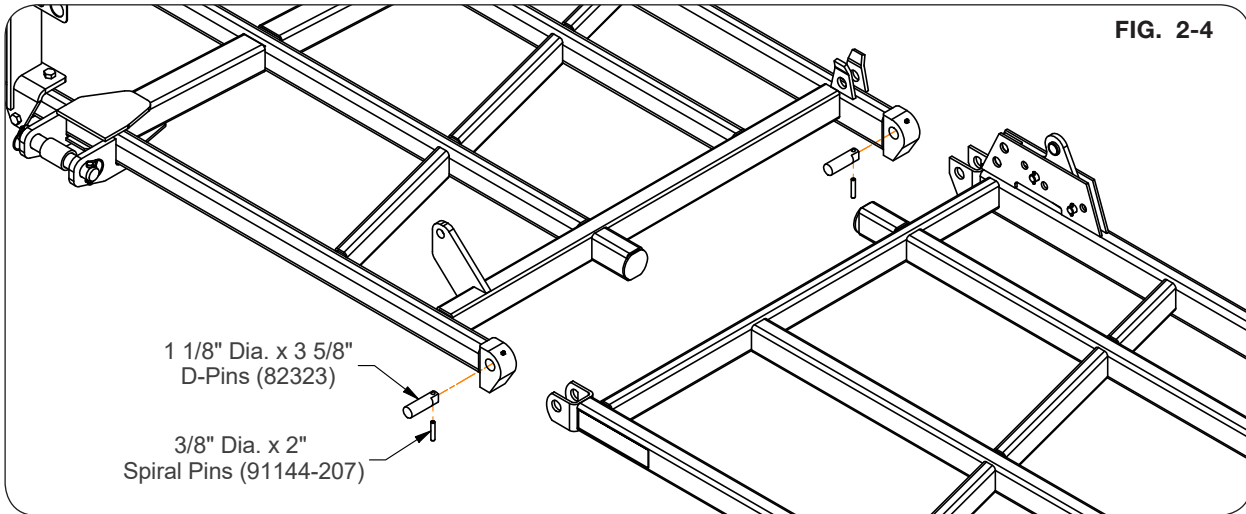
5. Attach rear mast trusses (and side trusses on folding units).



6. Tighten mast hardware alternately until mast and clamp castings are secured evenly. Torque 1"-14UNS hardware to 550 ft.-lbs. Refer to "Torque Chart" in MAINTENANCE section.

Wing Assembly

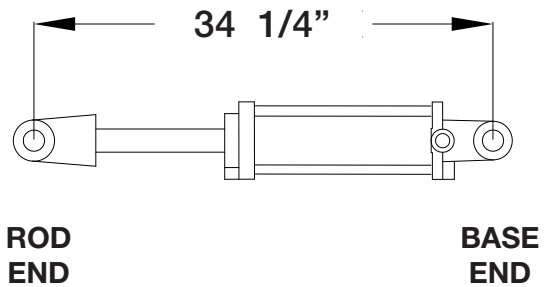
1. Using a safe lifting device rated at a minimum of 2,000 lbs., attach wings to the base using four 1 1/8" Dia. x 3 5/8" pins (82323), retain into position with four 3/8" Dia. x 2" spiral pins (91144-207) (Fig. 2-4).



IMPORTANT

- All cylinders have been factory preset. Measure the dimensions (adjust if necessary) before installing (Fig. 2-5).

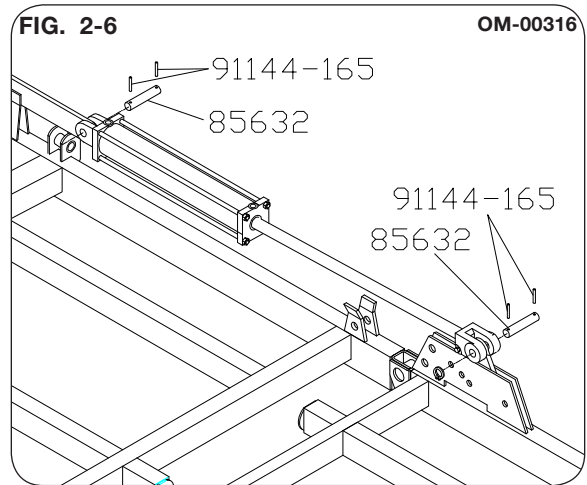
FIG. 2-5



Hydraulic Assembly

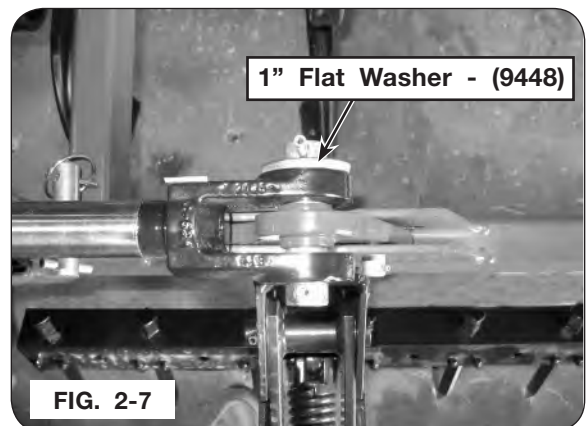
NOTE: Hydraulic cylinder should be installed with hydraulic ports facing up.

1. Install base end of hydraulic cylinder to the main frame cylinder mount using a 1" Dia. x 3 3/4" pin (85632) and two 1/4" Dia. x 1 7/8" spiral pins (91144-165) (Fig. 2-6).
2. Fasten the rod end of the cylinder to the wing linkage using a 1" Dia. x 3 3/4" pin (85632) and two 1/4" Dia. x 1 7/8" spiral pins (91144-165) (Fig. 2-6).



BEDDED PERFECTA 3x84 ASSEMBLY

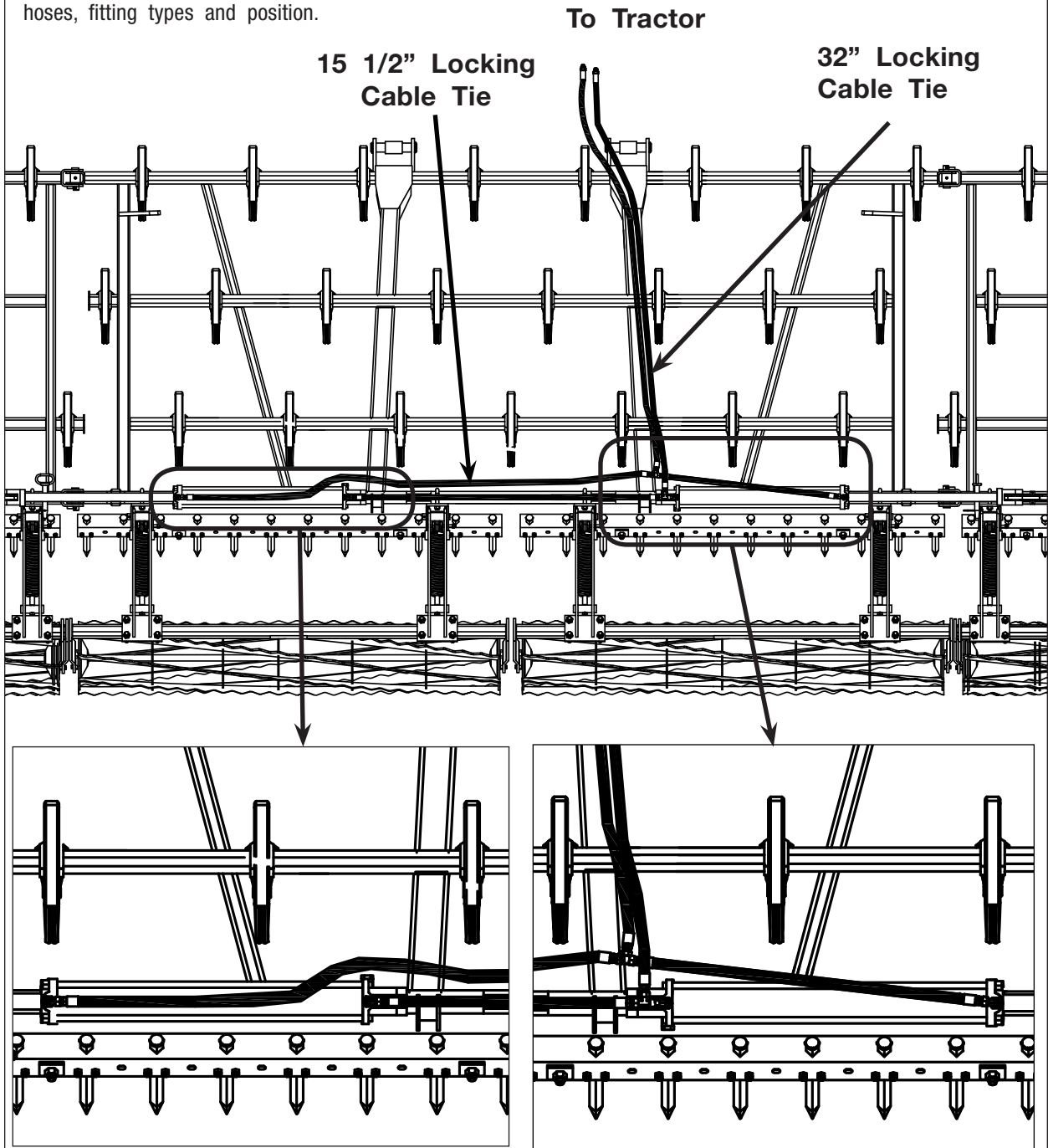
To prevent the wing fold cylinder pins from catching on the main frame bedding shanks, the 1" flat washer (9448) must be installed on the front side of the rod end pin. This will prevent the pin from sliding rearward and contacting the bedding shank.



Hydraulic Assembly (continued)

HOSE ROUTING DIAGRAM

For Main Frame Plumbing,
Refer to PARTS Section for
hoses, fitting types and position.



Hydraulic Assembly (continued)

3. Install hydraulic components to the machine.

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 Diagram" for routing and positioning of the hydraulic components onto the frame.

⚠ WARNING

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

4. Attach unit to a tractor and then purge air from the hydraulic system.

IMPORTANT

- *Be sure the wing components DO NOT catch or snag on the floor (on rough spots, or uneven grade) when unit is first raised for transport.*

Purging Hydraulic System

Purge the air from the hydraulic system.

- A. Disconnect the rod end of all cylinders in a circuit and block up cylinders so the rod can completely extend and retract without contacting any other component.
- B. Pressurize the system and maintain system at full pressure for at least 5 seconds after cylinder rods stop moving. Check that all cylinders have fully extended or retracted.
- C. Check oil reservoir in hydraulic power source and re-fill as needed.
- D. Pressurize system again to reverse the motion of step B. Maintain pressure on system for at least 5 seconds after cylinder rods stop moving. Check that cylinders have fully extended or retracted.
- E. Check for hydraulic leaks using cardboard or wood. Tighten connections according to directions in Torque Specifications in "MAINTENANCE" Section.
- F. Repeat steps B, C, D, and E 3-4 times.
- G. De-pressurize hydraulic system and connect cylinder rods clevises to their mating lug.

⚠ WARNING

- **MOVING WINGS CAN CAUSE SERIOUS INJURY OR DEATH. KEEP AWAY FROM FOLDING AND UNFOLDING WINGS.**



When the unit is folded, check to make sure the wings are resting on the wing rest stands.

Hydraulic Assembly (continued)

Hydraulic System Checks

ON ALL UNITS - CHECK THE FOLLOWING:

ROUTING OF ALL HOSES:

Hoses should not be kinked, twisted, or rubbing against sharp edges.

FITTINGS AND CONNECTIONS:

Check for leaks. Refer to "Torque Chart" in "MAINTENANCE" Section.

HOSES

Be sure hoses have room to "FLEX". Hoses must be secured with tie straps.

WARNING

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

Be sure to relieve all hydraulic pressure before disconnecting any lines between implement and tractor hydraulic system. Keep all guards and shields in place.

Mounting Arm Assembly - Single Basket

Assembly of the one-bar/Rolling Harrow baskets to the machine is best accomplished with the unit setting on the ground.

See "Overhead Layouts" (on Positioning Components) in "ASSEMBLY" Section for dimensions showing mounting arm locations depending on style of leveler bar and harrow sizes and location on rear of the machine.

NOTE: For ease of assembly, install all hardware loosely until assembly is complete, then tighten.

1. Install mounting arms onto the rear of the main frame tube with one 1/2"-13UNC U-bolt (91434) and two locknuts (9800) per arm (Fig. 2-8).

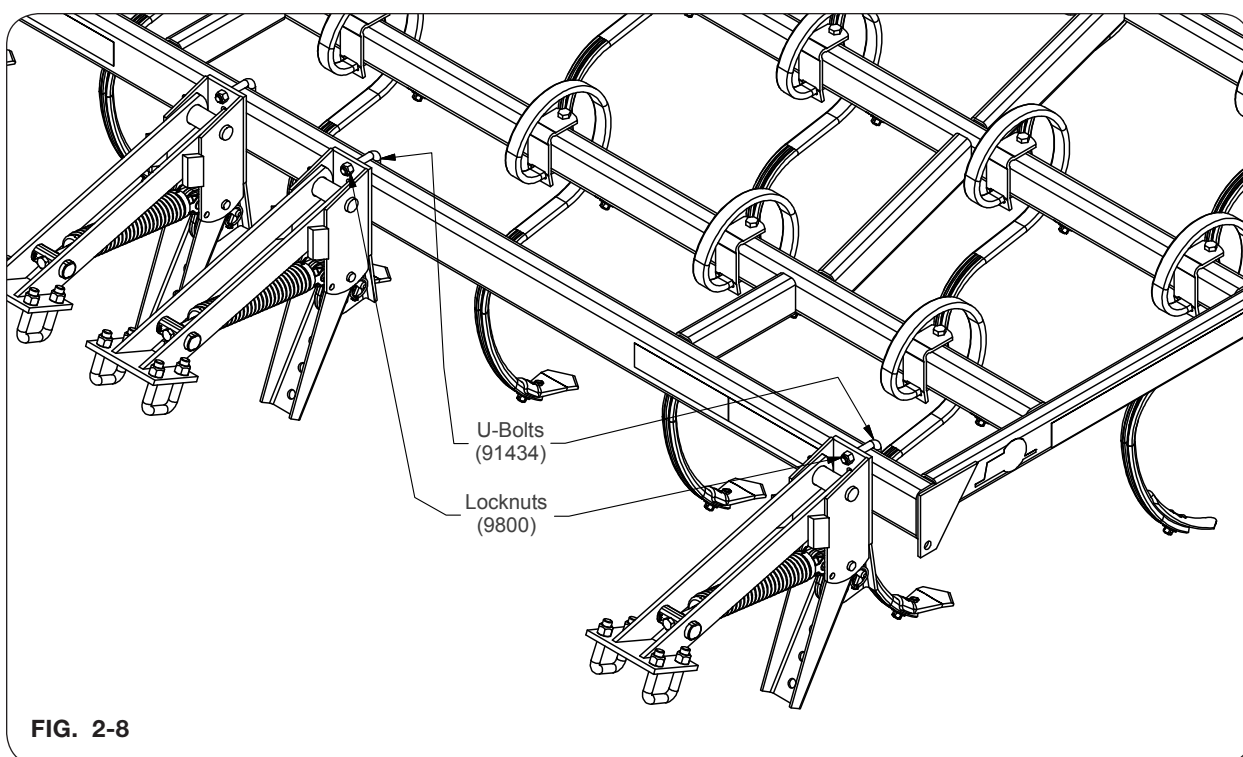


FIG. 2-8

NOTE: Refer to the "PARTS" Section for individual components of the "Rolling Harrow" and "One-Bar".

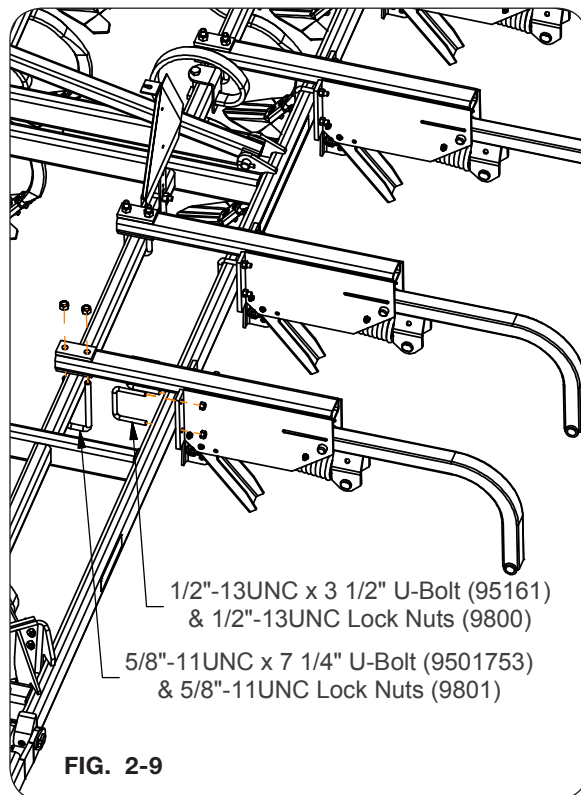
Mounting Arm Assembly - Double Basket & Single Drum Roller

Assembly of the one-bar/Rolling Harrow baskets to the machine is best accomplished with the unit setting on the ground.

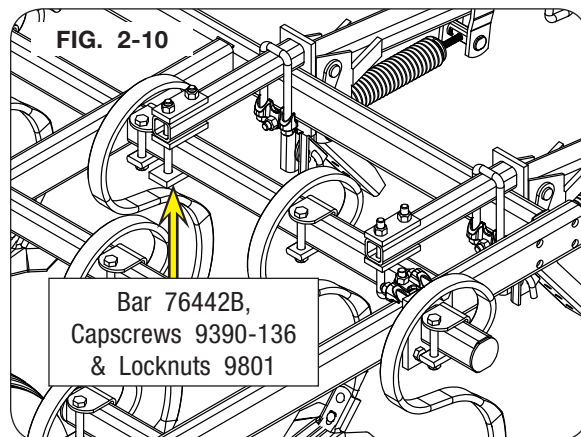
See "Overhead Layouts" (on Positioning Components) in "ASSEMBLY" Section for dimensions showing mounting arm locations depending on style of leveler bar and harrow sizes and location on rear of the machine.

NOTE: For ease of assembly, install all hardware loosely until assembly is complete, then tighten.

1. Install mounting arms onto the rear of the main frame tube with two 5/8"-11UNC x 7 1/4" U-bolt (9501753) and four 5/8"-11UNC lock nuts (9801) per arm (FIG. 2-9). Attach the front of the mounting arm to the frame with one 1/2"-13UNC U-bolt (95161) and two lock nuts (9800) per arm (FIG. 2-9).



NOTE: Due to some mounting location interference, use mounting kit (77059) (FIG. 2-10).



NOTE: Refer to the "PARTS" Section for individual components of the "Rolling Harrow" and "One Bar".

Rolling Harrow Assembly - Single Basket

1. Refer to table (below) for determining Rolling Harrow basket width required, on each section.

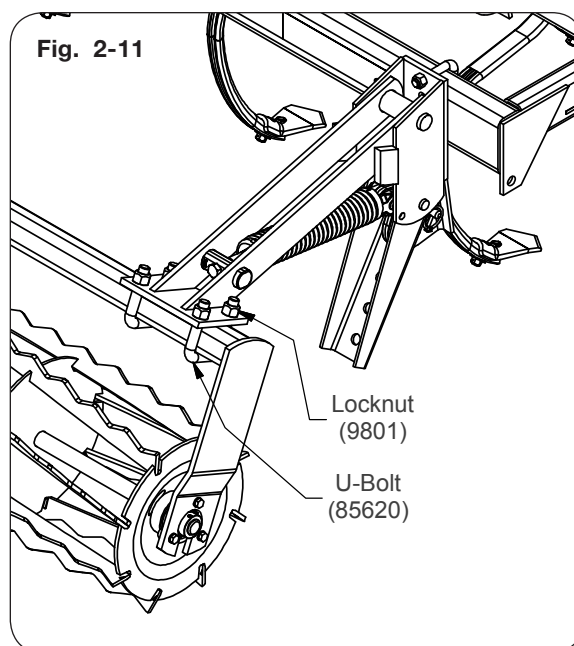
ROLLING HARROW WIDTH	ROLLING HARROW FRAME-WIDTH
3'	35"
4'	47"
5'	59"
6'	71"

WARNING

- **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 500 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

NOTE: The roller can be set for normal (aggressive) or firming action, refer to "Field Adjustments" in "OPERATIONS" Section.

2. Position "Rolling Harrow" assembly to mounting arms, align holes and install 5/8"-11UNC U-bolt (85620) and secure with locknuts (9801) (Fig. 2-11). Torque according to Torque Chart in "MAINTENANCE" Section, tightening evenly to have the same number of threads exposed on each side.



Rolling Harrow Assembly - Double Basket

⚠ WARNING

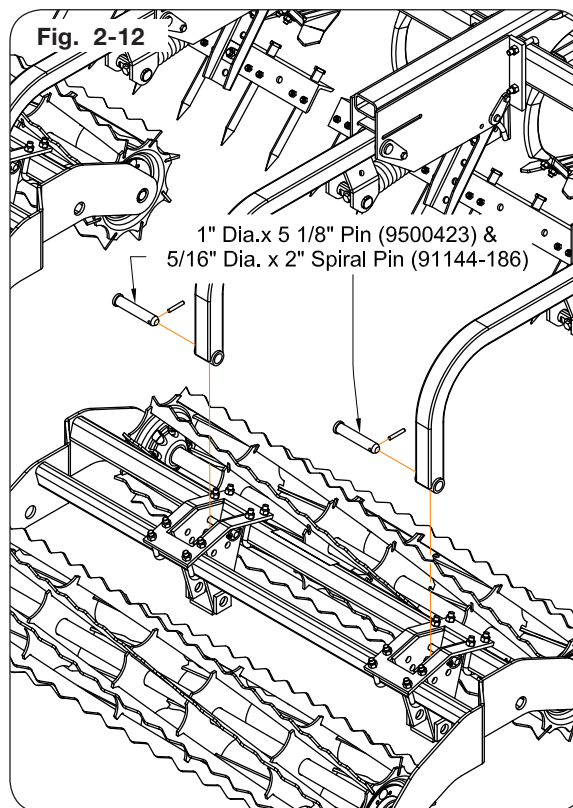
- FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 500 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.
- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- KEEP HANDS CLEAR OF PINCH POINT AREAS.

1. Refer to table (below) for determining Rolling Harrow width required, on each section.

ROLLING HARROW WIDTH	ROLLING HARROW FRAME-WIDTH
4'	47"
5'	59"
6'	71"

NOTE: The roller can be set for normal (aggressive) or firming action, refer to "Field Adjustments" in "OPERATIONS" Section.

2. Position "Rolling Harrow" assembly to mounting arms, align holes and install 1" Dia. x 5 1/8" pins (9500423) and 5/16" Dia. x 2" spiral pins (91144-186) (Fig. 2-12). Torque according to Torque Chart in "MAINTENANCE" Section, tightening evenly to have the same number of threads exposed on each side.



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.
2. Install arm (76015B) to scraper using 1/2"-13UNC x 1 1/2" carriage bolts (9388-104) passing bolt through arm first. (FIG. 2-13)

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. 2-13)
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. 2-13)
6. Install U-bolts (901837) from bottom of basket frame through arm. (FIG. 2-13)
7. Center notch in scraper over ribs on drums and secure scraper assembly with four 1/2"-13UNC locknuts per bar mount. (FIG. 2-14)
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.

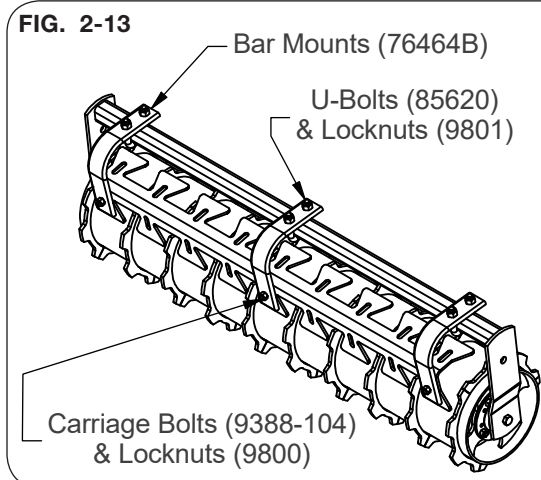
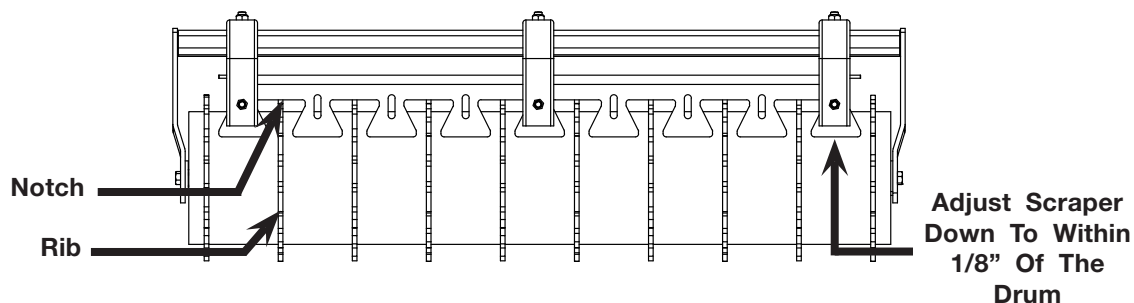


FIG. 2-14

Center Notch In Scraper Over Ribs On Drum Roller



Drum Roller Assembly

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. Refer to table (below) for determining Rolling Harrow width required, on each section.

ROLLING HARROW WIDTH	ROLLING HARROW FRAME-WIDTH
4'	47"
5'	59"
6'	71"

2. Position "Drum Roller" assembly to mounting arms, align holes and install 5/8"-11 U-bolts (85620) and secure with locknuts (9801) (Fig. 2-15). Torque according to Torque Chart in "MAINTENANCE" Section, tightening evenly to have the same number of threads exposed on each side.

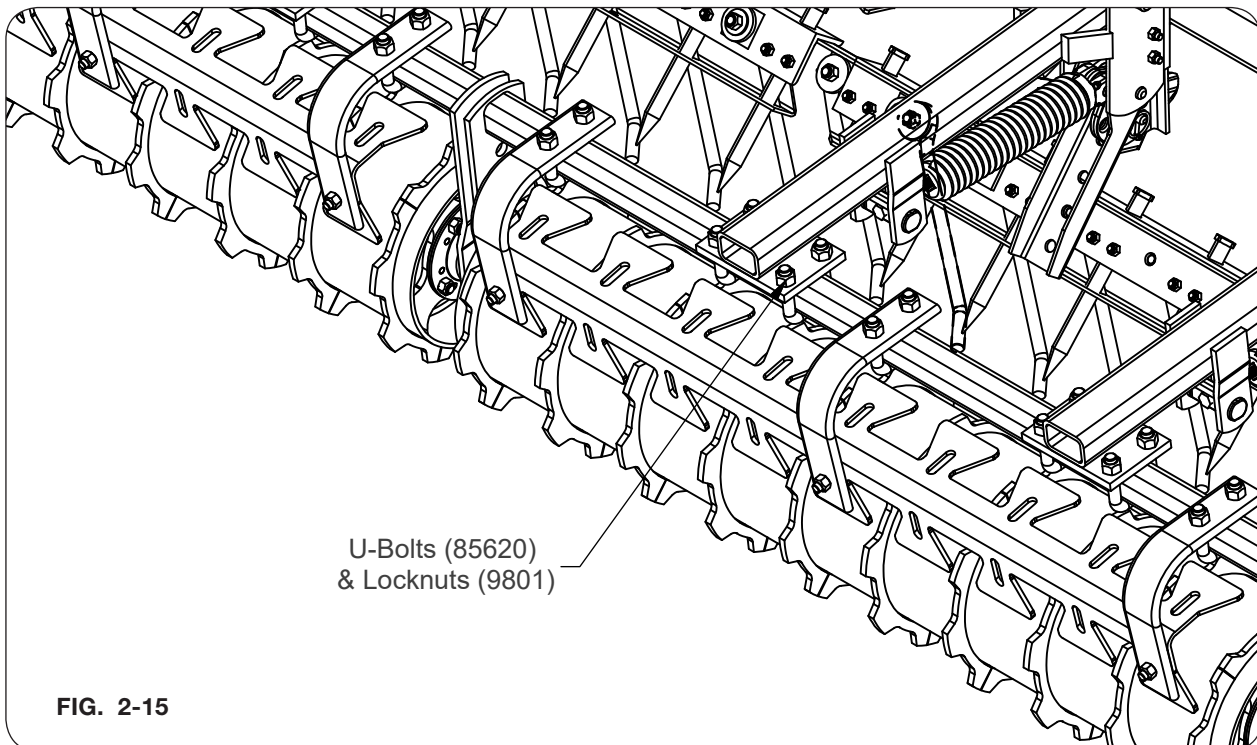


FIG. 2-15

Leveler Bar Assembly

1. Raise machine to allow sufficient clearance for leveling bars. Block the machine to prevent the machine from accidentally lowering.

⚠ WARNING

- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

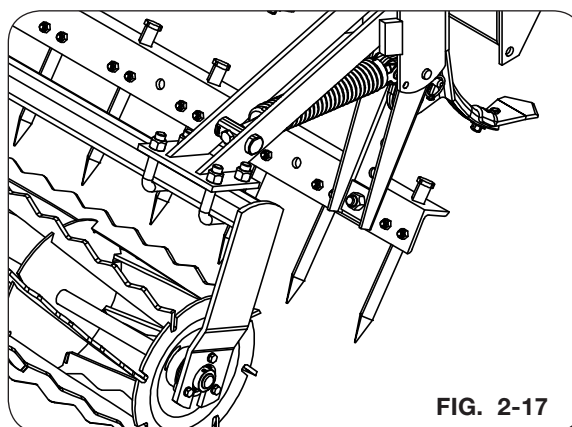
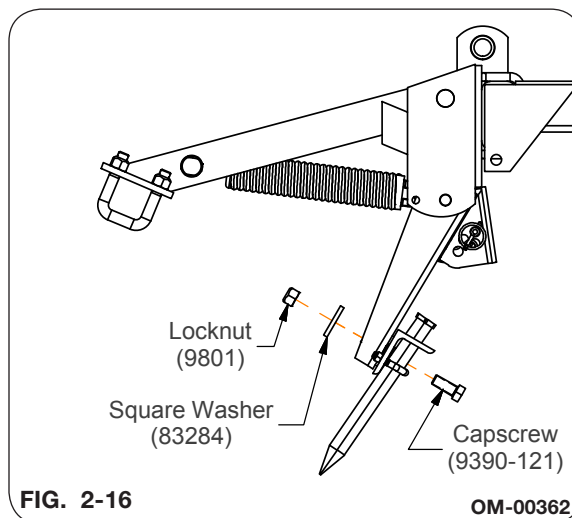
2. See Adjustments Section for procedure to adjust leveling bar tension.
3. Determine the style of leveler bar to be installed and follow instructions for that style. Unverferth Manufacturing does not recommend mixing leveler bar styles on a machine. See torque chart for proper tightening of all leveler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

Spike Tooth Leveler Bar

1. Refer to chart below for determining which leveler bars are required for each machine section.

ONE-BAR SIZE	ANGLE LENGTH
4'	45"
5'	57"
6'	69"

2. Remove the 5/8"-11UNC x 1 1/4" capscrews (9390-121), square washers (83284), and 5/8"-11UNC locknuts (9801) from the angle of the leveler bar assembly (Fig. 2-16).
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. 2-17.



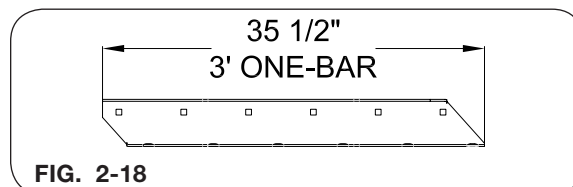
Leveler Bar Assembly (continued)

Diagonal Tooth Leveler Bar

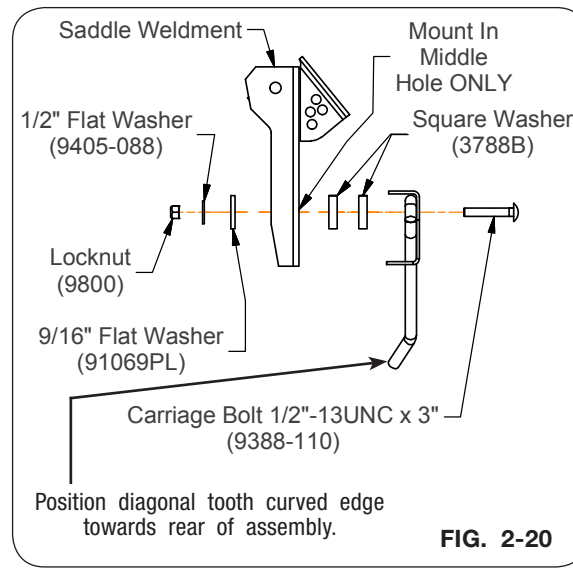
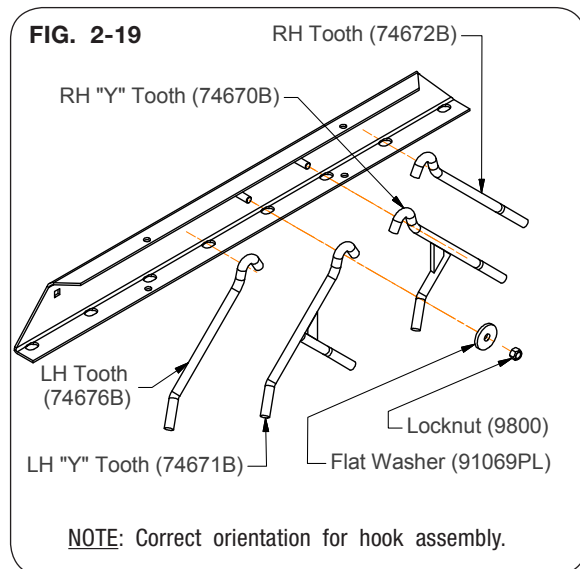
Diagonal tooth leveler bars come in right-hand and left-hand assemblies. The teeth will point diagonally to the outside of the machine on each assembly.

1. Use the chart below and the diagonal tooth leveler bar layouts to identify the bars needed for your machine (Fig. 2-18).

ONE-BAR SIZE	RIGHT/LEFT LENGTH	CENTER LENGTH
3'	35 1/2"	--
4'	47 1/2"	44 1/2"
5'	59 1/2"	56 1/2"
6'	73 3/8"	68 1/2"



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. 2-19 & 2-20). 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.



3. Mount the diagonal bar to the MIDDLE hole on the machine's mounting arms (Fig 2-19).

IMPORTANT

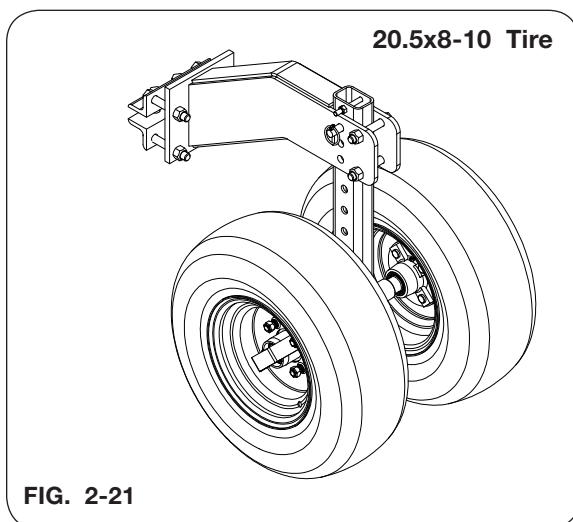
- Machine damage will result if the diagonal leveler bars are installed in any hole in the machine's mounting arms other than the middle.

Gauge Wheels

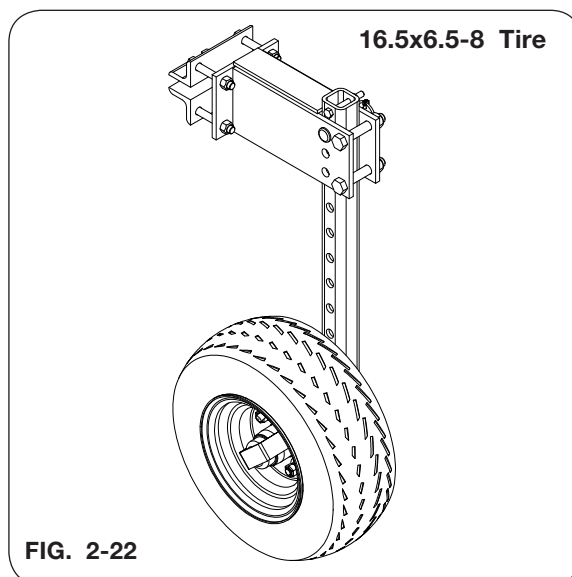
IMPORTANT

- For ease of assembly install hardware loosely until assembly is complete, then tighten all hardware.
1. Position gauge wheels onto the machine. Use the "Overhead Layouts" (on Positioning Components) in the Set Up Section to determine the wheel location on the cultivator frame.
 2. Retain the dual gauge wheel into position with two 1/2"-13UNC U-bolts (91120) and four 1/2"-13UNC locknuts (9800) per mounting arm (Fig. 2-21). Retain the single gauge wheel into position with four 1/2"-13UNC x 3 1/2" capscrews (9390-109) and 1/2"-13 locknuts (9800) (Fig. 2-22).

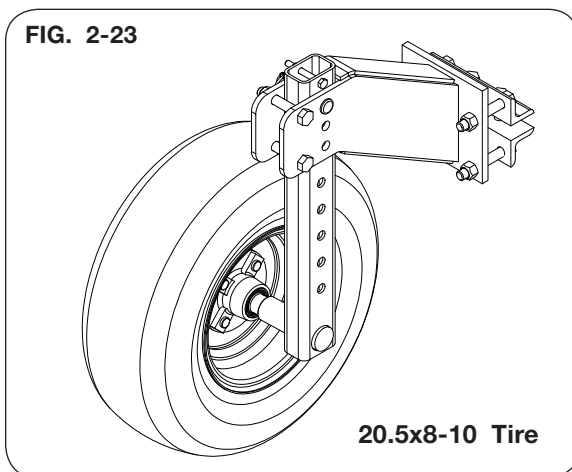
**DUAL GAUGE WHEEL
ASSEMBLY (73956B)**



**SINGLE GAUGE WHEEL
ASSEMBLY (83824)**



**SINGLE GAUGE WHEEL
ASSEMBLY (74606B)**



Transport Marking & Light Kits (86763B & 86764B)

NOTE: Unverferth Manufacturing has designed the transport lighting and marking kit to meet United States federal law and ASABE standards at the time of manufacture. Machine modifications, including additional features or changes to the intended configurations, may require updates to the lighting and marking as well.

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

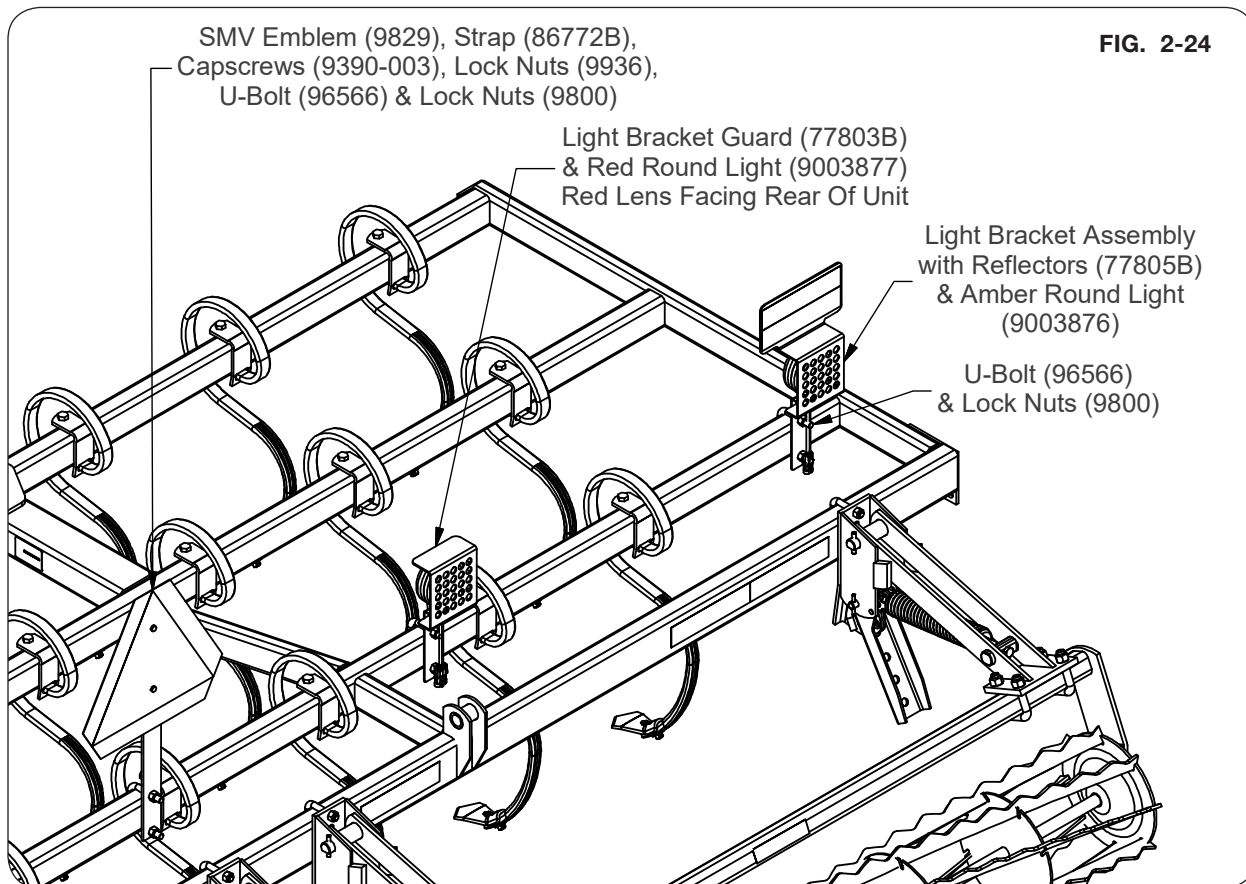
See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

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

Lights & SMV Emblem for Rigid Perfecta Units

Refer to “OVERHEAD LIGHT/REFLECTOR LAYOUTS” on the following pages for proper positioning of lights.

1. Secure the light bracket assemblies with reflectors (77805B) with amber round lights (9003876) and light bracket guard (77803B) with red round light (9003877) using 1/2"-13UNC U-bolts (96566) and 1/2"-13UNC lock nuts (9800) as shown in Fig. 2-24.
2. Attach the SMV emblem (9829) to the strap (86772B) with two 1/4"-20UNC x 3/4" cap screws (9390-003) and 1/4"-20UNC lock nuts (9936). Secure strap to the frame with 1/2"-13UNC U-bolt (96566) and 1/2"-13UNC lock nuts (9800) as shown in Fig. 2-24.



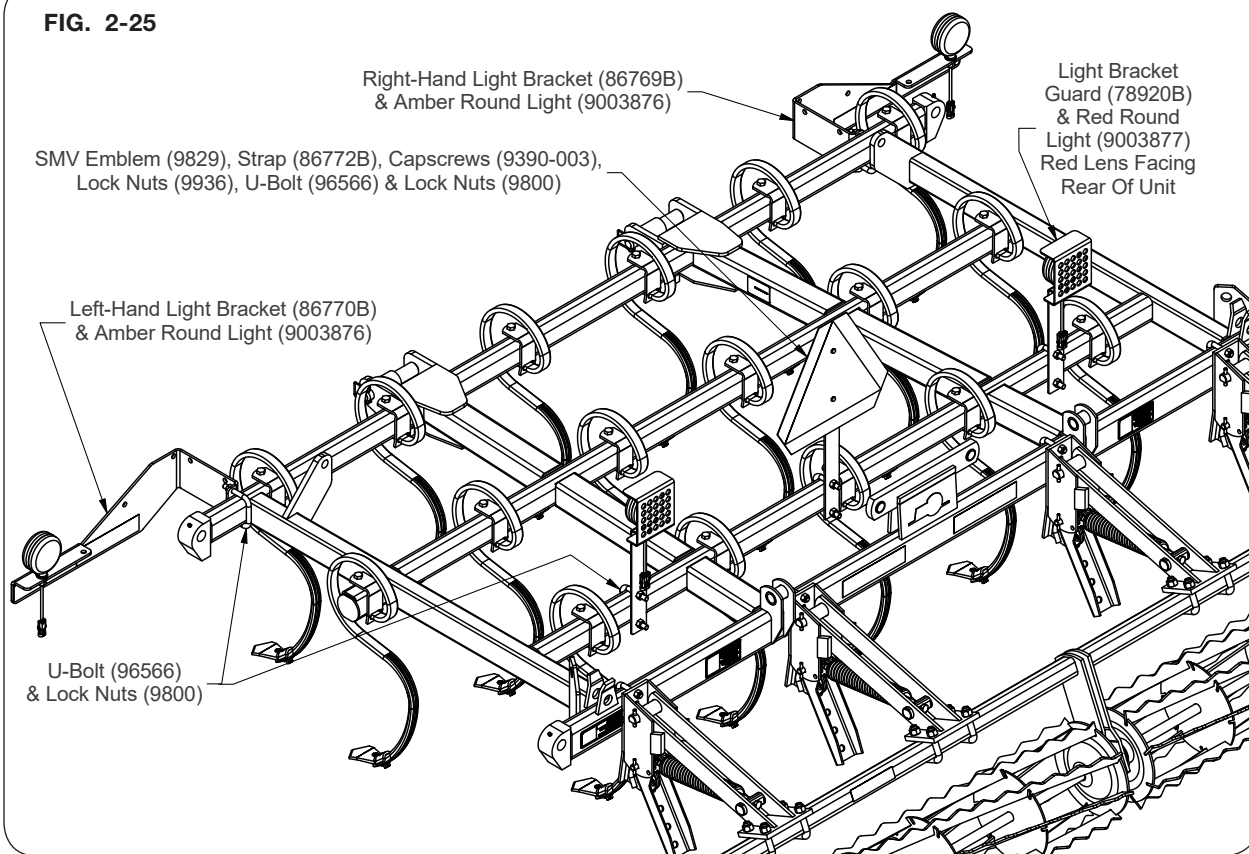
Transport Marking & Light Kits (86763B & 86764B)

Lights & SMV Emblem for Folding Perfecta Units

Please refer to “OVERHEAD LIGHT/REFLECTOR LAYOUTS” on the following pages for proper positioning of lights.

1. Secure the left-hand light bracket (86770B) and right-hand light bracket (86769B) with amber round lights (9003876) and light bracket guard (78920B) with red round light (9003877) using 1/2”-13UNC U-bolts (96566) and 1/2”-13UNC lock nuts (9800) as shown in Fig. 2-25.
2. Attach the SMV emblem (9829) to the strap (86772B) with two 1/4”-20UNC x 3/4” capscrews (9390-003) and 1/4”-20UNC lock nuts (9936). Secure strap to the frame with 1/2”-13UNC U-bolt (96566) and 1/2”-13UNC lock nuts (9800) as shown in Fig. 2-25.

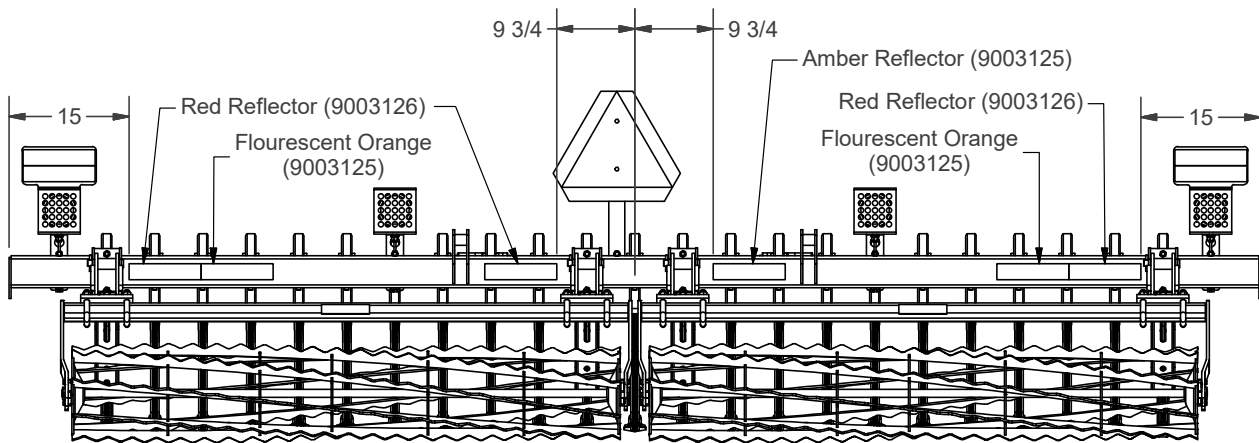
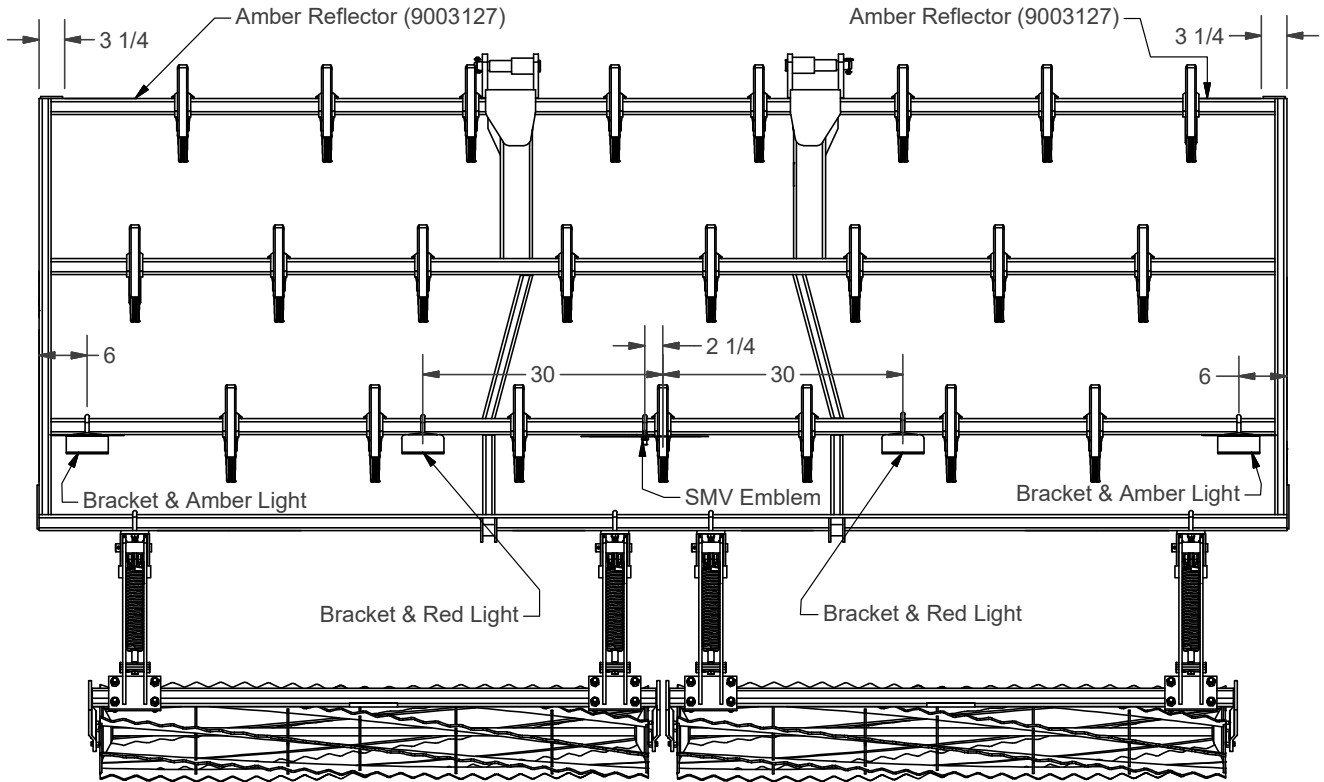
FIG. 2-25



Transport Marking & Light Kits — Overhead Layouts

12' & 13'
RIGID UNITS

NOTE: Center All Reflectors Vertically On Tube

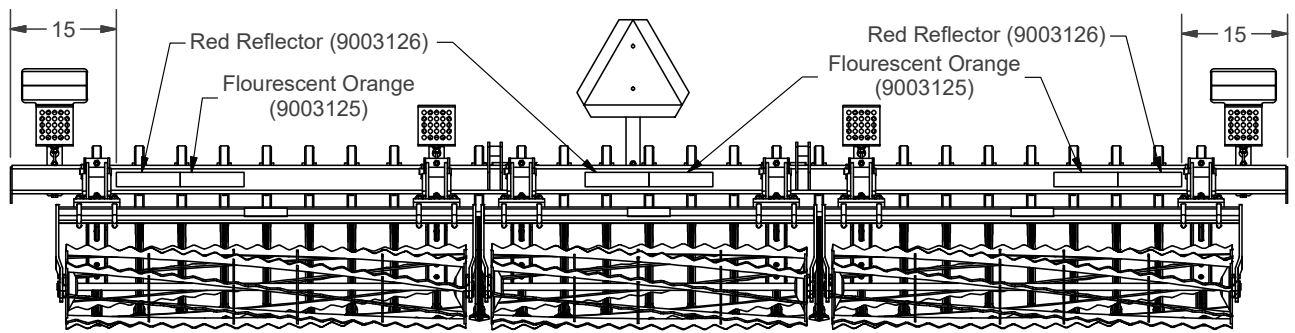
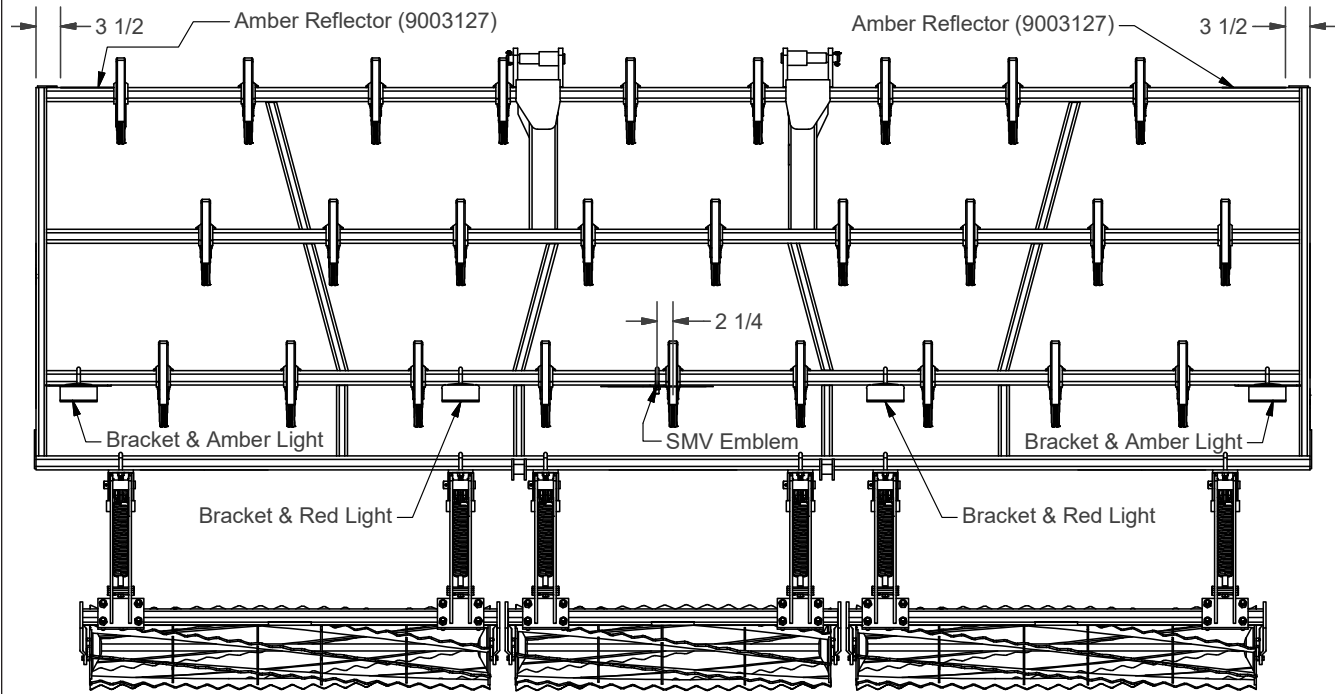


FIELD CULTIVATORS — Set Up

Transport Marking & Light Kits — Overhead Layouts

14' & 15'
RIGID UNITS

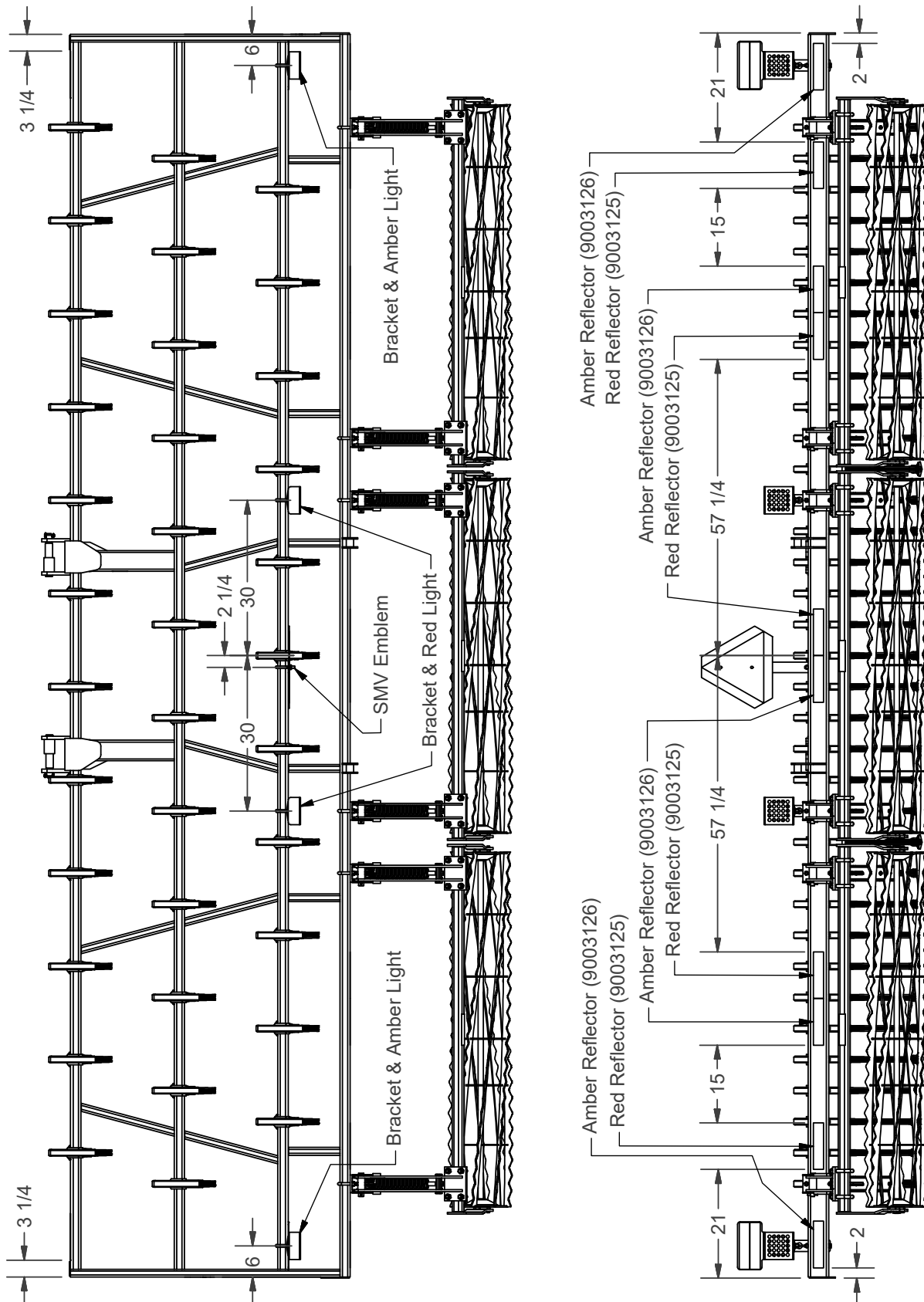
NOTE: Center All Reflectors Vertically On Tube



Transport Marking & Light Kits — Overhead Layouts

18' & 20' RIGID UNITS

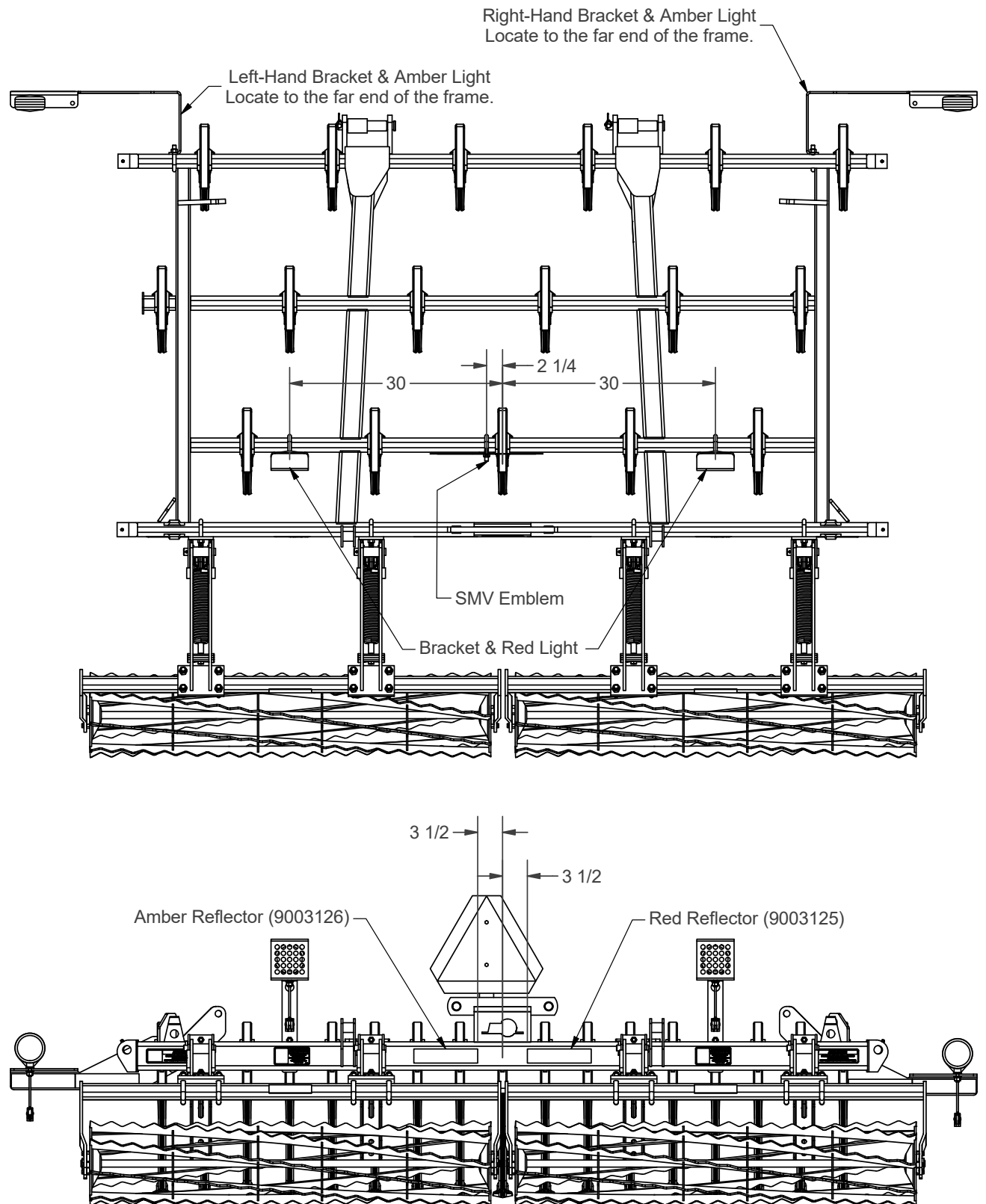
NOTE: Center All Reflectors Vertically On Tube



Transport Marking & Light Kits — Overhead Layouts

ALL FOLDING UNIT (BASE)

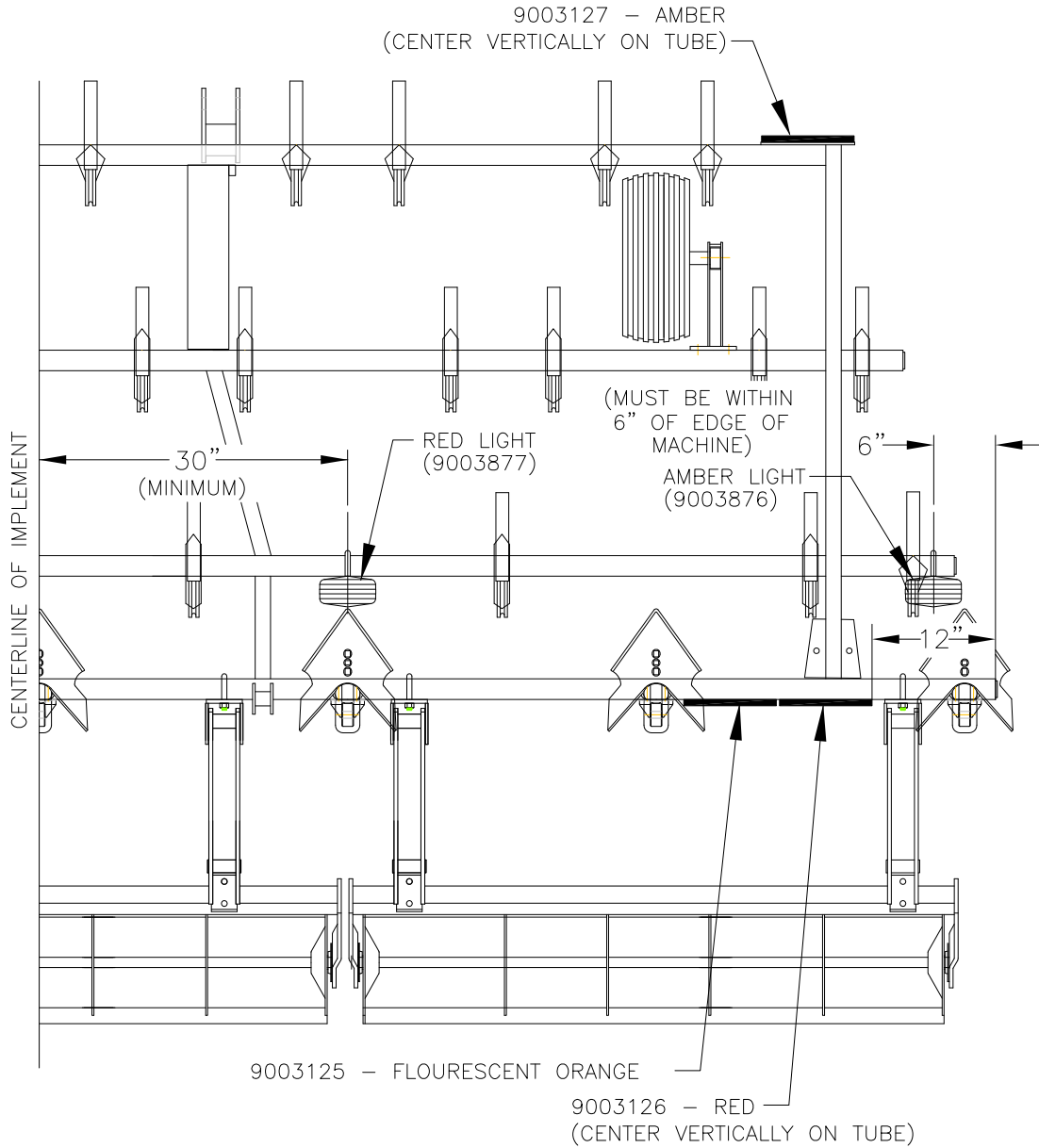
NOTE: Center All Reflectors Vertically On Tube



Transport Marking & Light Kits — Overhead Layouts

NOTE: Center All Reflectors Vertically On Tube

15' BEDDED UNIT



Transport Marking & Light Kits — 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 J560 that connects to tractor or other towing vehicle. If your tractor or other towing vehicle does not have the mating socket connector, contact respective dealer.

1. Route the main harness along the support tubes near the center of the main frame.

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

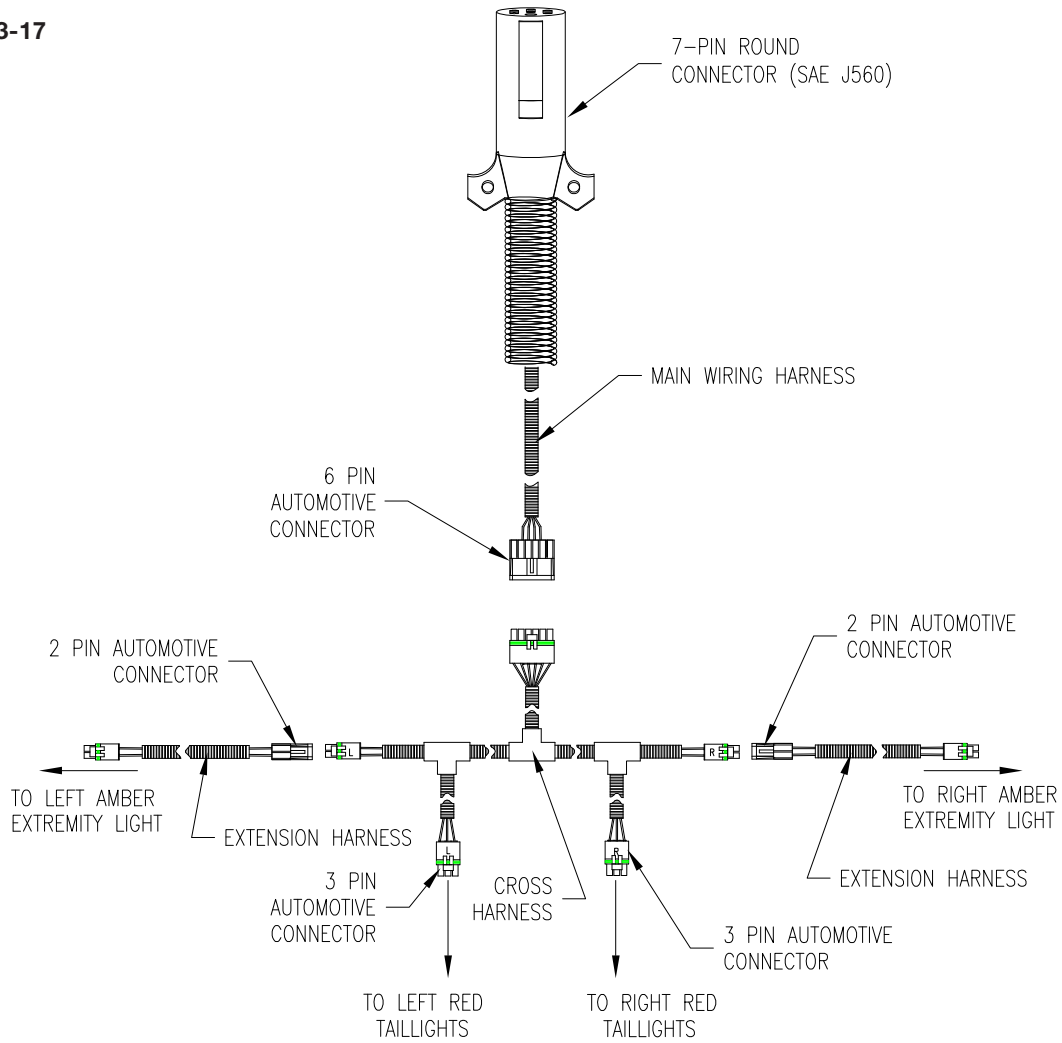
2. Route the legs labeled “R” to the right side of machine, and the legs labeled “L” to the left side.
3. Connect the three pin connectors on the cross harness to the 3 pin connectors on the red taillights.
4. Coil up any excess wire and secure harness to frame with cable ties.

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

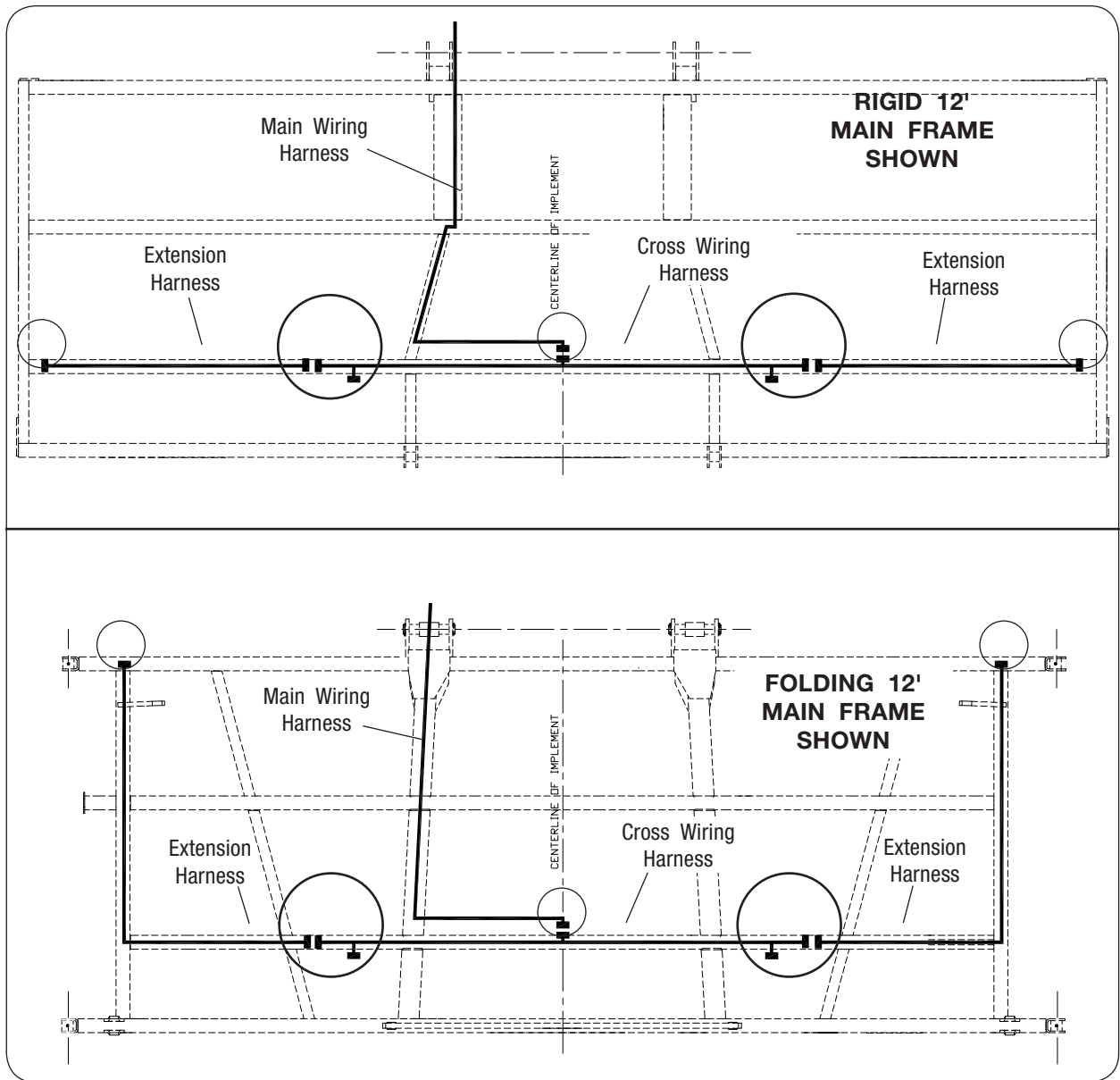
5. Route extension harnesses along the main frame and connect to the amber extremity lights.
6. Tie the extension harnesses to the extremity light mounting bracket through the extra hole in the light bracket.
7. Coil up any excess and tie the remainder to the main frame with cable ties. Be sure to avoid contact with the fold cylinders, fold linkage, or any other moving parts.

Transport Marking & Light Kits — Wiring Harness

FIG. 3-17



Transport Marking & Light Kits — Wiring Harness



Checking Function

To check for proper functioning of the Unverferth Transport Marking Kit, perform the following:

1. Turn on the tractor's flashing lights. The amber extremity lights on the Perfecta cultivator should flash in unison with the tractor lights.
2. Activate the tractor's turn signal. The amber extremity light on the turn side should flash in unison with the tractor's turn signal. The non-turn side (amber light) should burn solid. Check the opposite turn direction also.
3. Turn on the tractor's headlights. The red taillights should burn solid.

If the lights do not burn, check that all connections are properly made. If the lights do not function properly, check that the 7-pin connector on towing vehicle is wired per ASABE standards.

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.

Maintenance

Always check function of lights before traveling on public roads.

All connectors are watertight and require no normal maintenance.

With each use, check condition of the wire harnesses, looking for kinked, frayed, or loose wires. If lights or harnesses are damaged, replace as necessary.

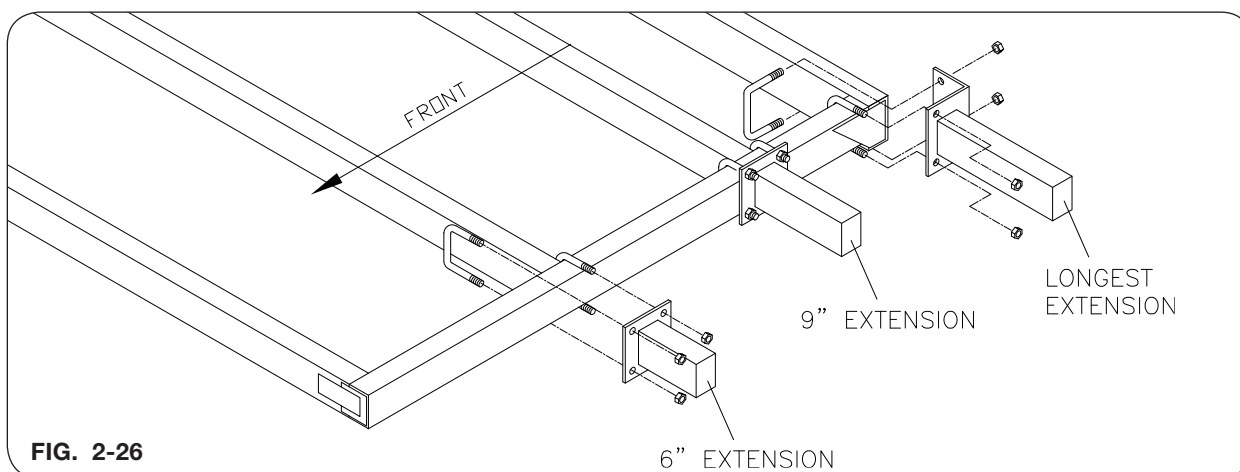
Over time, the reflective striping may become faded or torn from normal use. Replace as necessary.

A light coating of electrical grease on the 7-pin connector will make it easier to connect and inhibit corrosion. If machine is stored outside, the 7-pin connector should be positioned so rain, snow, and ice cannot collect in it.

Extensions (82745G or 82745R) (Optional)

NOTE: On machine with optional extensions, refer to the following instructions for assembly.

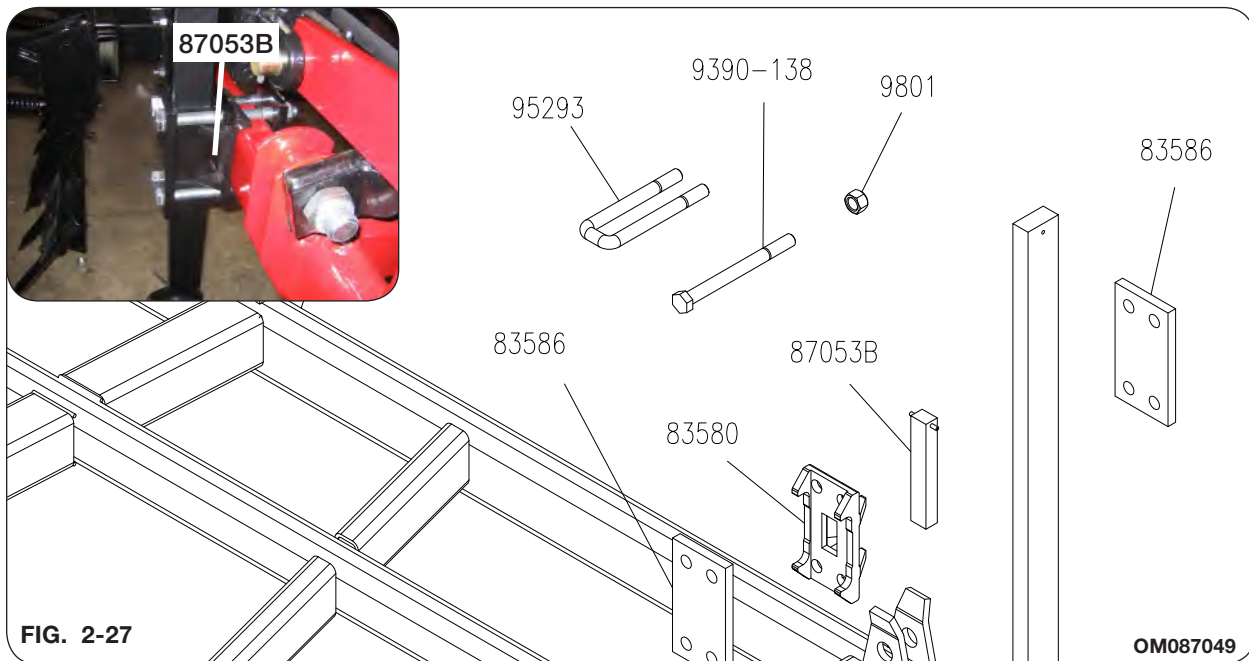
1. Attach 6" long and 9" long extensions to the second and third tool bar as shown. Secure using two 1/2" U-bolts (91120) and four locknuts (9800) per extension.
2. Secure the longest extension to the rear of the tool bar using one 1/2"-13UNC x 3 9/16" C/C U-bolt (91120), one 1/2"-13UNC x 4 9/16" C/C U-bolt (91434) and four 1/2"-13UNC locknuts (9800) per extension (Fig. 2-26).
3. Mount S-tines onto extensions with hardware supplied. Positioning of S-tines should be spaced the same distance as the other S-tines on the same tool bars.
4. Tighten all hardware.



Bedded Crop Perfecta Models — On 60" Row Spacing Assembly

On 5 bed x 60" Bedded Models, a spacer (87053B) must be installed on the bedding shanks on the main frame to avoid interference with the folding cylinders.

1. Disassemble the shank assembly and remove the U-bolts (95293) and locknuts (9801) (Fig. 2-27).
2. Reassemble the shank assembly with clamp plate (83586) behind the shank and clamp bracket (83580) (Fig. 2-27).
3. Secure into position with 5/8"-11UNC x 7" capscrews (9390-138) and locknuts (9801) (Fig. 2-27).



Bedded Crop Perfecta Models (continued) — On 60" Row Spacing Assembly

4. Basket mounting frames (87051B) must be installed for outer rolling baskets on the main frame (Fig. 2-28). Position mounting frames as shown on layout and secure with U-bolts (91434) and locknuts (9800). Mount basket arms (84762) to frames per layout and attach with U-bolts (91434) and locknuts (9800). Place red reflectors (9003126) on the outermost edge of mounting frames (right and left sides). Place the fluorescent strip (9003125) at inner edge of red reflectors. Make sure the full length of all reflectors are visible to oncoming traffic.

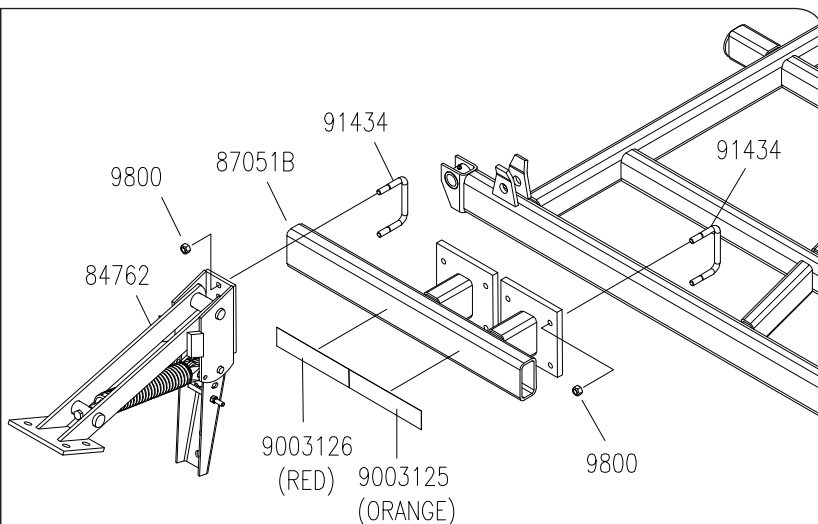



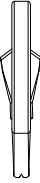
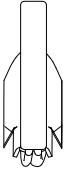

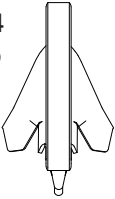

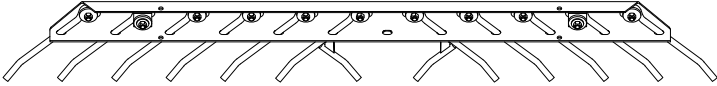
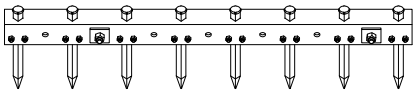
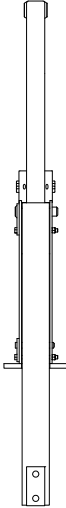
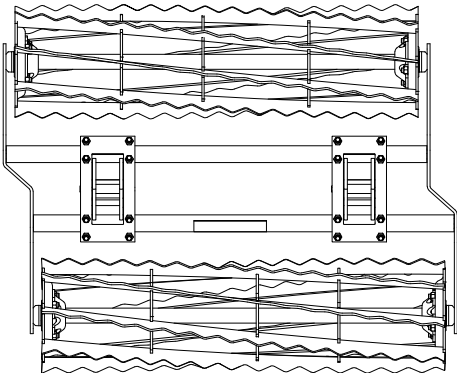
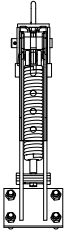
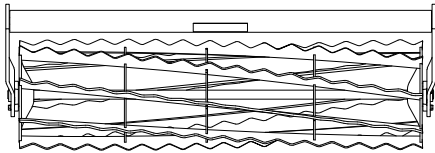
FIG. 2-28

FIELD CULTIVATORS — Set Up

Overhead Layout

Use these "Overhead Layout" drawings (on the following pages) as an assembly guide for the positioning of components onto the cultivator frame.

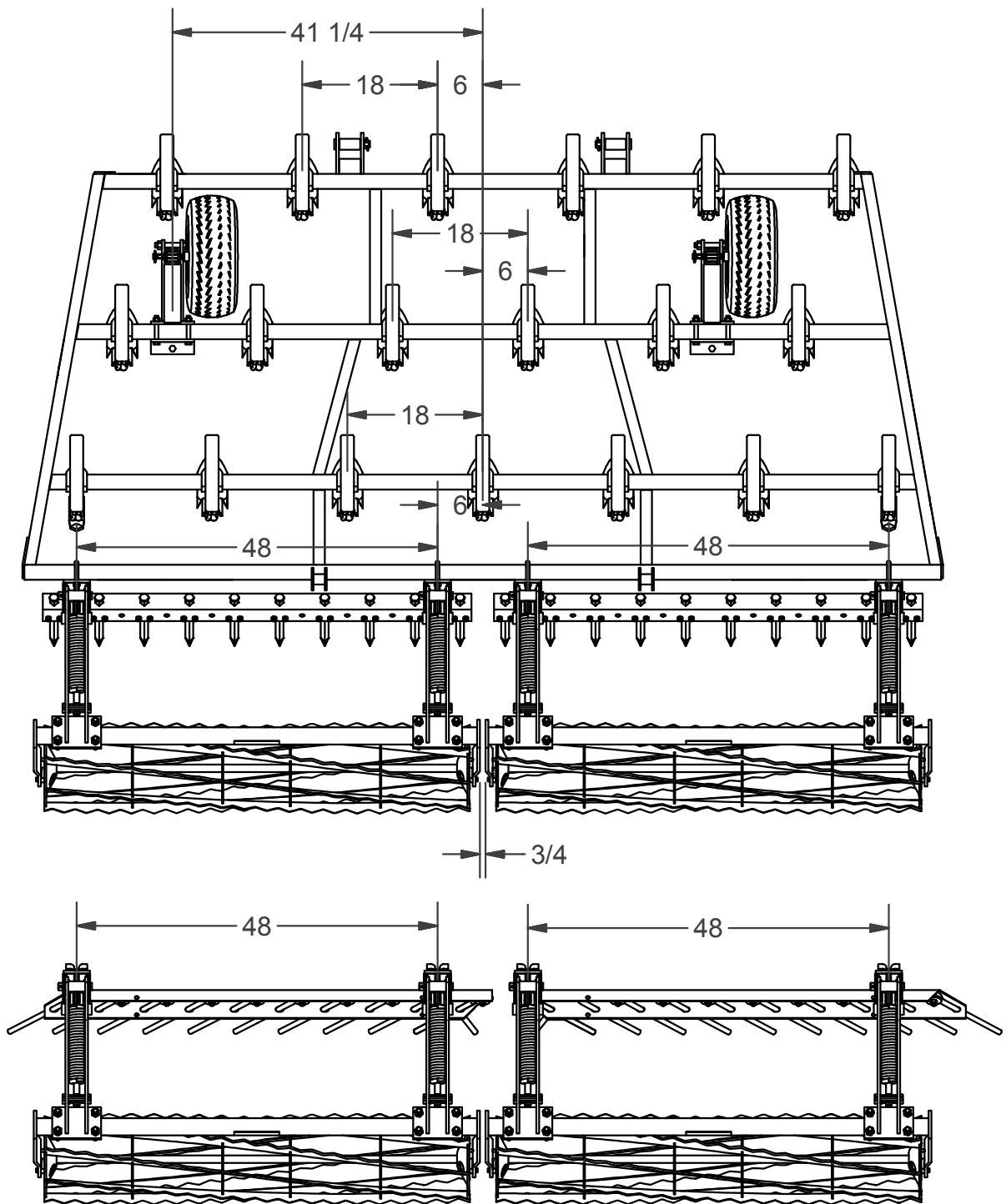
NOTE: All dimensions are in inches - unless otherwise specified.

 <p>Standard S-Tine (9952) with Point (9974)</p>	<p>Model 10</p>  <p>Standard S-Tine (9952) with Sweep (91381)</p>	<p>Model 12 4" Sweep</p>  <p>Heavy-Duty S-Tine (94138) with Sweep (9500465)</p>
 <p>Heavy-Duty S-Tine (94138) with Point (95848)</p>	<p>Model 14 7" Sweep</p>  <p>Heavy-Duty Edge Bent S-Tine (91495) with Sweep (93687)</p>	 <p>Heavy-Duty Edge Bent S-Tine (91495) with Point (95848)</p>
 <p>Diagonal One-Bar</p>		 <p>Spike Tooth One-Bar</p>
 <p>Double Rolling Harrow Mounting Arm</p>	 <p>Double Rolling Harrow Basket</p>	 <p>Single Rolling Harrow Mounting Arm</p>
 <p>Single Rolling Harrow Basket</p>		

FIELD CULTIVATORS — Set Up

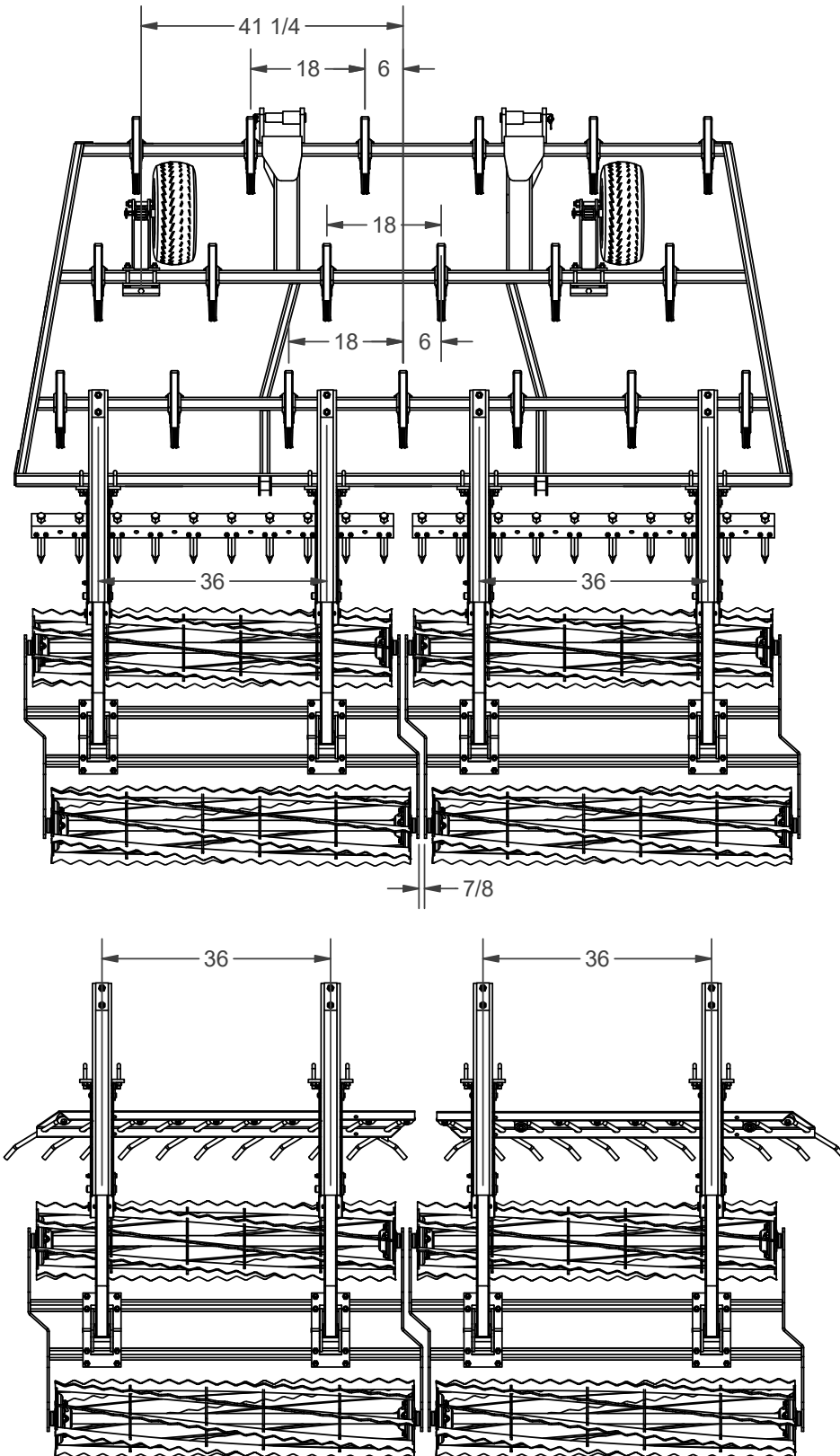
Overhead Layout — Rigid Perfecta Models

10 Ft. Base - Single Basket



Overhead Layout — Rigid Perfecta Models

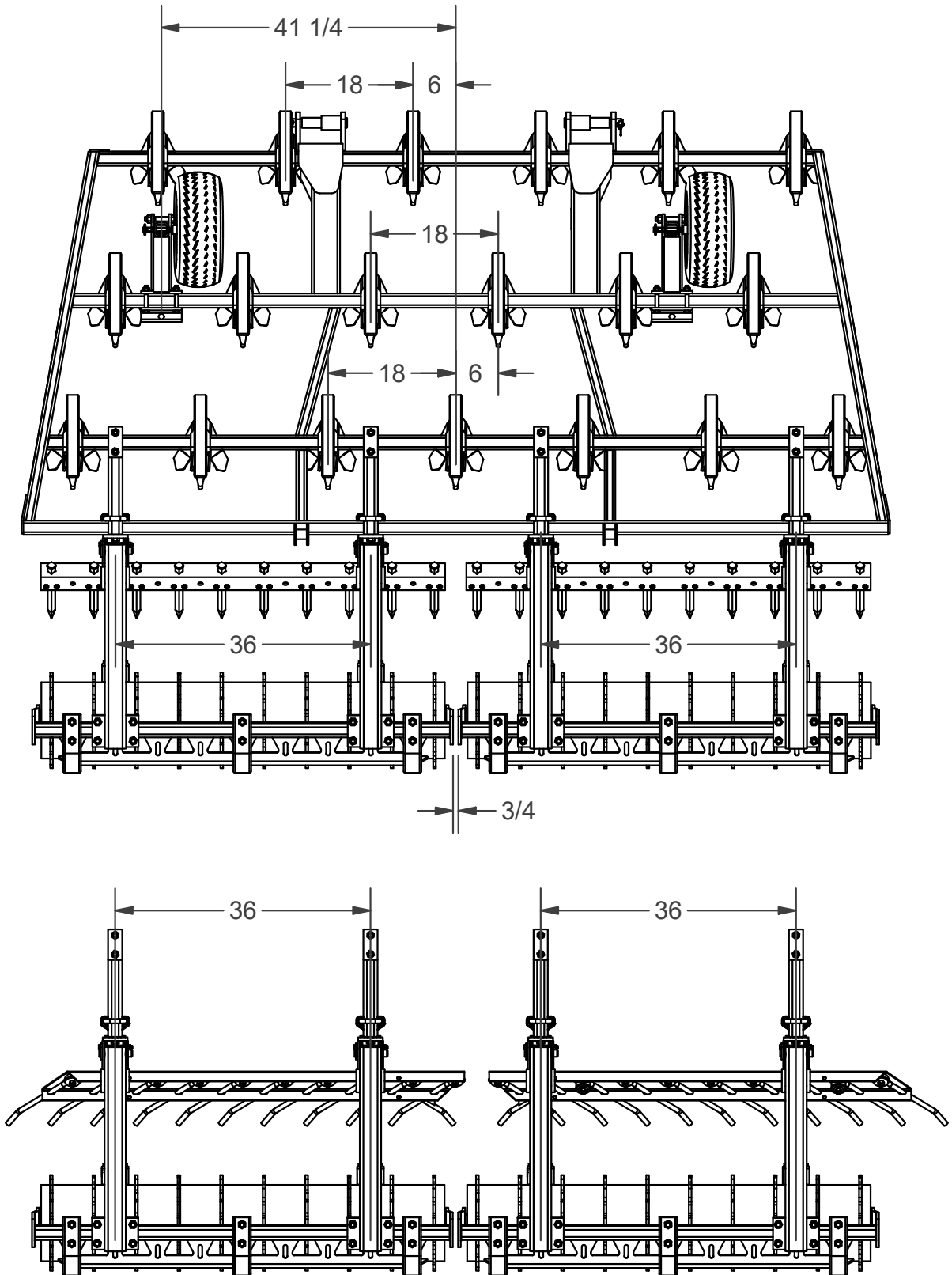
10 Ft. Base - Double Basket



FIELD CULTIVATORS — Set Up

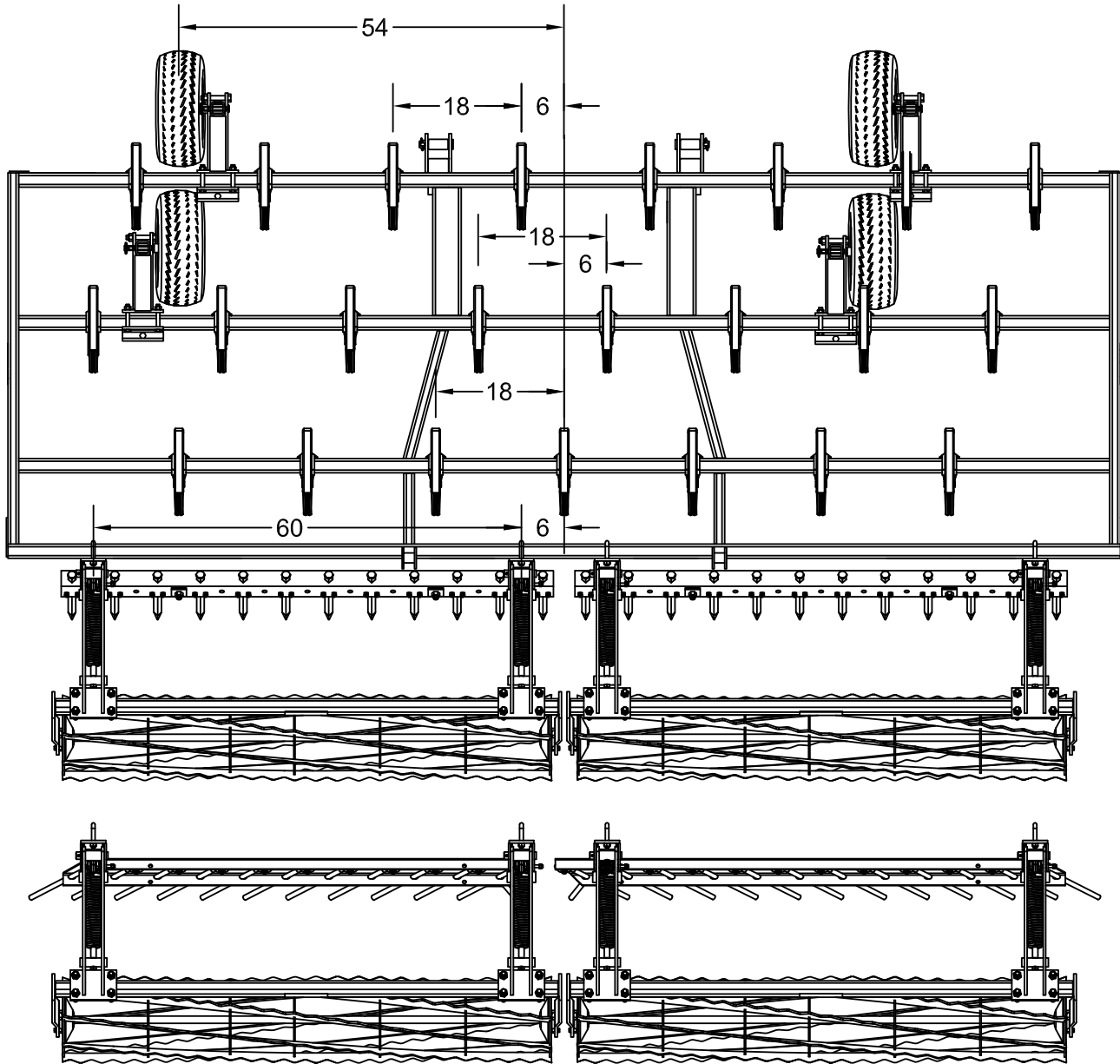
Overhead Layout — Rigid Perfecta Models

10 Ft. Base - Single Drum Roller



Overhead Layout — Rigid Perfecta Models

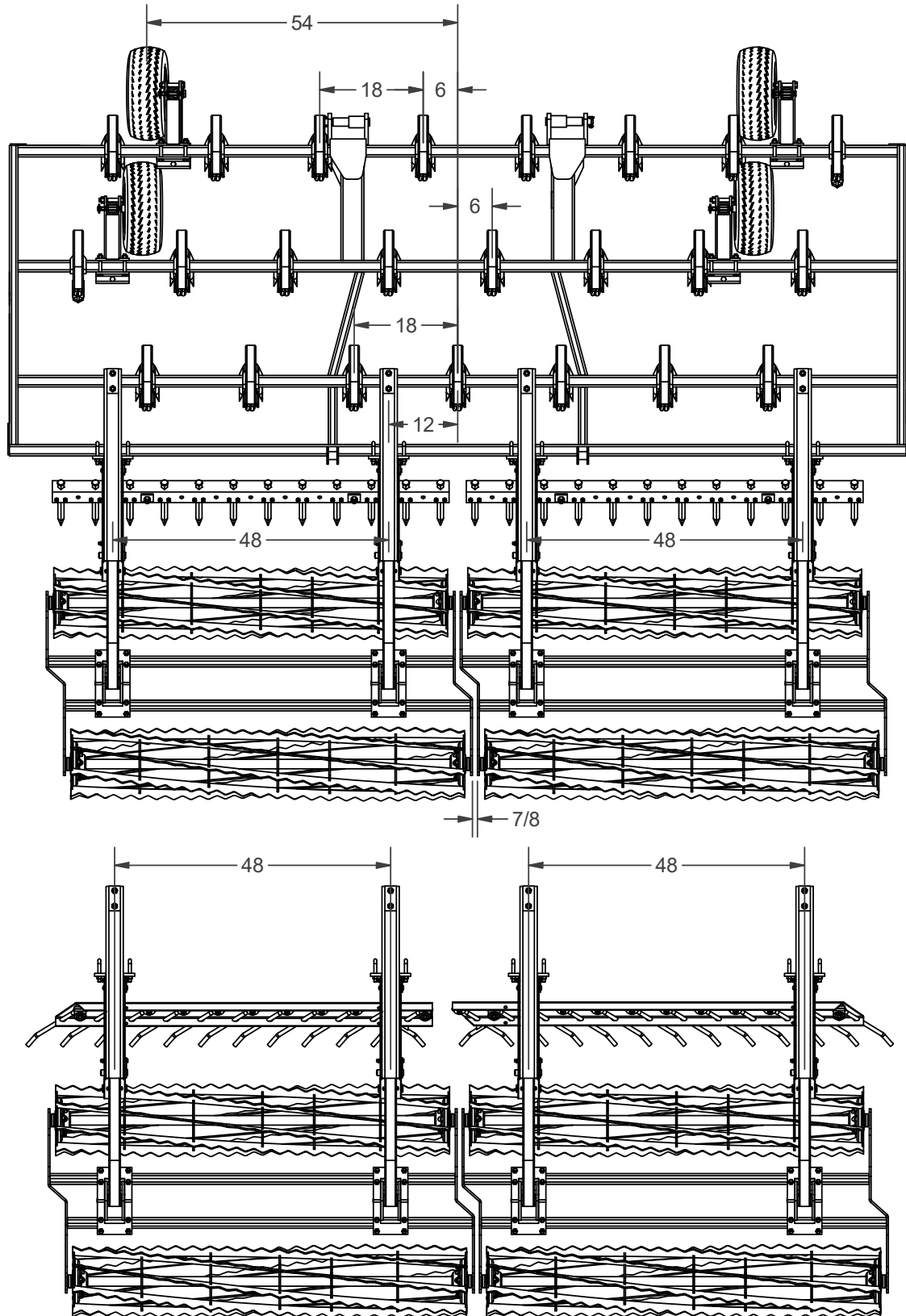
12 Ft. Base - Single Basket



FIELD CULTIVATORS — Set Up

Overhead Layout — Rigid Perfecta Models

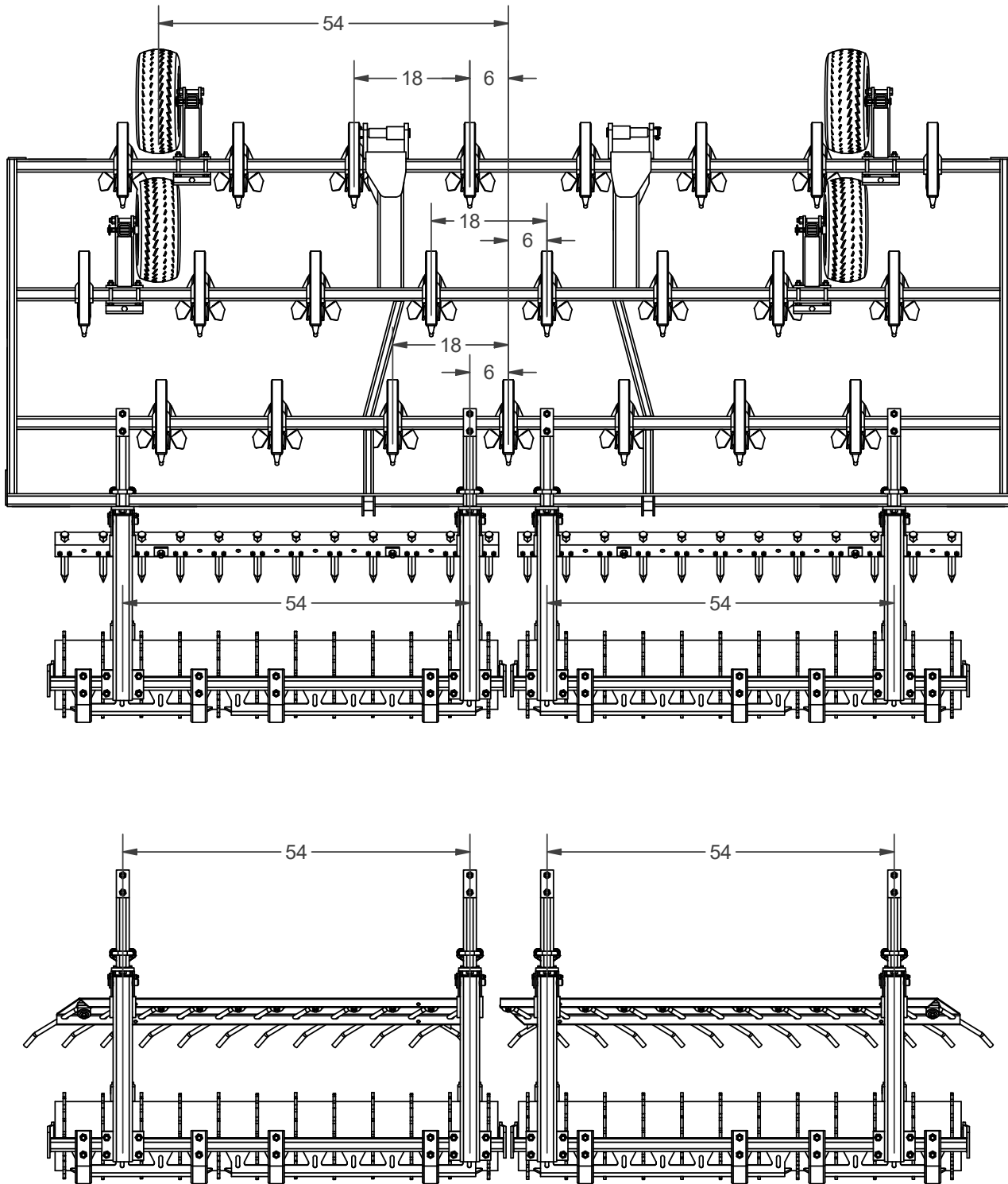
12 Ft. Base - Double Basket



FIELD CULTIVATORS — Set Up

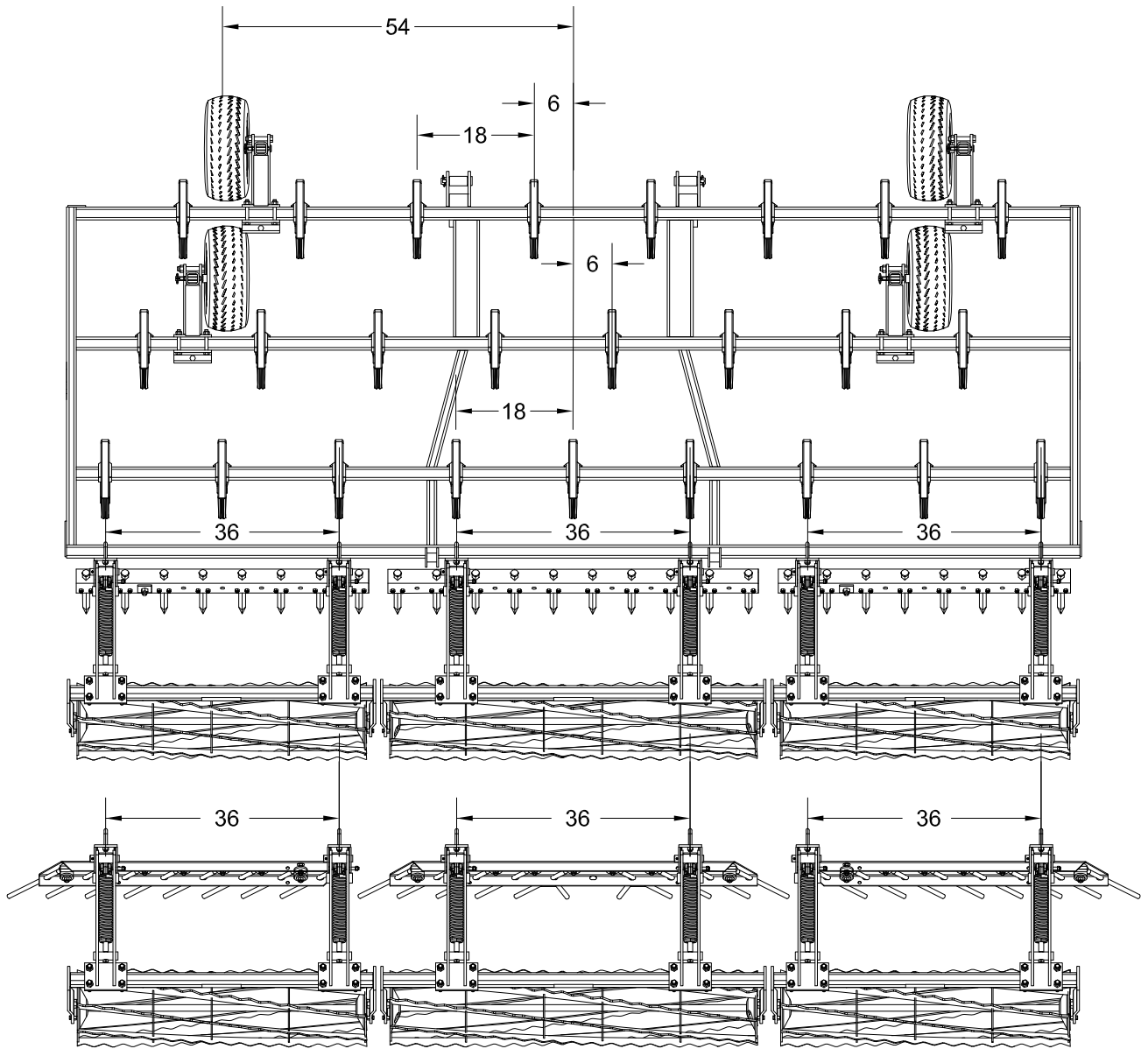
Overhead Layout — Rigid Perfecta Models

12 Ft. Base - Single Drum Roller



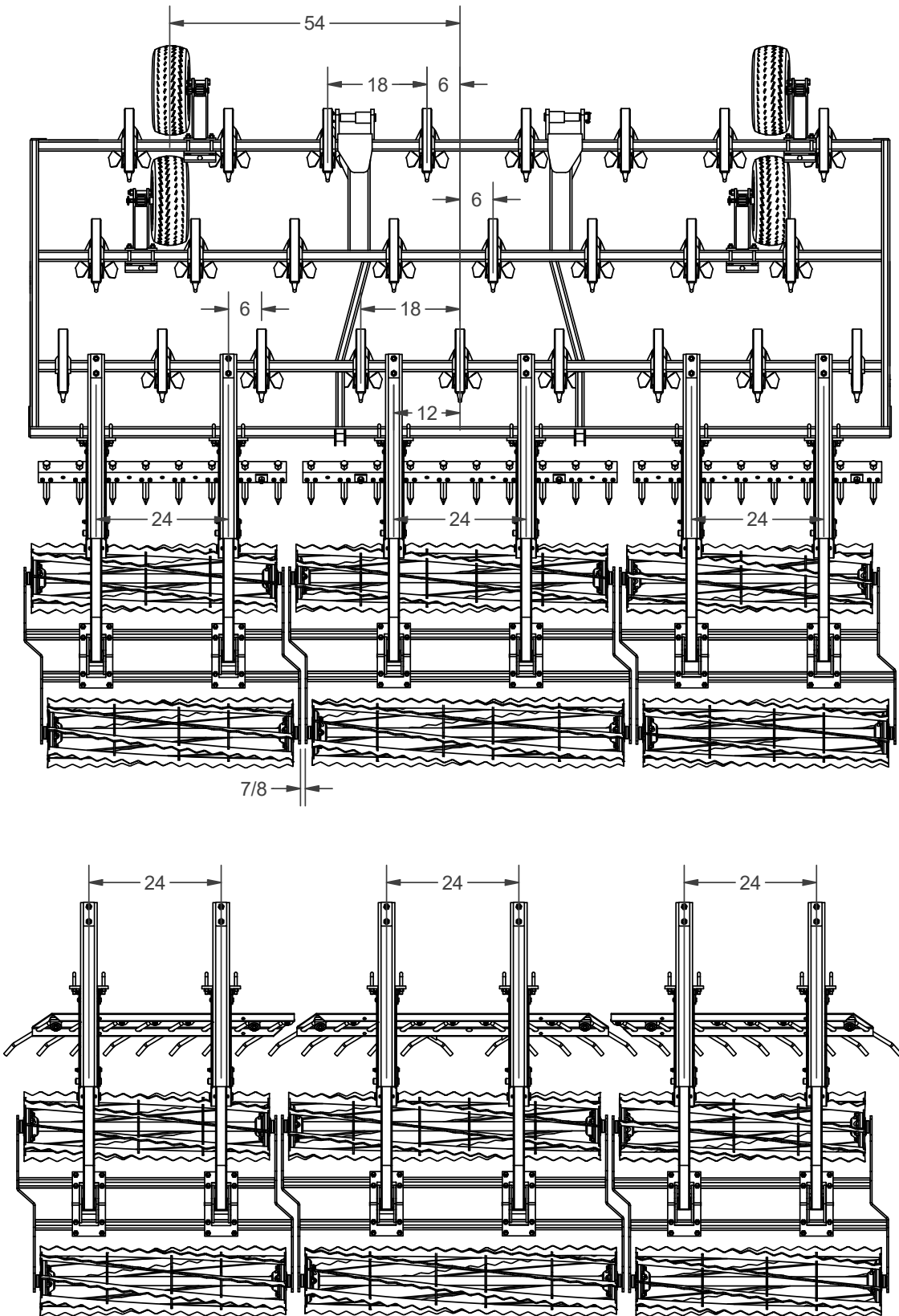
Overhead Layout — Rigid Perfecta Models

13 Ft. Base - Single Basket



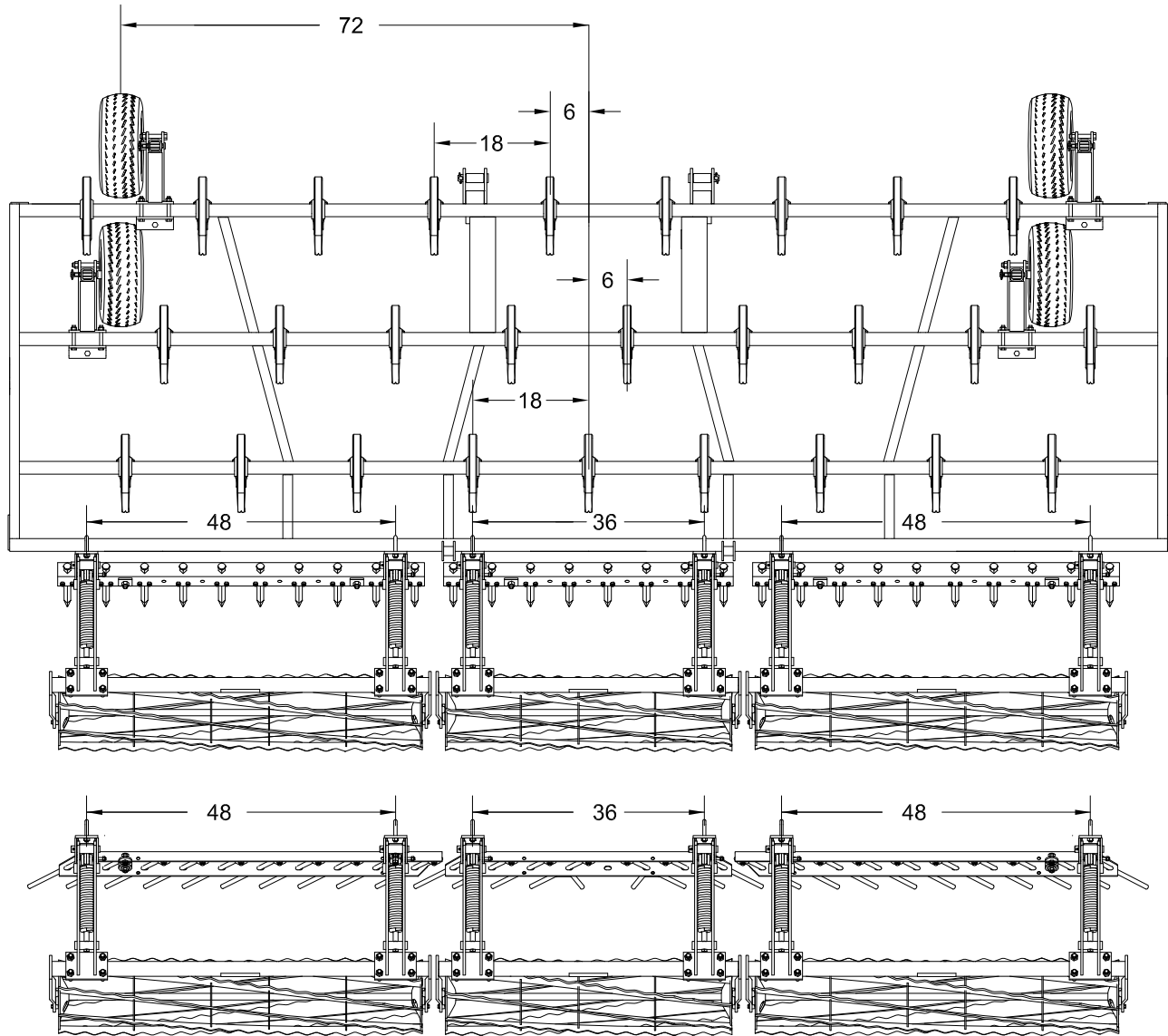
Overhead Layout — Rigid Perfecta Models

13 Ft. Base - Double Basket



Overhead Layout — Rigid Perfecta Models

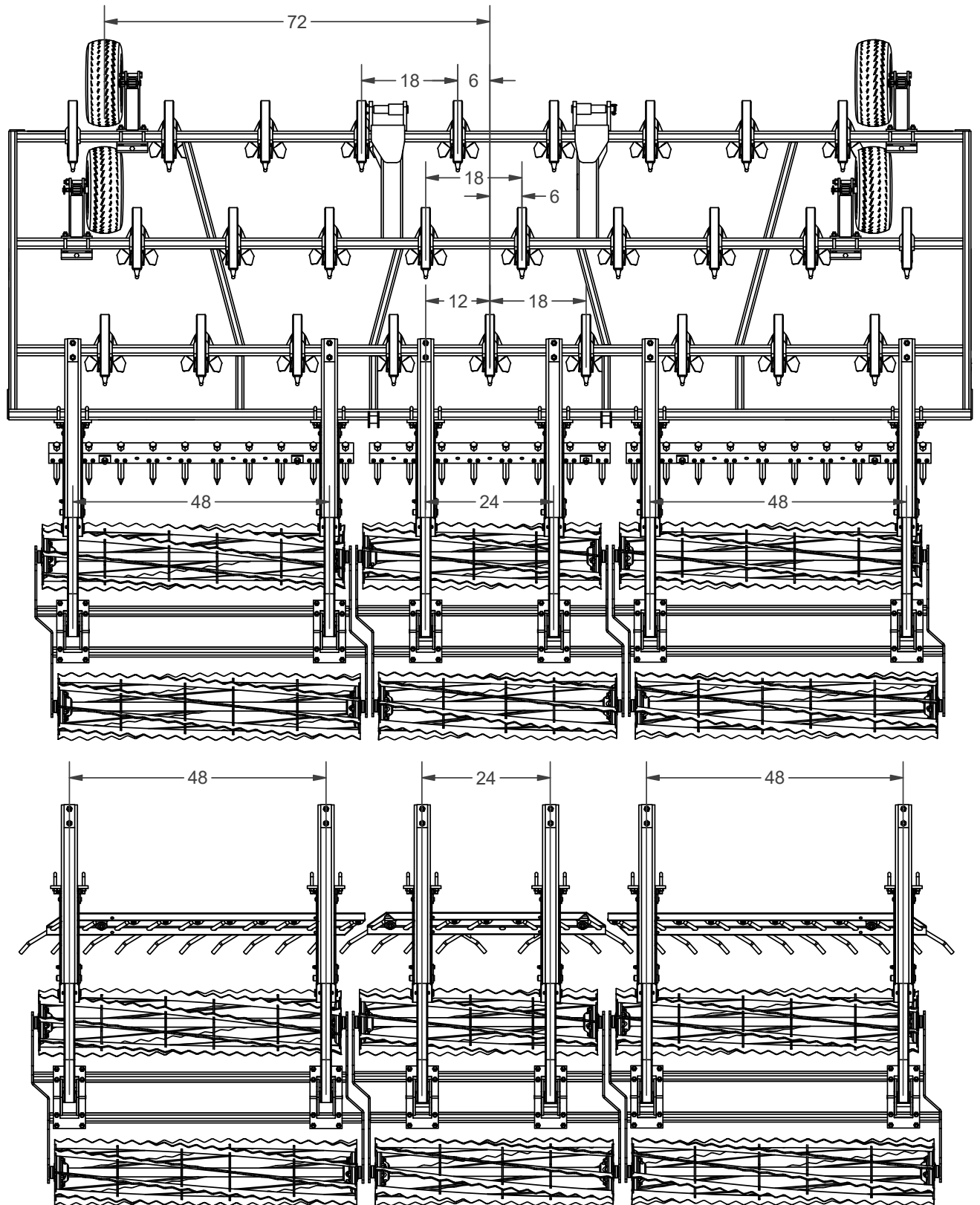
14 Ft. Base - Single Basket



FIELD CULTIVATORS — Set Up

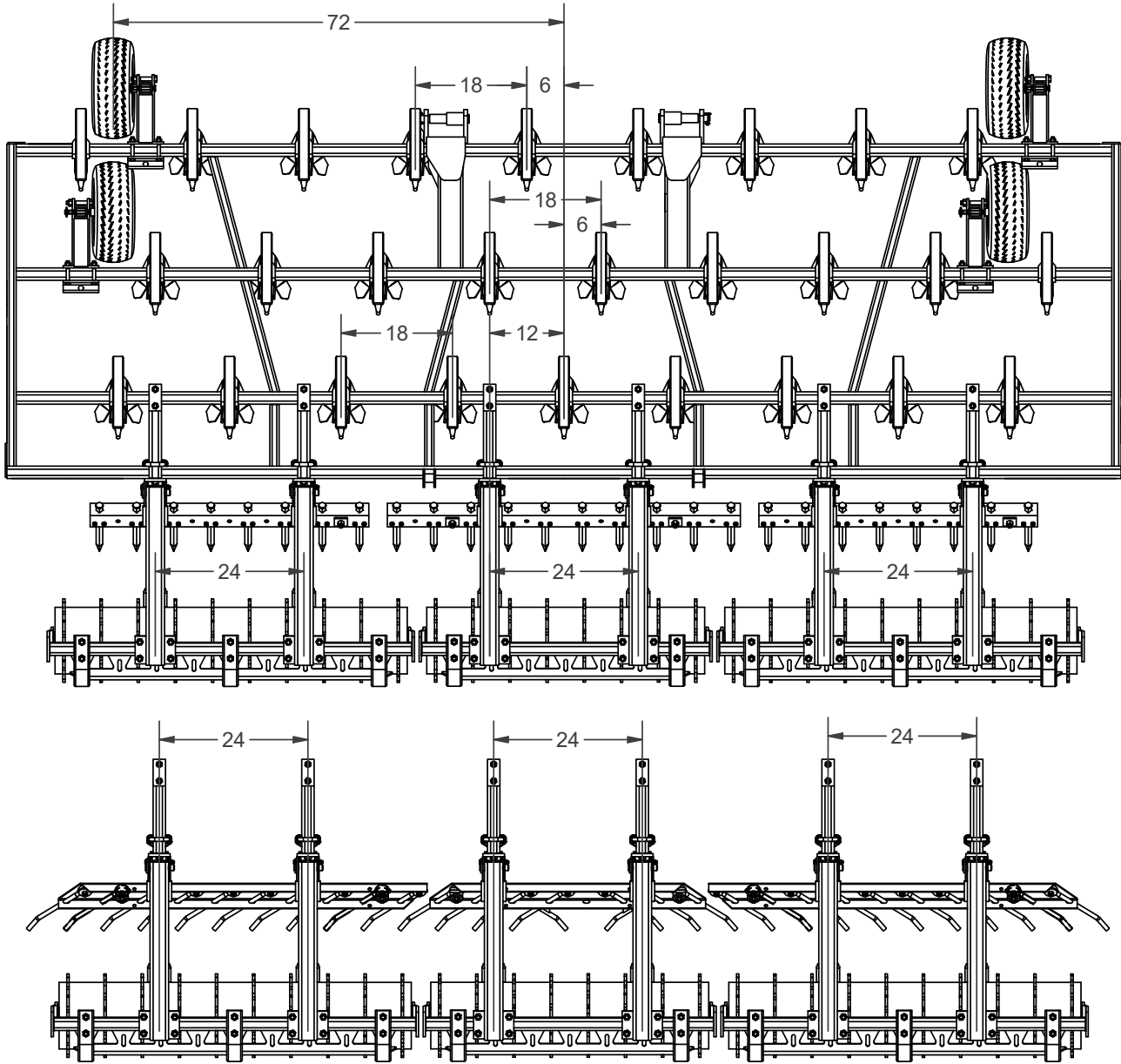
Overhead Layout — Rigid Perfecta Models

14 Ft. Base - Double Basket



Overhead Layout — Rigid Perfecta Models

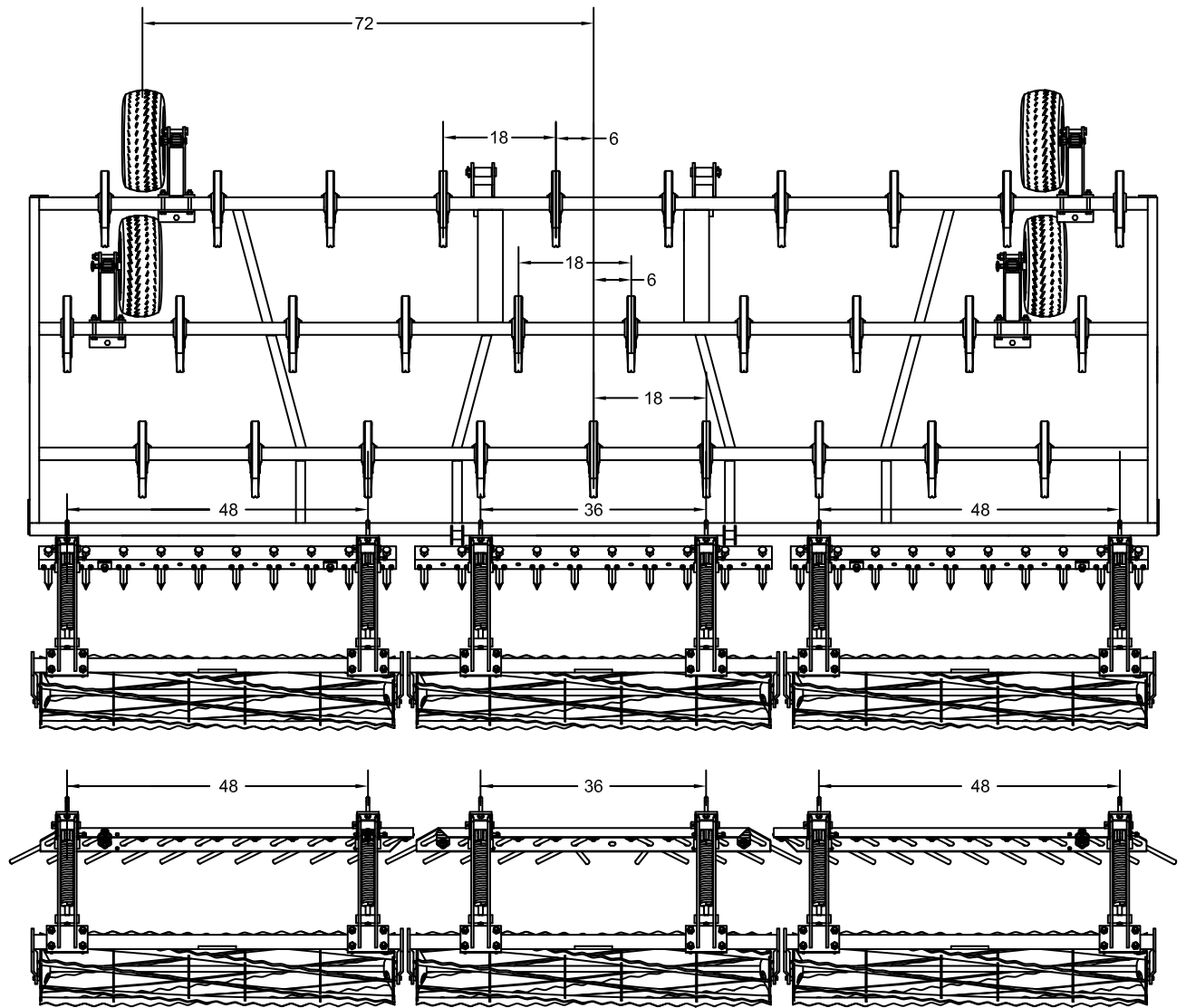
14 Ft. Base - Single Drum Roller



FIELD CULTIVATORS — Set Up

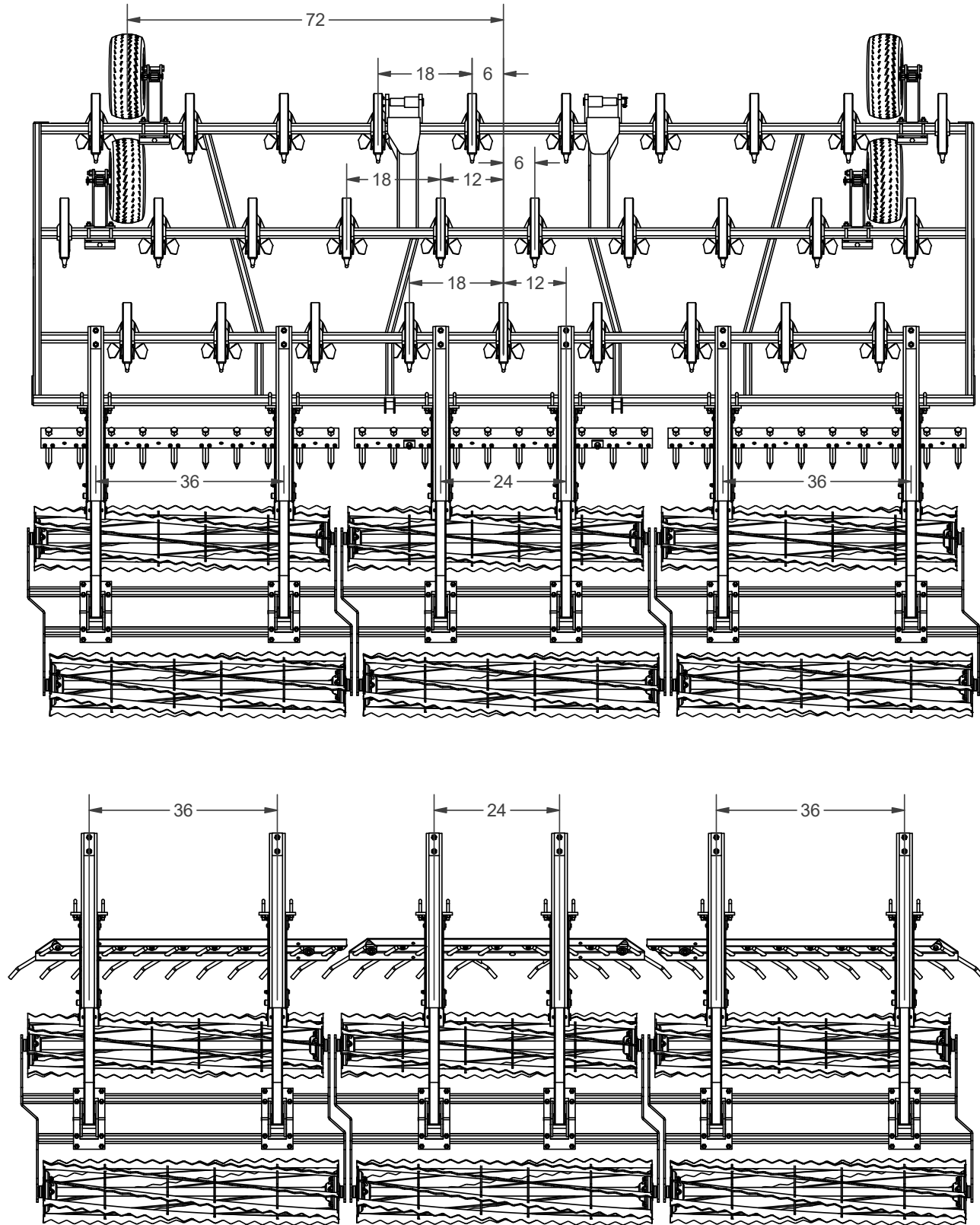
Overhead Layout — Rigid Perfecta Models

15 Ft. Base - Single Basket



Overhead Layout — Rigid Perfecta Models

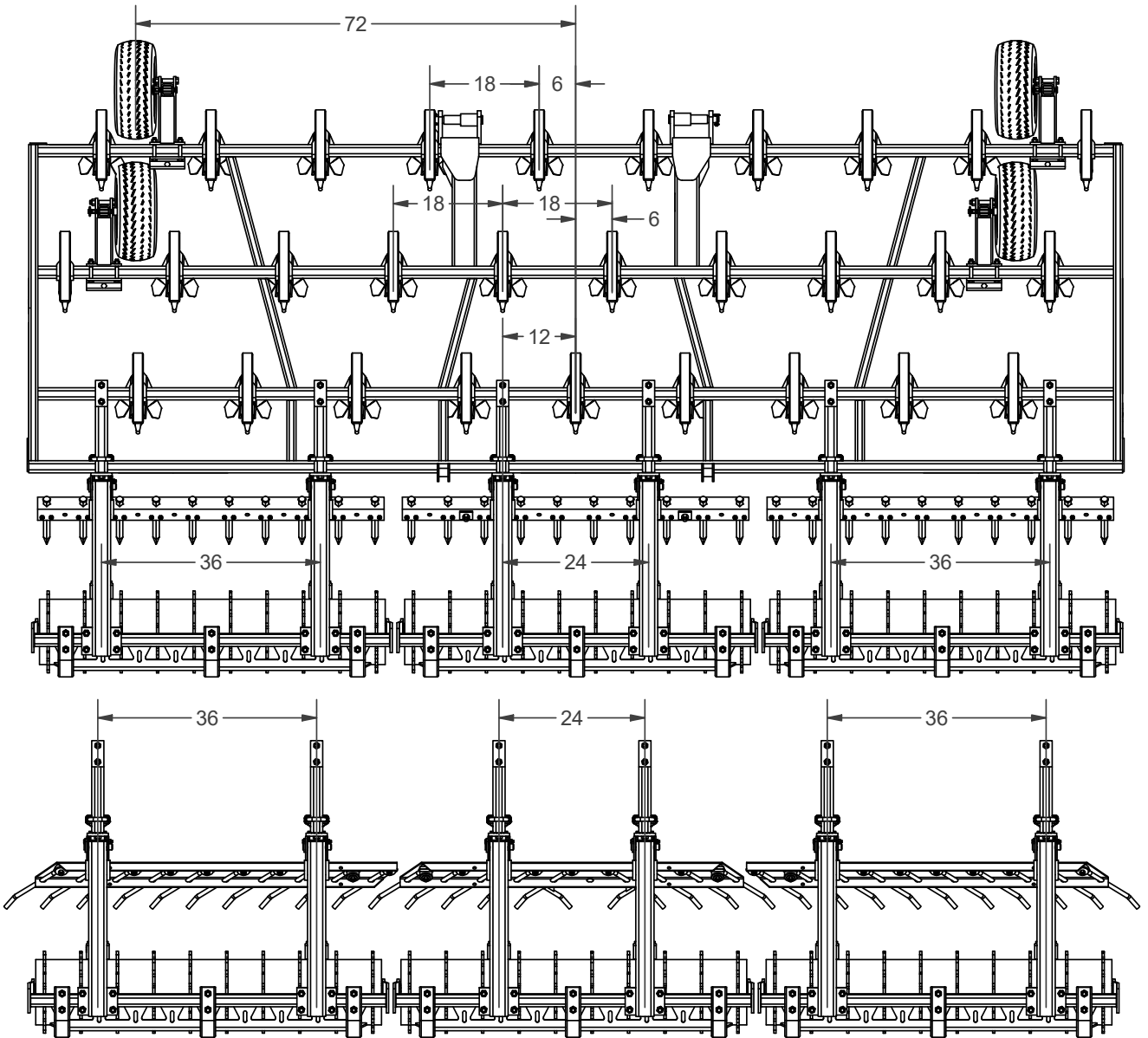
15 Ft. Base - Double Basket



FIELD CULTIVATORS — Set Up

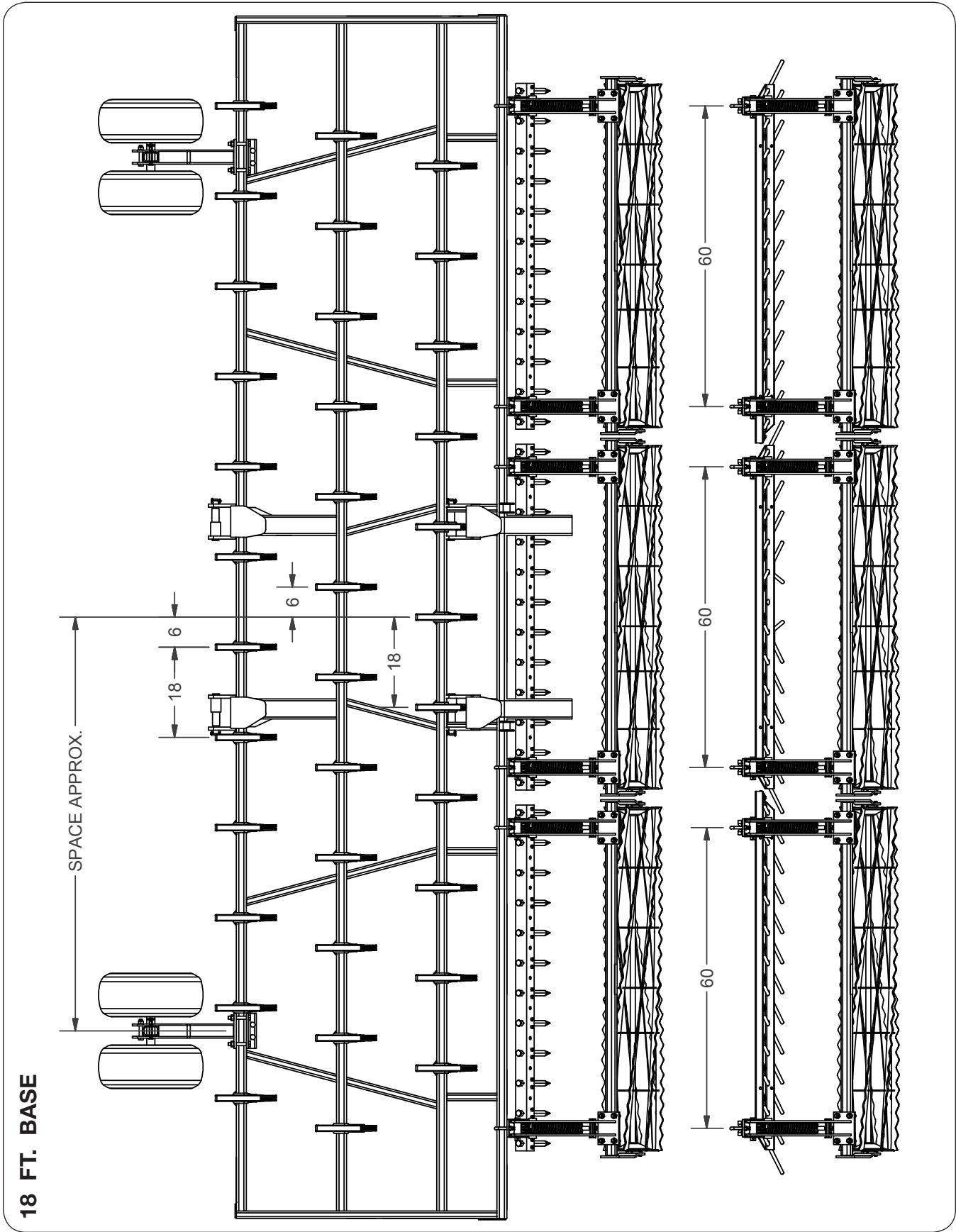
Overhead Layout — Rigid Perfecta Models

15 Ft. Base - Single Drum Roller



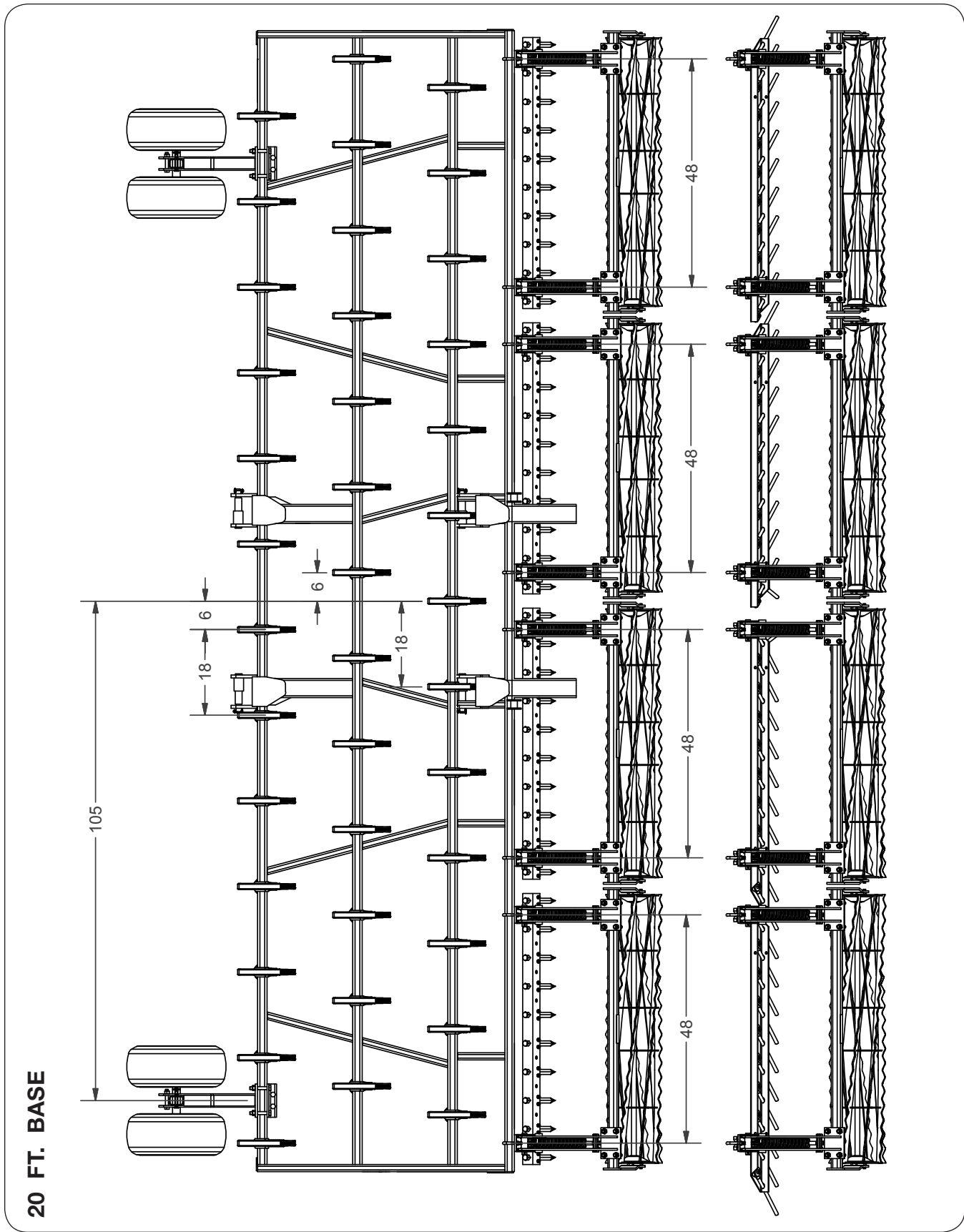
FIELD CULTIVATORS — Set Up

Overhead Layout — Rigid Perfecta Models



FIELD CULTIVATORS — Set Up

Overhead Layout — Rigid Perfecta Models

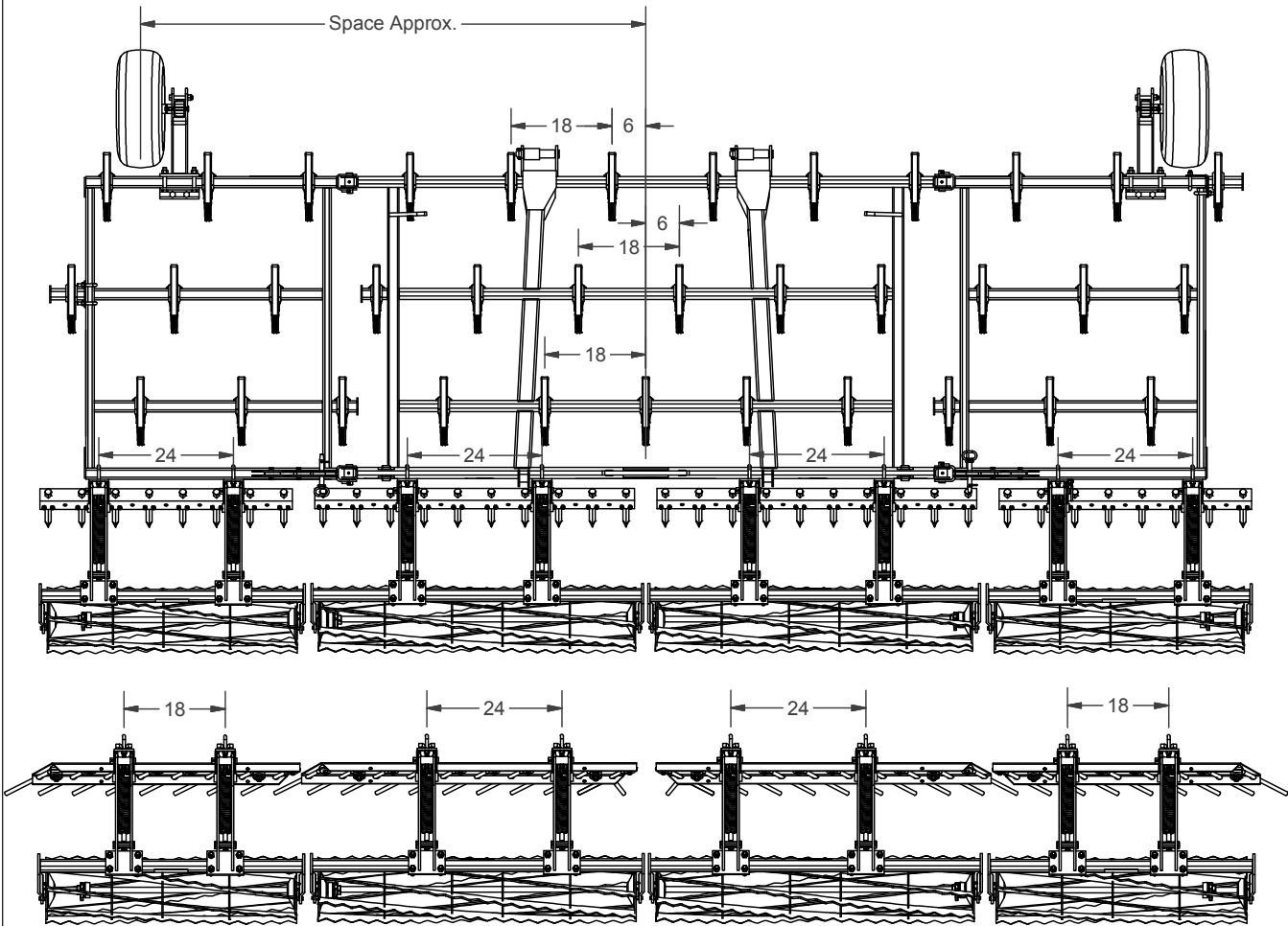


20 FT. BASE

FIELD CULTIVATORS — Set Up

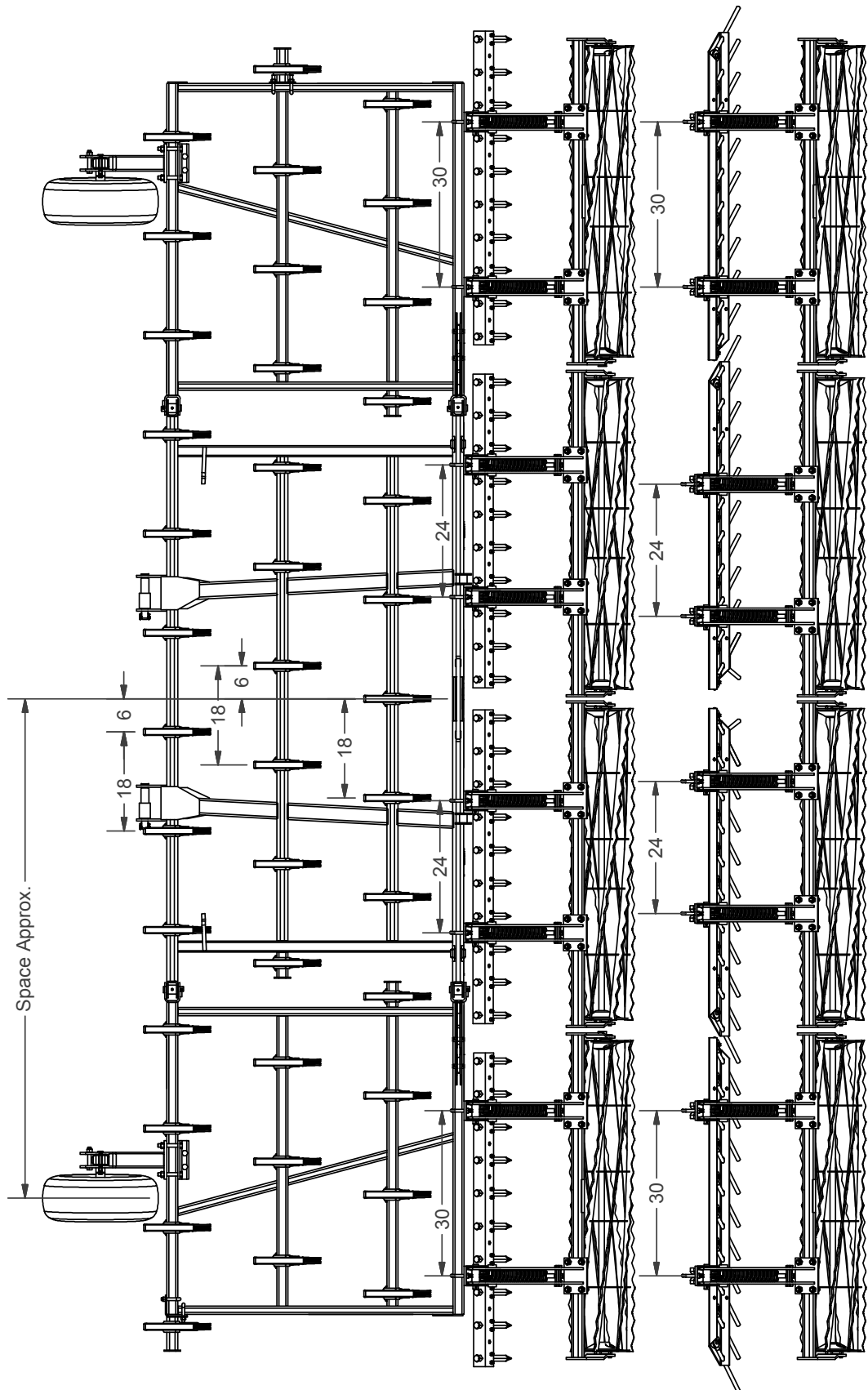
Overhead Layout — Folding Perfecta Models

9 FT. BASE WITH 4 1/2 FT. WINGS - SINGLE BASKET



Overhead Layout — Folding Perfecta Models

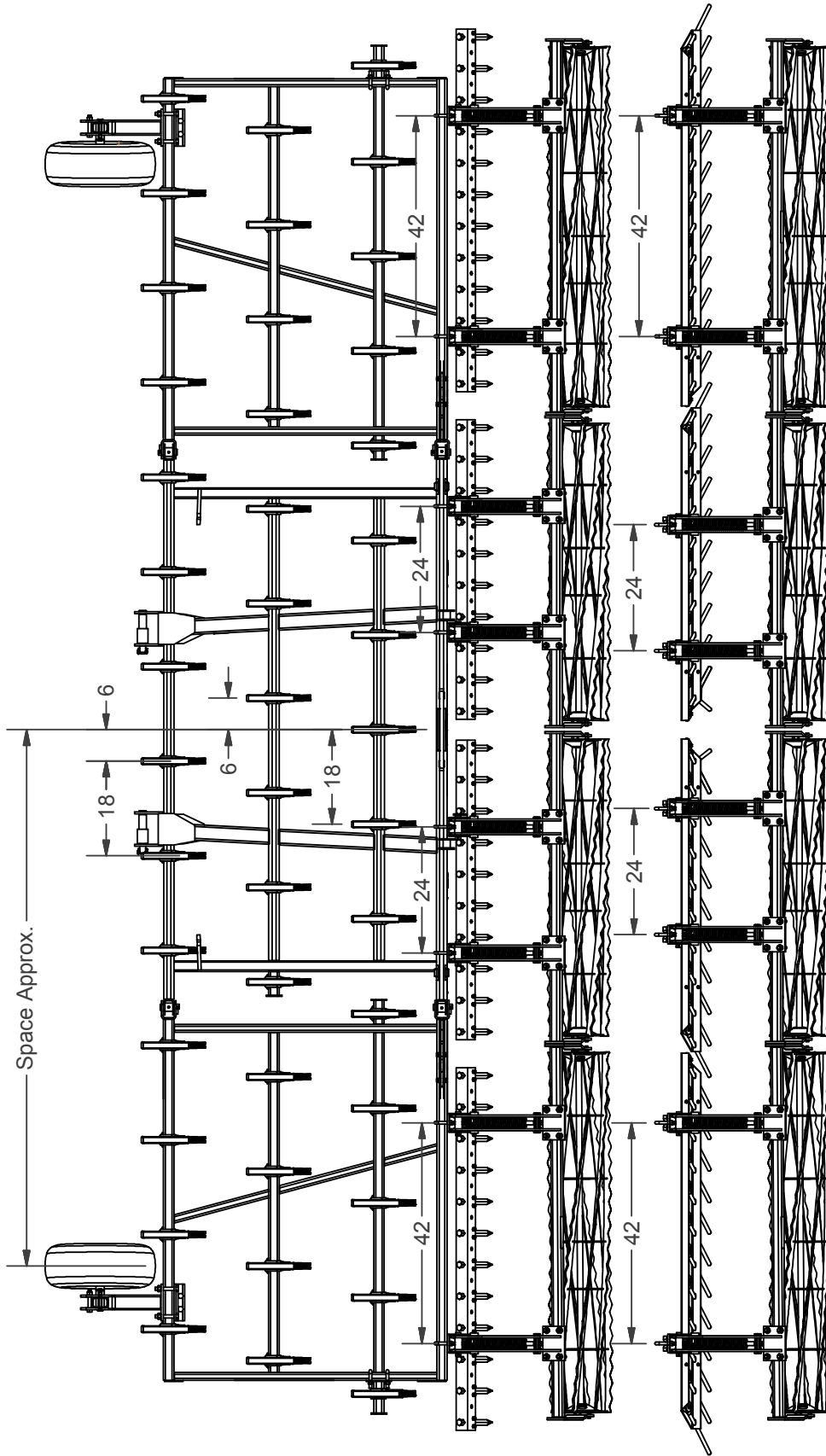
9 FT. BASE WITH 5 1/2 FT. WINGS - SINGLE BASKET



FIELD CULTIVATORS — Set Up

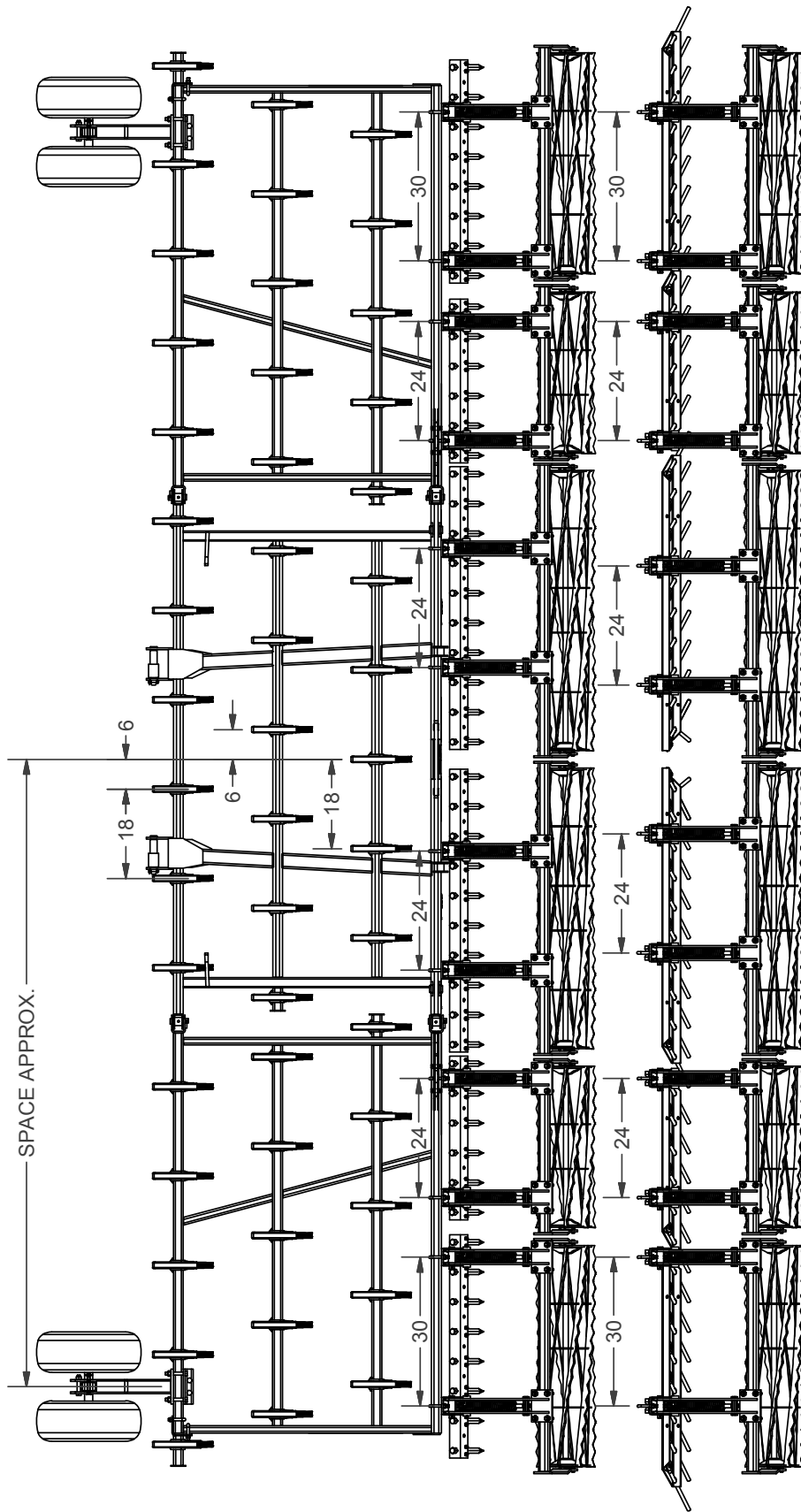
Overhead Layout — Folding Perfecta Models

9 FT. BASE WITH 6 1/2 FT. WINGS - SINGLE BASKET



Overhead Layout — Folding Perfecta Models

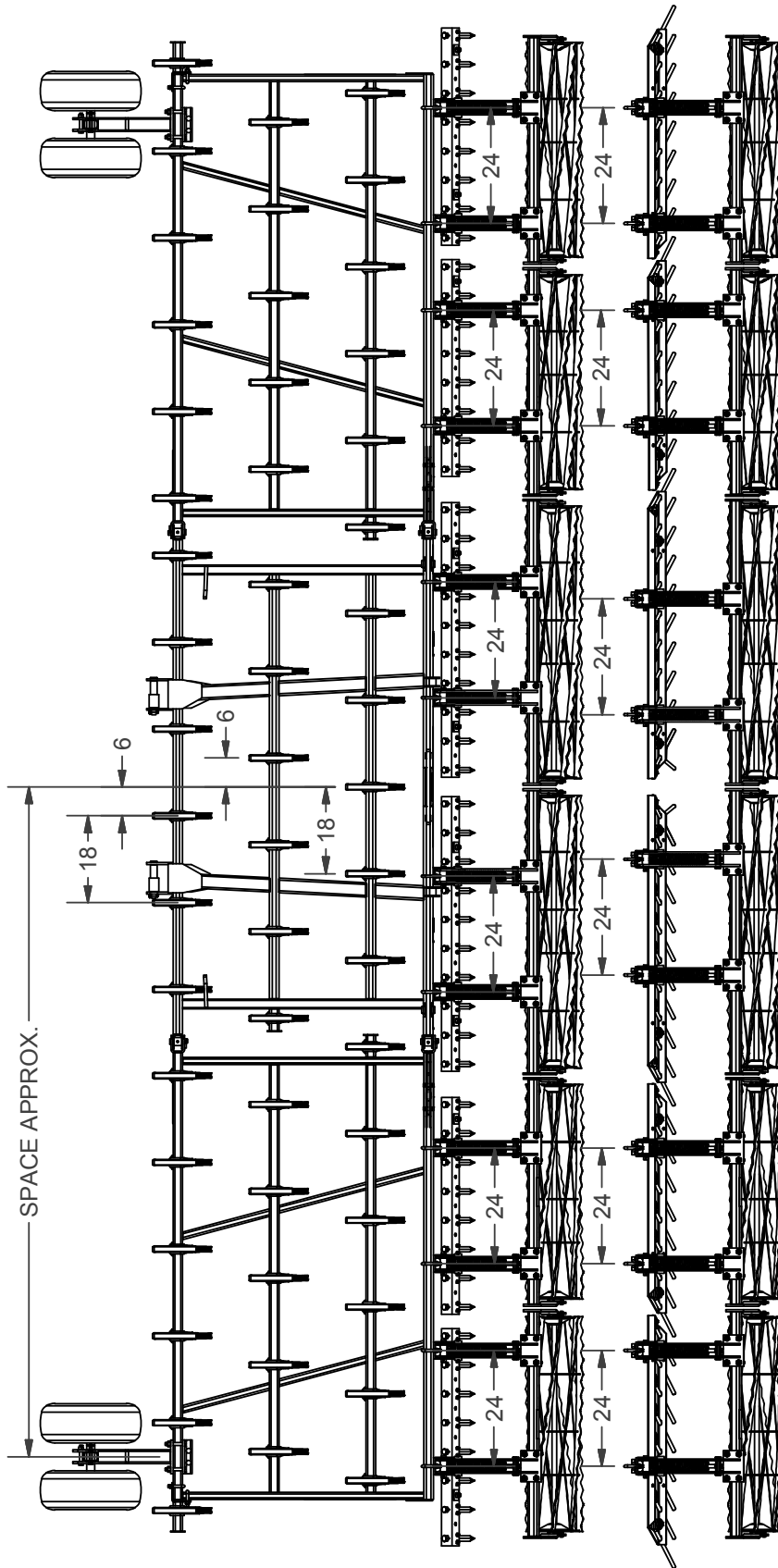
9 FT. BASE WITH 7 1/2 FT. WINGS - SINGLE BASKET



FIELD CULTIVATORS — Set Up

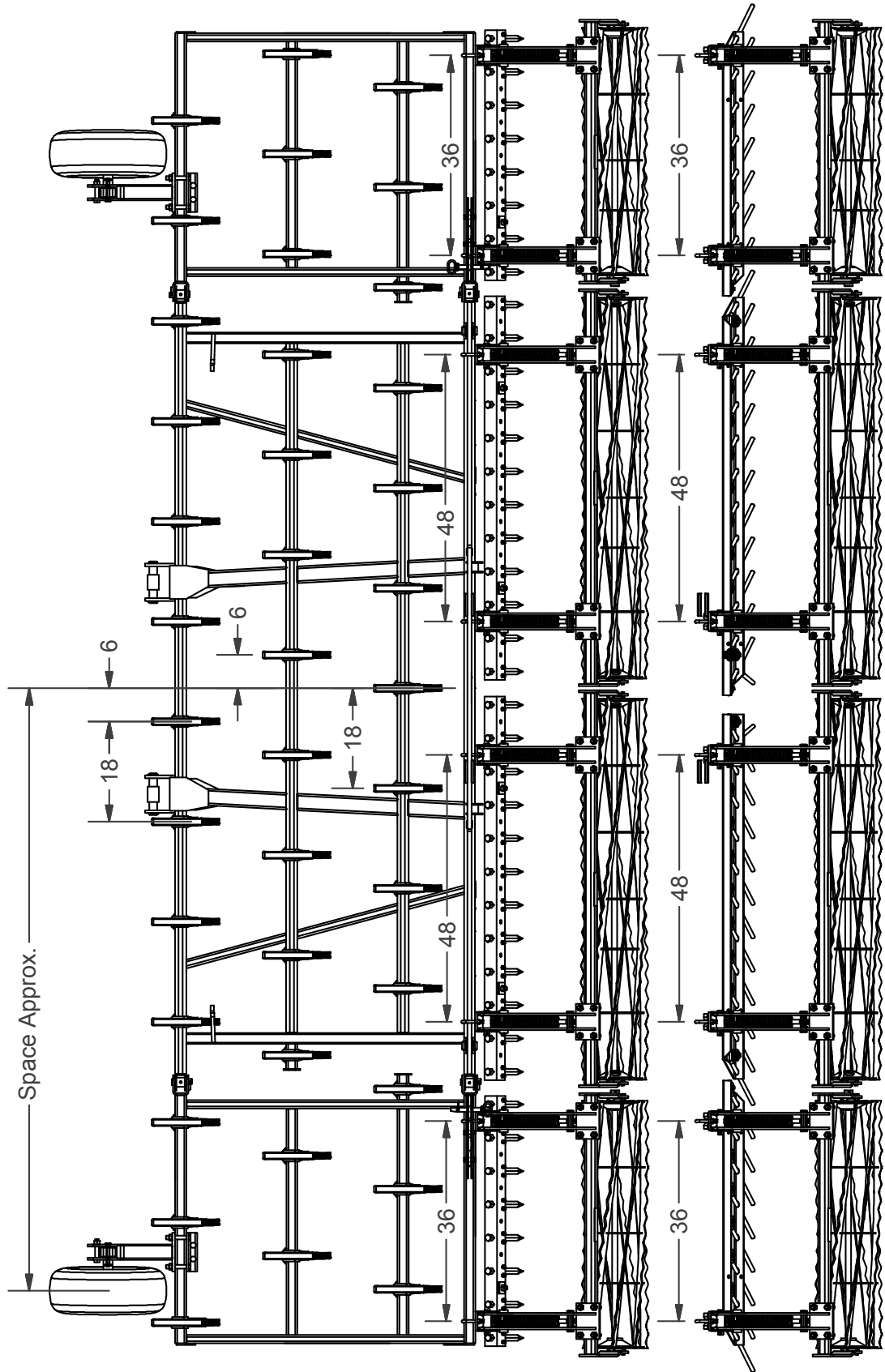
Overhead Layout — Folding Perfecta Models

9 FT. BASE WITH 8 1/2 FT. WINGS - SINGLE BASKET



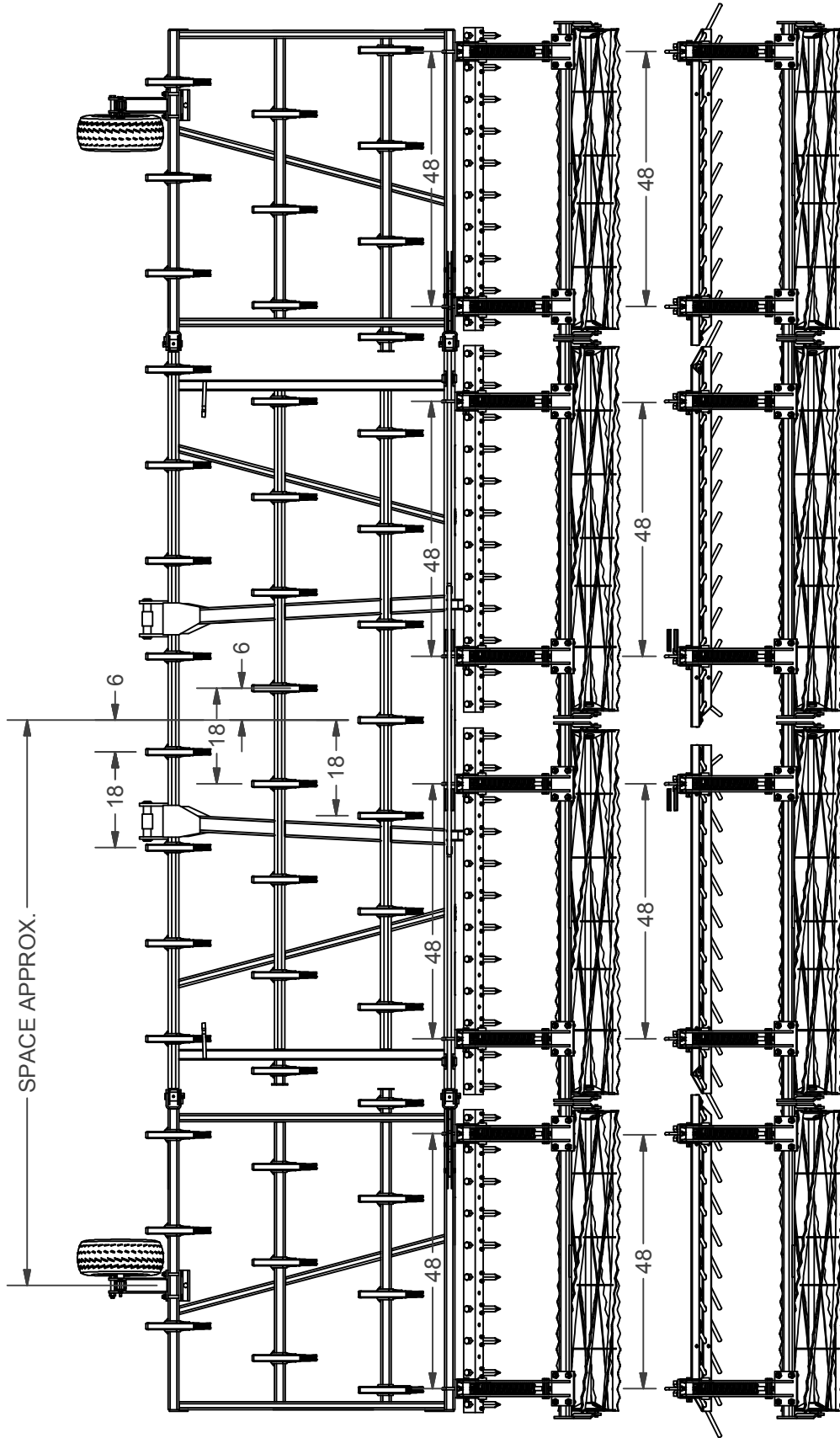
Overhead Layout — Folding Perfecta Models

12 FT. BASE WITH 4 FT. WINGS - SINGLE BASKET



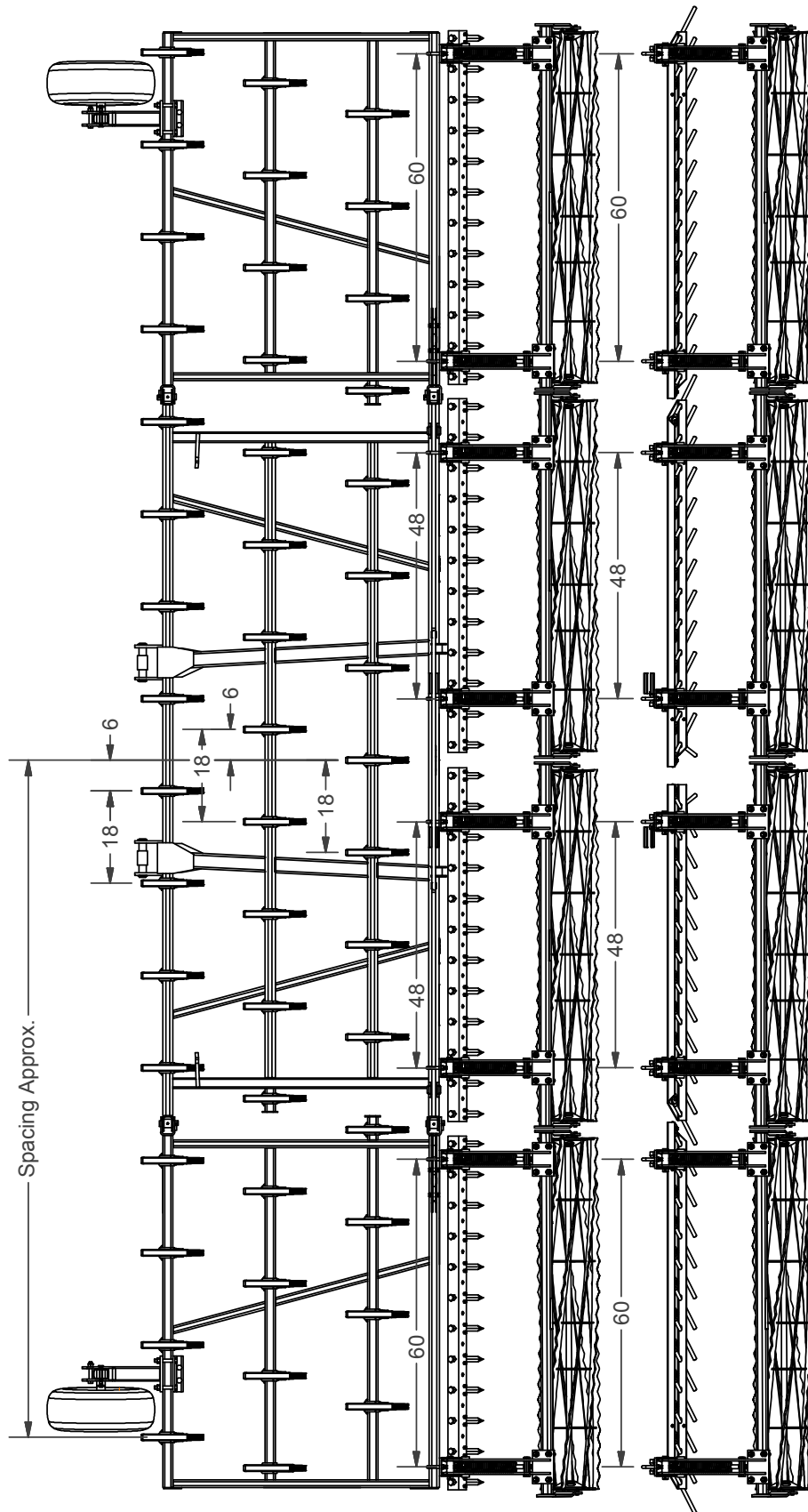
Overhead Layout — Folding Perfecta Models

12 FT. BASE WITH 5 FT. WINGS - SINGLE BASKET



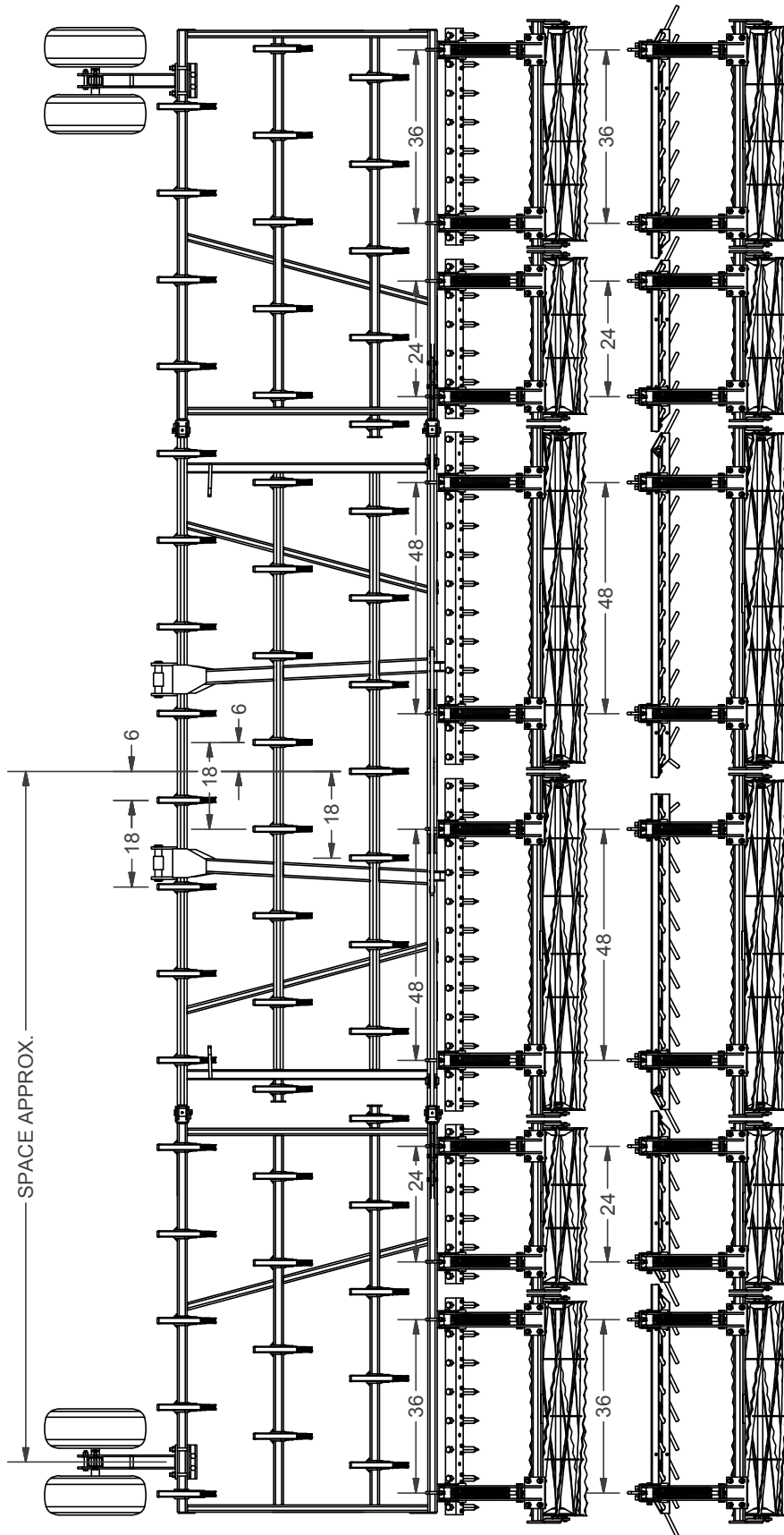
Overhead Layout — Folding Perfecta Models

12 FT. BASE WITH 6 FT. WINGS - SINGLE BASKET



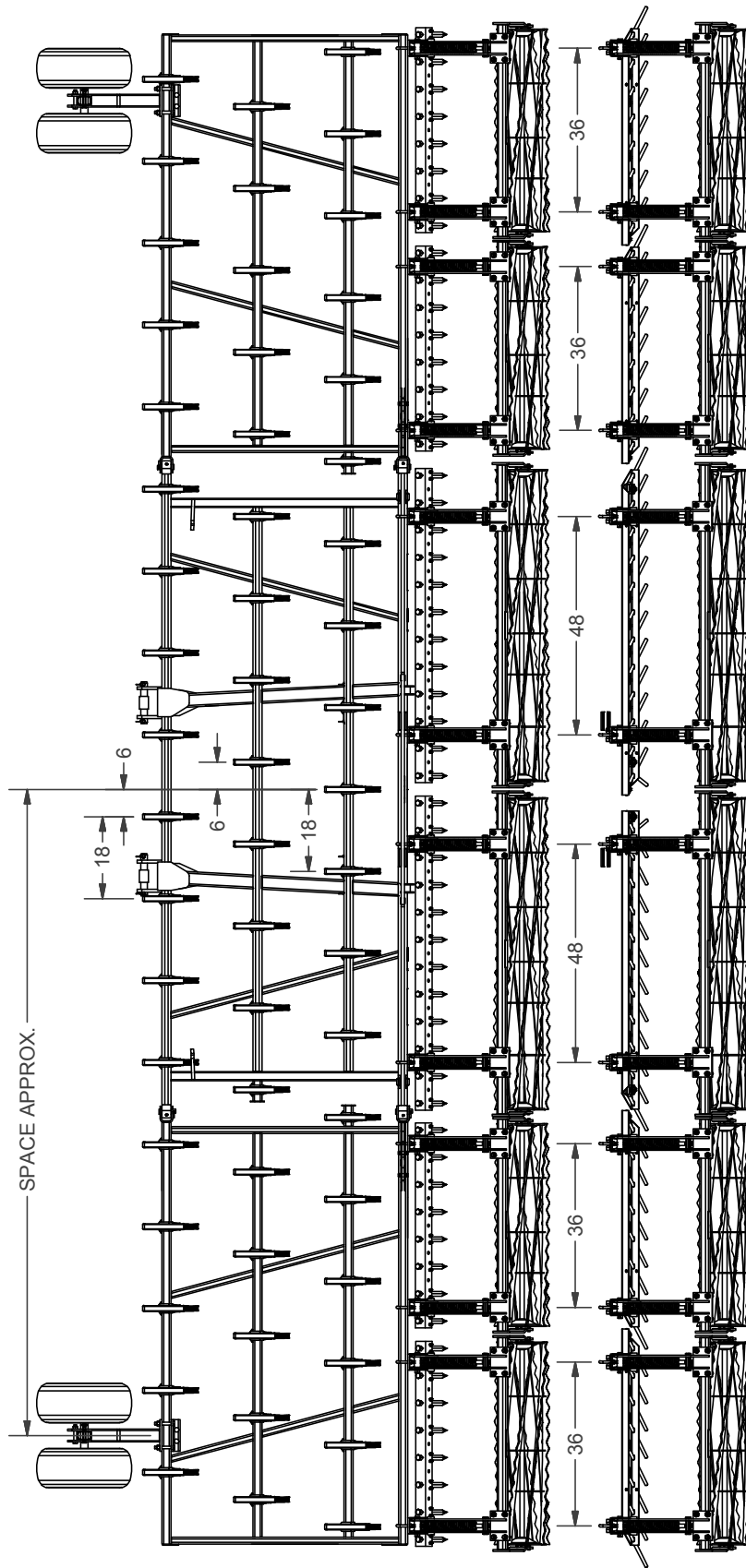
Overhead Layout — Folding Perfecta Models

12 FT. BASE WITH 7 FT. WINGS - SINGLE BASKET



Overhead Layout — Folding Perfecta Models

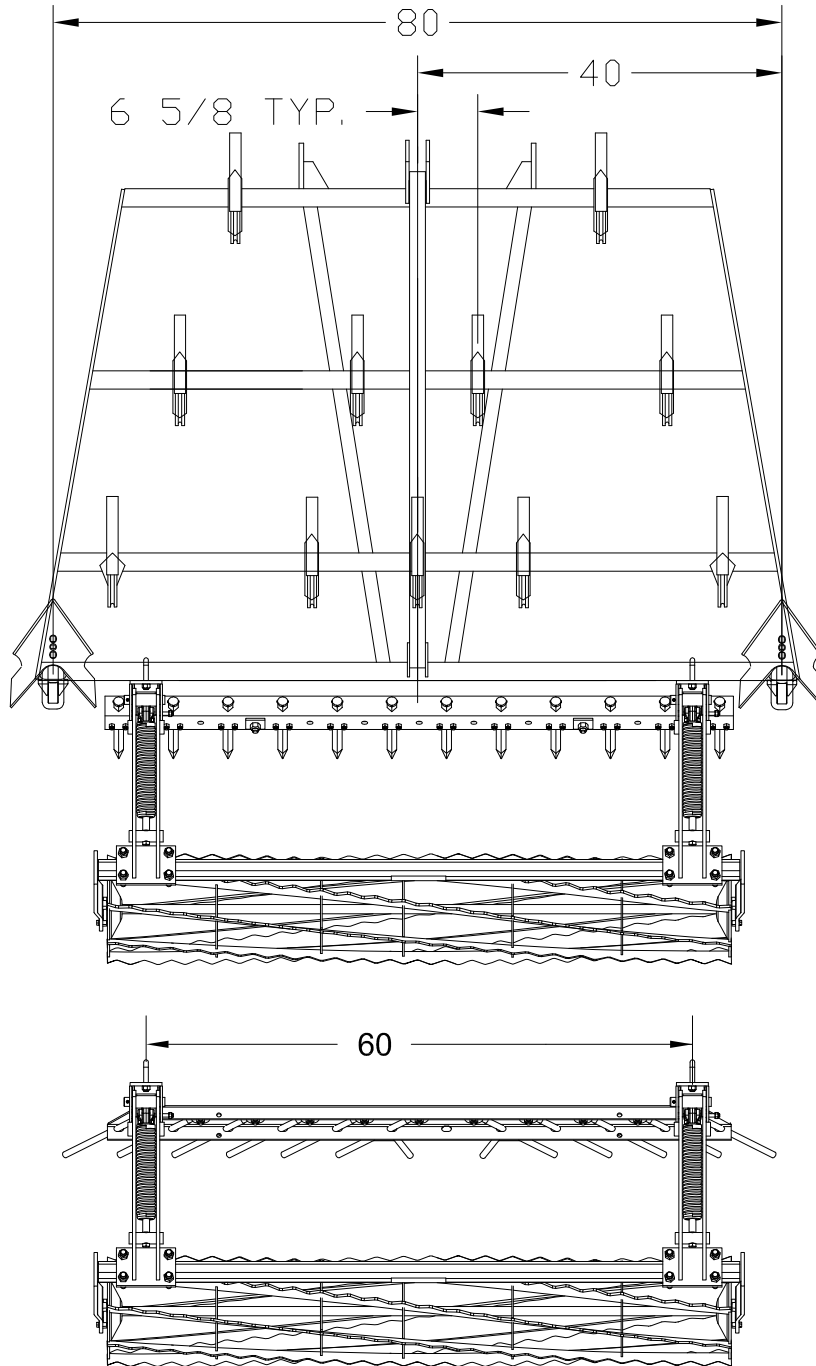
12 FT. BASE WITH 8 FT. WINGS - SINGLE BASKET



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

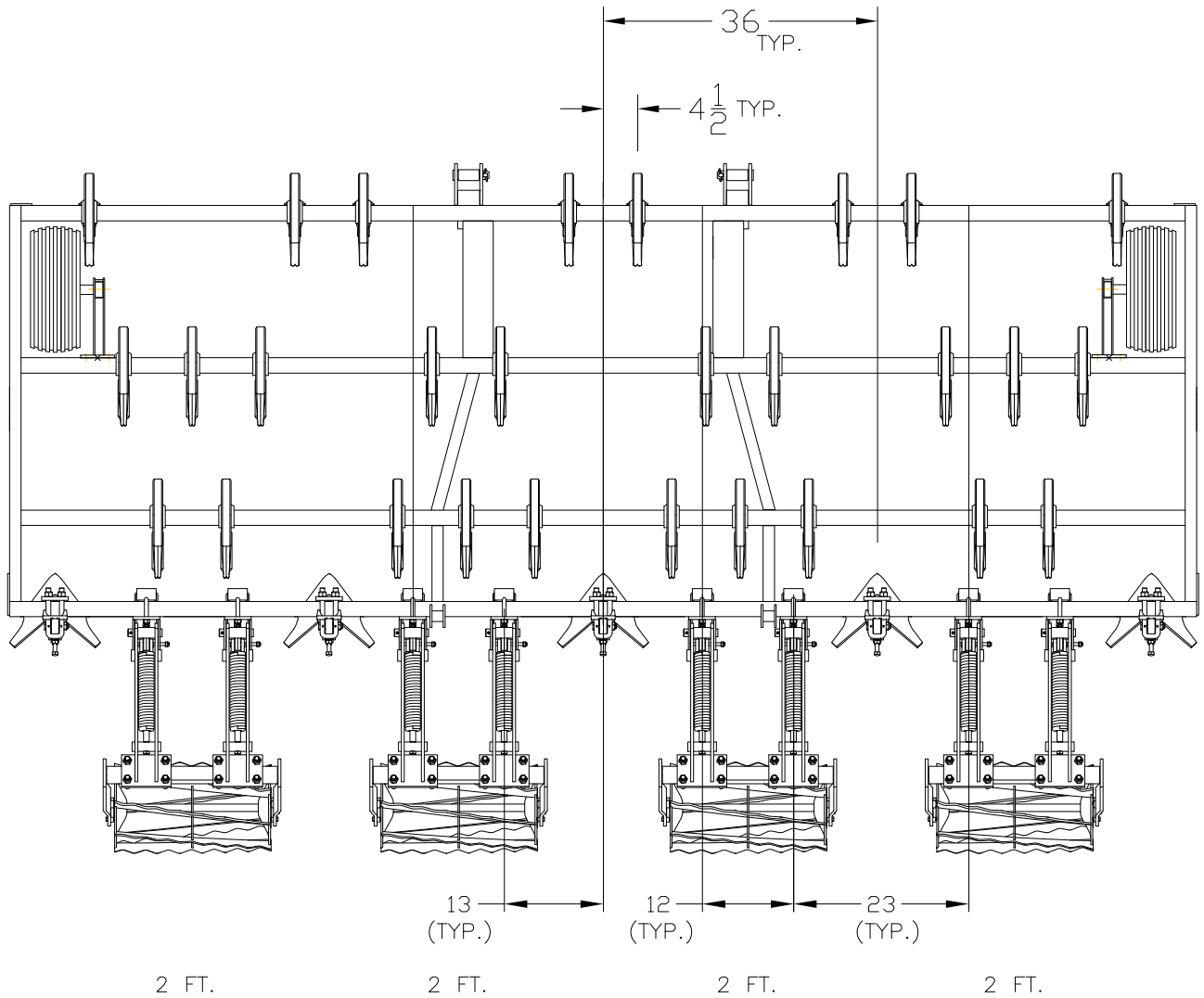
7 FT. BASE WITH SHANKS ON 80" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

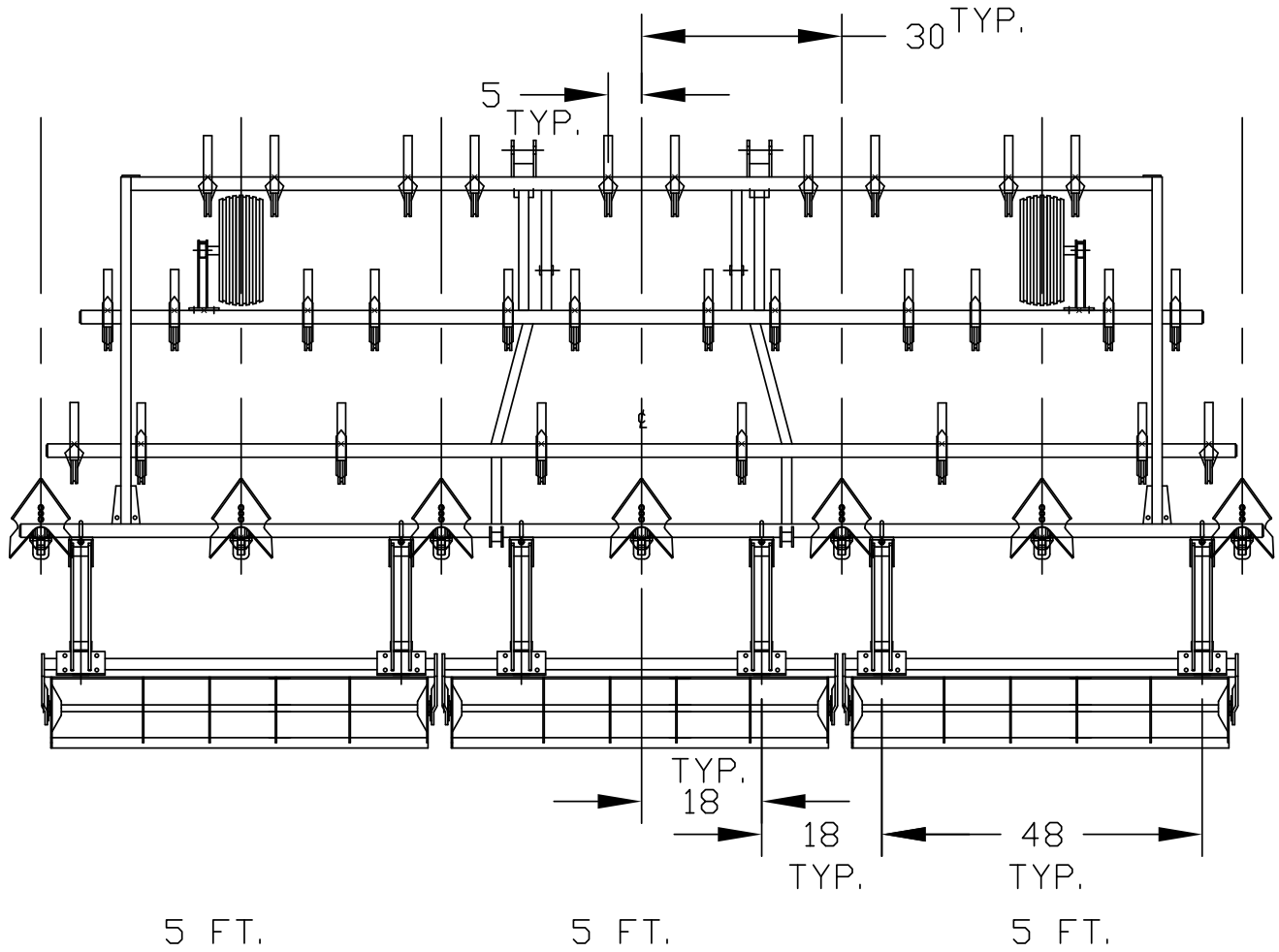
12 FT. BASE WITH SHANKS ON 36" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

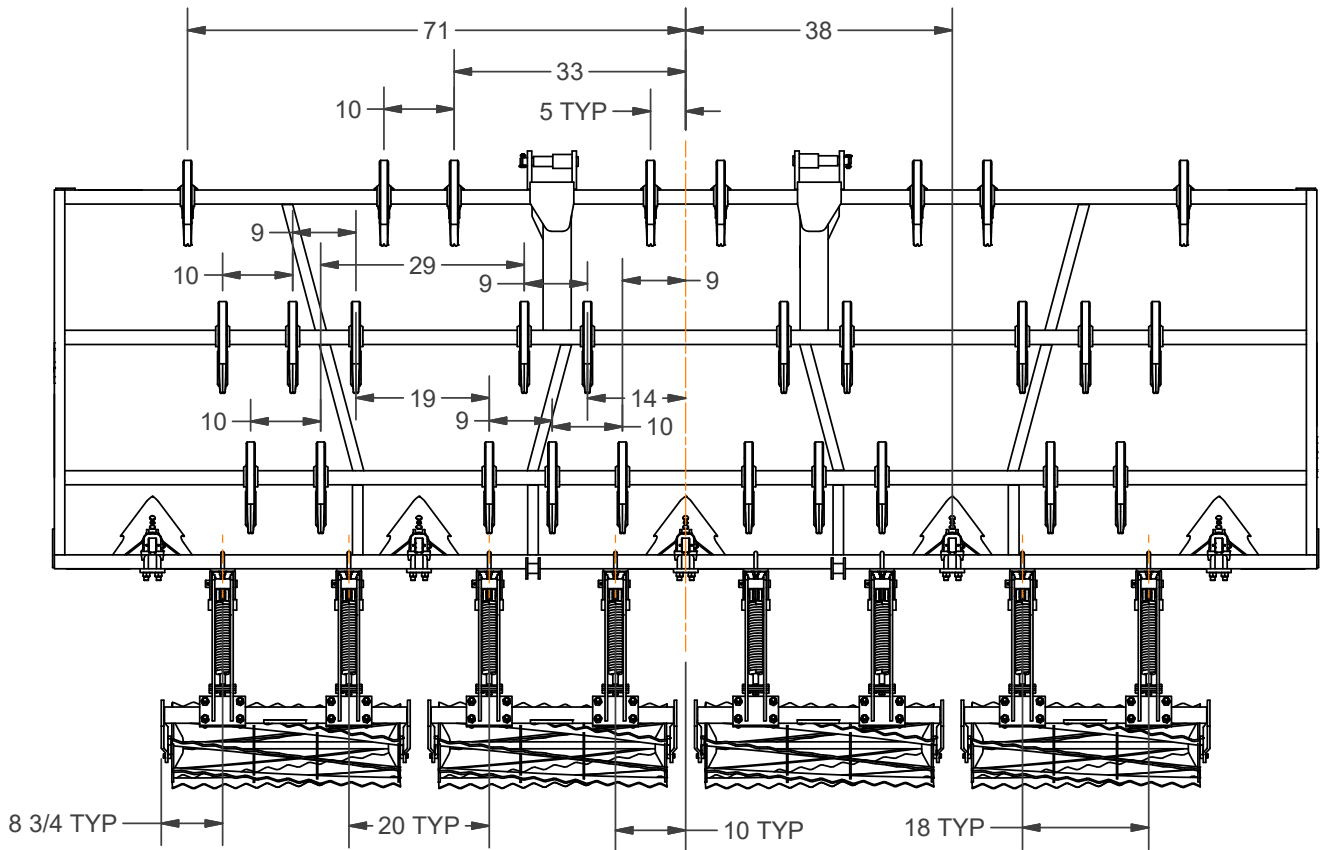
15 FT. BASE WITH SHANKS ON 30" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

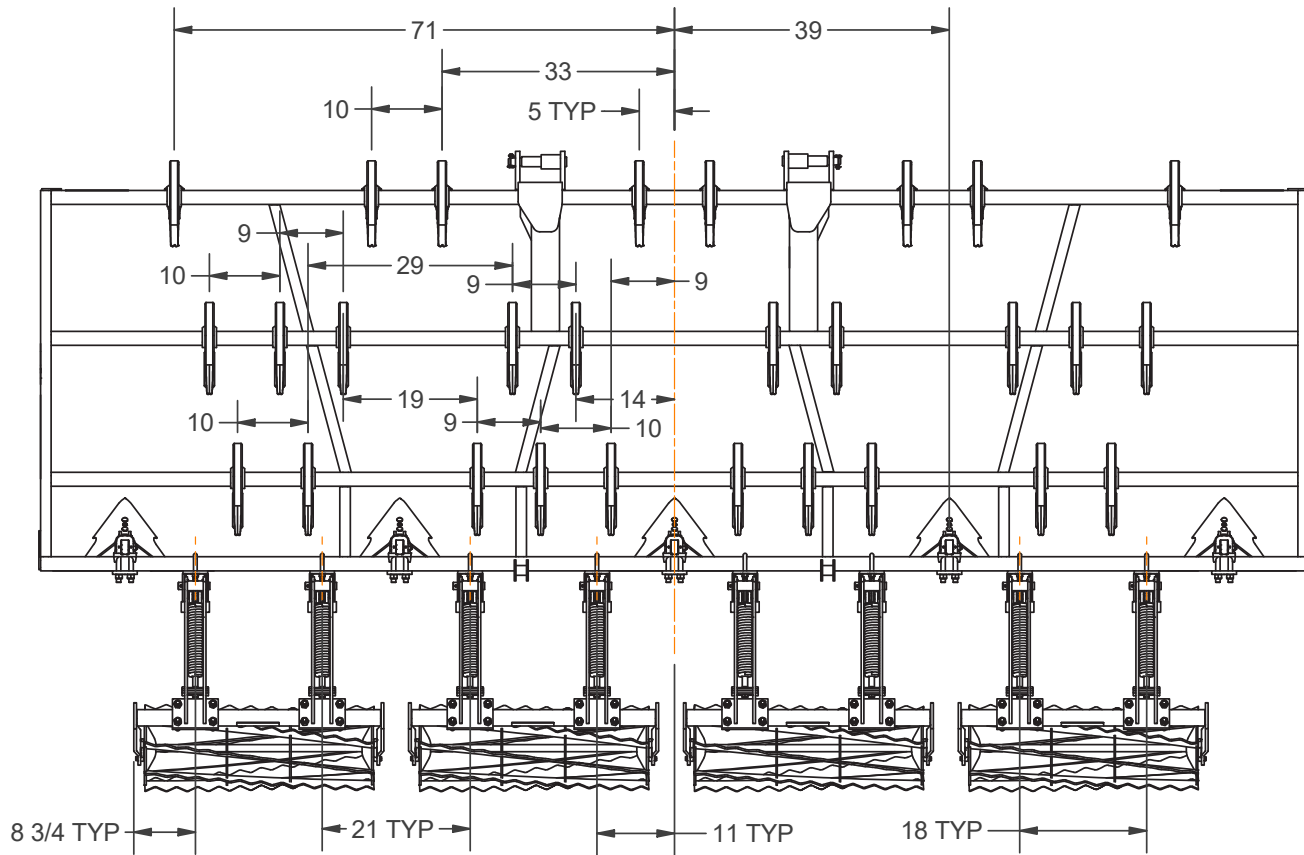
15 FT. BASE WITH SHANKS ON 38" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

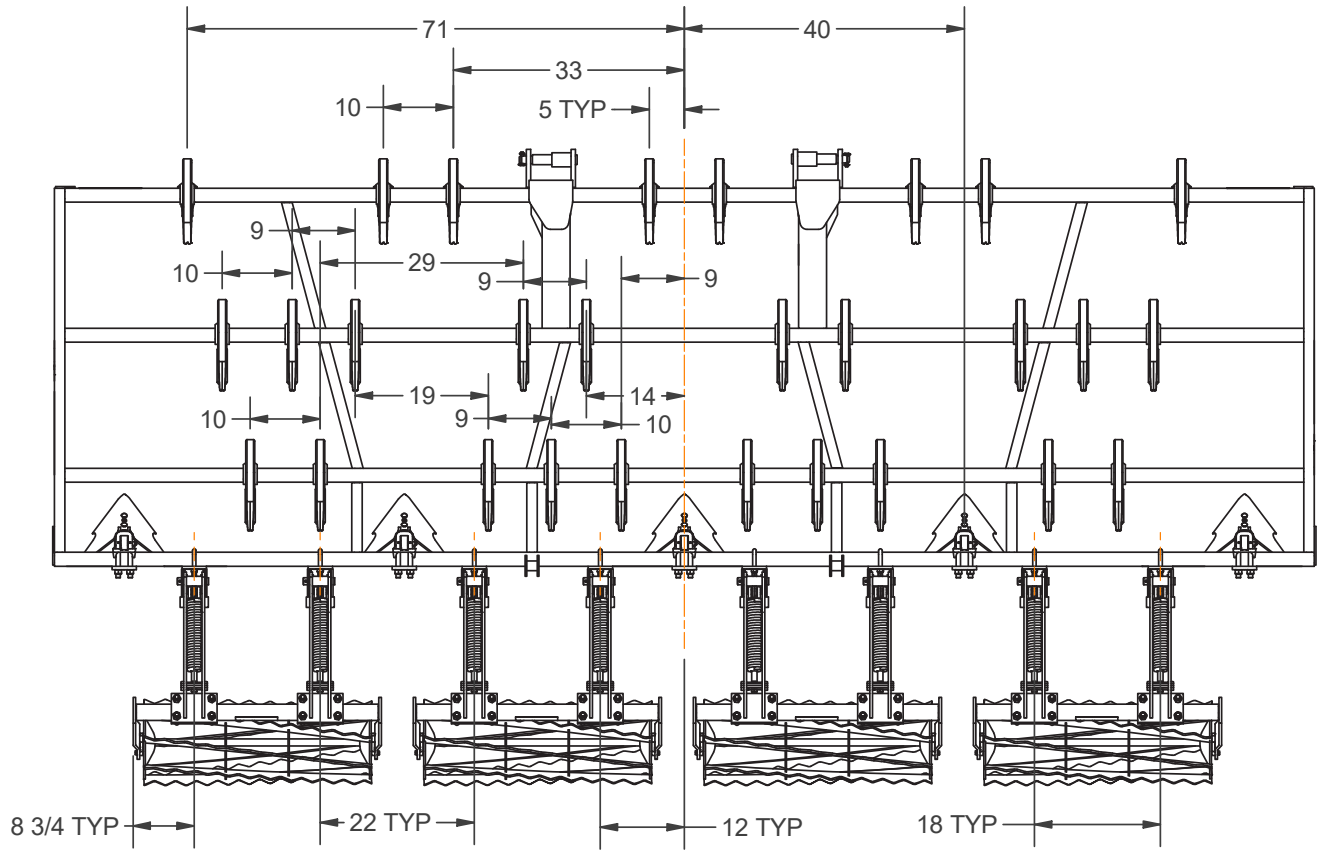
15 FT. BASE WITH SHANKS ON 39" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

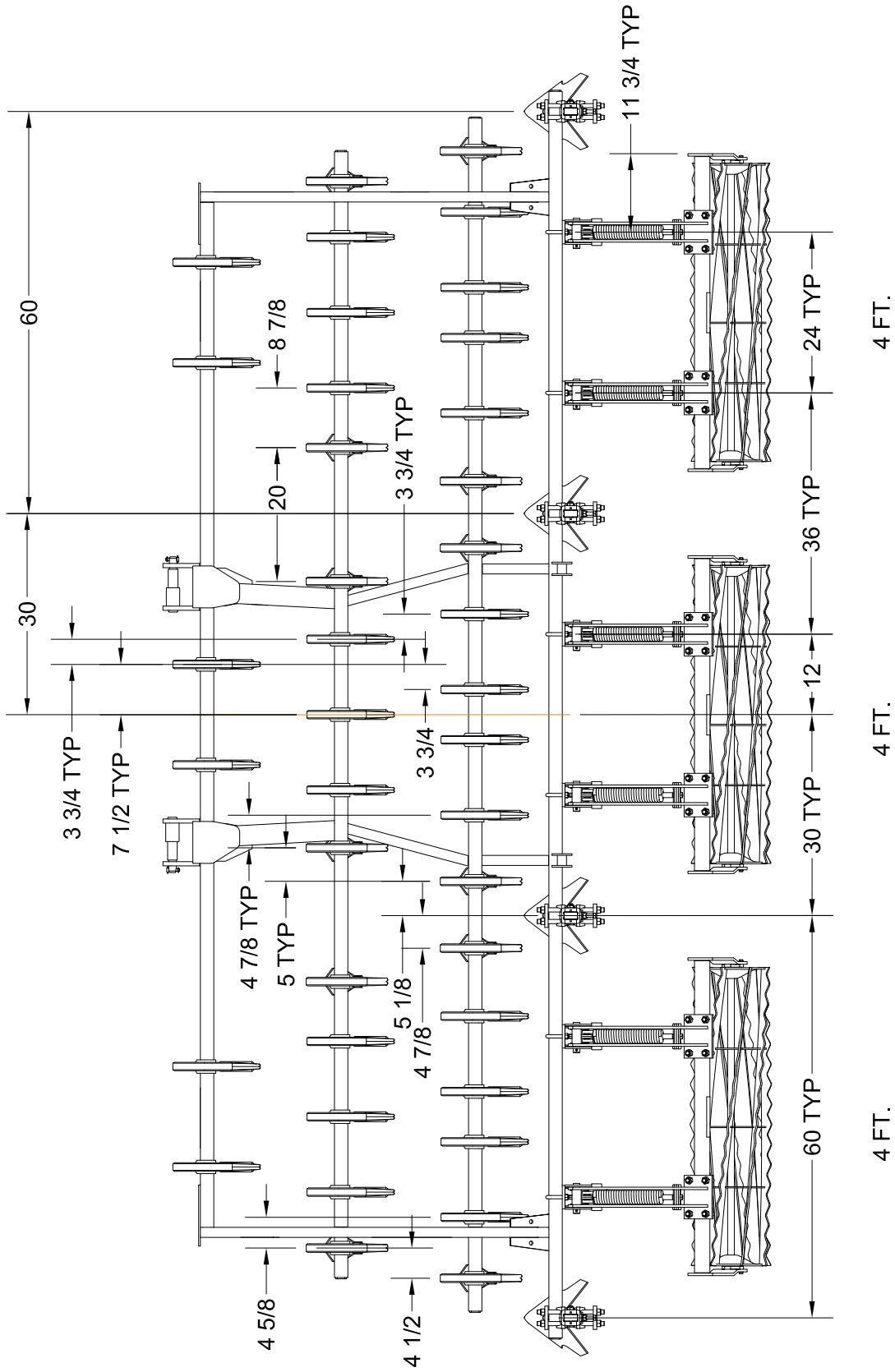
15 FT. BASE WITH SHANKS ON 40" ROW SPACINGS



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

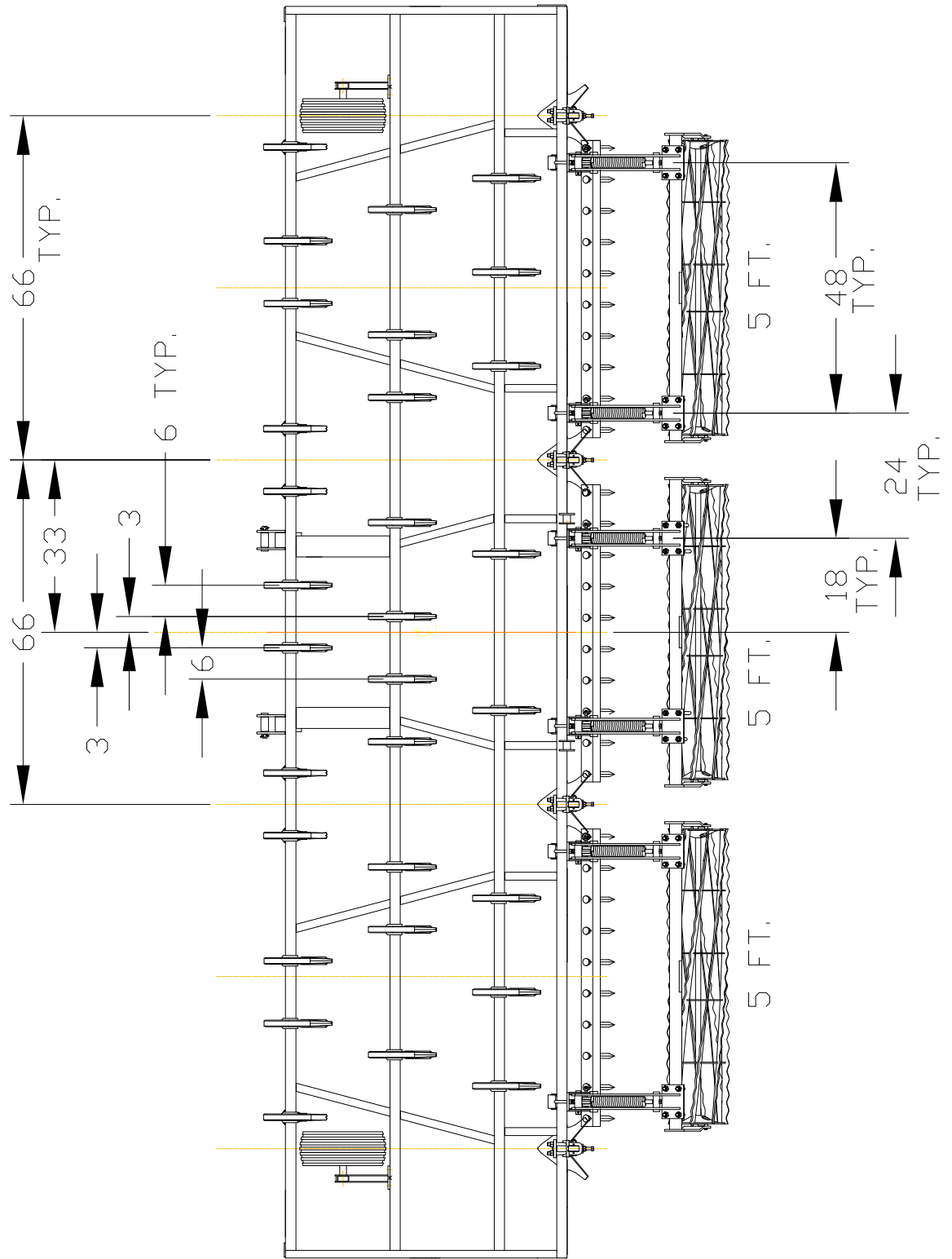
15 FT. BASE WITH SHANKS ON 60" ROW SPACING



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

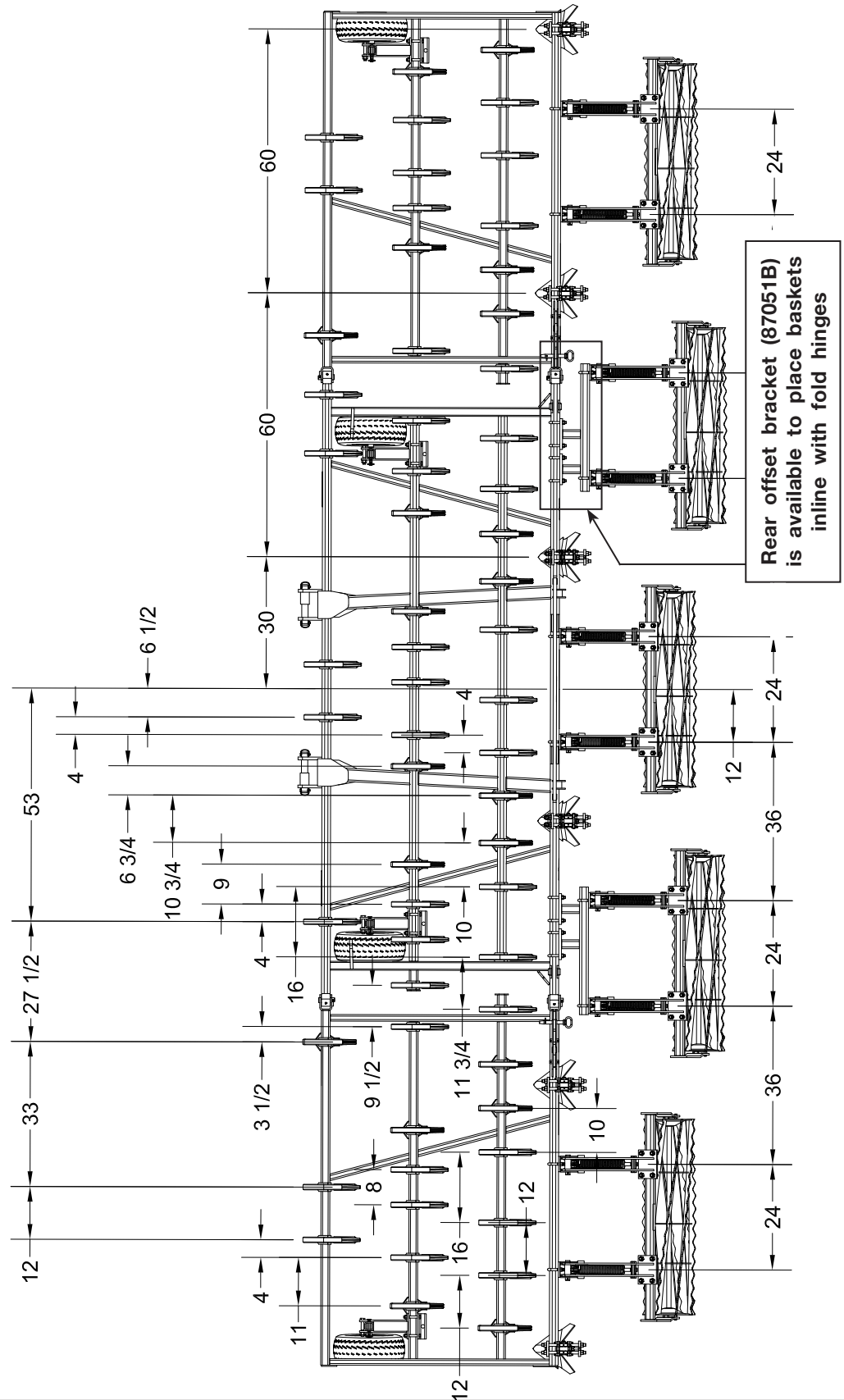
20 FT BASE WITH SHANKS ON 66" ROW SPACING



FIELD CULTIVATORS — Set Up

Overhead Layout — Bedded Crop Perfecta Models

12 FT. BASE, 7 FT. WINGS WITH SHANKS ON 60" ROW SPACING



SECTION III

Operation

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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

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 transport lights. Make sure they are in proper working order.

Check tractor hydraulic oil reservoir and add oil if needed.

WARNING

- **TRANSPORTING THE IMPLEMENT SIGNIFICANTLY CHANGES THE WEIGHT AND BALANCE OF YOUR TRACTOR. MAKE SURE THE TRACTOR IS PROPERLY BALLASTED.**

Front-End Weights

Use front-end weights as needed to provide effective steering control and front-end stability. See your tractor operator's manual for recommendations on ballasting procedures.

NOTE: In adverse field conditions which necessitate using lower gears, use the maximum front-end weights permissible to avoid possible front-end tip-up.

Sway Blocks

Sway blocks should be used and adjusted to provide movement in operating position. Cultivator should be permitted to sway while operating and should be held rigid while transporting. See your tractor operator's manual.

Wheel Spacing

The dimension from the center of the tractor to the center of each tire should be the same. If using the PERFECTA to cultivate in fields of row crops, set the tractor wheels so they are centered between the rows.

See your tractor operator's manual for correct tire inflation pressure and instructions for wheel ballast where required.

NOTE: Do not exceed the tractor's lift capacity or ballast recommendations.

Preparing Tractor (continued)

Tractor Quick Hitch

Recommended for convenient connection to tractor, also increases clearance between tractor and Perfecta in transport.

Tractor 3-Point Top Link Arm

Connect to the top hole on the tractor to allow the Perfecta to raise vertically. Using the bottom hole on the tractor causes the Perfecta to tip in toward the tractor as it raises, reducing clearance during transport. Attaching the tractor top link to the bottom hole on the Perfecta mast also increases tractor/Perfecta clearance.

Drawbar Position

Place the drawbar in the short, center position to provide maximum clearance between the drawbar and cultivator.

Lift Links And Center Links

Adjust the length of the lift links and center link to assure adequate clearance between the tractor tires and cultivator components. See your tractor operator's manual.

Lift Link Lateral Float

If the frame gauge wheels are used, adjust the lift link pins to allow the lateral float. If the frame gauge wheels are not used, adjust the lift link pins to prevent lateral float. See your tractor operator's manual.

Load And Depth Control

IMPORTANT

- *Do not use gauge wheels to determine the operating depth for heavy draft loads.*

Adjust gauge wheels for only light contact with the ground and position the tractor load control lever midway between the maximum depth control and maximum load control position. If working depth cannot be maintained, move the control closer toward the depth control position.

NOTE: In hard soil conditions, successive passes may be necessary to obtain the desired final tillage depth.

Preparing Field Cultivator

Mast And Hitch

IMPORTANT

- Before connecting tractor to the implement, be sure the mast and hitch pins are assembled correctly. See *SETUP* section “Mast Assembly” for illustration and instructions on assembly.

Perfecta Size & Style	Tractor Hitch Type That The Perfecta Will Accept
10' - 20' Rigid Models	CAT. 2 & CAT. 3 3-Point Hitch
	CAT. 2 & CAT. 3-N Quick Attach Coupler
	CAT. 3 Quick Attach Coupler
18' - 28' Folding Models	*CAT. 2 & CAT. 3 3-Point Hitch
	CAT. 2 & CAT. 3 & CAT. 3-N Quick Attach Coupler

NOTE: When using CAT. 3 3-point hitch, CAT. 3 quick attaching coupler or CAT. 3-N quick attaching coupler, two 1 7/16” OD lower hitch bushings (83881) and one 1 1/4” OD mast bushing (62640) are required. These bushings come with your PERFECTA.

*NOTE: Optional pin kit, part number 61670 is required on folding models on tractors with CAT. 2 hitch.

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.

⚠ WARNING

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **RELIEVE THE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE THE TRACTOR OPERATOR’S MANUAL FOR PROPER PROCEDURES.**

Preparing Field Cultivator (continued)

Tire Pressure

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 And Retaining Rings

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.

Lubrication

Lubricate unit as outlined in MAINTENANCE section.

Attaching Field Cultivator To Tractor

WARNING

- **CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN THE TOWING VEHICLE AND IMPLEMENT WHEN HITCHING. ALWAYS ENGAGE THE PARKING BRAKE AND STOP THE ENGINE BEFORE INSERTING THE HITCH PINS OR SECURING LATCHES.**

Attach the unit to the tractor as specified in the tractor operator's manual. Use the appropriate size hitch pins and lock in place.

Tractor Without Quick Hitch

Back the tractor to the front of the cultivator and position the draft links in front of, and in line with, the lower hitch pins. Shut-off the engine and set the brakes on the tractor.

Connect the draft links to the front of the cultivator and adjust the length of the top link to enable installation of hitch pins. Install pins, and/or bushing, secure with lock pins.

Tractor With Quick Hitch

Lower the coupler to allow jaws to pass under the cultivator mast and hitch pins. Back the tractor to the front of the cultivator until the jaws are under their respective hitch pins, then raise the coupler to firmly seat jaws. Lock the jaw latches into place.

On the RIGID PERFECTA and BEDDED CROP PERFECTA 10'-20' sizes, bushings (83881) are required on the lower hitch pins if being used with CAT 3 or CAT 3-N Quick-Hitch.

Hydraulic Hook-Up

When connecting the hydraulic lines to a hydraulic source, the lines may be connected into a separate two-way hydraulic control circuit (on back of the tractor).

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 SET UP section for purging process.

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

Unfolding The Wings

DANGER

- KEEP CLEAR OF POWER LINES WHEN FOLDING/UNFOLDING WINGS. WINGS MAY BECOME TALLER THAN SOME POWER LINES DURING THE FOLD CYCLE CAUSING ELECTROCUTION AND SERIOUS INJURY OR DEATH.

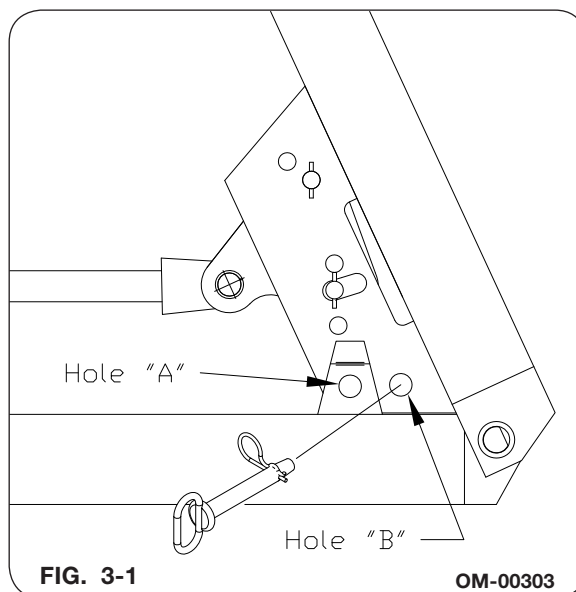
WARNING

- MOVING WINGS CAN CAUSE SERIOUS INJURY OR DEATH. KEEP AWAY FROM FOLDING AND UNFOLDING WINGS.

Remove pins from wing locks (Hole "A"), and insert into storage position (Hole "B") (Fig. 3-1). Secure with hairpin.

Failure to remove pins before unfolding wings could result in damage to machine.

Raise unit to transport position. Unfold wings so that the hydraulic cylinders are fully extended.



Leveling Cultivator Frame

For best results when leveling your PERFECTA, position the tractor with the cultivator on a level floor. Check the tractor tire pressure and inflate equally from side-to-side. See your tractor operator's manual for correct tire inflation pressure.

Side-To-Side Leveling

With the PERFECTA attached to the tractor, raise the cultivator a couple of inches off the floor. Shut-off engine and lock the brakes on the tractor. Stand at the rear of the cultivator and sight across the top of the cultivator frame and tractor axle. Level the cultivator frame from side-to-side by adjusting the lift links on the tractor 3-point hitch.

For initial adjustment, with the PERFECTA still raised off the ground a couple of inches (being sure the bottom of the rollers clear floor), stand at the side of the cultivator and sight across the top of the cultivator frame and floor.

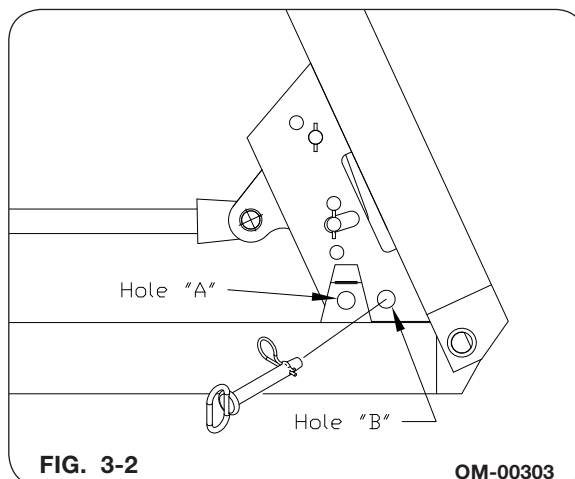
If the cultivator frame is not level from the front-to-back with the ground line, turn the center link on the tractor either in or out until the cultivator frame is parallel (or level) to the ground line.

Further front-to-back adjustment may be required once the machine is operated in the field. When properly leveled, all cultivator tools will enter the ground to a uniform depth.

Transporting

WARNING

- **INADVERTENT LOWERING OF WINGS CAN CAUSE SERIOUS INJURY OR DEATH. INSTALL WING TRANSPORT LOCKS BEFORE TRANSPORTING (FIG. 3-2).**



Comply with all laws governing highway safety and regulations when moving machinery on public roads.

Be sure SMV Emblem is in place and clearly visible on the rear of the implement. See SMV Emblem in SETUP section.

WARNING

- **USE APPROVED ACCESSORY LIGHTS AND REFLECTORS WHEN TRANSPORTING AT NIGHT, DURING PERIODS OF POOR VISIBILITY, AND AS REQUIRED BY LOCAL LAW.**
- **ALWAYS TRAVEL AT A SPEED WHICH PERMITS COMPLETE CONTROL OF TRACTOR AND IMPLEMENT.**

Check transport route clearance on the PERFECTA for transport dimensions of your cultivator.

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.

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.

If you will be transporting at night on public roads, ask your dealer about the Transport Marking Kit (86763B & 86764B) for the PERFECTA.

Unhitching

WARNING

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

Lower the PERFECTA on a flat surface clear of any debris or obstruction. Unhitch the unit, disconnect the hydraulic hoses (FOLDING PERFECTA ONLY) and install dust covers over the hose plugs and outlets.

Field Adjustments

To properly prepare the seedbed, the PERFECTA must run level from side-to-side and from front-to-back. See “Leveling Cultivator Frame” in “OPERATIONS” Section.

The following adjustments may be made to obtain maximum performance from your PERFECTA.

Gauge Wheel Adjustment

The gauge wheels are used to allow the unit to better follow the ground contour.

Rigid Perfecta

Singles 16.5 x 6.5-8 -- Standard on 10', 11', 12', 13', 14', and 15', sizes.

Duals 20.5 x 8-10 -- Standard on 18' and 20' sizes.

Single Gauge Wheel #83824 Shown (Rigid & Bedded Perfecta Models)

Adjustment Pin

NOTE: Any hardware loosened during adjustment MUST be retightened before operating machine.

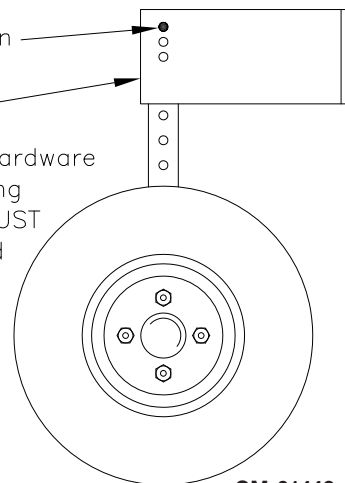


FIG. 3-3

OM-01442

Field Adjustments (continued)

Folding Perfecta

Singles 20.5 x 8 -10-- Standard on 4', 5', and 6' wings.

Duals 20.5 x 8-10 -- Standard on 7' and 8' wings.

Bedded Crop Perfecta

Singles 16.5 x 6.5-8 -- Standard on all sizes.

The weight of the PERFECTA should be carried on the 3-PT. of the tractor. The gauge wheels will maintain consistent working depths, especially in rolling or hilly conditions.

NOTE: See "Lift Link Lateral Float" in "OPERATIONS" Section for further adjustment procedures to obtain maximum operating performance.

Adjust gauge wheels to desired working depth equally from side-to-side (Fig. 3-2).

Use "Overhead Layouts" in ASSEMBLY section for determining wheel locations on cultivator frame. Maintain at least 6 inches of clearance between gauge wheels and tractor tires.

NOTE: Only on Rigid Perfecta models, single 16.5 x 6.5-8 gauge wheels may be installed inside the cultivator frame. This is especially helpful on units where tractor dual wheels might otherwise interfere with the gauge wheel position.

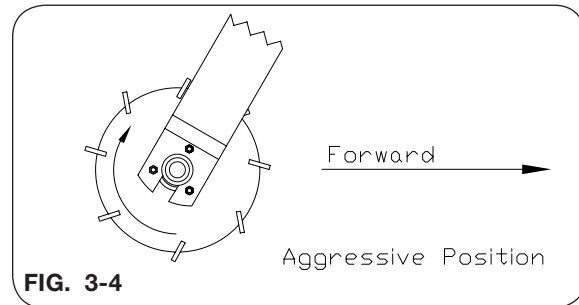
Folding Perfecta models with larger 20.5 x 8-10 gauge wheels must be positioned in front of the frame on the wings only.

Field Adjustments (continued)

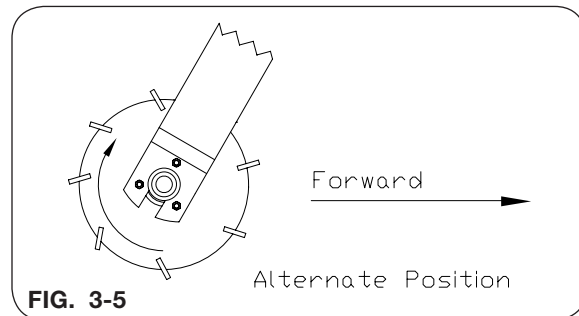
Rolling Harrow - Single Basket

The Rolling Harrow basket is designed to help provide an excellent seedbed when used in conjunction with the S-tines and one-bar drag tooth harrow.

A maximum amount of leveling and conditioning of the soil is obtained when the roller is operated in the aggressive position (FIG. 3-4). This position also helps provide mixing of chemicals into the top two inches of the soil when used for incorporation.

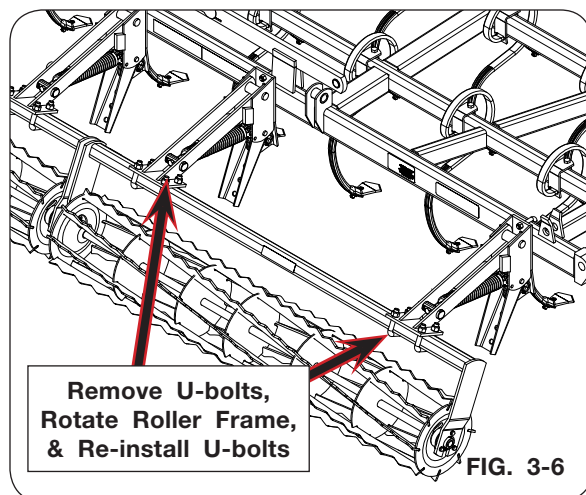


In some light soil conditions, the "Rolling Harrow" frame can be reversed (FIG. 3-5). When operated in this position, the aggressive wheel runs backwards and acts as a soil firmer.



NOTE: To reverse the "Rolling Harrow", remove the U-bolts connecting the lower frame to the spring arm, rotate the roller frame, and re-install U-bolts.

NOTE: Be sure to center "Rolling Harrow" frame with the arms on each section. Maintain approximately a 3/4" clearance between the roller frames before tightening U-bolts. Torque U-bolts to 110 ft. lbs.



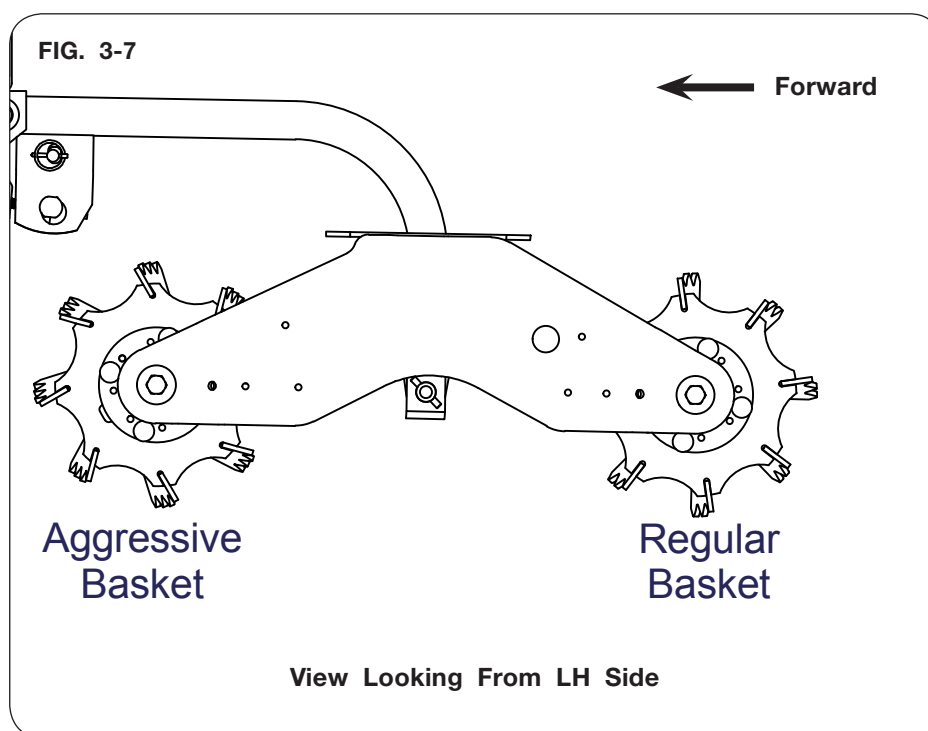
Field Adjustments (continued)

Rolling Harrow - Double Basket

Normal Position

In most cases, the unit runs with the aggressive basket positioned to the front (FIG. 3-7) 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 (as shown in FIG. 3-7). This position also helps provide thorough mixing of chemicals into the top two to three inches of the soil, when used for incorporation.

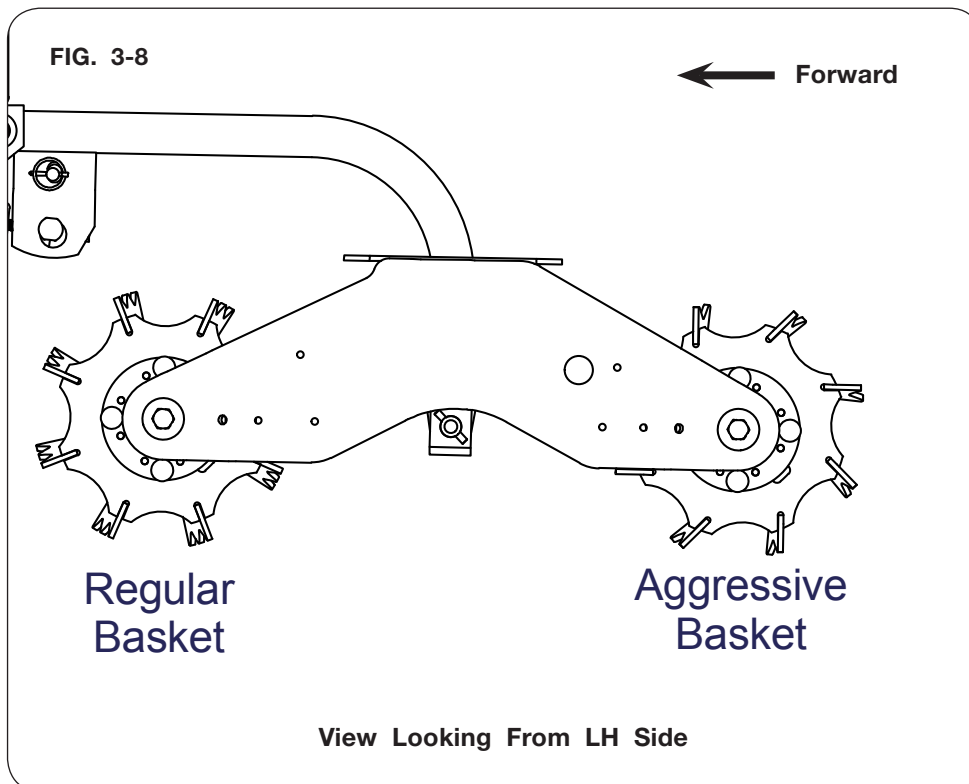


Field Adjustments (continued)

Alternate Position

A maximum amount of firming and conditioning of the soil is obtained when the aggressive basket is positioned at the rear (as shown in FIG. 3-8).

To reverse Rolling Harrow baskets, remove mounting pin (9500423) and spiral pin (91144-186) (FIG. 3-8) connecting basket frame to spring arm, rotate basket frame and reinstall mounting pins and spiral pins.



Field Adjustments (continued)

Working Depth

Position "X" - setting for normal S-tine working depth of 2-4 inches.

Position "Y" - setting for deeper S-tine working depth of 4-6 inches.

Additional adjustment is provided (Position "Y" FIG. 3-9) to allow the "Rolling Harrows" working height to be raised in the field. This position allows more working depth from the S-tines, yet still maintaining the normal working action from the rolling harrow.

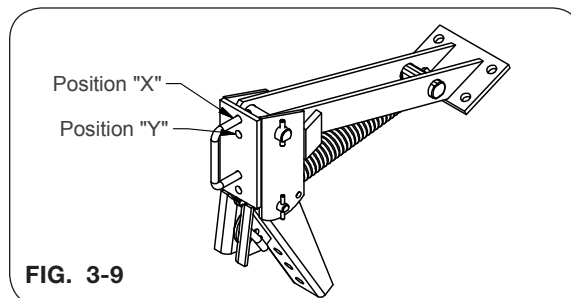


FIG. 3-9

Leveler Bar

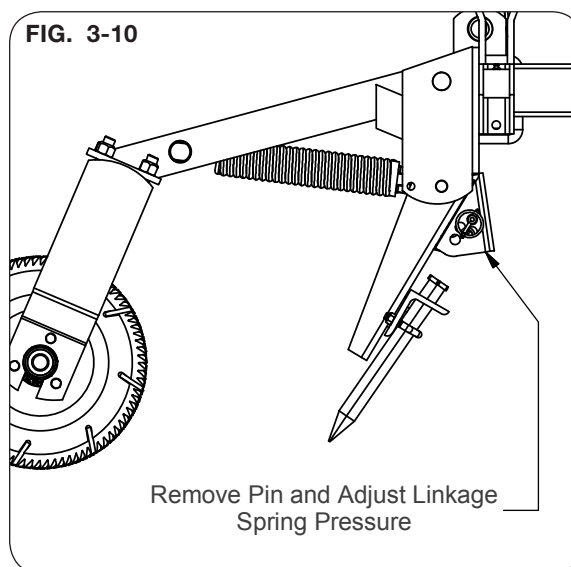
The one-bar is designed to improve the soil leveling capabilities of your PERFECTA. The one-bar spring pressure can be increased, to improve ground leveling (by tightening the adjusting screw) or decreased, to improve trash flow (by loosening the adjusting screw). This adjustment is especially important in heavy soils or trashy conditions, by improving soil leveling and/or trash flow.

Tool Free Style — Spring Tension Adjustment

Spring pressure is adjusted by aligning different holes between the adjustment casting and the leveler bar arm as shown in FIG. 3-10.

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.



Field Adjustments (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

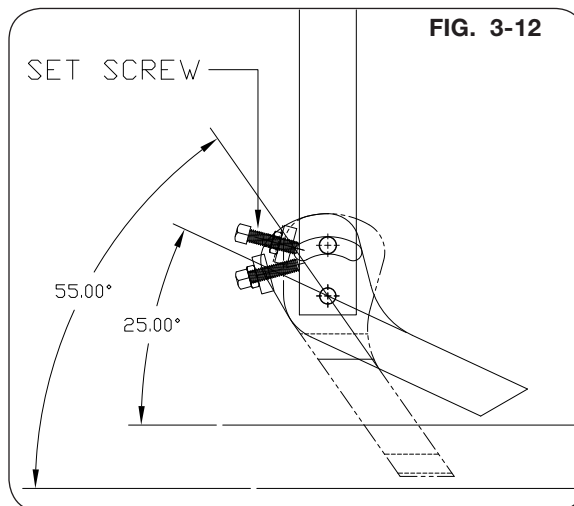


Diagonal Bar Adjustment

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

Field Adjustments (continued)

Bedded crop rear shank has adjustable foot which is adjustable from 25° to 55° and may be adjusted by tightening or loosening set screw once angle/position is set, tighten both lower bolts. (FIG. 3-12).

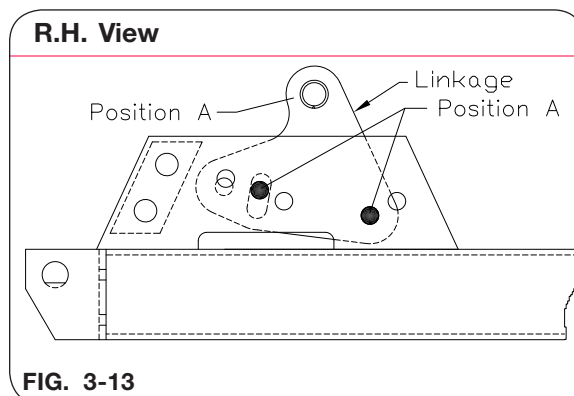


The wings of the PERFECTA have been specially designed to offer the most flexibility to meet your soil preparation needs. With the use of adjustable linkages, three different settings are offered.

POSITION "A" (FIG. 3-13)

NOTE: When you receive your FOLDING PERFECTA the linkage (82240B) will be pre-assembled in this position.

Position "A" allows the wing to flex 5° above and 2° below the centerline of the machine. This position allows for turning the PERFECTA while it is raised, on relatively flat fields.



Field Adjustments (continued)

POSITION "B" (FIG. 3-14)

Position "B" will allow the wing to remain level to the base. This setting should be used for turning in raised position, when fields are level and a rigid unit is desired.

R.H. View

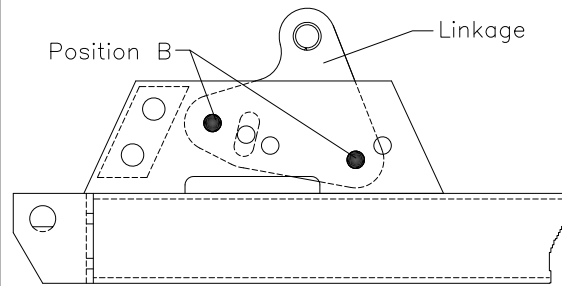


FIG. 3-14

POSITION "C" (FIG. 3-15)

Place the link in position "C" when the FOLDING PERFECTA is used on varying contours of the land such as terracing. It provides more flexibility, from 5° above to 5° below the center-line so that the machine will be able to follow the contour in rolling ground conditions.

R.H. View

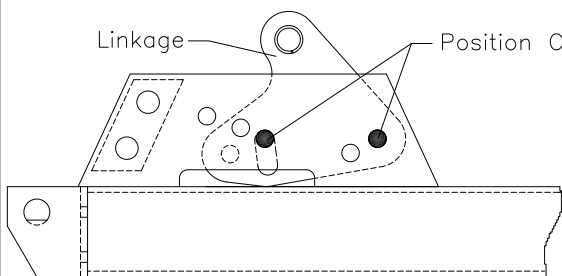


FIG. 3-15

IMPORTANT

- When turning in raised position in this setting, the wing tips will contact the ground. Folding the wings before raising into the transport position will prevent possible damage to the S-tines or the wings.

Single Basket Reinforcement Disc Plate Part #87229 (Optional)

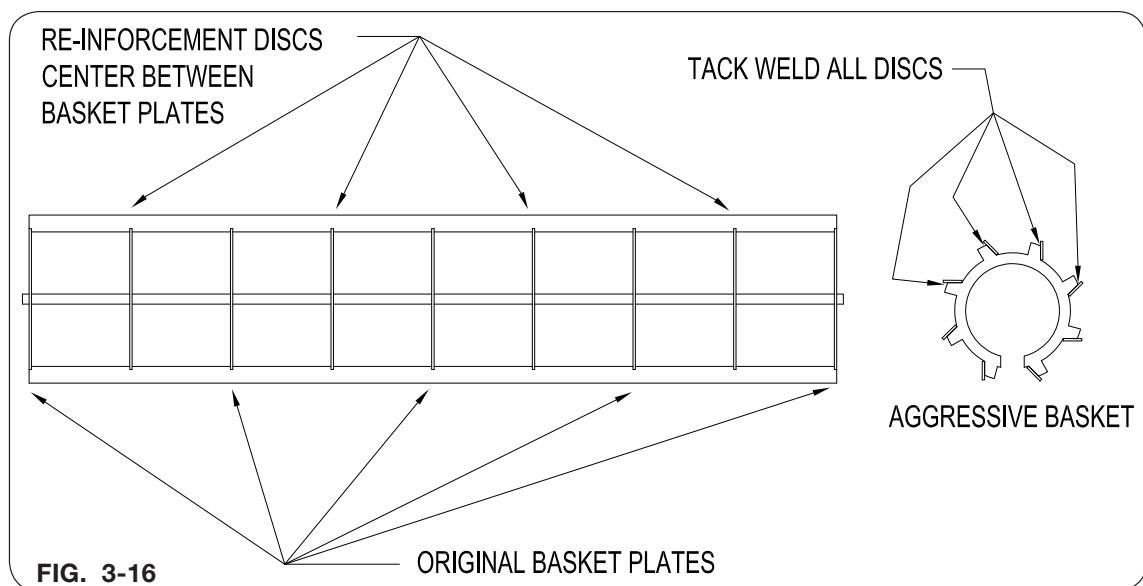
This option is for reinforcing both the regular and aggressive basket in rocky soils. This accessory will provide additional stiffness to your basket.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**

IMPORTANT

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

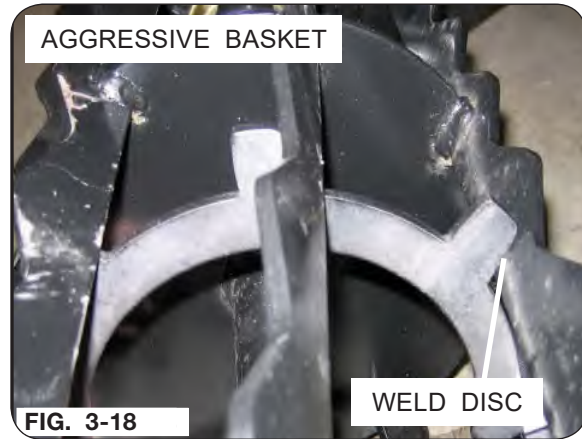


2. Center reinforcement discs between original basket plates and rotate disc until it matches the basket blades. There are two different angles for the teeth on the disc to match either the aggressive basket or the passive basket. Hold into position using a locking pliers or clamps (FIG. 3-17).



Reinforcement Disc Plate Part #87229 (Optional)

3. Remove powder coating before welding. Secure discs into place by tack welding. Weld where discs and basket blades are in contact (FIG. 3-18).



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

Double Basket Weld-In Reinforcement Disc Part #74964 (Optional)

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

IMPORTANT

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

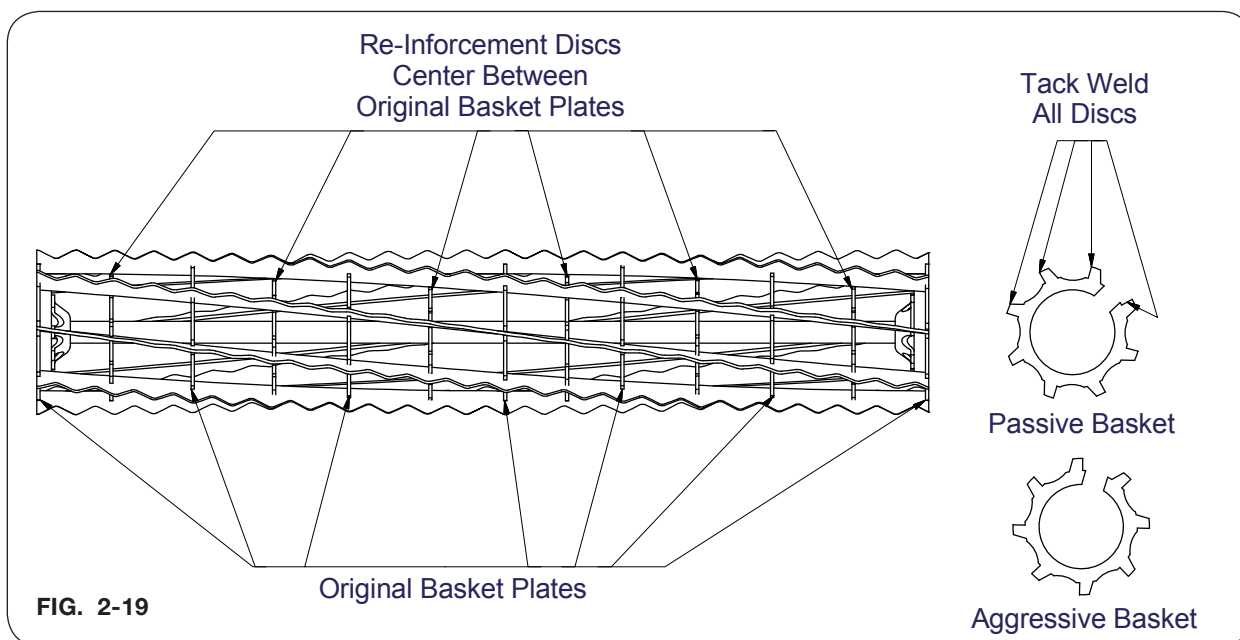


FIG. 2-19

1. Position discs inside of the basket by inserting horizontally between blades, and then rotating vertically.
2. Center reinforcement discs between original basket plates and hold into position using locking pliers or clamps (FIG. 2-20).



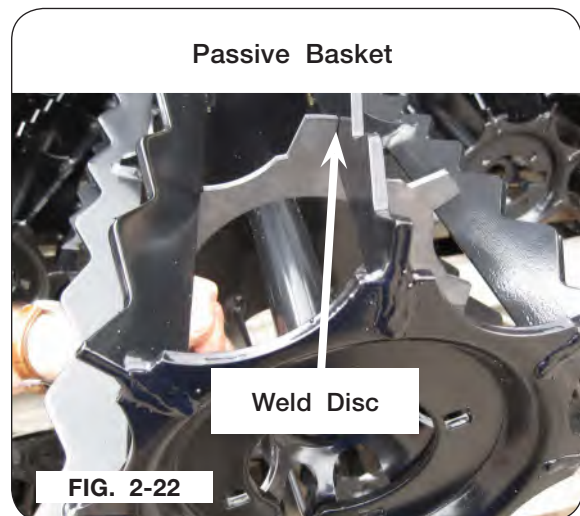
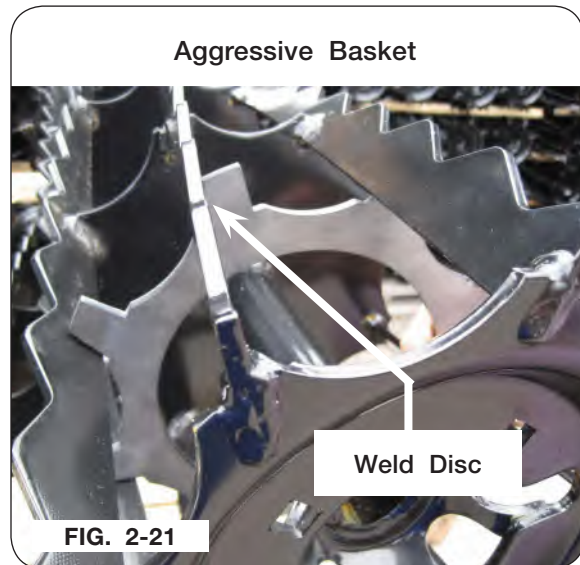
FIG. 2-20

IMPORTANT

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

Double Basket Weld-In Reinforcement Disc Part #74964 (Optional)

3. Remove powder coating before welding. Secure discs into place by tack welding. Weld where discs and basket blades are in contact (FIG. 2-21 & 2-22).



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

SECTION IV

Maintenance

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

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

IMPORTANT

- *Do not use a high pressure grease gun to lubricate these bearings. Damage to bearing seals could occur.*

Wheel Bearings

Lubricate with an SAE multi-purpose grease. All fittings must be free from dirt and paint to insure entry of lubrication inside bearing.

The gauge wheel bearing should be cleaned, repacked and adjusted once per season. Use a number 2 wheel bearing grease to repack the bearings and adjust per the Hub Assembly instructions in this section.

Wing Assembly

Lubricate the 4 Wing Assembly points using a grease gun at the beginning of each season.

Hub Assembly

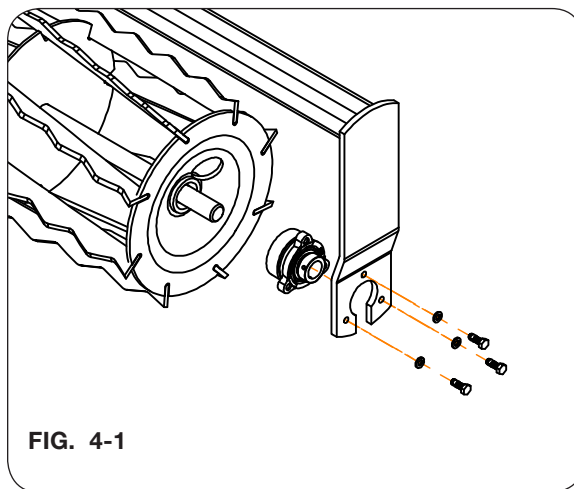
1. Use grease to lubricate the seal lip.
2. Place the hub onto the spindle. Rotate the hub while doing this so that the seal lip does not fold under as the lip goes on the seal lip of the spindle.
3. Be sure the outer cone slides on the spindle and into the cup.
4. Assemble the washer and the nut onto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

Replacing Single Rolling Harrow Basket Bearings

WARNING

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

1. Lower the basket to the ground.
2. Remove the 5/8" locknuts and the 5/8"-11 U-bolts that attach the basket frame to the attachment arms.
3. Slide the basket and the frame away from the others so it can be worked on.
4. Remove the three 5/16"-18 carriage bolts and the capscrews which hold the bearing on.
5. Pry the end of the basket from out of the basket frame slot.
6. Loosen the set screw in the lock collar. Loosen lock collar by turning with a punch.
7. Place a punch through the hole in the end plate on the basket and use a hammer to remove the bearing. If the bearing is on too tight, use a bearing puller to remove the bearing.
8. File off any burrs left on the shaft. Finish with a strip of emery cloth. Make sure bearing will slide on the shaft.
9. Slide a new bearing (87175) on the shaft so the lock collar will be on the outside.
10. Install the end of the basket into the slot of the frame.
11. Assemble the new 5/16"-18UNC capscrews through the holes in the frame and onto the bearing housing.



NOTE: Use the other side of the basket as a sample of how the capscrews should be assembled.

IMPORTANT

- *Tighten 5/16"-18UNC capscrews before you tighten the setscrew in the lock collar. Turn lock collar in the direction of travel. Tighten capscrews according to "Torque Chart".*

All ROLLING HARROW® bearings are manufactured with triple-lip seals. It is important to use Unverferth bearings (87181) for maximum life.

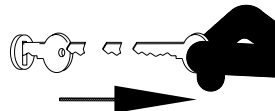
Replacing Double Rolling Harrow Basket Bearings

WARNING

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

1. Bearing replacement kit (74006) is available for the ROLLING HARROW.

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



3. 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.

4. Roll the basket assembly from under the machine.

5. 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 stub shaft and the basket weldment to prevent the head of the stub shaft from turning.

6. Push the stub shaft into the basket weldment so the shaft disengages the basket frame side plate.

7. 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 stub shaft on the other end of the basket and roll the basket away from the frame.

8. Remove the 1/2"-13UNC x 1 1/4" carriage bolts (9322-103) from the bearing and basket. Remove bearing from the basket and remove stub shaft from bearing.

9. Inspect the square recess for the stub shaft 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.

10. 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 stub shaft 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.

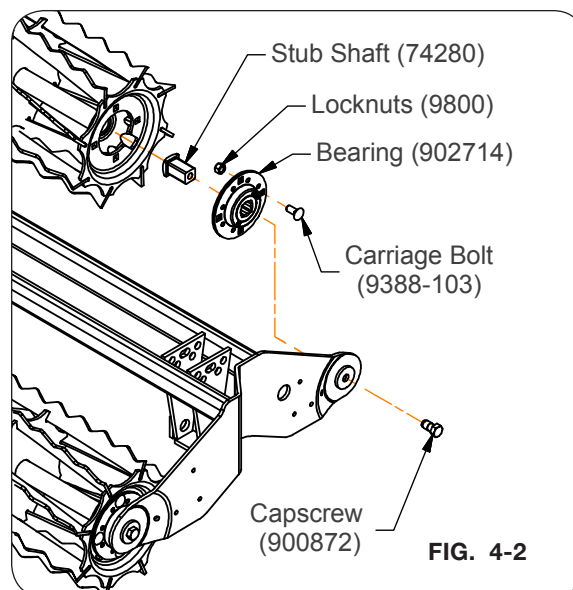


FIG. 4-2

Replacing Double Rolling Harrow Basket Bearings (continued)

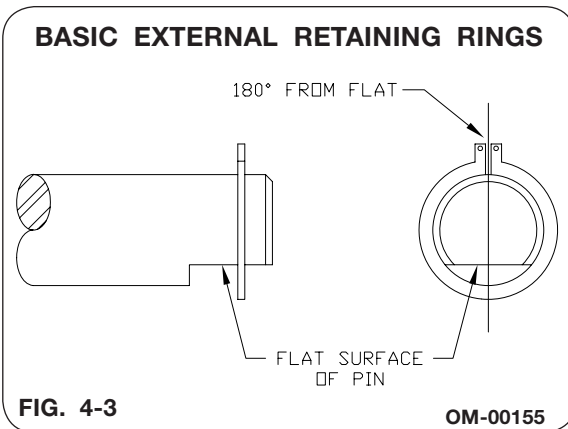
11. Push the basket back into the frame. Align the hole in the bearing bolt with the hole in the frame side plate. Thread the new 5/8"-11UNC x 1 1/4" capscrew (900872) into the bearing bolt (74280) until the epoxy begins to engage.
12. Use a pry bar to force the head of the bearing bolt (74280) against 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 (74280), use the 5/8"-11UNC x 1 1/4" capscrew (900872) to rotate the stub shaft 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 (900872) 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 (900872).*
13. Reinstall basket assembly on machine with pins (9500423) and spiral pins (91144-186).

Installing Retaining Rings

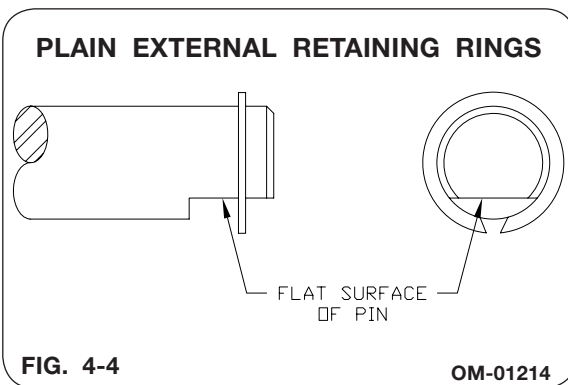
1. USE PROPER TOOLS for assembling rings onto pins (for plain external retaining rings use a flat-blade retaining ring pliers).
2. Before inserting pins, be sure the GROOVE IS FREE FROM ALL FOREIGN MATERIAL (paint, dirt, etc.), to ensure a proper seating.
3. DO NOT OVERSTRETCH RING during assembly. Install ring into groove so that it is securely seated and will not rotate around the pin.
4. **BASIC EXTERNAL RETAINING RINGS**
On "D" shaped pins, the retaining ring OPENING SHOULD BE APPROXIMATELY 180° FROM FLAT of the pin (Fig. 4-3).



PLAIN EXTERNAL RETAINING RINGS

On "D" shaped pins, the retaining ring OPENING SHOULD BE OVER THE FLAT of the pin (Fig. 4-4).

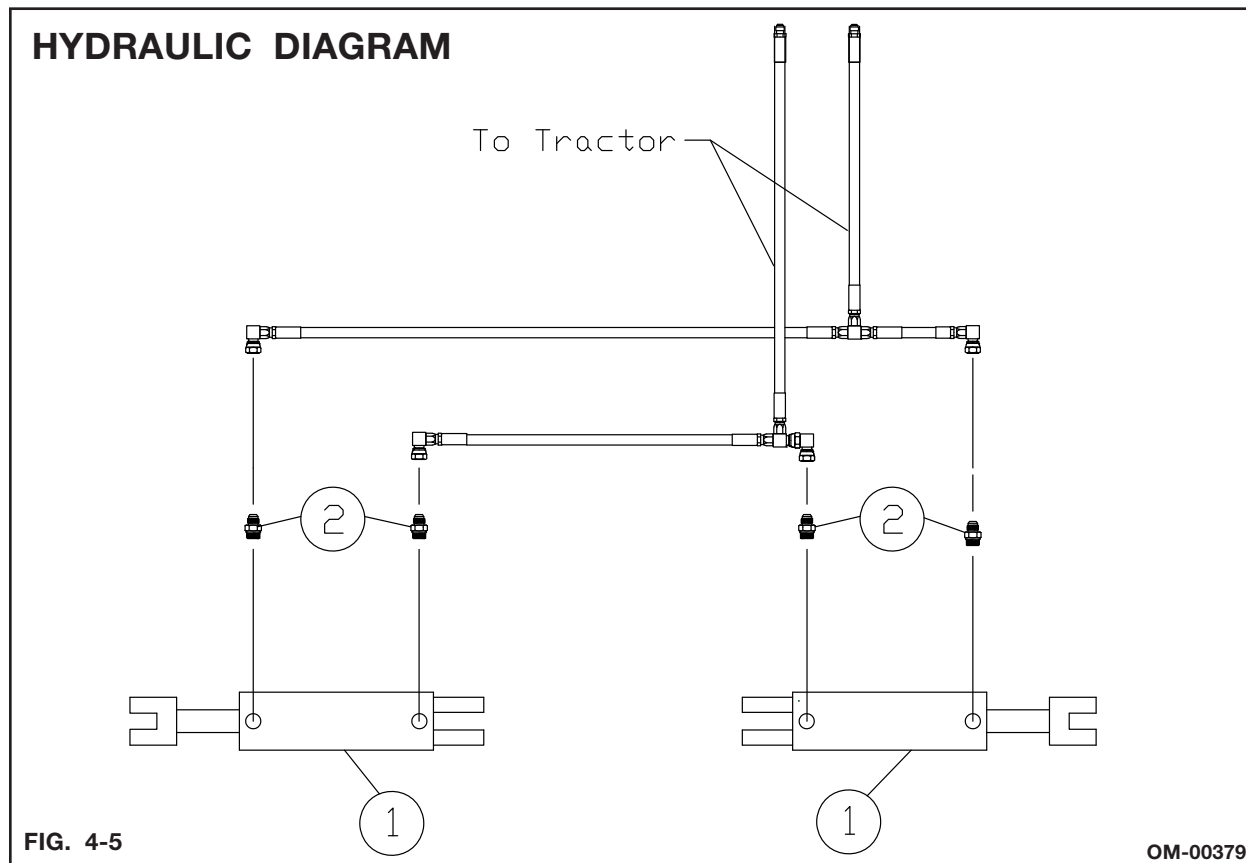
NOTE: The retaining rings should fit tightly once released and should not rotate freely.



Hydraulic System

MODELS WITH WINGS ONLY

NOTE: For plumbing diagram - refer to "Hydraulic Diagram". Refer to PARTS Section for hydraulic components detailed listing.



ITEM	DESCRIPTION	QTY	COMMENTS
1	Wing Fold Cylinder	2	Standard on ALL units with wings
2	Orifices	4	Standard on ALL units with wings

Troubleshooting

PROBABLE CAUSE	CORRECTION
Hydraulics Not Functioning Properly	
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
Malfuction 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)
Over-center fold wings not folding properly (hydraulic malfunction)	Refer to MAINTENANCE section for checking system function. (Refer to SETUP section for hydraulic assembly procedures)
Poor Penetration	
Frame not level	See OPERATION section for leveling instructions
Ground too hard for hitch control setting	Adjust hitch control position. See OPERATION section "Load and Depth Control"
Worn or dull tool points	Replace with new tool points
Tractor Wheels Slipping	
Poor field conditions	Wait until the field is dry enough to cultivate properly or add duals or triples to tractor
Tractor not weighted properly to utilize full horsepower	Add weight to tractor as recommended by manufacturer. See OPERATION section "Preparing Tractor"
Plugging	
Tines not spaced correctly	See "Overhead Layouts" in the proper SETUP section for correct spacing of tines
Poor field conditions	Wait until the field is dry enough to cultivate properly
One-bar working depth set too deep	Raise working depth. See field adjustments "One-Bar Harrow" in OPERATION section
One-bar spring pressure set too high	Decrease spring pressure. See field adjustments "One-Bar Harrow" in OPERATION section
Implement Running Crooked In The Field	
Tines not spaced correctly	See "Overhead Layouts" for correct spacing of S-tines
Tires not equally inflated	Find the cause and correct. See OPERATION section "Gauge Wheel Adjustment"
Gauge wheels not adjusted equally from side-to-side	Check side-to-side adjustments and correct
Tractor tires not properly spaced or equally inflated	Find the cause and correct. See OPERATION section "Wheel Spacing"
Tractor 3-Pt lift linkage not adjusted for level operation	Re-level the cultivator frame
Tractor 3-Pt link linkage lateral float pins not set properly	Check position of lateral float pins.
Minimal clearance between tractor and implement when raised.	See Operation, Use of tractor quick hitch, and tractor 3-point top link arm adjustment

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**.

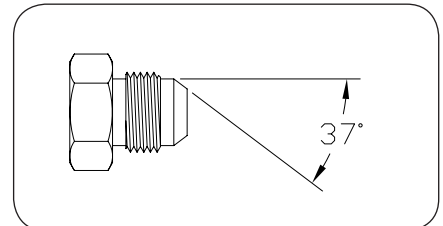
NOTE: Tighten U-bolts to have the same number of threads exposed on each end.

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

Hydraulic Fittings - Torque and Installation

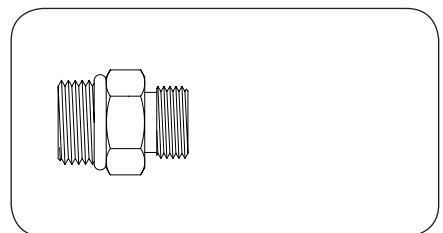
SAE FLARE CONNECTION (J. I. C.)

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

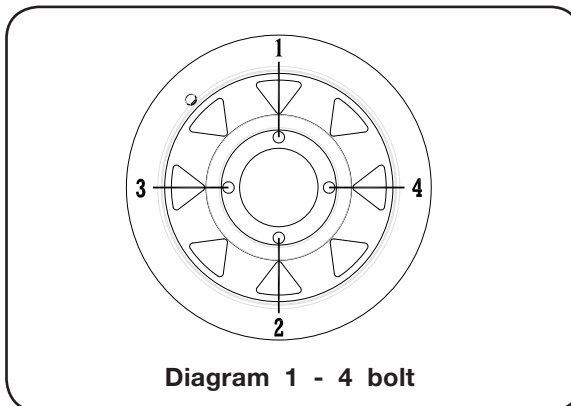


CAUTION

- **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.



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 for 16.5x6.5-8 tire....35 PSI maximum
 Recommended for 20.5x8-10 tire....35 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

Notes

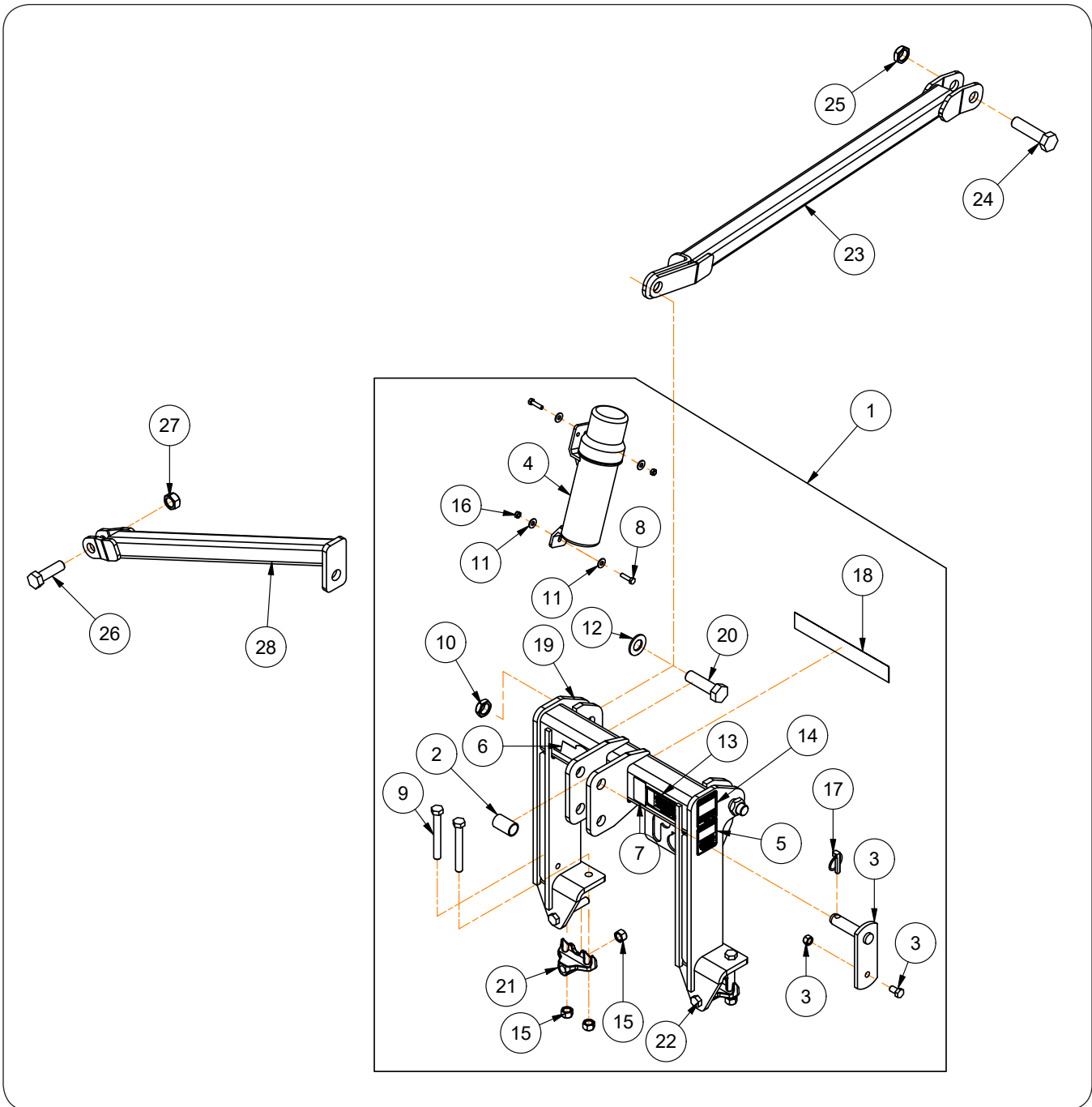
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Mast Components with Square Truss Tubes

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



FIELD CULTIVATORS — Parts

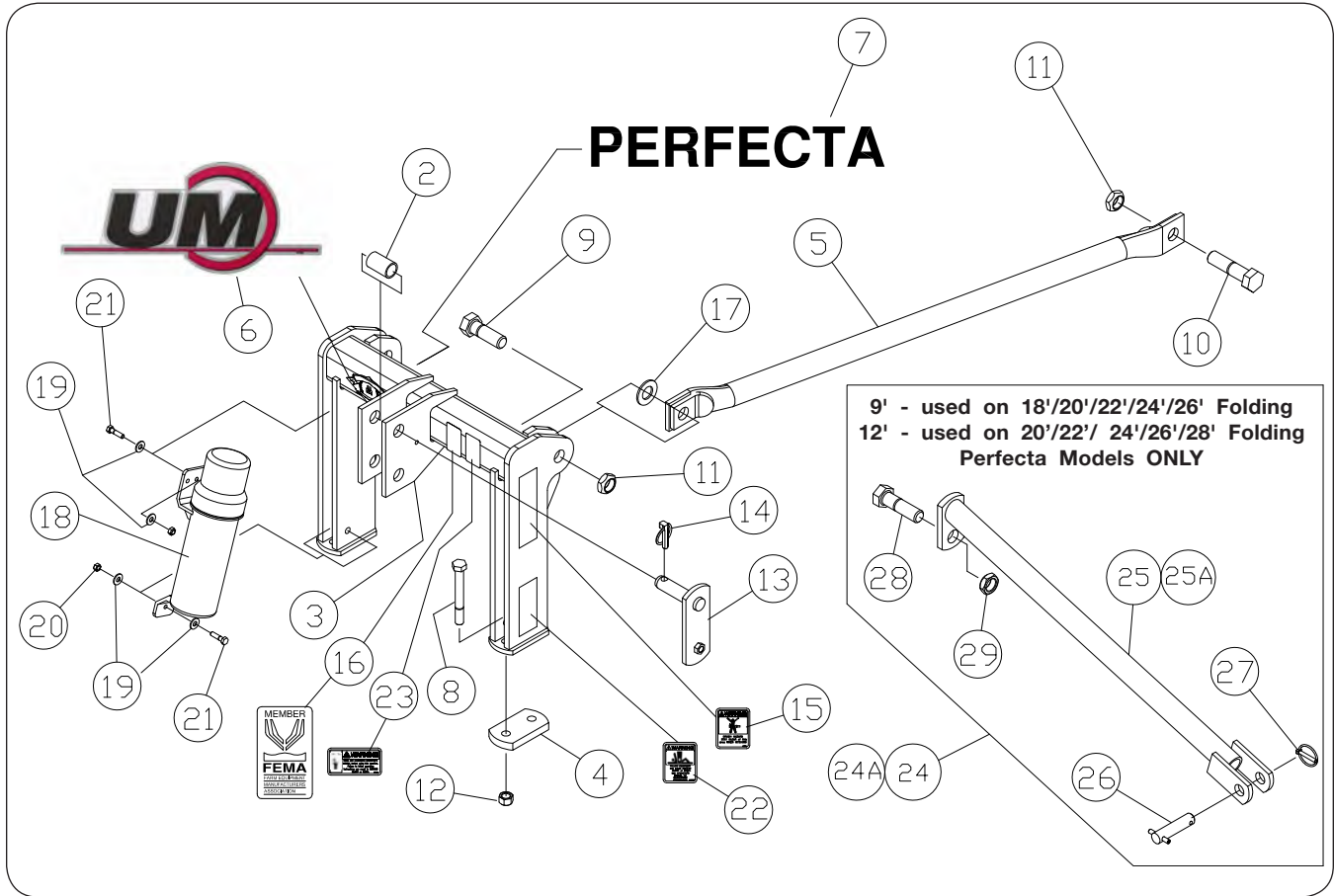
Mast Components with Square Truss Tubes

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	74862B	3-Point Bolt-On Heavy Mast Asy W/Cast Clamps	1	
2	62640	Spacer/Bushing 2" Long	1	
3	87290	Pin Weldment 1" Dia. x 4 9/16"	1	
4	900552	Manual Holder	1	
5	900751	Decal WARNING (Falling Equipment)	1	
6	901765	Decal UM Swoosh	1	
7	91605	Decal FEMA	1	
8	9390-031	Capscrew 5/16-18UNC x 1 1/4	2	Grade 5
9	9390-134	Capscrew 5/8-11UNC x 5	4	Grade 5
10	9397-018	Elastic Jam Nut 1-14UNS	2	
11	9405-070	Flat Washer 5/16" USS	4	
12	9405-116	Flat Washer 1" SAE	2	
13	97961	Decal WARNING (Read & Understand)	1	
14	97972	Decal WARNING (Crushing)	1	
15	9801	Locknut 5/8-11UNC	6	
16	9807	Locknut 5/16-18UNC	2	
17	9951	Lynch Pin 7/16" Dia. x 1 3/4	1	
18	9500662	Decal PERFECTA	1	
19	N/A	Mast Weldment	1	Use 74862B
20	9390-411	Capscrew 1-14UNS x 3 1/2	2	Grade 5
21	67922B	Extension Clamp Casting	2	
22	9390-132	Capscrew 5/8-11UNC x 4	2	Grade 5
23	74860B	Brace Tube Weldment (square tube)	2	For All Models
24	9390-413	Capscrew 1-14UNS x 4	2	Grade 5
25	9397-018	Elastic Jam Nut 1-14UNS	2	
26	9390-168	Capscrew 7/8-9UNC x 3	2	Grade 5
27	98420	Locknut 7/8-9UNC	2	
28	74888B	Front Strut 9' Weldment (square tube)	2	For 9' & 10' Base Folding Models
	74876B	Front Strut 12' Weldment (square tube)		For 12' Base Folding Models
	74925B	Front Strut 9' Bundle (PAIR) w/Hardware	-	Includes Items 26, 27, & 28
	74926B	Front Strut 12' Bundle (PAIR) w/Hardware	-	

Mast Components with Round Truss Tubes

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



FIELD CULTIVATORS — Parts

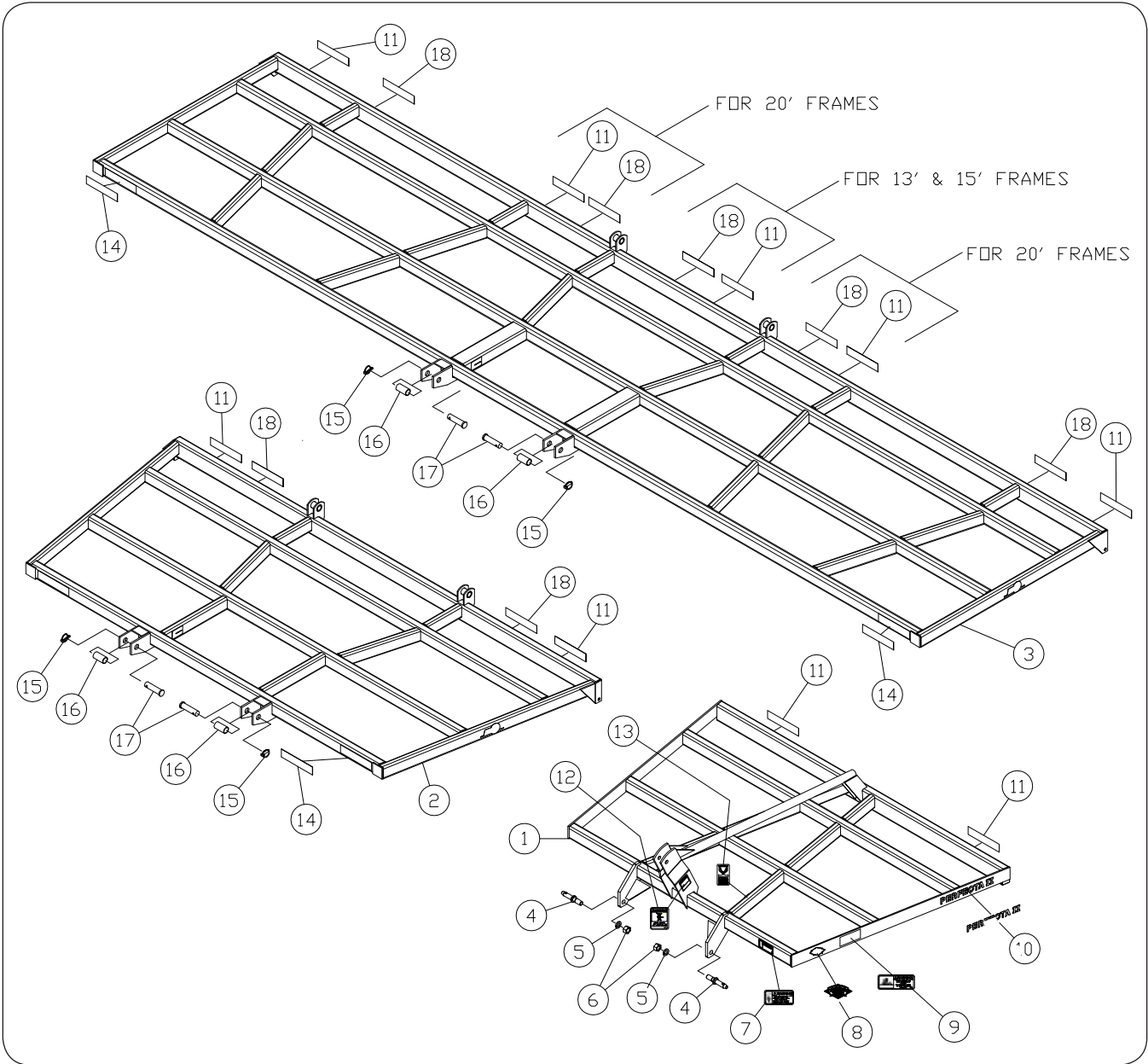
Mast Components with Round Truss Tubes

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	86293	Mast Assembly Complete	
2	62640	Tube/Spacer 2" Long	
3	83552B	Mast Weldment	
4	83557B	Plate	
5	86292B	Brace (round pipe)	
6	901765	Decal, UM Swoosh	
7	9500662	Decal, "PERFECTA"	
8	9390-134	Capscrew 5/8-11 x 5"	
9	9390-409	Capscrew 1-14 x 3"	
10	9390-413	Capscrew 1-14 x 4"	
11	9397-018	1-14 Elastic Stop Nut	
12	9801	Locknut 5/8-11	
13	87290	Pin Weldment	
14	9951	Lynch Pin 7/16 Dia.	
15	97972	Decal, "WARNING"	
16	91605	Decal, "FEMA"	
17	9405-116	Flat Washer 1"	
18	900552	Manual Holder	
19	9405-070	Flat Washer 5/16"	
20	9807	Locknut 5/16-18	
21	9390-031	Capscrew 5/16-18 x 1 1/4"	
22	900751	Decal, WARNING (Falling Equipment)	
23	97961	Decal, WARNING (Read & Understand)	
24	87065B	12' - Front Truss-Tube Bundle (PAIR)	
25	87064B	12' - Front Truss Tube	
26	82220	Pin Assembly 7/8" Dia. x 3 3/4"	
27	91058	Klik Pin 1/4" Dia.	
28	9390-411	Capscrew 1-14 x 3 1/2"	
29	9397-018	1-14 Elastic Stop Nut	
24A	88638B	9' - Front Truss-Tube Bundle (PAIR)	
25A	88637B	9' - Front Truss Tube (round pipe)	
26	82220	Pin Assembly, 7/8" Dia. x 3 3/4"	
27	91058	Klik Pin, 1/4" Dia.	
28	9390-411	Capscrew, 1-14 x 3 1/2"	
29	9397-018	1-14 Elastic Stop Nut	

Main Frame — Rigid Perfecta

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



FIELD CULTIVATORS — Parts

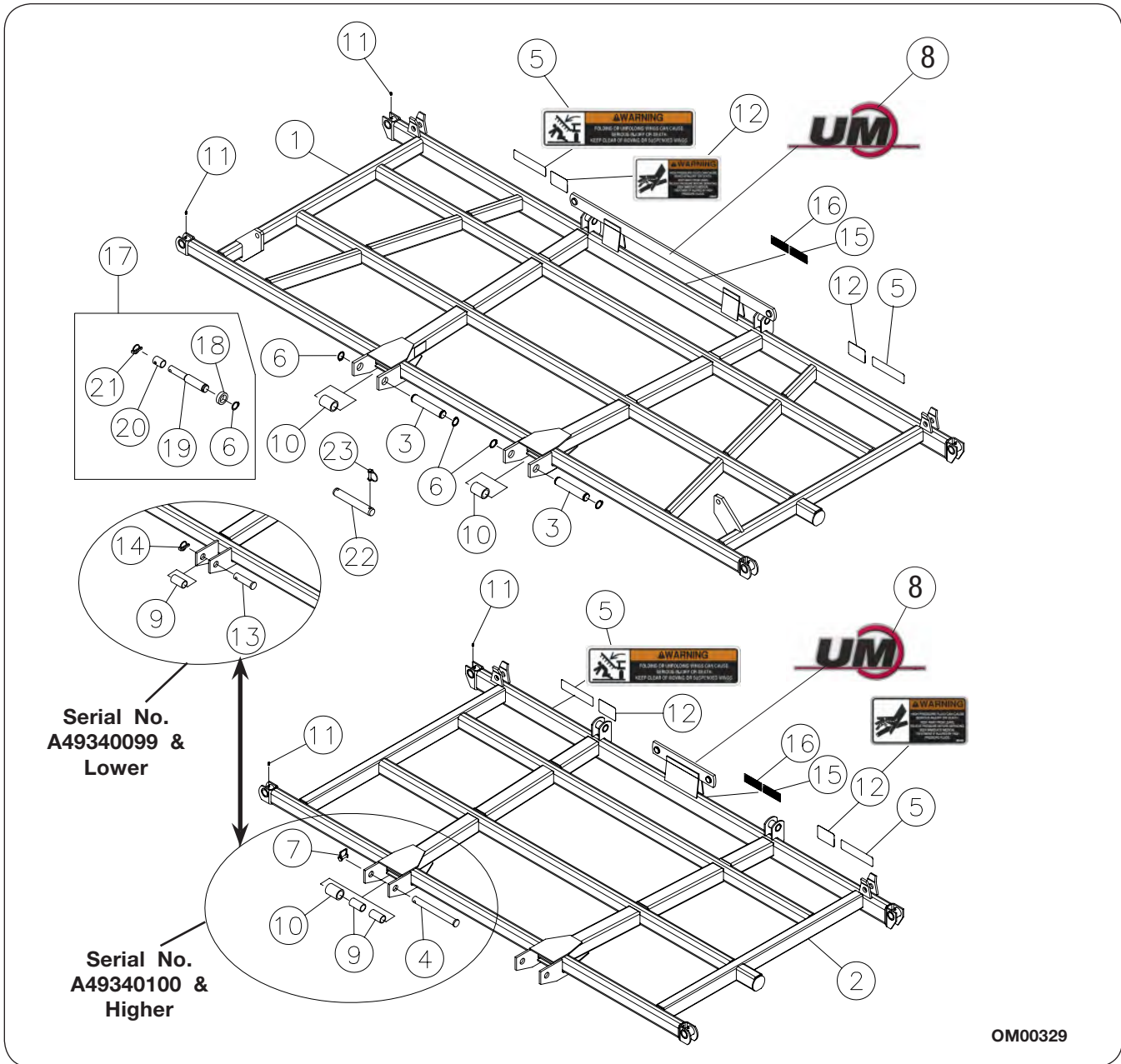
Main Frame — Rigid Perfecta

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	87684R	Main Frame w/Decals (7 Ft.) =Red=	
2	88697G	Main Frame w/Decals (10 Ft.) =Green=	
	88697R	Main Frame w/Decals (10 Ft.) =Red=	
	88697NG	Main Frame w/Decals (10 Ft.) =Orange=	
3	88700G	Main Frame w/Decals (20 Ft.) =Green=	
	88700R	Main Frame w/Decals (20 Ft.) =Red=	
	88698G	Main Frame w/Decals (13 Ft.) =Green=	
	88698R	Main Frame w/Decals (13 Ft.) =Red=	
	88699G	Main Frame w/Decals (15 Ft.) =Green=	
	88699R	Main Frame w/Decals (15 Ft.) =Red=	
4	9947	Hitch Pin 7/8" Dia. x 5 15/32"	
5	9404-037	Lock Washer, 7/8"	
6	9394-017	Hex Nut, 7/8-14UNF	
7	97961	Decal, WARNING "Read and Understand..."	
8	901765	Decal, UM Swoosh	
9	900751	Decal, WARNING "Falling Equipment..."	
10	9500655	Decal, "PERFECTA 10"	
	9500656	Decal, "PERFECTA 12"	
	9500657	Decal, "PERFECTA 14"	
11	9003126	Reflector - Red,2 x 9	
12	97972	Decal, WARNING "Serious Injury or Death..."	
13	91605	Decal, "FEMA"	
14	9003127	Reflector-Amber,2 x 9	
15	94652	Lynch Pin 3/8" Dia.	
16	83881	Bushing 1 7/16" OD	
17	88260	Pin 1 1/8 x 8"	
18	9003125	Reflector-Red/Orange,2 x 9	

Main Frame — Folding Perfecta

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



FIELD CULTIVATORS — Parts

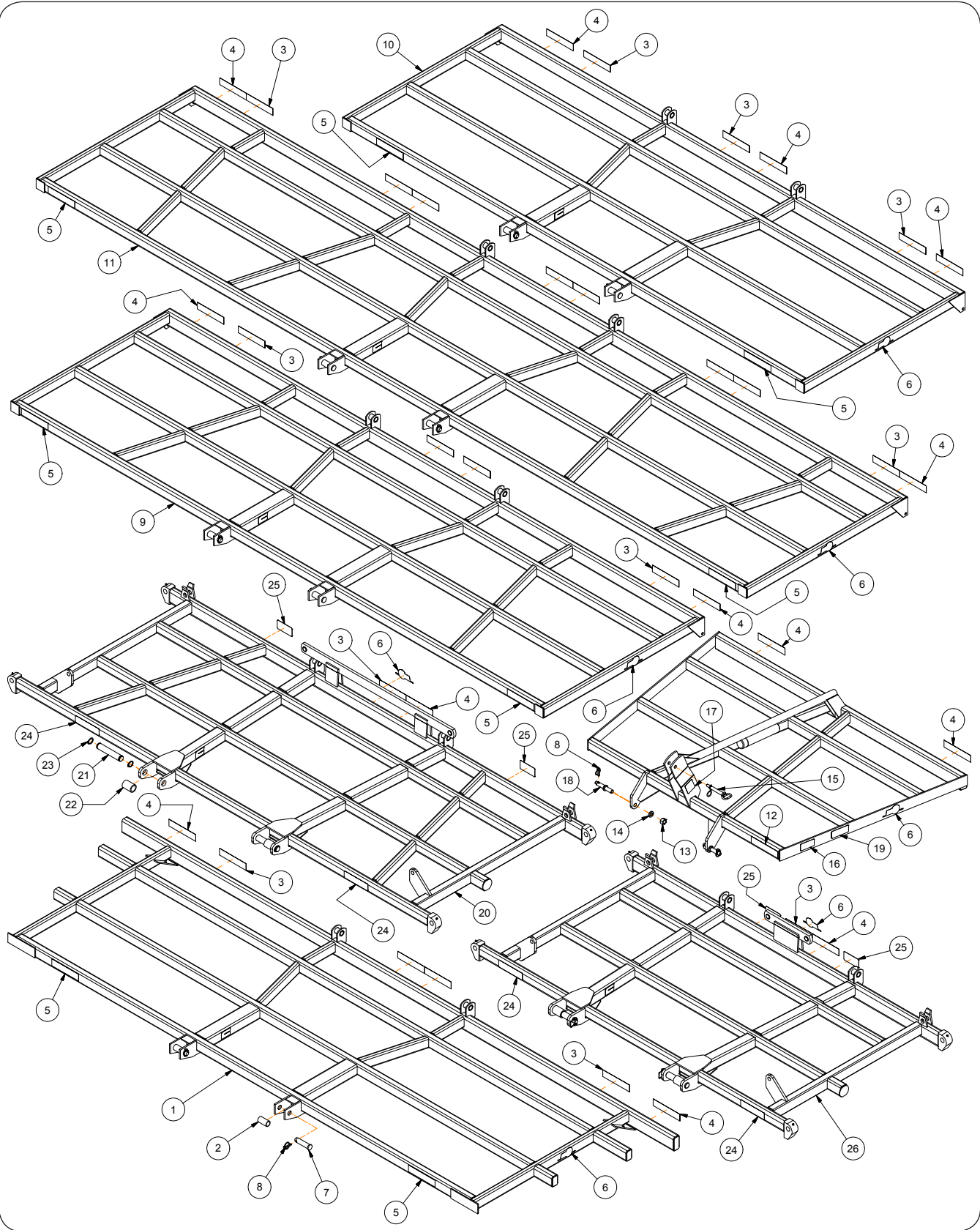
Main Frame — Folding Perfecta

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	88702G	Main Frame (12 Ft.) w/Decals =Green=	Serial # A61570100 and Higher
	88702R	Main Frame (12 Ft.) w/Decals =Red=	
2	88701G	Main Frame (9 Ft.) w/Decals =Green=	Serial # A61570100 and Higher
	88701R	Main Frame (9 Ft.) w/Decals =Red=	
3	82024	Pin 1 7/16" Dia. x 7 3/4"	For CAT 2 Adapter Kit
4	88260	Pin 1 1/8" Dia. x 7 7/16	
5	95136	Decal, WARNING "Folding & Unfolding Wings..."	
6	91575	Retaining Ring 1 3/8" OD	
7	94652	Lynch Pin 3/8" Dia.	
8	901765	Decal, UM Swoosh	
9	83881	Bushing 1 7/16" OD	
10	83882	Bushing 2" OD	
11	91160	Zerk	
12	95445	Decal, WARNING "High-Pressure Fluid..."	
13	91454	Clevis Pin 1 1/8" Dia. x 4 1/2	
14	9951	Lynch Pin 7/16" Dia.	
15	9003125	Reflector 2x9, "Red/Orange"	
16	9003126	Reflector 2x9, "Red"	
17	61670	Pin Pkg for 12' Base Folding Machines	For CAT 2 Reg. Hitch
18	62471	Bushing 2 1/4" OD x 5/8	
19	62472	Pin 1 7/16" Dia. x 9 1/8	
20	62473	Bushing 1 7/16" OD x 1 7/8	
21	95031	Lynch/Klik Pin 7/16" Dia.	
22	75185	Pin 1 7/16" Dia. x 9 1/4"	For All 12' Units Except CAT 2 Adapter Kit
23	9501350	Single Wire Lock Pin	

Main Frame — Bedded Crop Perfecta

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



FIELD CULTIVATORS — Parts

Main Frame — Bedded Crop Perfecta

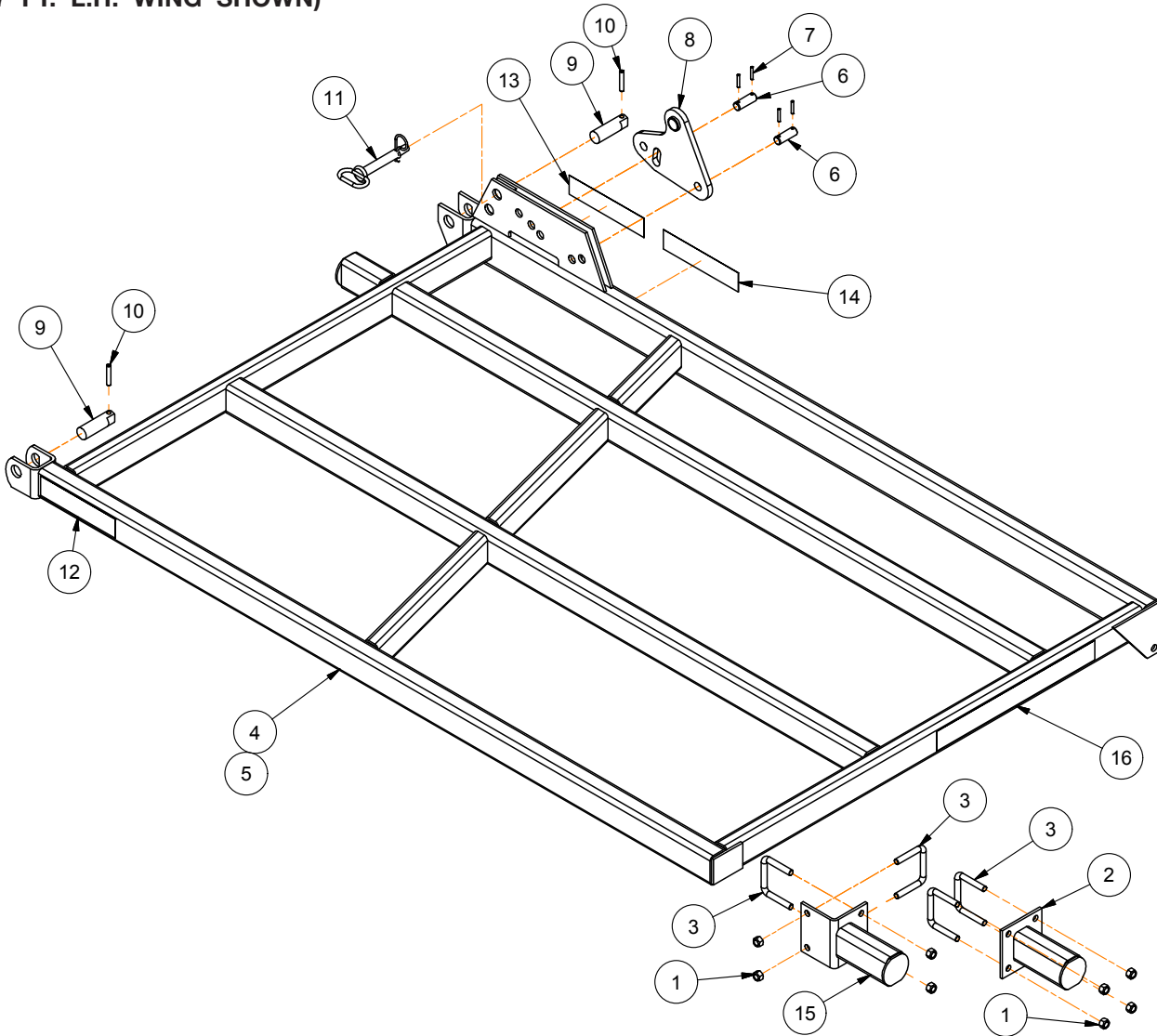
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	88703G	Main Frame 15' Weldment (Green) w/Decals	1	For 3-60" Beds Rigid Frame For 6-30" Beds Rigid Frame Serial # A61570100 and Higher
	88703R	Main Frame 15' Weldment (Red) w/Decals		
2	83881	Tube/Bushing 1 7/16" OD x 2 3/4	2	CAT 2 Quick Hitch Lower Pin
3	9003125	Decal =Fluorescent Orange=	3/4/5	
4	9003126	Reflector 2x9 =Red=	3/4/5	
5	9003127	Reflector 2x9 =Amber=	2	
6	901765	Decal UM Swoosh	2	
7	91454	Clevis Pin 1 1/8" Dia. x 4 1/2	2	
8	9951	Lynch Pin 7/16" Dia. x1 3/4	2	
9	88699G	Main Frame 15' Weldment (Green) w/Decals	1	For 4-38/39/40" Beds Rigid Frame
	88699R	Main Frame 15' Weldment (Red) w/Decals		
10	88698G	Main Frame 13' Weldment (Green) w/Decals	1	For 4-36" Beds Rigid Frame
	88698R	Main Frame 13' Weldment (Red) w/Decals		
11	88700G	Main Frame 20' Weldment (Green) w/Decals	1	For 3-66" Beds Rigid Frame
	88700R	Main Frame 20' Weldment (Red) w/Decals		
12	87684G	Main Frame 7' (Angled) (Green) w/Decals	1	For 1-80" Beds Rigid Frame
	87684R	Main Frame 7' (Angled) (Red) w/Decals		
13	9394-017	Hex Nut 7/8-14UNF	2	
14	9404-037	Lock Washer 7/8"	2	
15	97199	Hitch Pin 3/4" Dia. x 4 w/Hair Pin	1	
16	97961	Decal WARNING (Read and Understand)	1	
17	97972	Decal WARNING (Crushing)	1	
18	9947	Hitch Pin 7/8" Dia. x 5 15/32	2	
19	99507	Decal WARNING (Falling Equipment)	1	
20	88702G	Main Frame 12' Weldment (Green) w/Decals	1	For 25' Unit; 5-60" Beds Folding Frame For 28' Unit; 5-66" Beds Folding Frame Serial # A61570100 and Higher
	88702R	Main Frame 12' Weldment (Red) w/Decals		
21	75185	Pin 1 7/16" Dia. x 9 1/4"	2	Serial # A61570100 and Higher
	82024	pin 1 7/16" Dia. x 7 3/4"		Serial # A61570099 and Lower
22	83882	Tube 2" Dia. x 2 3/4"	2	
23	9501350	Locking Pin 1 3/4"	4	Serial # A61570100 and Higher
	91575	Retaining Ring 1 3/8"		Serial # A61570099 and Lower
24	95136	Decal WARNING (Folding/Unfolding Wings)	2	
25	95445	Decal WARNING (High-Pressure Fluid)	2	
26	88701G	Main Frame 9' Weldment (Green) w/Decals	1	For 22' Unit; 3-84" Beds Folding Frame For 22' Unit; 3-80" Beds Folding Frame Serial # A61570100 and Higher
	88701R	Main Frame 9' Weldment (Red) w/Decals		

Wing Components

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

(7 FT. L.H. WING SHOWN)



FIELD CULTIVATORS — Parts

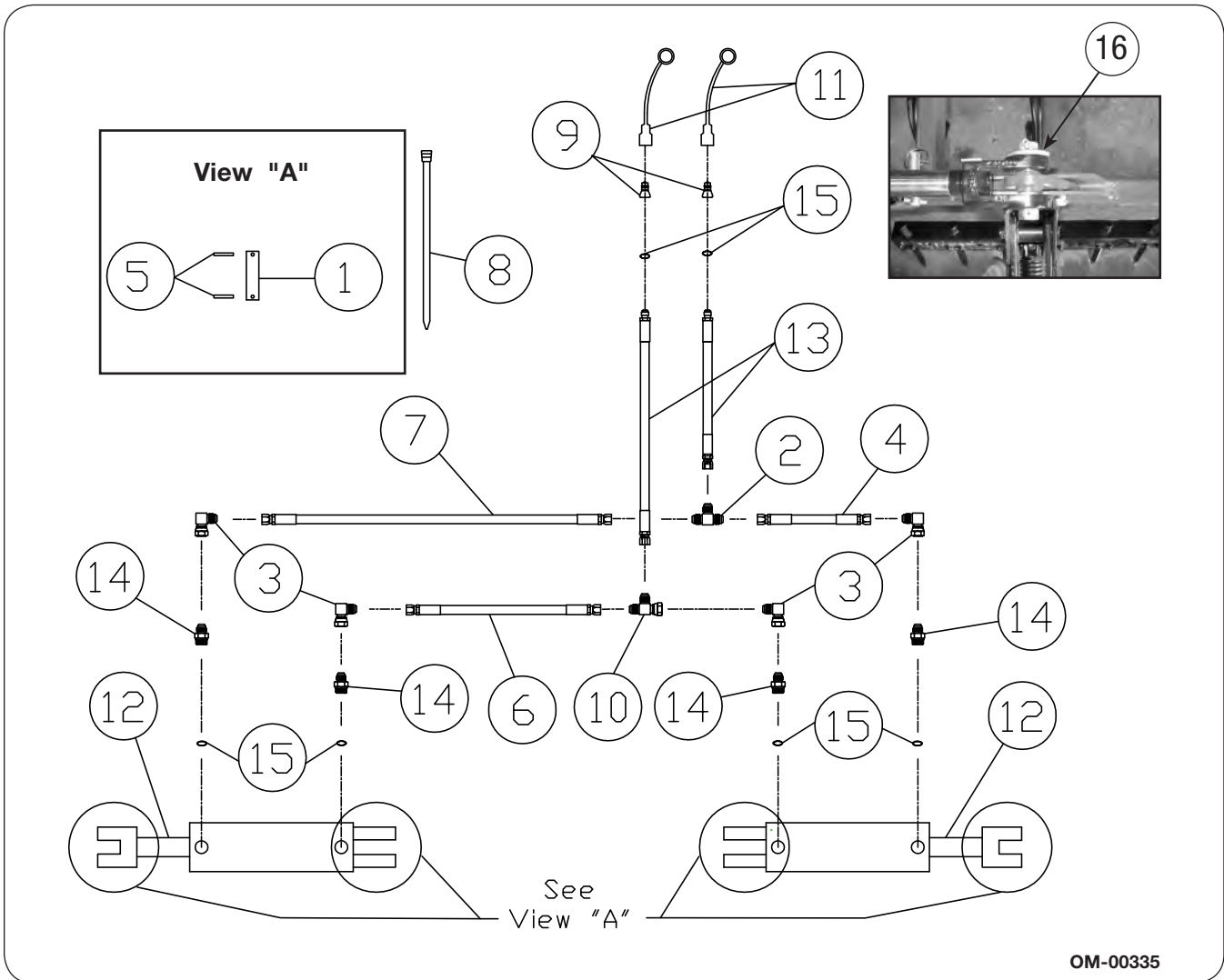
Wing Components

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	9800	Top Locknut 1/2-13UNC	
2	82741G	Extension Tube Weldment 6" Long =Green=	
	82741R	Extension Tube Weldment 6" Long =Red=	
3	91120	U-Bolt 1/2-13UNC x 3	
4	88687G	R.H. 4' Wing Weldment =Green=	
	88687R	R.H. 4' Wing Weldment =Red=	
	88689G	R.H. 5' Wing Weldment =Green=	
	88689R	R.H. 5' Wing Weldment =Red=	
	88691G	R.H. 6' Wing Weldment =Green=	
	88691R	R.H. 6' Wing Weldment =Red=	
	88693G	R.H. 7' Wing Weldment =Green=	
	88693R	R.H. 7' Wing Weldment =Red=	
	88695G	R.H. 8' Wing Weldment =Green=	
	88695R	R.H. 8' Wing Weldment =Red=	
5	88688G	L.H. 4' Wing Weldment =Green=	
	88688R	L.H. 4' Wing Weldment =Red=	
	88690G	L.H. 5' Wing Weldment =Green=	
	88690R	L.H. 5' Wing Weldment =Red=	
	88692G	L.H. 6' Wing Weldment =Green=	
	88692R	L.H. 6' Wing Weldment =Red=	
	88694G	L.H. 7' Wing Weldment =Green=	
	88694R	L.H. 7' Wing Weldment =Red=	
	88696G	L.H. 8' Wing Weldment =Green=	
	88696R	L.H. 8' Wing Weldment =Red=	
6	84963	Pin 3/4" Dia. x 2 1/8" Lg.	
7	91144-141	Spiral Pin 7/32" Dia. x 1 1/4" Lg.	
8	82240B	Lift Link Plate Weldment =Black=	
9	82323	Pin 1 1/8" Dia. x 3 5/8" Lg.	
10	91144-207	Spiral Pin 3/8" Dia. x 2" Lg.	
11	97199	Hitch Pin with Hairpin	
12	9003127	Fluorescent Strip 2 x 9 "Amber"	
13	9003126	Fluorescent Strip 2 x 9 "Red"	
14	9003125	Fluorescent Strip 2 x 9 "Red/Orange"	
15	73595G	Corner Extension Tube Weldment =Green=	
	73595R	Corner Extension Tube Weldment =Red=	
16	9500655	Decal, "PERFECTA 10"	
	9500656	Decal, "PERFECTA 12"	
	9500657	Decal, "PERFECTA 14"	

Hydraulics — Folding Perfecta

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



OM-00335

FIELD CULTIVATORS — Parts

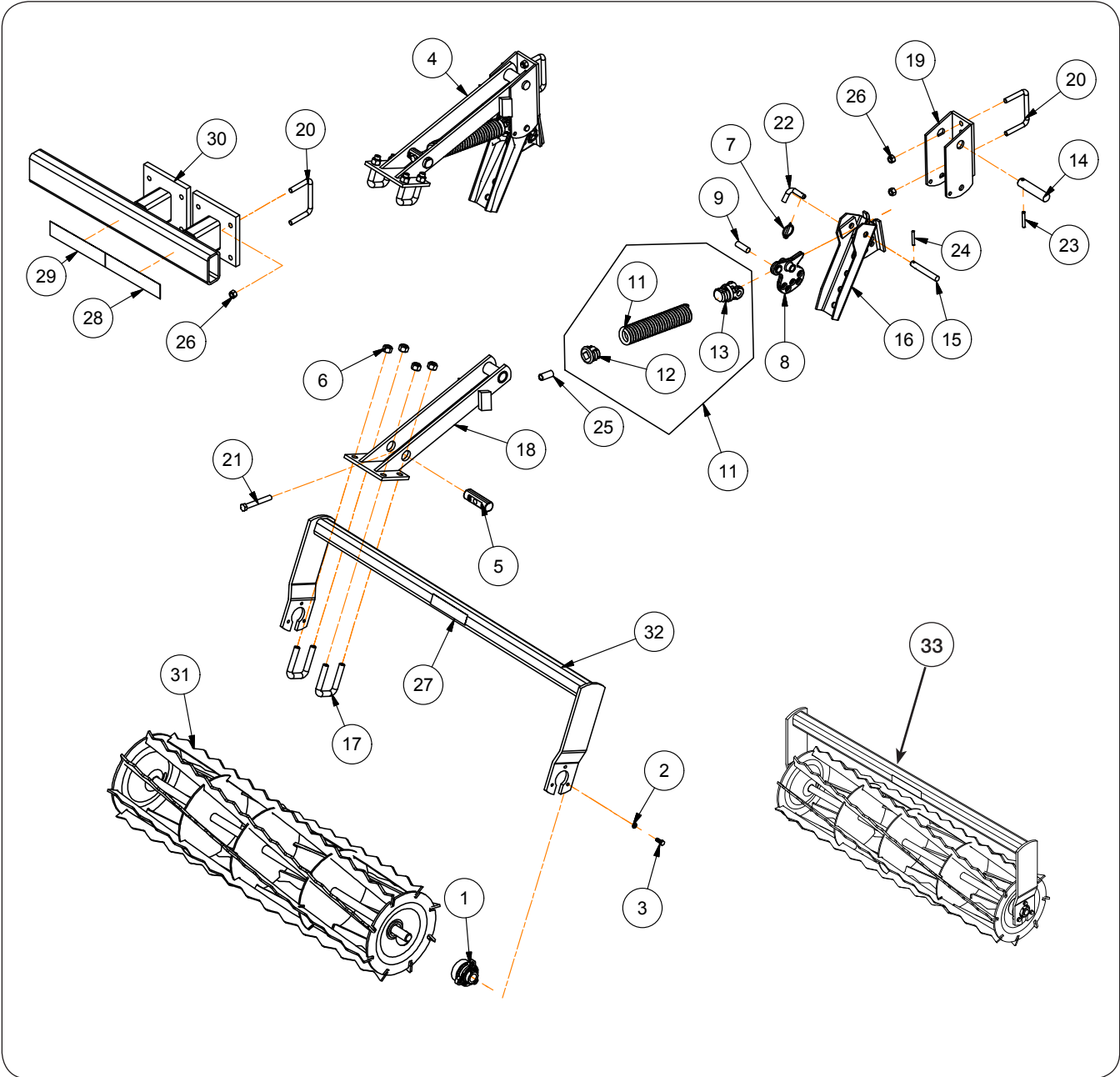
Hydraulics — Folding Perfecta

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

ITEM	PART NO.	DESCRIPTION	9' BASE		12' BASE	
			4' & 5' WINGS	6', 7' & 8' WINGS	4' & 5' WINGS	6', 7' & 8' WINGS
1	85632	Pin 1" Dia. x 3 3/4" Lg.	4	4	4	4
2	9875	Tee 9/16-18	1	1	1	1
3	9876	90° Elbow - 9/16-18	4	4	4	4
4	9502775	Hydraulic Hose 3/8" x 30" Lg.	1	1	1	1
5	91144-165	Spiral Pin 1/4" Dia. x 1 7/8" Lg.	12	12	12	12
6	9501677	Hydraulic Hose 3/8" x 54" Lg.	-	-	1	1
	9503641	Hydraulic Hose 3/8" x 20" Lg.	1	1	-	-
7	9501685	Hydraulic Hose 3/8" x 80" Lg.	-	-	1	1
	9501683	Hydraulic Hose 3/8" x 44" Lg.	1	1	-	-
8	94037	Tie - 15 1/2" Lg.	2	4	-	-
	94038	Tie - 32" Lg.	2	-	4	4
9	91383	Male Coupling	2	2	2	2
10	91465	Swivel Run Tee - 3/8" Dia.	1	1	1	1
11	91511	Dust Cap	2	2	2	2
12	95409	Hydraulic Cylinder 2 1/2 x 24	2	-	2	-
	95400	Hydraulic Cylinder 3 x 24	-	2	-	2
13	91607	Hydraulic Hose 3/8 x 102" Lg.	2	2	2	2
14	91608	Orifice	4	4	4	4
15	9840	O-Ring (For Repairs Only)	-	-	-	-
16	9448	Flat Washer 1"	-	2	-	-
	95398	Cylinder Repair Kit (For 3 x 24" Cylinder)	-	-	-	-
	95388	Cylinder Repair Kit (For 2 1/2 x 24" Cylinder)	-	-	-	-

Single Rolling Harrow Basket & Mounting Arm Components

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



FIELD CULTIVATORS — Parts

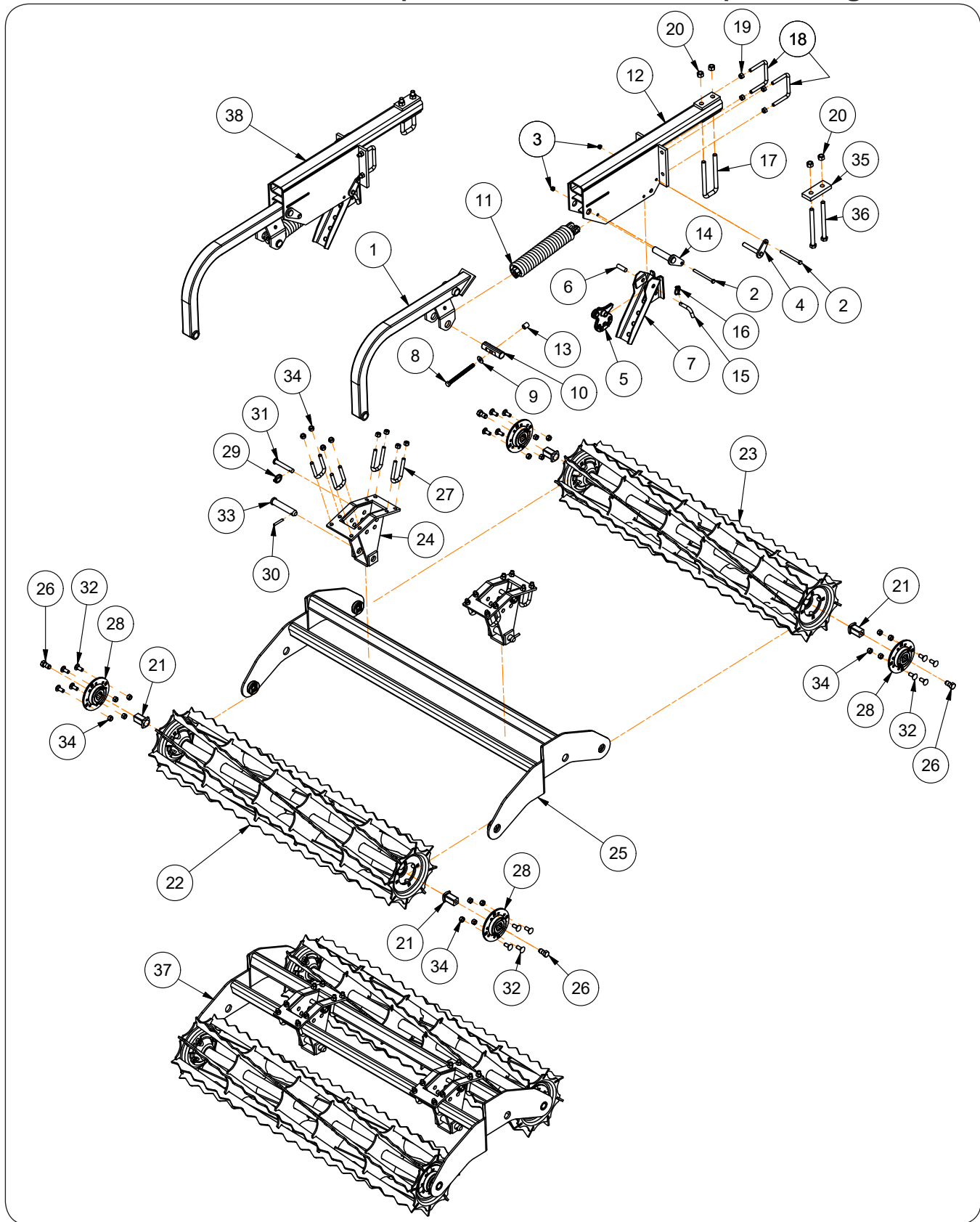
Single Rolling Harrow Basket & Mounting Arm Components

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	87181	Flange Bearing Assembly	Incl. washer, flange bearing, seal & collar
2	9404-019	5/16 Lock Washer	
3	97321	Capscrew 5/16-18 x 7/8" Lg. (Epoxy Lock)	
4	74227B	Arm Assembly	Includes Items 5 through 26
5	67173	Trunnion	
6	9801	Locknut 5/8-11	
7	9093	Klik Pin 3/16" Dia.	
8	89256	Link	
9	81321	Pin 5/8" Dia. x 1 7/8" Lg.	
10	82251B	Spring Assembly	
11	9798B	Spring	
12	8001B	Spring Plug	
13	81249B	Spring Clevis	
14	84356	D-Pin 1" Dia. x 4 1/2" Lg.	
15	84371	D-Pin 5/8" Dia. x 4 3/8" Lg.	
16	74848B	Saddle Weldment	
17	85620	U-Bolt 5/8-11	
18	86825B	Arm Weldment	
19	81308B	Mounting Bracket	
20	91434	U-Bolt 1/2-13	
21	91552	Full Threaded Bolt 1/2-13 x 4" Lg.	
22	902450	Bent Pin 1/2" Dia.	
23	91144-186	Spiral Pin 5/16" Dia. x 2" Lg.	
24	91144-165	Spiral Pin 1/4" Dia. x 1 7/8" Lg.	
25	84259PL	Spacer Tube	
26	9800	Locknut 1/2-13	
27	92256	Decal, Roller Action	
28	9003125	Reflector 2 x 9 (Fluorescent Orange)	
29	9003126	Reflector 2 x 9 (Red)	
30	87051B	Rear Bracket	For Bedded Crop Perfecta ONLY
31	84432	2 Ft. Aggressive Roller	
	81121	3 Ft. Aggressive Roller	
	81123	4 Ft. Aggressive Roller	
	81125	5 Ft. Aggressive Roller	
	71423B	6 Ft. Aggressive Roller	
32	84435	2 Ft. Rolling Harrow Frame	
	81326	3 Ft. Rolling Harrow Frame	
	81327	4 Ft. Rolling Harrow Frame	
	81328	5 Ft. Rolling Harrow Frame	
	71364B	6 Ft. Rolling Harrow Frame	
33	84431	Basket & Frame 2 Ft. Assembly	Includes Items 1, 2, 3, 27, 31, 32
	81323	Basket & Frame 3 Ft. Assembly	
	81324	Basket & Frame 4 Ft. Assembly	
	81325	Basket & Frame 5 Ft. Assembly	
	86388B	Basket & Frame 6 Ft. Assembly	

Double Rolling Harrow Basket & Mounting Arm Components

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



FIELD CULTIVATORS — Parts

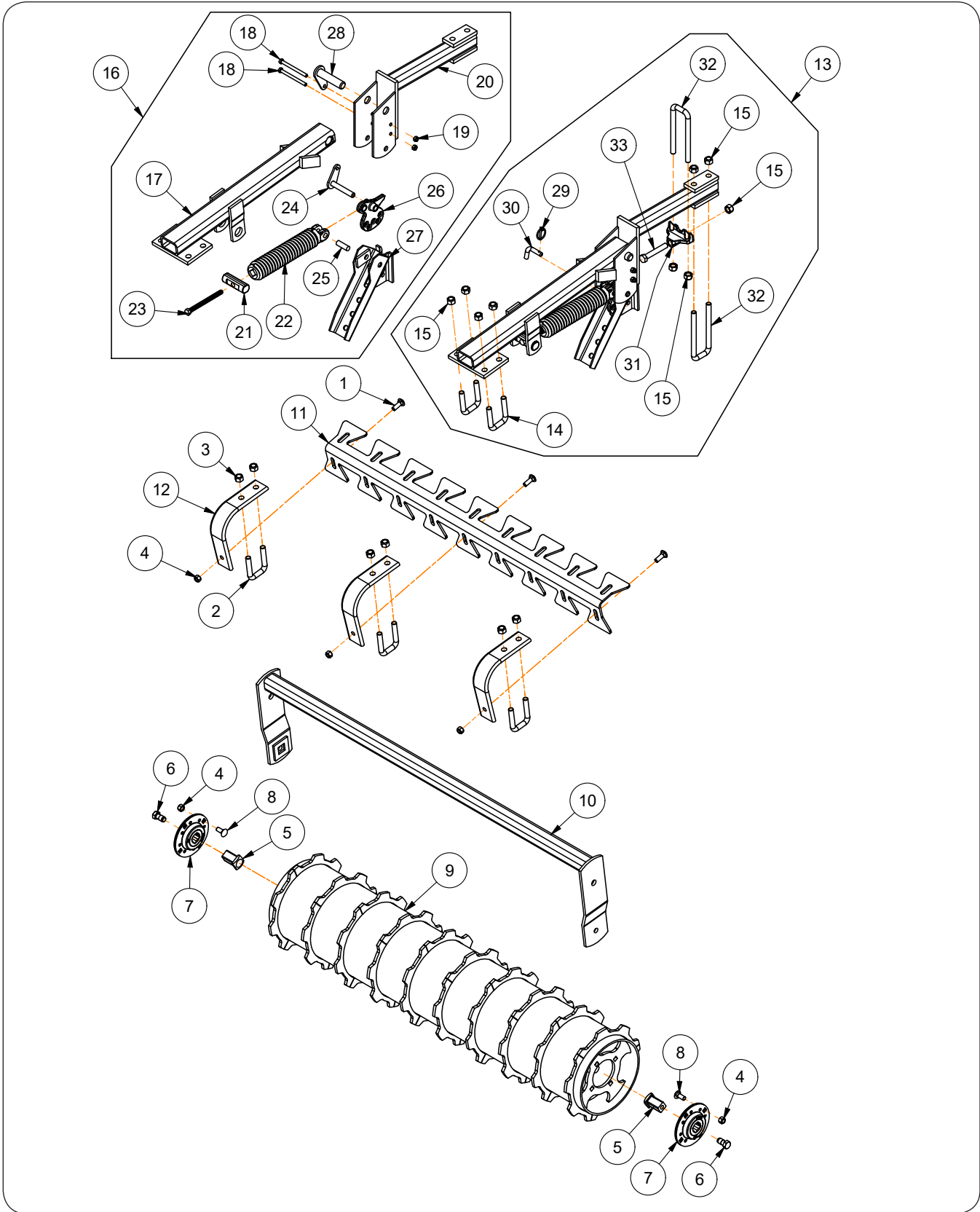
Double Rolling Harrow Basket & Mounting Arm Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	74793B	Bent Arm Weldment	2	
2	9390-068	Capscrew 3/8"-16UNC x 4 1/2" G5	4	
3	9928	Lock Nut/Top 3/8"-16UNC	4	
4	86251B	Pin Weldment 5/8" Dia. x 3 7/8"	2	
5	89256	Link/Adjustable Plate	2	
6	81321	Pin 5/8" Dia. x 1 7/8"	2	
7	74848B	Saddle Weldment	2	
8	97171	Capscrew 1/2"-13UNC x 6" G5 Full Threaded	2	
9	9405-082	Flat Washer 7/16" USS	2	
10	74850	Trunnion 1 1/4" Dia. x 4 1/4"	2	
11	75473B	Spring Assembly	2	
12	76405	Rear Bracket Weldment	2	
13	21491	Bushing	2	
14	76331PL	Pin Weldment 1" Dia. x 4 11/16"	2	
15	902450	Bent Pin 1/2" Dia.	2	
16	9093	Klik Pin 3/16" Dia.	2	
17	9501753	U-Bolt 5/8"-11UNC x 7 1/4"	2	
18	95161	U-Bolt 1/2"-13UNC x 3 1/2"	4	
19	9800	Lock Nut 1/2"-13UNC	8	
20	9801	Lock Nut 5/8"-11UNC	4	
21	74280	Bearing Bolt 1.125SQ x 2 1/16	4	
22	74596B	Regular Basket 3' Weldment	1	
	74597B	Regular Basket 4' Weldment		
	74576B	Regular Basket 5' Weldment (SHOWN)		
	74598B	Regular Basket 6' Weldment		
23	74599B	Aggressive Basket 3' Weldment	1	
	74600B	Aggressive Basket 4' Weldment		
	74579B	Aggressive Basket 5' Weldment (SHOWN)		
	74601B	Aggressive Basket 6' Weldment		
24	75235B	Bolt-On Basket Bracket Weldment	2	
25	78821B	Frame 3' Weldment	1	
	76487B	Frame 4' Weldment		
	76478B	Frame 5' Weldment (SHOWN)		
	76473B	Frame 6' Weldment		
26	900872	Capscrew 5/8"-11UNC x 1 1/4" G5 Full Threaded	4	
27	901837	U-Bolt 1/2"-13UNC	8	
28	902714	Flange Bearing Assembly	4	
29	9093	Klik Pin 3/16" Dia.	2	
30	91144-186	Spiral Pin 5/16" Dia. x 2"	2	
31	91523	Clevis Pin 5/8" Dia. x 4"	2	
32	9388-103	Carriage Bolt 1/2"-13UNC x 1 1/4" G5	16	
33	9500423	Pin 1" Dia. x 5 1/8"	2	
34	9800	Lock Nut 1/2"-13UNC	32	
35	77059	Mounting Arm Kit	1	Includes Bar & Items 20 & 36
	76442B	Bar 5/8" x 2" x 5"	2	
36	9390-139	Capscrew, 5/8"-11UNC x 7 1/2"	4	
37	78822B	Basket & Frame 3' Assembly	-	Includes Items 21-23, 25, 26, 28, 32, 34
	76486B	Basket & Frame 4' Assembly	-	
	76477B	Basket & Frame 5' Assembly	-	
	76471B	Basket & Frame 6' Assembly	-	
38	76441B	Mounting Arm Assembly	-	Includes Items 1-20, 35 & 36

Single Drum Roller & Mounting Arm Components

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



FIELD CULTIVATORS — Parts

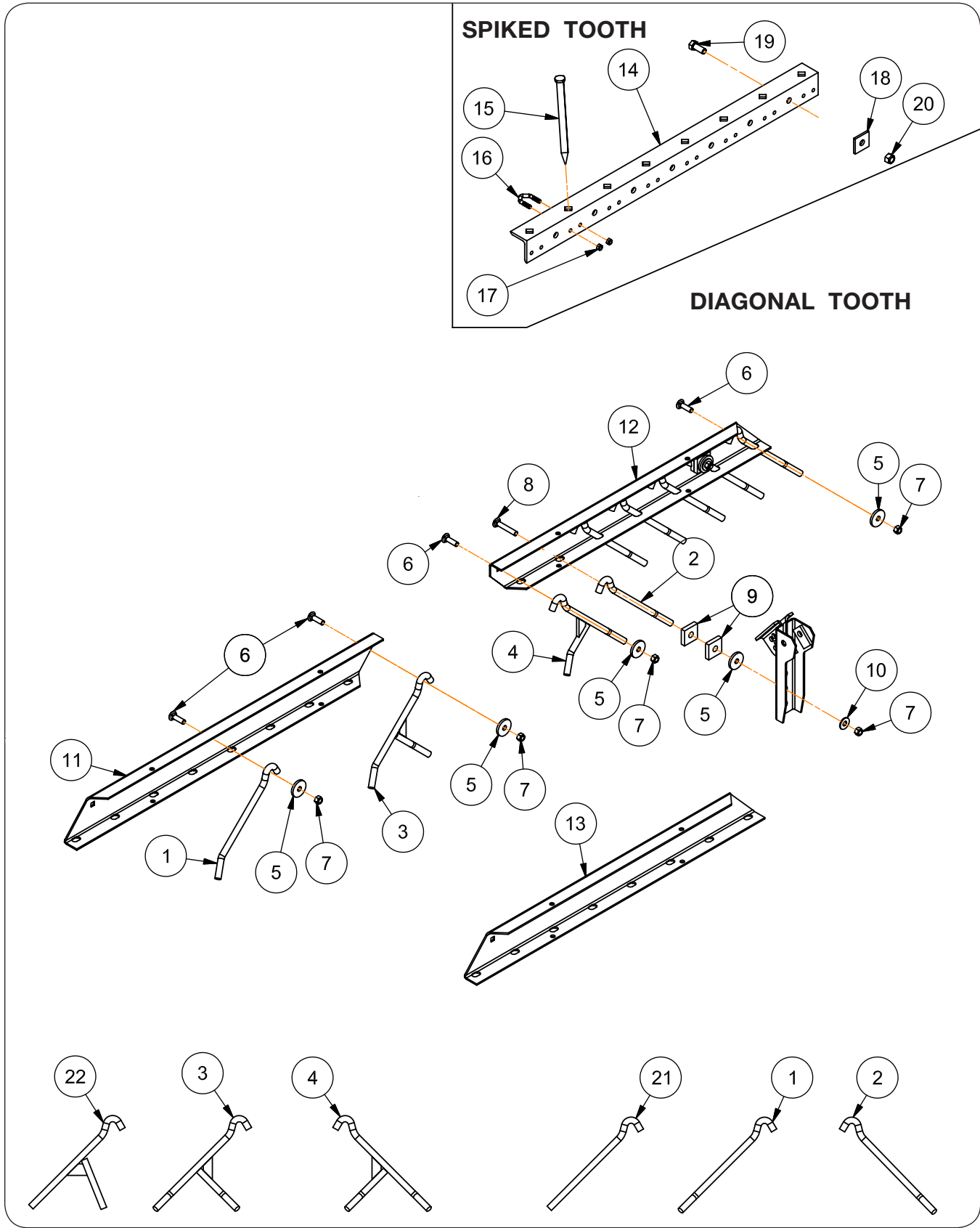
Single Drum Roller & Mounting Arm Components

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

ITEM	PART NUMBER	DESCRIPTION	QTY PER DRUM ROLLER ASSEMBLY				
			3 FT.	4 FT.	5 FT.	6 FT. LH	6 FT. RH
	78832B	Drum Roller 3 Ft. Assembly	1	-	-	-	-
	76513B	Drum Roller 4 Ft. Assembly	-	1	-	-	-
	76512B	Drum Roller 5 Ft. Assembly (SHOWN)	-	-	1	-	-
	76514B	Drum Roller 6 Ft. LH Assembly	-	-	-	1	-
	76515B	Drum Roller 6 Ft. RH Assembly	-	-	-	-	1
1	9388-104	Carriage Bolt 1/2"-13UNC x 1 1/2" G5	2	2	3	4	4
2	85620	U-Bolt 5/8"-11UNC	2	2	3	4	4
3	9801	Locknut 5/8"-11UNC	4	4	6	8	8
4	9800	Locknut 1/2"-13UNC	10	10	11	12	12
5	74280	Bearing Bolt 1.125" Sq.	2	2	2	2	2
6	900872	Capscrew 5/8"-11UNC 1 1/4" G5	2	2	2	2	2
7	902714	Flange Bearing 1 1/8" Sq. Bore	2	2	2	2	2
8	9388-103	Carriage Bolt 1/2"-13UNC x 1 1/4" G5	8	8	8	8	8
9	76024B	Drum Roller 3 Ft. Weldment	1	-	-	-	-
	76025B	Drum Roller 4 Ft. Weldment	-	1	-	-	-
	76009B	Drum Roller 5 Ft. Weldment (SHOWN)	-	-	1	-	-
	76026B	Drum Roller 6 Ft. Weldment	-	-	-	1	1
10	78831B	Frame 3 Ft. Weldment	1	-	-	-	-
	76447B	Frame 4 Ft. Weldment	-	1	-	-	-
	76480B	Frame 5 Ft. Weldment (SHOWN)	-	-	1	-	-
	76443B	Frame 6 Ft. Weldment	-	-	-	1	1
11	78833B	Drum Scraper 3 Ft. Plate (Gen 2)	1	-	-	-	-
	76969B	Drum Scraper 4 Ft. Plate (Gen 2)	-	1	-	1	1
	76970B	Drum Scraper 5 Ft. Plate (Gen 2) (SHOWN)	-	-	1	-	-
	76971B	Drum Scraper 2 Ft. Plate (Gen 2)	-	-	-	1	1
12	76464	Scraper Mounting Arm	2	2	3	4	4
13	76425B	Mounting Arm Drum Roller	2	2	2	2	2
14	85620	U-Bolt 5/8"-11UNC	2	2	2	2	2
15	9801	Locknut 5/8"-11UNC	9	9	9	9	9
16	76427B	Mounting Arm Assembly	1	1	1	1	1
17	76430	Straight Arm Weldment	1	1	1	1	1
18	9390-068	Capscrew 3/8"-16UNC x 4 1/2"	2	2	2	2	2
19	9928	Locknut 3/8"-16UNC	2	2	2	2	2
20	76428	Mounting Bracket	1	1	1	1	1
21	67173	Trunnion	1	1	1	1	1
22	82250B	Spring Assembly	1	1	1	1	1
23	97171	Capscrew 1/2"-13UNC x 6"	1	1	1	1	1
24	86251B	Pin Weldment	1	1	1	1	1
25	81321	Pin	1	1	1	1	1
26	89256	Link	1	1	1	1	1
27	74848	Saddle Weldment	1	1	1	1	1
28	76331PL	Pin Weldment	1	1	1	1	1
29	9093	Klik Pin 3/16" Dia.	1	1	1	1	1
30	902450	Bent Pin 1/2" Dia. x 1 7/32"	1	1	1	1	1
31	67922B	Clamp	1	1	1	1	1
32	9501753	U-Bolt 5/8"-11UNC	2	2	2	2	2
33	9390-132	Capscrew 5/8"-11UNC x 4"	1	1	1	1	1

Leveler Bar Components

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



FIELD CULTIVATORS — Parts

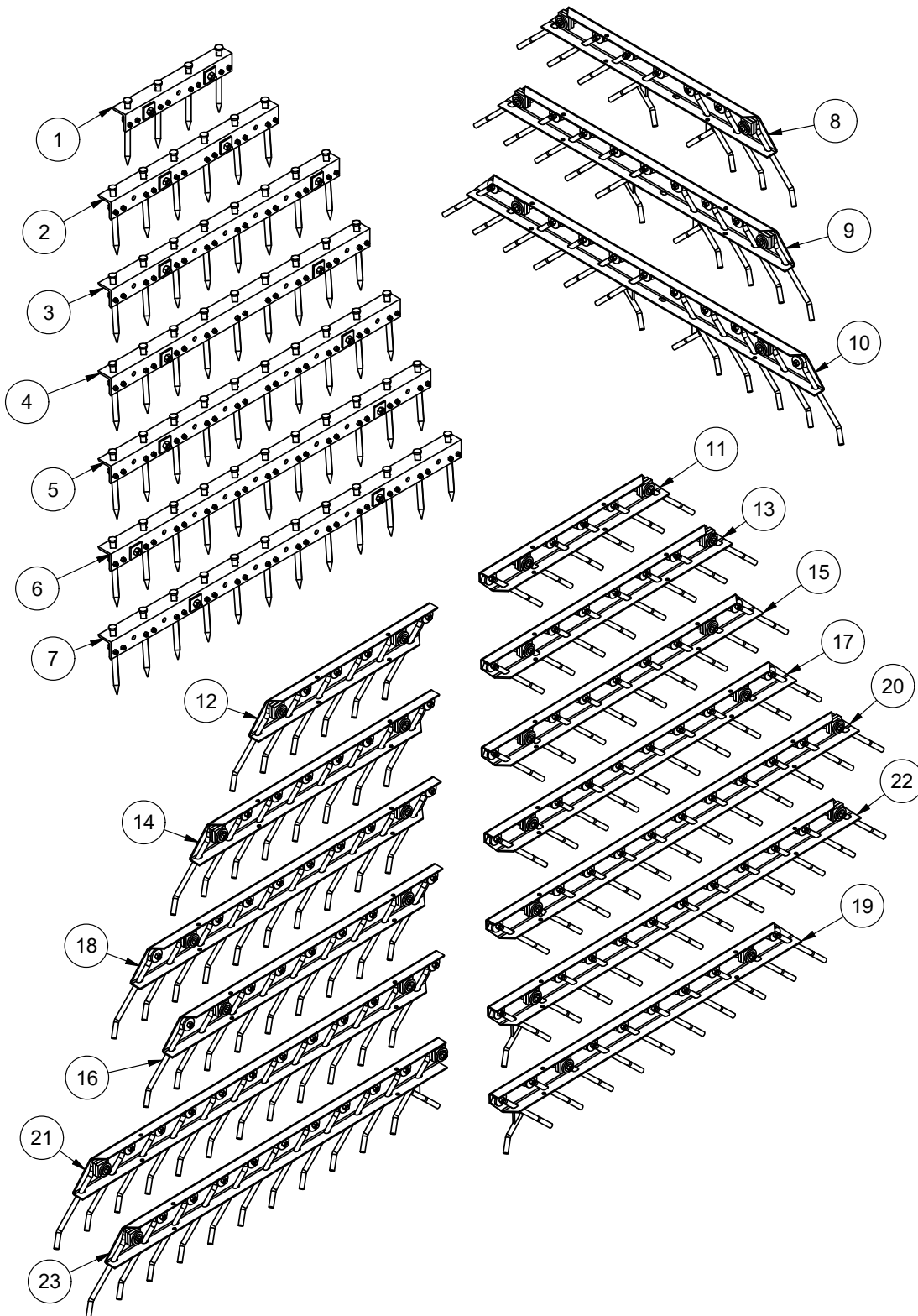
Leveler Bar Components

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" Gr5	
7	9800	Locknut/Top 1/2"-13UNC	
8	9388-110	Carriage Bolt 1/2"-13UNC x 3" Gr5	
9	3788B	Spacer (Required In Two Places)	
10	9405-088	Flat Washer 1/2" USS	
11	71257B	3 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand	
	71259B	4 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand	
	71296B	4 1/2 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand	
	71261B	5 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand	
	72147B	6 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand	
	72272B	6 Ft. Diagonal Bent Tooth Leveler-Bar Left-Hand-Y	
12	71256B	3 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand	
	71258B	4 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand	
	71316B	4 1/2 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand	
	71260B	5 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand	
	71260B	5 1/2 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand-Y	
	72144B	6 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand	
13	72144B	6 Ft. Diagonal Bent Tooth Leveler-Bar Right-Hand-Y	
	71254B	5 Ft. Diagonal Bent Tooth Leveler-Bar Center	
	71255B	6 Ft. Diagonal Bent Tooth Leveler-Bar Center	
14	71583B	7 Ft. Diagonal Bent Tooth Leveler-Bar Center	
	71300B	2 Ft. Spike Tooth Leveler-Bar	
	71184B	3 Ft. Spike Tooth Leveler-Bar	
	71185B	4 Ft. Spike Tooth Leveler-Bar	
	106918B	4 1/2 Ft. Spike Tooth Leveler-Bar	
	71186B	5 Ft. Spike Tooth Leveler-Bar	
15	72965B	5 1/2 Ft. Spike Tooth Leveler-Bar	
	71580B	6 Ft. Spike Tooth Leveler-Bar	
16	9634P	Diamond-Shaped Spike Tooth	
17	9635	V-Bolt 3/8-16	
18	9928	Locknut 3/8-16UNC	
19	83284	Square Washer	
20	9390-122	Capscrew 5/8-11 x 1 1/2" Lg.	
21	9801	Hex Nut 5/8-11	
22	71088B	Diagonal Round Tooth (For Service ONLY)	
	71142B	Diagonal Round "Y" Tooth (For Service ONLY)	

Leveler Bar Assemblies

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



Leveler Bar Assemblies

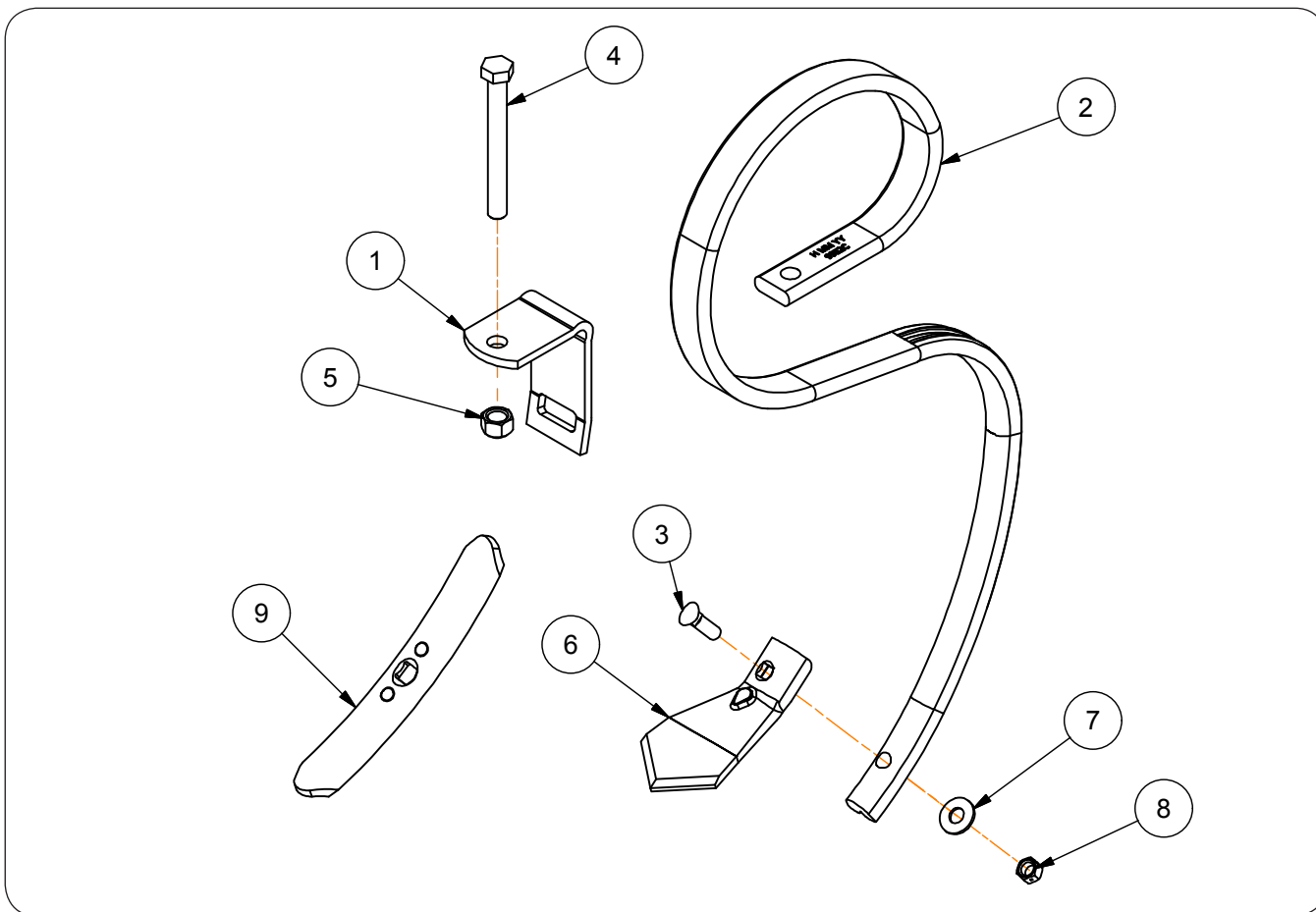
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION
1	71299	Straight Spike-Tooth One Bar 2' Assembly
2	71181	Straight Spike-Tooth One Bar 3' Assembly
3	71182	Straight Spike-Tooth One Bar 4' Assembly
4	106919	Straight Spike-Tooth One Bar 4 1/2' Assembly
5	71183	Straight Spike-Tooth One Bar 5' Assembly
6	72966B	Straight Spike-Tooth One Bar 5 1/2' Assembly
7	71579B	Straight Spike-Tooth One Bar 6' Assembly
8	74687B	Diagonal-Tooth One Bar 5' CTR Assembly
9	74688B	Diagonal-Tooth One Bar 6' CTR Assembly
10	76692B	Diagonal-Tooth One Bar 7' CTR Assembly
11	74680B	Diagonal-Tooth One Bar 3' RH Assembly
12	74679B	Diagonal-Tooth One Bar 3' LH Assembly
13	74682B	Diagonal-Tooth One Bar 4' RH Assembly
14	74681B	Diagonal-Tooth One Bar 4' LH Assembly
15	76830B	Diagonal-Tooth One Bar 4 1/2' RH Assembly
16	76831B	Diagonal-Tooth One Bar 4 1/2' LH Assembly
17	74684B	Diagonal-Tooth One Bar 5' RH Assembly
18	74683B	Diagonal-Tooth One Bar 5' LH Assembly
19	76911B	Diagonal-Tooth One Bar 5 1/2' RH-Y Assembly
20	74686B	Diagonal-Tooth One Bar 6' RH Assembly
21	74685B	Diagonal-Tooth One Bar 6' LH Assembly
22	74216B	Diagonal-Tooth One Bar 6' RH Y Assembly
23	74215B	Diagonal-Tooth One Bar 6' LH Y Assembly

FIELD CULTIVATORS — Parts

S-Tines, Sweeps & Shovels — Model 10

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

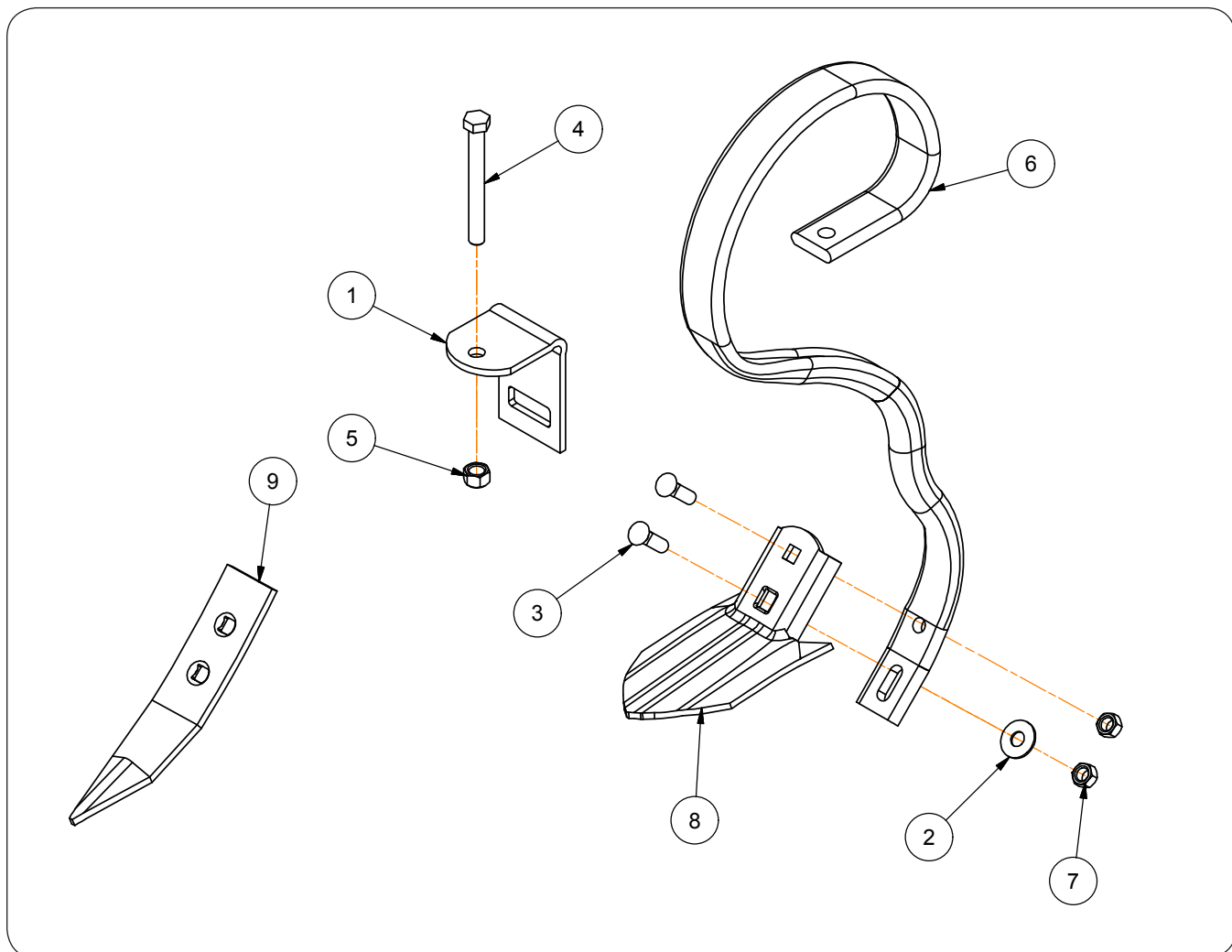


ITEM	PART NO.	DESCRIPTION	NOTES
1	82065	Clamp	
2	9952	S-Tine 1 1/4 x 1/2 (32 x 12 M.M.)	
3	9823	Plow Bolt 3/8-16UNC x 1 1/2" Lg.	Grade 8
4	9390-112	Capscrew 1/2-13UNC x 4 1/2" Lg.	Grade 5
5	9800	Locknut 1/2-13UNC	
6	91381	Sweep 2 3/4"	
7	9005471	Flat Washer 3/8"	Hardened
8	902875	Locknut 3/8-16UNC	
9	9974	Point 8"x 1 3/8" X 1/4"	

FIELD CULTIVATORS — Parts

S-Tines, Sweeps & Shovels — Model 12

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

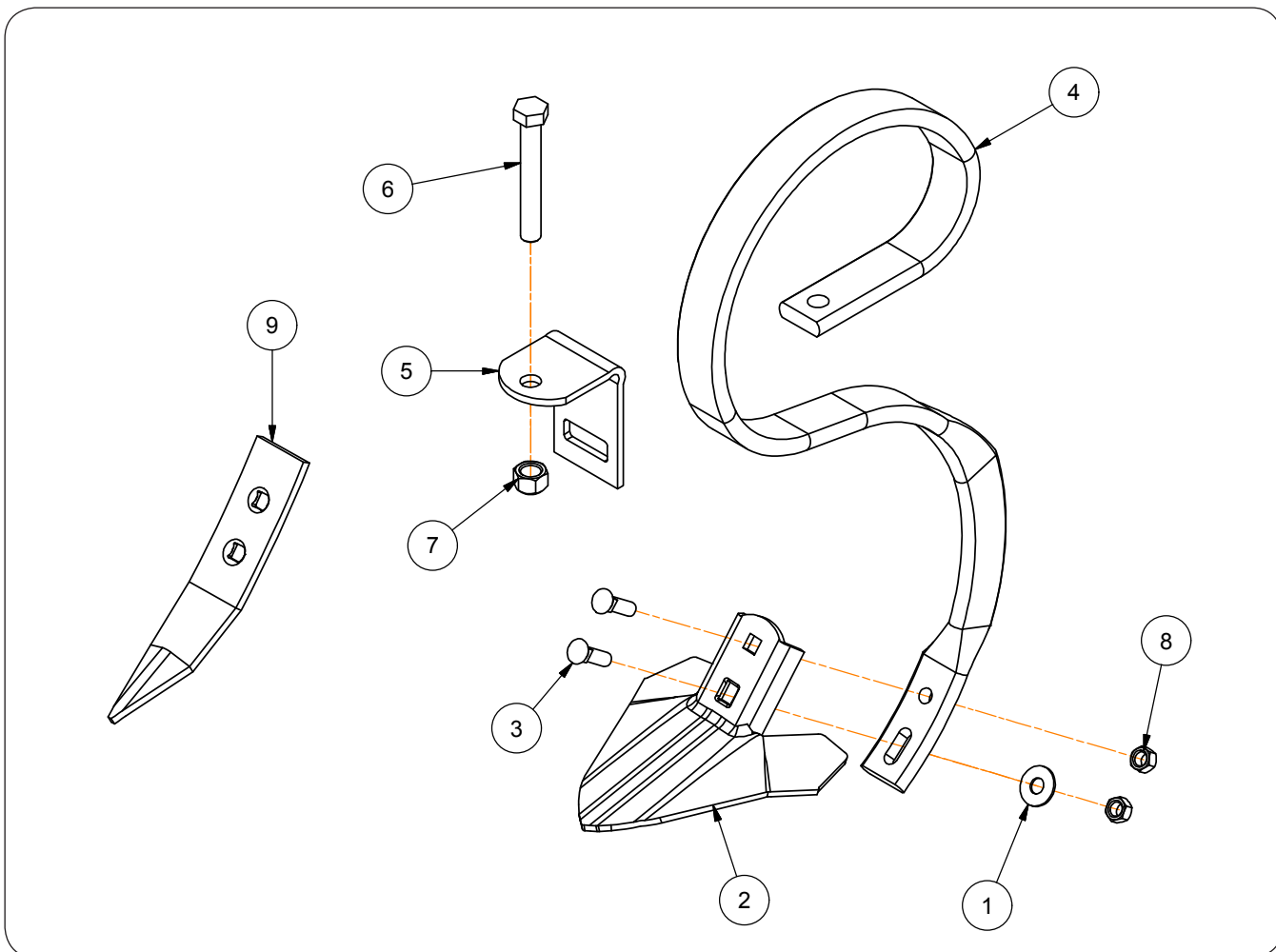


ITEM	PART NO.	DESCRIPTION	NOTES
1	83417	Clamp	
2	9405-082	Flat Washer 7/16" USS	
3	91411	Plow Bolt 7/16-14UNC x 1 1/2" #3 Flat Head	Grade 5
4	9390-112	Capscrew 1/2-13UNC x 4 1/2"	Grade 5
5	9800	Locknut 1/2-13UNC	
6	94138	S-Tine H.D. Edge Rolled (High Residue) .472x1.772x18.96	
7	9799	Locknut 7/16-14UNC	
8	9500465	Sweep 4"	
9	95848	Point Shovel (Non-Reversible) 2x5/16x9 1/2	

FIELD CULTIVATORS — Parts

S-Tines, Sweeps & Shovels — Model 14

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

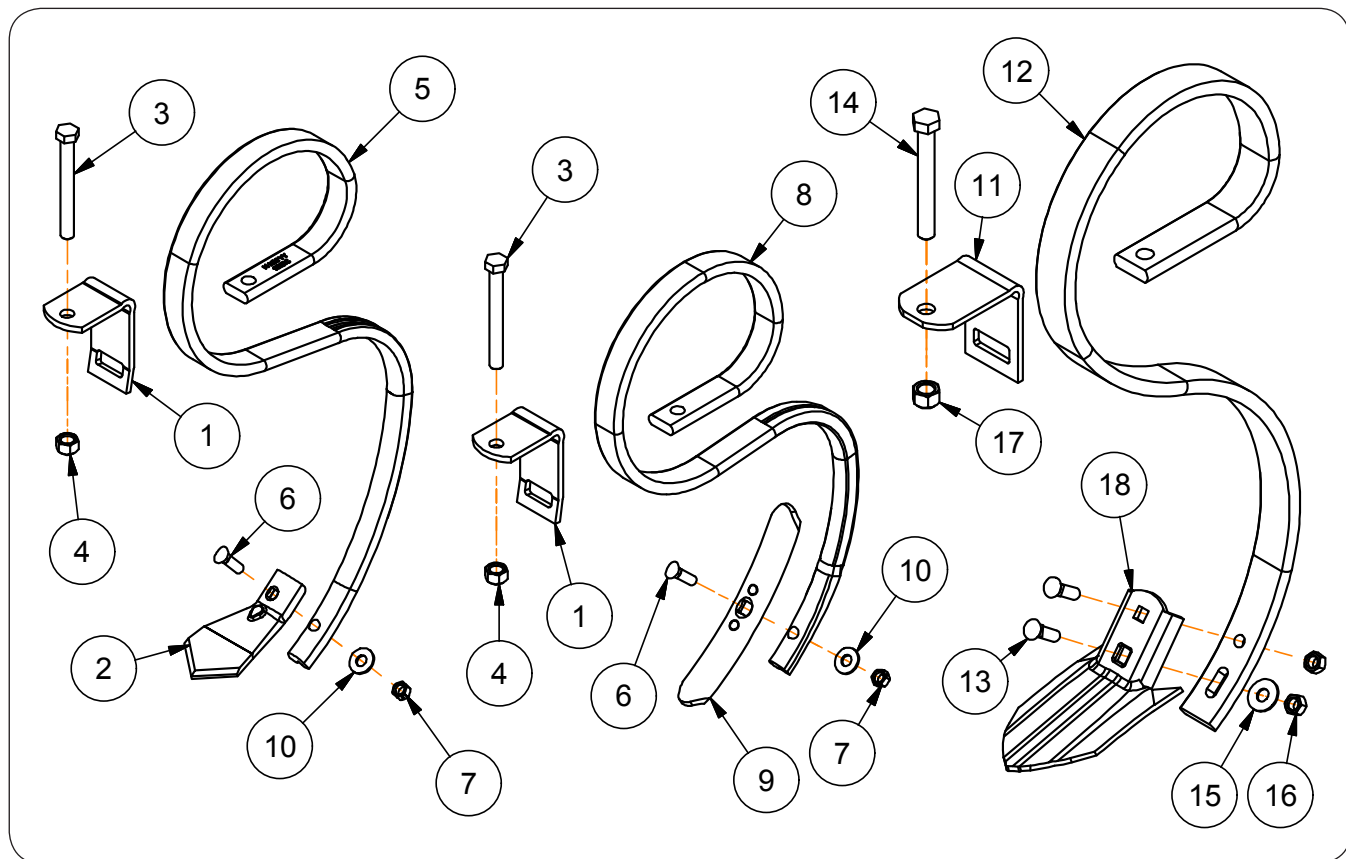


ITEM	PART NO.	DESCRIPTION	NOTES
1	9405-082	Flat Washer 7/16" USS	
2	93687	Sweep 7"	
3	91411	Plow Bolt 7/16-14UNC x 1 1/2" #3 Flat Head	Grade 5
4	91495	S-Tine with Edge Flattened For Trash Clearance 9/16x1 3/4x19 1/4	
5	82066	Clamp	
6	9390-133	Capscrew 5/8-11UNC x 4 1/2"	Grade 5
7	9801	Locknut 5/8-11UNC	
8	9799	Locknut 7/16-14UNC	
9	95848	Point Shovel (Non-Reversible) 2x5/16x9 1/2	

FIELD CULTIVATORS — Parts

S-Tines — Bedded Crop Perfecta

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

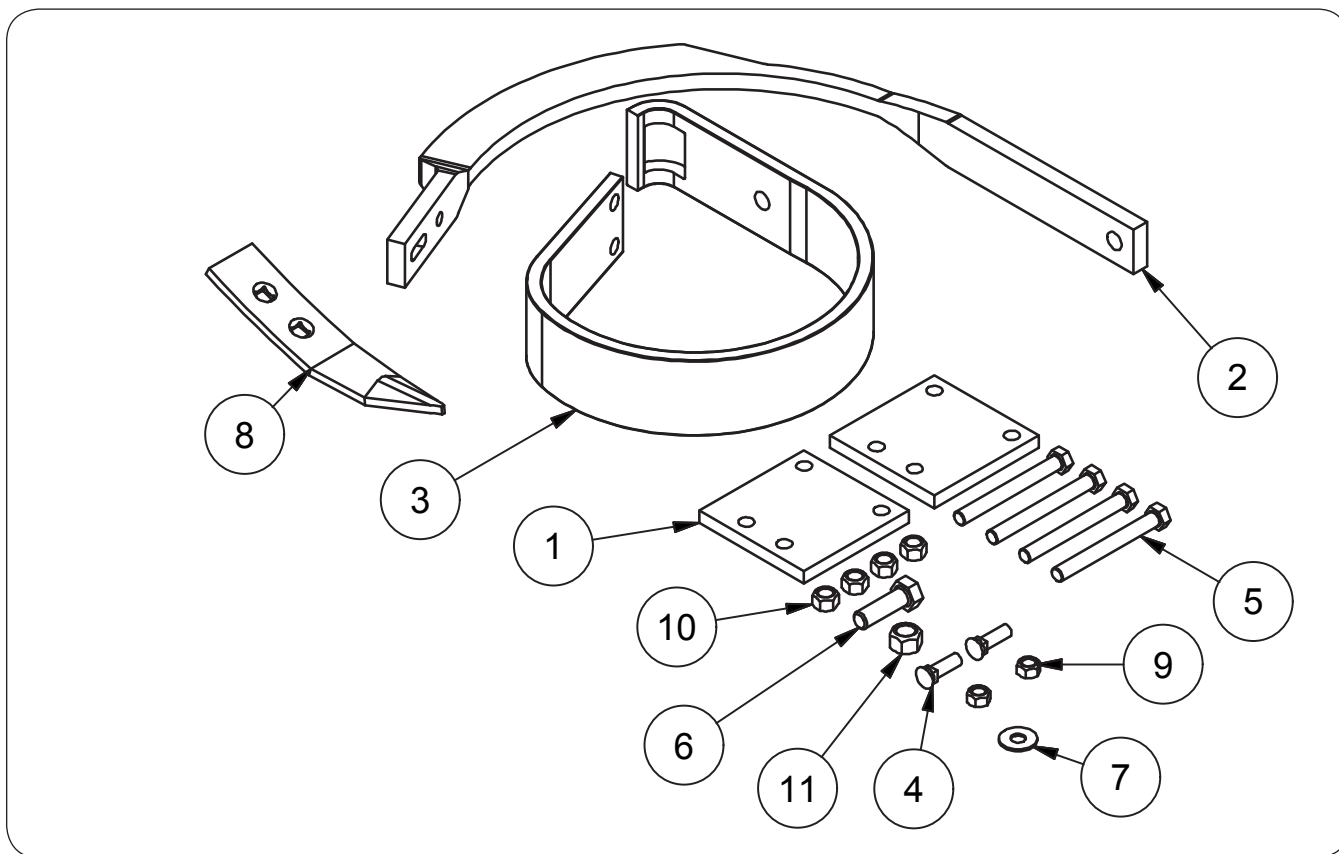


ITEM	PART NO.	DESCRIPTION	NOTES
1	82065	Clamp	
2	91381	Sweep 1/4 x 2 3/4	
3	9390-112	Capscrew 1/2-13 x 4 1/2" Lg.	
4	9800	Locknut 1/2-13	
5	9952	S-Tine .472x1.25x18 7/32	
6	9823	#8 Plow Bolt 3/8-16 x 1 1/2" Lg.	
7	902875	Locknut 3/8-16	
8	9820	S-Tine 1 1/4x.472x14.35	
9	9974	Point 8" x 1/4	
10	9005471	Flat Washer 3/8"	
11	82065	Clamp	
12	91221	S-Tine 9/16 x 1 3/4 x 22.32	
13	91411	Plow Bolt 7/16-14UNC x 1 1/2" #3 Flat Head	Grade 5
14	9390-134	Capscrew 5/8-11UNC x 5	Grade 5
15	9405-082	Flat Washer 7/16" USS	
16	9799	Locknut 7/16-14UNC	
17	9801	Locknut 5/8-11UNC	
18	9500465	Sweep Pattern 1/4 x 4 w/47" Stem Angle	

FIELD CULTIVATORS — Parts

S-Tine Heavy-Duty Assembly — Bedded Crop Perfecta

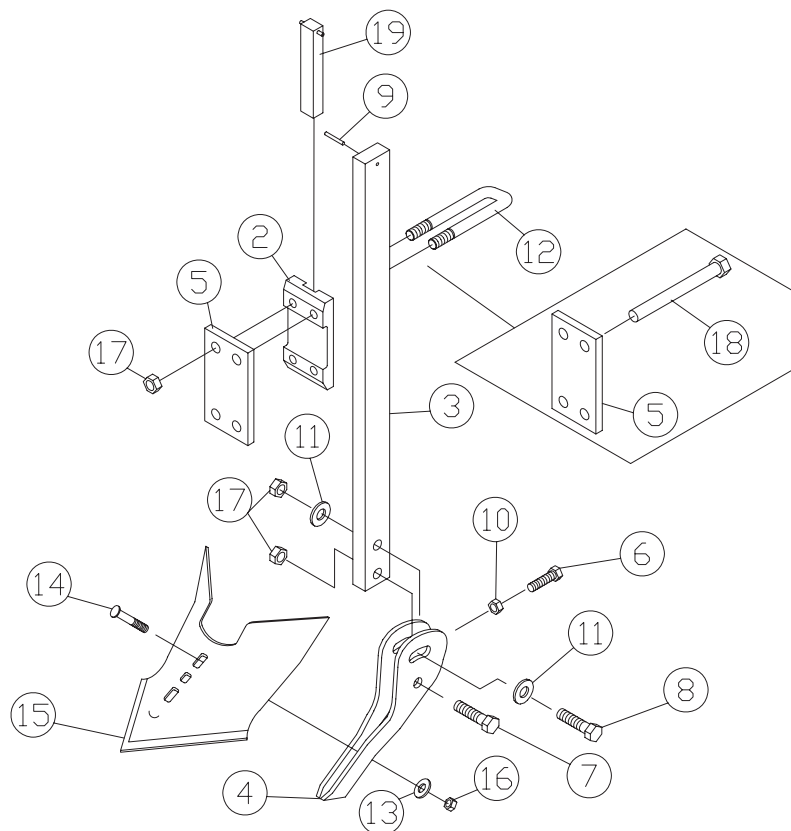
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	75955B	Plate	2	
2	9002071B	Shank	1	
3	9002116B	K-Flex Bracket	1	
4	91411	Plow Bolt 7/16-14UNC x 1 1/2 Gr.5	2	
5	9390-112	Capscrew 1/2-13UNC x 4 1/2 Gr.5	4	
6	9390-124	Capscrew 5/8-11UNC x 2 Gr.5	1	
7	9405-082	Flat Washer 7/16" USS	1	
8	95848	Point	1	
9	9799	Locknut 7/16-14UNC	2	
10	9800	Locknut 1/2-13UNC	4	
11	9801	Locknut 5/8-11UNC	1	

Shank Assembly - Bedded Crop Perfecta

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

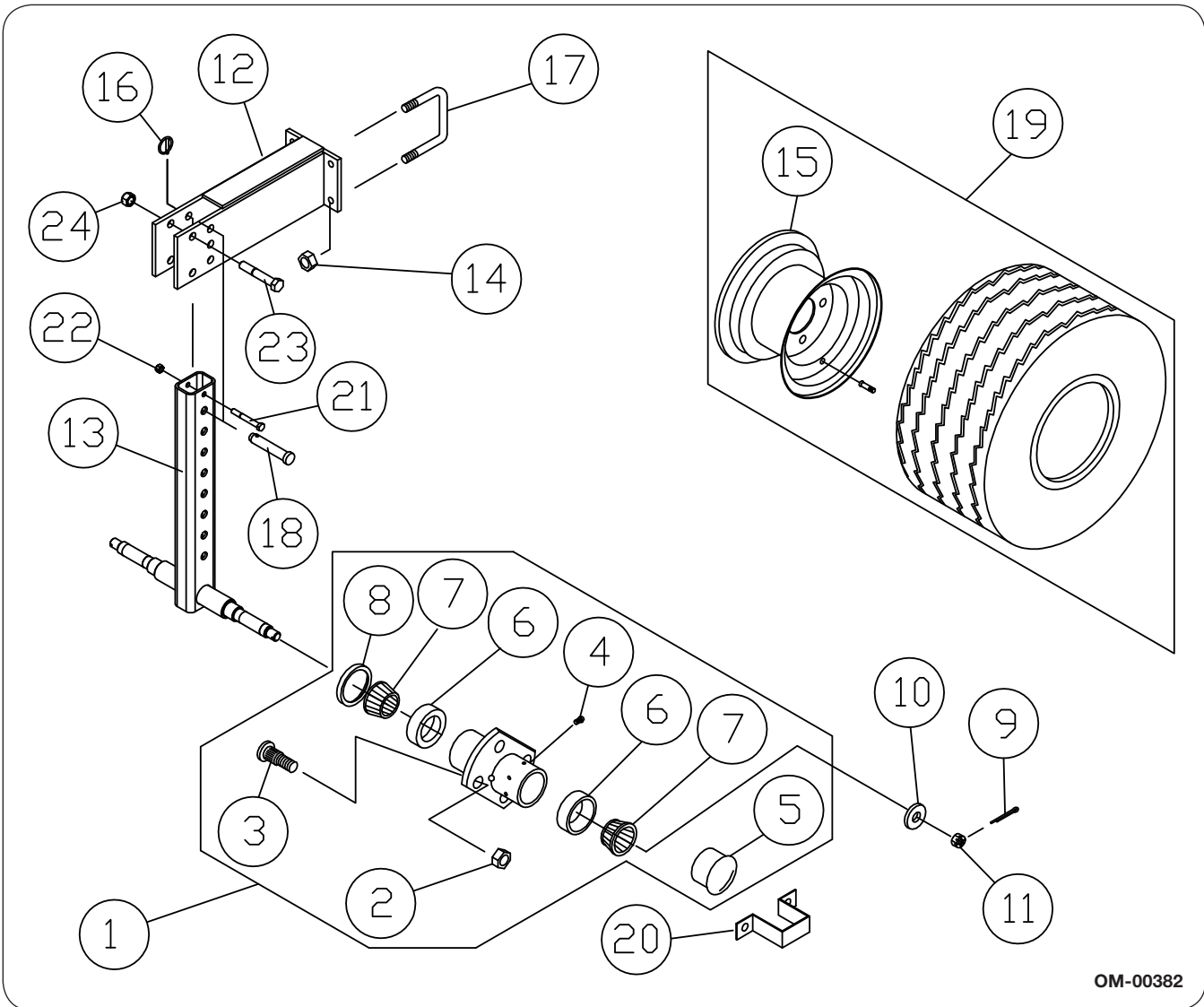


ITEM	PART NO.	DESCRIPTION	NOTES
1	83587	Shank Assembly	
2	83580	Clamp Bracket	
3	83581	Shank	
4	83582	Foot	
5	83586	Clamp Plate	
6	91596	Capscrew 1/2-13UNC x 2 1/2" Lg. (Full Thread)	
7	9390-126	Capscrew 5/8-11UNC x 2 1/2" Lg.	
8	9390-127	Capscrew 5/8-11UNC x 2 3/4" Lg.	
9	91144-126	Spiral Pin 3/16" Dia. x 1 3/4" Lg.	
10	9394-010	Hex Nut 1/2-13UNC	
11	9405-100	Flat Washer 5/8"	
12	95293	U-Bolt 5/8-11UNC x 6 x 1 3/4	
13	95380	Flat Washer 7/16"	
14	95381	Plow Bolt 7/16-14 x 2 1/2" Lg.	
15	95395	10" Furrow Shovel	
16	9799	Locknut 7/16-14UNC	
17	9801	Locknut 5/8-11UNC	
18	9390-138	Capscrew 5/8-11 x 7" Lg.	
19	87053B	Spacer/Bar 6" Lg.	

FIELD CULTIVATORS — Parts

Dual Gauge Wheel — Prior to Serial #A59820100

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



OM-00382

FIELD CULTIVATORS — Parts

Dual Gauge Wheel — Prior to Serial #A59820100

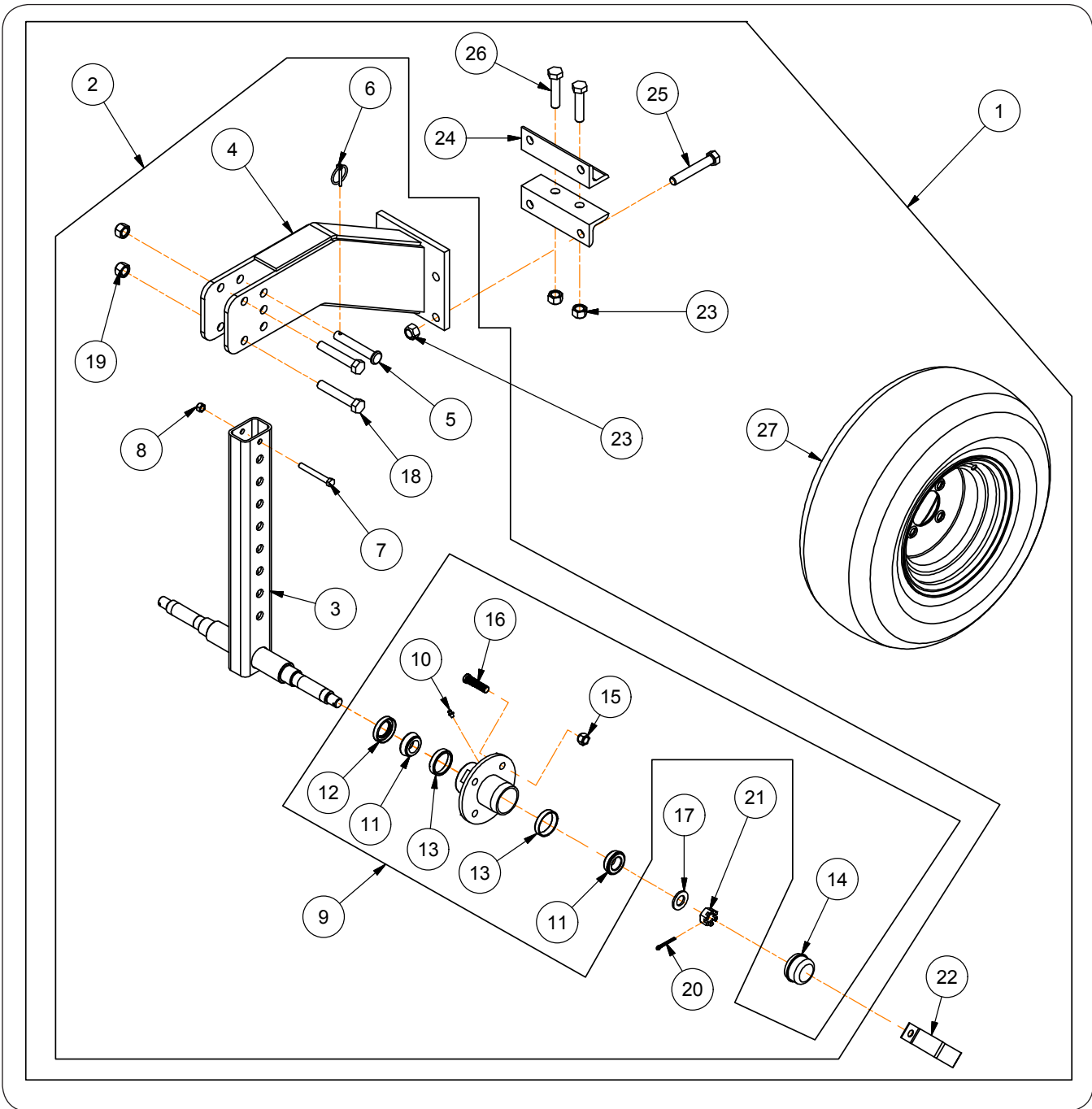
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	92519	Hub Assembly	
2	91049	Bevel Nut	
3	91052	Hub Stud Bolt 1/2-20UNF x 1.219 For Welded Hub	
	9347	Hub Stud Bolt 1/2-20UNF x 1.875 For Cast Hub	
4	91160	Lube Fitting	
5	92521	Dust Cap	
6	92522	Cup	
7	92523	Cone	
8	92525	Seal	
9	9391-035	Cotter Pin 5/32" Dia. x 1 1/2	
10	91050	Washer	
11	9393-016	Slotted Hex Nut	
12	88316B	Mounting Arm Weldment Bracket (Dual)	
13	88378B	Arm/Spindle (Dual) Weldment	
14	9800	Locknut 1/2-13	
15	91046	Wheel	
16	9093	Hair Pin Cotter, 3/16" Dia. x 1.25	
17	91120	U-Bolt	
18	91523	Clevis Pin, 5/8" x 4" Lg.	
19	91045	Mounted Tire (16.5 x 6.5-8) & Wheel Assembly	
20	61721	Hub Cap Retainer/Bracket	
21	9390-063	Capscrew, 3/8-16UNC x 3"	
22	9928	Locknut, 3/8-16UNC	
23	9390-131	Capscrew, 5/8-11UNC x 3 3/4"	
24	9801	Locknut, 5/8-11UNC	
	73956B	Gauge Wheel Assembly (includes all the above items)	

FIELD CULTIVATORS — Parts

Dual Gauge Wheel — Beginning with Serial #A59820100

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



FIELD CULTIVATORS — Parts

Dual Gauge Wheel — Beginning with Serial #A59820100

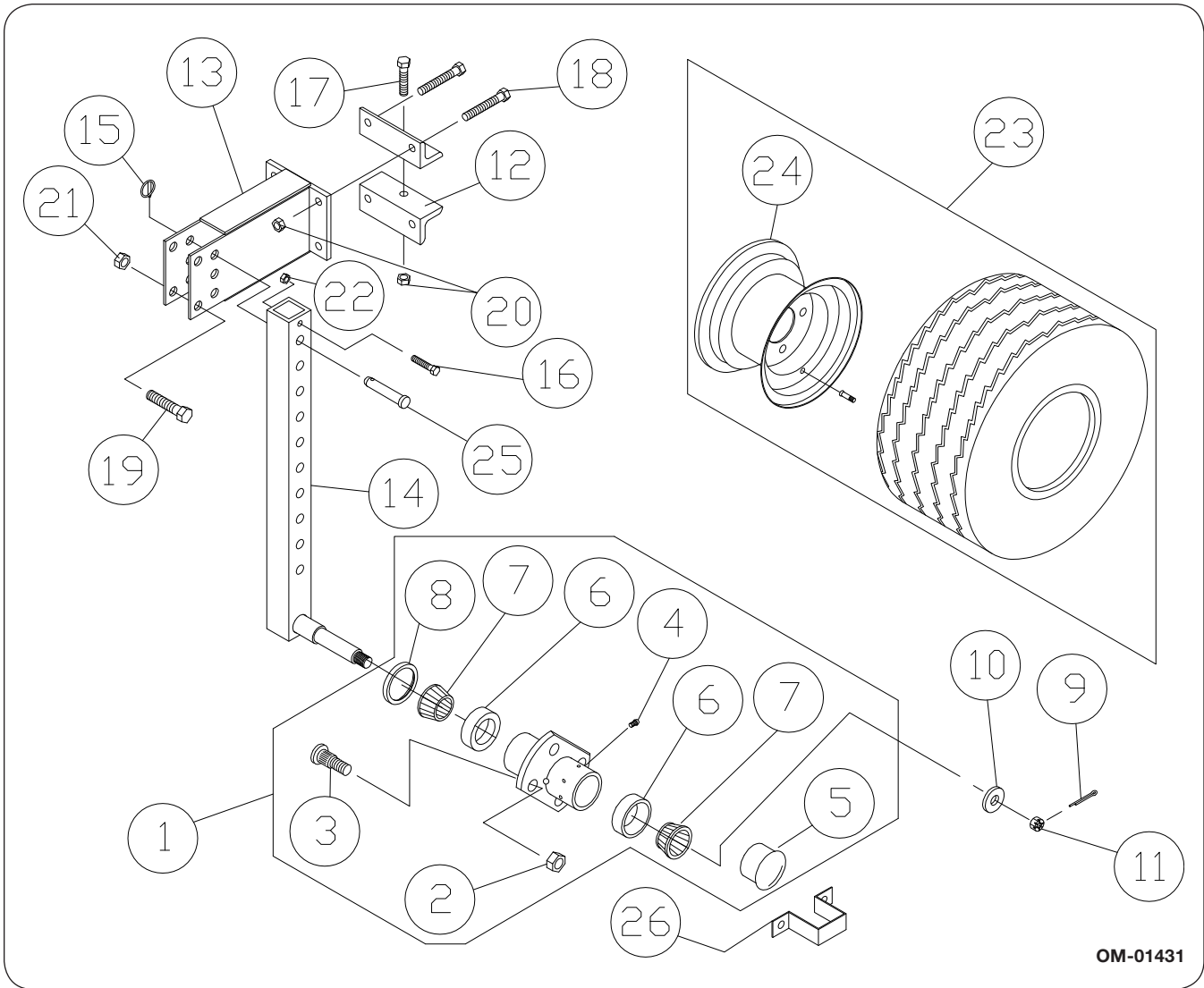
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	73956B	Gauge Wheel Assembly	Includes Items 2 through 27
2	73957B	Mounting Arm/Spindle/Hub Assembly	Includes Items 3 through 21
3	88378B	Arm/Spindle Weldment	
4	73958B	Mounting Arm Weldment Bracket	
5	91523	Clevis Pin, 5/8" Dia. x 4 Lg.	
6	9093	Hair Pin Cotter, 3/16" Dia. x 1.25	
7	9390-063	Capscrew, 3/8-16UNC x 3	Grade 5
8	9928	Locknut, 3/8-16UNC	
9	92519	Hub 4-Bolt Assembly	Includes Items 10 through 16
10	91160	Lube Fitting	
11	92523	Bearing Cone (L44643)	
12	92525	Seal	
13	92522	Bearing Cup (L44610)	
14	92521	Dust Cap	
15	91049	Bevel Nut 1/2-20UNF	
16	902276	Hub Stud Bolt 1/2-20UNF x 2	Grade 8
17	91050	Flat Washer (Hardened)	
18	9390-131	Capscrew, 5/8-11UNC x 3 3/4	Grade 5
19	9801	Locknut, 5/8-11UNC	
20	9391-035	Cotter Pin 5/32" Dia. x 1 1/2	
21	9393-016	Slotted Hex Nut 3/4-16UNF	Grade 2
22	61721	Hub Cap Retainer/Bracket	
23	9801	Locknut, 5/8-11UNC	
24	88842B	Angle	
25	9390-132	Capscrew 5/8-11UNC x 4	Grade 5
26	9390-127	Capscrew 5/8-11UNC x 2 3/4	Grade 5
27	9500302	Mounted Tire (20.5 x 8.0) & Wheel Assembly (W6-610)	
	99136	Tire TL20.5x8.0	E-Range

FIELD CULTIVATORS — Parts

Single Gauge Wheel #83824

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



FIELD CULTIVATORS — Parts

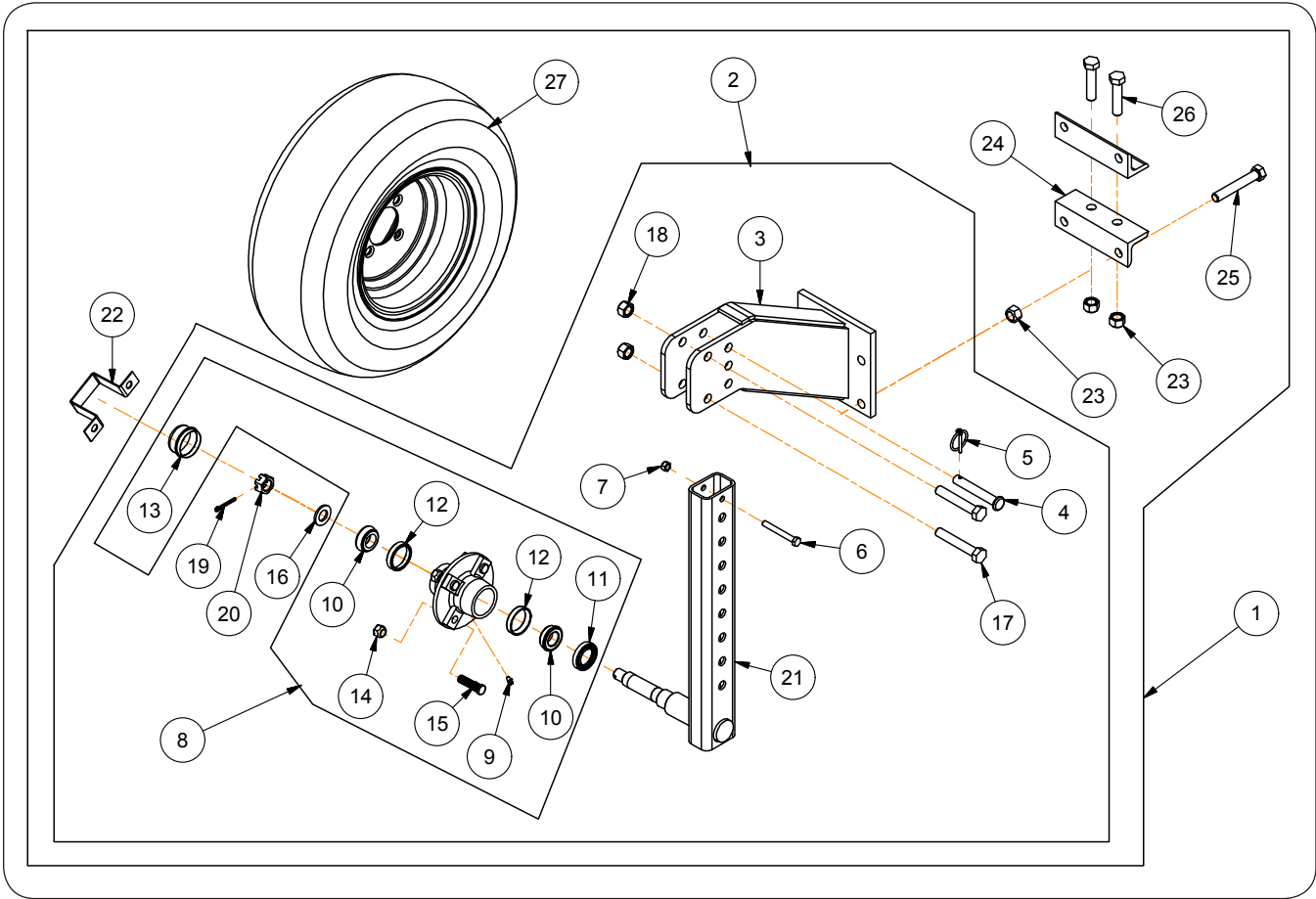
Single Gauge Wheel #83824

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

ITEM	PART NO.	DESCRIPTION	NOTES
1	92519	Hub Assembly	
2	91049	Bevel Nut	
3	91052	Hub Stud Bolt 1/2-20UNF x 1.219 For Welded Hub	
	9347	Hub Stud Bolt 1/2-20UNF x 1.875 For Cast Hub	
4	91160	Lube Fitting	
5	92521	Dust Cap	
6	92522	Cup	
7	92523	Cone	
8	92525	Seal	
9	9391-035	Cotter Pin 5/32" Dia. x 1 1/2	
10	91050	Washer	
11	9393-016	Slotted Hex Nut	
12	88466B	Angle, 2 x 2 x 3/8 x 5 3/4 Lg.	
13	88310B	Mounting Bracket Weldment	
14	83823	Spindle Weldment	
15	9093	Klik Pin	
16	9390-063	Capscrew, 3/8-16UNC x 3" Lg.	
17	9390-105	Capscrew, 1/2-13UNC x 2 1/2" Lg.	
18	9390-109	Capscrew, 1/2-13UNC x 3 1/2" Lg.	
19	9390-131	Capscrew, 5/8-11UNC x 3 3/4" Lg.	
20	9800	Locknut 1/2-13	
21	9801	Locknut 5/8-11	
22	9928	Locknut 3/8-16	
23	91045	Mounted Tire (16.5 x 6.5-8) & Wheel Assembly	
24	91046	Wheel	
25	91523	Clevis Pin, 5/8" Dia. x 4" Lg.	
26	61721	Hub Cap Retainer/Bracket	
	83824	Gauge Wheel Assembly Complete (includes all the above items)	

Single Gauge Wheel #74606B

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



FIELD CULTIVATORS — Parts

Single Gauge Wheel #74606B

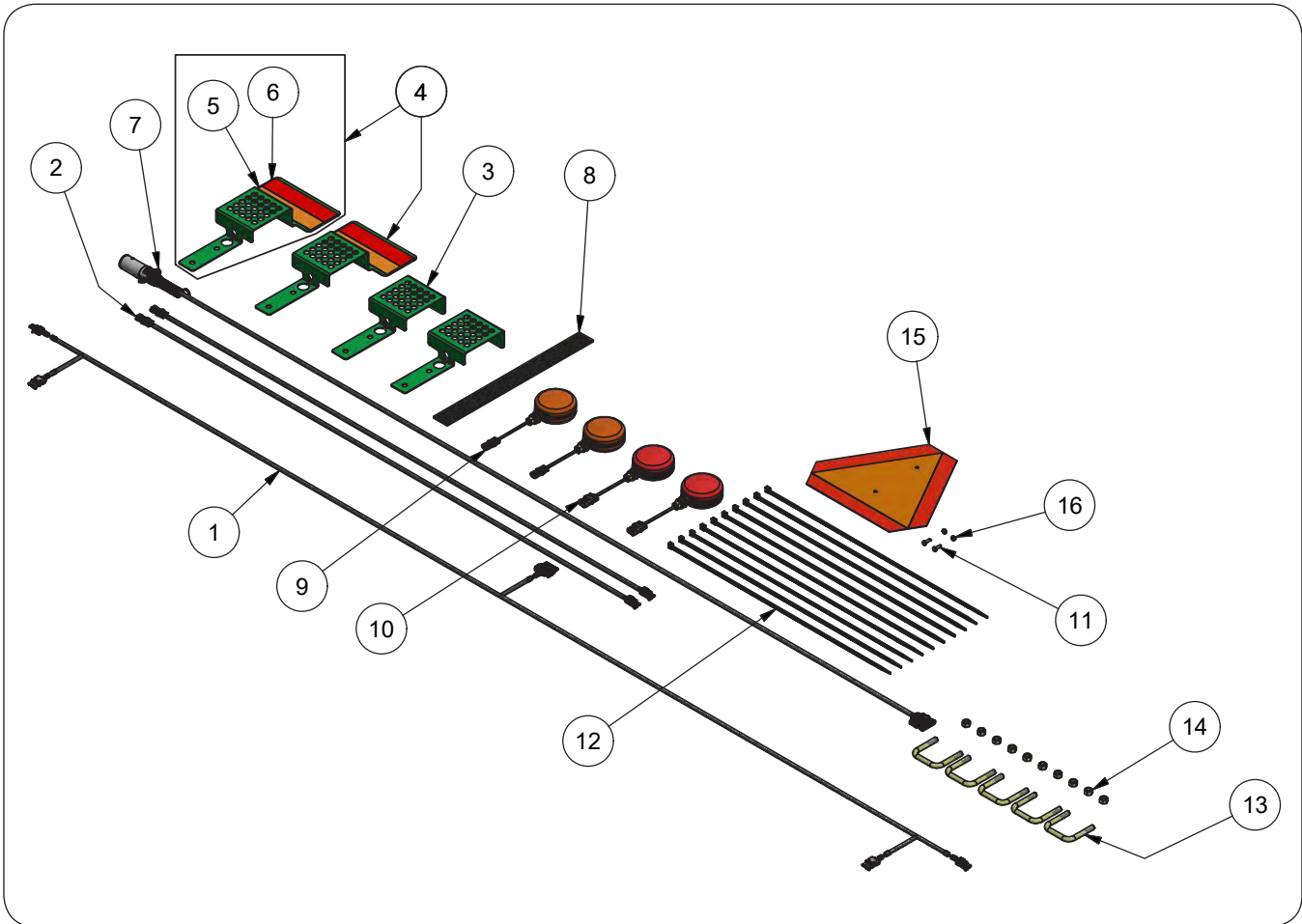
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES
1	74606B	Gauge Wheel Assembly	Includes Items 2 through 27
2	74607B	Mounting Arm/Spindle/Hub Assembly	Includes Items 3 through 21
3	74608B	Mounting Arm Weldment Bracket	
4	91523	Clevis Pin, 5/8" Dia. x 4 Lg.	
5	9093	Hair Pin Cotter, 3/16" Dia. x 1.25	
6	9390-063	Capscrew, 3/8-16UNC x 3	Grade 5
7	9928	Locknut, 3/8-16UNC	
8	92519	Hub 4-Bolt Assembly	Includes Items 10 through 16
9	91160	Lube Fitting	
10	92523	Bearing Cone (L44643)	
11	92525	Seal	
12	92522	Bearing Cup (L44610)	
13	92521	Dust Cap	
14	91049	Bevel Nut 1/2-20UNF	
15	902276	Hub Stud Bolt 1/2-20UNF x 2	Grade 8
16	91050	Flat Washer (Hardened)	
17	9390-131	Capscrew, 5/8-11UNC x 3 3/4	Grade 5
18	9801	Locknut, 5/8-11UNC	
19	9391-035	Cotter Pin 5/32" Dia. x 1 1/2	
20	9393-016	Slotted Hex Nut 3/4-16UNF	Grade 2
21	73987B	Arm/Spindle Weldment	
22	61721	Hub Cap Retainer/Bracket	
23	9801	Locknut, 5/8-11UNC	
24	88842B	Angle	
25	9390-132	Capscrew 5/8-11UNC x 4	Grade 5
26	9390-127	Capscrew 5/8-11UNC x 2 3/4	Grade 5
27	9500302	Mounted Tire (20.5 x 8.0) & Wheel Assembly (W6-610)	
	99136	Tire TL20.5x8.0	E-Range

FIELD CULTIVATORS — Parts

Light Kit #86763B — Rigid Perfecta

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



FIELD CULTIVATORS — Parts

Light Kit #86763B — Rigid Perfecta

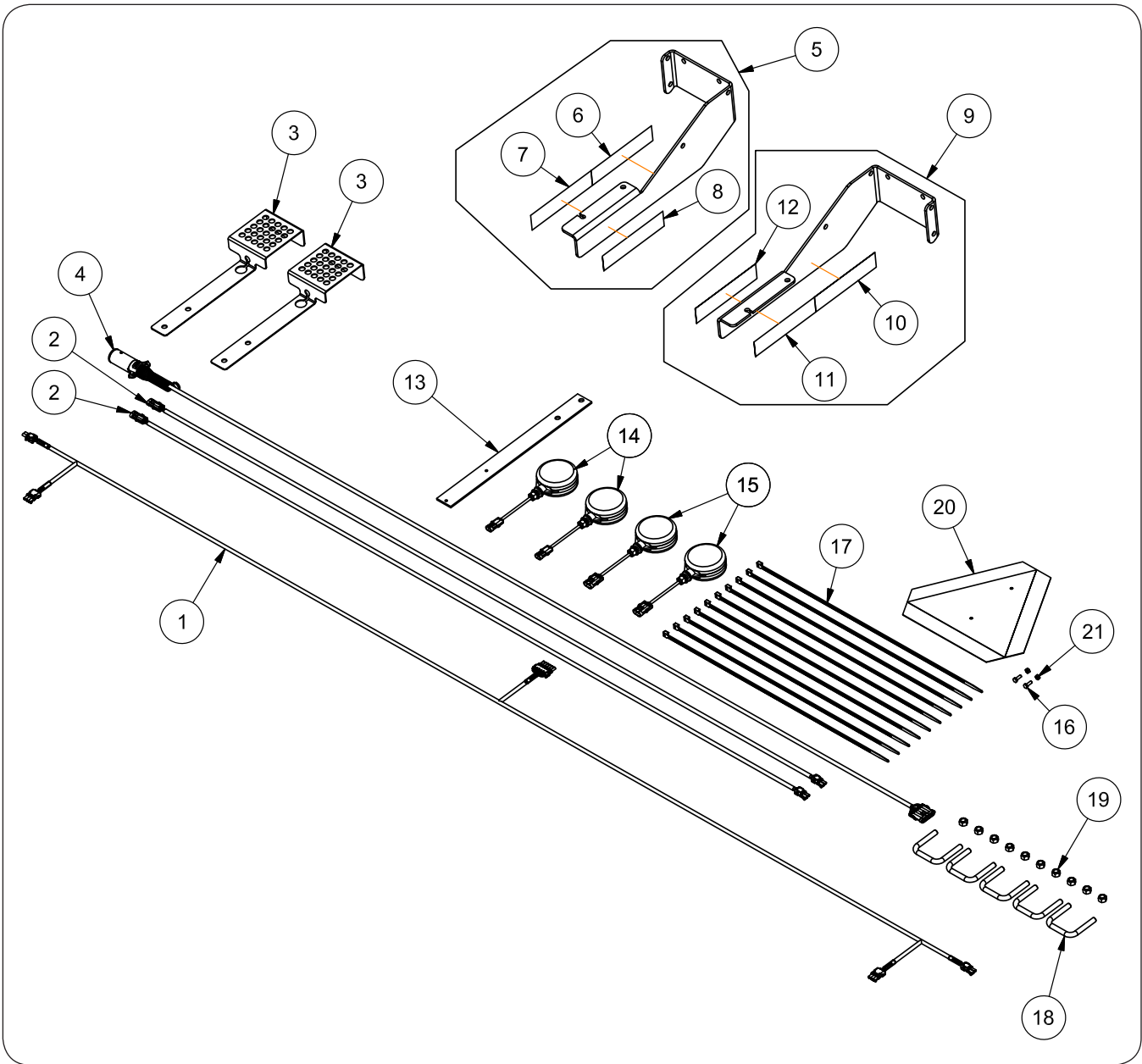
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	NOTES	QTY.
1	22790	Wiring Harness		1
2	64132	Wiring Harness 72"		2
3	77803B	Light Bracket Guard		2
4	77805B	Light Bracket Assembly		2
5	9003125	Fluorescent Orange Decal		1
6	9003126	Red Reflector		1
7	86466	Wiring Harness		1
8	86772B	SMV Strap		1
9	9003876	Light - Amber (Round)		2
10	9003877	Light - Red (Round)		2
11	9390-003	Capscrew, 1/4-20UNC x 3/4 G5		2
12	94038	Cable Tie, 32" Long		10
13	96566	U-Bolt, 1/2-13UNC x 3.25 G5		5
14	9800	Lock Nut, 1/2-13UNC G5		10
15	9829	SMV Emblem		1
16	9936	Lock Nut, 1/4-20UNC G5		2

FIELD CULTIVATORS — Parts

Light Kit #86764B — Folding Perfecta

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



FIELD CULTIVATORS — Parts

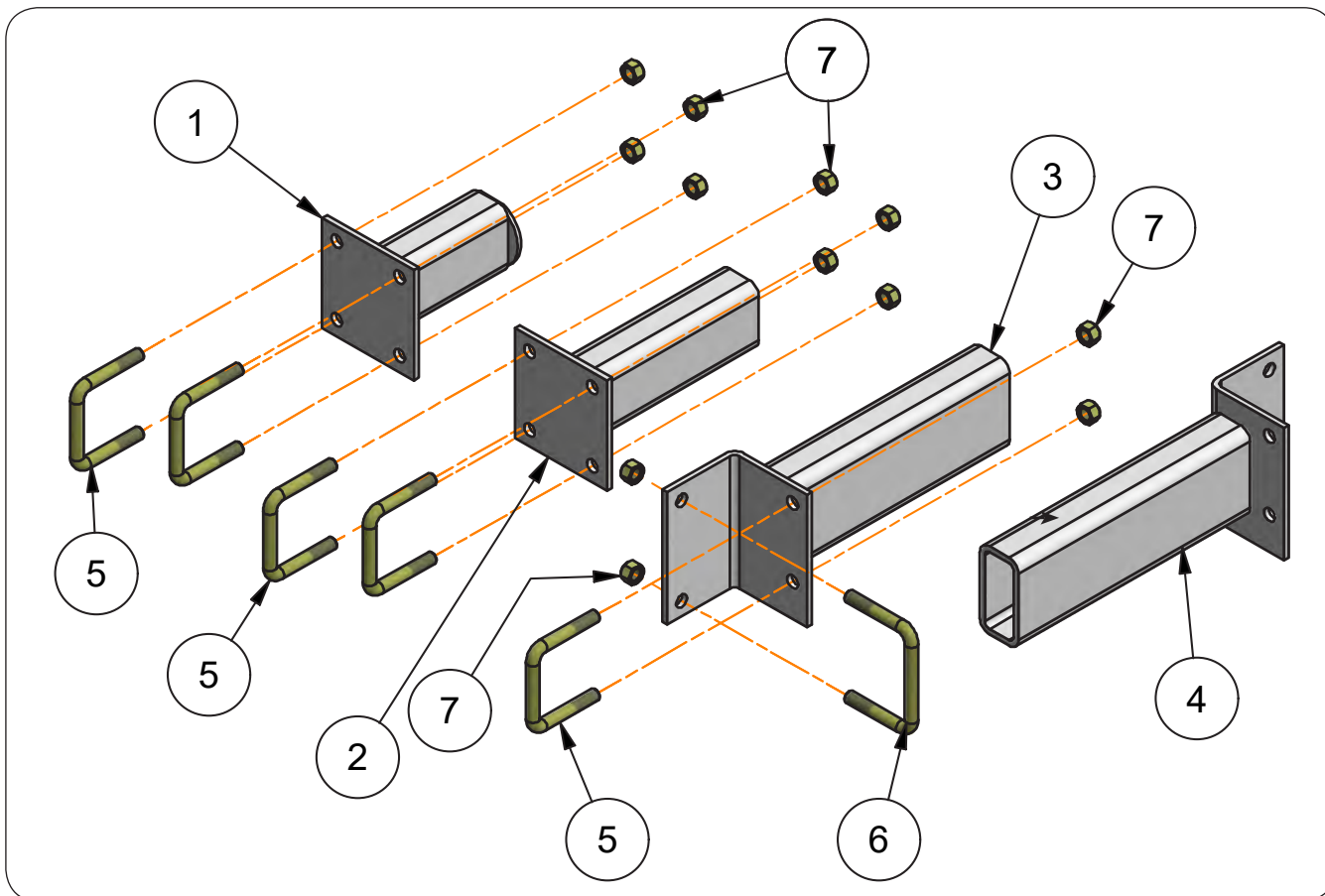
Light Kit #86764B — Folding Perfecta

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

ITEM	PART NO.	DESCRIPTION	NOTES	QTY.
1	22790	Wiring Harness		1
2	64140	Wiring Harness 96"		2
3	78920B	Light Bracket Guard		2
4	86466	Wiring Harness		1
5	86769B	Light Bracket (Right-Hand) w/Decals		1
6	9003125	Fluorescent Orange Decal		1
7	9003126	Red Reflector		1
8	9003127	Amber Reflector		1
9	86770B	Light Bracket (Left-Hand) w/Decals		1
10	9003125	Fluorescent Orange Decal		1
11	9003126	Red Reflector		1
12	9003127	Amber Reflector		1
13	86772B	SMV Strap		1
14	9003876	Light - Amber (Round)		
15	9003877	Light - Red (Round)		
16	9390-003	Capscrew, 1/4-20UNC x 3/4 Gr. 5		
17	94038	Cable Tie, 32" Long		
18	96566	U-Bolt, 1/2-13UNC x 3.25 Gr. 5		
19	9800	Locknut, 1/2-13UNC Gr. 5		
20	9829	SMV Emblem		
21	9936	Locknut, 1/4-20UNC Gr. 5		

12" Extension Bundle Components (Optional)

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

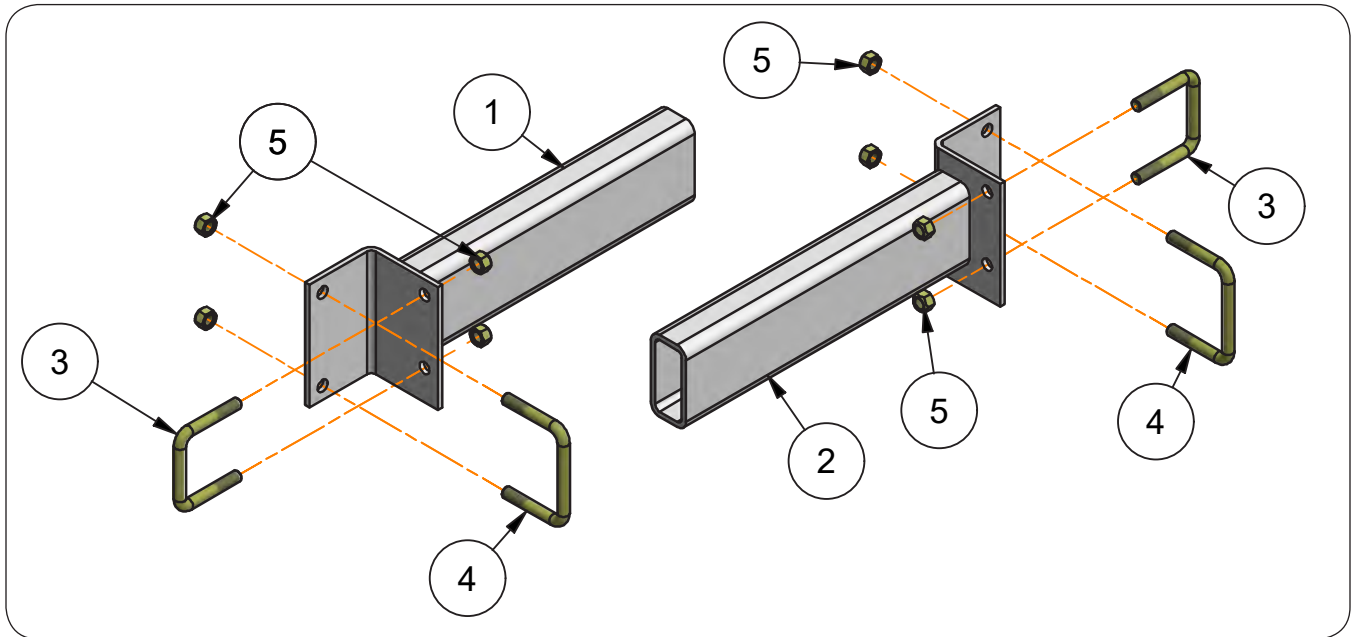


ITEM	PART NO.	DESCRIPTION	NOTES
1	82741G	Tube Weldment 6" =Green=	
	82741R	Tube Weldment 6" =Red=	
2	82742G	Tube Weldment 9" =Green=	
	82742R	Tube Weldment 9" =Red=	
3	82743G	Tube Weldment 12" LH =Green=	
	82743R	Tube Weldment 12" LH =Red=	
4	82744G	Tube Weldment 12" RH =Green=	
	82744R	Tube Weldment 12" RH =Red=	
5	91120	U-Bolt 1/2-13 x 3 9/16 C/C	
6	91434	U-Bolt 1/2-13 x 4.56 C/C	
7	9800	Locknut 1/2-13	
	82745G	12" Extension Bundle Complete =Green=	
	82745R	12" Extension Bundle Complete =Red=	

FIELD CULTIVATORS — Parts

16" Extension Bundle Components (Optional)

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



ITEM	PART NO.	DESCRIPTION	NOTES
1	82885G	Tube Weldment 16" LH =Green=	
	82885R	Tube Weldment 16" LH =Red=	
2	82886G	Tube Weldment 16" RH (Shown) =Green=	
	82886R	Tube Weldment 16" RH (Shown) =Red=	
3	91120	U-Bolt 1/2-13 x 3 9/16 C/C	
4	91434	U-Bolt 1/2-13 x 4.56 C/C	
5	9800	Locknut 1/2-13	
	82887G	16" Extension Bundle Complete =Green=	
	82887R	16" Extension Bundle Complete =Red=	



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