TRANSPORTATION EQUIPMENT

4-WHEEL STEER FIELDRUNNER HEADER TRANSPORT

Models: AWS-30, 36, 42, 48, 52

Serial Number A69020100 and Higher

Part No. 33979

Foreword

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

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

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

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

Product Information

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

- Machine name
- Serial number

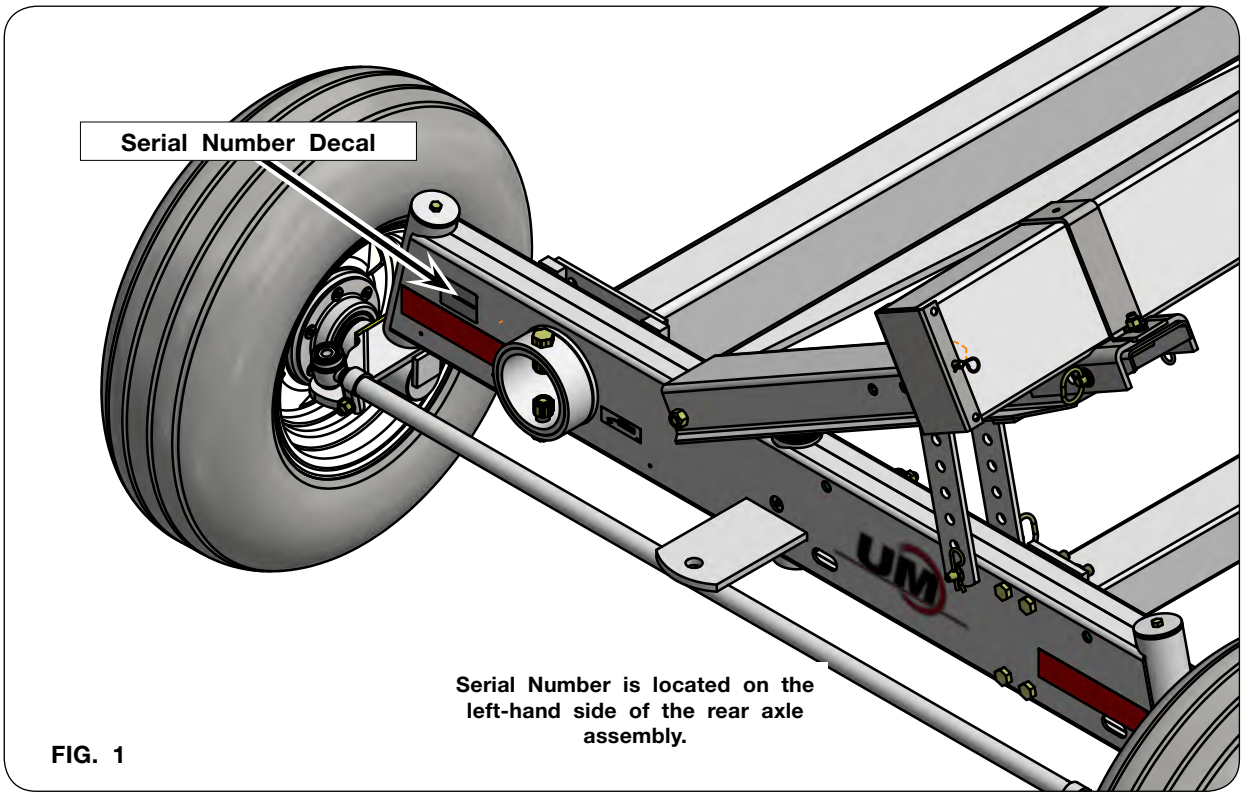
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number decal is located on the left-hand side of the rear axle assembly (FIG. 1).

Purchase Date _____ Model _____Serial No._____

Dealer _____ City _____

Dealer Contact _____ Phone _____



Serial Number is located on the left-hand side of the rear axle assembly.

FIG. 1

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
Safety

General Hazard Information

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

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

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

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

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

DANGER

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

WARNING

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

CAUTION

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

IMPORTANT

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

Safety Decals

WARNING

- **REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.**

PART NO. 97575

PART NO. 91072

PART NO. 98229

PART NO. 97961

PART NO. 97877

PART NO. 95839

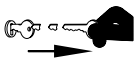
PART NO. 9003126

PART NO. 9003127

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 towing vehicle engine off and remove key before servicing.



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

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

Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.
- 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.
- Do not stand between the towing vehicle and implement during hitching.
- Do not stand between head and implement during operation.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.

During Operation

- Never service or lubricate equipment when in operation.
- Regulate speed to working conditions. Maintain complete control at all times.
- Use extreme care when operating close to ditches, fences or on hillsides.
- Do not leave the towing vehicle unattended with the engine running.
- Do not adjust transporter with head positioned over the unit.

Before Transporting

- Secure the transport chains to the towing vehicle before transporting. DO NOT transport without chains.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure that the SMV emblem and SIS decal are visible to approaching traffic.
- This implement may not be equipped with brakes. Ensure that the towing vehicle has adequate weight and braking capacity to tow this unit.
- Before transporting, secure the head with straps. Replace damaged or worn straps, and avoid putting straps over rough, sharp surfaces. Use appropriate number and capacity rating of straps.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Maximum transport speed of this implement should never exceed 20 mph as indicated on the machine. Maximum transport speed of any combination of implements must not exceed the lowest specified speed of the implements in combination. Do not exceed 10 mph during off-highway travel.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- Use the rear hitch for transporting an additional unloaded Header Transport only. Do not use for towing any other implement.
- 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.

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

SECTION II
Set Up

Checklist

Inspect all listed items that apply and when satisfactory or completed, check the box:

- ❑ Power wash any road salt off this unit to help prevent corrosion.
- ❑ Torque wheel nuts and check tire pressure as specified in MAINTENANCE section.
- ❑ Make sure all safety decals and SMV sign are clearly visible. Replace if damaged.
- ❑ Check all lubrication points.
- ❑ Check transport chain.
- ❑ Paint all parts scratched during shipment and dealer set up.

General Instructions

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 unit.

IMPORTANT

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

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

⚠ WARNING

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

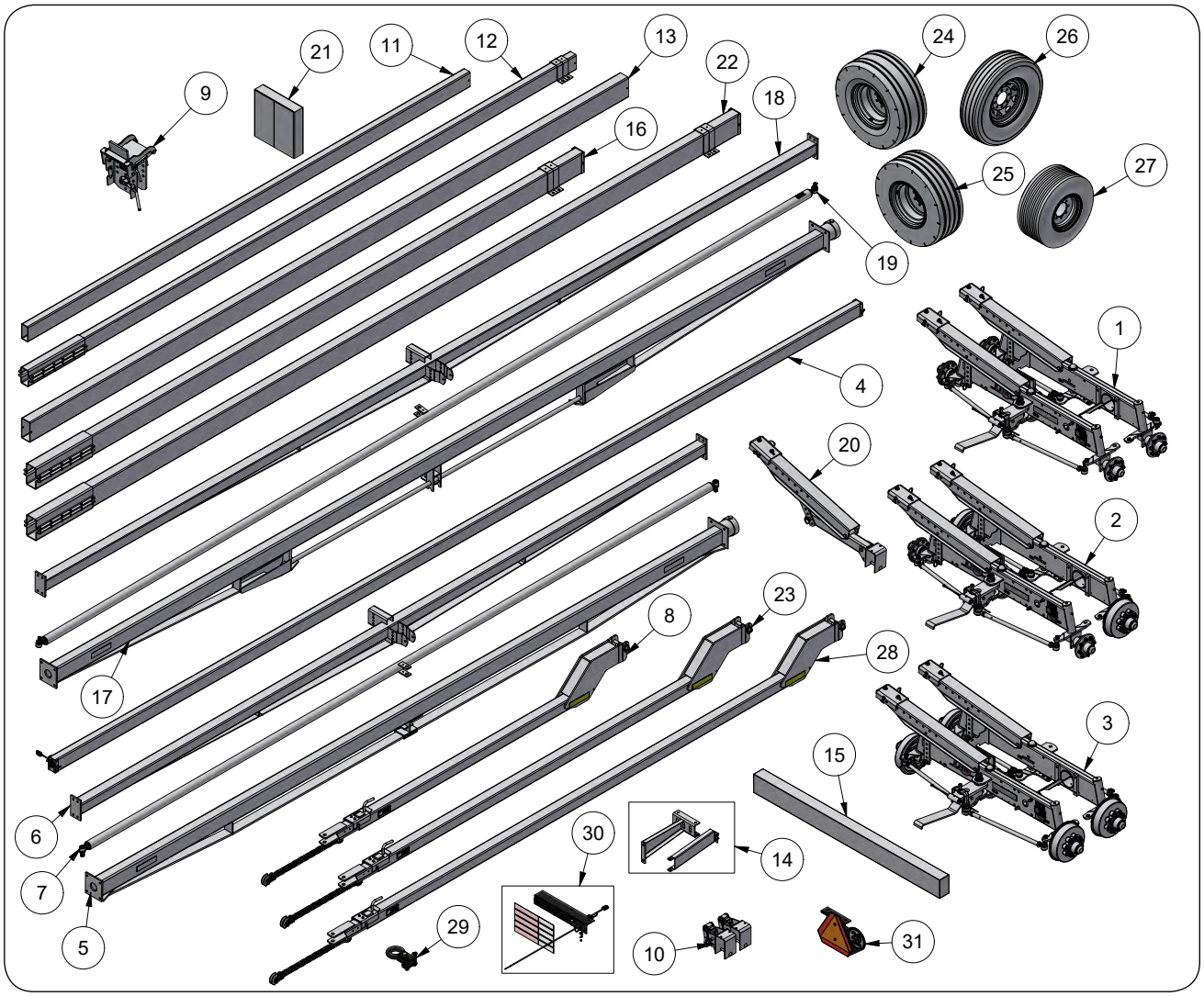
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

- **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 4,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

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

Shipping Bundles

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



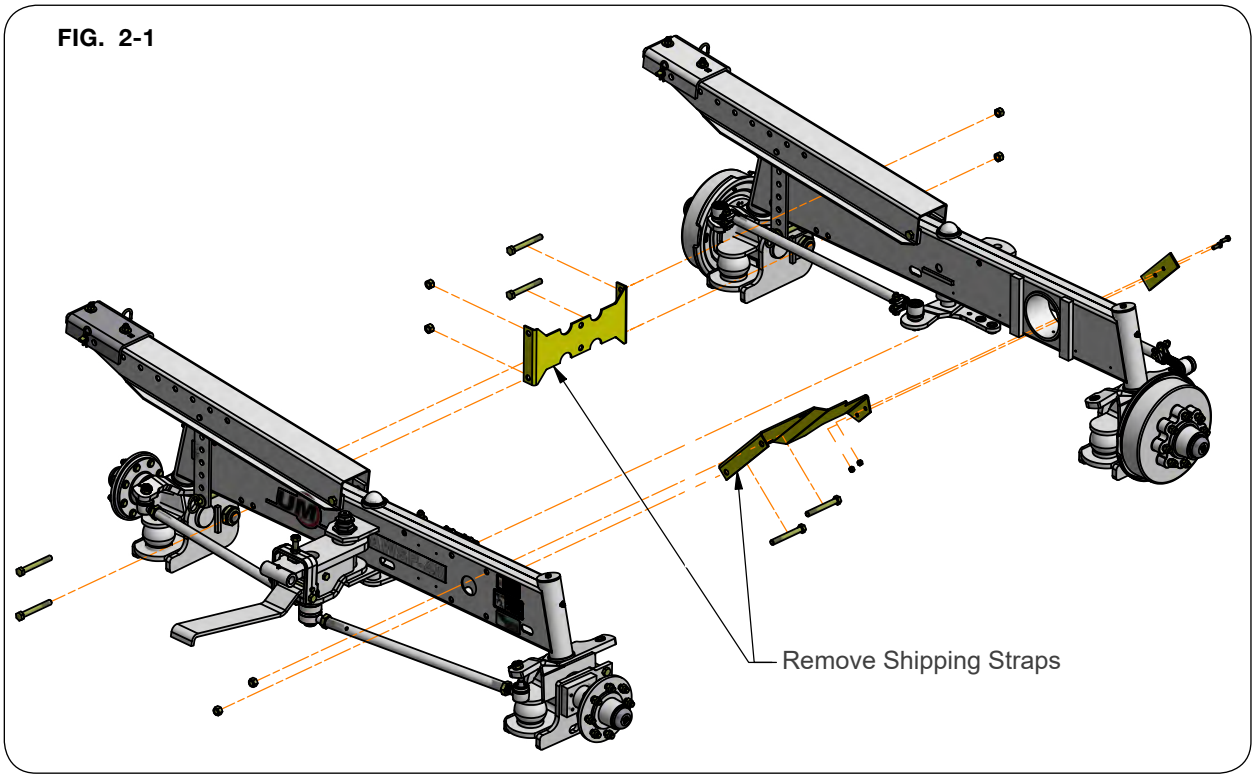
Shipping Bundles

ITEM	PART NO.	DESCRIPTION	QTY	MODELS
1	33151B/G/R	Front & Rear Frame Without Brakes =Black=	1	All AWS Models Without Brakes
	33166B/G/R	Front & Rear Frame Without Brakes =Black=	1	All AWS Models Without Brakes & Suspension
2	33152B/G/R	Front & Rear Frame With 2 Brakes =Black=	1	All AWS Models With 2 Brakes
	33167B/G/R	Front & Rear Frame With 2 Brakes =Black=		All AWS Models With 2 Brakes & Suspension
3	33153B/G/R	Front & Rear Frame With 4 Brakes =Black=	1	All AWS Models With 4 Brakes
	33168B/G/R	Front & Rear Frame With 4 Brakes =Black=		All AWS Models With 4 Brakes & Suspension
4	106629B/G/R	Upper Bar 31' =Black=	1	AWS-30
	32287B/G/R	Upper Bar 26' =Black=		AWS-52
5	33089B/G/R	Support Swivel 24' =Black=	1	AWS-30, 36
6	32957B/G/R	Brace Tube Weldment =Black=	1	AWS-30, 36
7	32184B/G/R	Tie Rod Connector Link 24' Asy =Black=	1	AWS-30, 36
8	34076B/G/R	Drop Tongue 12' Without Brakes =Black=	1	AWS-36, 42, 48 Without Brakes
	34087B/G/R	Drop Tongue 12' With Brakes =Black=	1	AWS-36, 42, 48, 52 With Brakes
9	33575B	Rest Bracket =Black=	2	All AWS Models
10	30501	Tie-Down Asy (Pair)	1	All AWS Models
11	30925B/G/R	Upper Bar 17' =Black=	1	AWS-36
12	30970B/G/R	Upper Tube 20' =Black=	1	AWS-36
13	31728B/G/R	Upper Bar 23' =Black=	1	AWS-42, 48
14	32576B	Light Mount Assembly - Axle Mount	1	All AWS Models
15	33557B/G/R	Light Bar Asy =Black=	1	All AWS Models
16	31892B/G/R	Upper Tube 20' =Black=	1	AWS-42
17	33987B/G/R	Support Swivel 30' =Black=	1	AWS-42, 48, 52
18	32230B/G/R	Brace Tube Weldment =Black=	1	AWS-42, 48, 52
19	32257B/G/R	Tie Rod Connector Link 30' Asy =Black=	1	AWS-42, 48, 52
20	33298B	Center Support =Black=	1	AWS-36, 42, 48, 52
21	N/A	Hardware Box	1	
22	32288B/G/R	Upper Tube 26'	1	AWS-48, 52
23	33416B/G/R	Drop Tongue 16' Without Brakes	1	AWS-48 Without Brakes
	34004B/G/R	Drop Tongue 16' With Brakes	1	AWS-48 With Brakes
24	110884	Wheel & Tire Asy 10 x 15 / IF320/65R15	4	All AWS Models
25	111544	Wheel & Tire Asy 10 x 15 / IF280/70R15	4	AWS-30, 36, 42, 48
26	902702	Wheel & Tire Asy 6 x 16 / ST235/85R16	4	AWS-36, 42, 48
27	111198	Wheel & Tire Asy 10.5 x 12 / TL26x12	4	AWS-30, 36, 42
28	34000B/G/R	Drop Tongue Assembly 20' Without Brakes	1	AWS-42, 48, 52
	34005B/G/R	Drop Tongue Assembly 20' With Brakes		
29	33329B	Pintle Hitch Kit =Black=	1	
30	31758	Vin Package	1	
31	33359B	SMV/SIS Bracket Assembly	1	

Frame

1. Remove and discard the shipping straps. Save hardware.

FIG. 2-1



Frame (continued)

2. Position the front and rear axles far enough apart to allow room for the support tubes.

3. Using a safe lifting device rated at a minimum of 1,000 lbs., raise the support swivel with truss bar and place it between the front and rear axles.

4. Remove the collar (30123B/G/R) on the support swivel (FIG. 2-2). Slide the support swivel through the hole in the rear axle. Attach the swivel collar previously removed and light support bracket (34056B) with the 3/4”-10UNC x 2” capscrews (9390-145) and 3/4”-10UNC elastic stop nuts (9398-021) (FIG. 2-2).

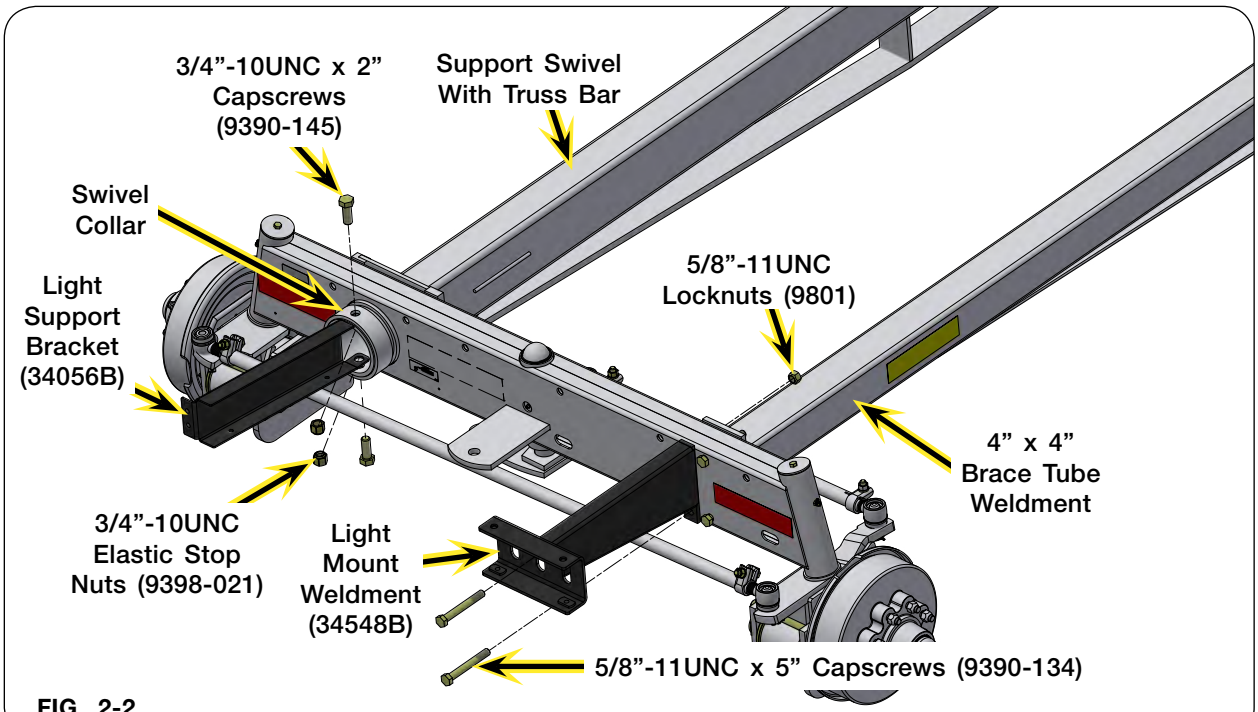


FIG. 2-2

5. Using a safe lifting device rated at a minimum of 1,000 lbs., raise the 4” x 4” brace tube weldment into position. Loosely attach the light bar weldment (34548B) and the 4” x 4” brace tube weldment to the rear axle as shown in FIG. 2-2 with 5/8”-11UNC x 5” capscrews (9390-134) and 5/8”-11UNC locknuts (9801) located in the hardware box.

Frame (continued)

6. Using a safe lifting device rated at a minimum of 1,000 lbs., raise the 4” x 4” brace tube weldment and support swivel with truss bar into position. (FIG. 2-3)

7. Secure the ends of the support swivel with truss bar and 4” x 4” brace tube weldment to the front axle with the 5/8”-11UNC x 5” capscrews (9390-134) and 5/8”-11UNC locknuts (9801).

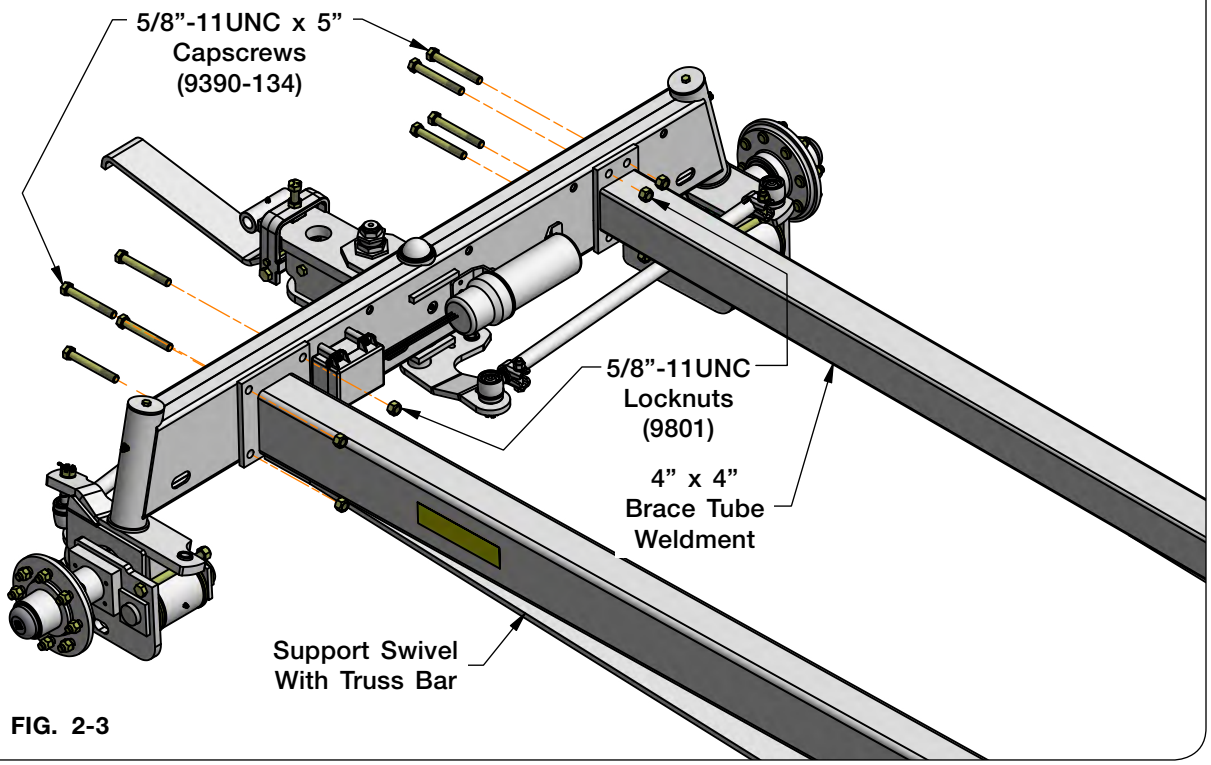


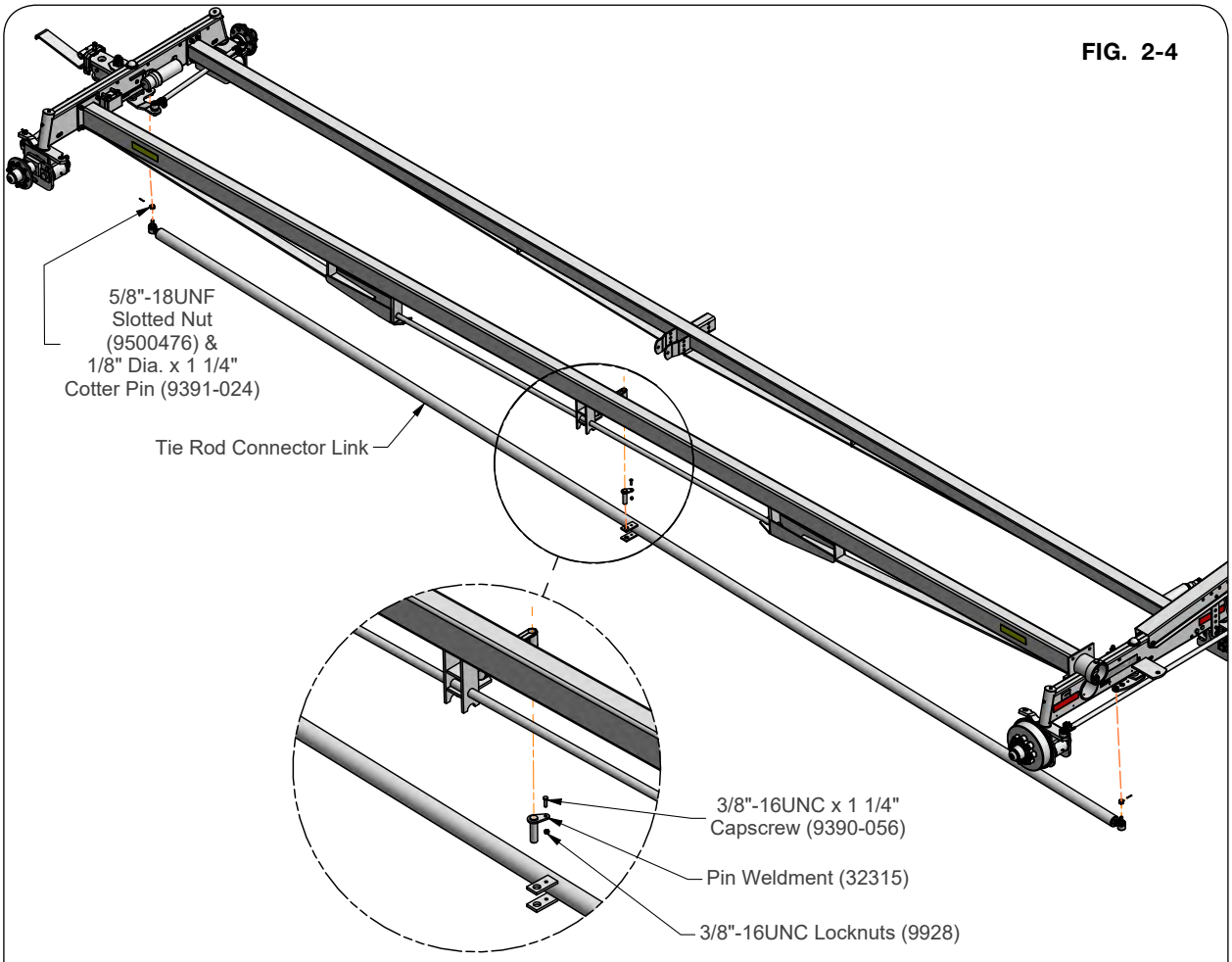
FIG. 2-3

Frame (continued)

8. Using a safe lifting device rated at a minimum of 200 lbs., attach the tie rod connector link assembly to the front and rear axles with the nut provided on the tie rod ends as shown in FIG. 2-4. Torque 5/8”-18UNF slotted nuts (9500470) to 130 ft.-lbs. Insert cotter pin (continue to torque slotted nut as needed for hole alignment).

9. In the hardware box, locate the pin weldment (32315), 3/8”-16UNC x 1 1/4” capscrew (9390-056), and 3/8”-16UNC locknut (9928). Use the pin weldment (32315) and hardware to attach the tie rod connector link assembly to the support swivel with truss bar (FIG. 2-4).

FIG. 2-4



NOTE: The tie rod can be installed in either the outside hole, or hole closest to mid line. The inside hole is used for more aggressive rear axle steering. The outer hole is the recommended factory setting.

Frame (continued)

10. Attach the lower part of the center support bracket with 5/8”-11UNC x 5 1/2” carriage bolt (9388-146) and 5/8”-11UNC locknut (9801) as shown in FIG. 2-5. Hardware can be found in the hardware box.

11. Secure the opposite end of the center support to the tube weldment with 5/8”-11UNC x 4 1/2” capscrew (9390-133) and 5/8”-11UNC locknut (9801) (FIG. 2-5). Hardware can be found in the hardware box. Use the hitch pin (97824) provided with the center support to adjust the vertical height. Also refer to the “Vertical Adjustment” procedures in the OPERATION section.

12. Tighten all hardware. Refer to “Torque Chart” in MAINTENANCE section.

IMPORTANT

- *Do not over-tighten hardware. Overtightening could cause axle failure.*

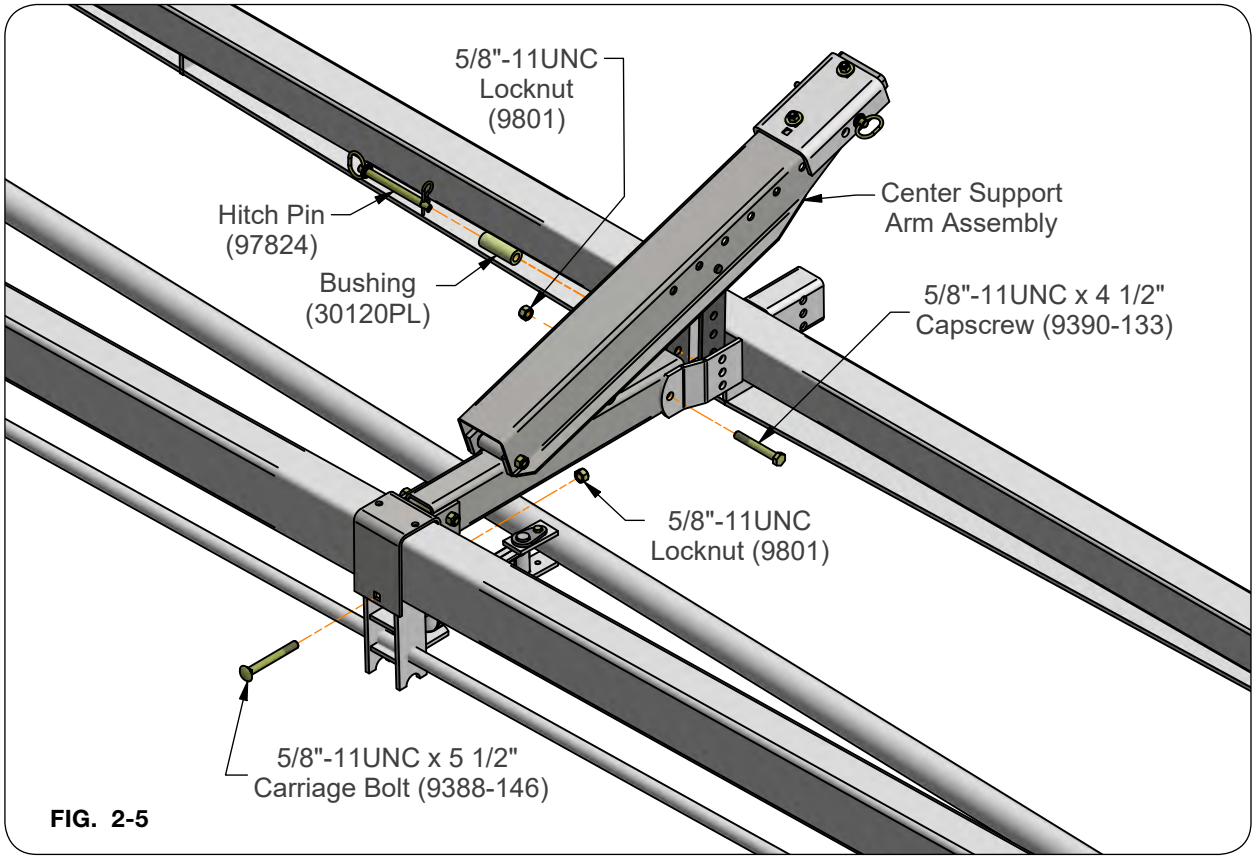


FIG. 2-5

Tires and Wheels

1. Install wheels and tires onto axles and secure with tapered nuts. Refer to “Wheel Torque Chart” in MAINTENANCE section.

⚠ CAUTION

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

IMPORTANT

- *Check tire inflation pressure before installing.*

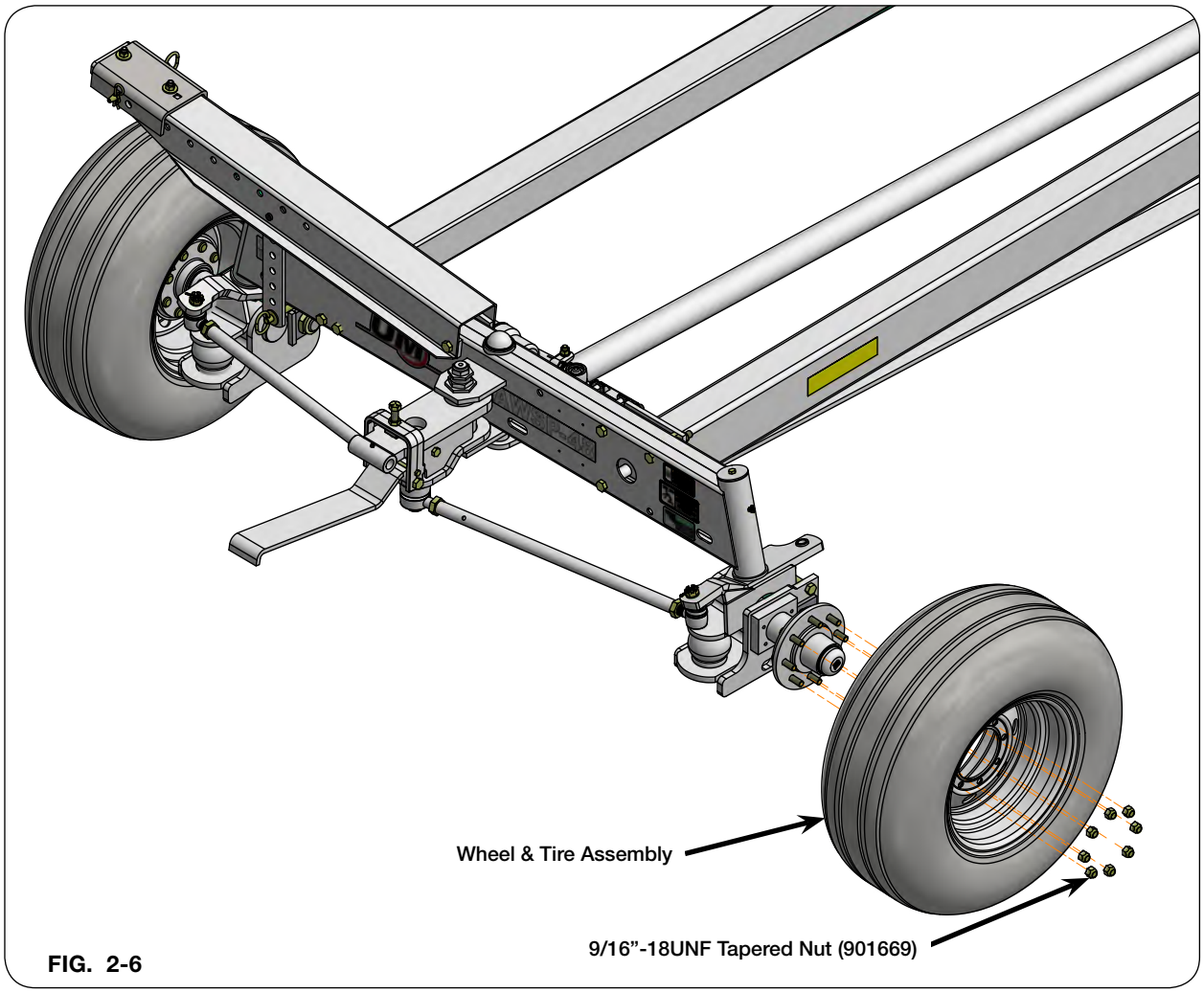


FIG. 2-6

Rest Bracket

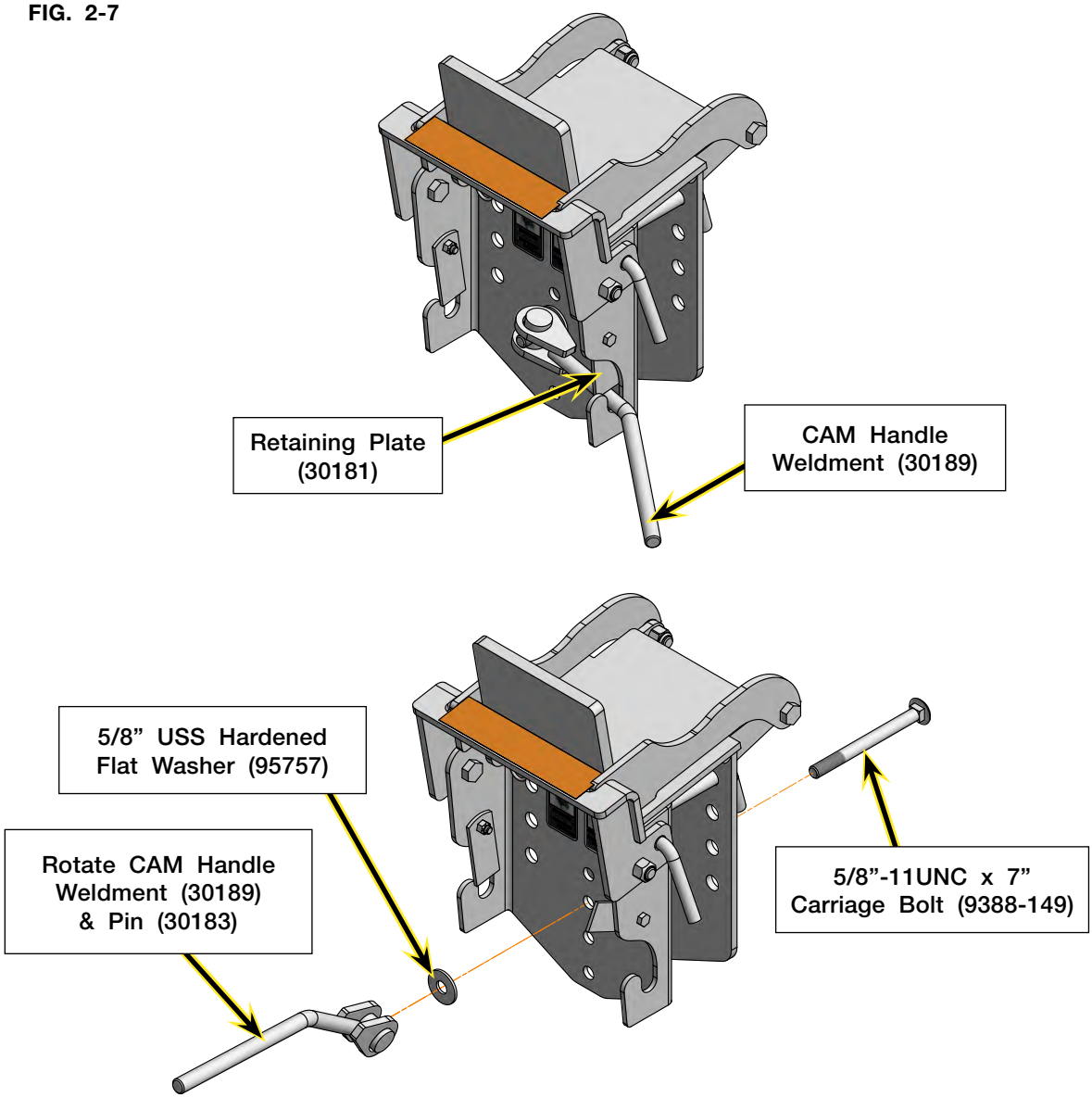
1. Lift the retaining plate (30181) to allow the CAM handle weldment (30189) to release the 5/8”-11UNC x 7” carriage bolt (9388-149). (FIG. 2-7)

2. Position the rest brackets on the 6” x 4” support swivel with truss bar.

3. Insert the 5/8”-11UNC x 7” carriage bolt (9388-149) into the back of the rest bracket and secure with 5/8” USS hardened flat washer (95757), and CAM handle weldment (30189) with pin (30183).

4. Secure CAM handle weldment (30189) into transport position by reposition retaining plate (30181) as shown below.

FIG. 2-7



Upper Rest Bar

NOTE: For ease and safe assembly, be sure all support arms are in the lowest position.

NOTE: Upper bar support arms are factory assembled on the outer set of holes, best used for draper heads and corn heads. For grain platforms, move support arms to the alternate set of mounting holes located 11" to the left which moves the upper bar closer to the combine.

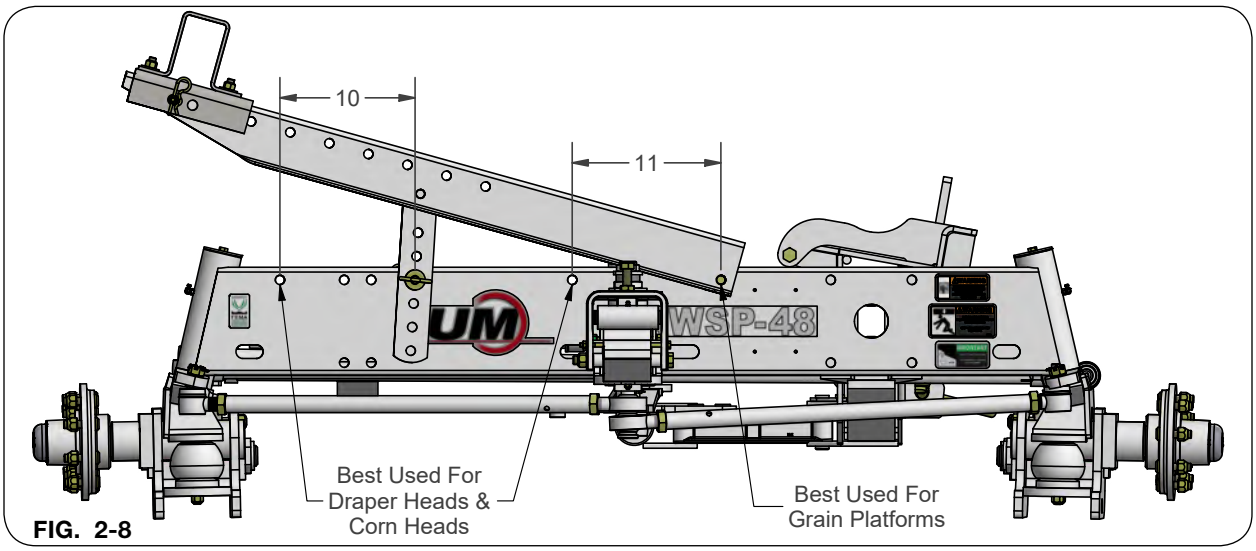


FIG. 2-8

1. Locate the straps.

2. Remove the 1/2"-13UNC locknuts (9800) and 1/2" flat washers (9405-088) (FIG. 2-9).

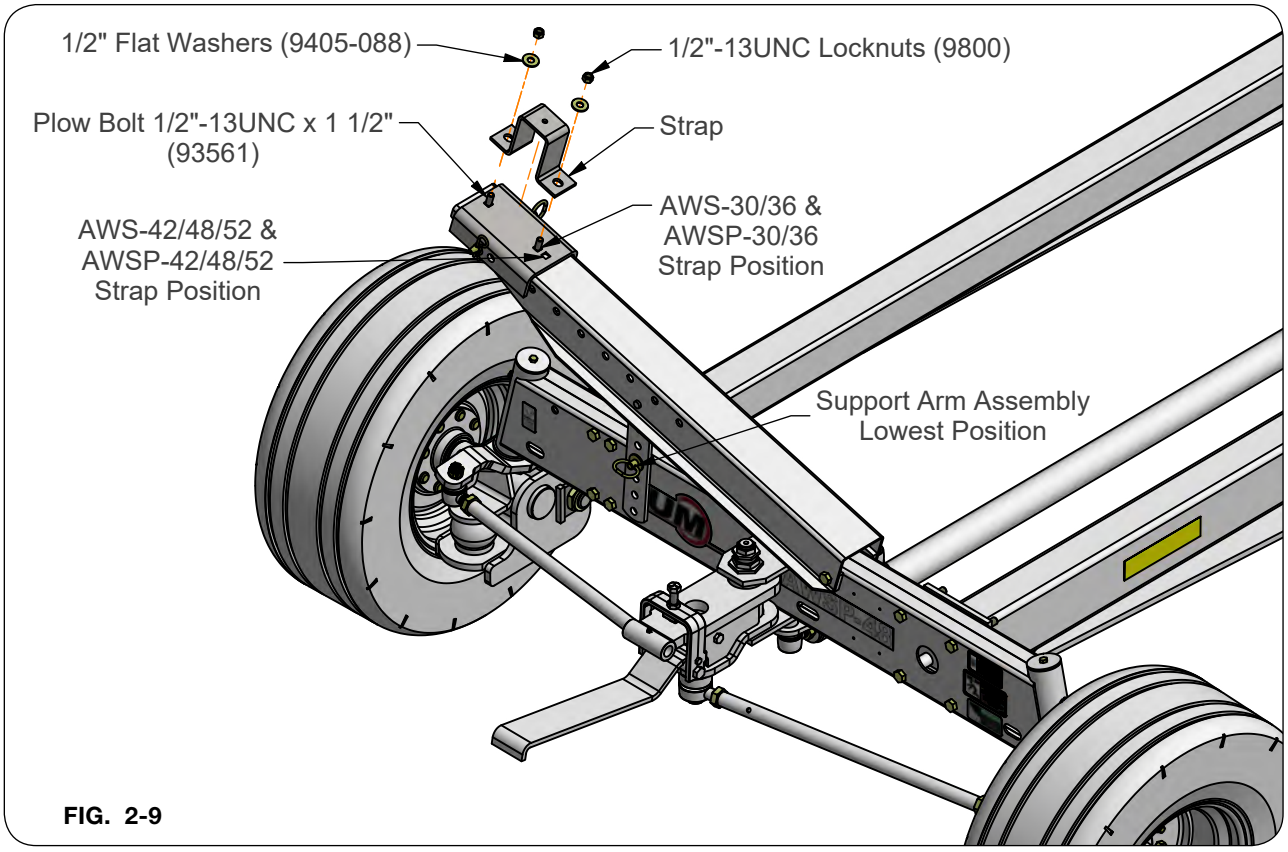


FIG. 2-9

Upper Rest Bar (continued)

3. **AWS-30 MODELS ONLY**
   Using a safe lifting device rated at a minimum of 1,000 lbs., position the upper bar onto the support arm assemblies and secure into position with the straps provided. For initial set-up, position upper bar so that approximately four feet extends beyond the front axle. Refer to Lateral Adjustment in OPERATION section of this manual. The bar can be shifted slightly toward the rear if specific applications (towing behind a combine) require it.

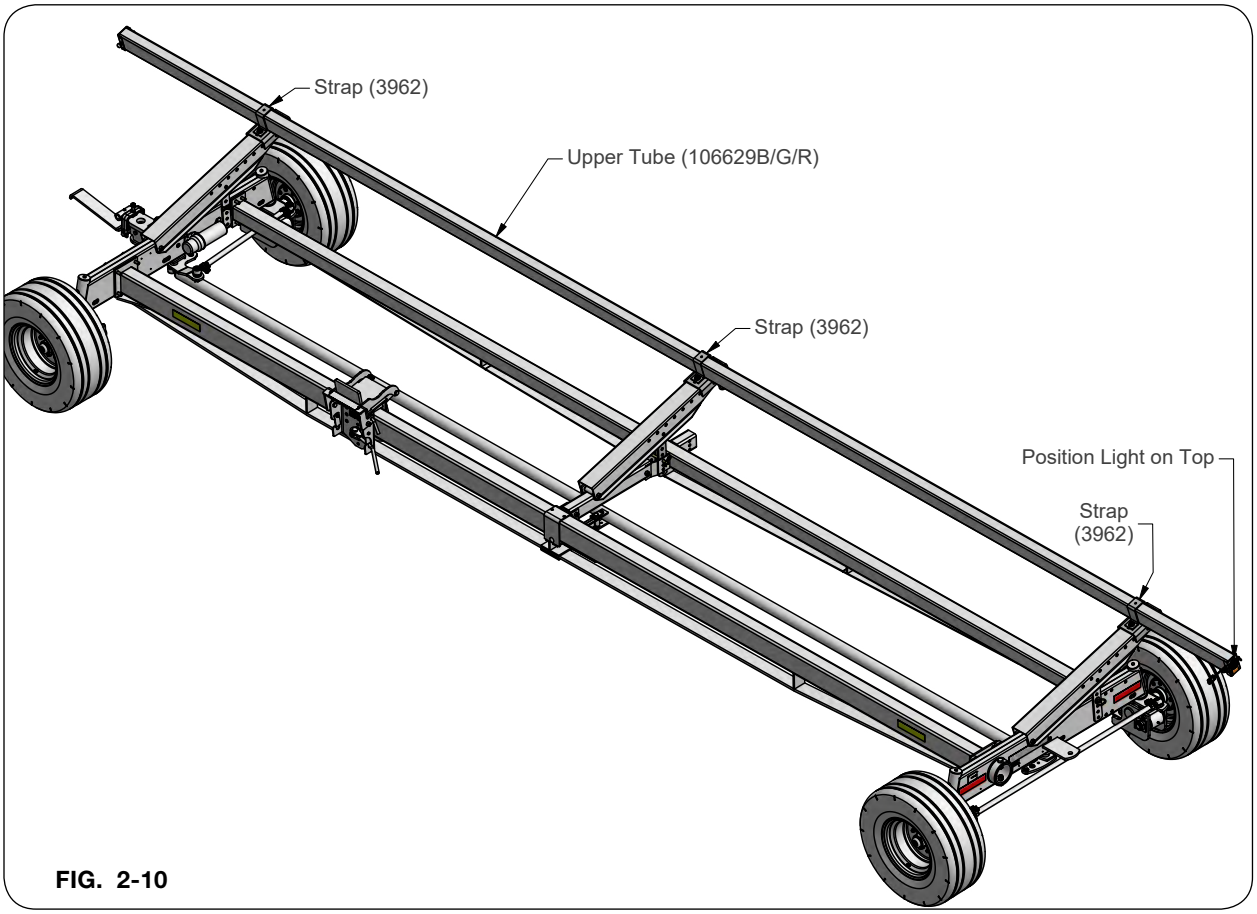


FIG. 2-10

Upper Rest Bar (continued)

3. **(continued)**
AWS-36/42/48/52 MODELS ONLY
Assemble the upper tube into the upper tube assembly coupler and tighten hardware (FIG. 2-11). Using a safe lifting device rated at a minimum of 1,000 lbs., position the upper tube and upper tube assembly with coupler onto the support arm assemblies. Secure upper tube components into position with the straps provided with your unit. For initial set-up, position upper bar so that there are equal amounts extending beyond the front and rear axles. The bar can be shifted slightly toward the rear if specific applications (towing behind a combine) require it. Refer to Lateral Adjustment in OPERATION section of this manual.

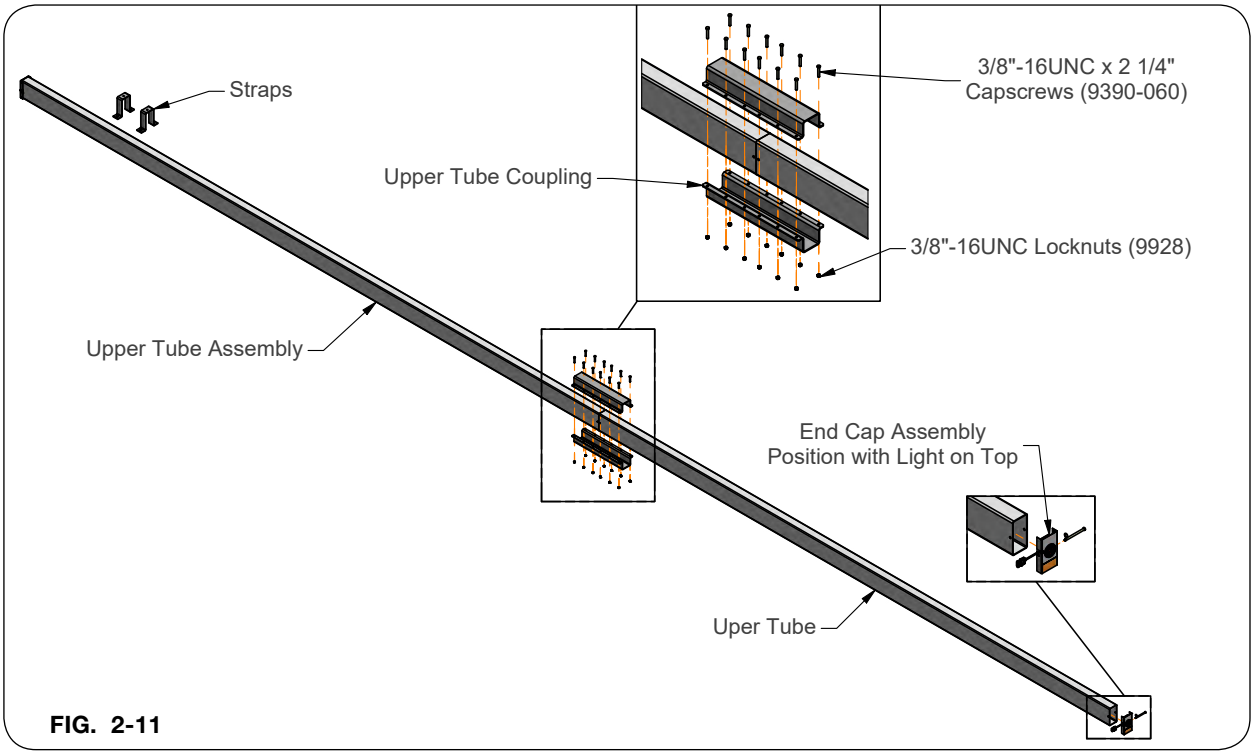


FIG. 2-11

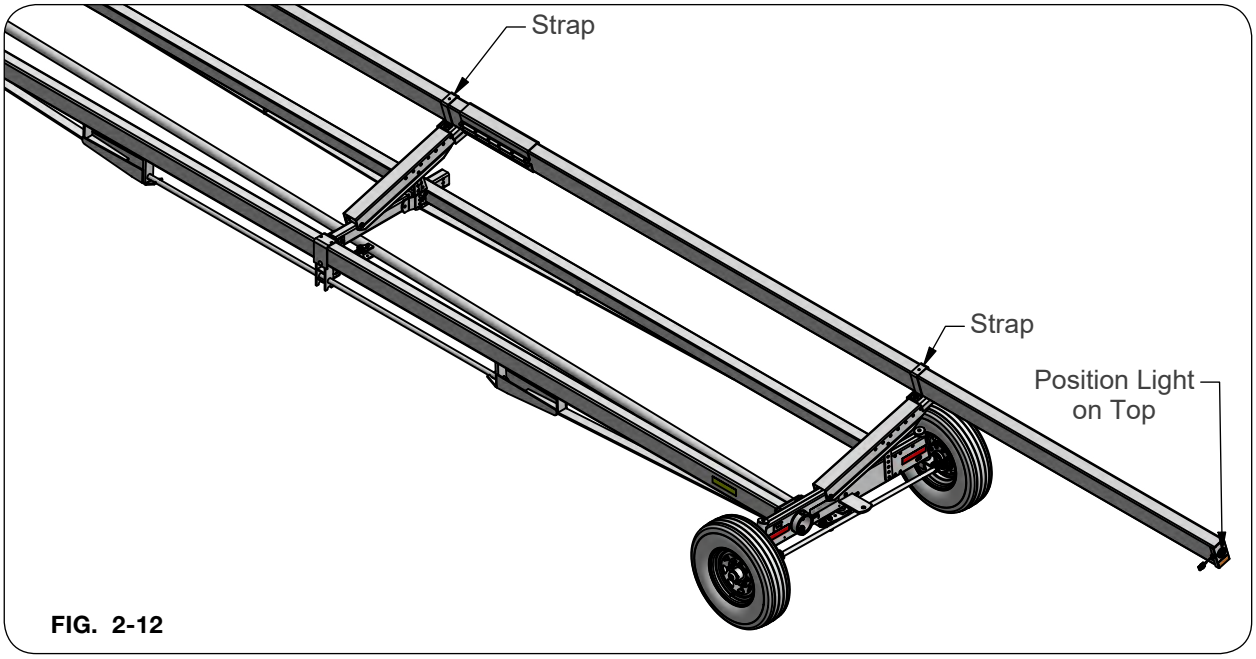


FIG. 2-12

Tongue

1. Remove the bolt lock plate (32983), 3/8”-16UNC x 3/4” flange screw, tongue bolt (9500917) and taper nut (9500918).

2. Assemble tongue to the front axle frame using tongue bolt (9500917) and taper nut (9500918) with a torque of 120-125 ft.-lbs., bolt lock plate (32983), and capscrew (95585) with a torque of 25-28 ft.-lbs. (FIG. 2-13).

IMPORTANT

- *Always tighten the tongue bolt to the proper torque. Never loosen the bolt to align the lock plate. The lock plate is reversible and will align when turned one way or the other.*

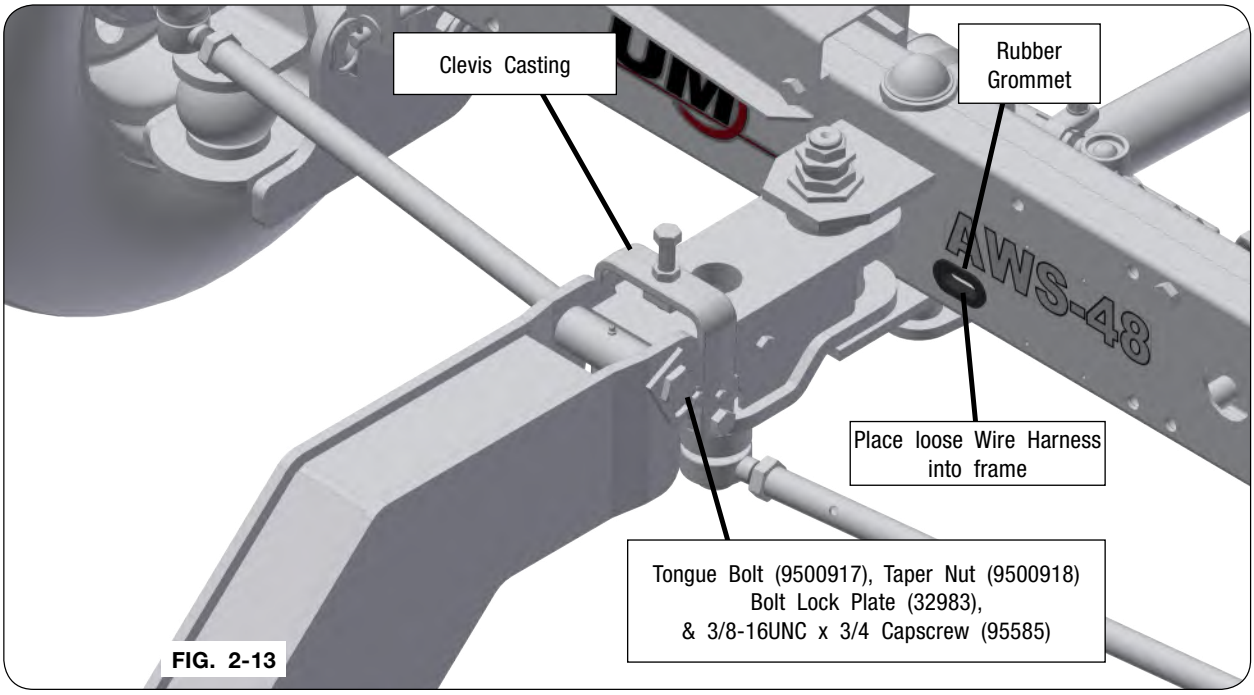


FIG. 2-13

3. Secure rubber grommet to hole in front axle frame (FIG. 2-13). With tongue connected to frame, route tongue wire harness through front axle frame hole (FIG. 2-13). Place extra wire harness into hole of axle frame.

Tongue (continued)

4. Make sure there is adequate wire to connect the harness to the tow vehicle. The harness is secured approximately 43 inches from the front of the tongue. Excess harness is looped on the inner tongue first two washers with releasable zip ties. (FIG. 2-15)

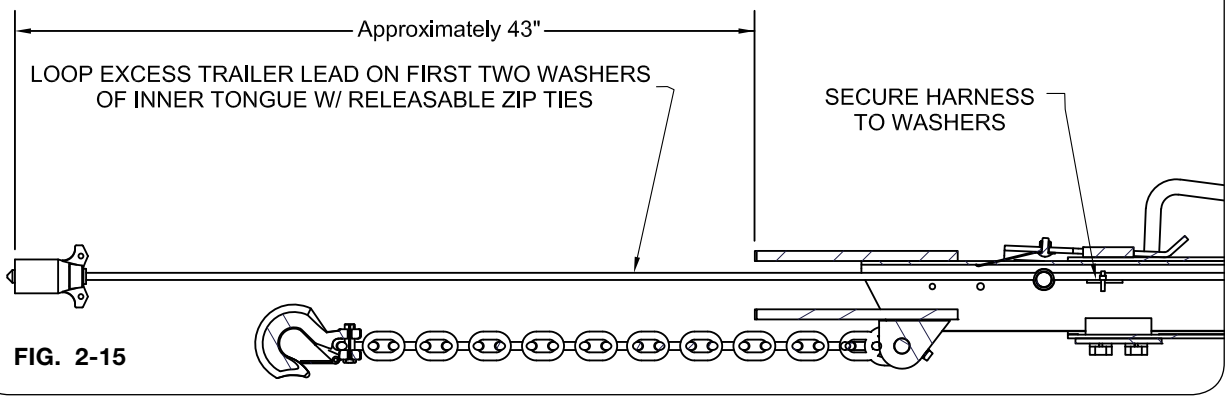


FIG. 2-15

5. Attach ALL WHEEL STEER TRANSPORT and wiring harness to tow vehicle and test the lights:

   Check:
   Tail Lights, Brake Lights, Left Turn Signal, Left Turn Signal with Brakes, Right Turn Signal, Right Turn Signal with Brakes

NOTE: If any lights fail to properly illuminate, check wiring harness on tow vehicle for proper wiring.

Light Bar Installation - Axle Mount (Standard)

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.

1. Install the third light (32733B, 32738B or 32742B), sized to the upper bar, onto the end of the bar. Wire should exit towards the left side of the machine. Connect the light bar wire harness to the long wire harness (FIG. 2-16).

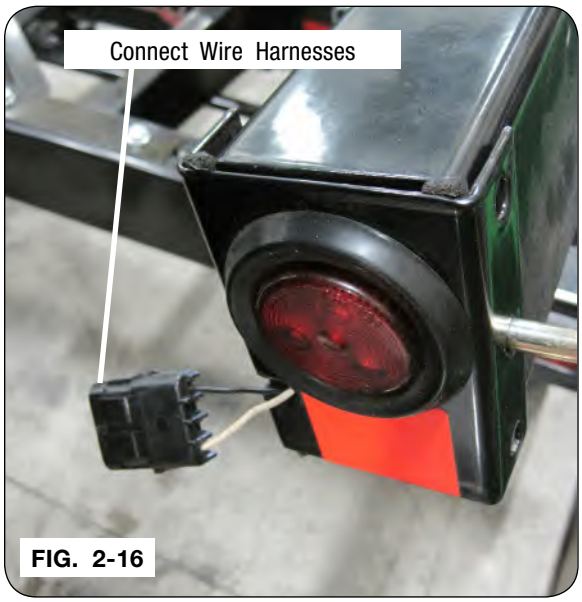


FIG. 2-16

2. Continue to route long wire harness along tube to rear frame of transport. Route around the front of the arm (FIG. 2-17).

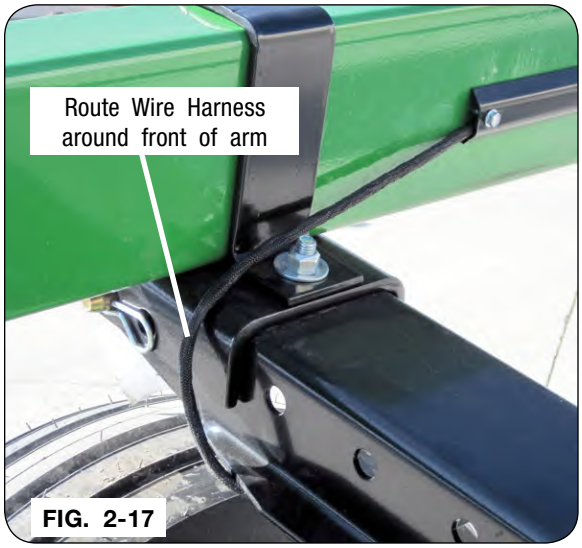


FIG. 2-17

Light Bar Installation - Axle Mount (continued)

3. Route under arm and on top of plate and bushing on underside of arm. Continue along top of axle and exit the left side of the arm. The short leg of the "Y" in the harness is routed up the angled leg of the light bar mount. Route the long leg of the harness into frame tube (FIG. 2-18A, 2-18B, 2-18C & 2-18D).

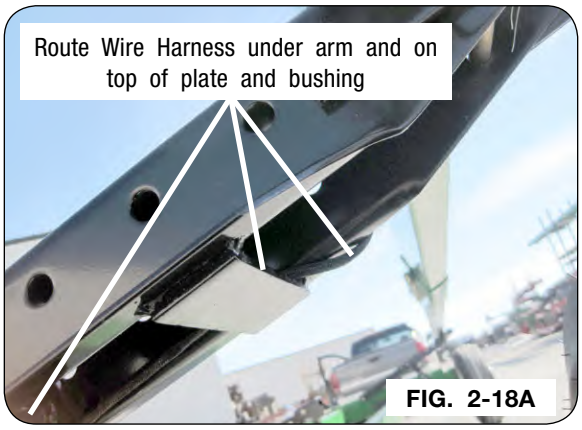


FIG. 2-18A

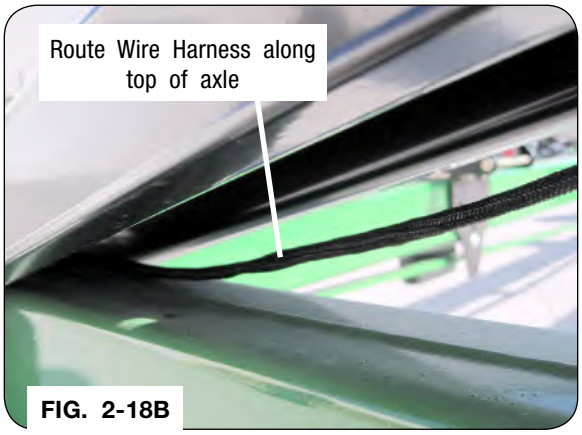


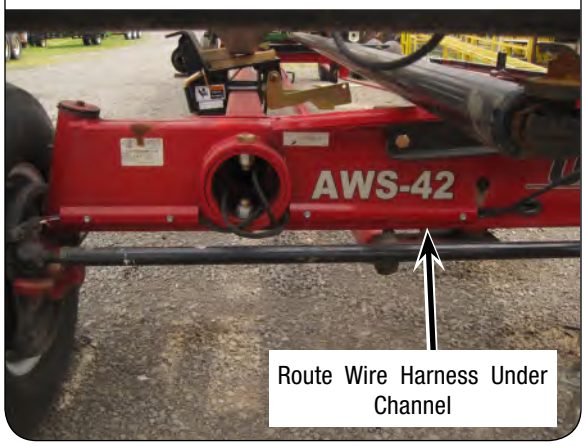
FIG. 2-18B

FOR UNITS LESS BRAKES

FIG. 2-18C

FIG. 2-18D

FOR UNITS WITH BRAKES

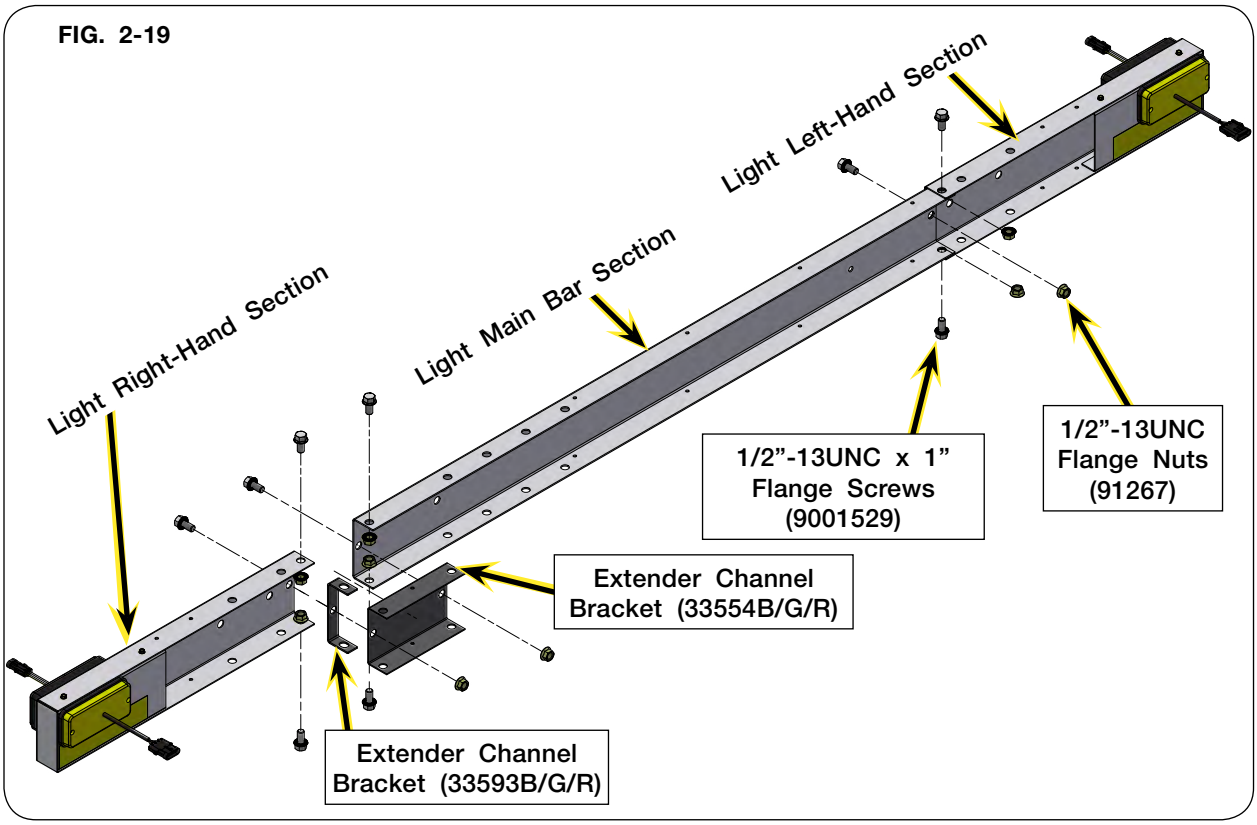


Light Bar Installation - Axle Mount (continued)

4. Due to the different head sizes, the light bar assembly (33557B) can be assembled at various widths. Use 1/2”-13UNC x 1” flange screws (9001529) and 1/2”-13UNC flange nuts (91267) to assemble the right-hand and left-hand sides to the main bar.

NOTE: Optional right-hand light extender bracket kit #33560B is available for heads extending to the right farther than the light bracket can normally cover. (FIG. 2-19)

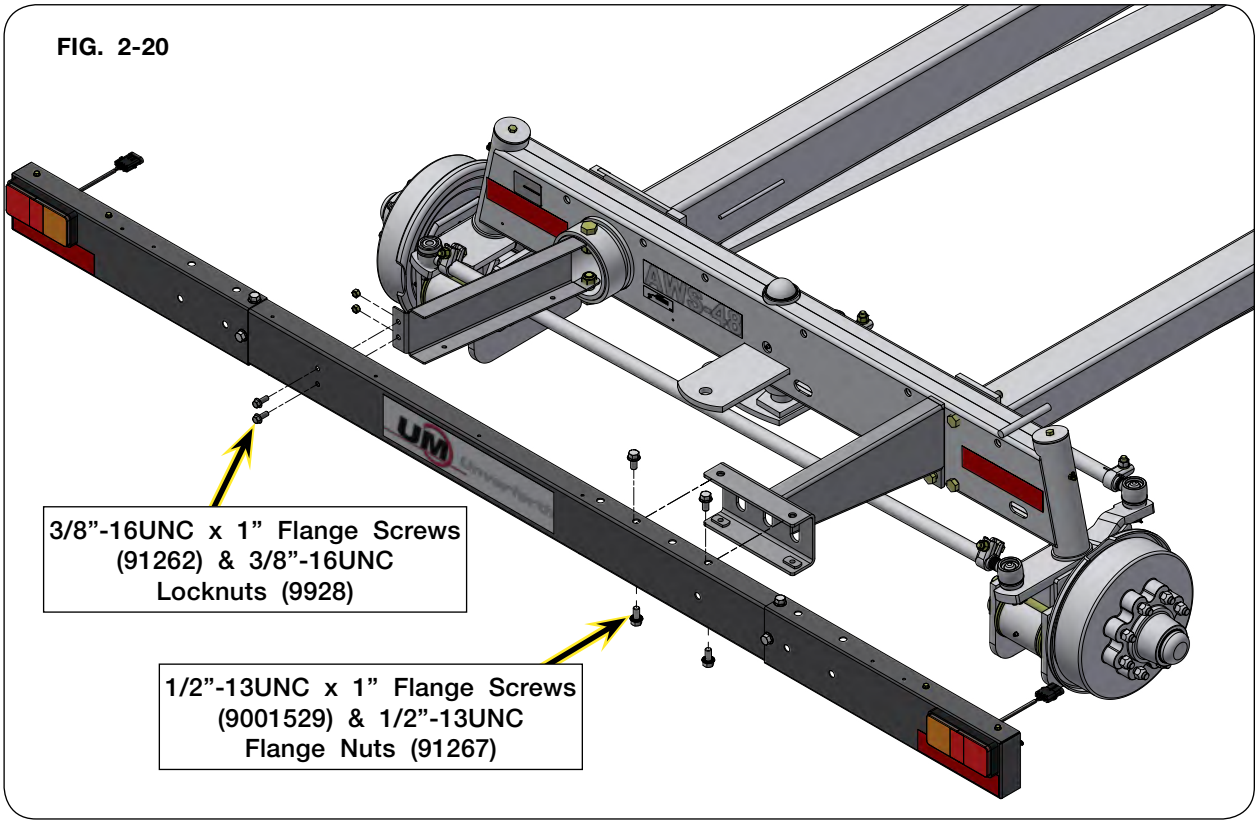
FIG. 2-19



Light Bar Installation - Axle Mount (continued)

5. Attach light bar assembly (33557B) onto end of light mounting arm with 1/2”-13UNC x 1” flange screws (9001529) and 1/2”-13UNC flange nuts (91267). (FIG. 2-20)

FIG. 2-20



NOTE: When attaching the light bar, be sure the cover side of the light bar is facing the light mounting arm.

Light Bar Installation - Axle Mount (continued)

6. Once secured, route wire harness through the hole in the end of light mount weldment (34548B) (FIG. 2-21 & FIG. 2-22).

7. With light bar wire harness in place, extend light bar all the way to the left to determine the length of wire harness required. To adjust light bar, see “Light Bar Width Adjustment” in OPERATION section.

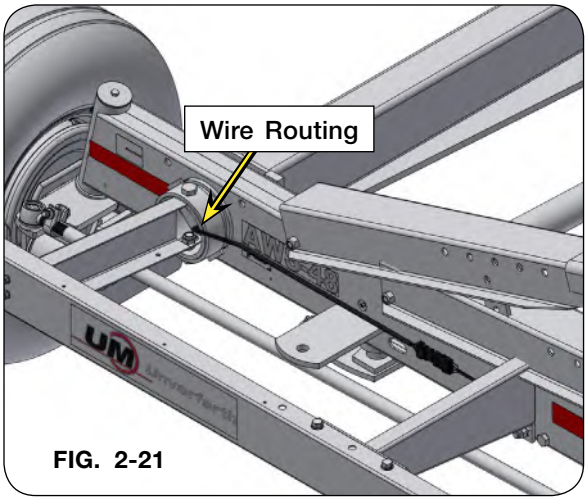


FIG. 2-21

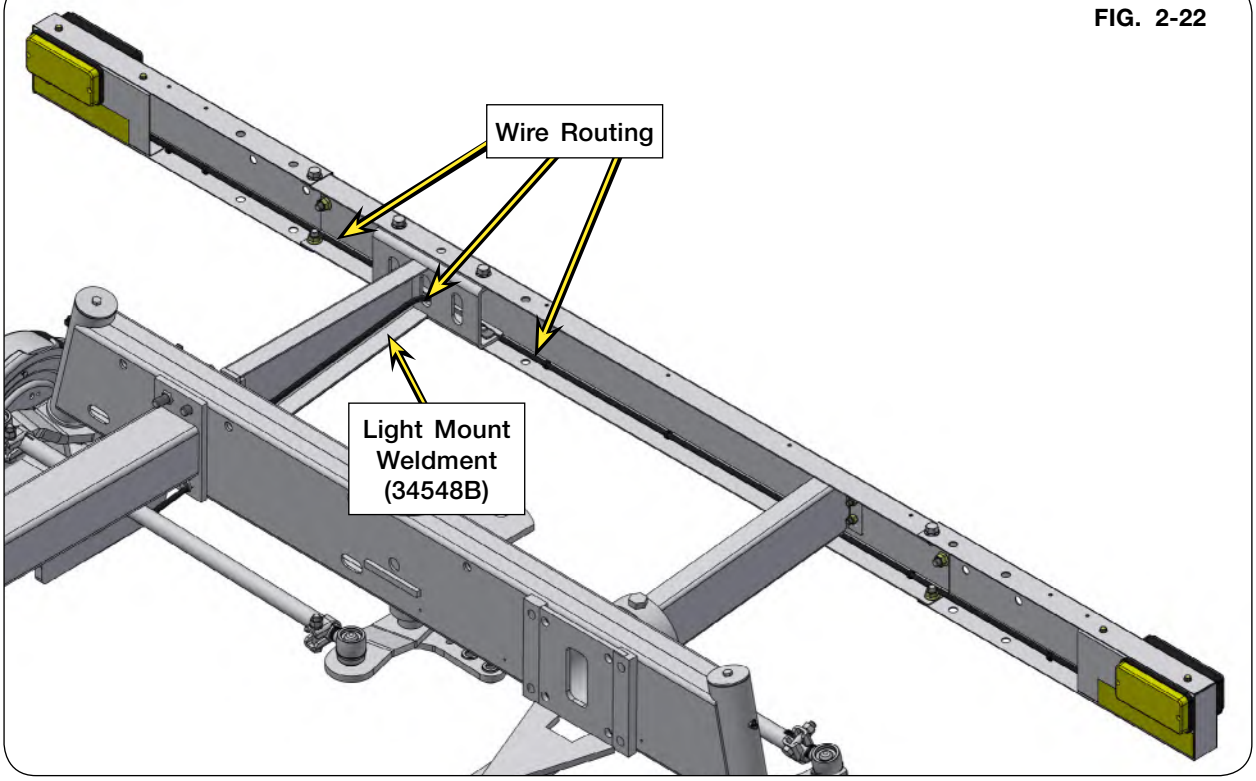


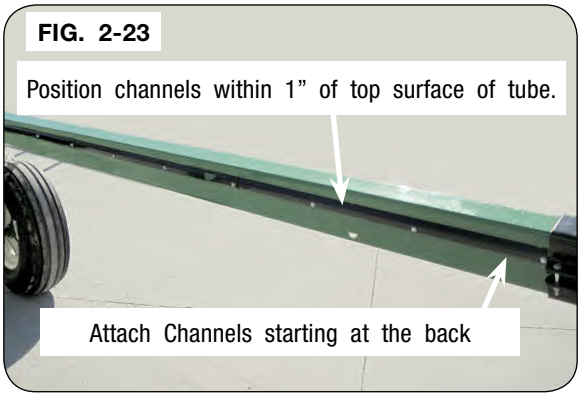
FIG. 2-22

Light Bar Installation - Axle Mount (continued)

8. Position upper bar in working position front to rear. Refer to "Upper Bar Adjustment" in OPERATION section of this manual. Starting at the back, attach channels by either overlapping or leaving a space in between. Pre-drill the tube with 3/16" holes. Secure channels using self-drilling screws (9523). Position channels within 1" top of top surface of tube as required by top bar location. (FIG. 2-23).

NOTE: The front most channel may need to be pushed back, overlapping more holes of channels if tube positioning interferes.

FIG. 2-23



Refer to "Light Bar Width Adjustment" in OPERATION section of this manual to set light bar location and to secure in place.

Light Bar Installation - Upper Bar Mount (Optional)

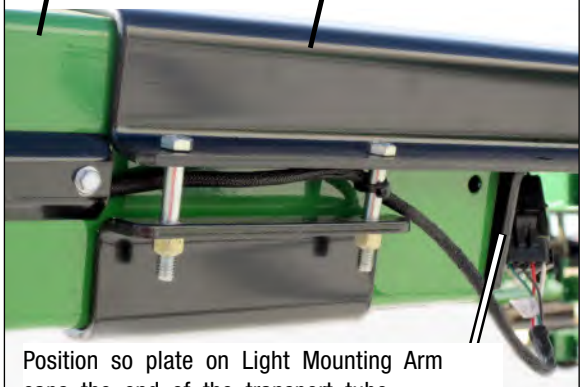
The following instructions are for attaching the rear light bar onto the end of the header transport tube.

Note: Top bar mount is required.
Prior to beginning assembly you will need:

- Tape Measure or Fish Tape (Minimum 22 ft.)
- Long Narrow Screwdriver
- Electrical Tape
- Needle Nose Pliers
- Piece of stiff wire bent in “L” shape

1. Mount the light mounting arm onto the header transport frame. Make sure the plate on the light mounting arm caps the end of the transport tube. Secure with hardware provided. See FIG. 2-24.

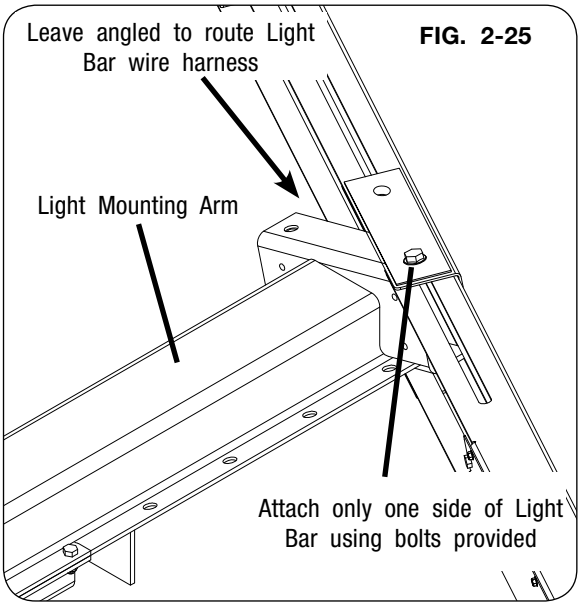
FIG. 2-24



2. Attach light bar onto end of light mounting arm. Remove top and bottom bolts from one side of the backing plate on light bar. Attach that side of the light bar to the light mounting arm using bolts removed. Nuts can be discarded. See FIG. 2-25.

NOTE: When attaching the light bar, be sure the cover side of the light bar is facing the light mounting arm.

FIG. 2-25



Light Bar Installation - Upper Bar Mount (continued)

3. Once secured, angle light bar so wire harness can be routed through end of light mounting arm, see FIG. 2-26. Slide wire harness through hole on underside of light mounting arm. See FIG. 2-26.

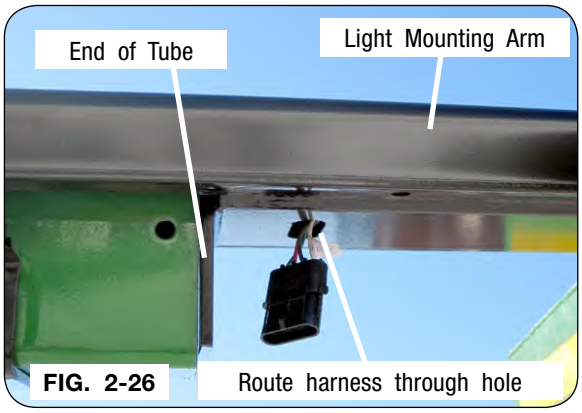


FIG. 2-26

4. With light bar wire harness in place, remove top and bottom bolts on the opposite side of backing plate on light bar. Attach light bar to light mounting arm using bolts removed, see FIG. 2-27. Nuts can be discarded. Extend light bar all the way to the left to determine the length of wire harness required, see FIG. 2-28. Tuck extra wire harness behind light bar cover for storage, see FIG. 2-29.

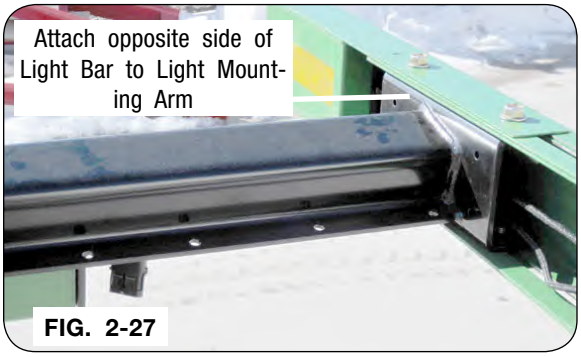


FIG. 2-27

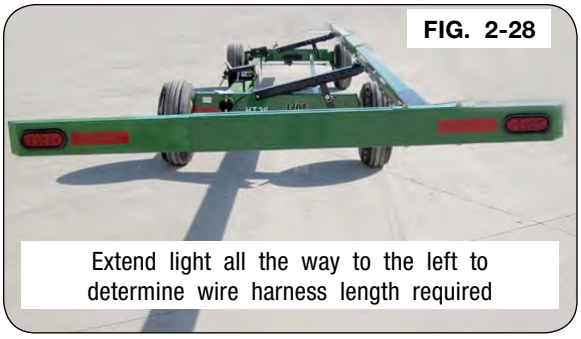


FIG. 2-28

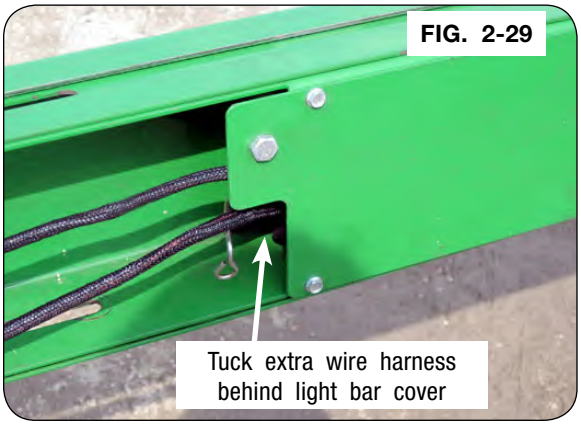


FIG. 2-29

Light Bar Installation - Upper Bar Mount (continued)

5. Connect light bar wire harness to long wire harness. See FIG. 2-30.

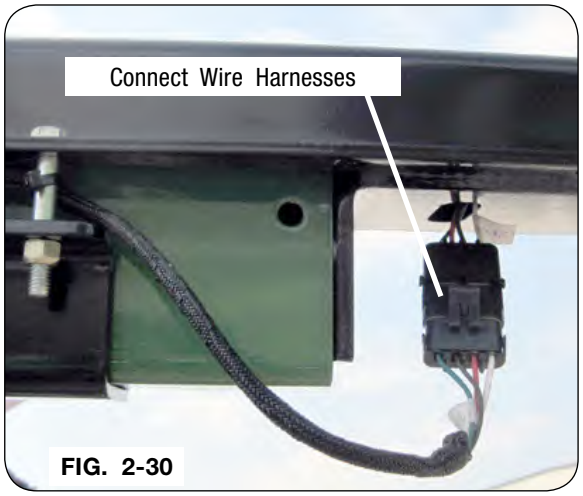


FIG. 2-30

6. Route long wire harness behind bolts on light mounting arm. Do not attach channels at this time. See FIG. 2-31.

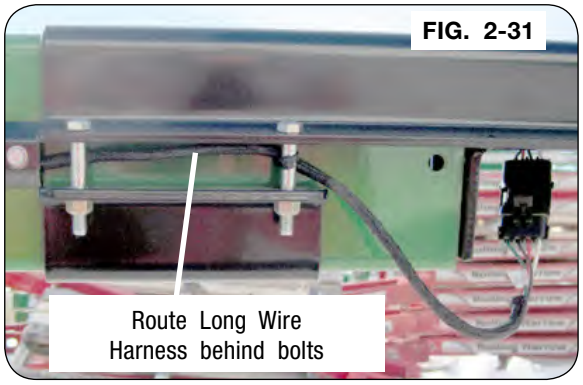


FIG. 2-31

7. Continue to route long wire harness along tube to rear frame of transport. Route around the front of the arm. See FIG. 2-32.

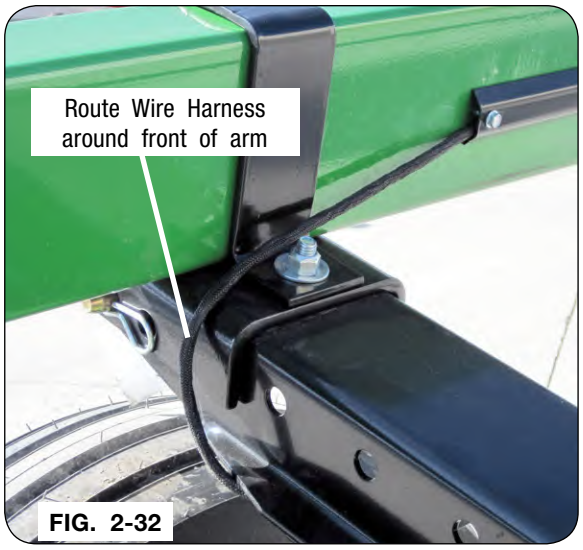


FIG. 2-32

Light Bar Installation - Upper Bar Mount (continued)

8. Route under arm and on top of plate and bushing on underside of arm. Continue along top of axle and exit the left side of the arm and into frame tube. See FIG.s 2-33, 2-34 and 2-35.

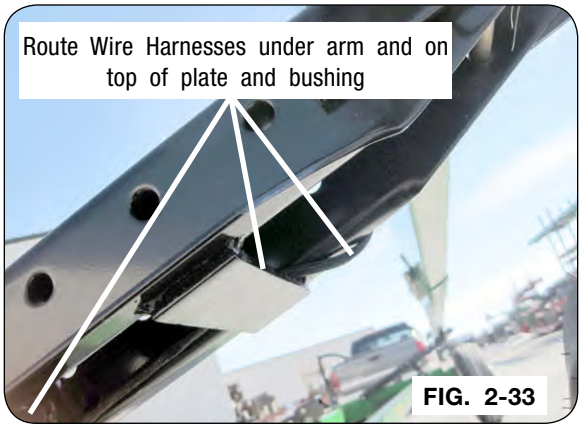


FIG. 2-33

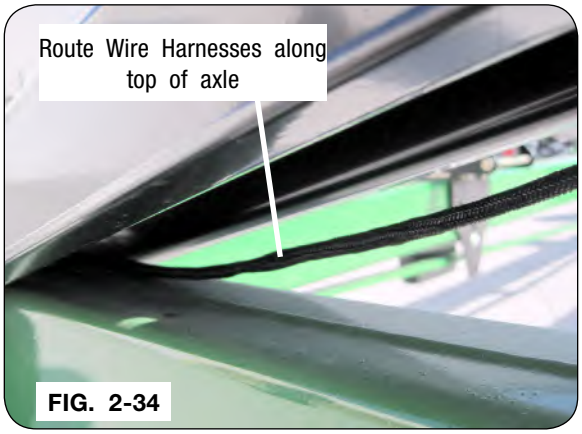


FIG. 2-34

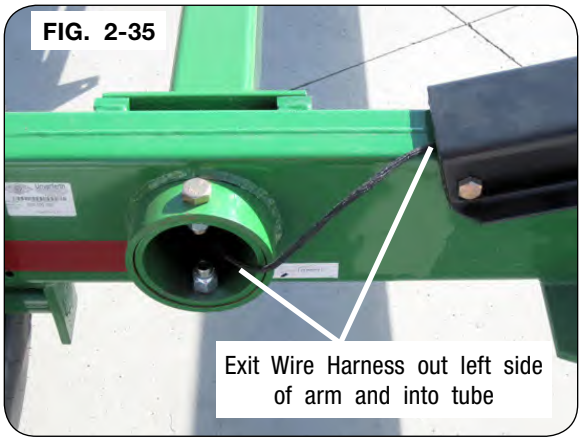


FIG. 2-35

Light Bar Installation - Upper Bar Mount (continued)

10. Position upper bar in working position front to rear. Refer to Upper Bar Adjustment in OPERATION section of the HEADER TRANSPORT manual. Starting at the back, attach channels by either overlapping or leaving a space in between using self-drilling screws (9523). Position channels within 1" top of top surface of tube as required by top bar location. See FIG. 2-36.

NOTE: The front most channel may need to be pushed back, overlapping more holes of channels if tube positioning interferes.

NOTE: Be careful to avoid damage to wires when installing self-drilling screws.

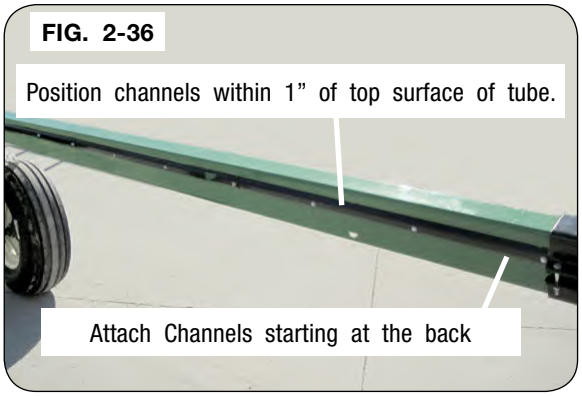


FIG. 2-36

Electrical

Make sure no wires are pinched or cut during installation. Keep all wires concealed to prevent them from getting caught on obstructions.

Note: Prior to beginning assembly you will need:
- Tape Measure or Fish Tape (Minimum 32 ft.)
- Long Narrow Screwdriver
- Electrical Tape
- Needle Nose Pliers
- Piece of stiff wire bent in "L" shape

1. The front harness is located inside the tongue assembly.

2. Insert tape measure or fish tape into front axle tube and push towards rear until it stops (FIG. 2-37).

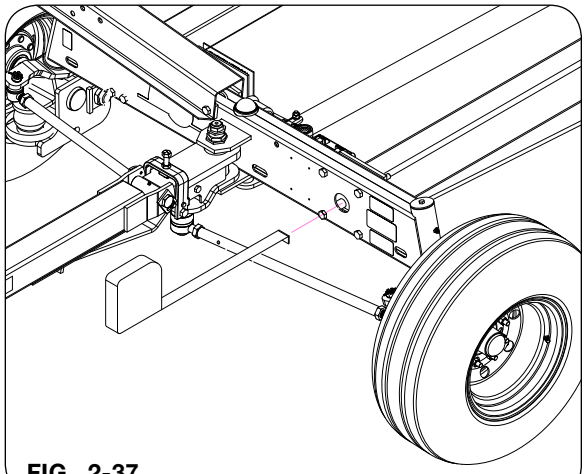


FIG. 2-37

Electrical (continued)

3. From rear axle, using a piece of stiff wire bent in “L” shape, pull tape measure or fish tape through the hole at the rear connecting tube of the rear axle (FIG. 2-38).

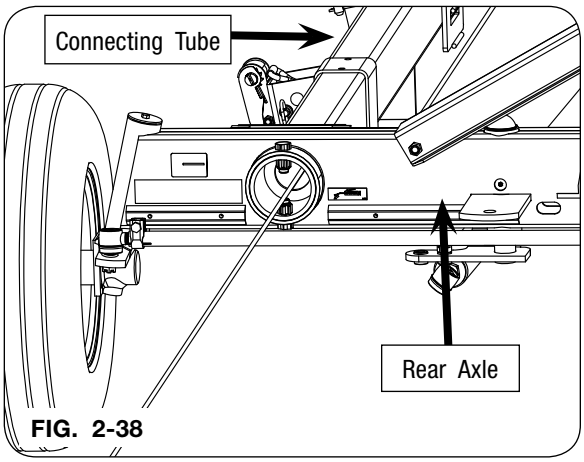


FIG. 2-38

4. **MODEL LESS BRAKES**
   Tape one end of the light wiring harness (32269) to the end of the tape measure or fish tape.

   MODEL WITH 2-BRAKE OR 4-BRAKE
   Tape one end of the light wiring harness (32269) and rear brake wiring harness (32273) to the end of the tape measure or fish tape.

5. Push tape measure/fish tape and wire harness(es) through the hole and into the connecting tube (FIG. 2-38).

6. From the front of the implement gently pull the tape measure/fish tape and wiring harness(es) through the connecting tube and front axle. (Make sure the wiring harness(es) do not get tangled where the wire enters the rear axle).

7. Lay the wiring harness(es) out straight towards the front of the HEADER TRANSPORT and insert the connector into the same hole on the front axle. Push the wiring harness(es) towards the center hinge on the front axle, (FIG. 2-39).

8. Using a needle nose pliers or a piece of stiff wire, pull the wire harness through the slot on the front axle. Take all slack out of the wiring harness(es) by pulling the harness(es) towards the front of the HEADER TRANSPORT (FIG. 2-39).

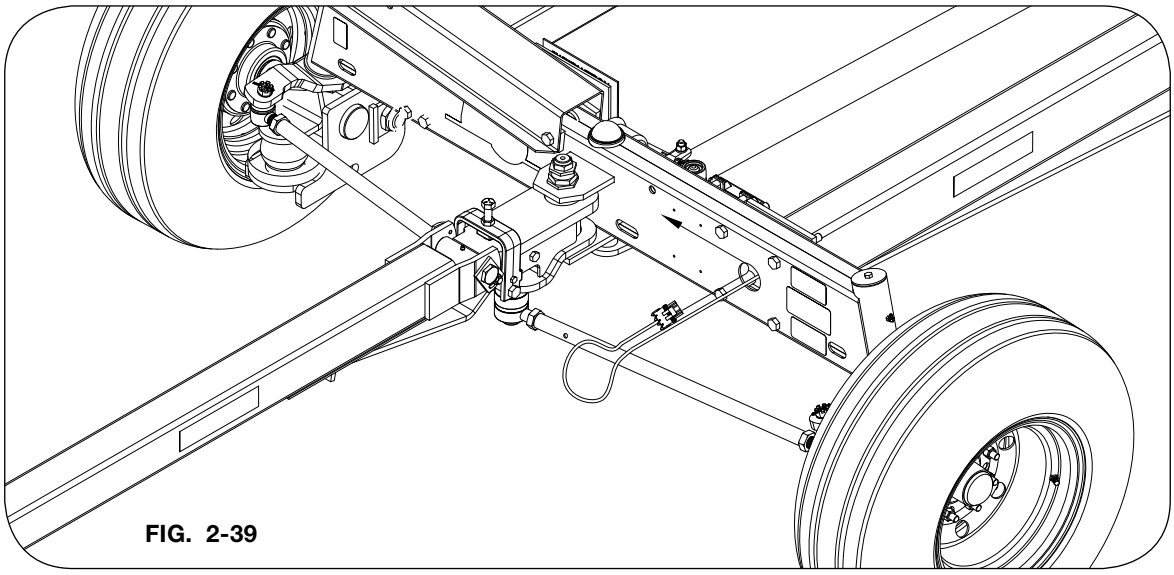


FIG. 2-39

Electrical (continued)

9. **MODEL WITH BRAKES**
   Connect the rear brake wiring harness (32273). Use cover plates (32271B) and (32270B) to secure the wiring harnesses to the frame (FIG. 2-40).

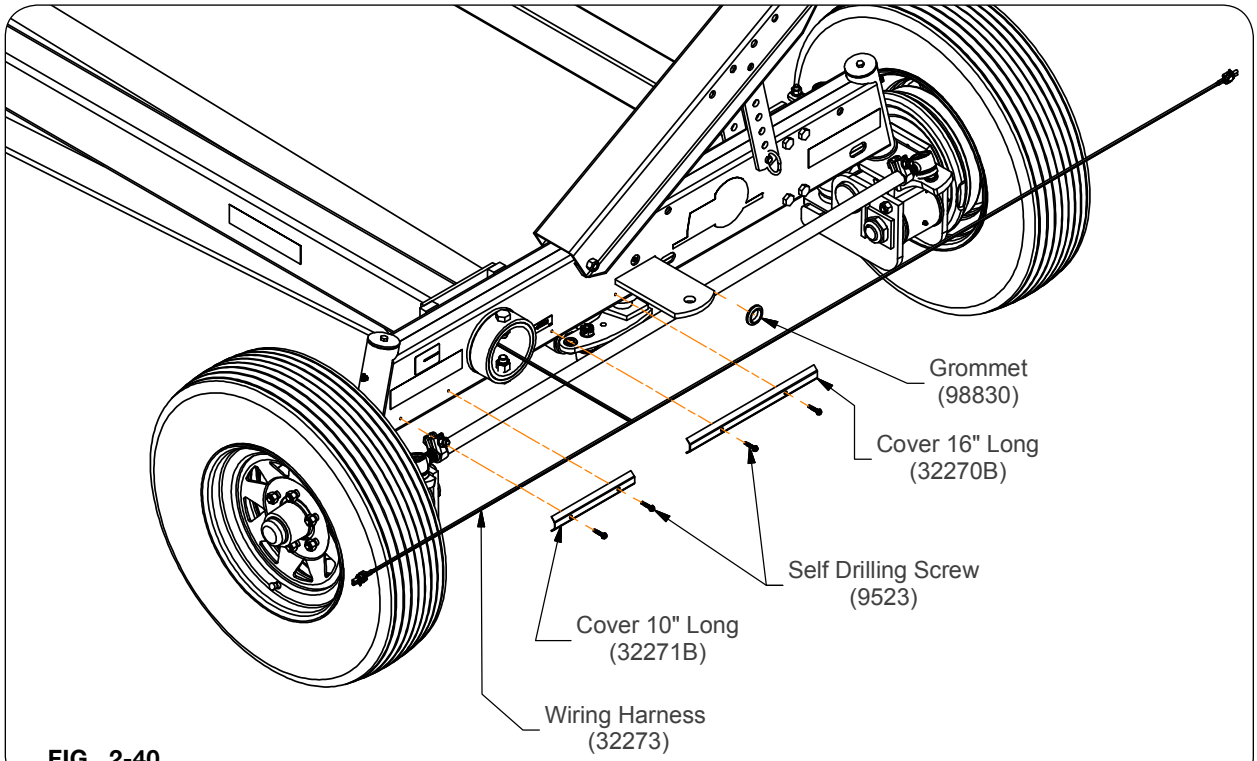
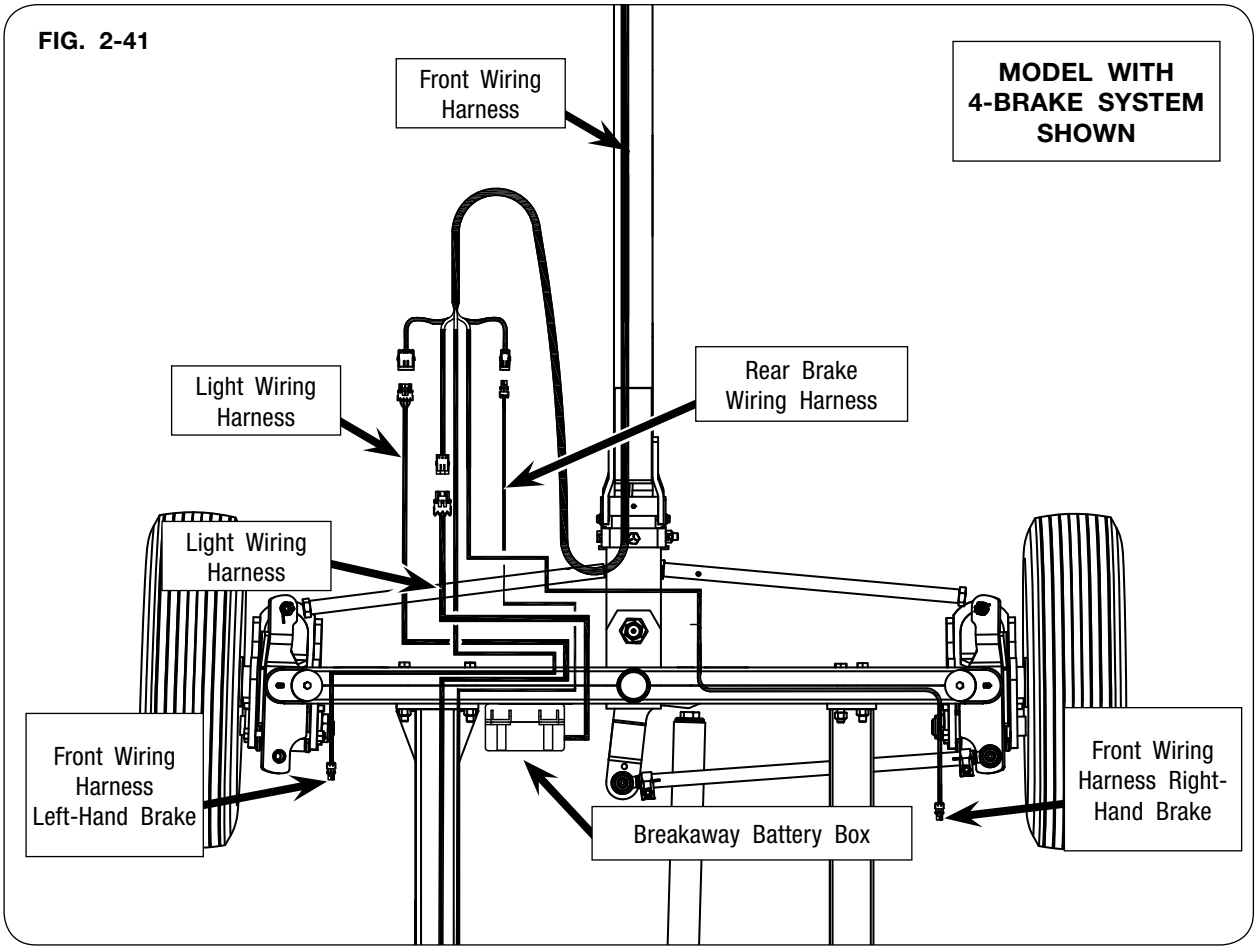


FIG. 2-40

Electrical (continued)

10. **MODEL WITH 4-BRAKE ONLY**
    Route the front wiring harness, right-hand brake connector through the slot in the front axle and out the rear slot nearest the axle (FIG. 2-41). Connect the front wiring harness to the front right-hand brake.

FIG. 2-41



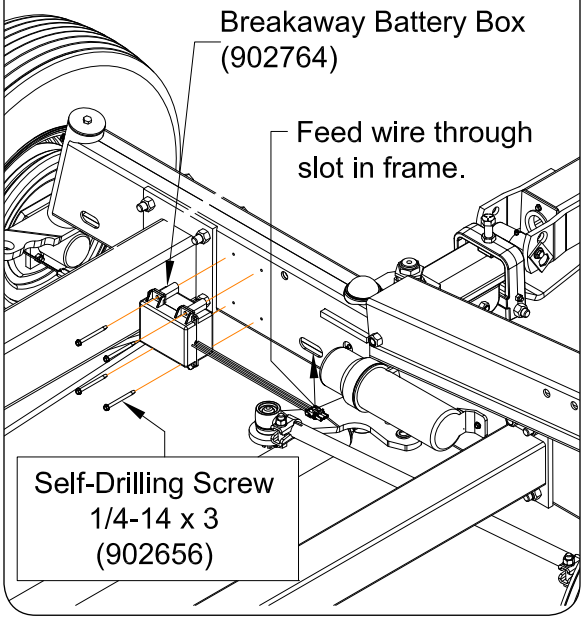
11. Store excess wiring in the front axle weldment.

Electrical (continued)

Breakaway Kit Installation

1. Attach breakaway battery/charger box to the rear of the front axle weldment using the existing holes (FIG. 2-42) using self-drilling screw. Feed the wire harness through the slot in the rear of the front axle and out the front slot. Connect breakaway box cable to the front wiring harness.

FIG. 2-42



SECTION III
Operation

General Information

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

⚠ WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

IMPORTANT

- *Know and understand safety rules before operating or servicing this machine. Review "Safety" section in this manual.*

Hitching

1. Position towing vehicle in front of header transport. Lift tongue latch handle and extend inner tongue extension enough to attach to vehicle drawbar using a 3/4" minimum diameter hitch pin and lock in place. Back-up towing vehicle to re-latch tongue.

NOTE: Before hitching the header transport to any vehicle drawbar, be sure that the pin hole is located close enough to the rear of the vehicle drawbar to allow the header transport tongue clevis to swing 90 degrees right or left of the center line without interference.

⚠ CAUTION

- **BE SURE TRANSPORT TONGUE IS LATCHED BEFORE TRANSPORTING, OTHERWISE JARRING COULD OCCUR WHEN STOPPING UNIT, CAUSING A SUDDEN SHIFT OF LOAD.**
- **ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE A TRANSPORT CHAIN COULD CAUSE PERSONAL INJURY IF IMPLEMENT BECOMES DISENGAGED.**
- **REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, DAMAGED OR NOT FUNCTIONING. DO NOT WELD TRANSPORT CHAIN.**
- **USE ONLY AN UNVERFERTH DOT TRANSPORT CHAIN WITH A WEIGHT RATING EXCEEDING THE GROSS COMBINED WEIGHT OF ALL TOWED IMPLEMENTS. CONTACT YOUR UNVERFERTH DEALER FOR ADDITIONAL INFORMATION.**

2. Install transport chain 97436 (FIG. 3-1).

NOTE: Transport chains should have a rating equal to the gross weight of implement and head.

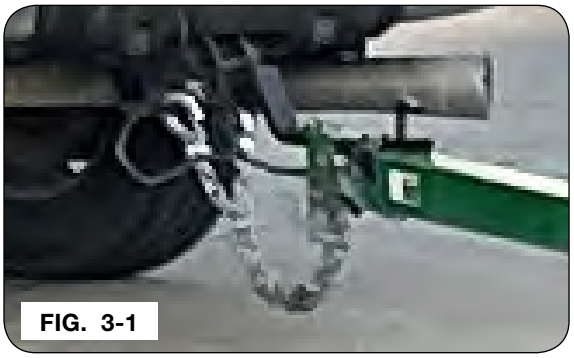


FIG. 3-1

Hitching (continued)

3. CHECK THE FOLLOWING:
   Tires/Wheels: Check tire pressures and maintain at recommended values listed in the SERVICE section of this manual.

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.**

IMPORTANT

- *Installing wheels without the proper inset could result in hub or spindle failure. This will cause substantial damage to cart.*

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Tire manufacturers' phone numbers and web sites are listed in the "MAINTENANCE" section of this manual for your convenience.

Initial Adjustments

Upper Rest Bar

⚠ WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

- **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 1,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

⚠ CAUTION

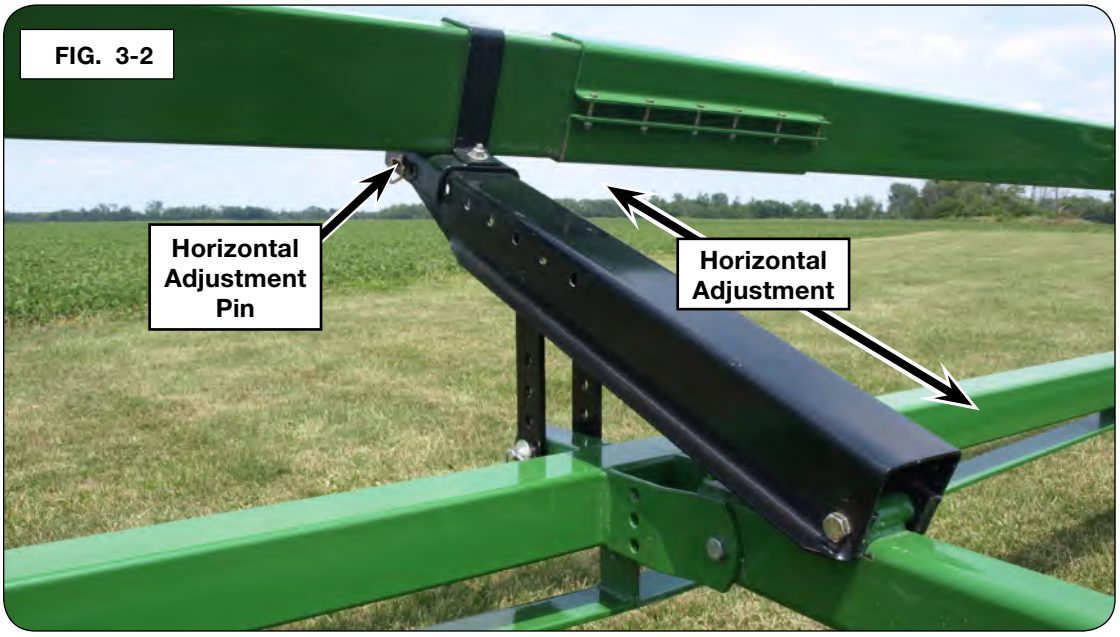
- **WHEN ADJUSTING UPPER BAR, ALWAYS MOVE ONE PIN AT A TIME PER SIDE. THE WEIGHT OF THE UPPER BAR MAY BE DIFFICULT TO MANAGE IF BOTH ENDS ARE ADJUSTED SIMULTANEOUSLY.**

Horizontal Adjustment

1. Using a safe lifting device rated at a minimum of 1,000 lbs., support the upper rest bar and remove the horizontal adjustment pin. Reposition bar to desired location and install the horizontal adjustment pin (FIG. 3-2).

NOTE: Be sure bar is adjusted equally from side-to-side. Additional horizontal information: upper bar support arms are factory assembled on the outer set of holes, best used for Draper heads and corn heads. For grain platforms, move support arms to the alternate set of mounting holes located 11" to the left (moves upper bar closer to the combine).

FIG. 3-2



Initial Adjustments (continued)

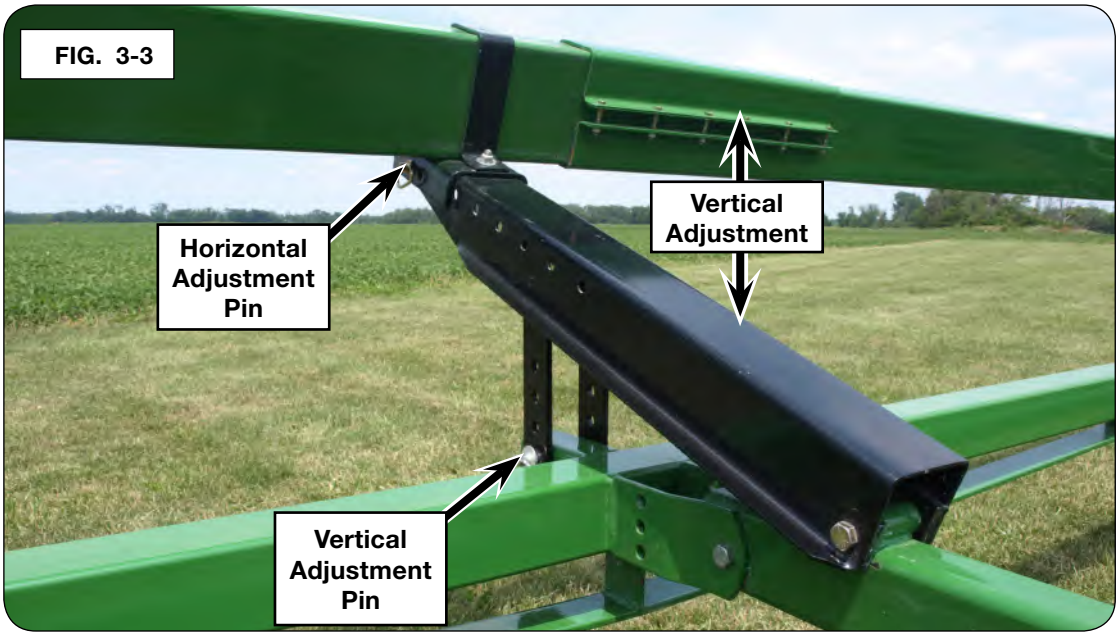
Vertical Adjustment

1. Raise upper rest tube with a safe lifting device rated at 1,000 lbs., to take pressure off of the vertical adjustment pin. Remove the pin.

2. Reposition upper rest tube and reinsert the vertical adjustment pin and lock into position (FIG. 3-3).

IMPORTANT

- *Be sure all three arms are pinned.*



Initial Adjustments (continued)

Front-To-Rear Adjustment

1. Loosen hex nuts, flat washers, and straps on support arms so that the upper rest bar slides freely (FIG. 3-4). Position upper bar evenly from front-to-rear so an equal amount extends beyond each axle.

NOTE: For best performance and flexibility of the unit, it is recommended that no more than four feet (30' & 36' Units), seven feet (42' Units), or nine feet (48' & 52' Units) of the header be positioned over the front axle. This should assure proper tongue clearance.

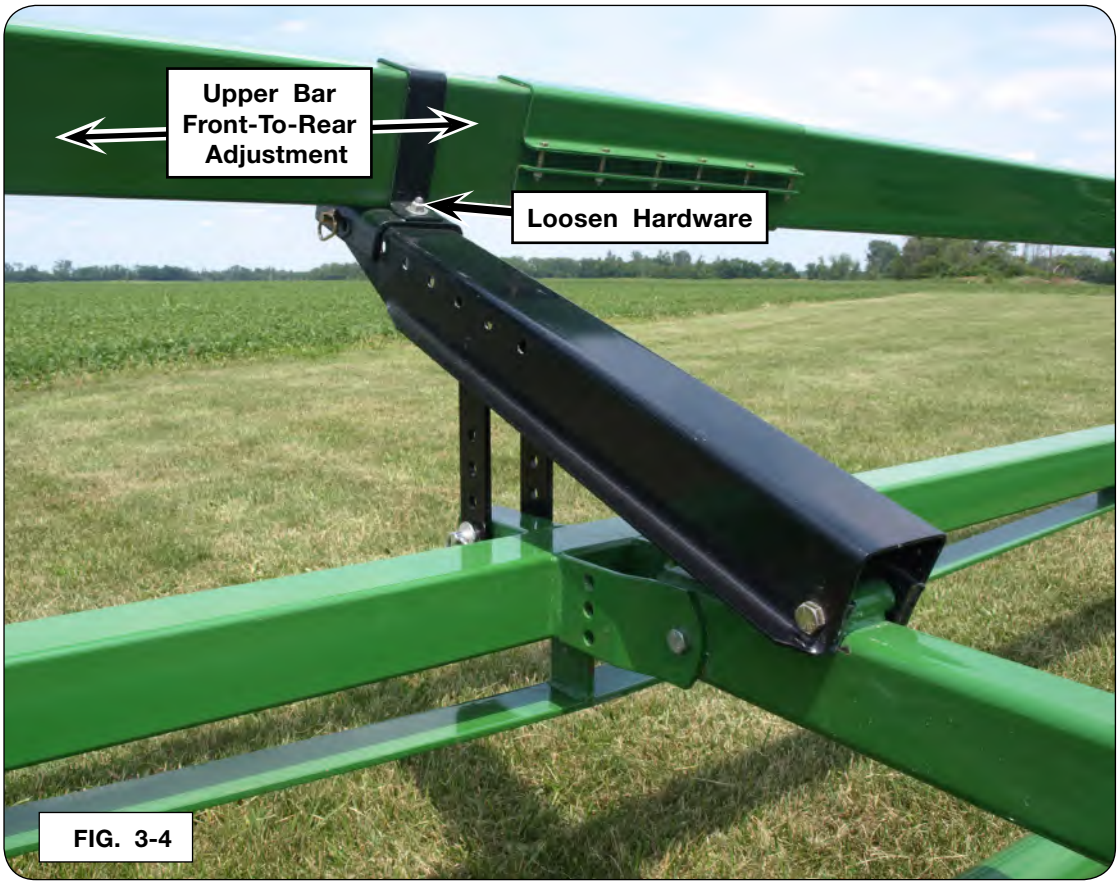


FIG. 3-4

Initial Adjustments (continued)

Center Arm Adjustment

Side-To-Side Adjustment

Side-to-side adjustment should be the same as the front-to-rear on page 3-6.

Vertical Adjustment

Vertical adjustment can be achieved by pinning so the top bar is straight when loaded. For heavier heads, the center arm may need to be pinned one or more positions higher than the ends to account for frame flex after load is applied. Ideally a loaded frame should be straight to slightly arched up.

Initial Adjustments (continued)

Rest Brackets

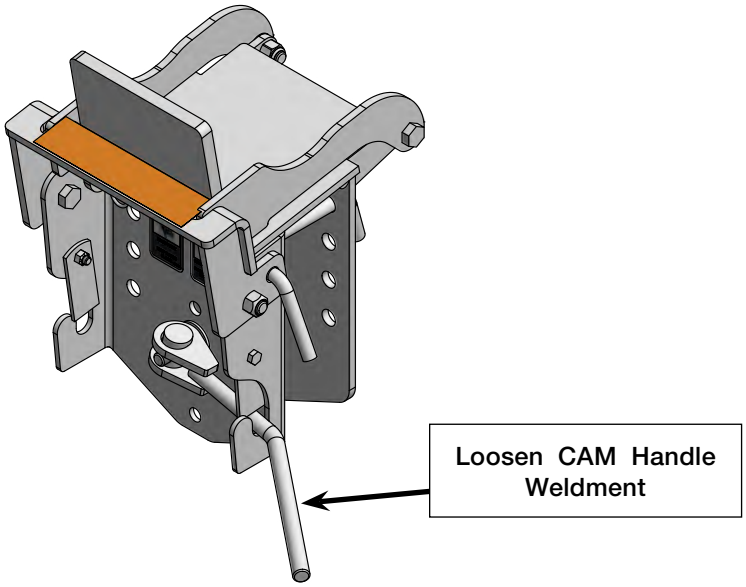
WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

Horizontal Adjustment

1. Loosen CAM handle weldment on rest bracket (FIG. 3-5).

FIG. 3-5



2. Reposition the rest brackets.
3. Turn the handle clockwise and **tighten as much as possible**.
4. Close the handle and secure in the locking slot.
5. Check that the bracket cannot move from side-to-side.

Initial Adjustments (continued)

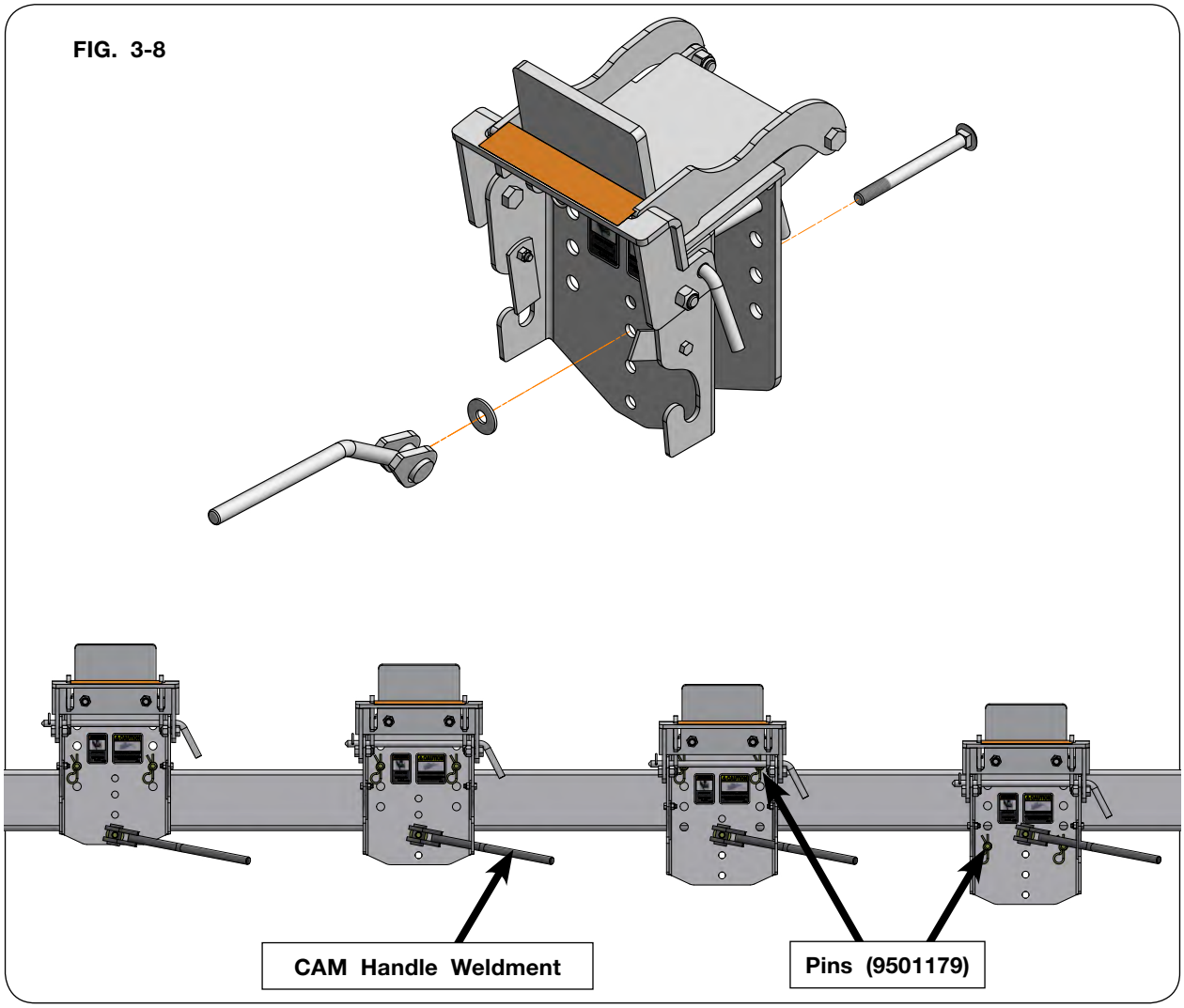
Vertical Adjustment

There are 4 settings totaling 6 inches of vertical adjustment available on the rest bracket.

Lower Position

Pins (9501179) are placed in the appropriate holes (FIG. 3-8). Pins can be removed to lower rest brackets to the lowest position required for specific applications. Store pins in unused lower holes in rest brackets. Align CAM handle weldment and hardware through the holes aligning with the bottom of the 6”x4” lower rest tube. **Tighten CAM handle weldment as tight as possible to secure the rest pads to the lower rest tube.**

FIG. 3-8



Initial Adjustments (continued)

Riser Side Plates

NOTE: Current fitment photos are viewable at www.umequip.com/header-transports/aws-fieldrunner/

1. The riser side plates (34449B) are used on most corn heads or when the header main cross-member can not rest directly on the rest bracket. The riser side plates are not used for most grain platforms. Only one riser side plate is used when the rest bracket is positioned under the feeder house frame. Typically the riser side plates are used to form a pocket that captures a foot on the head.

2. To put the riser side plates in the storage position:
   A. Pull hairpin (95959) and pin (32928) holding the riser side plates onto the top of the rest bracket (FIG. 3-7, FIG. 3-8, & FIG. 3-9).
   B. Rotate one or both riser side plates behind the rest bracket as required.
   C. Re-insert pin (32928) and hairpin (95959) through the same hole in the rest bracket.

NOTE: Pin is always in the rest bracket whether using the side plates or not.

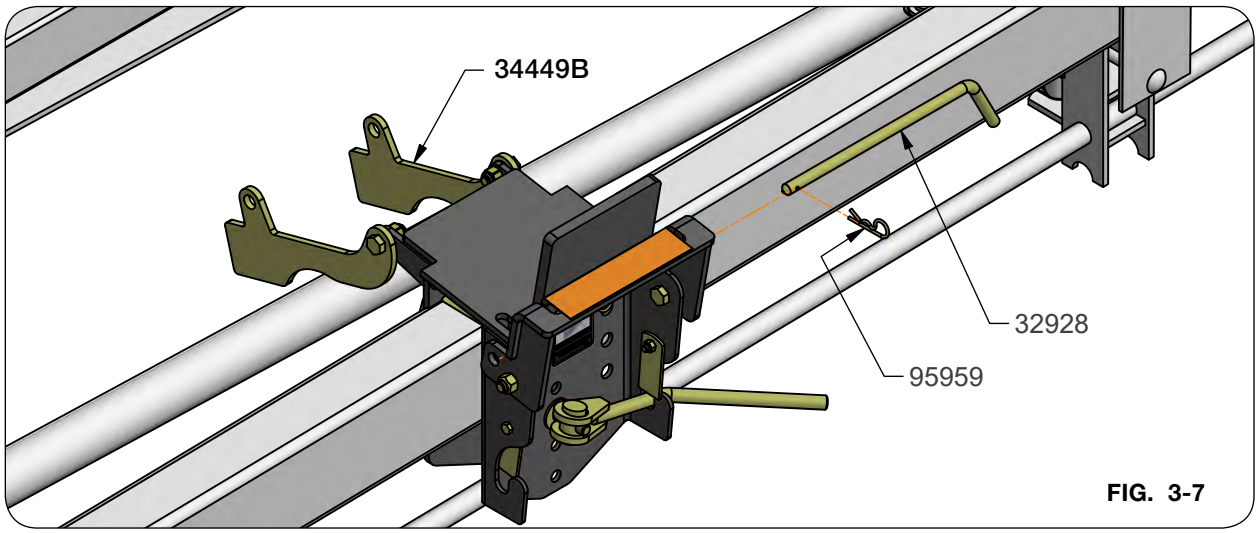


FIG. 3-7

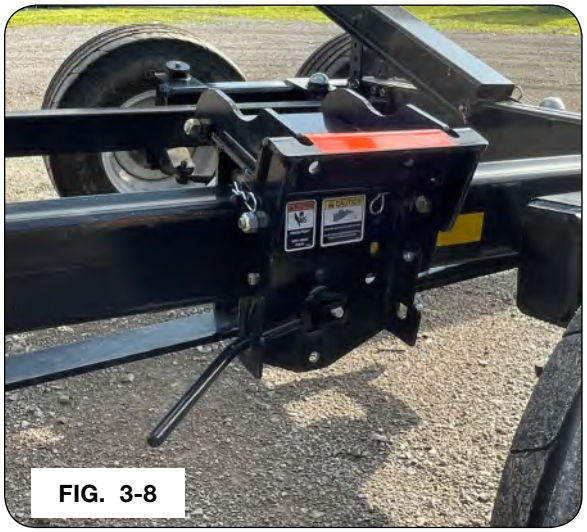


FIG. 3-8


FIG. 3-9

Initial Adjustments (continued)

Tongue Lift Assist Spring Tension

The tongue lift assist spring tension can be adjusted to reduce the effort required to lift the tongue into position or it can be adjusted to hold the tongue at a convenient height. The amount of lift assist can be adjusted by turning the tensioner bolt (FIG. 3-10).

Turn the tensioner bolt clockwise to increase the lift assist force.

Turn the tensioner bolt counter-clockwise to reduce the lift assist force.

NOTE: When tightening the tensioner bolt, manually lifting the tongue will reduce the effort required to turn the tensioner bolt.

NOTE: After adjusting tensioner bolt always make sure to tighten jam nut to prevent bolt from loosening during use (FIG. 3-10).

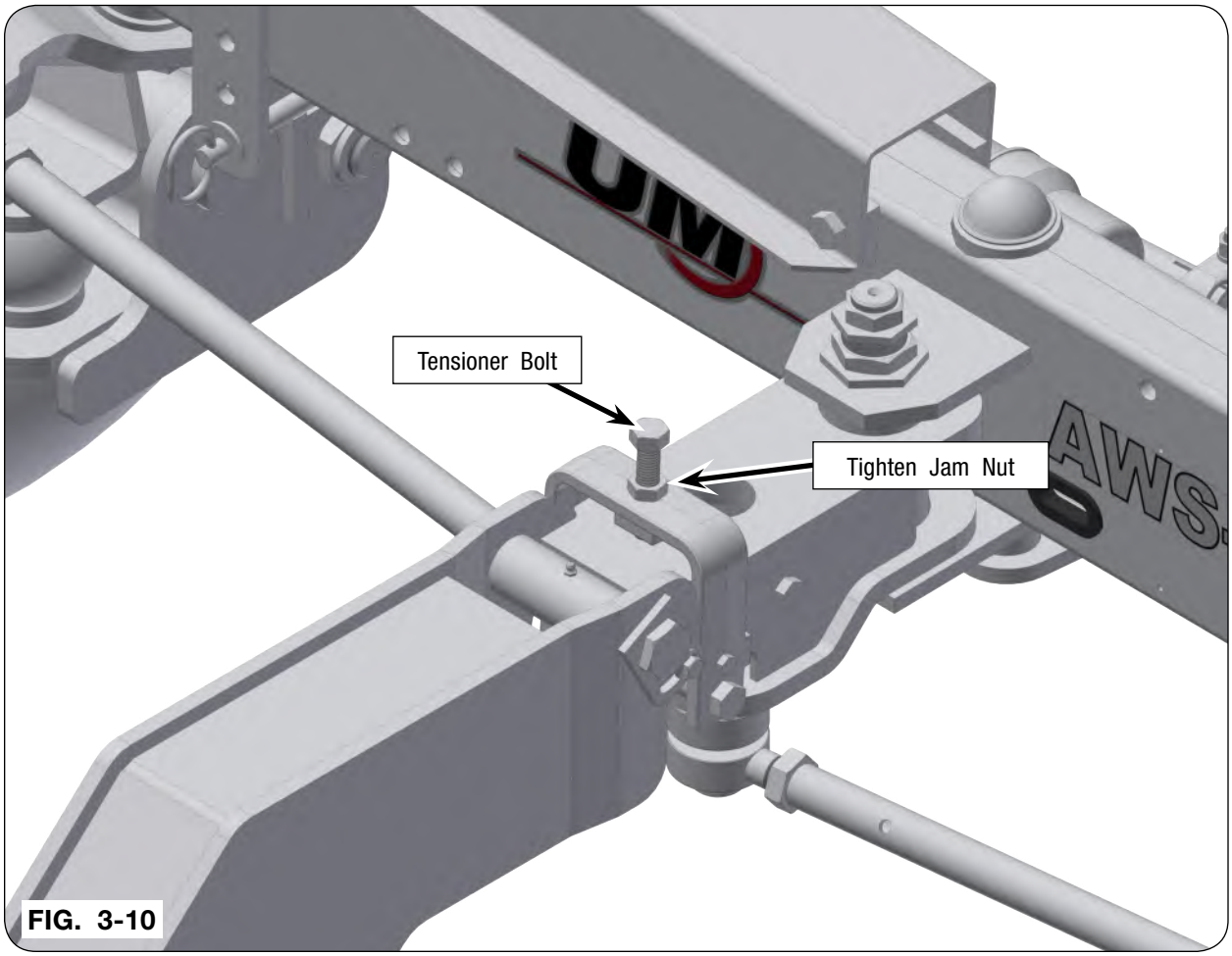


FIG. 3-10

Positioning Head On Transport

⚠ CAUTION

- **BE SURE TRANSPORT IS ATTACHED TO TOWING VEHICLE OR THAT THE WHEELS ARE BLOCKED BEFORE POSITIONING HEADER ON TRANSPORT. THE ADDED WEIGHT COULD CAUSE UNIT TO ROLL IF PROPER STEPS ARE NOT TAKEN.**

IMPORTANT

- *Before placing header over transport, be sure header will clear rest brackets on lower rest bar. Adjust rest brackets, or reposition upper rest bar (refer to SET UP section) if necessary.*

NOTE: Current fitment photos are viewable at www.umequip.com/header-transports/aws-fieldrunner/

NOTE: To allow sufficient tongue turning clearance on unit, position header on transport so header does not extend too far ahead of front axle. For recommended top bar, see "UPPER BAR FRONT-TO-REAR ADJUSTMENT".

Lower Bar Adjustment

⚠ WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

1. Position header over transport so that lower rest tube of transport is directly below the foot or frame tube of header. Remove header and make necessary adjustments vertically and horizontally to the lower rest brackets. It is recommended that the rest brackets be positioned under the header main support frame, cross frame tube, frame support stiffener, header support shoe as needed (refer to "Initial Adjustment" in "Operation" section).

NOTE: For best support and stability of header, it is suggested that the rest brackets be positioned as far apart as possible (FIG. 3-11).

FIG. 3-11

Positioning Head On Transport (continued)

Upper Bar Adjustment

WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

NOTE: Current fitment photos are viewable at www.umequip.com/header-transports/aws-fieldrunner/

1. Place the header over the unit (Do Not Lower) back the head away from transport, adjust the upper bar, then pull back up to verify adjustment (on grain platform or the gathering chain/stalk roller frame on corn head). Leave approximately three inches minimum between upper rest bar and header for varying contours of ground when positioning header onto transport (refer to "Initial Adjustment" in "Operations" section). Position upper rest bar under the skid plate of the grain platforms so the weight is evenly carried on the full length of the upper rest bar.

2. Position header onto transport.

IMPORTANT

- *Refer to "Before Transporting" in this section.*

John Deere RD Series Flex Draper Shown

FIG. 3-12

John Deere Stalkmaster Corn Head Shown

FIG. 3-13

Positioning Head On Transport (continued)

Additional Upper Bar & Support Arm Adjustment

⚠ WARNING

- **FALLING OR LOWERING HEADER CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT ADJUST THE UNIT WHILE THE HEADER IS ABOVE OR ON TRANSPORT.**

NOTE: Current fitment photos are viewable at www.umequip.com/header-transports/aws-fieldrunner/

1. Move the entire upper bar and support arms out (away from the rest pad) to accommodate moving it out 11" for heads that require additional distance from the rest pads.

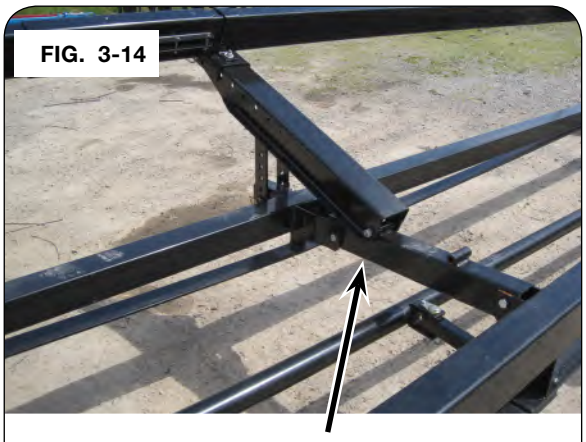
2. Place the header over the unit (Do Not Lower) back the head away from transport, adjust the upper bar, then pull back up to verify adjustment. Leave approximately three inches minimum between upper rest bar and header for varying contours of ground when positioning header onto transport (refer to "Initial Adjustment" in OPERATIONS section). Position upper rest bar under the skid plate of the platforms so the weight is evenly carried on the full length of the upper rest bar.

3. Position header onto transport.

IMPORTANT

- *Refer to "Before Transporting" in this section.*

FIG. 3-14

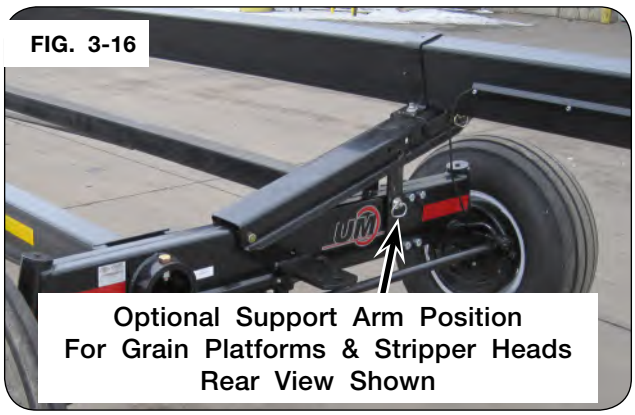


Center Support Arm Shown in outer position, grain platform applications may require moving all support arms 11" to inner position.

FIG. 3-15

Standard Support Arm Position
Front View Shown

FIG. 3-16



Optional Support Arm Position
For Grain Platforms & Stripper Heads
Rear View Shown

Light Bar Width Adjustment

1. Adjust width of rear light bar by loosening wire harness along the light bar assembly (33557B). Remove and save the 1/2”-13UNC x 1” flange screws (9001529) and 1/2”-13UNC flange nuts (91267). DO NOT REMOVE hardware holding light bar assembly to light mounting arm.

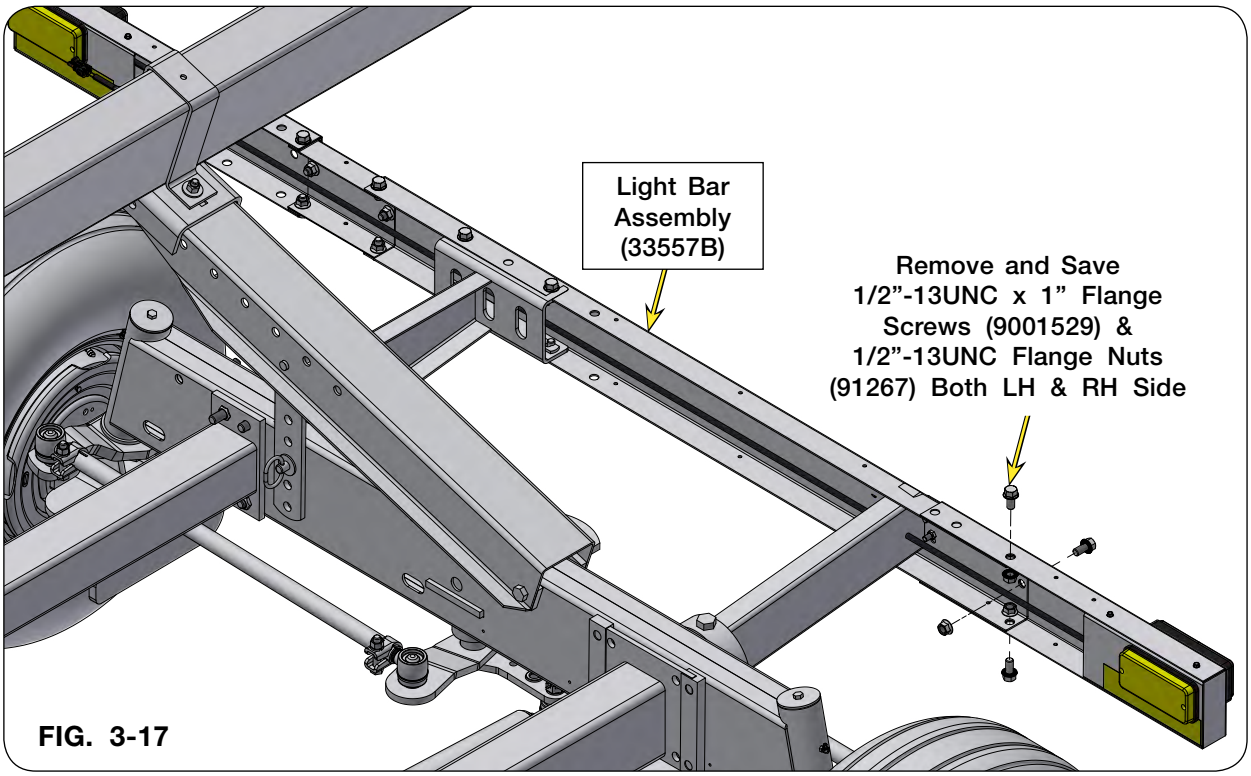


FIG. 3-17

2. Slide each section of light bar left or right as required. See **“IMPORTANT”** note below.

IMPORTANT

- *Lights MUST be within 1 ft. of the outer most point on head or cart.*

NOTE: Optional right-hand light extender bracket kit #33560B is available for heads extending to the right farther than the light bracket can normally cover.

3. Once in position, reinstall previously removed hardware. Tuck any extra wire harness behind cover on light bar.

Check function of lights before transporting on public roads. Replace reflectors as they become worn, torn, or faded.

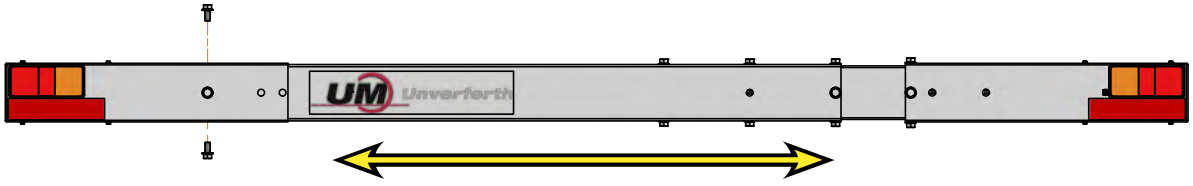


FIG. 3-18

Before Transporting

Header Transport Tongue Swing Clearance

1. Check to make sure there is adequate swing clearance for the header transport tongue (from side-to-side/up and down) to prevent damage to the transport or combine head when turning or moving over uneven ground.

NOTE: It may be necessary to move the header back on transport to obtain more tongue swing clearance. Approximately no more than four feet (30' & 36' Units), seven feet (42' Units), or nine feet (48' Units) of the header should be positioned over the front axle.

Tire Clearance

1. Check to make sure the tires have adequate clearance to prevent damage when turning.

NOTE: It may be necessary to reposition header on transport to obtain more front tire turning clearance.

2. Secure header with proper straps to prevent head from shifting while being transported (refer to "Tie-Down Operation").

⚠ 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.**

Tie-Down Package (Part #30501)

⚠ WARNING

- **UNSECURE HEADER CAN SHIFT OR FALL CAUSING SERIOUS INJURY OR DEATH. DO NOT EXCEED WORKING LOAD LIMIT STATED ON TIE DOWN STRAP LABEL. DO NOT USE STRAP IF DAMAGED. REPLACE STRAP IF LOAD LIMIT LABEL IS MISSING OR UNREADABLE, OR STRAP IS DAMAGED.**

⚠ CAUTION

- **BE SURE RATCHETS, WEBBINGS, AND HOOKS ARE IN PROPER WORKING CONDITION SO THAT DAMAGE DOES NOT OCCUR DUE TO LOSS OF HEADER FROM TRANSPORT.**
- **BE SURE ALL SHARP EDGES ARE REMOVED SO THAT WEBBING DOES NOT BECOME CUT OR FRAYED.**

The tie down brackets consist of two heavy duty strap assemblies which secure current design headers to the transport. For proper installation follow steps as shown.

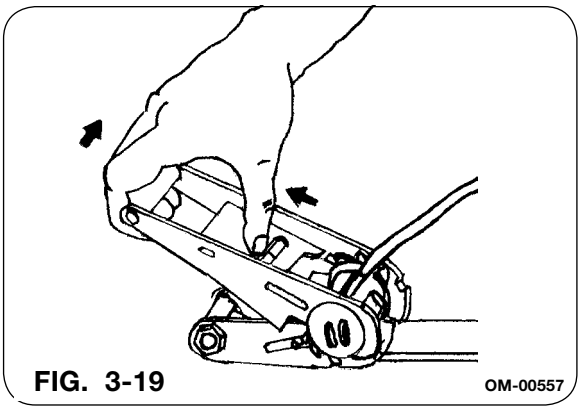


FIG. 3-19 OM-00557

FIG. 3-20

1. Loosen strap by pulling up ratchet handle and lock in open position (FIG. 3-19 & 3-20).

NOTE: Before tightening, be sure header is resting against backstops on lower rest brackets.

NOTE: Be sure tie down bracket assemblies are secured to transport directly below the section on the header that the tie down hook is being attached to. DO NOT ATTACH BRACKET AND PULL STRAP AT AN ANGLE TO THE BRACKET TO SECURE. Doing so could result in unnecessary stress and wear to tie down webbing.

2. Slide tie down bracket across lower rest tube and secure in appropriate location under header by inserting carriage bolt, flat washer, and knob. Tighten into position by turning knob clockwise.

3. Attach tie strap hook through any mainframe hole on header (FIG. 3-20 through 3-27).

NOTE: It is recommended that the tie downs be secured to a main bar or sufficient bar/tube on the combine head that is rigid enough to support total weight of header. Failure to do so could result in damage to the combine header.

Tie-Down Package (Part #30501) (continued)

Remove slack in strap, rotate ratchet handle until webbing is TIGHTLY DRAWN and header is held to transport.

FIG. 3-21

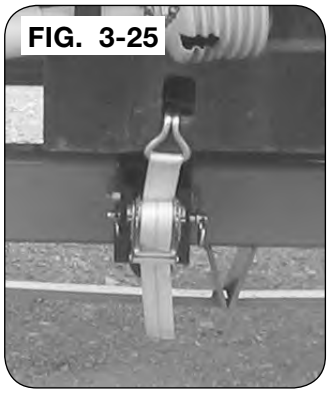


FIG. 3-25

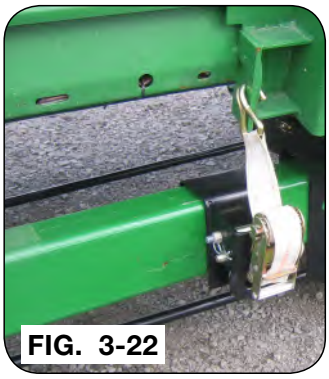


FIG. 3-22

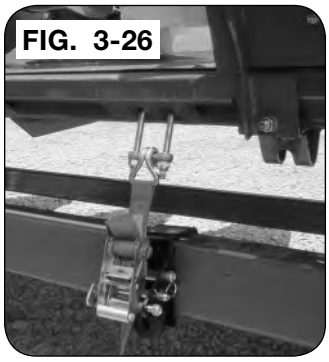


FIG. 3-26

FIG. 3-23

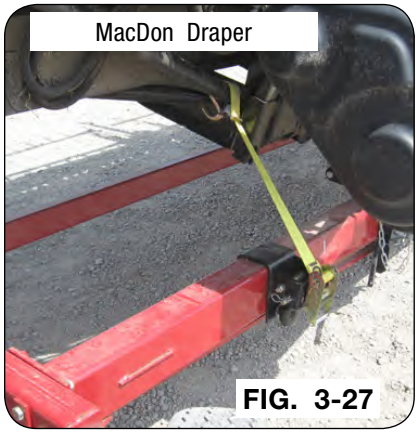


FIG. 3-27

FIG. 3-24

Tie-Down Package (Part #30501) (continued)

⚠ WARNING

- **ALWAYS TRAVEL AT A SPEED WHICH PERMITS COMPLETE CONTROL OF TOWING VEHICLE AND IMPLEMENT.**

⚠ CAUTION

- **AT LEAST TWO STRAPS MUST BE IN PLACE. COMPLIANCE WITH ALL LAWS TO SECURE THE LOAD ARE THE RESPONSIBILITY OF THE OPERATOR AT THE TIME OF TRAVEL.**

IMPORTANT

- *Contact your combine header/platform dealer or manufacturer for specific tie-down locations to avoid damaging your equipment.*
- *Use caution when transporting, be aware of transport width of unit when approaching obstacles along the road such as posts, signs, and poles. Check transport width of unit before entering bridges parts of the combine head may have to be folded in or repositioned to reduce the overall transport width.*

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

For added flexibility securing heads with tie down, the included hookback bracket (901677) can be used to loop the strap and hook around a head frame member, back to the hookback bracket.

FIG. 3-28

Grain Platform and Draper Knife Storage

An additional feature of the Unverferth HEADER TRANSPORT is a storage area for a spare cutter knife. To use this, simply remove the hitch pin (with clip) from the end of the upper support tube and insert knife into tube. To retain knife into position, reinsert hitch pin into hole in tube between blades of knife and reinstall clip (FIG. 3-29).

NOTE: Lean cutter bar blades away from light bar harness retaining screws to prevent interference when inserting and removing cutter bar. Harness conduit and attaching screws should be placed along the side of the tube near the top corner.

⚠ WARNING

- **CUTTER BAR CAN CUT. KEEP AWAY FROM SHARPENED EDGES.**

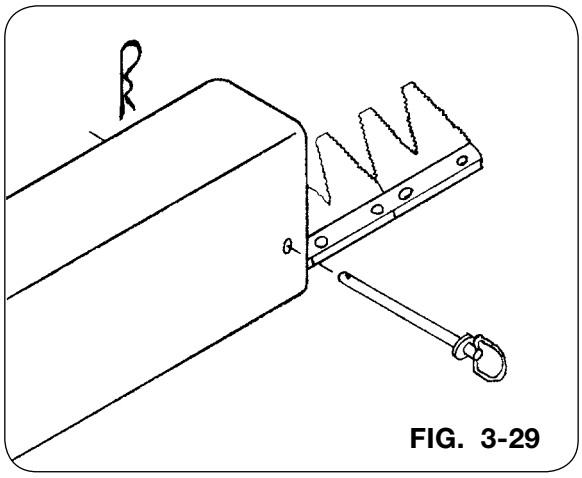


FIG. 3-29

Electric Brakes

⚠ WARNING

- **POTENTIAL ASBESTOS DUST HAZARD - SOME BRAKE LININGS MAY CONTAIN ASBESTOS DUST, WHICH HAS BEEN LINKED TO SERIOUS OR FATAL ILLNESSES. CERTAIN PRECAUTIONS NEED TO BE TAKEN WHEN SERVICING BRAKES:**

1. AVOID CREATING OR BREATHING DUST.
2. AVOID MACHINING, FILING OR GRINDING THE BRAKE LININGS.
3. DO NOT USE COMPRESSED AIR OR DRY BRUSHING FOR CLEANING (DUST CAN BE REMOVED WITH A DAMP BRUSH).

Brakes

Brakes need to be readjusted after an initial break in period. Refer to brake system operator's manual for additional information. Visit www.dexteraxle.com.

Electric Brakes

Set Up

⚠ CAUTION

- **BRAKING PERFORMANCE IS ACHIEVED WITH A CONTROLLER SETTING THAT IS JUST SHORT OF WHEEL LOCK UP OR SLIDE. OVERLY AGGRESSIVE BRAKING WHICH RESULTS IN WHEEL LOCK UP AND SLIDING, CAN CAUSE A DANGEROUS LOSS OF CONTROL AND RESULT IN PERSONAL INJURY OR DEATH.**

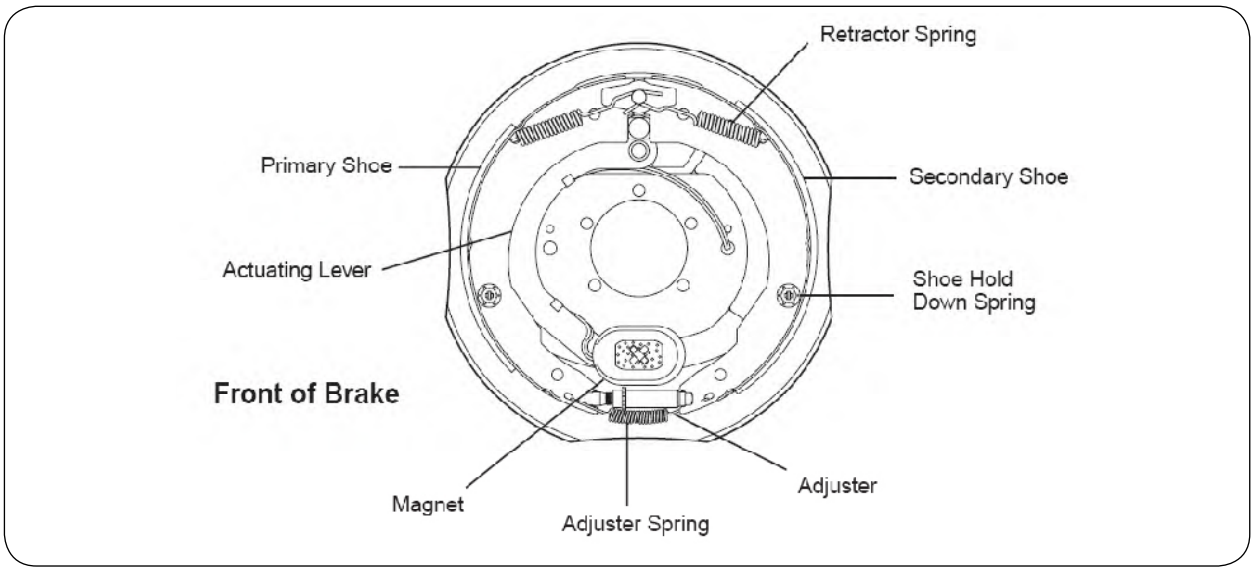
For proper performance, all new axles should have the following checked at the specified intervals:

- Wheel Nut Torque: See Maintenance section
- Brake Adjustment: at 200 and 3,000 miles
- Tire pressure: to manufacturer's requirements
- Brake synchronization: set brake controller per controller manufacturer's directions

Introduction

The electric brakes on your header transport are similar to the drum brakes on your automobile. The basic difference is that your automotive brakes are actuated by hydraulic pressure while your electric header transport brakes are actuated by an electromagnet. With all of the brake components connected into the system, the brake will operate as follows:

When the electrical current is fed into the system by the controller, it flows through the electromagnets in the brakes. The high capacity electromagnets are energized and are attracted to the rotating armature surface of the drums which moves the actuating levers in the direction that the drums are turning. The resulting force causes the actuating cam block at the shoe end of the lever to push the primary shoe out against the inside surface of the brake drum. The force generated by the primary shoe acting through the adjuster link moves the secondary shoe out into contact with the brake drum. Increasing the current flow to the electromagnet causes the magnet to grip the armature surface of the brake drum more firmly. This results in increasing the pressure against the shoes and brake drums until the desired stop is accomplished.



Notes

SECTION IV
Maintenance

General Maintenance Information

For header transport and bearing longevity, as well as ease of operation, periodic lubrication is essential. This also helps to flush out moisture and dirt. Lubricate with an SAE multi-purpose grease.

Grease Gun Lube Points — Lube Cycle

A. Tongue Hitch Pin (End of Steering Hinge) - 1 Point; Grease Once/Year

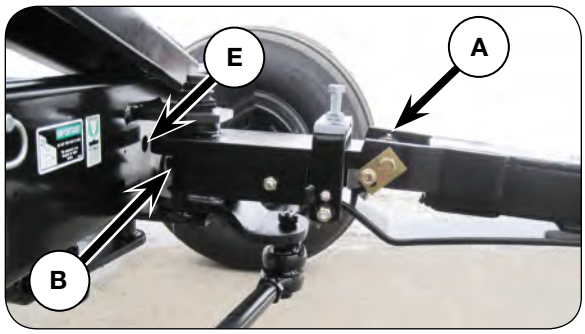
B. Steering Hinge Pin (Front of Front Frame) - 1 Point; Grease Once/Year
Rotate tongue to access zerk.

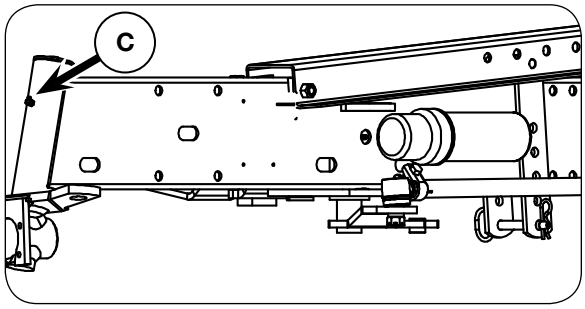
C. Spindle Bearings (Both Ends of Front Axle) - 2 Points; Grease Once/Year

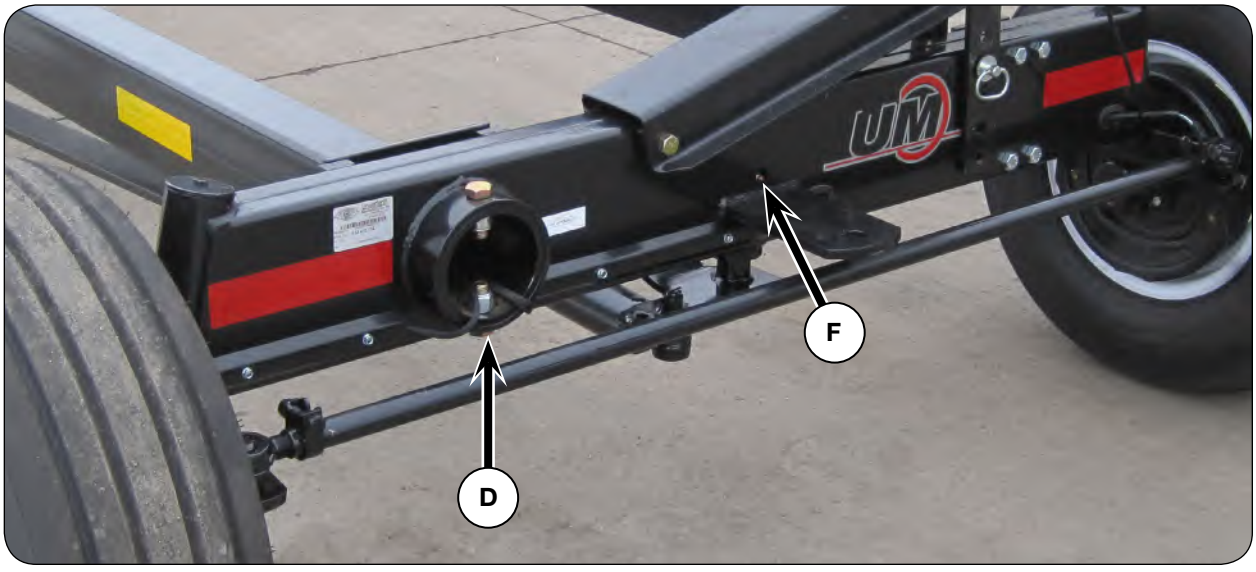
D. Swivel Trunnion (Rear End of Rear Axle) - 1 Point; Grease Once/Year

E. Front Pivot; Once/Year

F. Rear Pivot; Once/Year







General Maintenance Information (continued)

Miscellaneous Lube Points

Oil or grease the extension part of the extendable tongue when needed.

Wheel Bearings — 8 Points Repack Grease Yearly

The wheel bearings should be cleaned, replaced, and adjusted once per season. Use a number 2 wheel bearing grease to repack and adjust the bearings to a free rolling fit with no end play.

Hub Installation

1. Lubricate seal lip with grease.
2. While rotating hub, place the hub on the spindle, make sure to not damage the seal lip.
3. Be sure the outer cone slides on the spindle and into the cup.
4. Assemble the washer and nut.
5. While rotating the hub, torque the spindle nut to 20-25 ft. lbs.
6. Back the spindle nut off until the next slot.
7. Insert the cotter pin (9391-035) and bend the ends to secure.
8. Install the hub cap.

IMPORTANT

- *For maximum bearing life, never tow the header transport in excess of 20 m.p.h.*

Periodically during usage, check the following:

1. Tongue pivot pin.
2. Tie rod connections at radius arm and at steering hinge.
3. Check all hardware for tightness
4. Tire pressure -- follow manufacturer's specification (too high or too low pressure causes abnormal tread wear).
5. Wheel lug nuts -- wheel torque requirements.

After each season:

1. Check welds on front and rear axles of the lower rest tube and brace tube.
2. Tie rods -- adjust to minimum 1/8" toe-in (1/8" to 1/4" toe measured at tires).
3. It is recommended for improved tire life that tires be rotated diagonally.

General Maintenance Information (continued)

Pivot Bearings

1. Tighten the front and rear axle frame slotted hex nuts to 130 ft.-lbs. (FIG. 4-1). Continue to tighten nut to the next slot and install cotter pin.

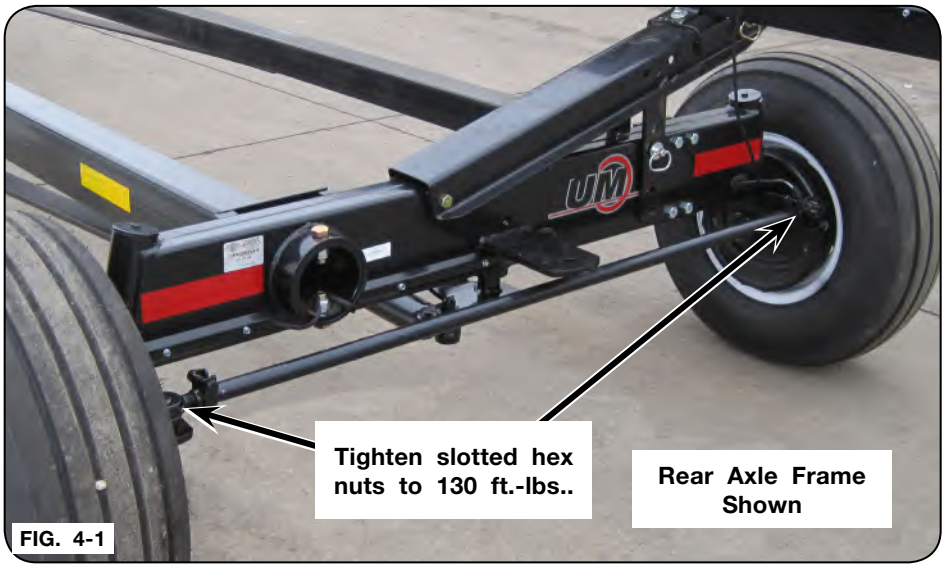


FIG. 4-1

2. Tighten nut bearing (32104) to 45 ft.-lbs..

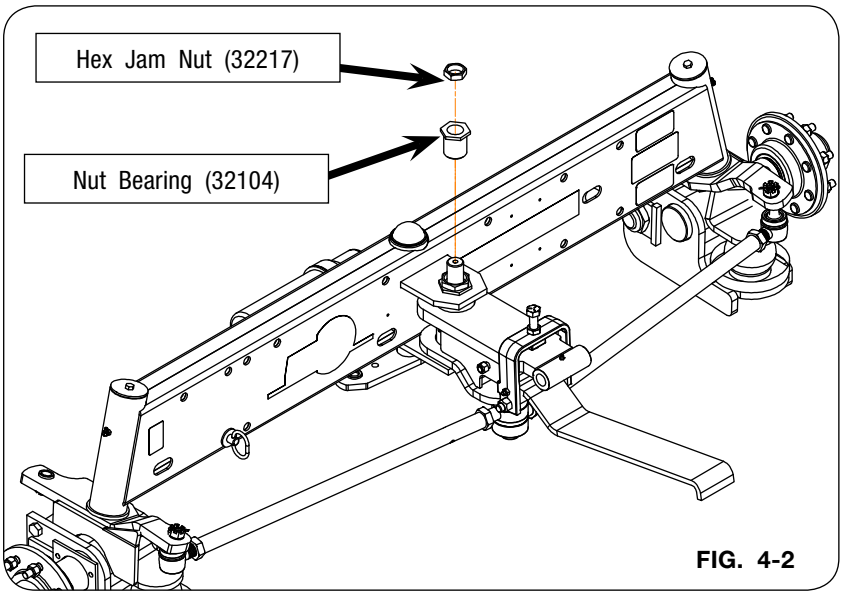


FIG. 4-2

General Maintenance Information (continued)

3. Tighten 1 1/2” x 1/2” hinge pivot hex jam nut (32217) to 45 ft.-lbs.

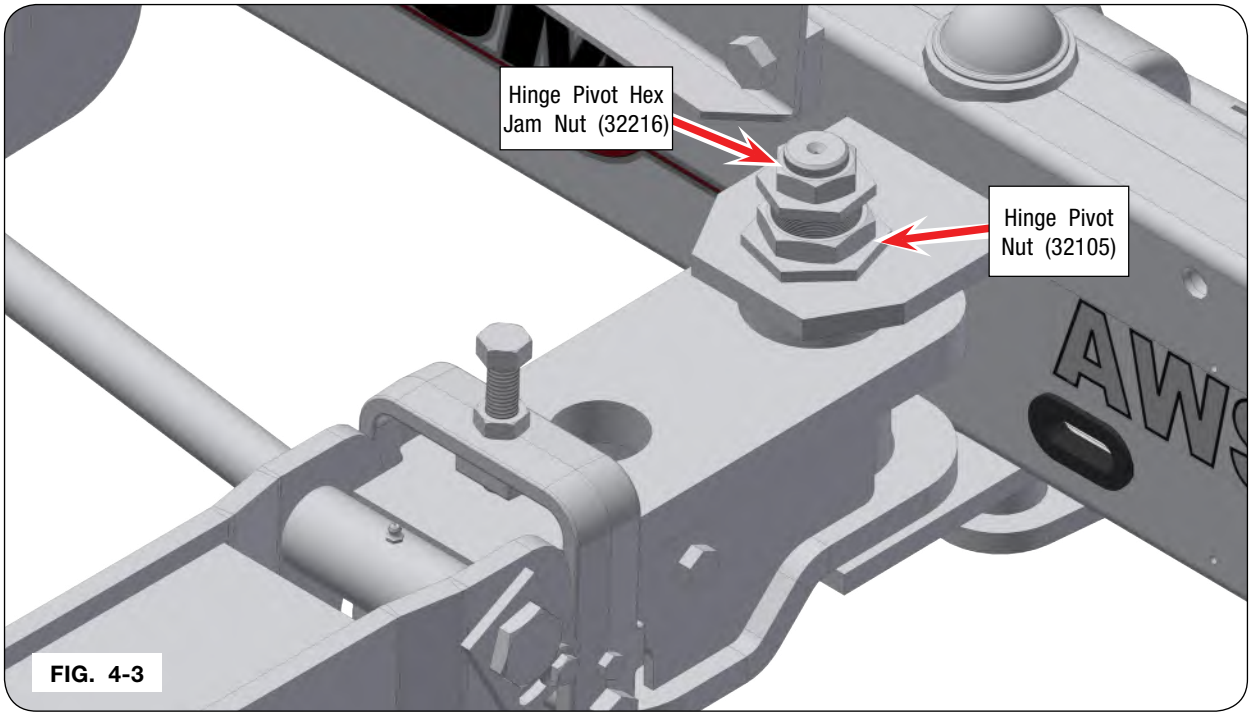


FIG. 4-3

4. Tighten hinge pivot nut (32105) to 200 ft.-lbs. to seat rear pivot into bottom plate.

5. Tighten 2” x 1/2” thread 1 3/4”-20 hinge pivot hex jam nut (32216) to 45 ft.-lbs..

6. Tighten 3/4”-16UNF slotted nut (9163) to 45 ft.-lbs..

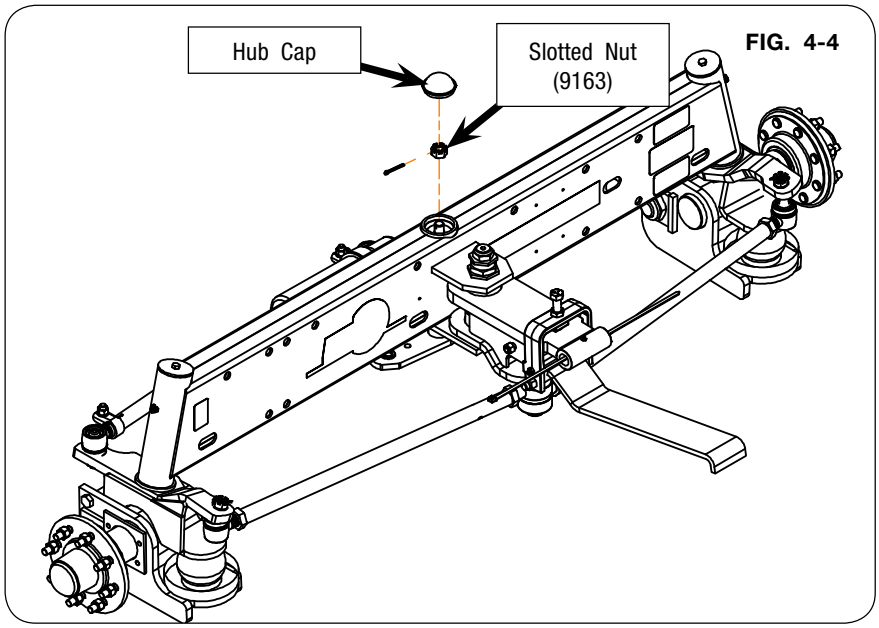


FIG. 4-4

7. Continue to tighten 3/4”-16UNF slotted nut (9163) until slot in nut aligns with hole in shaft.

8. Install cotter pin and hub cap.

General Maintenance Information (continued)

Tongue Removal

1. Park the unit on a firm, level surface. Block the tires to keep the machine from moving. Set the towing vehicle parking brake, shut off the engine, and remove the ignition key.
2. Using a safe lifting device rated for 150 lbs., properly support the tongue. Lift the tongue high enough until the leaf spring is no longer in contact with the underside of the tongue.
3. Remove the 3/8" bolts securing the lock plates to the tongue.
4. Remove the lock plates.
5. Remove nut 9500918 and bolt 9500917 that secures the tongue to the steering hinge.
6. Remove the tongue from the turning plate.

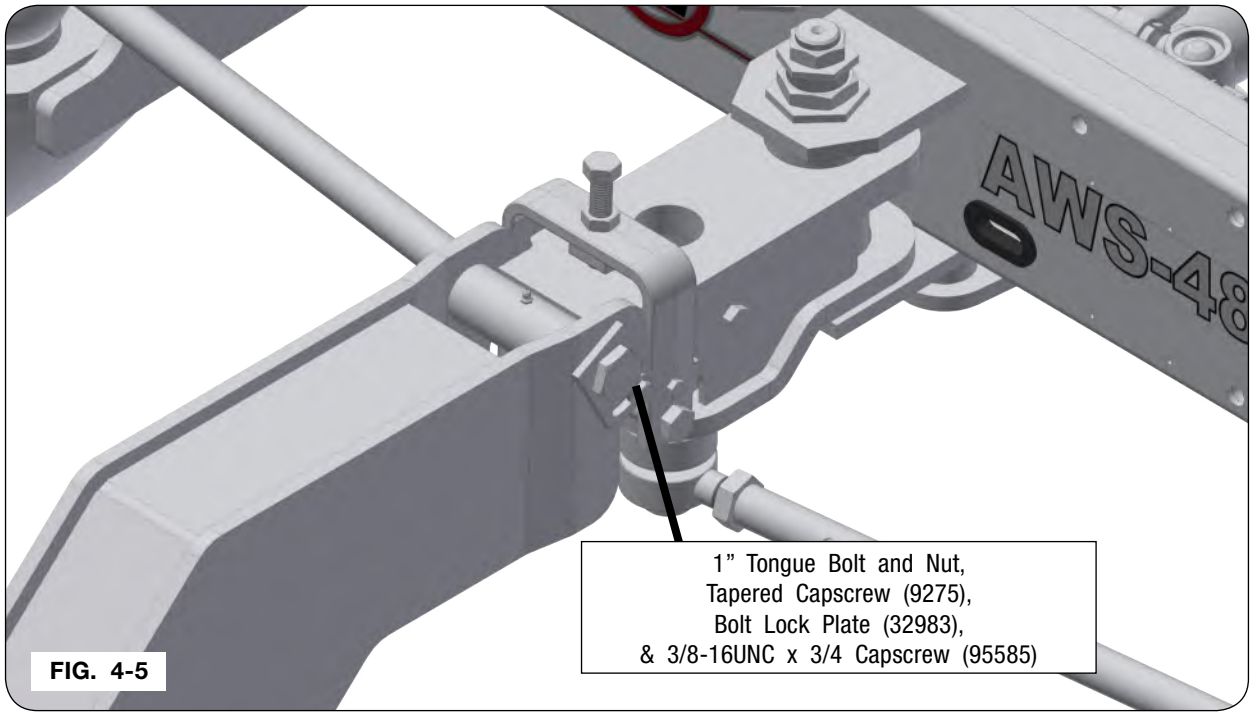


FIG. 4-5

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.

Before placing the implement in storage:

1. Repaint any chipped or scraped areas.
2. Inspect for damaged or worn parts. Replace before next season.
3. Store implement inside, away from livestock.
4. Use support stands rated at 1,000 lbs. to keep unloaded implement tires off bare ground.

Wheels and Tires

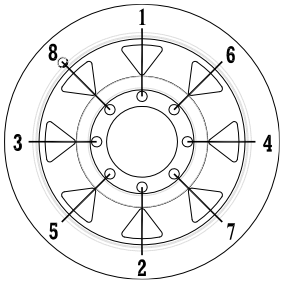
Wheel Nut Torque Requirements

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 USE, AFTER ONE HOUR OF UNLOADED USE OR AFTER FIRST LOAD, AND EACH LOAD UNTIL WHEEL NUTS/BOLTS MAINTAIN TORQUE VALUE. CHECK TORQUE EVERY 10 HOURS OF USE THERE-AFTER. 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 load may damage wheel nut/bolt seats. Once seats are damaged, it will become impossible to keep nuts/bolts tight. Tighten nuts/bolts to applicable torque value shown in table. 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
9/16-18 (UNF)	110 ft.-lbs.



8 BOLT

DIAGRAM 1

Wheels and Tires (continued)

Tire Pressure

The following is to be used as a **general guide** for tire inflation and pressures 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 below. 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.**

MODEL	TIRE SIZE & PRESSURE
AWS-30 & AWS-36	11L x 15 - 90 PSI 225/75 x 15 - 65 PSI 320/65 x 15 - 70 PSI
AWS-42 & AWS-48 & AWS-52	11L x 15 - 90 PSI 235/85R x 16 - 80 PSI 320/65 x 15 - 70 PSI

(All tire pressures in psi)

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

Complete Torque Chart

Capscrews - Grade 5

NOTE:

- Grade 5 capscrews can be identified by three radial dashes on the head.
- For wheel torque requirements, refer to Wheels and Tires.
- Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS
1/4-20 1/4-28	8-10 9-11	11-13 12-15
5/16-18 5/16-24	15-17 17-19	20-23 23-26
3/8-16 3/8-24	25-28 28-31	34-38 38-42
7/16-14 7/16-20	40-45 45-50	54-61 61-68
1/2-13 1/2-20	62-68 68-75	84-92 92-102
9/16-12 9/16-18	90-98 100-110	122-133 134-148
5/8-11 5/8-18	120-135 124-137	162-183 168-186
3/4-10 3/4-16	200-220 210-230	270-300 285-310
7/8-9 7/8-14	330-350 360-380	425-475 460-515
1-8 1-14	500-525 540-560	675-710 730-760
1 1/8-7 1 1/8-12	600-635 665-700	815-860 920-950
1 1/4-7 1 1/4-12	850-895 940-990	1150-1215 1275-1340
1 3/8-6 1 3/8-12	1125-1175 1280-1335	1525-1590 1735-1810
1 1/2-6 1 1/2-12	1500-1560 1685-1755	2035-2115 2285-2380

IMPORTANT

- *Follow these torque recommendations except when specified in text.*

Adjusting Wheel Toe-In

IMPORTANT

- *After first use, recheck toe-in. Front wheel toe-in has been preset at the factory. If adjustment becomes necessary, use the following procedure.*

1. Place the tongue in the straight and horizontal position. This can be checked by measuring reference lines “A” and “B”. These measurements are the same when the tongue is straight forward.
2. To adjust the toe-in of the tire on the front axle, measure the distance between the wheels at the center line of the tires. Dimension “C” should be 1/8” to 3/8” shorter than dimension “D”. If not, loosen the locknuts on both ends of both front tie rods. Adjust both front tie rods evenly as needed. Retighten the locknuts and recheck the dimensions.
3. To adjust the toe-in of the tires on the rear axle, measure the distance between the wheels at the center line of the tires. Dimension “E” should be 1/8” to 3/8” shorter than dimension “F”. If not, loosen the locknuts on both ends of the rear-most tie rod. Adjust this tie rod as needed. Retighten the locknuts and recheck the dimensions.

FRONT WHEEL TOE-IN

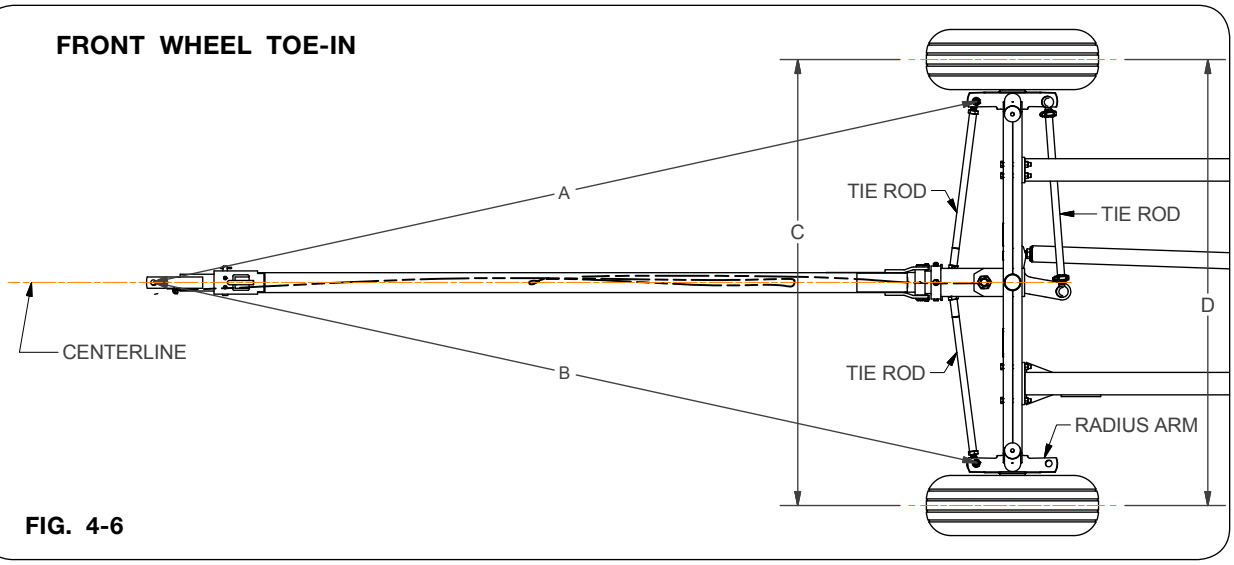


FIG. 4-6

REAR WHEEL TOE-IN

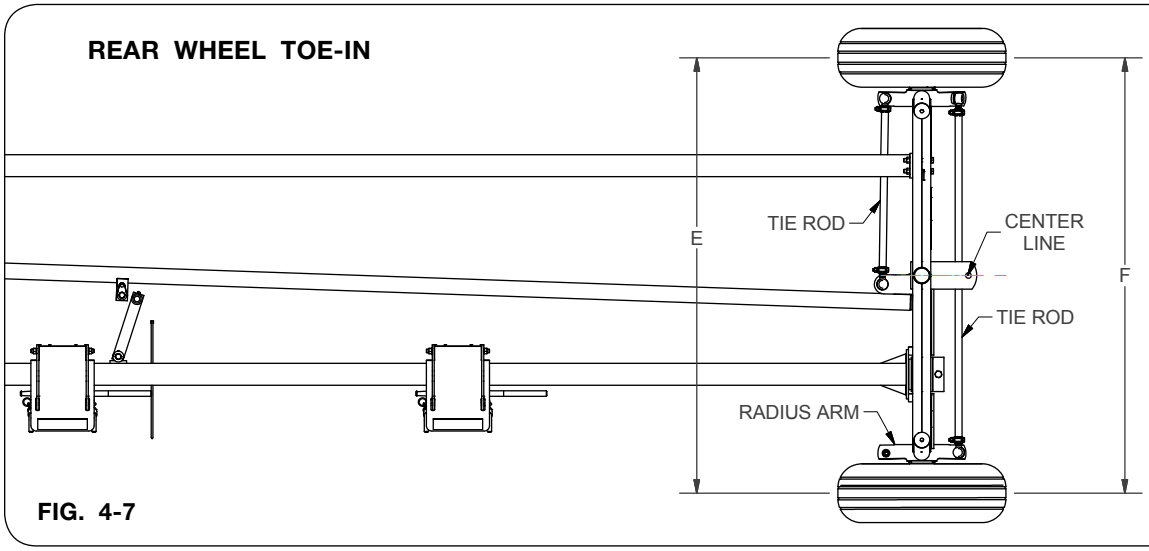


FIG. 4-7

Procedure To Correctly Adjust Front-To-Rear Trailing

With a header properly secured to the header transport, the unit should trail with the rear axle directly behind the front axle. To correct the front-to-rear trailing, any of the three inner tie rods can be adjusted. It is recommended to use the tie rod in front of the rear axle to make this adjustment.

If the rear of the unit is trailing to the left, as you observe in the direction of forward travel, the tie rod must be extended. If the rear of the unit trails to the right, as you observe in the direction of forward travel, the tie rod must be shortened.

1. Loosen the locknuts on both ends of the tie rod and rotate the center tube to extend or shorten the tie-rod.

2. Retighten the locknuts, pivot the tongue side-to-side and check for any interference.

3. Drive the unit and check the front-to-rear trailing. Repeat the procedure as necessary.

NOTE: 1/4” turn of tie rod shifts rear axle 1” with respect to the front axle.

NOTE: The unit may trail differently when unloaded.

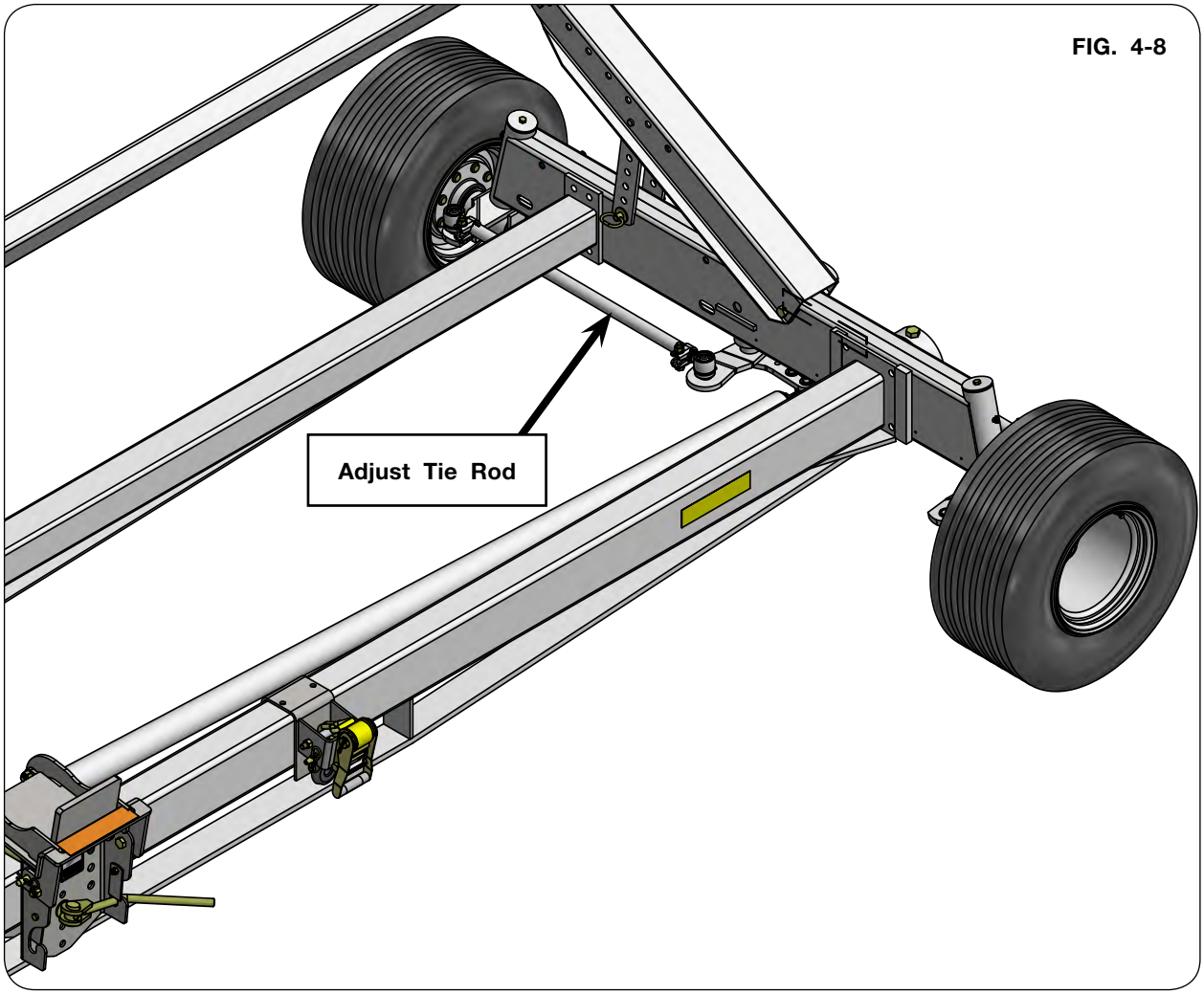


FIG. 4-8

Brake Cleaning and Inspection

Your header transport brakes must be inspected and serviced immediately if a loss of performance is experienced. With normal use, servicing at one year intervals is usually adequate. With increased usage, this work should be performed more frequently as required. Magnets and shoes must be changed when they become excessively worn or scored, a condition which can reduce vehicle braking. Clean the backing plate, magnet arm, magnet, and brake shoes. Make certain that all the parts removed are replaced in the same brake and drum assembly. Inspect for any loose or worn parts, stretched or deformed springs and replace as necessary.

⚠ WARNING

- **POTENTIAL ASBESTOS DUST HAZARD - SOME BRAKE LININGS MAY CONTAIN ASBESTOS DUST, WHICH HAS BEEN LINKED TO SERIOUS OR FATAL ILLNESSES. CERTAIN PRECAUTIONS NEED TO BE TAKEN WHEN SERVICING BRAKES:**

  1. **Avoid creating or breathing dust.**
  2. **Avoid machining, filing or grinding the brake linings.**
  3. **Do not use compressed air or dry brushing for cleaning (dust can be removed with a damp brush).**

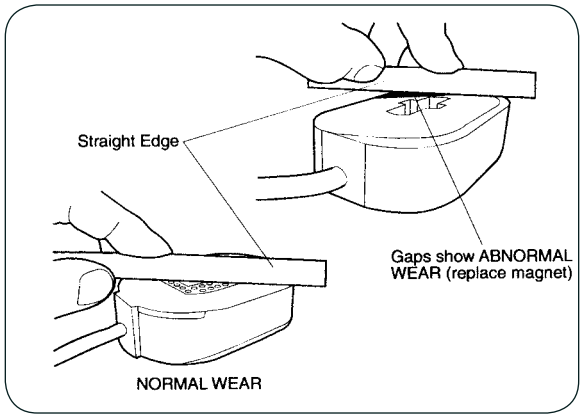
Brake Lubrication

Before reassembling, apply a light film of grease or anti-seize compound on the brake anchor pin, the actuating arm bushing and pin, and the areas on the backing plate that are in contact with the brake shoes and magnet lever arm. Apply a light film of grease on the actuating block mounted on the actuating arm.

NOTE: Do not get grease or oil on the brake linings, drums or magnets.

Magnets

Your electric brakes are equipped with high quality electromagnets that are designed to provide the proper input force and friction characteristics. Your magnets should be inspected and replaced if worn unevenly or abnormally. Use a straightedge to check magnet condition. For best results, the magnet should be flat. Even if wear is normal as indicated by your straightedge, the magnets should be replaced if any part of the magnet coil has become visible through the friction material facing of the magnet. It is also recommended that the drum armature surface be refaced when replacing magnets. Magnets should also be replaced in pairs - both sides of an axle.



Brake Cleaning and Inspection (continued)

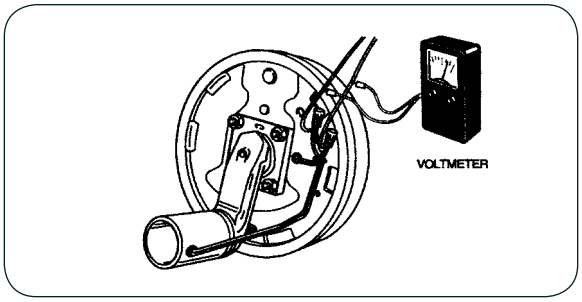
Shoes and Linings

A simple visual inspection of your brake linings will tell if they are usable. Replacement is necessary if the lining is worn (to within 1/16" or less), contaminated with grease or oil, or abnormally scored or gouged. Hairline heat cracks are normal in bonded linings and should not be cause for concern. When replacement is necessary, it is important to replace both shoes on each brake and both brakes of the same axle. This will help retain the "balance" of your brakes.

After replacement of brake shoes and linings, the brakes must be re-burnished to seat in the new components. This should be done by applying the brakes 20 to 30 times from an initial speed of 40 m.p.h., slowing the vehicle to 20 m.p.h. Allow ample time for brakes to cool between applications. This procedure allows the brake shoes to seat in to the drum surface.

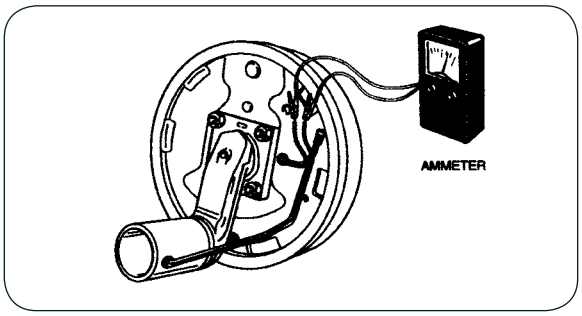
How to Measure Voltage

System voltage is measured at the magnets by connecting the voltmeter to the two magnet lead wires at any brake. This may be accomplished by using a pin probe inserted through the insulation of the wires. The engine of the towing vehicle should be running when checking the voltage so that a low battery will not affect the readings. Voltage in the system should begin at 0 volts and, as the controller bar is slowly actuated, should gradually increase to about 12 volts. If the controller does not produce this voltage control, consult your controller manual. The threshold voltage of a controller is the voltage applied to the brakes when the controller first turns on. Lower threshold voltage will provide for smoother braking. If the threshold voltage is too high, the brakes may feel grabby and harsh.



How to Measure Amperage

System amperage is the current flowing in the system when all the magnets are energized. The amperage will vary in proportion to the voltage. The engine of the tow vehicle should be running with the header transport connected when checking the header transport braking system. One place to measure system amperage is at the BLUE wire of the controller which is the output to the brakes. The BLUE wire must be disconnected and the ammeter put in series into the line. System amperage draw should be as noted in the following table.



Brake Size	Amps/ Magnet	Two Brakes	Four Brakes	Six Brakes	Magnet Ohms
7 x 1¼	2.5	5.0	10.0	15.0	3.9
10 x 1½	3.0	6.0	12.0	18.0	3.2
10 x 2¼	3.0	6.0	12.0	18.0	3.2
12 x 2	3.0	6.0	12.0	18.0	3.2
12¼ x 2½	3.0	6.0	12.0	18.0	3.2

Make sure your ammeter has sufficient capacity and note polarity to prevent damaging your ammeter. If a resistor is used in the brake system, it must be set at zero or bypassed completely to obtain the maximum amperage reading. Individual amperage draw can be measured by inserting the ammeter in the line at the magnet you want to check. Disconnect one of the magnet lead wire connectors and attach the ammeter between the two wires. Make sure that the wires are properly reconnected and sealed after testing is completed. The most common electrical problem is low or no voltage and amperage at the brakes. Common causes of this condition are:

1. Poor electrical connections
2. Open circuits
3. Insufficient wire size
4. Broken wires
5. Blown fuses (fusing of brakes is not recommended)
6. Improperly functioning controllers or resistors

Another common electrical problem is shorted or partially shorted circuits (indicated by abnormally high system amperage). Possible causes are:

1. Shorted magnet coils
2. Defective controllers
3. Bare wires contacting a grounded object

Finding the cause of a short circuit in the system is done by isolating one section at a time. If the high amperage reading drops to zero by unplugging the header transport, then the short is in the header transport. If the amperage reading remains high with all the brake magnets disconnected, the short is in the header transport wiring. All electrical troubleshooting procedures should start at the controller. Most complaints regarding brake harshness or malfunction are traceable to improperly adjusted or nonfunctional controllers. See your controller manufacturer's data for proper adjustment and testing procedures. For best results, all the connection points in the brake wiring should be sealed to prevent corrosion. Loose or corroded connectors will cause an increase in resistance which reduces the voltage available for the brake magnets.

Brake Drum Inspection

There are two areas of the brake drum that are subject to wear and require periodic inspection. These two areas are the drum surface where the brake shoes make contact during stopping and the armature surface where the magnet contacts (only in electric brakes).

The drum surface should be inspected for excessive wear or heavy scoring. If worn more than .020" oversized, or the drum has worn out of round by more than .015", then the drum surface should be re-machined. If scoring or other wear is greater than .090" on the diameter, the drum must be replaced.

The machined inner surface of the brake drum that contacts the brake magnet is called the armature surface. If the armature surface is scored or worn unevenly, it should be re-faced to a 120 micro inch finish by removing not more than .030" of material. To insure proper contact between the armature face and the magnet face, the magnets should be replaced whenever the armature surface is re-faced and the armature surface should be re-faced whenever the magnets are replaced.

IMPORTANT

- *It is important to protect the wheel bearing bores from metallic chips and contamination which result from drum turning or armature re-facing operations. Make certain that the wheel bearing cavities are clean and free of contamination before reinstalling bearing and seals. The presence of these contaminants will cause premature wheel bearing failure.*

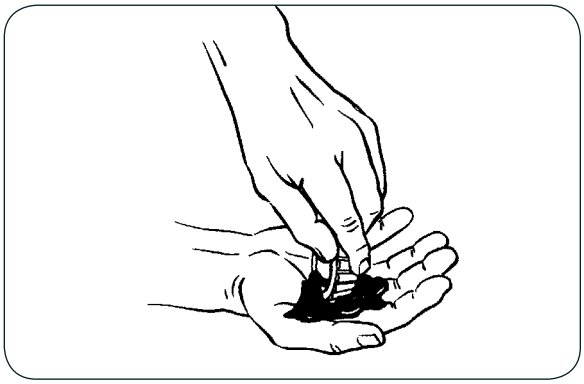
Bearing Inspection

Wash all grease and oil from the bearing cone using a suitable solvent. Dry the bearing with a clean, lint-free cloth and inspect each roller completely.

Bearing Lubrication

Along with bearing adjustment, proper lubrication is essential to the proper function and reliability of your header transport axle. Bearings should be lubricated every 12 months or 12,000 miles. The method to repack bearing cones is as follows:

1. Place a quantity of grease into the palm of your hand.
2. Press a section of the widest end of the bearing into the outer edge of the grease pile closest to the thumb forcing grease into the interior of the bearing.
3. Repeat this while rotating the bearing from roller to roller.
4. Continue this process until you have the entire bearing completely filled with grease.
5. Before reinstalling, apply a light coat of grease on the bearing cup.



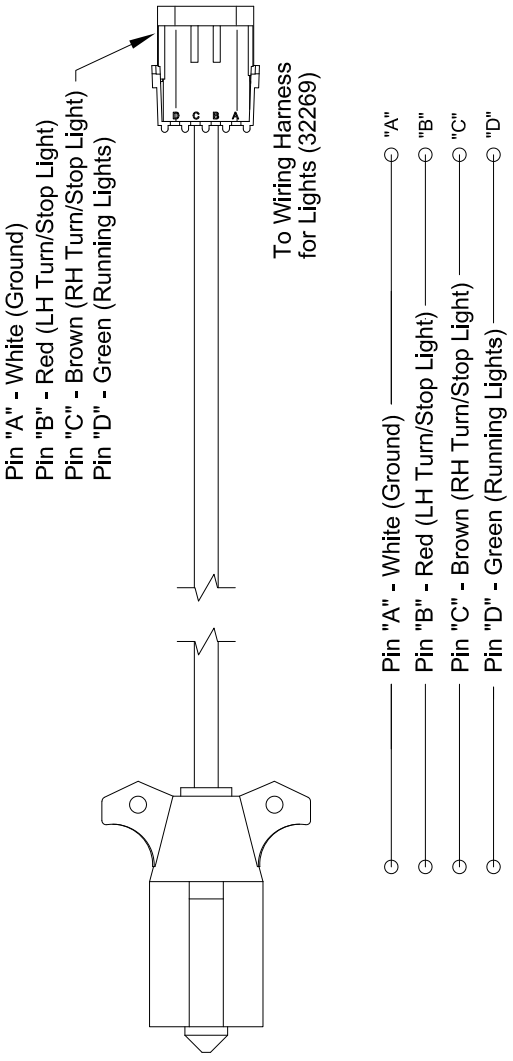
Troubleshooting Brakes

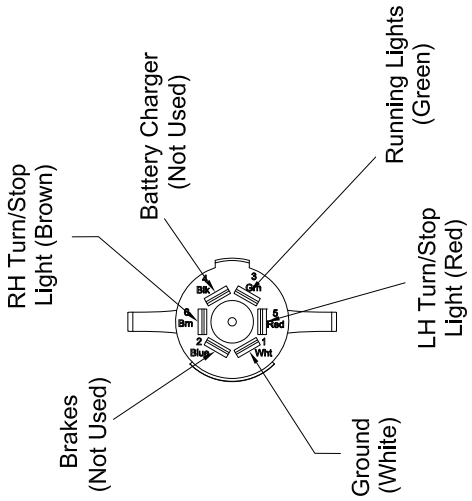
Most electric brake malfunctions, that cannot be corrected by either brake adjustments or synchronization adjustments, can generally be traced to electrical system failure. Voltmeters and ammeters are essential tools for proper troubleshooting of electric brakes. Mechanical causes are ordinarily obvious, i.e. bent or broken parts, worn out linings or magnets, seized lever arms or shoes, scored drums, loose parts, etc. Please consult the following troubleshooting charts in this section of the manual to determine the causes and solutions for common problems found in header transport braking systems.

⚠ CAUTION

- **BEST BRAKING PERFORMANCE IS ACHIEVED WITH A CONTROLLER SETTING THAT IS JUST SHORT OF WHEEL LOCK UP OR SLIDE. OVERLY AGGRESSIVE BRAKING WHICH RESULTS IN WHEEL LOCK UP AND SLIDING, CAN CAUSE A DANGEROUS LOSS OF CONTROL AND RESULT IN PERSONAL INJURY OR DEATH.**

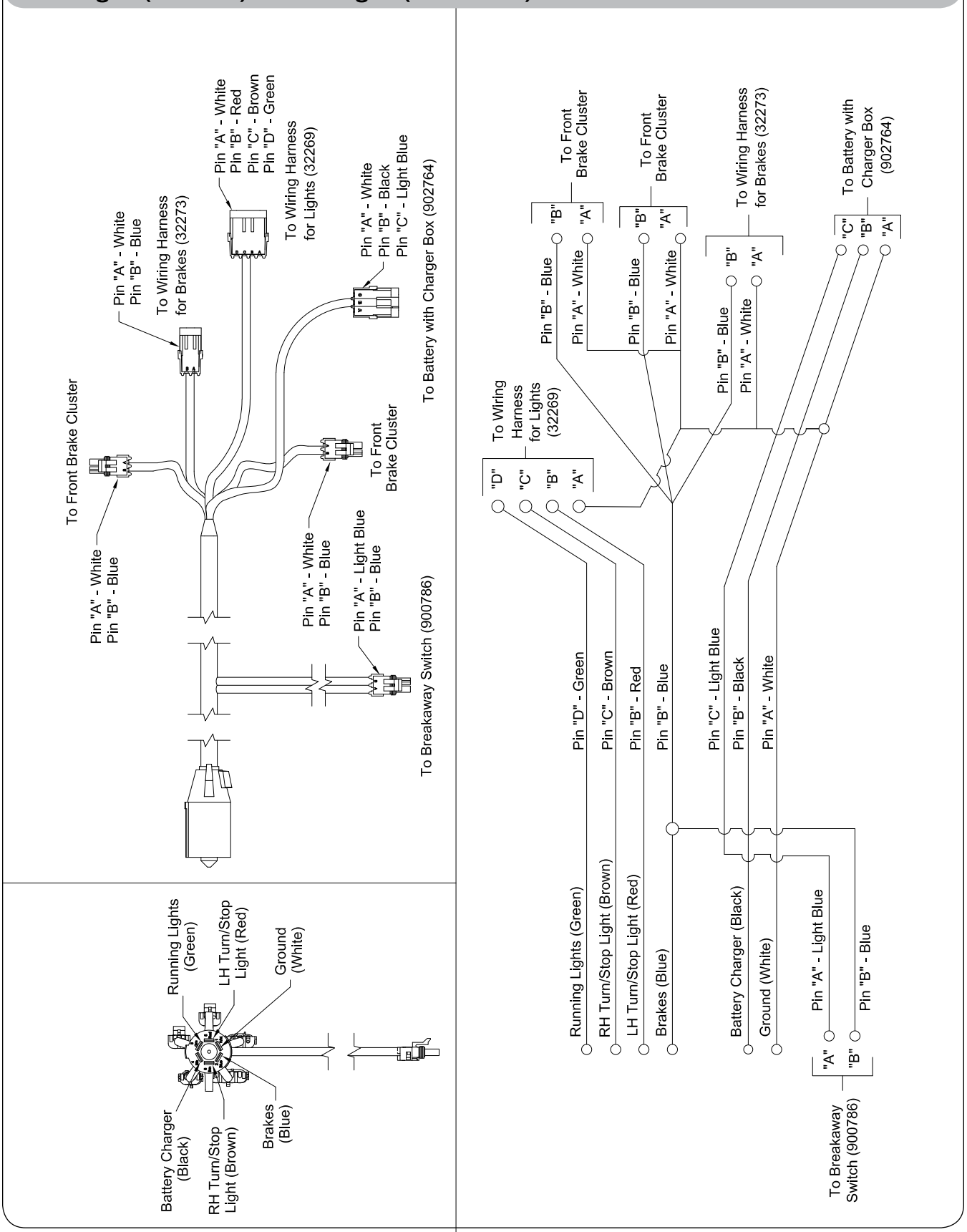
Front Harness for Non-Brakes Electrical Schematic (#9504152)



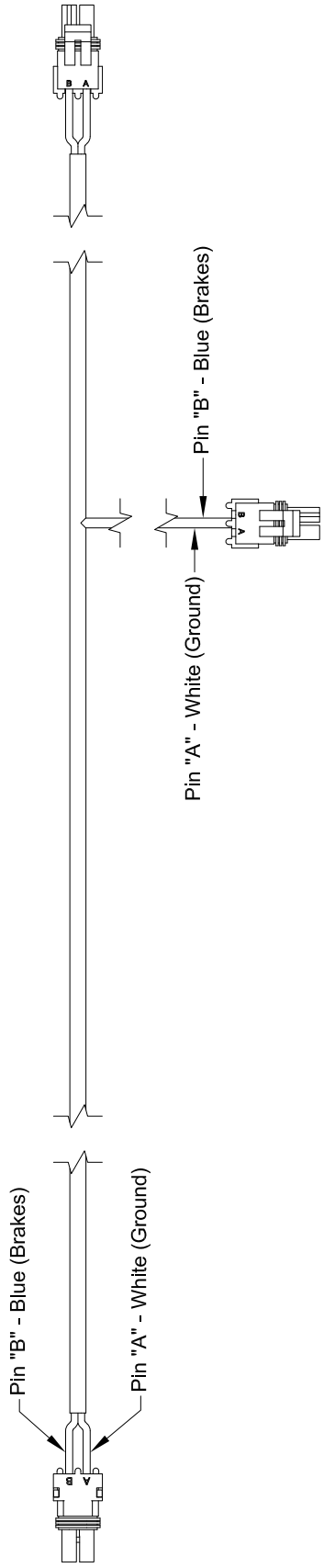


Front Harness for Brakes Electrical Schematic

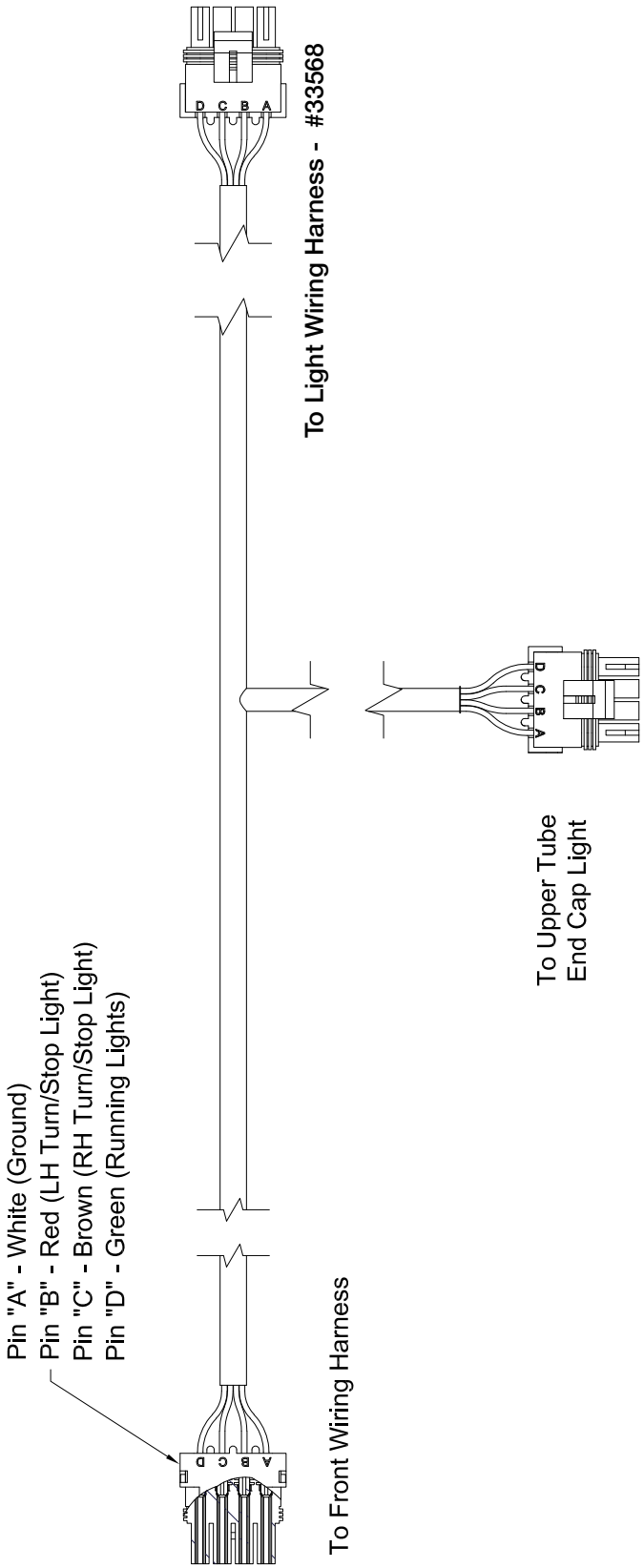
16’ Tongue (#33676) & 12’ Tongue (#9504155)



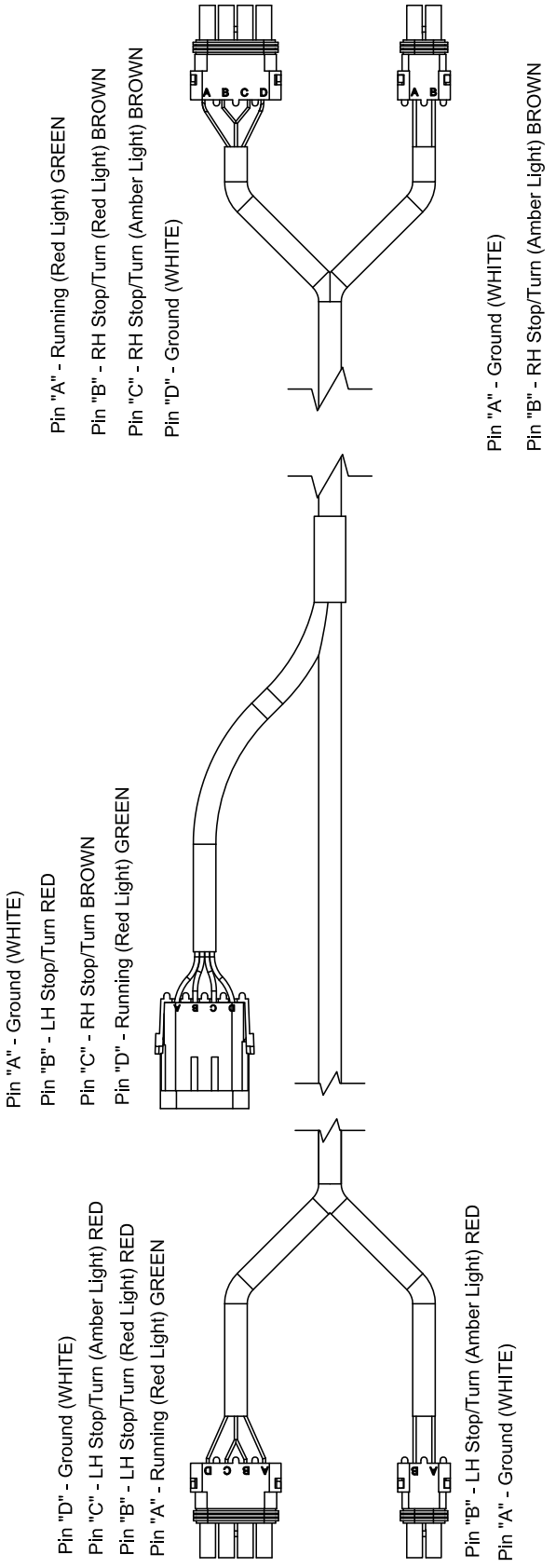
Rear Brake Harness Electrical Schematic (#32273)



Light Harness Electrical Schematic (#32269)



Rear Light Harness Electrical Schematic (#33568)

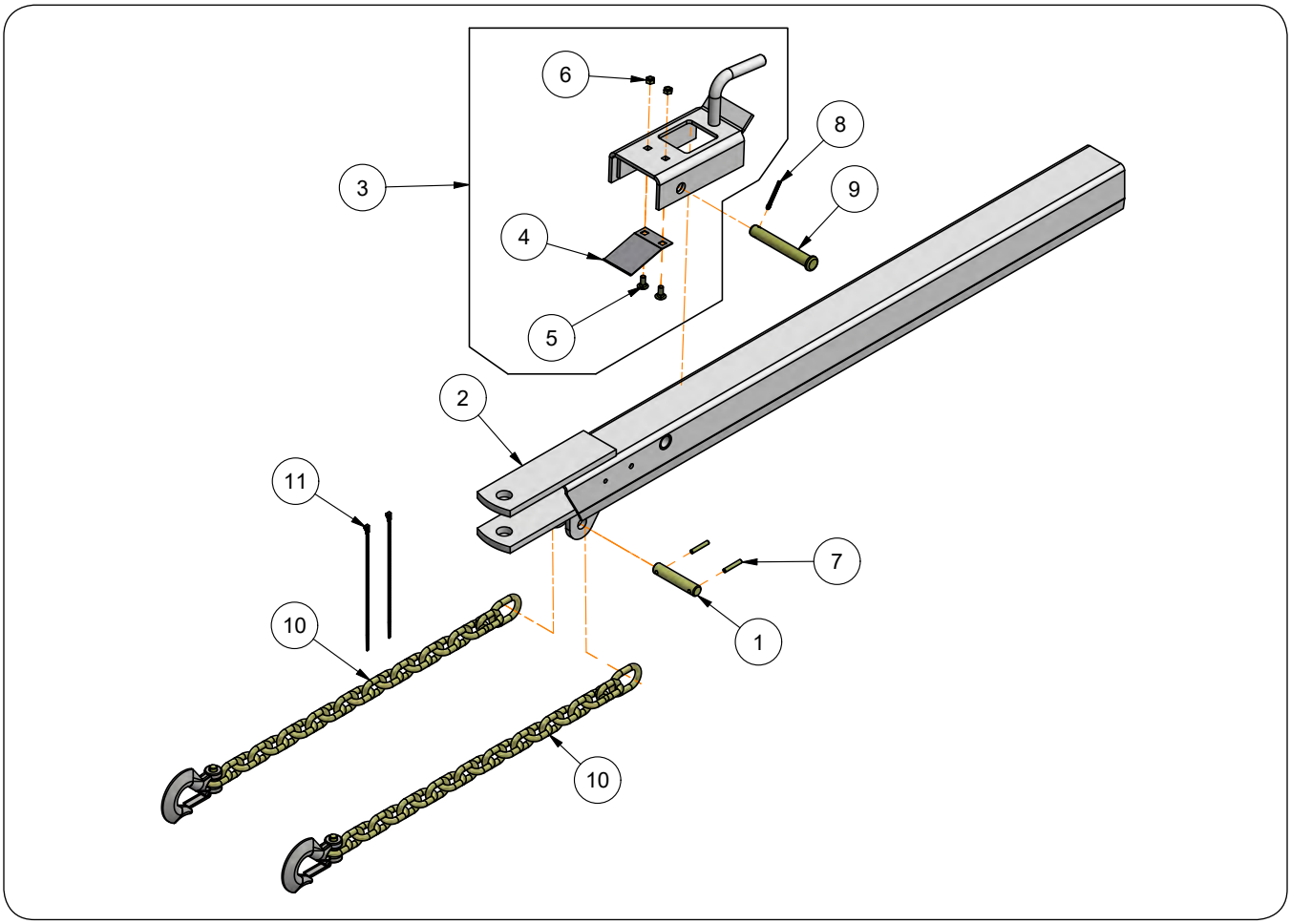


Notes

SECTION V
Parts

Inner Tongue & Transport Chain Components

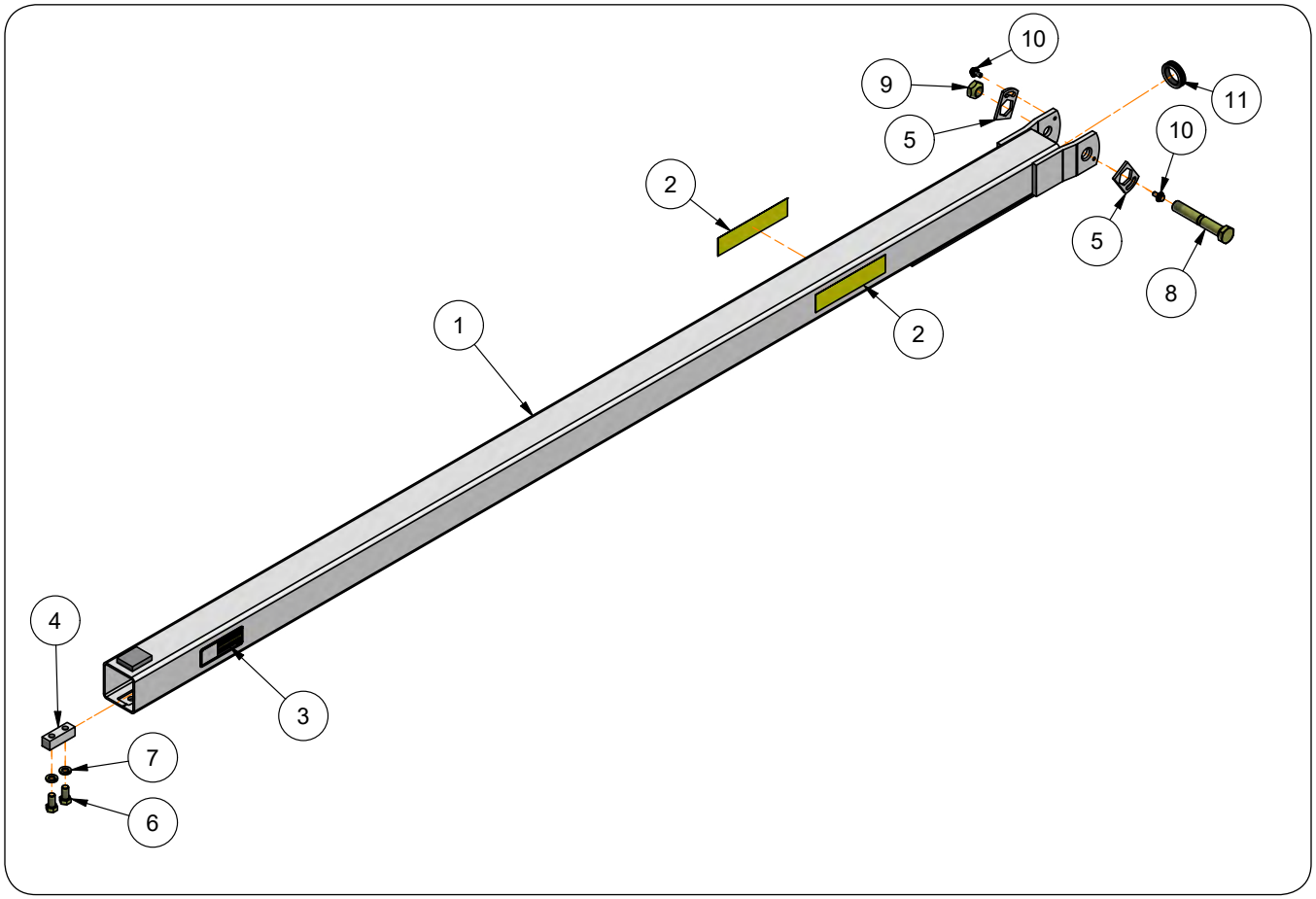
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	108051	Pin, 3/4" Dia. x 3 3/4"	1	
2	32672B	Inner Tongue Weldment (BLACK)	1	
	32672G	Inner Tongue Weldment (GREEN)		
	32672R	Inner Tongue Weldment (RED)		
3	33081B	Tongue Latch Assembly =BLACK=	1	Includes Items 4-6
4	3017B	Spring =BLACK=	1	
5	9388-024	Carriage Bolt, 5/16"-18UNC x 3/4" G5	2	
6	9807	Locknut/Top, 5/16"-18UNC	3	
7	91144-162	Spiral Pin, 1/4" Dia. x 1 1/2"	2	
8	9391-044	Cotter Pin, 3/16" Dia. x 1 1/2"	1	
9	9500274	Clevis Pin, 3/4" Dia. x 5 1/4"	1	
10	98792	Transport Chain	2	
11	9504157	Releasable Cable Tie, 9 7/8"	A/R	

Outer Tongue Components

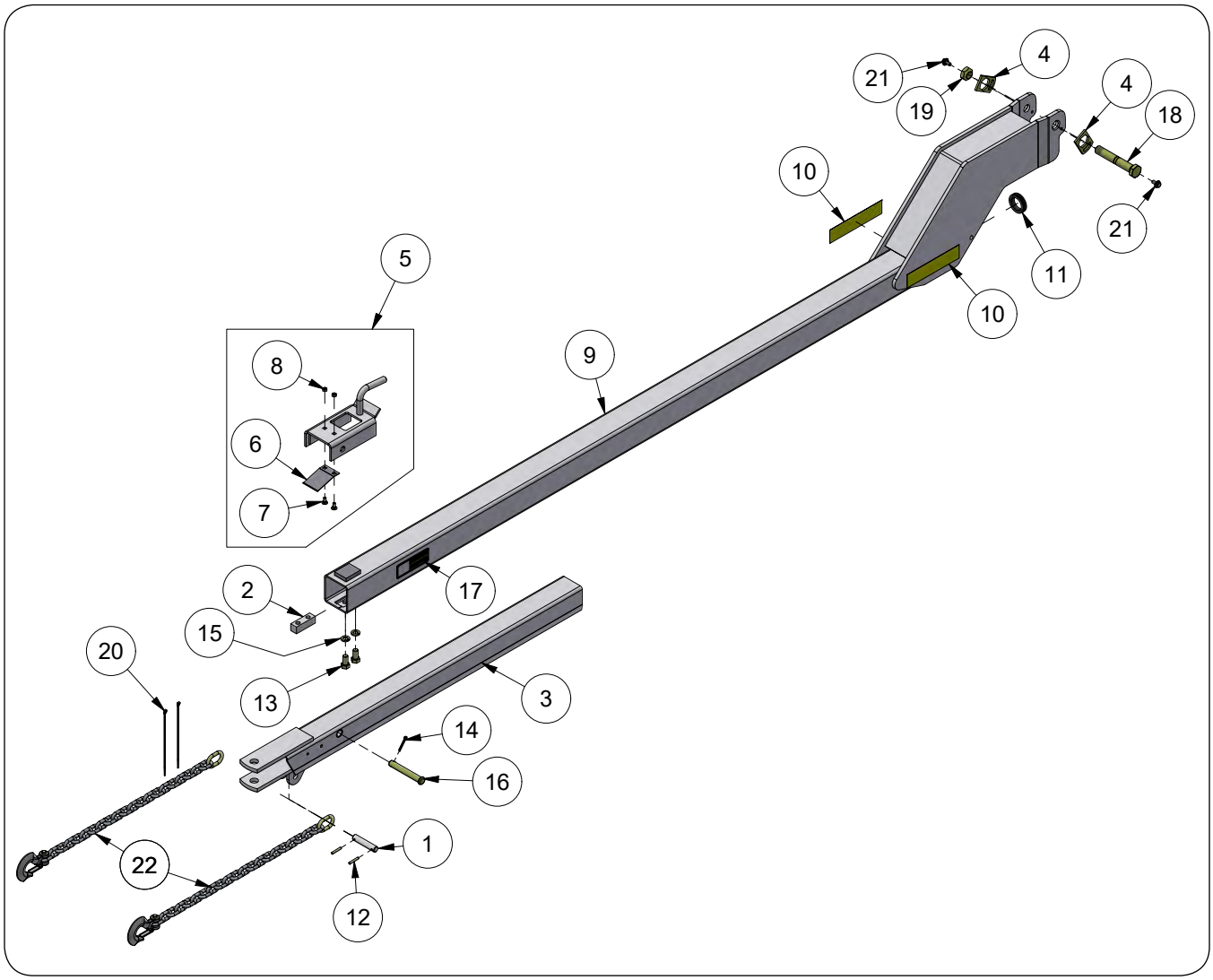
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.		NOTES
			12' Tongue	16' Tongue	
1	33025B	Outer Tongue 12' Tube Weldment w/Decals (BLACK)	1	-	Includes Items 2 & 3
	33025G	Outer Tongue 12' Tube Weldment w/Decals (GREEN)			
	33025R	Outer Tongue 12' Tube Weldment w/Decals (RED)			
	33026B	Outer Tongue 16' Tube Weldment w/Decals (BLACK)	-	1	Includes Items 2 & 3
	33026G	Outer Tongue 16' Tube Weldment w/Decals (GREEN)			
	33026R	Outer Tongue 16' Tube Weldment w/Decals (RED)			
2	9003127	Reflector, 2" x 9" =AMBER=	2	2	
3	9500710	Decal, CAUTION "Always Use Transport Chains..."	1	1	
4	3015B	Stop Block Weldment	1	1	
5	32983	Bolt Lock Plate w/Hex Hole	2	2	
6	9390-121	Capscrew, 5/8"-11UNC x 1 1/4" G5	2	2	
7	9404-029	Lock Washer, 5/8"	2	2	
8	9500917	Tapered Head Bolt, 1"-12UNF x 6"	1	1	
9	9500918	Tapered Head Nut, 1"-12UNF	1	1	
10	95585	Capscrew/Large Flange, 3/8-16UNC x 3/4" G5	2	2	
11	900513	Grommet/Rubber 2.00" Dia.	1	1	

Drop Tongue Components

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



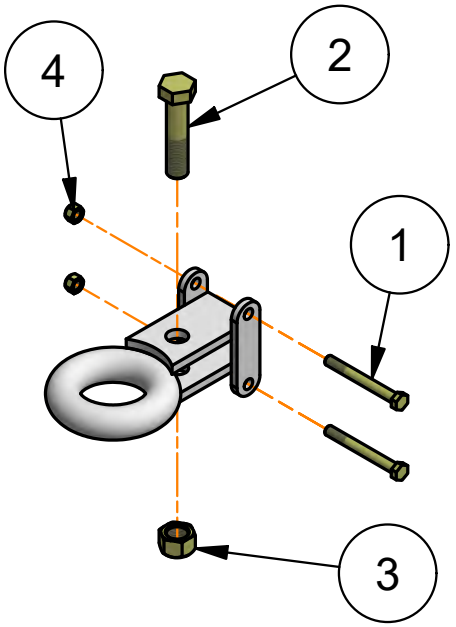
Drop Tongue Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	108051	Pin, 3/4" Dia. x 3 3/4"	1	
2	3015B	Stop Block Weldment	1	
3	32672B	Inner Tongue Weldment (BLACK)	1	
	32672G	Inner Tongue Weldment (GREEN)		
	32672R	Inner Tongue Weldment (RED)		
4	32983	Bolt Lock Plate w/Hex Hole	2	
5	33081B	Tongue Latch Assembly =BLACK=	1	Includes Items 6-8
6	3017B	Spring =BLACK=	1	
7	9388-024	Carriage Bolt, 5/16"-18UNC x 3/4" G5	2	
8	9807	Locknut/Top, 5/16"-18UNC	3	
9	34078B	Outer Tongue 12' Drop Tube Weldment (BLACK)	1	
	34078G	Outer Tongue 12' Drop Tube Weldment (GREEN)		
	34078R	Outer Tongue 12' Drop Tube Weldment (RED)		
	33411B	Outer Tongue 16' Drop Tube Weldment (BLACK)		
	33411G	Outer Tongue 16' Drop Tube Weldment (GREEN)		
	33411R	Outer Tongue 16' Drop Tube Weldment (RED)		
	33998B	Outer Tongue 20' Drop Tube Weldment (BLACK)		
	33998G	Outer Tongue 20' Drop Tube Weldment (GREEN)		
	33998R	Outer Tongue 20' Drop Tube Weldment (RED)		
10	9003127	Reflector, 2" x 9" =AMBER=	2	
11	900513	Grommet/Rubber 2.00" Dia.	1	
12	91144-162	Spiral Pin, 1/4" Dia. x 1 1/2"	2	
13	9390-121	Capscrew, 5/8"-11UNC x 1 1/4" G5	2	
14	9391-044	Cotter Pin, 3/16" Dia. x 1 1/2"	1	
15	9404-029	Lock Washer, 5/8"	2	
16	9500274	Clevis Pin, 3/4" Dia. x 5 1/4"	1	
17	9500710	Decal, CAUTION "Always Use Transport Chains..."	1	
18	9500917	Tapered Head Bolt, 1"-12UNF x 6"	1	
19	9500918	Tapered Head Nut, 1"-12UNF	1	
20	9504157	Releasable Cable Tie, 9 7/8"	A/R	
21	95585	Capscrew/Large Flange, 3/8-16UNC x 3/4" G5	2	
22	98792	Transport Chain	2	

Pintle Hitch Kit Option

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

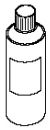


ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	33329B	Pintle Hitch Kit	1	Includes Items 1-4
1	9390-112	Capscrew, 1/2"-13UNC x 4 1/2" G5	2	
2	9390-192	Capscrew, 1"-8UNC x 4 1/2" G5	1	
3	9663	Locknut/Top, 1"-8UNC	1	
4	9800	Locknut/Top, 1/2"-13UNC	2	

Touch-Up Paint

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

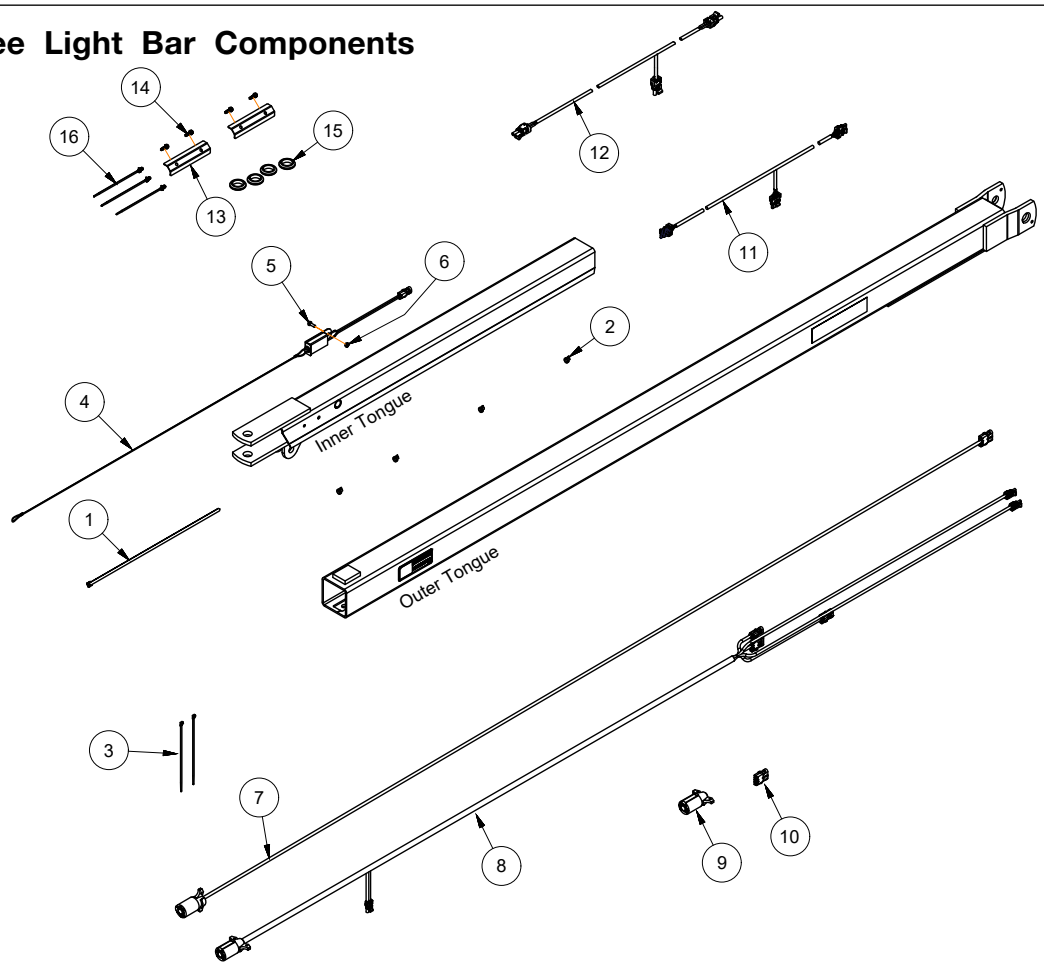
PAINT	SPRAY
Black	97013
Green	97015
Crimson Red	97301



Electrical Components

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

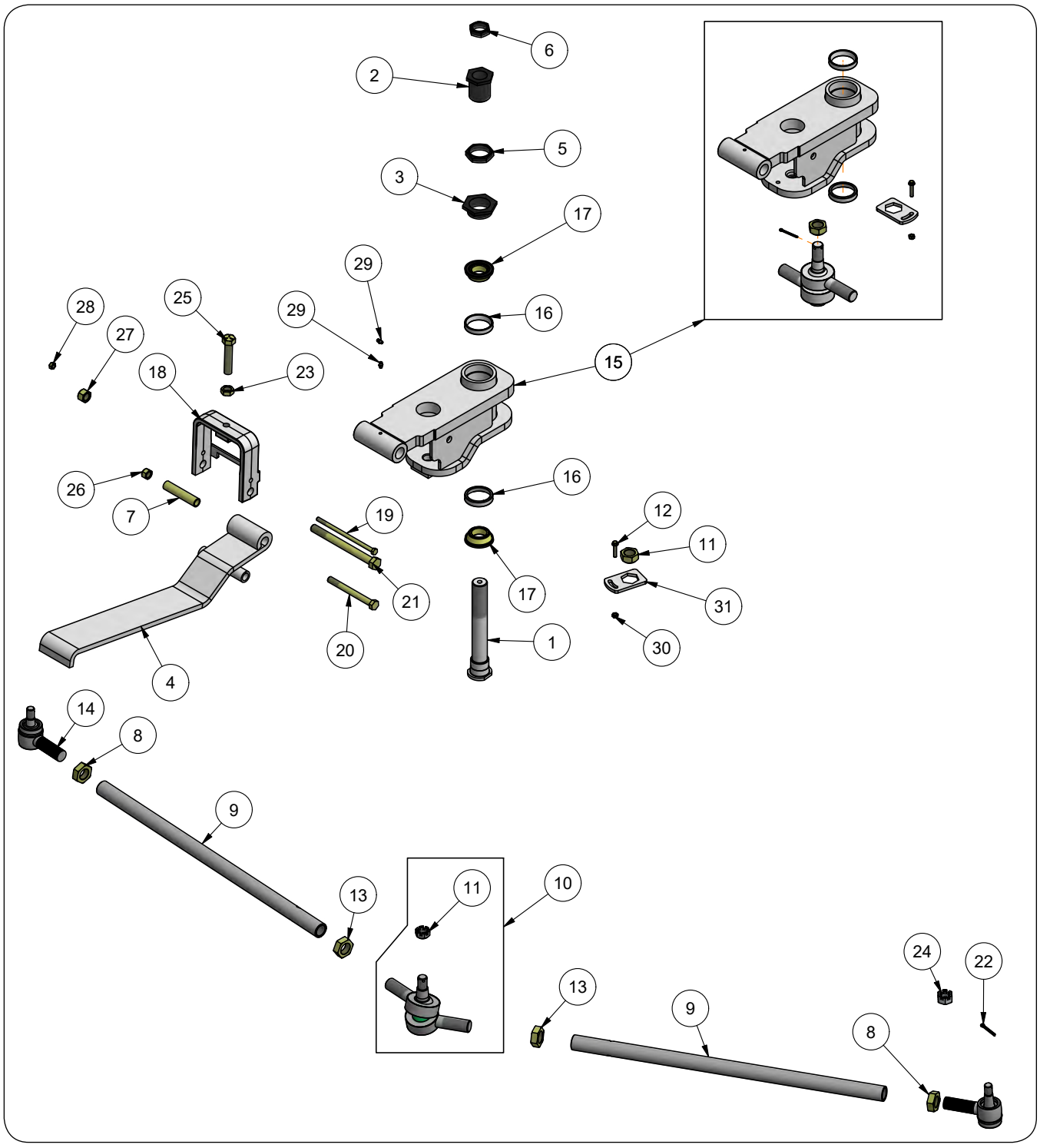
Also See Light Bar Components



ITEM	PART NO.	DESCRIPTION	QTY.					
			12' Tongue		16' Tongue		20' Tongue	
			w/Brakes	No Brakes	w/Brakes	No Brakes	w/Brakes	No Brakes
1	9000104	Cable Tie 21 1/2"	1	1	1	1	1	1
2	9000106	Cable Tie 6"	15	11	16	12	16	12
3	9504157	Releasable Cable Tie, 9 7/8"	2	2	2	2	2	2
4	900786	Breakaway Electric Switch	1	-	1	-	1	-
5	9390-003	Capscrew, 1/4"-20UNC x 3/4" G5	1	-	1	-	1	-
6	9936	Locknut/Top, 1/4"-20UNC	3	1	3	1	3	1
7	9504152	Front Wire Harness 295 1/4"	-	1	-	1	-	-
	9504721	Front Wire Harness, 343"	-	-	-	-	-	1
8	9504155	Front Wire Harness 284"	1	-	-	-	-	-
	33676	Front Wire Harness 327"	-	-	1	-	-	-
	34006	Front Wire Harness 375"	-	-	-	-	1	-
9	900623	Trailer Connector - 7 Way Plug	-	-	-	-	-	-
10	98008	Connector, 4-Pin	-	-	-	-	-	-
11	32269	Light Wire Harness 618" Long	1	1	1	1	1	1
12	32273	Brake Wire Harness 147" Long	1	-	1	-	1	-
13	33671B	Cover =Black=	2	-	2	-	2	-
14	9523	Screw/Self-Drill, 1/4"-14 x 1 1/4"	4	-	4	-	4	-
15	98830	Grommet, 1 1/4" ID	4	-	4	-	4	-
16	99599	Cable Tie/Fir Tree Mount, 18"	3	-	3	-	3	-

Front Steering Hinge Components

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



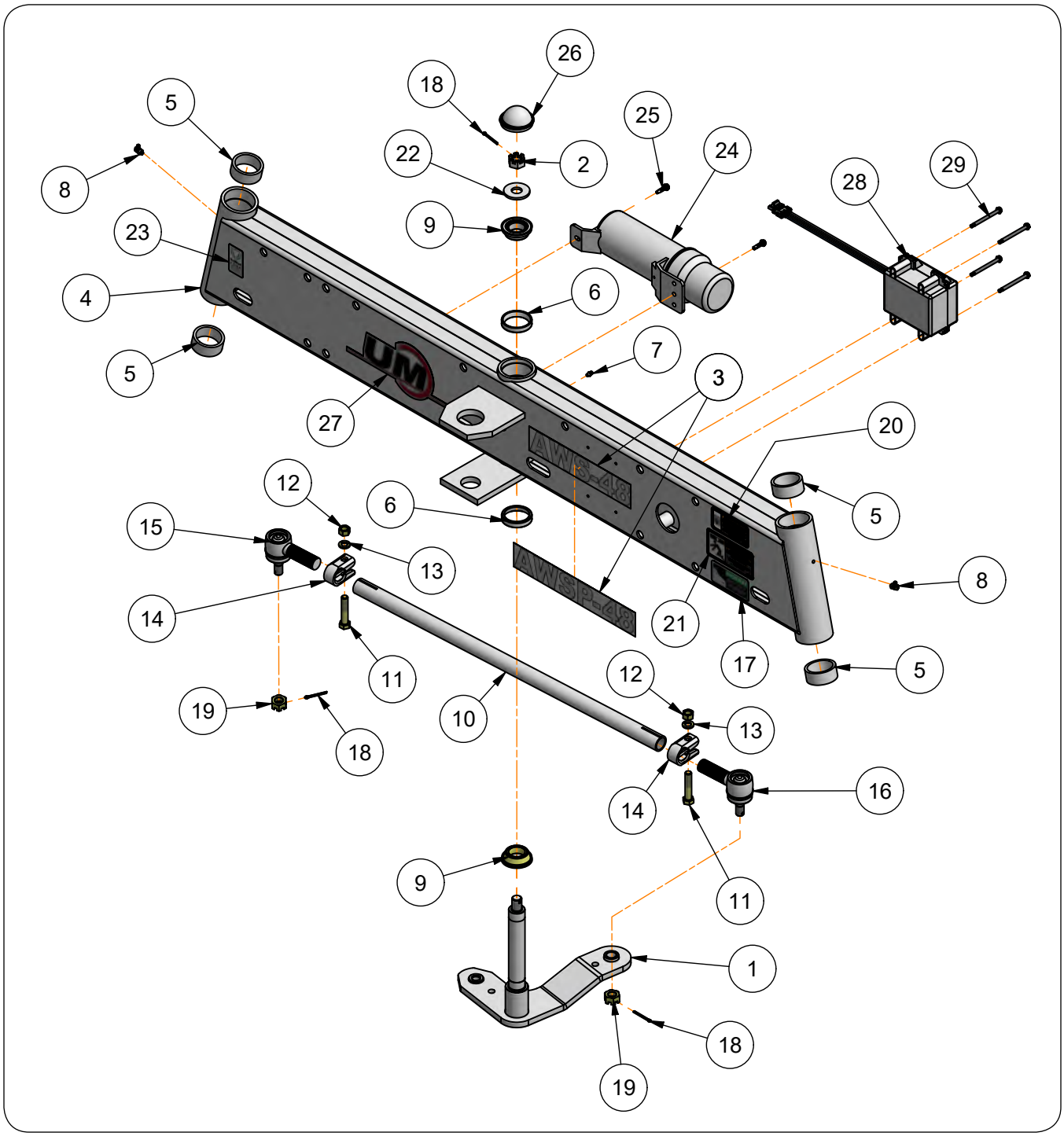
Front Steering Hinge Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	32103	Spindle, 1 1/4" Dia.	1	
2	32104	Nut Bearing, 1 3/4"-20	1	
3	32105	Hinge Pivot Nut, 1 3/4"-20	1	
4	32189B	Spring =Black=	1	
	32189G	Spring =Green=		
	32189R	Spring =Red=		
5	32216	Hinge Pivot Hex Jam Nut, 1 3/4"-20	1	
6	32217	Hinge Pivot Hex Jam Nut, 1 1/4"-28	1	
7	32219	Spacer Tube, 3 9/16" Long	1	
8	100251	Hex Jam Nut, 1-16UNF	2	
9	32207B	Tube/Tie Rod, 1 1/4" Dia. x 27 1/4"	2	
	33703B	Double Tie Rod Assembly =Black=	-	Includes Items 8, 9, 10, 13, 14
10	33391B	Ball Joint Assembly w/Nut	1	Includes Item 11
11	33569	Chamfered hex Nut, 7/8"-14UNF	1	
12	903161-005	Flange Screw, 1/4"-20UNC x 1 1/4" G5	1	
13	9395-019	Hex Jam Nut 1"-14UNS G5	2	
14	9684B	Tie Rod End 1-16UNF	2	
15	33705B	Steering Hinge w/Bearing Cups =Black=	1	Includes Items 10, 11, 12, 16, 30, 31
	33705G	Steering Hinge w/Bearing Cups =Green=		
	33705R	Steering Hinge w/Bearing Cups =Red=		
16	9345	Bearing Cup #LM67010	2	
17	901145	Bearing & Seal Assembly	4	
18	32829B	Clevis Casting =Black=	1	
	32829G	Clevis Casting =Green=		
	32829R	Clevis Casting =Red=		
19	9390-047	Capscrew, 5/16"-18UNC x 6 1/2" G5	1	
20	9390-113	Capscrew, 1/2"-13UNC x 5" G5	1	
21	9390-138	Capscrew, 5/8"-11UNC x 7" G5	1	
22	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	4	
23	9395-014	Hex Jam Nut, 5/8"-11UNC G5	1	
24	9500476	Slotted Nut, 5/8"-18UNF	4	
25	97601	Capscrew, 5/8"-11UNC x 3 (G5) Full Threaded	1	
26	9800	Locknut/Top, 1/2"-13UNC	1	
27	9801	Locknut/Top, 5/8"-11UNC	1	
28	9807	Locknut/Top, 5/16"-18UNC	1	
29	91160	Grease Zerk	2	
30	9936	Locknut, 1/4"-20UNC	1	
31	33570	Anti-Rotation Plate	1	

Front Frame, Pivot, Manual Holder, & Tie Rod Components

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



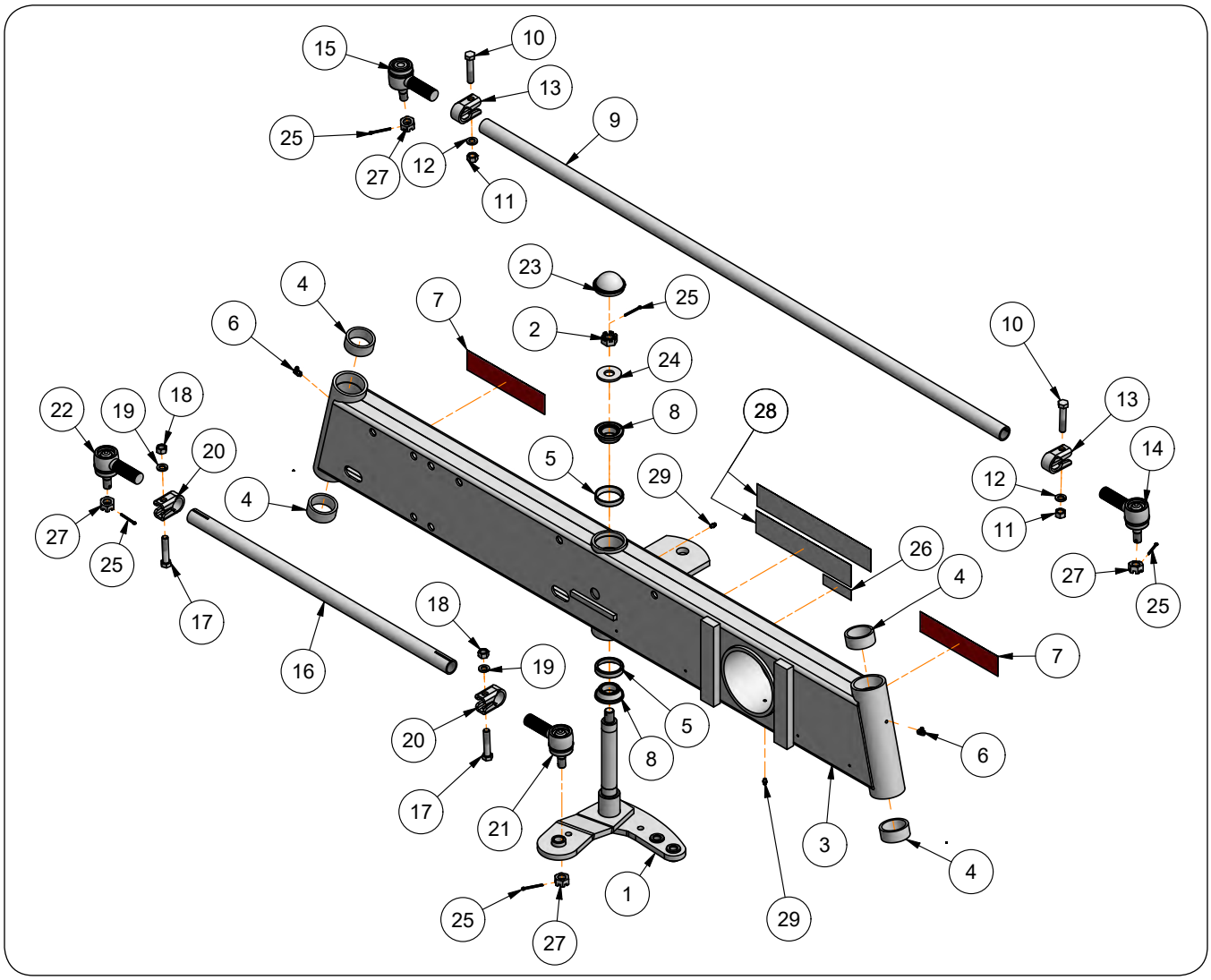
Front Frame, Pivot, Manual Holder, & Tie Rod Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	32196B	Front Pivot Weldment =Black=	1	Includes Item 2
	32196G	Front Pivot Weldment =Green=		
	32196R	Front Pivot Weldment =Red=		
2	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
3	902649	Decal Model AWS-30	1	
	902650	Decal Model AWS-36		
	902651	Decal Model AWS-42		
	902652	Decal Model AWS-48		
	9503664	Decal Model AWS-52		
4	32195B	Front Axle Weldment w/Bearing Cups & Bushings =Black=	1	Includes Items 5 & 6
	32195G	Front Axle Weldment w/Bearing Cups & Bushings =Green=		
	32195R	Front Axle Weldment w/Bearing Cups & Bushings =Red=		
5	9197SP	Bushing	4	
6	9345	Bearing Cup #LM67010	2	
7	91160	Grease Zerk 1/4-28	3	
8	93415	90° Grease Zerk 1/4-28	2	
9	901145	Bearing & Seal Assembly	2	
10	902678B	Tie Rod Assembly	1	Includes Items 11 - 16
11	9390-329	Capscrew, 1/2"-20UNF x 2 1/2" G5	2	
12	9394-009	Hex Nut, 1/2"-20UNF	2	
13	9404-025	Lock Washer, 1/2"	2	
14	9683B	Clamp/Tie Rod Tube 1 1/4" Dia.	1	
15	9684B	Tie Rod End/Left-Hand 1"-16UNF	1	
16	9685B	Tie Rod End/Right-Hand 1"-16UNF	2	
17	91072	Decal, IMPORTANT "Do Not Tow..."	1	
18	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	4	
19	9500476	Slotted Nut, 5/8"-18UNF	4	
20	97961	Decal, WARNING "Read & Understand Operator..."	1	
21	98229	Decal, WARNING "Falling or Lowering Equipment..."	1	
22	9234	Flat Washer, 13/16" (Hardened)	3	
23	91605	Decal, FEMA	1	
24	900552	Manual Holder	1	
25	9512	Self-Drilling Screw, 1/4"-14 x 1"	2	
26	9162	Hub Cap	1	
27	901607	Decal, UM Oval	1	
28	902764	Battery w/Charger & Box	1	For Units With Brakes
29	902656	Self-Drilling Screw, 1/4"-14 x 3"	4	For Units With Brakes

Rear Frame, Pivot, & Tie Rod Components

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



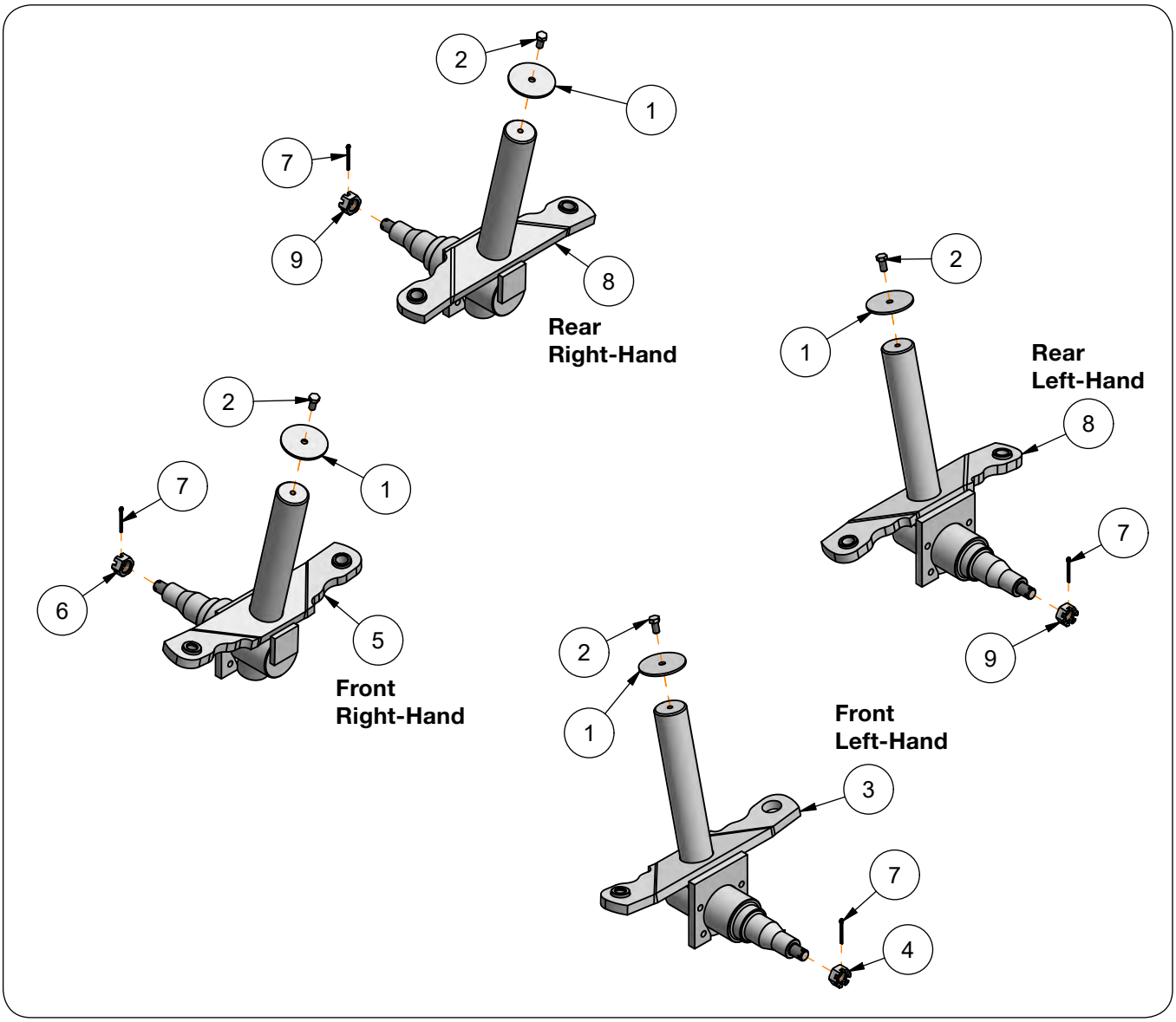
Rear Frame, Pivot, & Tie Rod Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	32096B	Rear Pivot Weldment =Black=	1	Includes Item 2
	32096G	Rear Pivot Weldment =Green=		
	32096R	Rear Pivot Weldment =Red=		
2	9393-016	Slotted Nut, 3/4"-16UNF	3	
3	32090B	Rear Axle Weldment =Black=	1	Includes Items 4 & 5
	32090G	Rear Axle Weldment =Green=		
	32090R	Rear Axle Weldment =Red=		
4	9197SP	Spindle Retainer Bushing	4	
5	9345	Bearing Cup (LM67010)	2	
6	93415	90° Grease Zerk	2	
7	9003126	Reflector =Red=	2	
8	901145	Bearing & Seal Assembly	2	
9	902674B	Rear Tie Rod Assembly	1	Includes Items 10-15
10	9390-329	Capscrew, 1/2"-20UNF x 2 1/2" G5	2	
11	9394-009	Hex Nut, 1/2"-20UNF	2	
12	9404-025	Lock Washer, 1/2"	2	
13	9683B	Clamp/Tie Rod Tube	2	
14	9684B	Tie Rod End / Left-Hand	1	
15	9685B	Tie Rod End / Right-Hand	1	
16	902678B	Rear Tie Rod Assembly	1	Includes Items 17-22
17	9390-329	Capscrew, 1/2"-20UNF x 2 1/2"	2	
18	9394-009	Hex Nut, 1/2"-20UNF	2	
19	9404-025	Lock Washer, 1/2"	2	
20	9683B	Clamp/Tie Rod Tube	2	
21	9684B	Tie Rod End / Left-Hand	1	
22	9685B	Tie Rod End / Right-Hand	1	
23	9162	Hub Cap	1	
24	9234	Flat Washer, 13/16" ID	1	
25	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	5	
26	94127	Decal, Grease 20 Hours	1	
27	9500476	Slotted Nut, 5/8"-18UNF G5	4	
28	902649	Decal Model AWS-30	1	For Units Without Suspension
	902650	Decal Model AWS-36		
	902651	Decal Model AWS-42		
	902652	Decal Model AWS-48		
	9503664	Decal Model AWS-52		
29	91160	Grease Zerk	2	

Front and Rear Spindles without Suspension Components

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



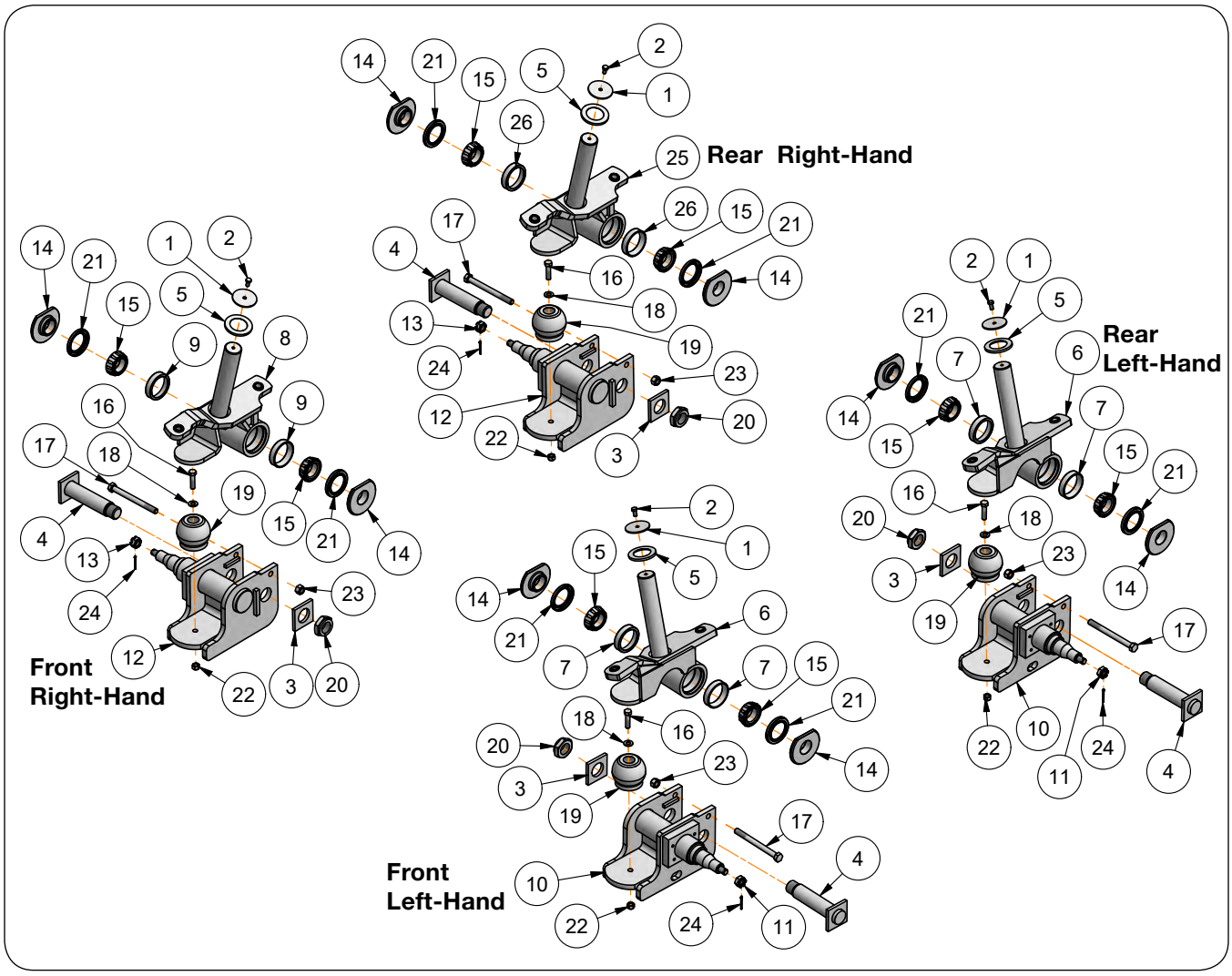
Front and Rear Spindles without Suspension Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	3040B	Washer/Retainer	4	
2	9390-053	Capscrew, 3/8"-16UNC x 3/4" G5	4	
3	32261B	Front Spindle Weldment Left-Hand w/Slotted Nut =Black=	1	Includes Item 4
	32261G	Front Spindle Weldment Left-Hand w/Slotted Nut =Green=		
	32261R	Front Spindle Weldment Left-Hand w/Slotted Nut =Red=		
4	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
5	32320B	Front Spindle Weldment Right-Hand =Black=	1	Includes Item 6
	32320G	Front Spindle Weldment Right-Hand =Green=		
	32320R	Front Spindle Weldment Right-Hand =Red=		
6	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
7	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	4	
8	32267B	Rear Spindle Weldment =Black=	2	Includes Item 9
	32267G	Rear Spindle Weldment =Green=		
	32267R	Rear Spindle Weldment =Red=		
9	9393-016	Slotted Nut, 3/4"-16UNF G2	1	

Front and Rear Spindles with Suspension Components

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



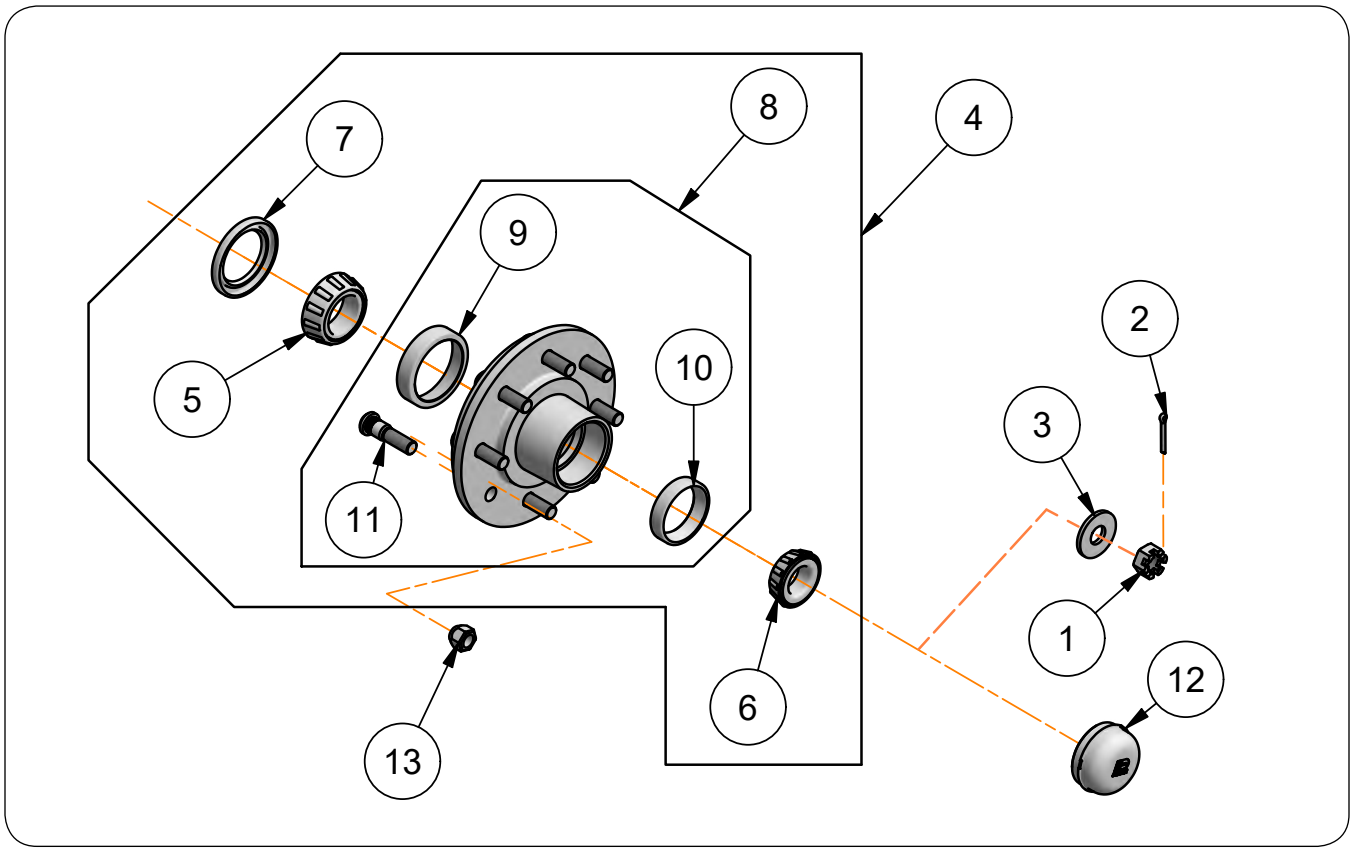
Front and Rear Spindles with Suspension Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	3040B	Washer/Retainer	4	
2	9390-053	Capscrew, 3/8"-16UNC x 3/4" G5	4	
3	30172B	Washer	4	
4	32649	Pin Weldment 8 9/16" long	4	
5	32600	Washer	4	
6	32603B	Radius Arm Left-Hand Weldment =Black=	2	Includes item 7
	32603G	Radius Arm Left-Hand Weldment =Green=		
	32603R	Radius Arm Left-Hand Weldment =Red=		
7	91812	Bearing Cup (25520)	2	
8	32601B	Radius Arm Front Right-Hand Weldment =Black=	1	Includes item 9
	32601G	Radius Arm Front Right-Hand Weldment =Green=		
	32601R	Radius Arm Front Right-Hand Weldment =Red=		
9	91812	Bearing Cup (25520)	2	
10	33173B	Front Spindle Weldment Left-Hand w/Slotted Nut =Black=	2	Includes Item 11
	33173G	Front Spindle Weldment Left-Hand w/Slotted Nut =Green=		
	33173R	Front Spindle Weldment Left-Hand w/Slotted Nut =Red=		
11	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
12	33179B	Front Spindle Weldment Right-Hand =Black=	2	Includes Item 13
	33179G	Front Spindle Weldment Right-Hand =Green=		
	33179R	Front Spindle Weldment Right-Hand =Red=		
13	9393-016	Slotted Nut, 3/4"-16UNF G2	1	
14	66056	Spacer 4 1/2" Dia.	8	
15	91822	Bearing Cone (25580)	8	
16	9390-103	Capscrew, 1/2"-13UNC x 2"	4	
17	9390-138	Capscrew, 5/8"-11UNC x 7"	4	
18	9405-086	Flat Washer, 1/2" SAE	4	
19	9500159	Rubber Bumper 3.32" Long	4	
20	96976-056	Thin Locknut, 1 1/2"-12UNF	4	
21	97342	Seal (9065061)	8	
22	9800	Locknut/Top, 1/2"-13UNC	4	
23	9801	Locknut/Top, 5/8"-11UNC	4	
24	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	4	
25	32639B	Radius Arm Rear Right-Hand Weldment =Black=	1	Includes item 26
	32639G	Radius Arm Rear Right-Hand Weldment =Green=		
	32639R	Radius Arm Rear Right-Hand Weldment =Red=		
26	91812	Bearing Cup (25520)	2	

Standard Hub Components — 8-Bolt

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



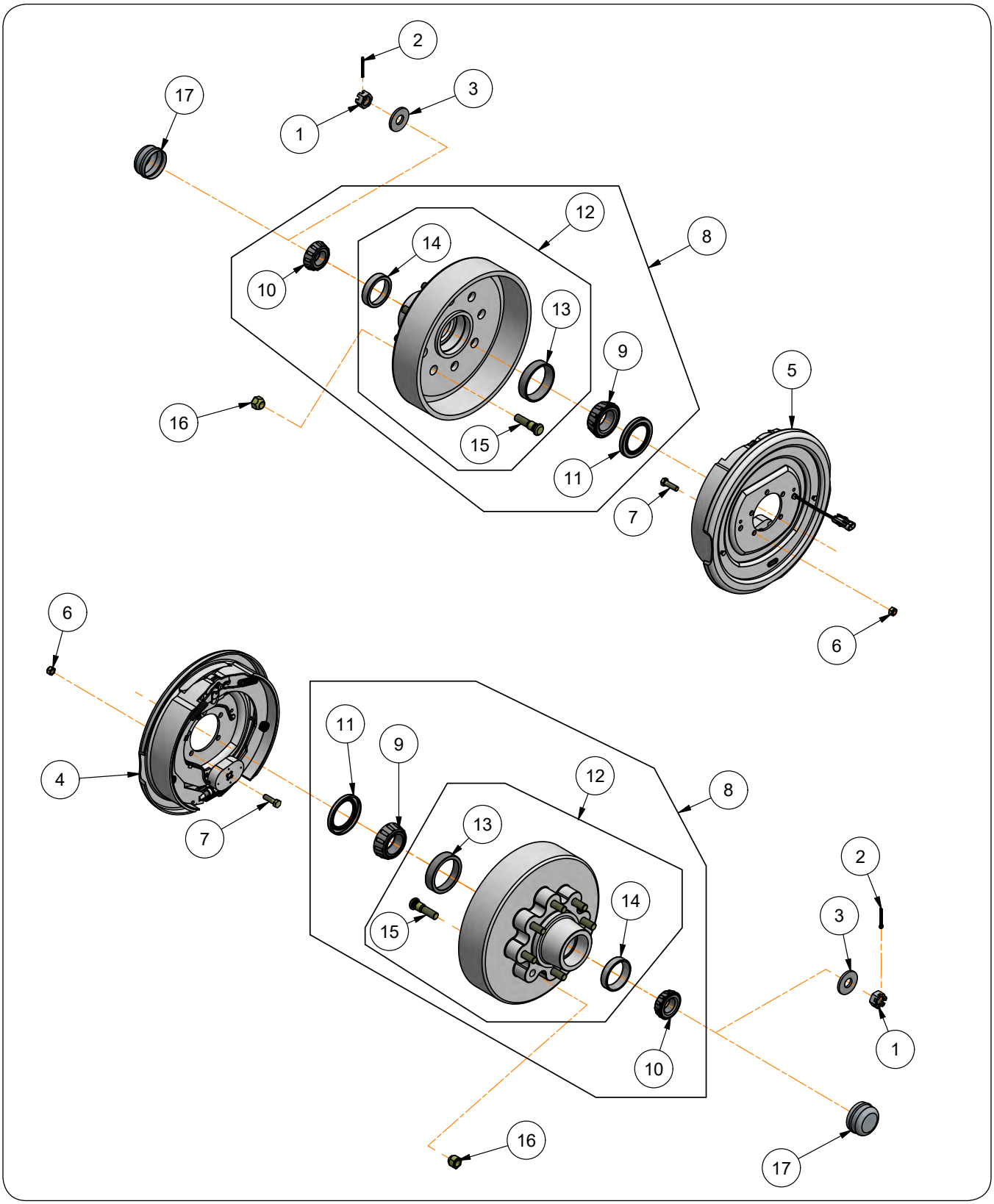
Standard Hub Components — 8-Bolt

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

ITEM	PART NO.	DESCRIPTION	QTY	
			MODELS WITH NO BRAKES	MODELS WITH 2 BRAKES
1	9393-016	Slotted Nut, 3/4"-16UNF	4	2
2	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	4	2
3	9234	Flat Washer, 13/16" ID	4	2
4	9501118	Hub Assembly w/Bearings (9/16"-18UNF Hdw) 8-Bolt	4	2
5	91822	Bearing Cone #25580	1	1
6	91824	Bearing Cone #14125A	1	1
7	97342	Seal, 2 1/4 ID	1	1
8	N/A	8 Bolt Hub W/Bearing Cups & Studs (9/16"-18UNF Hdw)	1	1
9	91812	Bearing Cup #25520	1	1
10	92687	Bearing Cup #14276	1	1
11	9502240	Stud Bolt, 9/16"-18UNF x 2.30" (G8)	8	8
12	91887	Hub Cap 2.717D	1	1
13	901669	Tapered Nut, 9/16"-18UNF	8	8

Hub With Brake Components — 8-Bolt

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



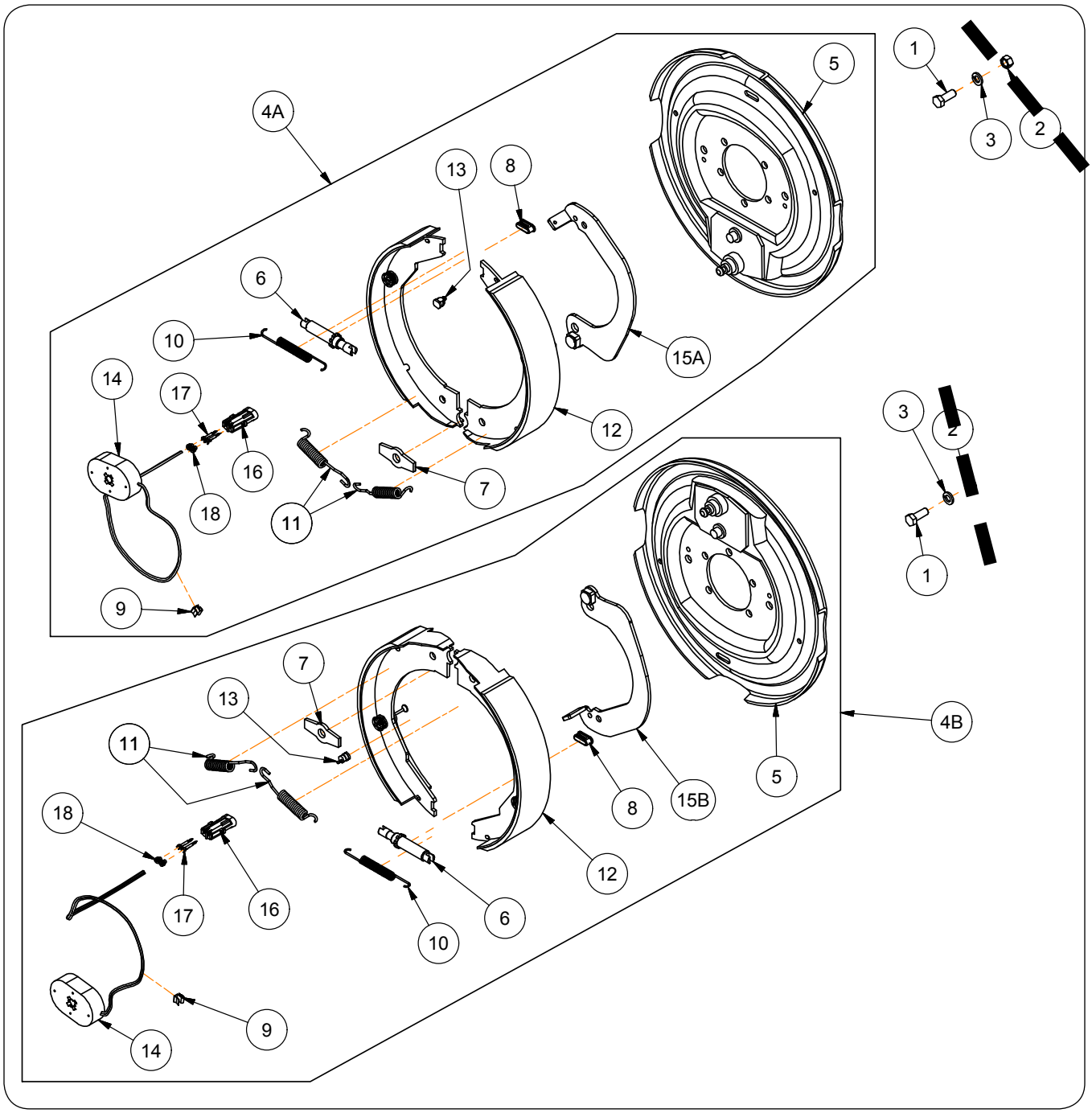
Hub With Brake Components — 8-Bolt

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

ITEM	PART NO.	DESCRIPTION	QTY	
			MODELS WITH 2 BRAKES	MODELS WITH 4 BRAKES
1	9393-016	Slotted Nut, 3/4"-16UNF	2	4
2	9391-025	Cotter Pin, 1/8" Dia. x 1 1/2"	2	4
3	9234	Flat Washer, 13/16" ID	2	4
4	97348	Electric Brake Cluster, LH	1	2
5	97349	Electric Brake Cluster, RH	1	2
6	9928	Locknut, 3/8"-16UNC	8	16
7	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	8	16
8	9501096	Drum Assembly w/Bearings 8-Bolt	2	4
9	91822	Bearing Cone #25580	1	1
10	91824	Bearing Cone #14125A	1	1
11	97342	Seal, 2 1/4" ID	1	1
12	901686	8 Bolt Hub w/Brake Drum (9/16"-18UNF Hdw)	1	1
13	91812	Bearing Cup #25520	1	1
14	92687	Bearing Cup #14276	1	1
15	9502240	Stud Bolt, 9/16"-18UNF x 2.30" G8	8	8
16	901669	Tapered Nut, 9/16"-18UNF	8	8
17	91887	Hub Cap	1	1

Electric Brake Cluster Components

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



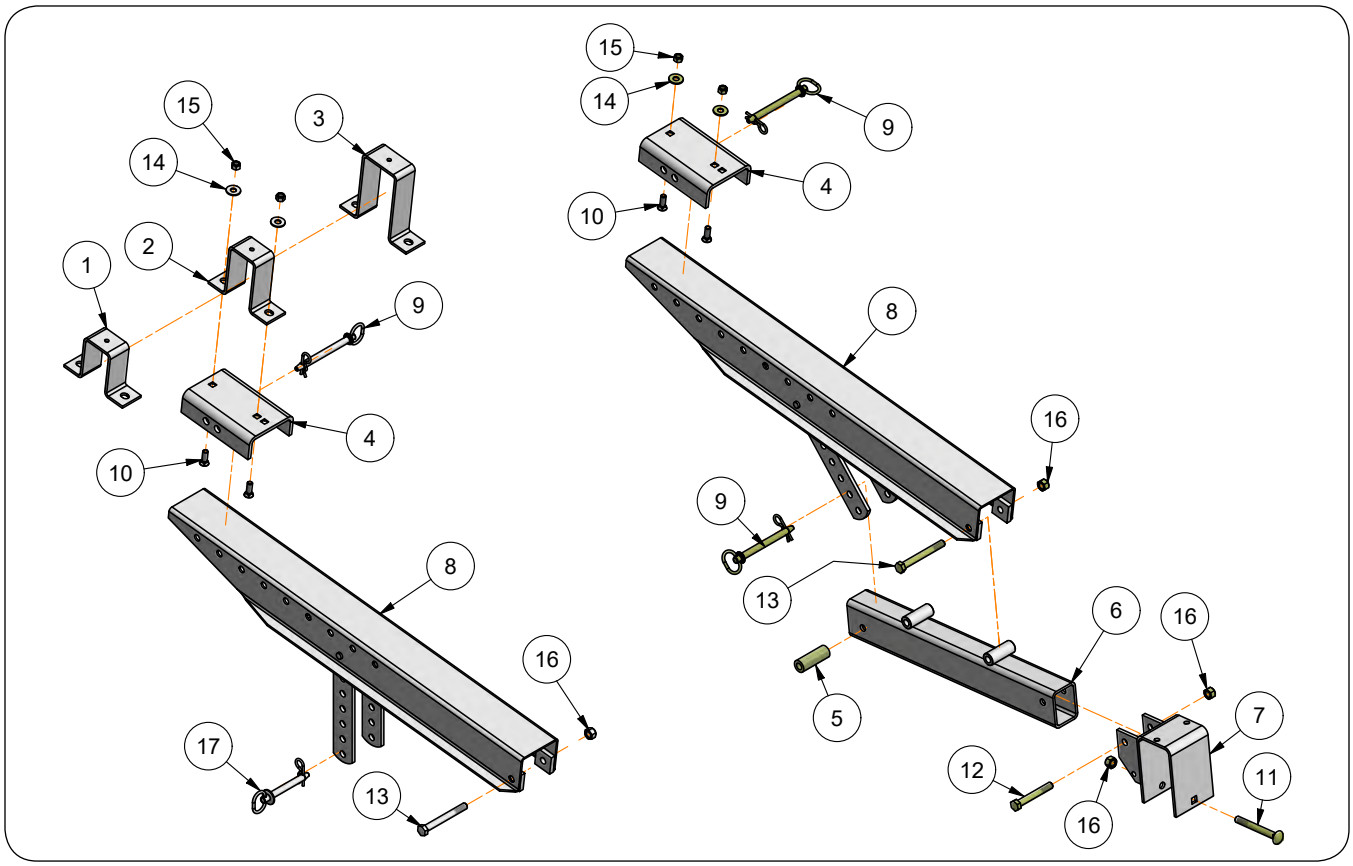
Electric Brake Cluster Components

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9390-055	Capscrew, 3/8"-16UNC x 1" G5	4	
2	9394-006	Hex Nut, 3/8"-16UNC	4	
3	9404-021	Lock Washer, 3/8"	4	
4A	97348	Electric Brake Cluster, LH	1	Includes Items 5 through 18
4B	97349	Electric Brake Cluster, RH		
5	97350	Backing Plate Assembly	1	
6	97356	Adjusting Assembly	1	
7	97361	Anchor Post Washer	1	
8	97359	Plug	1	
9	97353	Wire Clip	3	
10	97357	Extension Spring 0.44	1	
11	97354	Retractor Spring	2	
12	97355	Electric Brake Show & Lining Kit	1	
13	97360	Wire Grommet	1	
14	97358	Magnet Kit	1	
15A	97352	Right-Hand Actuating Level Arm	1	
15B	97351	Left-Hand Actuating Level Arm		
16	98004	Shroud 2 Pin	1	
17	98011	Male Terminal 14-16 GA	2	
18	97590	Cable Seal	2	

Support Arm Components

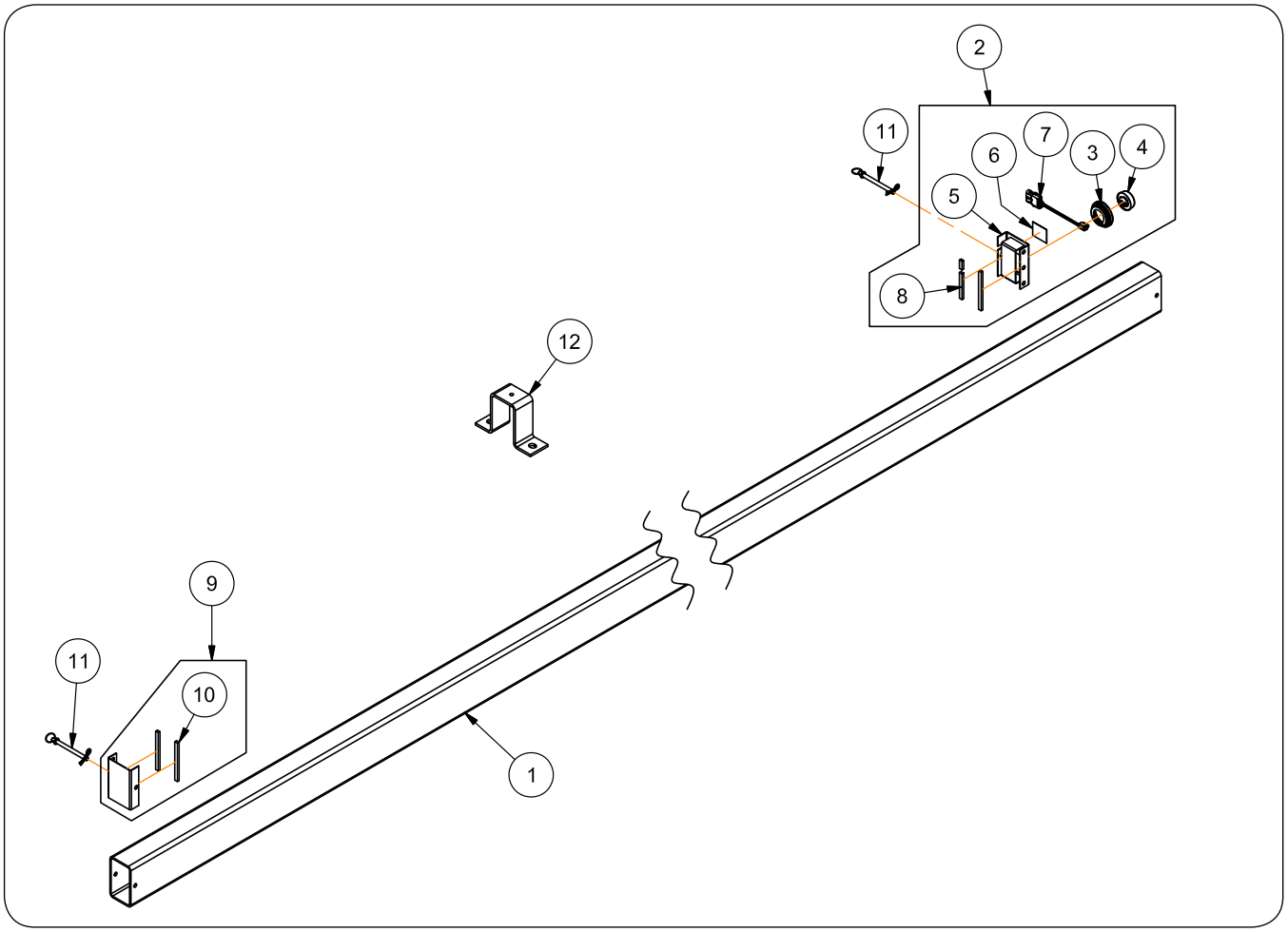
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	33281B	Support Arm Assembly	2	Includes Items 4, 8, 9, 10, 13, 14, 15, 16, 17
	33298B	Center Support Arm Assembly	1	Includes Items 4 through 16
1	3962	Strap, 5x3	3	AWS-30
2	30693B	Strap, 6x3	3	AWS-36
3	31726B	Strap, 8x4	3	AWS-42/48/52
4	30114	Slider Channel	3	
5	30120PL	Bushing	1	
6	32343B	Cross Tube Weldment	1	
7	33013B	3rd Arm Mount Weldment	1	
8	33263B	Support Arm Weldment	3	
9	92270	Hitch Pin 5/8" Dia. w/Hairpin	4	
10	93561	Plow Bolt 1/2"-13UNC x 1 1/2	6	
11	9388-146	Carriage Bolt, 5/8"-11UNC x 5 1/2" G5	1	
12	9390-133	Capscrew, 5/8"-11UNC x 4 1/2" G5	1	
13	9390-135	Capscrew 5/8"-11UNC x 5 1/2	3	
14	9405-088	Flat Washer 1/2 USS	6	
15	9800	Locknut 1/2"-13UNC	6	
16	9801	Locknut 5/8"-11UNC	4	
17	97824	Hitch Pin 5/8" Dia. w/Hairpin	2	

Upper Tube Components - AWS-30

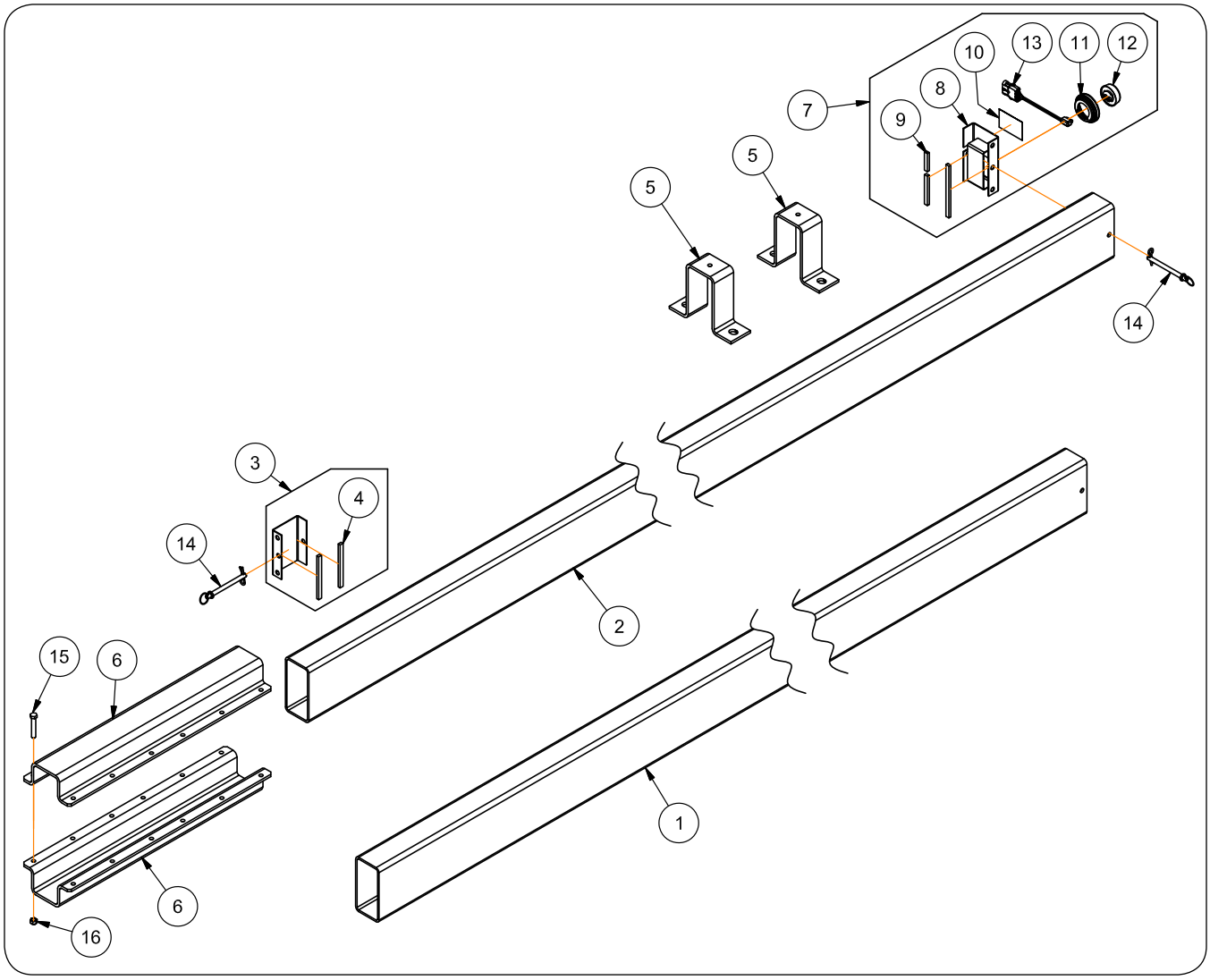
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	106629B	Upper Bar Assembly 5" x 3" x 372" =Black=	1	Includes Items 2 through 11
1	106629G	Upper Bar Assembly 5" x 3" x 372" =Green=		
1	106629R	Upper Bar Assembly 5" x 3" x 372" =Red=		
2	32733B	End Cap Asy 5" x 3" w/Light	1	Includes Items 3 through 8
3	900956	Grommet Open Back	1	
4	902218	Light/Red LED	1	
5	32734B	End Cap 5" x 3"	1	
6	9003125	Fluorescent Strip	1	
7	9500410	Wire Harness	1	
8	900152	Tape/Black Foam Rubber	A/R	
9	106582B	Cover	1	Includes Item 10
10	900152	Tape/Black Foam Rubber	A/R	
11	91168	Hitch Pin & Hair Pin	2	
12	3962	Strap, 5" x 3"	2	

Upper Tube Components - AWS-36

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



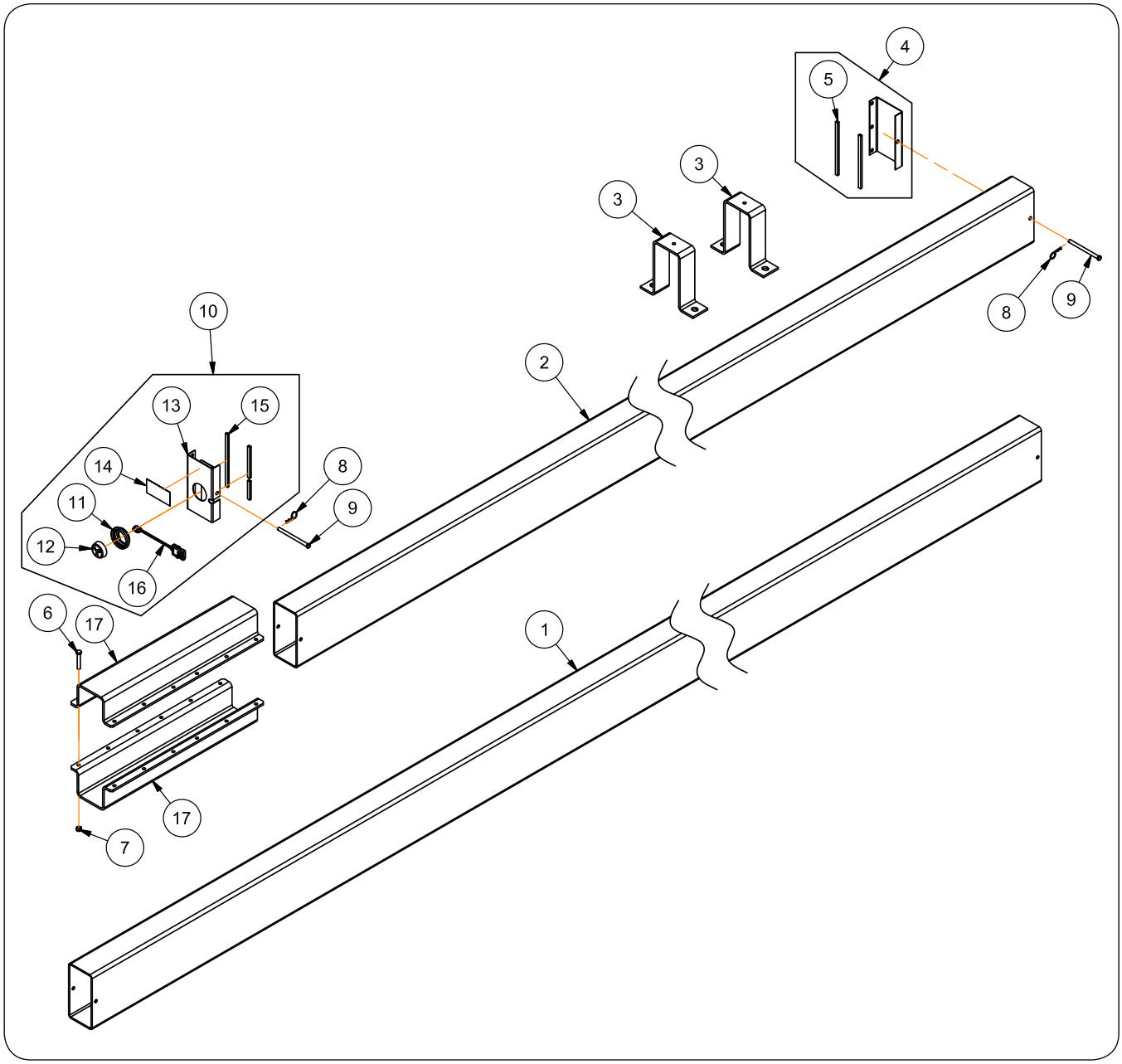
Upper Tube Components - AWS-36

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	30925B	Upper Tube 6" x 3" x 203 7/8" =Black=	1	
	30925G	Upper Tube 6" x 3" x 203 7/8" =Green=		
	30925R	Upper Tube 6" x 3" x 203 7/8" =Red=		
2	30970B	Upper Tube Asy 6" x 3" x 240" =Black=	1	Includes Items 3 through 16
	30970G	Upper Tube Asy 6" x 3" x 240" =Green=		
	30970R	Upper Tube Asy 6" x 3" x 240" =Red=		
3	106582B	Cover	1	Includes Item 4
4	900152	Tape/Black Foam Rubber	A/R	
5	30693B	Strap 6" x 3"	2	
6	30886B	Upper Tube Coupling =Black=	2	
	30886G	Upper Tube Coupling =Green=		
	30886R	Upper Tube Coupling =Red=		
7	32738B	End Cap Asy 6" x 3" w/Light	1	Includes Items 8 through 13
8	32737B	End Cap 6" x 3"	1	
9	900152	Tape/Black Foam Rubber	A/R	
10	9003125	Fluorescent Strip	1	
11	900956	Grommet Open Back	1	
12	902218	Light/Red LED	1	
13	9500410	Wire Harness	1	
14	91168	Hitch Pin & Hair Pin	2	
15	9390-060	Capscrew, 3/8"-16UNC x 2 1/4" G5	12	
16	9928	Locknut/Top, 3/8"-16UNC	12	

Upper Tube Components - AWS-42

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



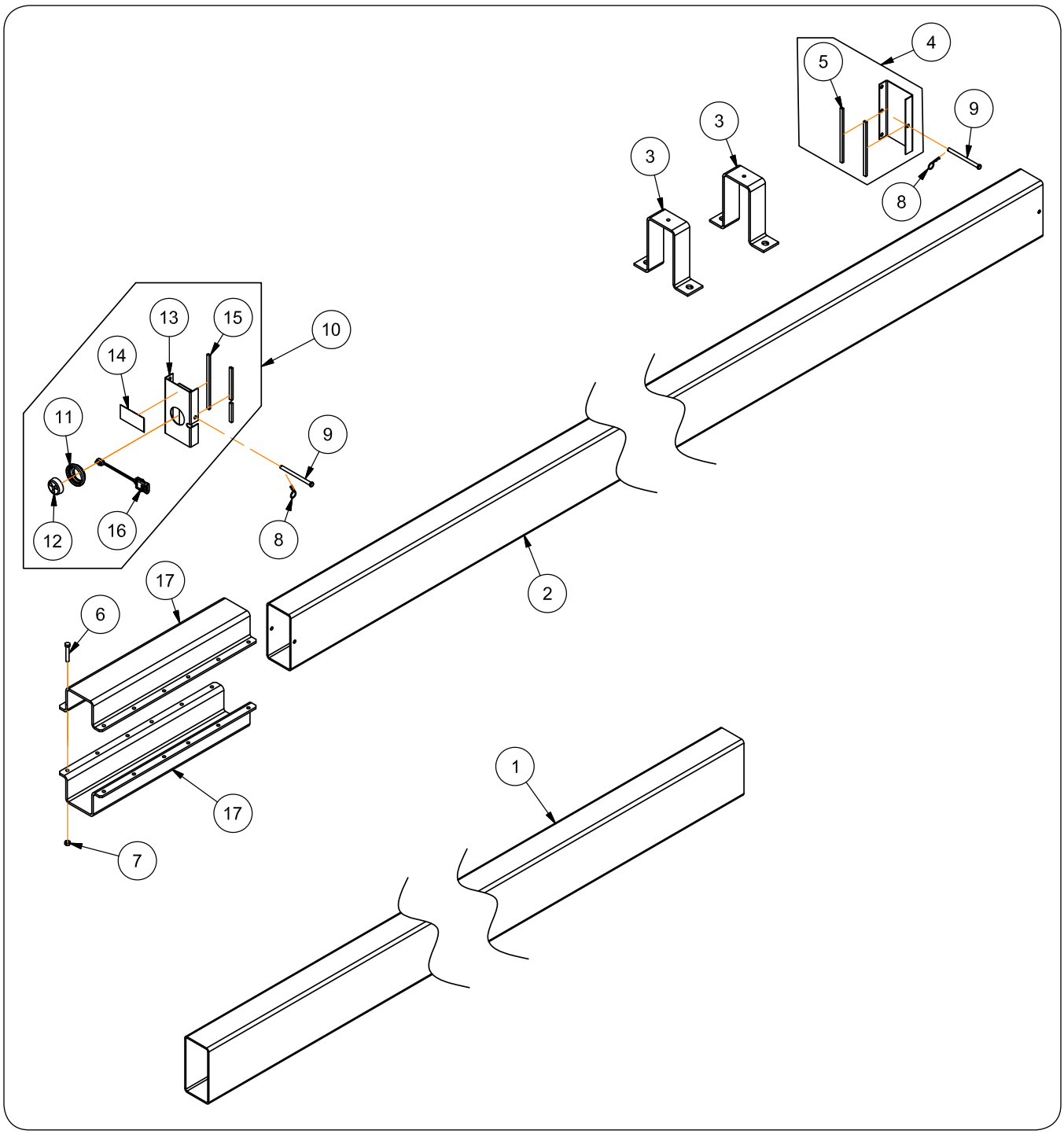
Upper Tube Components - AWS-42

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	31728B	Upper Tube 8" x 4" x 276" =Black=	1	
	31728G	Upper Tube 8" x 4" x 276" =Green=		
	31728R	Upper Tube 8" x 4" x 276" =Red=		
2	31892B	Upper Tube Assembly 8" x 4" x 240" =Black=	1	Includes Items 3 through 17
	31892G	Upper Tube Assembly 8" x 4" x 240" =Green=		
	31892R	Upper Tube Assembly 8" x 4" x 240" =Red=		
3	31726B	Strap, 8" x 4"	2	
4	31891B	Cover Plate	1	Includes Item 5
5	900152	Tape/Black Foam Rubber	A/R	
6	9390-060	Capscrew, 3/8"-16UNC x 2 1/4" G5	12	
7	9928	Locknut/Top, 3/8"-16UNC	12	
8	9514	Hairpin Cotter	2	
9	TA8F93	Clevis Pin, 3/8" Dia. x 5"	2	
10	32742B	End Cap Asy 8" x 4" w/Light	1	Includes Items 11 through 16
11	900956	Grommet Open Back	1	
12	902218	Light/Red LED	1	
13	32741B	End Cap 8" x 4"	1	
14	9003125	Fluorescent Strip	1	
15	900152	Tape/Black Foam Rubber	A/R	
16	9500410	Wire Harness	1	
17	31725B	Upper Tube Coupling =Black=	1	
	31725G	Upper Tube Coupling =Green=		
	31725R	Upper Tube Coupling =Red=		

Upper Tube Components - AWS-48/52

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



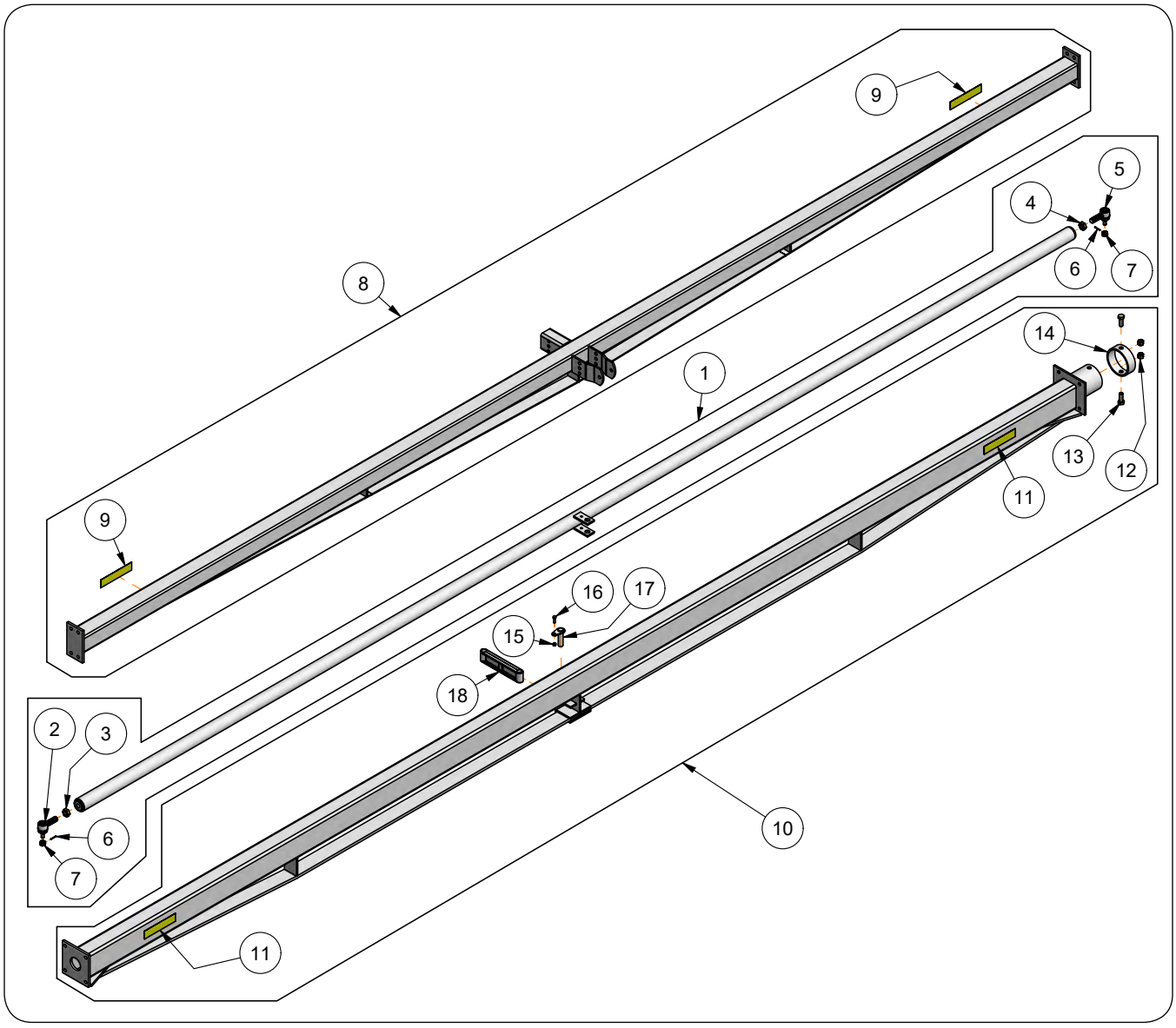
Upper Tube Components - AWS-48/52

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	31728B	Upper Tube 8" x 4" x 276" =Black=	1	AWS-48
	31728G	Upper Tube 8" x 4" x 276" =Green=		
	31728R	Upper Tube 8" x 4" x 276" =Red=		
	32287B	Upper Tube 8" x 4" x 312" =Black=		AWS-52
	32287G	Upper Tube 8" x 4" x 312" =Green=		
	32287R	Upper Tube 8" x 4" x 312" =Red=		
2	32288B	Upper Tube Assembly 8" x 4" x 312" =Black=	1	AWS-48/52 Includes Items 3 through 17
	32288G	Upper Tube Assembly 8" x 4" x 312" =Green=		
	32288R	Upper Tube Assembly 8" x 4" x 312" =Red=		
3	31726B	Strap, 8" x 4"	2	
4	31891B	Cover Plate	1	Includes Item 5
5	900152	Tape/Black Foam Rubber	A/R	
6	9390-060	Capscrew, 3/8"-16UNC x 2 1/4" G5	12	
7	9928	Locknut/Top, 3/8"-16UNC	12	
8	9514	Hairpin Cotter	2	
9	TA8F93	Clevis Pin, 3/8" Dia. x 5"	2	
10	32742B	End Cap Asy 8" x 4" w/Light	1	Includes Items 11 through 16
11	900956	Grommet Open Back	1	
12	902218	Light/Red LED	1	
13	32741B	End Cap 8" x 4"	1	
14	9003125	Fluorescent Strip	1	
15	900152	Tape/Black Foam Rubber	A/R	
16	9500410	Wire Harness	1	
17	31725B	Upper Tube Coupling =Black=	1	
	31725G	Upper Tube Coupling =Green=		
	31725R	Upper Tube Coupling =Red=		

Lower Tube Components - AWS-30/36

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



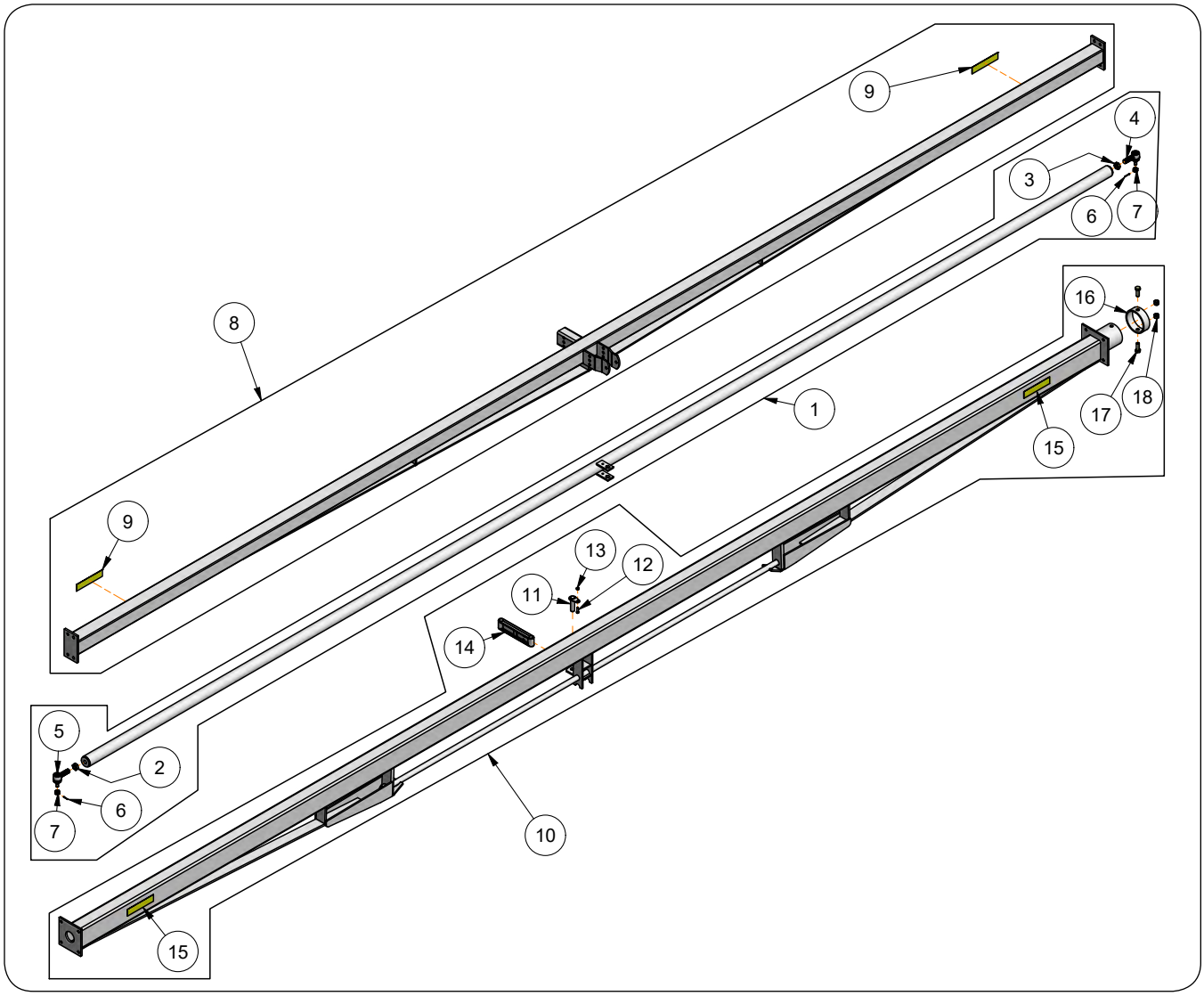
Lower Tube Components - AWS-30/36

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	32184B	Connector Link Assembly 24' =Black=	1	Includes items 2 through 7
	32184G	Connector Link Assembly 24' =Green=		
	32184R	Connector Link Assembly 24' =Red=		
2	9685B	Tie Rod End/RH 1”-16UNF-2A	1	
3	100249	Hex Jam Nut 1”-16UNF-2B (RH Threaded)	1	
4	100251	Hex Jam Nut 1”-16UNF-2B (LH Threaded)	1	
5	9684B	Tie Rod End/LH 1”-16UNF-2A	1	
6	9391-024	Cotter Pin, 1/8” Dia. x 1 1/4”	2	
7	9500476	Slotted Nut 5/8”-18UNF	2	
8	32957B	Brace Tube Weldment 24' =Black=	1	Includes Item 9
	32957G	Brace Tube Weldment 24' =Green=		
	32957R	Brace Tube Weldment 24' =Red=		
9	9003127	Reflector 2” x 9” =Amber=	2	
10	33089B	Support Swivel Weldment 24' Rod Truss =Black=	1	Includes Items 11 through 18
	33089G	Support Swivel Weldment 24' Rod Truss =Green=		
	33089R	Support Swivel Weldment 24' Rod Truss =Red=		
11	9003127	Reflector, 2” x 9” =Amber=	2	
12	9398-021	Elastic Stop Nut, 3/4”-10UNC	2	
13	9390-145	Capscrew, 3/4”-10UNC x 2” G5	2	
14	30123B	Collar =Black=	1	
	30123G	Collar =Green=		
	30123R	Collar =Red=		
15	9928	Locknut/Top, 3/8”-16UNC	1	
16	9390-056	Capscrew, 3/8”-16UNC x 1 1/4” G5	1	
17	32315	Pin Weldment	1	
18	32800B	Link Casting 11 3/4" Long	1	

Lower Tube Components - AWS-42/48/52

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



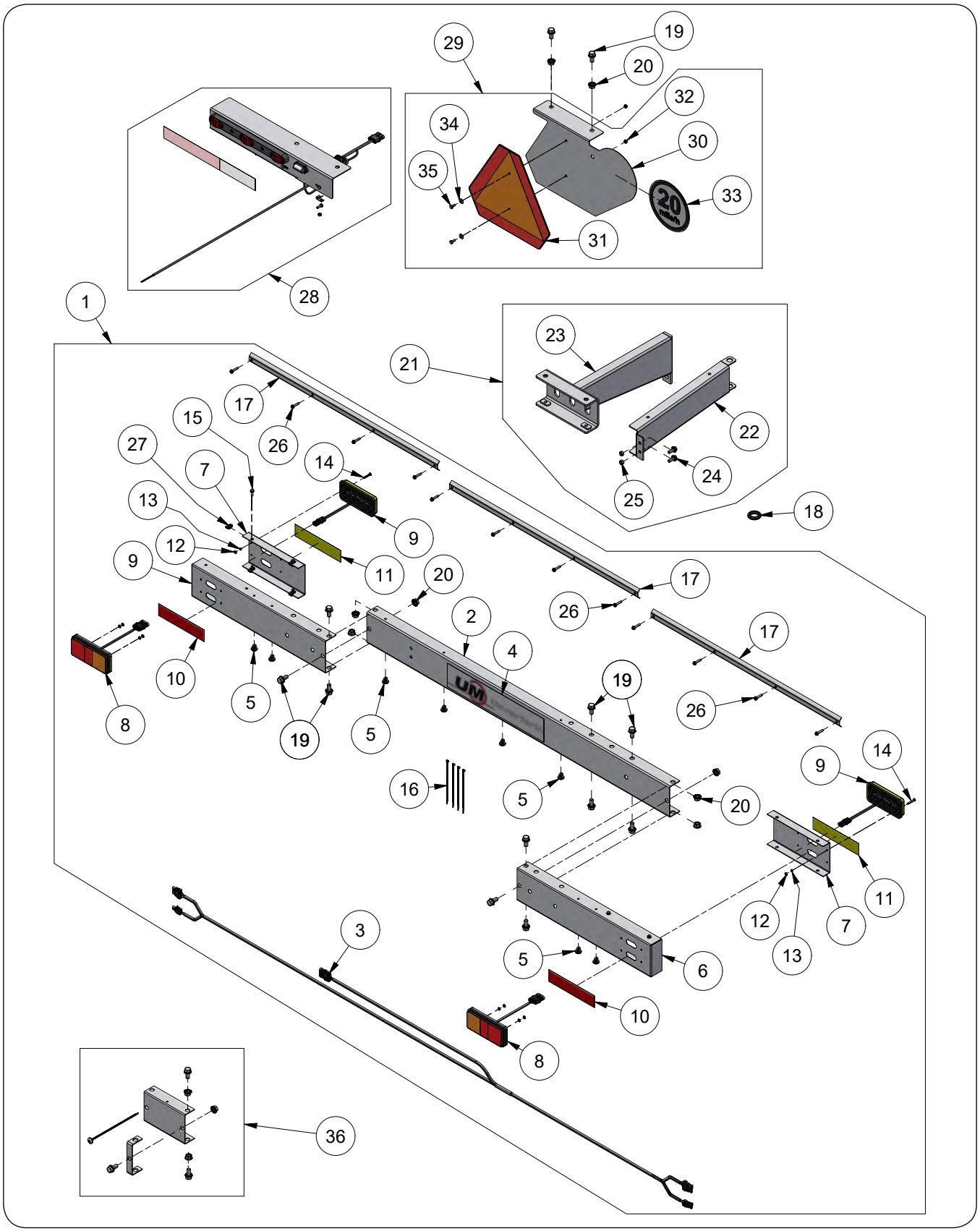
Lower Tube Components - AWS-42/48/52

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	32257B	Tie Rod/Connector Link 30' Assembly =Black=	1	Includes Items 2 through 7
	32257G	Tie Rod/Connector Link 30' Assembly =Green=		
	32257R	Tie Rod/Connector Link 30' Assembly =Red=		
2	100251	Hex Jam Nut 1-16UNF-2B (LH Threaded)	1	
3	100249	Hex Jam Nut 1-16UNF-2B (RH Threaded)	1	
4	9685B	Tie Rod End/RH 1-16UNF-2A	1	
5	9684B	Tie Rod End/LH 1-16UNF-2A	1	
6	9391-024	Cotter Pin, 1/8" Dia. x 1 1/4"	2	
7	9500476	Slotted Nut, 5/8"-18UNF	2	
8	32230B	Brace Tube Weldment 30' =Black=	1	Includes item 9
	32230G	Brace Tube Weldment 30' =Green=		
	32230R	Brace Tube Weldment 30' =Red=		
9	9003127	Reflector 2" x 9" =Amber=	2	
10	33987B	Support Swivel Weldment 30' Rod Truss =Black=	1	includes Items 11 through 18
	33987G	Support Swivel Weldment 30' Rod Truss =Green=		
	33987R	Support Swivel Weldment 30' Rod Truss =Red=		
11	32315	Pin Weldment	1	
12	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	1	
13	9928	Locknut/Top, 3/8"-16UNC	1	
14	32800B	Link Casting, 11 3/4" Long	1	
15	9003127	Reflector, 2" x 9" =Amber=	2	
16	30123B	Collar =Black=	1	
	30123G	Collar =Green=		
	30123R	Collar =Red=		
17	9390-145	Capscrew, 3/4"-10UNC x 2" G5	2	
18	9398-021	Elastic Stop Nut, 3/4"-10UNC	2	

Light Bar Components

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



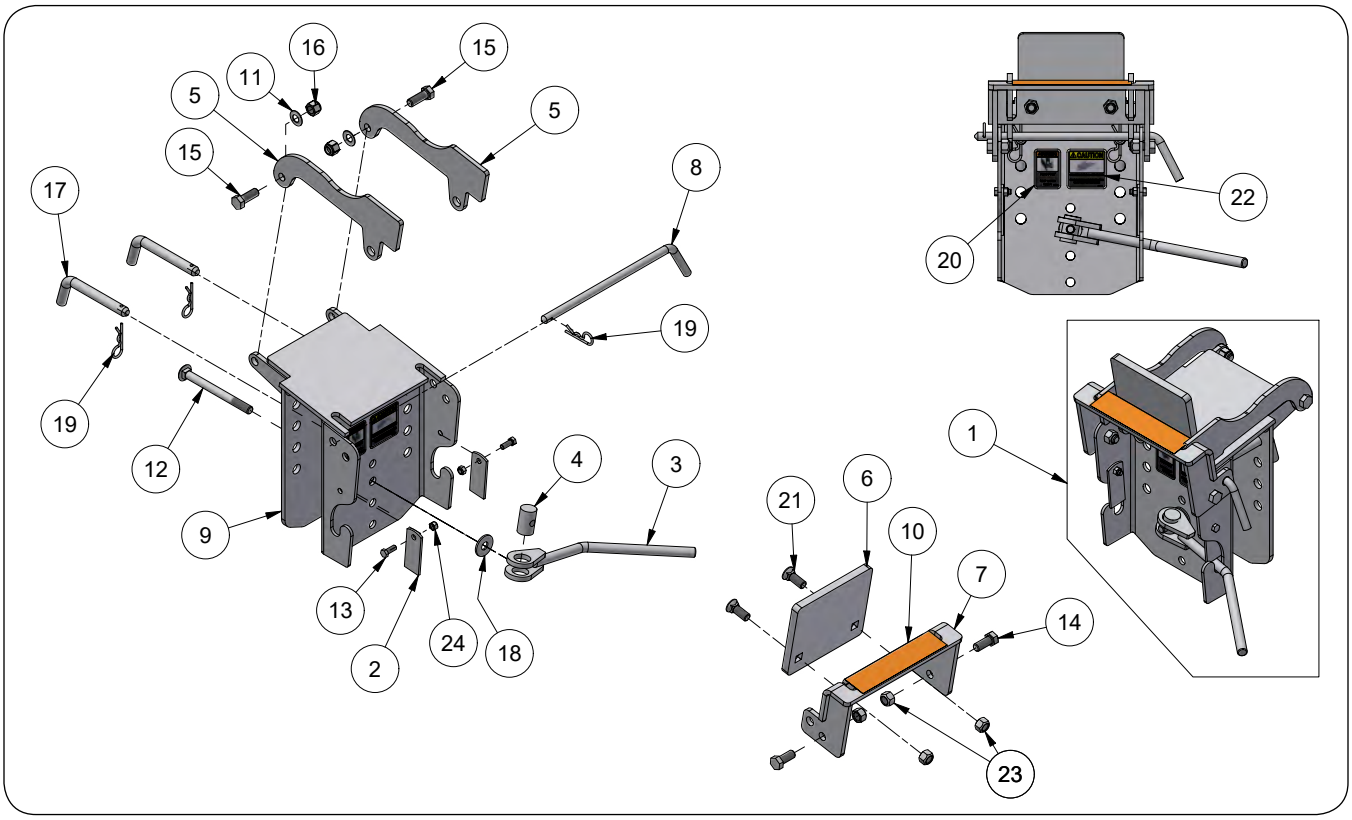
Light Bar Components

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

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	33557B	Light Bar Assembly =Black=	1	Includes items 2-20 & 26, 27
	33557G	Light Bar Assembly =Green=		
	33557R	Light Bar Assembly =Red=		
2	33551B	Formed Channel, 59 1/2" =Black=	1	
	33551G	Formed Channel, 59 1/2" =Green=		
	33551R	Formed Channel, 59 1/2" =Red=		
3	33568	Wiring Harness, 104"	1	
4	33038	Unverferth Logo	1	
5	9504089	Button Head Zip Tie	8	
6	33553B	Formed Channel, 28 11/32" =Black=	2	
	33553G	Formed Channel, 28 11/32" =Green=		
	33553R	Formed Channel, 28 11/32" =Red=		
7	33552B	Formed Channel, 11" =Black=	2	
	33552G	Formed Channel, 11" =Green=		
	33552R	Formed Channel, 11" =Red=		
8	9501503	Light Combo Lamp Red/Amber, Stop-Tail-Turn w/Hardware	2	
9	9006281	Light, AMBER (LED)	2	
10	9003126	Reflector, 2" x 9" (RED)	2	
11	9003127	Reflector, 2" x 9" (AMBER)	2	
12	9830-016	Hex Nut, #10-32UNF G2	4	
13	9404-013	Lock Washer, #10	4	
14	903172-350	Pan Head, #10-32UNF x 1 1/4" Phillips Machine Screw	4	
15	97420	Flange Screw, 1/4"-20UNC x 3/4" G5	12	
16	9000106	Cable Tie, 7 1/2"	4	
17	31809B	Formed Plate Cover =Black=	3	
	31809G	Formed Plate Cover =Green=		
	31809R	Formed Plate Cover =Red=		
18	98830	Rubber Grommet	1	
19	9001529	Flange Screw, 1/2"-13UNC x 1" G5	10	
20	91267	Flange Nut, 1/2"-13UNC	6	
21	32576B	Light Mount Assembly - Axle Mount	1	Includes Items 22-25
22	34056B	Light Support Bracket =Black=	1	
23	34548B	Light Mount Weldment =Black=	1	
24	91262	Flange Screw, 3/8"-16UNC x 1" G5	2	
25	9928	Locknut, 3/8"-16UNC	2	
26	9523	Self-Drilling Screw, 1/4"-14 x 1 1/4"	20	
27	9504864	Panel Nut, 1/4"-20UNC	12	
28	31758	VIN Package, License Plate Bracket/Lamp Kit	1	
29	33359B	Bracket SMV/SIS Assembly	1	Includes Items 30-35
30	33343B	SMV/SIS Bracket	1	
31	TA510514	SMV Emblem	1	
32	9936	Locknut/Top, 1/4"-20UNC	2	
33	9008714	Decal, Rear SIS 20MPH	1	
34	9405-064	Flat Washer, 1/4" USS	2	
35	9390-002	Capscrew, 1/4"-20UNC x 5/8" G5	2	
36	33560B	Light Bar Extension Kit Option	-	

Header Rest Bracket Components

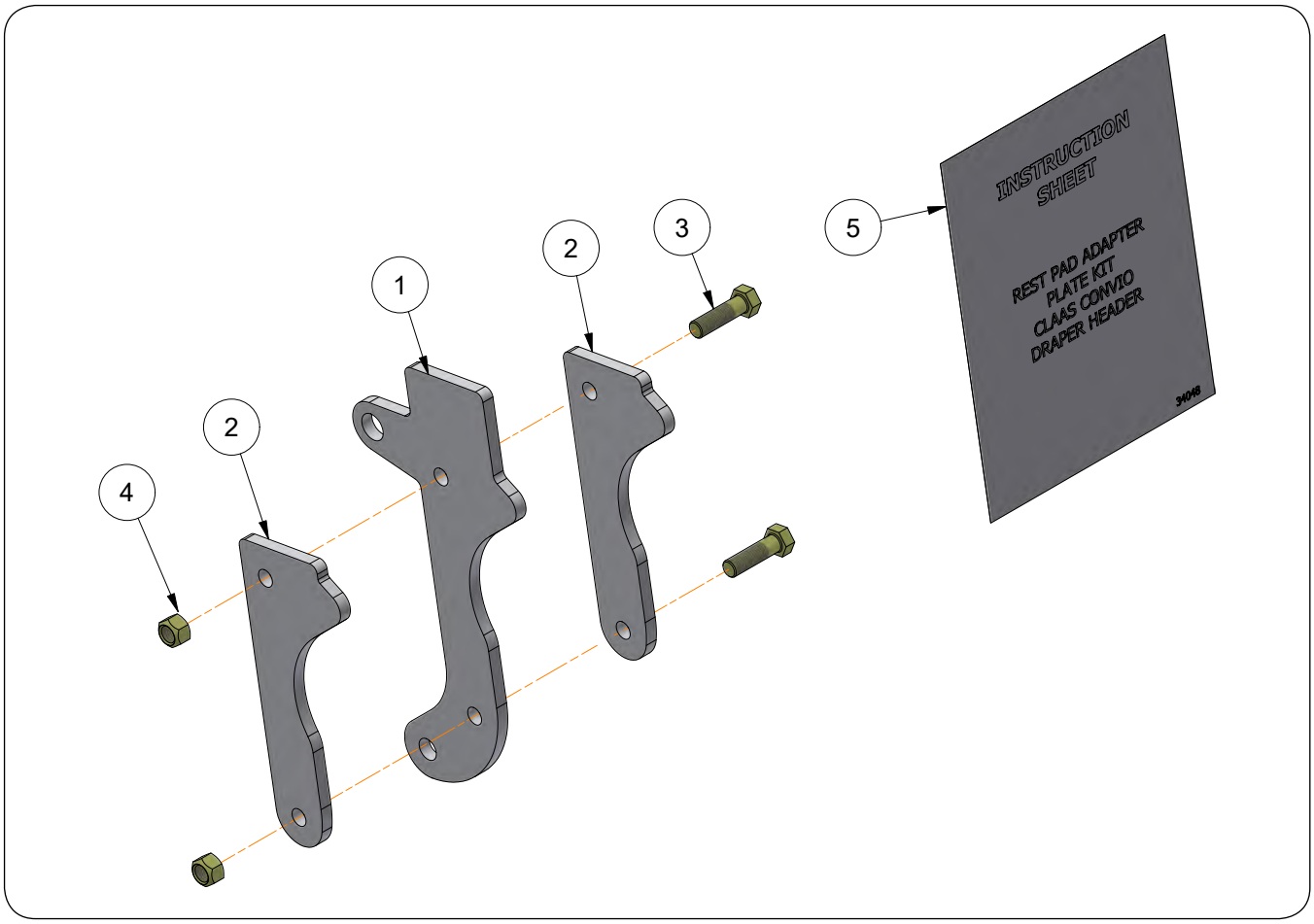
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	33575B	Rest Bracket Assembly	1	Includes Items 2 through 24
2	30181	Plate, 1 1/2" x 3 13/16"	2	
3	30189	CAM Handle Weldment	1	
4	30193	Pin, 1 1/4" Dia. x 2"	1	
5	34449B	Side Rest Plate	2	
6	32913B	Bar 8" x 6 1/2"	1	
7	32925B	Back Stop Weldment	1	
8	32928	Pin 5/8" Dia. x 17 5/16"	1	
9	33577B	Rest Bracket Weldment (Less Decals)	1	
10	9003125	Decal, Fluorescent Orange	1	
11	902490	Belleville Spring Washer 5/8"	2	
12	9388-149	Carriage Bolt, 5/8"-11UNC x 7" G5	1	
13	9390-055	Capscrew, 3/8"-16UNC x 1" G5	2	
14	9390-122	Capscrew 5/8"-11UNC x 1 1/2" G5	2	
15	9390-123	Capscrew, 5/8"-11UNC x 1 3/4" G5	2	
16	9398-019	Elastic Locknut, 5/8"-11UNC	2	
17	9501179	Formed Pin 3/4" Dia.	2	
18	95757	Flat Washer, 5/8" USS (Hardened)	1	
19	95959	Hairpin Cotter .1562" Dia. x 3"	3	
20	97048	Decal, WARNING (Pinch Point)	1	
21	97296	Plow Bolt, 5/8"-11UNC x 1 3/4" G5	2	
22	97877	Decal, CAUTION (Secure)	1	
23	9801	Locknut/Top, 5/8"-11UNC	4	
24	9928	Locknut/Top, 3/8"-16UNC	2	

Claas Convio Draper Header Kit

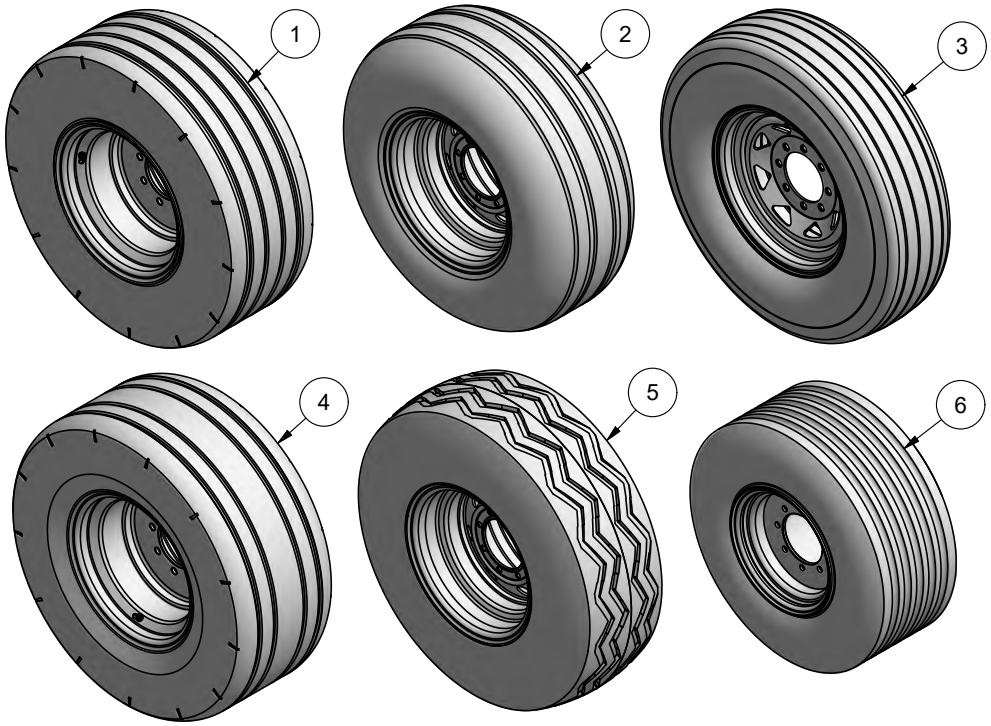
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	34045B	Claas Convio Draper Header Adapter Plate Kit	-	Includes Items 1-5
1	34046B	Side Plate (Larger) =Black=	4	
2	34047B	Side Plate (Smaller) =Black=	8	
3	9390-102	Capscrew, 1/2"-13UNC x 1 3/4" G5	8	
4	9800	Locknut, 1/2"-13UNC	8	
5	34048	Instruction Sheet	1	

Wheel & Tire Components

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



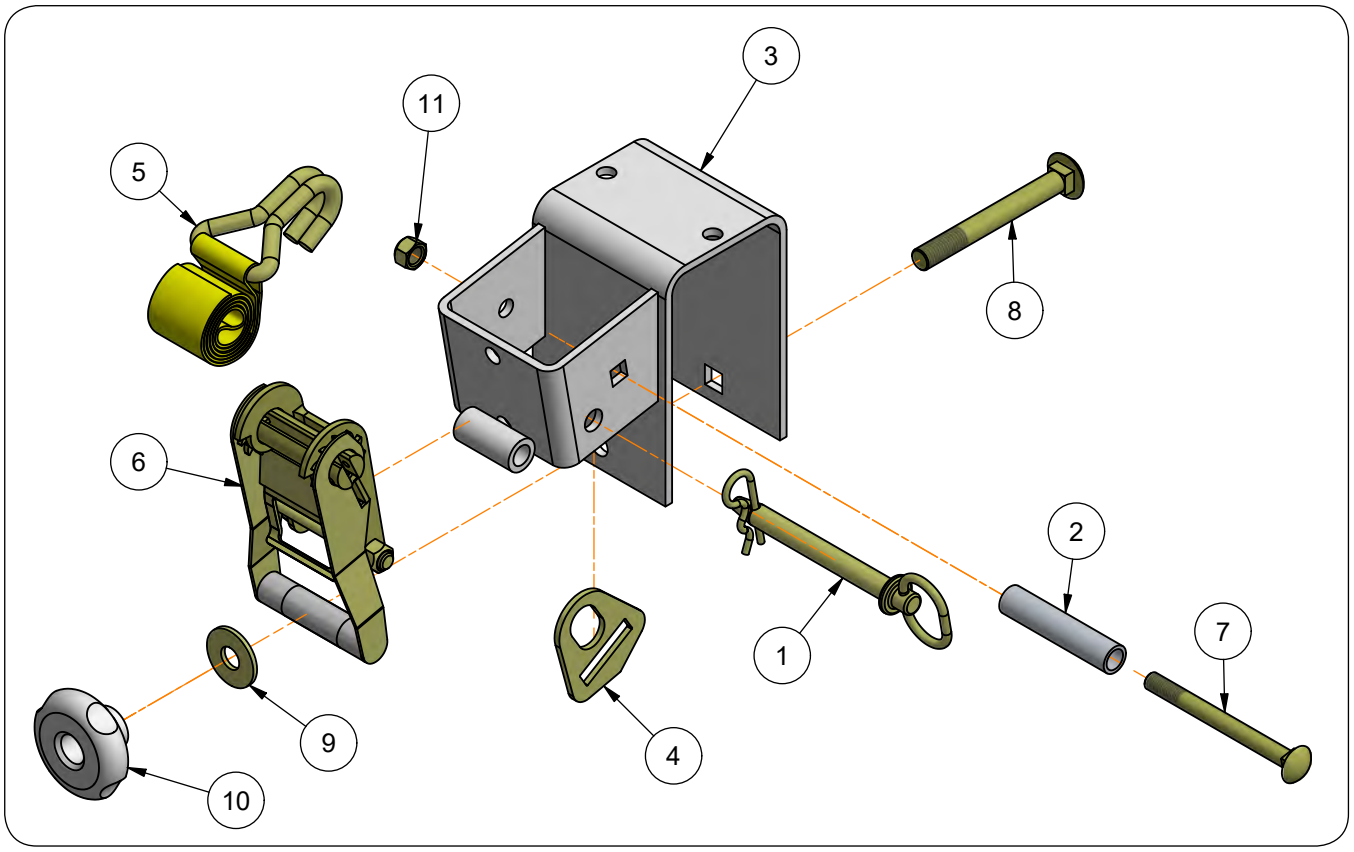
ITEM	PART NO.	DESCRIPTION
1	111544	Wheel & Tire 10 x 15 / IF280/70R15 - 64PSI (8-Bolt)
	9002500	Valve Stem
	9504090	10 x 15 Wheel (8-Bolt)
2	N/A	Wheel & Tire 10 x 15 / 11L15 - F-Ply - 90PSI (8-Bolt) (Straight Rib)
	9002500	Valve Stem
	9504090	10 x 15 Wheel (8-Bolt)
3	902702	Wheel & Tire 6 x 16 / ST235/85R16 - E Range - 80PSI (8-Bolt)
	98859	6 x 16 Wheel (8-Bolt)
	9002500	Valve Stem
4	110884	Wheel & Tire 10 x 15 / IF320/65R15 - 70PSI (8-Bolt)
	9002500	Valve Stem
	9504090	10 x 15 Wheel (8-Bolt)
5	N/A	Wheel & Tire 10 x 15 / 11L15 - Industrial F-3 Tread - 90PSI (8-Bolt)
	9002500	Valve Stem
	9504090	10 x 15 Wheel (8-Bolt)
6	111198	Wheel & Tire 10.50 x 12 / TL26x12.00-12CA - 12 Ply - 65PSI (8-Bolt)
	93300	Valve Stem
	111197ACW	10.50 x 12 Wheel (8-Bolt)

FOR TIRE WARRANTY

Any questions concerning tire warranty should be directed to the tire manufacturer or your local tire dealer. Tire manufacturers' phone numbers and websites are listed in "MAINTENANCE" section for your convenience.

Tie-Down Components

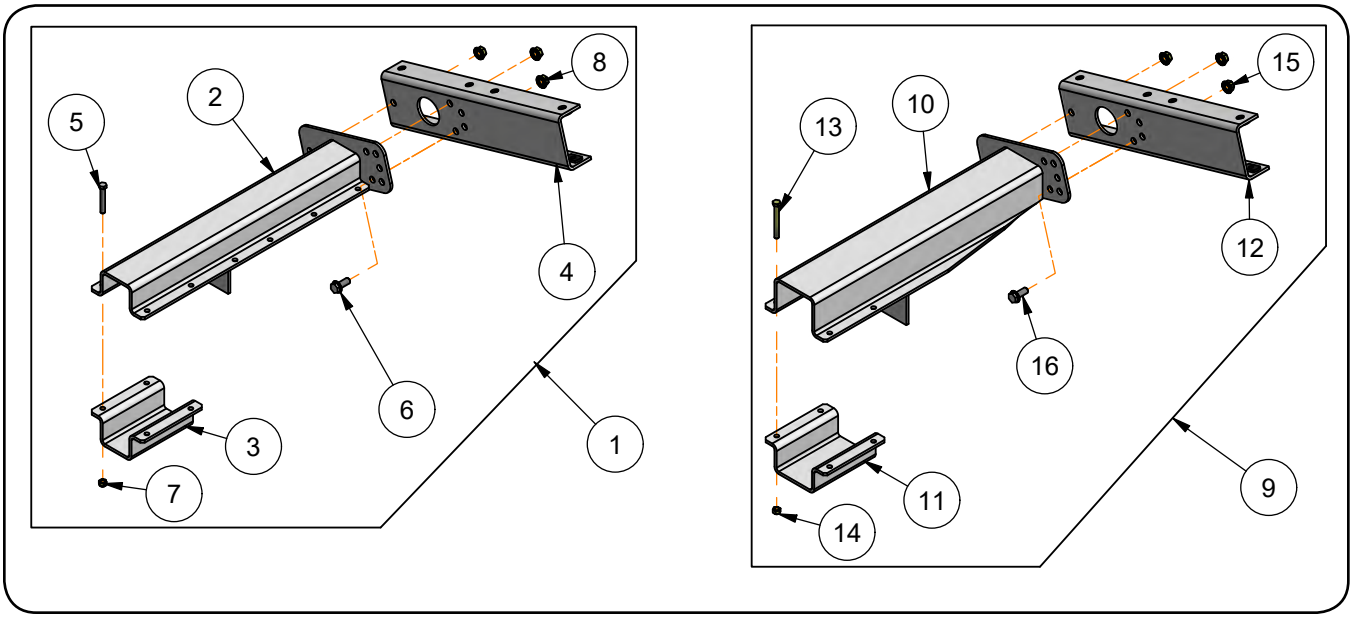
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	30501	Tie-Down Assembly (Set)	-	Includes Items 1-11
1	103076	Hitch Pin, 5/8" x 5 3/4" w/Hairpin	2	
2	30485	Pipe 3 15/16"	2	
3	30544B	Tie-Down Bracket	2	
4	901677	Hook Back Plate	2	
5	903044	Strap / Tie-Down	2	
6	903121	Ratchet Buckle	2	
7	9388-117	Carriage Bolt, 1/2"-13UNC x 5 1/2"	2	
8	9388-146	Carriage Bolt, 5/8"-11UNC x 5 1/2"	2	
9	9405-100	Flat Washer, 5/8"	2	
10	97517	Knob	2	
11	9800	Top Locknut 1/2"-13UNC	2	

Optional Upper Bar Mount Light Bar Bracket

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



Optional Upper Bar Mount Light Bar Bracket

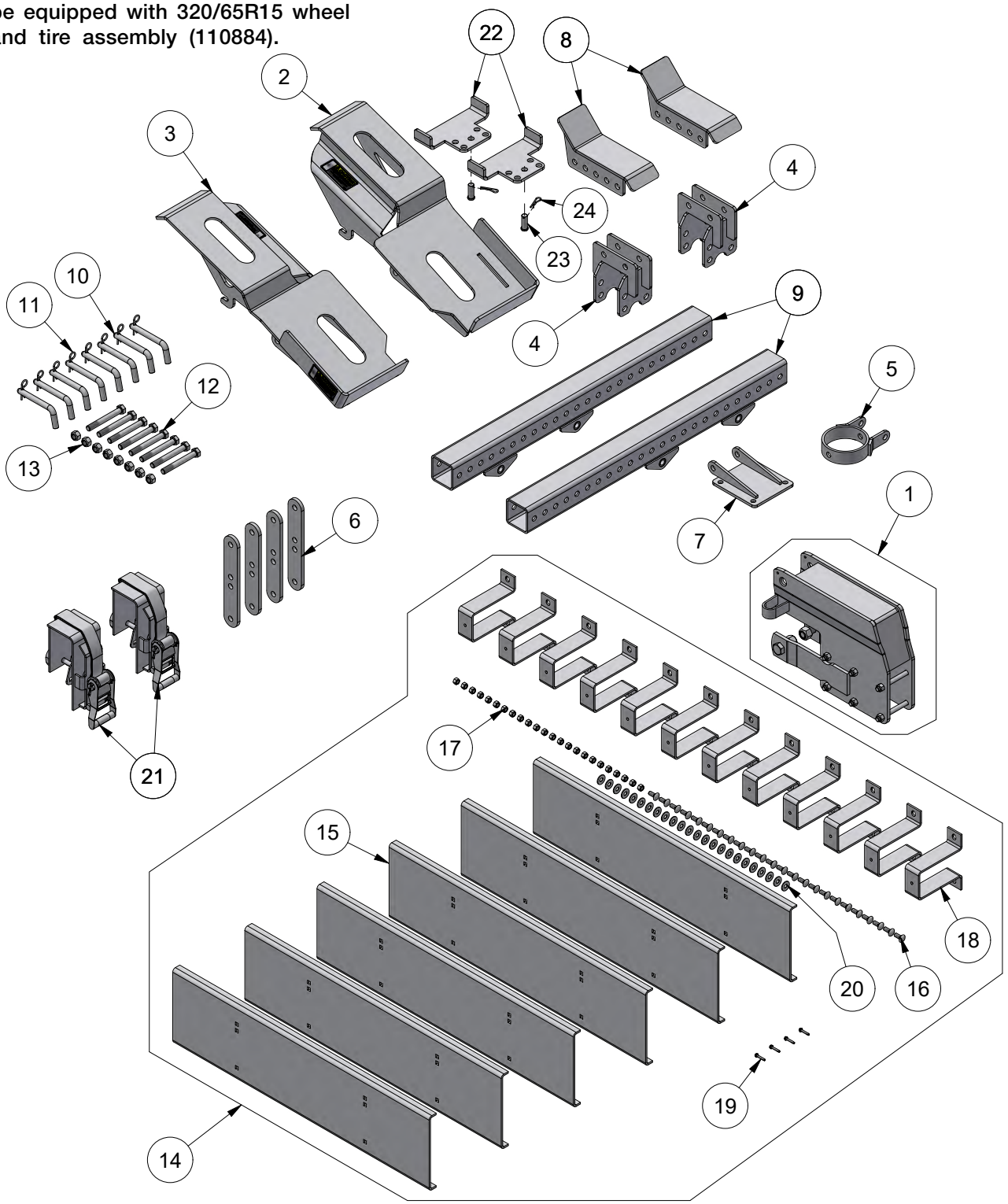
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	31743B	Light Bar Mounting Kit, 3x5 & 3x6	1	AWS-30, AWS-36
2	31738B	Light Mounting Weldment, 3”	1	
3	31742B	Coupler Plate Tube, 3”	1	
4	32363B	Channel Weldment	1	
5	900151	Capscrew, 3/8”-16UNC x 2 1/2” G5	4	
6	91266	Flange Screw 1/2”-13UNC x 1 1/4” G5	3	
7	9928	Locknut, 3/8”-16UNC	4	
8	91267	Flange Nut, 1/2”-13UNC	3	
9	31750B	Light Bar Mounting Kit, 4x8	1	AWS-42, AWS-48, AWS-52
10	31747B	Light Mounting Weldment, 4”	1	
11	31748B	Coupler Plate Tube, 4”	1	
12	32363B	Channel Weldment	1	
13	9390-064	Capscrew, 3/8”-16UNC x 3 1/4” G5	4	
14	9928	Locknut, 3/8”-16UNC	4	
15	91267	Flange Nut, 1/2”-13UNC	3	
16	91266	Flange Screw 1/2”-13UNC x 1 1/4” G5	3	

Draper Kit For John Deere Hinged Drapers Kit 34136G
For 42'/48'/52' Header Transports

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

NOTE: Hinged Draper Kit 34136G requires the header transport to be equipped with 320/65R15 wheel and tire assembly (110884).



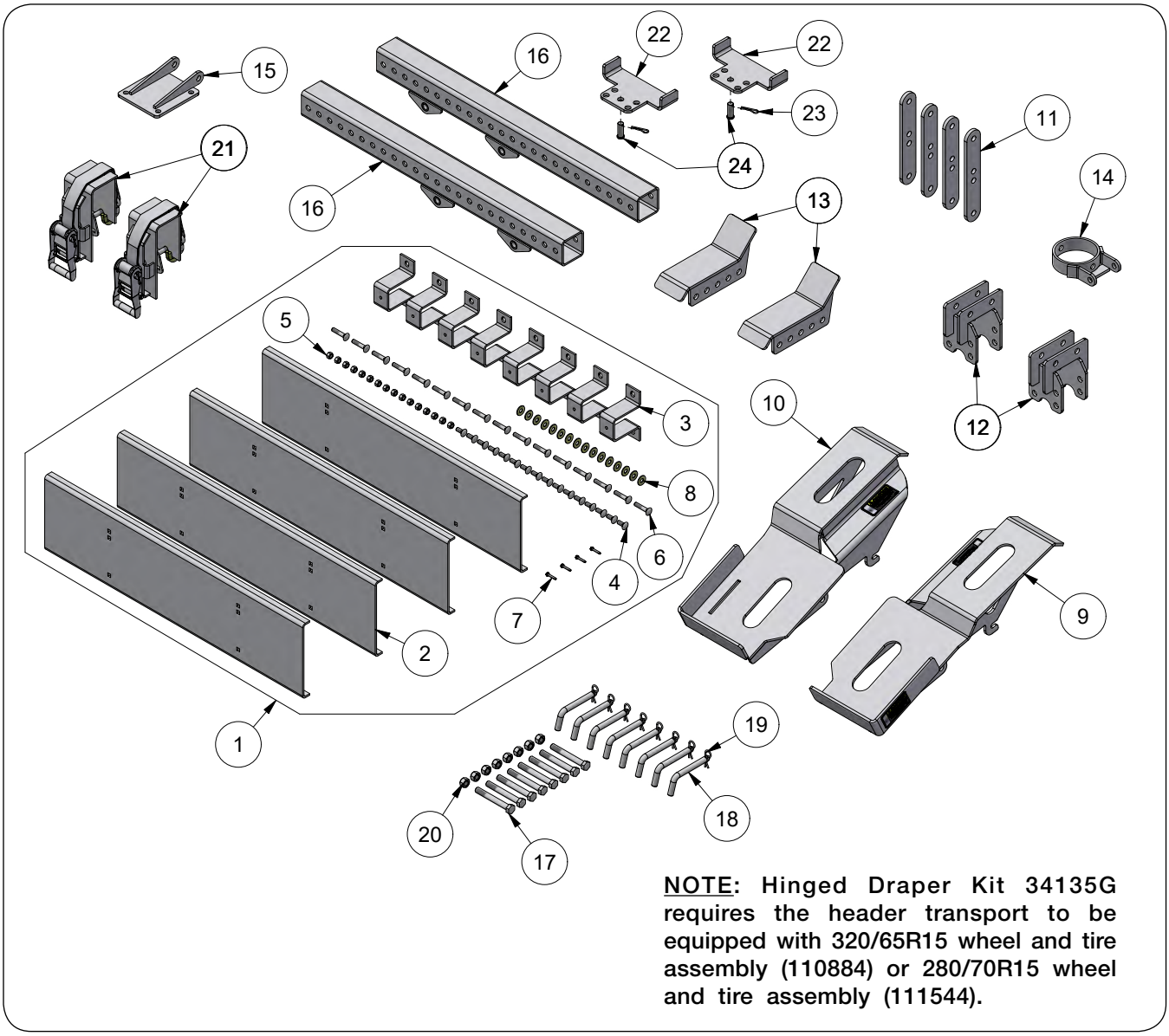
Draper Kit For John Deere Hinged Drapers Kit 34136G
For 42'/48'/52' Header Transports

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	33460G	AWS Tongue 10" Drop Bracket Assembly =Green=	1	NOT INCLUDED IN KIT
2	34445B	Rest Pad Right-Hand Weldment =Black=	1	
3	34446B	Rest Pad Left-Hand Weldment =Black=	1	
4	33375G	Riser Weldment =Green=	2	
5	33403G	Collar Weldment =Green=	1	
6	33366G	Plate =Green=	4	
7	33409G	Mounting Plate Weldment =Green=	1	
8	33397B	Rest Pad Weldment - Narrow 5" =Black=	2	
9	33410G	Square Tube Weldment =Green=	2	
10	9501179	Bent Pin, 3/4" Dia. x 5"	8	
11	95959	Hairpin Cotter, .1562" Dia. x 3"	8	
12	9390-157	Capscrew, 3/4"-10UNC x 6" G5	8	
13	9802	Locknut/Top, 3/4"-10UNC	8	
14	33183B	Upper Bar Landing Pad Kit =Black=	1	Includes Items 15-20
15	33180B	Upper Bar Landing Pad =Black=	6	
16	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4" G5	24	
17	9800	Locknut/Top, 1/2"-13UNC	24	
18	31726B	Hat Strap 4" x 8" =Black=	12	
19	9501598	Self-Drilling Screw, 1/4-14 x 1 1/2"	4	
20	9405-088	Flat Washer, 1/2" USS	24	
21	33628B	Tie-Down Bracket Assembly =Black=	2	
22	34466B	Spacer =Black=	2	
23	9002032	Clevis Pin, 3/4" Dia. x 2"	2	
24	JBP3504	Hairpin Cotter, 1/8" Dia. x 2 1/2"	2	

Draper Kit For John Deere Hinged Drapers Kit 34135G
For 35' Header Transports

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



NOTE: Hinged Draper Kit 34135G requires the header transport to be equipped with 320/65R15 wheel and tire assembly (110884) or 280/70R15 wheel and tire assembly (111544).

Draper Kit For John Deere Hinged Drapers Kit 34135G
For 35' Header Transports

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

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	33182B	Upper Bar Landing Pad Kit	1	Includes Items 2-8
2	33180B	Upper Bar Landing Pad	4	
3	3962B	Hat Strap 3" x 5"	8	
4	9388-103	Carriage Bolt, 1/2"-13UNC x 1 1/4" G5	16	
5	9800	Locknut/Top, 1/2"-13UNC	16	
6	9388-108	Carriage Bolt, 1/2"-13UNC x 2 1/2" G5	16	
7	9501598	Self-Drilling Screw, 1/4-14 x 1 1/2"	4	
8	9405-088	Flat Washer, 1/2" USS	16	
9	34445B	Rest Pad Right-Hand Weldment =Black=	1	
10	34446B	Rest Pad Left-Hand Weldment =Black=	1	
11	33366G	Plate =Green=	4	
12	33375G	Riser Weldment =Green=	2	
13	33397B	Rest Pad Weldment - Narrow 5" =Black=	2	
14	33403G	Collar Weldment =Green=	1	
15	33409G	Mounting Plate Weldment =Green=	1	
16	33410G	Square Tube Weldment =Green=	2	
17	9390-157	Capscrew, 3/4"-10UNC x 6" G5	8	
18	9501179	Bent Pin, 3/4" Dia. x 5"	8	
19	95959	Hairpin Cotter, .1562" Dia. x 3"	8	
20	9802	Locknut/Top, 3/4"-10UNC	8	
21	33628B	Tie-Down Bracket Assembly	2	
22	34466B	Spacer =Black=	2	
23	JBP3504	Hairpin Cotter, 1/8" Dia. x 2 1/2"	2	
24	9002032	Clevis Pin, 3/4" Dia. x 2"	2	

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