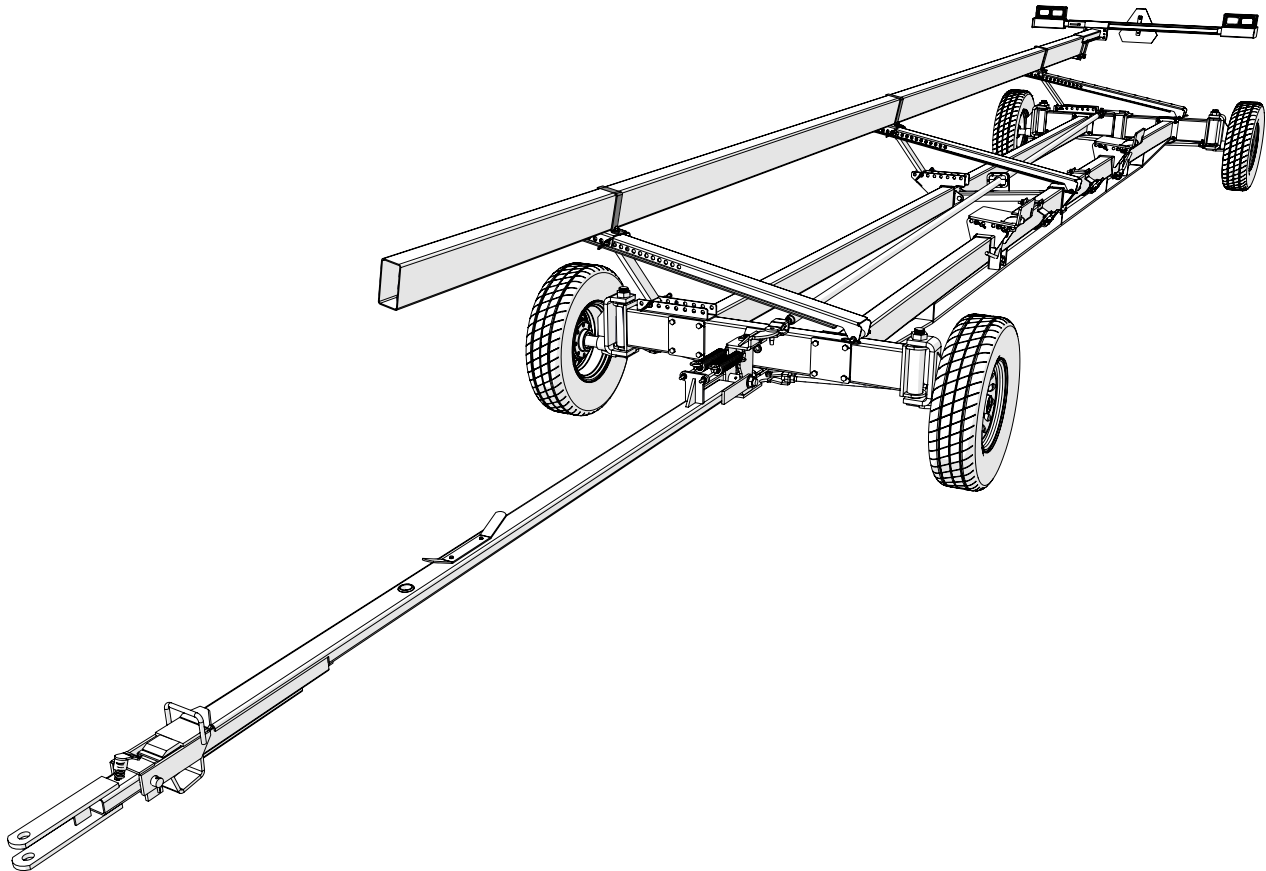




Operator's Manual

4 WHEEL STEER
HEADER TRANSPORT

MODEL ***4WS15***
4WS17



Rev. 8.18.2020

J&M Manufacturing Co, Inc

284 Railroad Street - P.O. Box 547 | Fort Recovery, OH 45846 | Ph: (419) 375-2376 | Fax: (419) 375-2708

www.jm-inc.com



Table Of Contents

4	.....To the Dealer
5	.....General Information
6	.....Safety Rules
7	.....Specifications
8	.....Decals
9	.....Bolt Torque Specifications
10	.....Operations/Maintenance
12	.....Hub and Bearing Maintenance
13	.....Set-Up Instructions
24	.....Axles
25	.....7k Idler Hub and Wheel
26	.....Brakes for 7k Axles
26	.....Lifting Arms Ends
27	.....Lifting Arms Middle
28	.....Header Mount and Tie Down Straps
32	.....Lights and Wiring
32	.....Spare Tire Mount

To the Dealer

TO THE DEALER

Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists are completed before releasing equipment to the owner.

The dealer must complete the Warranty Registration found on the Dealer Portal website located at dealer.jm-inc.com and return it to J&M Mfg. Co., Inc. at the address indicated on the form. Warranty claims will be denied if the Warranty Registration has not been submitted.

EXPRESS WARRANTY:

J&M Mfg. Co. Inc. warrants against defects in construction or materials for a period of ONE year. We reserve the right to inspect and decide whether material or construction was faulty or whether abuse or accident voids our guarantee.

Warranty service must be performed by a dealer or service center authorized by J&M Mfg. Co., Inc. to sell and/or service the type of product involved, which will use only new or remanufactured parts or components furnished by J&M Mfg. Co., Inc. Warranty service will be performed without charge to the purchaser for parts or labor based on the Warranty Labor Times schedule. Under no circumstance will allowable labor times extend beyond the maximum hours indicated in the Warranty Labor Times schedule for each warranty procedure. The purchaser will be responsible, however, for any service call and/or transportation of the product to and from the dealer or service center's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranty. Costs associated with equipment rental, product down time, or product disposal are not warrantable and will not be accepted under any circumstance.

Each warranty term begins on the date of product delivery to the purchaser. Under no circumstance will warranty be approved unless (i) the product warranty registration card has been properly completed and submitted to the equipment manufacturer, and (ii) a warranty authorization number has been issued by the equipment manufacturer. This Warranty is effective only if the warranty registration card is returned within 30 days of purchase.

This warranty does not cover a component which fails, malfunctions or is damaged as a result of (i) improper modification or repair, (ii) accident, abuse or improper use, (iii) improper or insufficient maintenance, or (iv) normal wear or tear. This warranty does not cover products that are previously owned and extends solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this warranty does not transfer to the third party purchaser in any way. J&M Mfg. Co., Inc. makes no Warranty, express or implied, with respect to tires or other parts or accessories not manufactured by J&M Mfg. Co., Inc. Warranties for these items, if any, are provided separately by their respective manufacturers.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

In no event shall J&M Mfg. Co., Inc. be liable for special, direct, incidental or consequential damages of any kind. The exclusive remedy under this Warranty shall be repair or replacement of the defective component at J&M Mfg. Co., Inc.'s option. This is the entire agreement between J&M Mfg. Co., Inc. and the Owner about warranty and no J&M Mfg. Co., Inc. employee or dealer is authorized to make any additional warranty on behalf of J&M Mfg. Co., Inc.

The manufacturer reserves the right to make product design and material changes at any time without notice. They shall not incur any obligation or liability to incorporate such changes and improvements in products previously sold to any customer, nor shall they be obligated or liable for the replacement of previously sold products with products or parts incorporating such changes.

SERVICE:

The equipment you have purchased has been carefully manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and maintenance. Lubricate the unit as specified. Observe all safety information in this manual and safety signs on the equipment.

For service, your authorized J&M dealer has trained mechanics, genuine J&M service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine J&M service parts. Substitute parts may void warranty and may not meet standards required for safety and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

Model No: 4WS15/4WS17 **Serial No:** _____ **Date of Purchase:** _____

Purchased From: _____

Provide this information to your dealer to obtain correct repair parts.



General Information

TO THE OWNER:

The purpose of this manual is to assist you in operating and maintaining your header transport in a safe manner. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance and help maintain safe operating conditions. If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating:

1. Is instructed in safe and proper use.
2. Reviews and understands the manual(s) pertaining to this machine.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.



This Safety-Alert symbol indicates a hazard and means
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT

Indicates that failure to observe can cause damage to equipment.

NOTE

Indicates helpful information.

SAFETY RULES:



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be erased by an operator's single careless act. In addition, hazard control and accident prevention are dependent upon the awareness, concern, judgment, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Make certain that the operator(s), prior to operating is instructed in safe and proper use and reviews and understands the manual(s) pertaining to this machine. Also make certain that the operator(s) reviews and understands the operator's manual of the tow vehicle prior to hooking up or operating the SpeedTender.

Read this manual before you operate this machine. If you do not understand any part of this manual, or need more information, contact the manufacturer or your authorized dealer.

Safety Rules Continued on Next Page

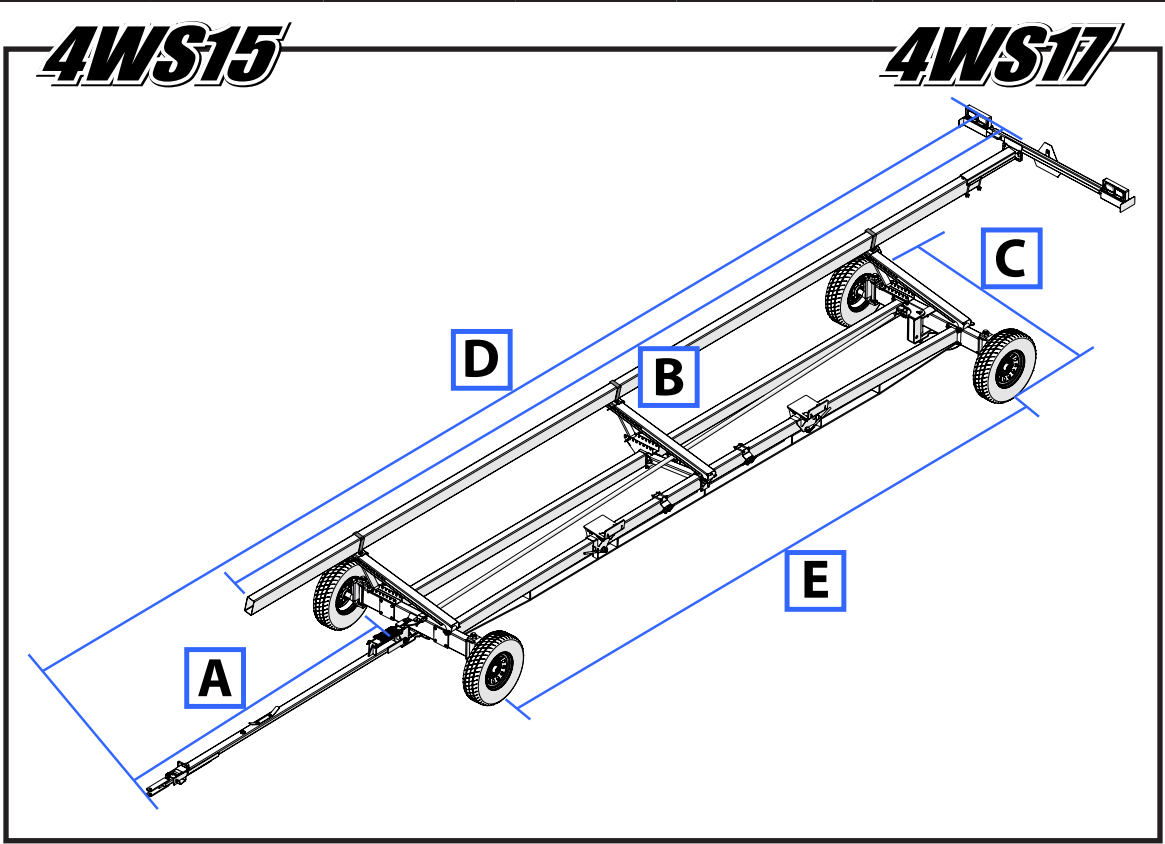


Safety Rules

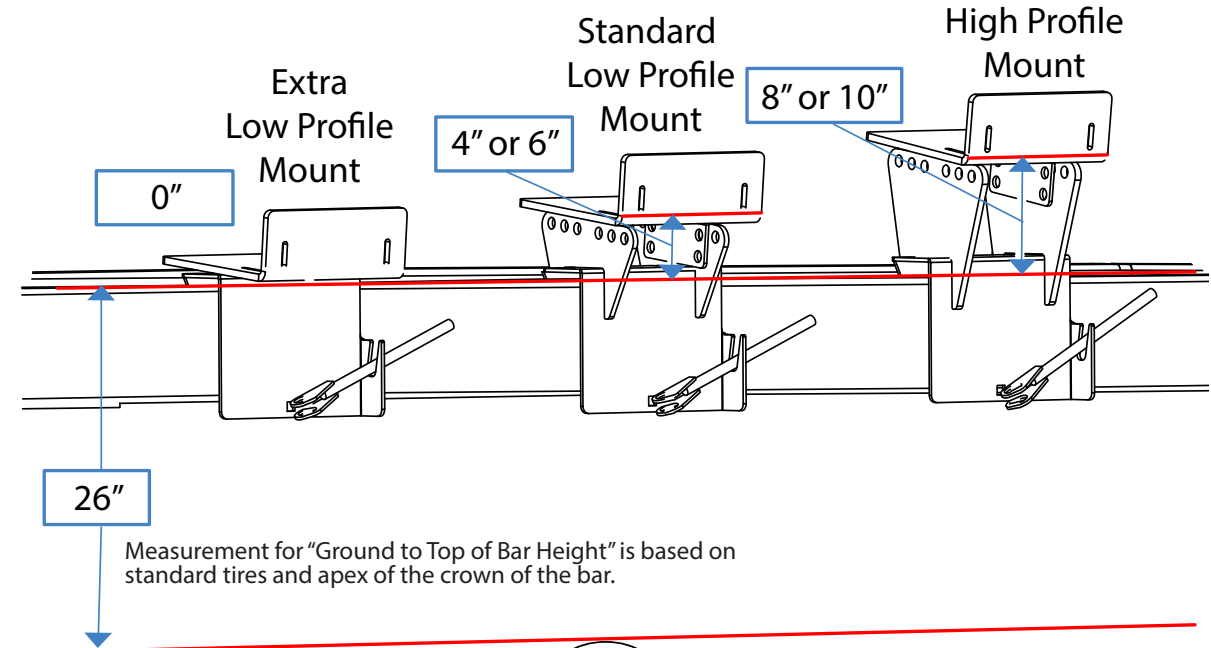
1. Understand that your safety and the safety of other persons are measured by how you service and operate this machine. Know the positions and functions of all controls before you try to operate them. Check all controls in a safe area before starting your work.
2. The safety information given in this manual does not replace safety codes, federal, state, or local laws. Ensure your machine has the proper equipment as designated by local laws and regulations.
3. A frequent cause of personal injury or death is from persons falling off equipment and being run over. Do not permit persons to ride on this machine.
4. Secure safety chain to towing vehicle before transporting. Do not transport without safety chains being attached to tow vehicle.
5. Use good judgment when transporting on a highway. Always maintain complete control. Regulate speed to road conditions.
WARNING: BE SURE ALL LIGHTS ARE WORKING PROPERLY BEFORE HIGHWAY TRAVEL.
6. Travel speeds should be such that complete control and machine stability is maintained at all times.
7. Where possible, avoid operating near ditches, embankments and holes. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces.
8. Make sure that the header is fastened securely to the transport before moving.
9. Make sure that everyone is clear of equipment before applying power or moving the machine. NEVER position yourself under or near header when mounting on header transport.
10. Never adjust, service, clean or lubricate the header transport until all power is shut off.
11. Ensure the implement is fastened securely to the towing unit.
12. Before unhooking the implement from the towing unit, properly block the wheels to prevent the implement from moving.
13. Never overload the header transport. Overloading the header transport is dangerous and can cause extensive damage.
14. COMPLY WITH ALL SAFETY WARNINGS AND CAUTIONS IN THIS MANUAL AND IN THE COMBINE OPERATOR'S MANUAL.

Specifications

Capacity	Spindle Size	Wheel Size	Tire Size	Steel Upper Bar	Box Channel Axle Frame
13,000 lbs	2" Diameter	16" x 6" - 8 Bolt	235/85R16E	4" x 8"	8"

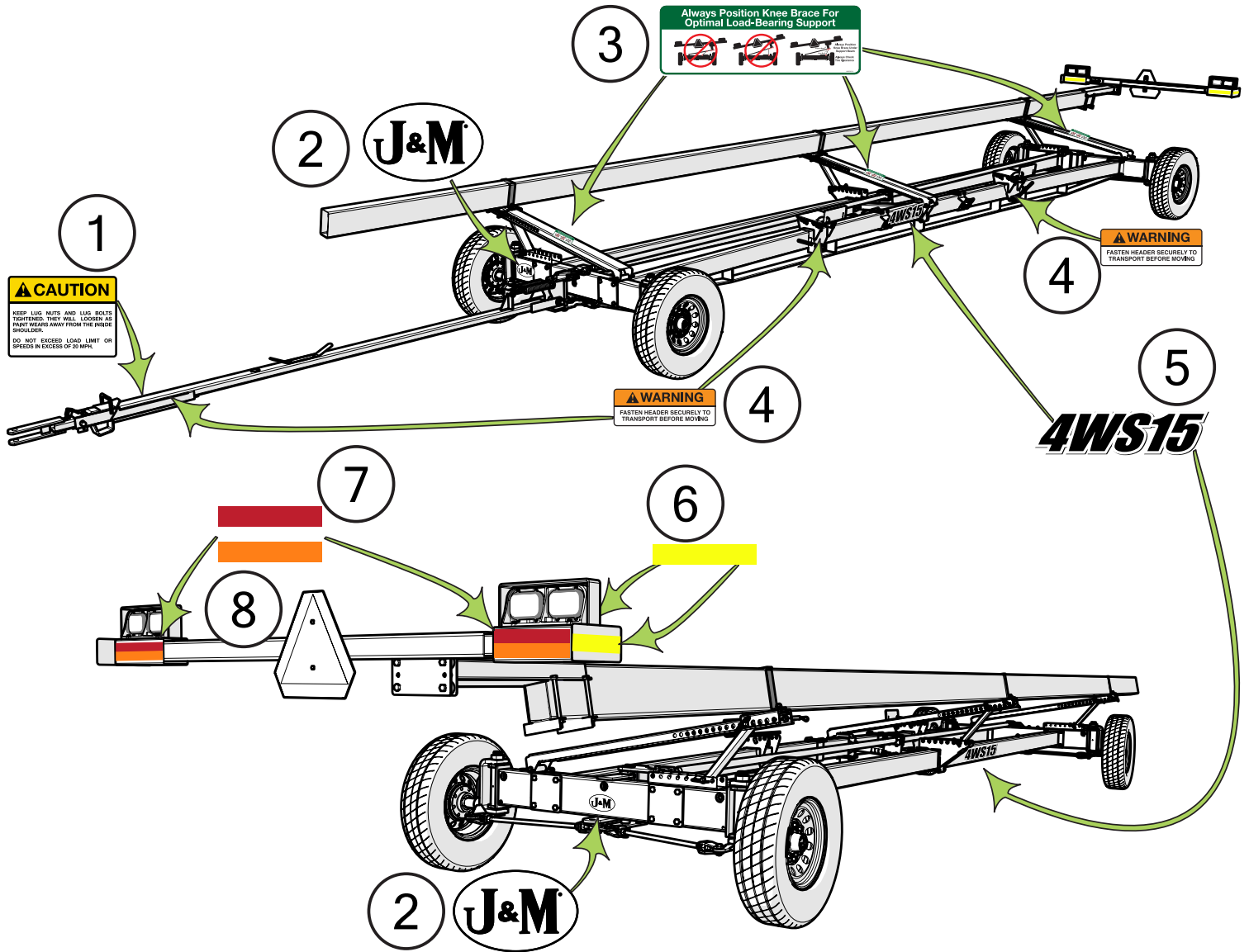


Model	Upper Bar	Weight	A	B	C	D	E
4WS15-32	32'	3,206 lbs	13'-4"	34'-2"	7'-10"	45'-9"	26'-9"
4WS15-38	38'	3,290 lbs	13'-4"	40'-2"	7'-10"	48'-9"	26'-9"
4WS15-42	42'	3,348 lbs	13'-4"	44'-2"	7'-10"	51'-1"	26'-9"
4WS17-48	48'	3,660 lbs	16'-0"	50'-2"	7'-10"	55'-10"	29'-11"



Decals

⚠ ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! ⚠
Replace Immediately If Damaged or Missing



	Description	Part No.
1	Caution - Keep Lug Nut Tight / Do Not Exceed Load Limit - Decal	JM0019220
2	J&M Oval Decal (Small) 3-5/8" x 5-1/4"	JM0015150
3	HT - Knee Brace Set Up Decal	JM0026114
4	Warning - Fasten Header Securely To Transport Before Moving Decal	JM0039381
5	4WS15 Decal	JM0039379
5	4WS17 Decal	JM0039380
6	Amber Reflective Decal 2" x 9"	JM0009946
7	Red Reflective Decal 2" x 9"	JM0009945
8	Orange Reflective Decal 2" x 9"	JM0009944

Bolt Torque Specifications

Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are clean and you start thread engagement properly. **Use these values when tightening all bolts and nuts with the exception of wheel nuts.**

SAE Fasteners

Coarse Thread Series				
Diameter and Pitch (Inches)	Grade 5		Grade 8	
	Dry	Oiled	Dry	Oiled
1/4"-20	8 ft-lbs	6 ft-lbs	12 ft-lbs	9 ft-lbs
5/16"-18	17	13	25	18
3/8"-16	31	23	44	33
7/16"-14	49	37	70	52
1/2"-13	75	57	106	80
9/16"-12	109	82	154	115
5/8"-11	150	113	212	159
3/4"-10	267	200	376	282
7/8"-9	429	322	606	455
1"-8	644	483	909	681
Fine Thread Series				
Diameter and Pitch (Inches)	Grade 5		Grade 8	
	Dry	Oiled	Dry	Oiled
1/4"-28	10 ft-lbs	7 ft-lbs	14 ft-lbs	10 ft-lbs
5/16"-24	19	15	27	20
3/8"-24	35	26	49	37
7/16"-20	55	41	78	58
1/2"-20	85	64	120	90
9/16"-18	121	91	171	128
5/8"-18	170	127	240	180
3/4"-16	297	223	420	315
7/8"-14	474	355	669	502

Stud and Wheel Nut Torque Specifications

Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are clean and you start thread engagement properly. **Use these values when tightening all studs and wheel nuts.**

Stud	Tightening Torque
1/2"-20	80 ft-lbs
9/16"-18	170 ft-lbs
5/8"-18	350 ft-lbs
3/4"-16	400 ft-lbs
20mm	475 ft-lbs
22mm	640 ft-lbs

TIGHTENING WHEEL NUTS: Torque 9/16"-18 lug nuts on wheels to 170 ft-lbs during initial operation of the header wagon. Check for proper torque after every 10 hours of use. Failure to do so may damage wheel nut seats. Once seats are damaged it will become impossible to keep nuts tight.

Operations/Maintenance

 **DANGER: BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE 4 WHEEL STEER HEADER TRANSPORT.**

Before the Header Transport is Put into Service:

- Has the Slow-Moving Vehicle sign been properly positioned at the rear of the header transport?
- Have all danger, warning, caution and important signs on the equipment been read and understood? If employees or others use or are near this equipment, make sure that they also have read and understood all danger, warning, caution and important signs on the equipment and have also read the operator's manual.
- Are all braces, bolts, nuts, studs and lug nuts properly fastened?
- Has the header transport been properly fastened to the towing unit? Use a good quality hitch pin with clip and safety chains.
- Are the rear amber extremity lights properly positioned? Extend lights within 16" of the left and right extremities of the header.
- Check alignment of tires yearly. Adjust the push pull rod to realign the tires if needed.

Safety Chain User Instructions

- Secure the safety chain by looping it around the tongue support located on the underside of the hitch tongue and connect to the towing machine's attaching bar.
- Do not allow more slack than necessary for articulation.
- Do not use an intermediate support as the attaching point.
- Store the safety chain by securing it around the tongue.
- Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.

Operating Instructions/Maintenance

- Adjust the brackets on the header transport to best fit your make and model header.
Note: When mounting the header, NEVER position yourself under or near the header. Securely fasten the header to the header transport.
- Do not exceed the load and size limits of the unit.
- Keep the tires properly inflated. Both under inflation and over inflation can greatly reduce tire life. Inflate 235-85 R16 tires to 80 psi.
- Inspect bracing and welds periodically and repair immediately, if needed. Failure to repair could cause extensive damage and greatly reduce the life of the unit.
- Repack the bearings in the hub assembly once a year or as needed. Use a good quality LS EP2 severe duty, high shock load, lithium-based grease.
- Check the wheel nuts often and keep them properly tightened.

 **WARNING: Check safety chains for broken, stretched or damaged link or end fittings. Replace chains if found to be damaged. Do not weld safety chains.**

Braking System Requirements

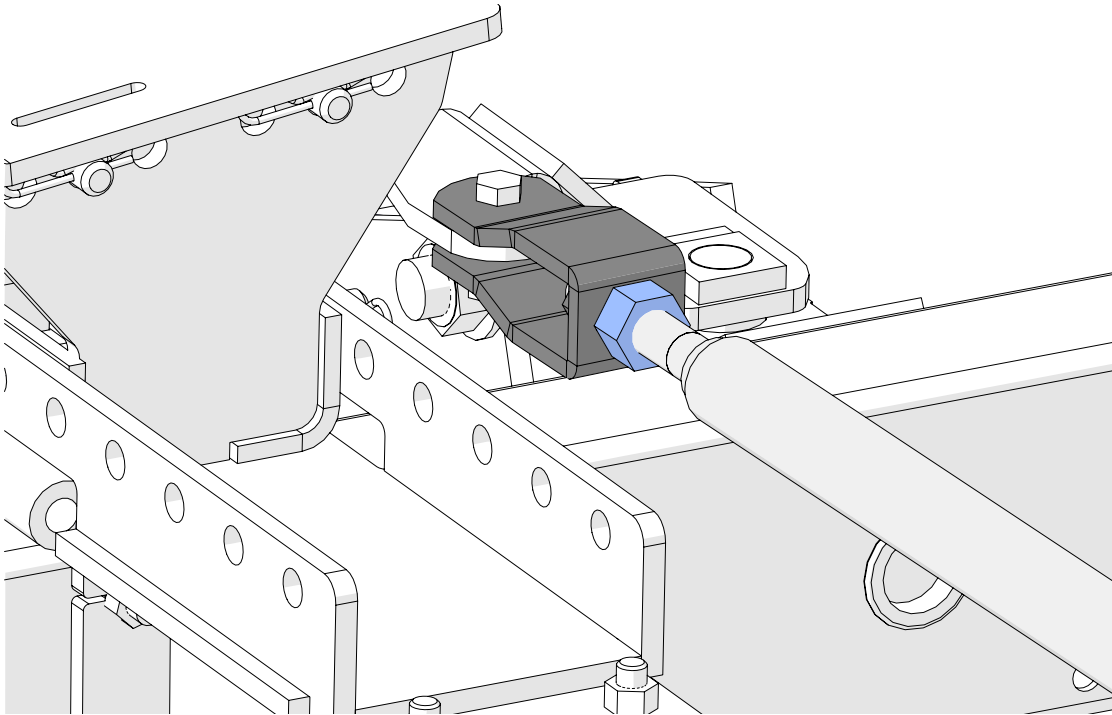
- Stopping distance increases with speed and weight of towed loads and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.
Note: Observe these recommended maximum road speeds, or local speed limits which may be lower.
- If towed equipment does not have brakes, do not travel more than 20 mph (32 km/h) and do not tow loads more than 1.5 times the tractor weight.
- If towed equipment does have brakes, do not travel more than 25 mph (40 km/h) and do not tow loads more than 4.5 times the tractor weight.
- Ensure the load does not exceed the recommended weight ratio. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

 **DANGER: Tow loads safely.**

Adjusting Push-Pull Rod to Align Front and Rear Axles

Before initial operation of header transport, follow these steps to align front and rear wheels while under load:

1. With the transport empty, loosen both nuts on the push-pull rod. The push-pull rod is left hand threaded on one end and right hand threaded on the other end to adjust alignment like a turnbuckle. One of the nuts is pictured in blue in the diagram below.
2. Place combine header on transport.
3. Drive the loaded transport in a straight line on level ground to check alignment.
4. Adjust push-pull rod by rotating the main rod body.
5. Repeat steps 3 and 4 until the transport rear wheels are aligned with front wheels.
6. Remove combine header from transport.
7. With the transport empty, tighten both nuts on the push-pull rod.
8. Return the combine header to the transport.
9. With the nuts on the push-pull rod tightened, drive loaded transport in a straight line on level ground to confirm alignment.



Hub and Bearing Maintenance



DANGER: BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE 4 WHEEL STEER HEADER TRANSPORT.

Hub Removal:

- Elevate and support the trailer unit carefully.
- Remove the wheel.
- Remove the grease cap by carefully prying progressively around the flange of the cap.
- Remove the cotter pin from the spindle nut or, in the case of E-Z Lube versions, bend the locking tang to the free position. For E-Z Lube axles produced after February 2002, a new type of retainer is used. Gently pry off retainer from the nut and set aside.
- Unscrew the spindle nut (counterclockwise) and remove the spindle washer.
- Remove the hub from the spindle, being careful not to allow the outer bearing cone to fall out. The inner bearing cone will be retained by the seal.
- For 7,200 lb. and 8,000 lb. axles, a hub puller should be used to assist in drum removal.

Bearing Lubrication:

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

- Place a quantity of grease into the palm of your hand.
- 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.
- Repeat this while rotating the bearing from roller to roller.
- Continue this process until you have the entire bearing completely filled with grease.
- Before reinstalling, apply a light coat of grease on the bearing cup.

Use a good quality LS EP2 severe duty, high shock load, lithium-based grease.

Bearing Adjustment and Hub Replacement:

If the hub has been removed or bearing adjustment is required, the following adjustment procedure must be followed:

- After placing the hub, bearings, washers, and spindle nut back on the axle spindle in reverse order as detailed in the previous section on hub removal, rotate the hub assembly slowly while tightening the spindle nut to approximately 50 ft-lbs (12" wrench or pliers with full hand force).
- Then loosen the spindle nut to remove the torque. Do NOT retighten the hub.
- Fingertighten the spindle nut until just snug.
- Back the spindle nut out slightly until the first castellated line up with the cotter key hole and insert the cotter pin (or locking tang in the case of E-Z Lube).
- Bend over the cotter pin legs to secure the nut (or locking tang in the case of E-Z Lube).
- Nut should be free to move with only restraint being the cotter pin (or locking tang).

For axles using the new nut retainer:

- Fingertighten the nut until just snug, align the retainer to the machined flat on the spindle and press the retainer onto the nut. The retainer should snap into place. Once in place the retainer/nut assembly should be free to move slightly.
- If the nut is too tight, remove the retainer and back the nut off approximately one twelfth of a turn and reinstall the retainer. The nut should now be free to move slightly.
- Reinstall grease cap.

E-Z Lube Lubrication:

- Remove the rubber plug from the end of the grease cap.
- Place a standard grease gun onto the grease fitting located in the end of the spindle. Make sure the grease gun nozzle is fully engaged on the fitting.
- Pump grease into the fitting. The old displaced grease will begin to flow back out the cap around the grease gun nozzle.
- When the new clean grease is observed, remove the grease gun, wipe off any excess, and replace the rubber plug in the cap.
- Rotate hub or drum while adding grease.

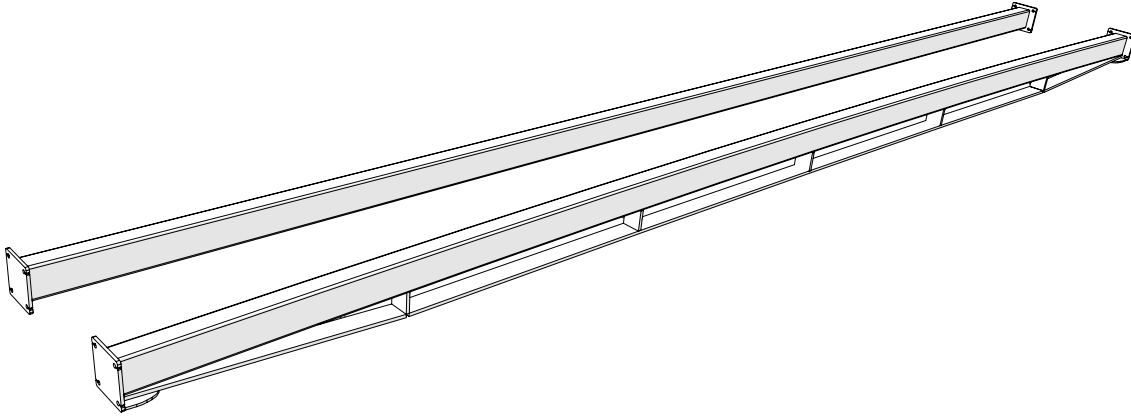


Set-Up Instructions

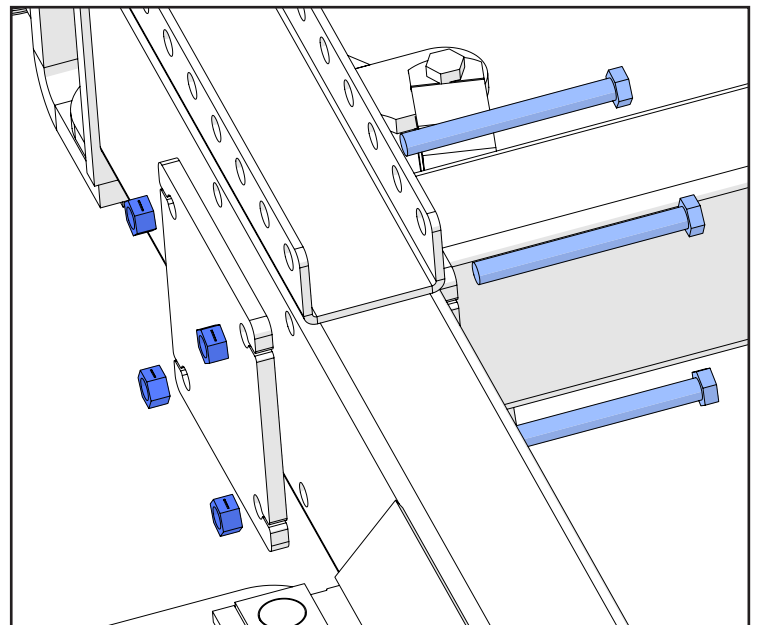
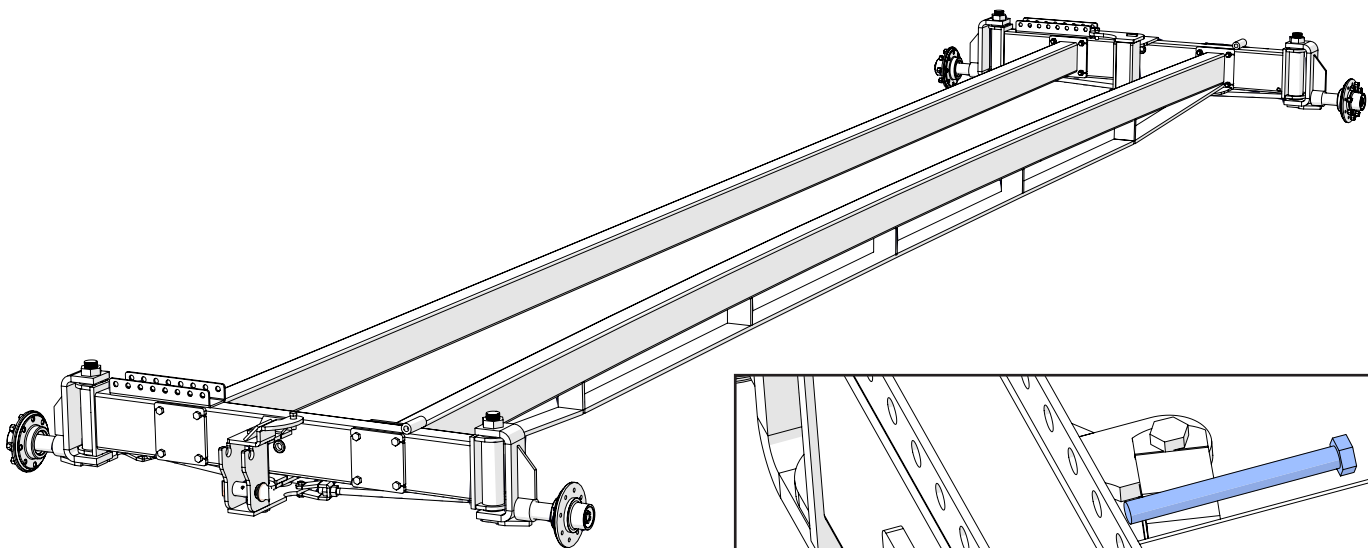
Mounting the Front and Rear axles

- Set both of the bottom frame bars on two sawhorses or blocks.

NOTE: Place 4" blocks under the small lower bar so the ends are level. The small lower bar is the bar without the truss pictured below.



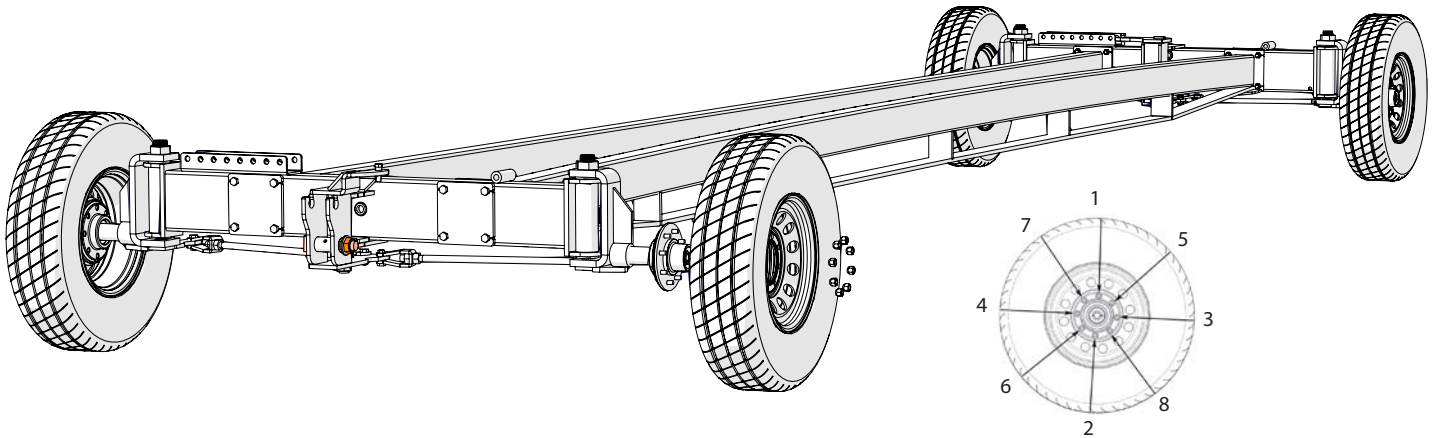
- Attach the front and rear axle to the frame bars using (8) 5/8" x 6" hex bolts, (8) 5/8" centerlock hex nuts and (2) frame tube end plates. Tighten all hex nuts.



Set-Up Instructions

Installing Tires

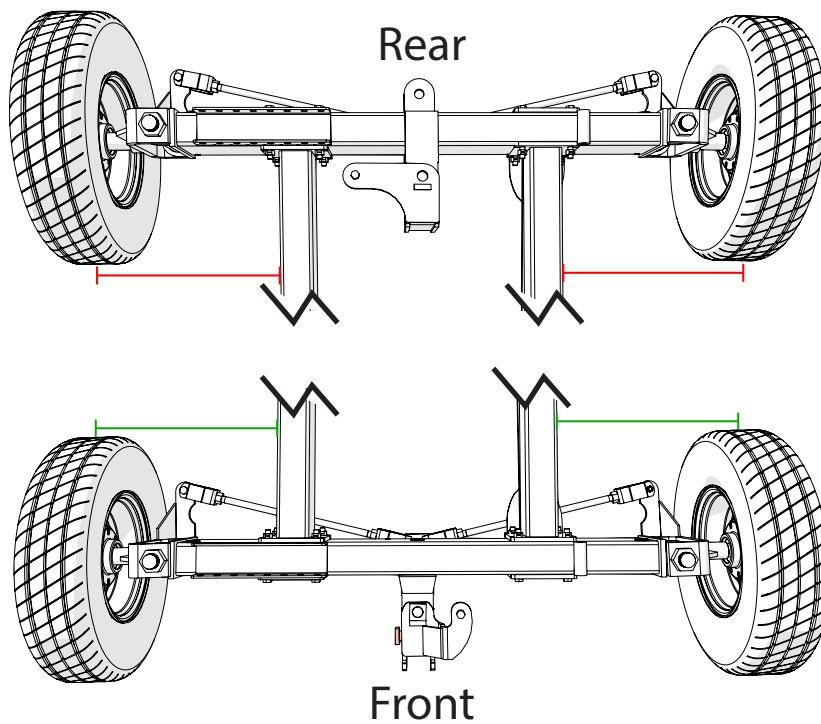
- Attach the four wheels. Use (8) 9-16" - 18 lug nuts to install the tires. Tighten lug nuts in a star pattern.



Prepping for the 4-wheel Steer Tie Rod

- Measure from the frame tube to the center of each tire of the back of the unit and adjust the tires so that both sides measure equal distance. Repeat for the front end.

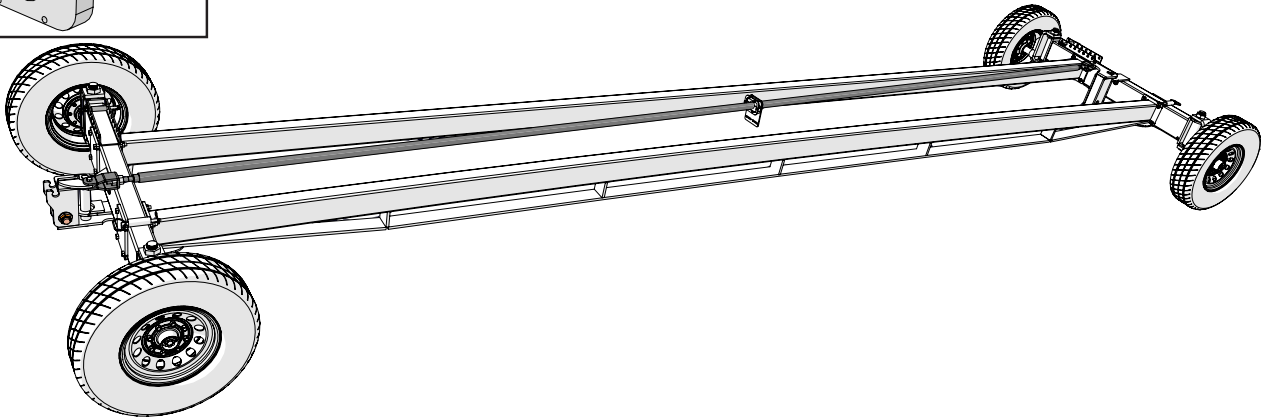
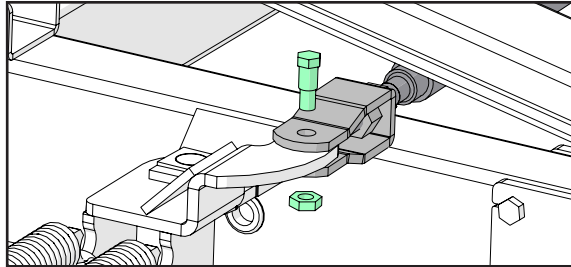
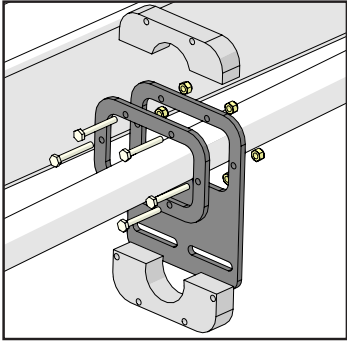
NOTE: Once the tires are adjusted, DO NOT MOVE them.



Set-Up Instructions

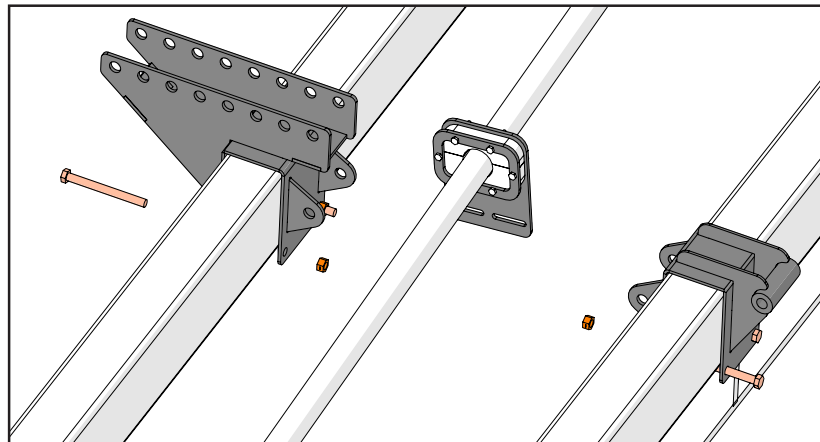
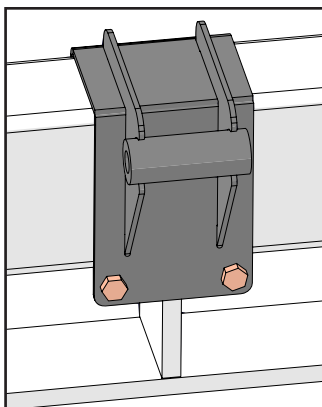
Install the Tie Rod

- Before installing the tie rod, slide the two center support brackets pictured below onto the bar. Slide the larger brace towards the rear of the header transport and the smaller brace towards the front. Insert the guide blocks and secure using the original hardware. While inserting the guide blocks, ensure all holes line up. The guide blocks are two different parts and must line up correctly.
- Adjust both clevis ends so that the holes in the clevis ends line up with the holes in the hitch top plate.
- Use (2) 3/4" shoulder bolts and (2) 3/4" shoulder bolt nuts to attach both ends of the push pull rod.



Install the Center Support Brackets

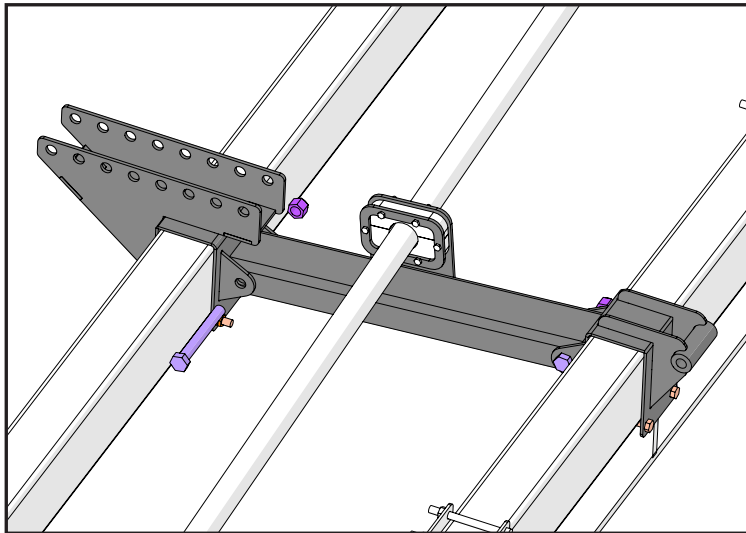
- Place the upper bar center support brackets on the header transport. The small bracket will straddle the support in the middle of the header transport (as shown below). Place the large bracket on the corresponding bar so they are aligned. Put the 1/2"-13 x 5" hex bolts and 1/2"-13 centerlock hex nuts into place and leaving loose until the next step.



Set-Up Instructions

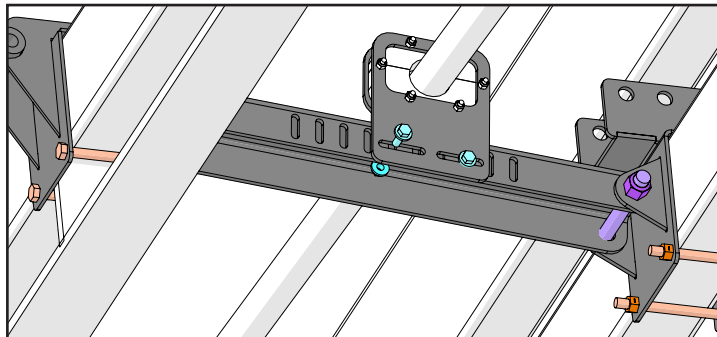
Center Support Brace

- Bolt the center support brace to both support brackets using 3/4"-10 x 6" hex bolts and 3/4"-10 nylon locking hex nuts. Ensure the center support brace is attached with the holes for the guide blocks facing the rear of the header transport. Tighten the 1/2"-13 hardware used in the previous step.



Tie Rod Support Brackets

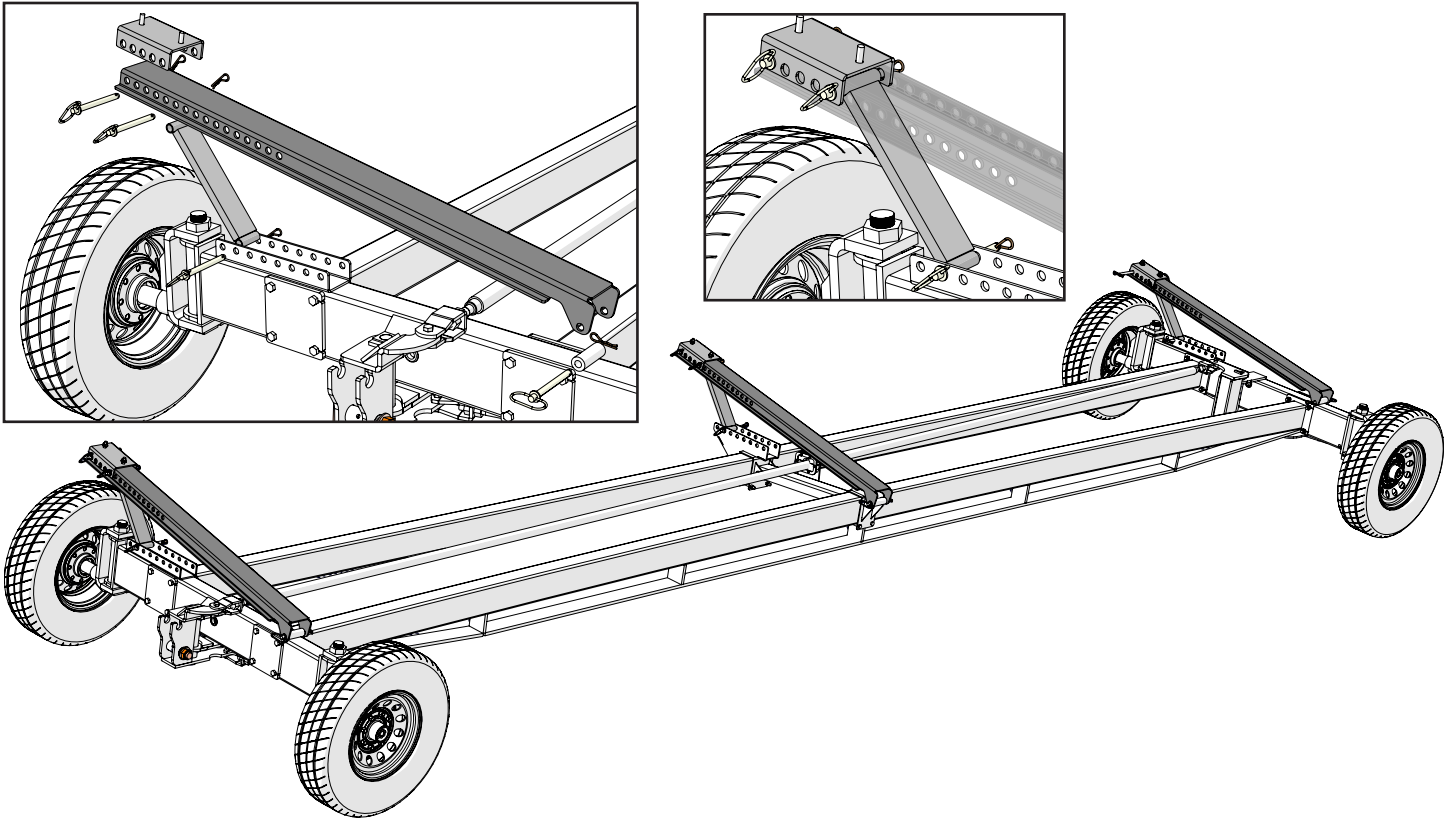
- Secure the tie rod support brackets to the rear of the upper bar center support brace using 3/8"-16 x 1" SF hex bolts and 3/8"-16 SF hex nuts. Before tightening nuts, push bracket up so that the guide blocks support the tie rod to remove sag in the tie rod.



Set-Up Instructions

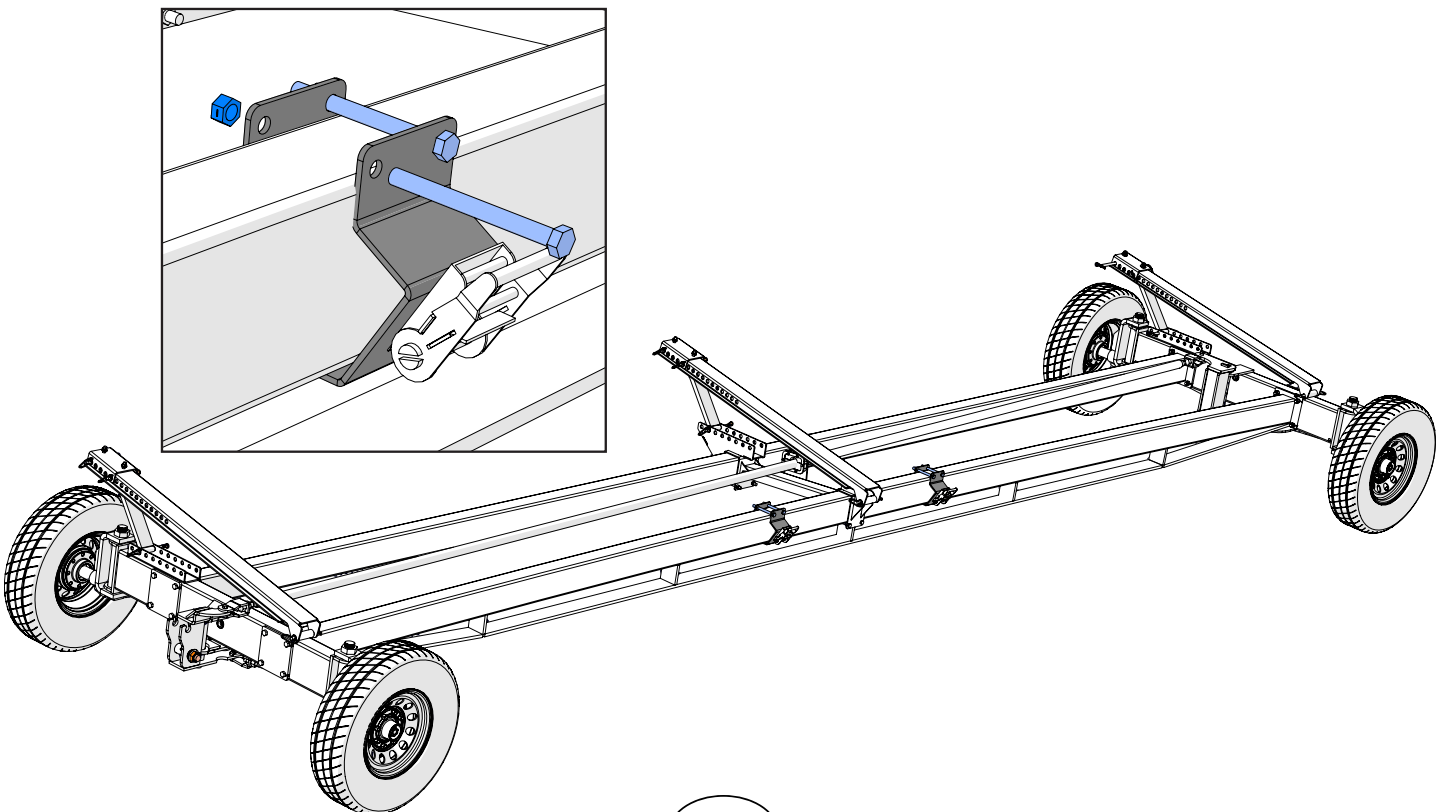
Install the Adjustable Support Arms

- Use (4) 3/4" x 9-1/2" pins to attach the adjustable header mount to the frame. Install the 3/4" pins from the front. Secure the pins using 3/4" cotter pins. Repeat this procedure for the front, rear, and middle adjustable support arms.



Install Both Ratchet Strap Weldments

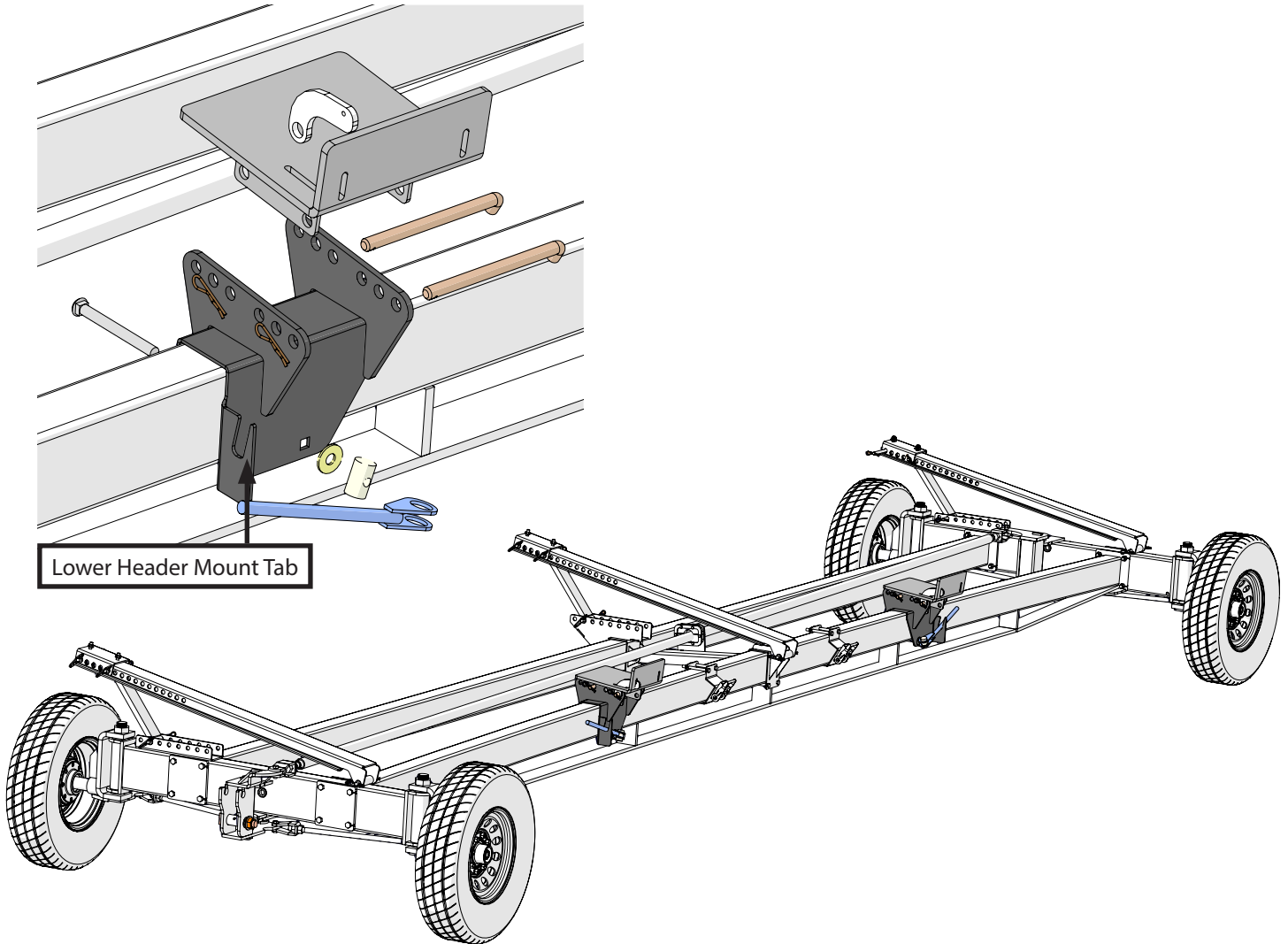
- Position both ratchet strap weldments to hold your header from moving in transit using (2) 1/2" x 5" hex head bolts and (2) 1/2" centerlock hex nuts.



Set-Up Instructions

Install the Header Mounts

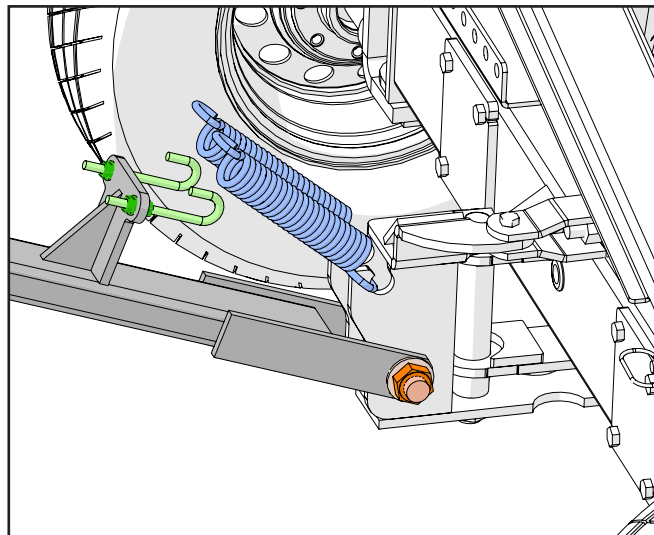
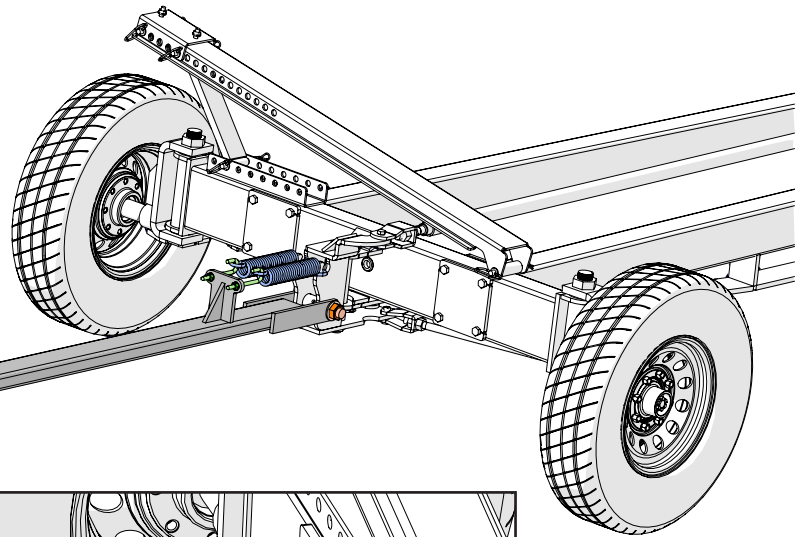
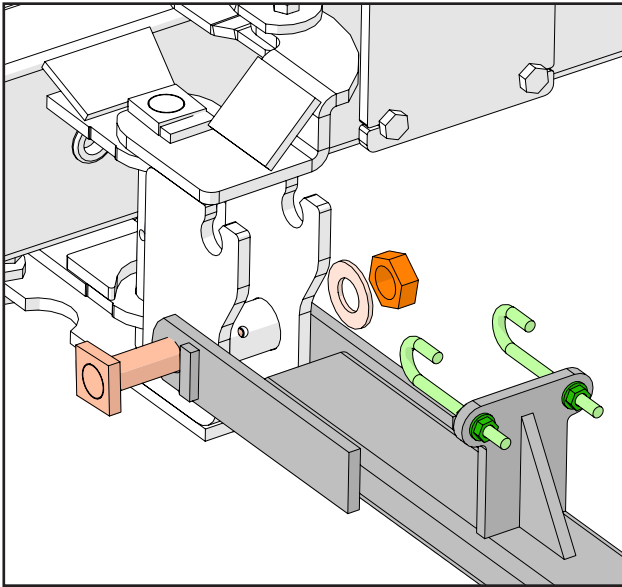
- Set the mount on the truss bar. Run the 5/8" x 6-1/2" carriage bolt through the bottom of the bottom header mount.
NOTE: The tab on the lower header mount will point away from the center of the frame.
- Place the bottom header mount bolt coupler between the ends of the clamp handle assembly. Next, place the washer against the mount. Line up the holes on the washer and mount bolt coupler and thread the carriage bolt onto the coupler.
- Install the upper header mount bracket to the bottom header mount. Attach the header position gusset using (2) 3/4" L Pins (10-9/32" length). Secure the L pins with (2) 3/4" cotter pins.



Set-Up Instructions

Attach the Tongue to the Header Transport

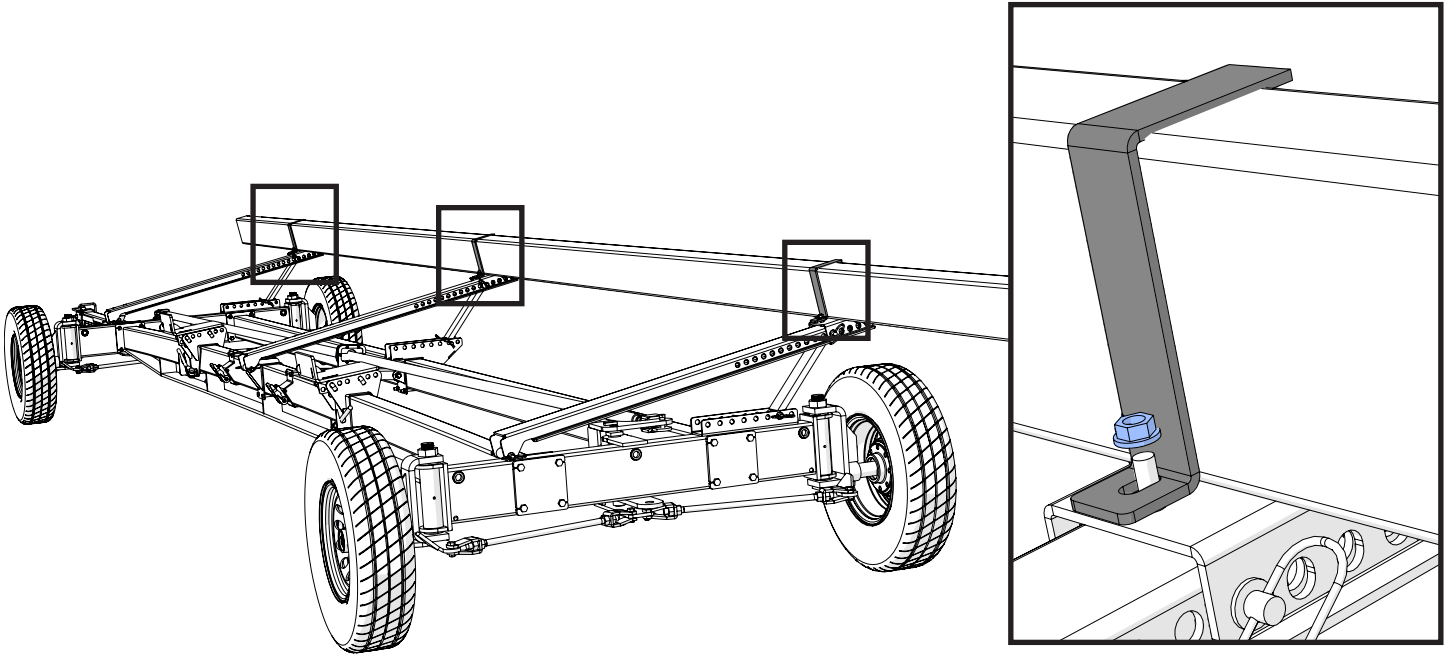
- Attach the outer tongue weldment to the front axle using a 6-1/2" x 1-1/4" king pin weldment and 1-1/4" hex nut.
- Hook both tongue springs to the axle.
- Remove the J-bolts by loosening the and removing the SF nuts positioned toward the front of the tongue. Once removed, hook the (2) 1/2" J-bolts over the springs and re-insert them to their original holes. Tighten the SF nuts.



Set-Up Instructions

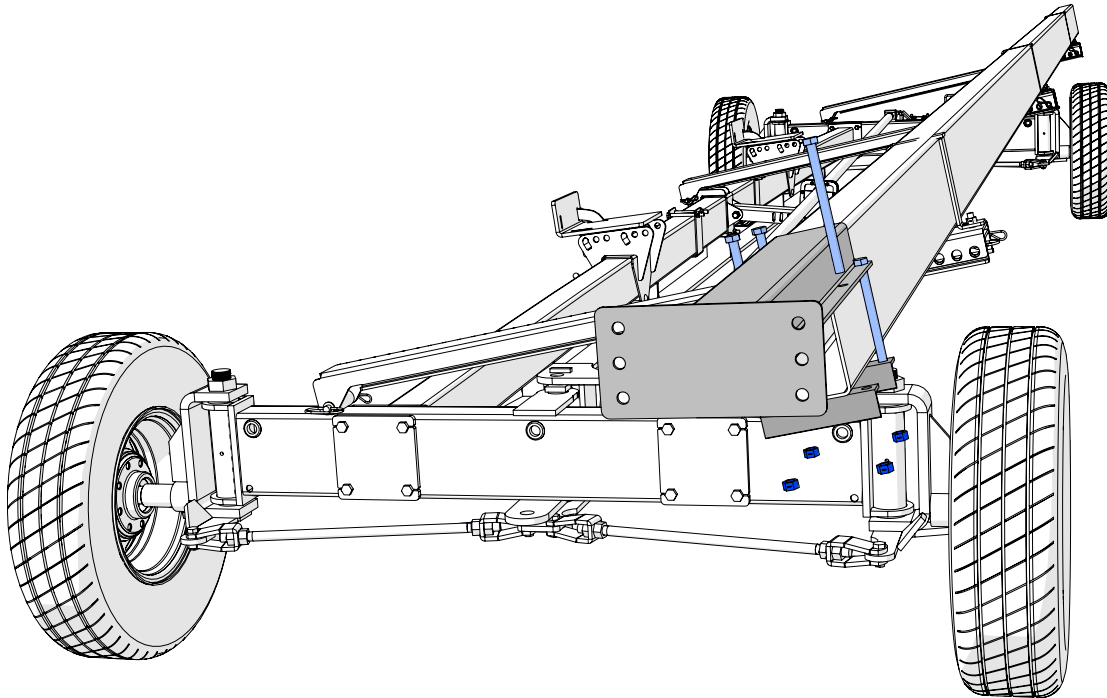
Install the Upper Bar

- Using (3) upper bar clamps and (6) 1/2" SF hex nuts attach the upper bar to the upper bar support mounts.



Install the Extension Bracket

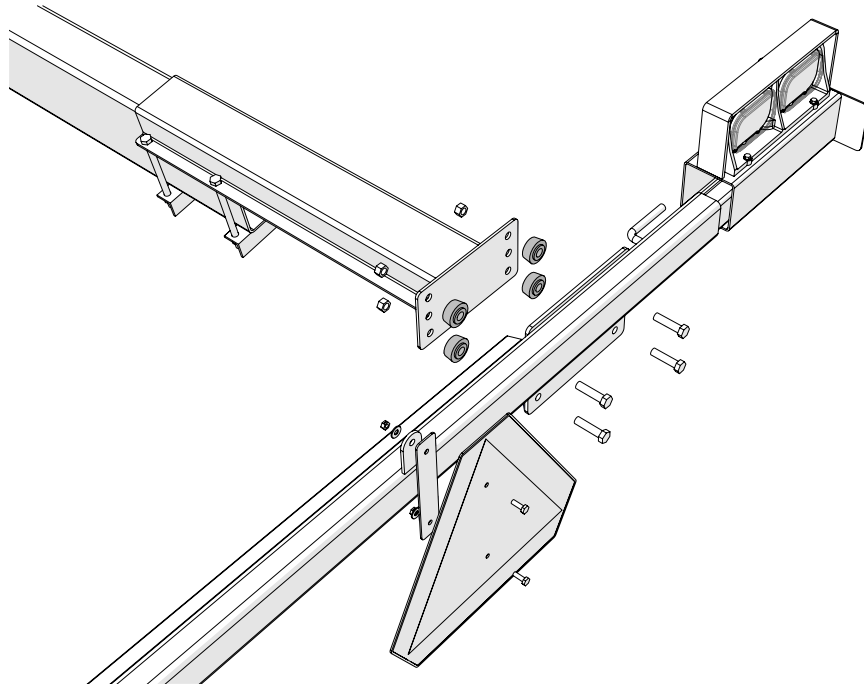
- Attach the extension bracket to the upper bar using (4) 1/2" x 7" hex bolts and (4) 1/2" centerlock hex nuts.



Set-Up Instructions

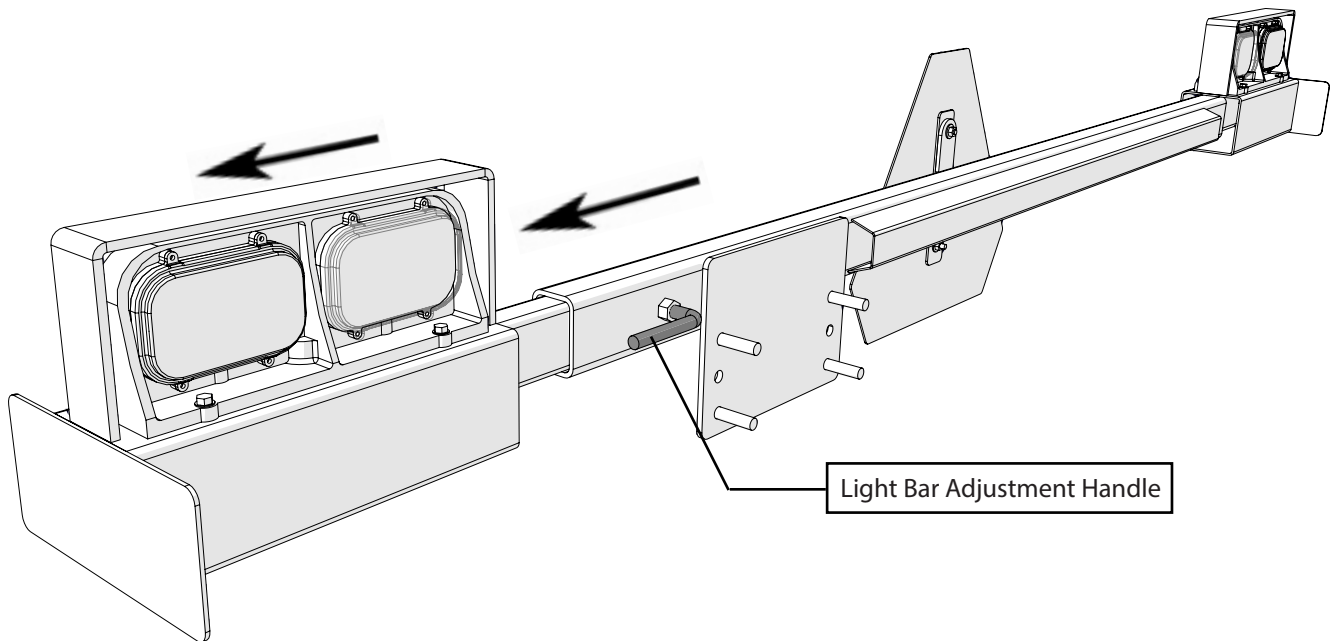
Install the Light Bar

- Mount the light bar to the extension bracket using (4) 1/2" x 2" hex bolts, (4) damping mounts, and (8) 1/2" centerlock hex nuts.
- Mount the SMV sign using the mounting bracket, (2) 1/4" x 3/4" hex bolts, (2) washers, and (2) 1/4" centerlock hex nuts.



Adjusting Light Bar

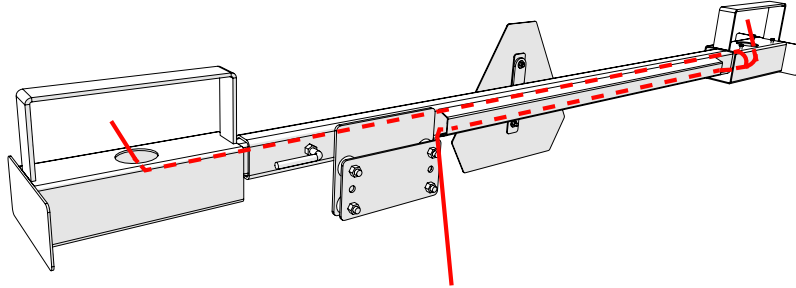
- If needed, adjust the width of the light bar by loosening the light bar adjustment handle and pull out or push in the bar to the desired width. Retighten the adjustment handle when finished.



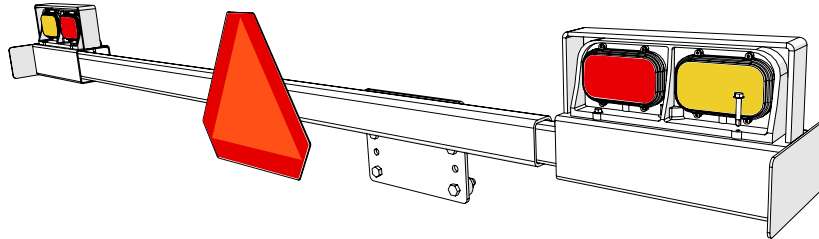
Set-Up Instructions

Installing the Lights

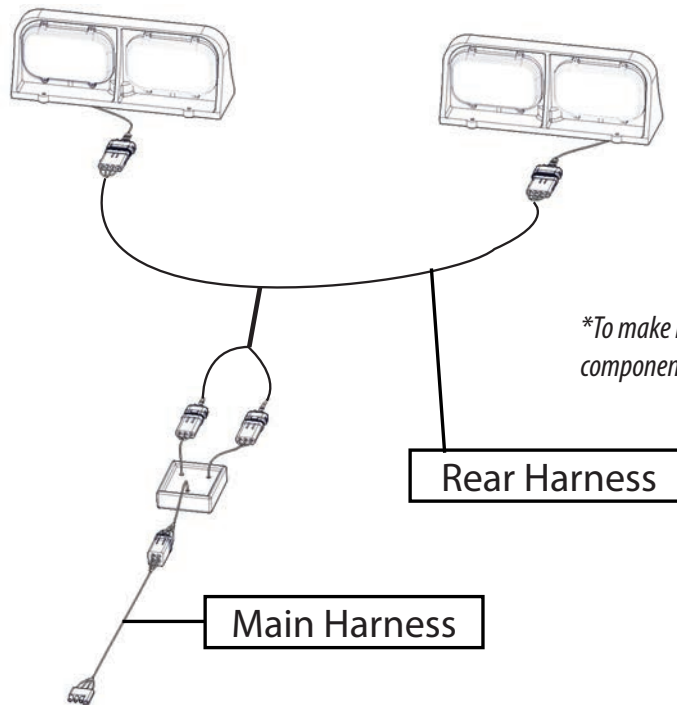
- Run the rear harness, starting with the 4-way flat connectors through the light bar starting on the side nearest to the rear axle. Facing the light bar from the front, the wire will need to be run from left to right through the channel on the outside of the light bar. Pull the 4-way flat connector on the harness out of the hole for the left-hand light. Thread the other connector on the rear harness to the right light through the inside of the main tube on the light bar.



- Plug the lights into the harness and mount them on the light bar using 1-1/2" self-tapping screws. Ensure the red and amber lights are facing to the rear and the amber light is on the outside.

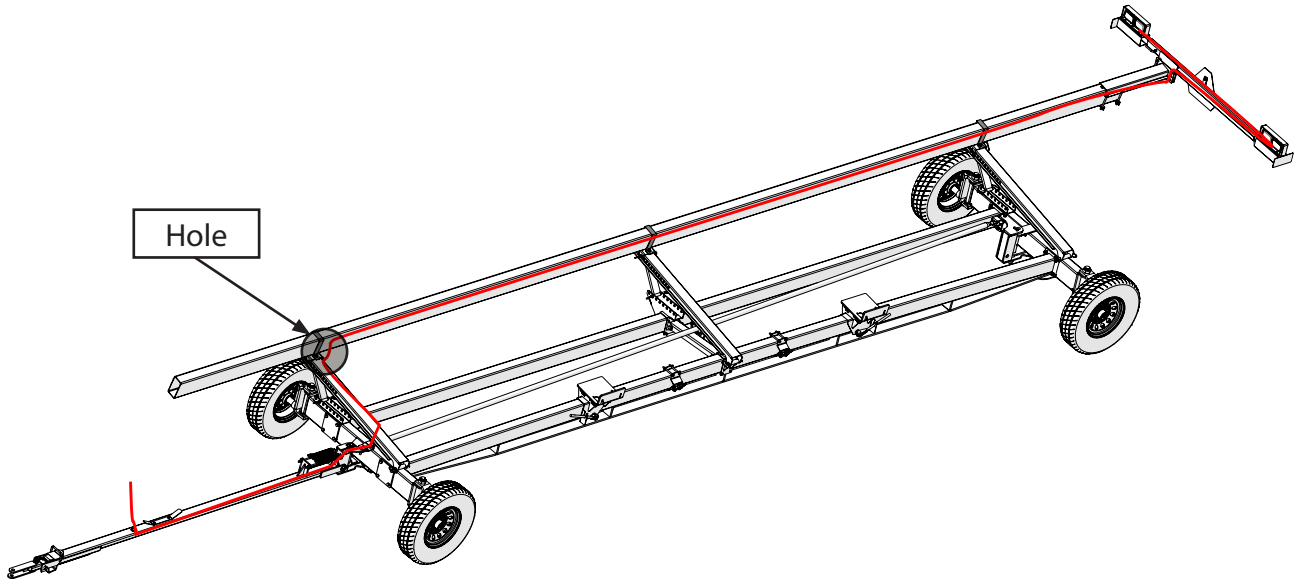


- Connect the 3-way flat connectors on the rear harness to the 3-way flat connections on the light enhancer.
- Connect the light enhancer to the main harness with the 4-way square connectors.



Set-Up Instructions

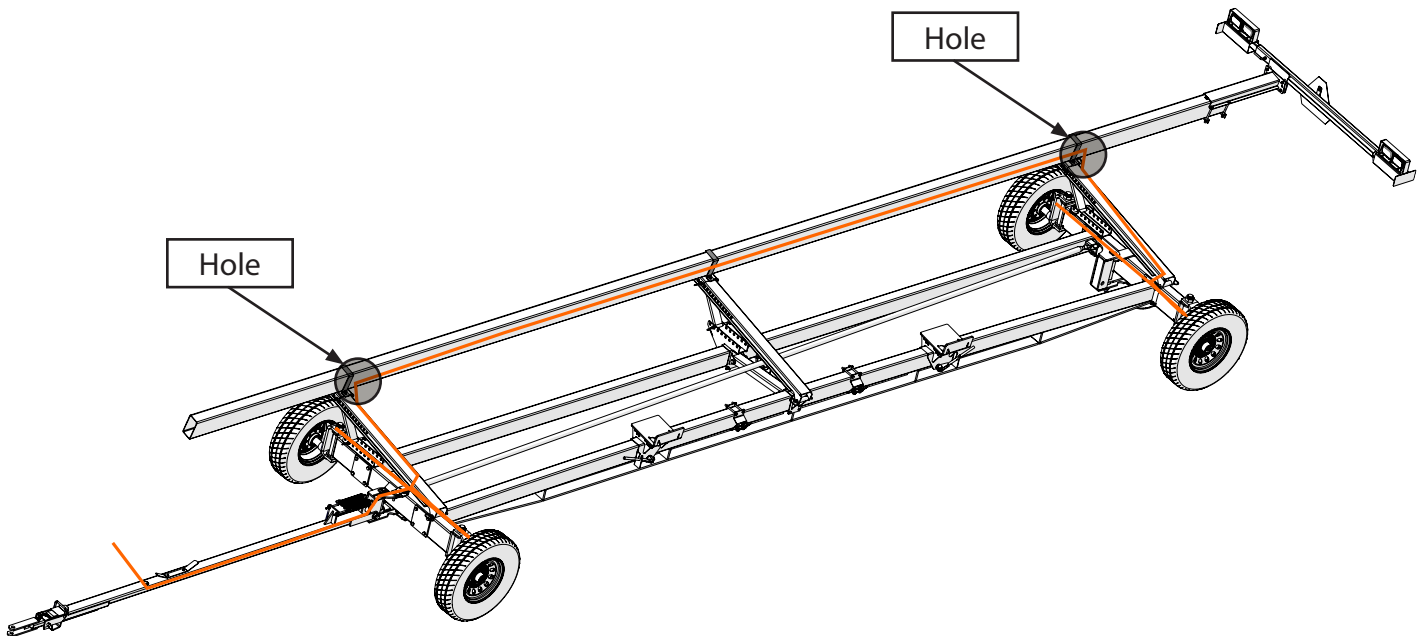
- Run the 3 male 1 female flat connector on the main harness to the front of the 4WS through the upper bar. There is a hole for the wire to come out of the bottom of the upper bar near the front of the wagon. Now run it through the front axle from the bottom rear left-hand side to the middle front hole and down the tongue to the cord wrap. During transportation plug the 4-way flat connector on the main harness to the towing vehicle and wrap the remaining cord around the cord wrap.



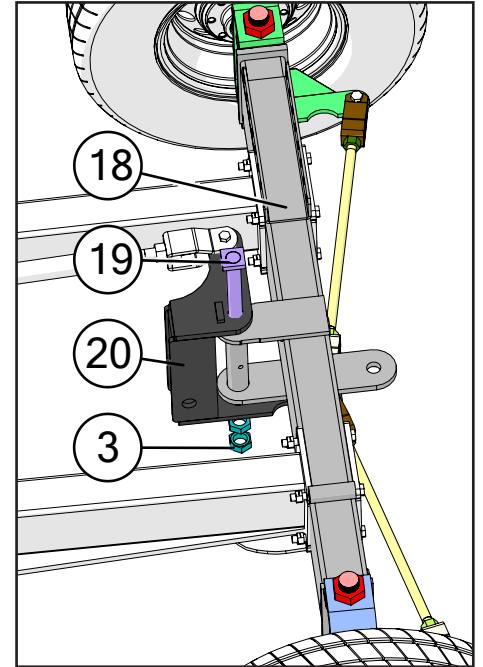
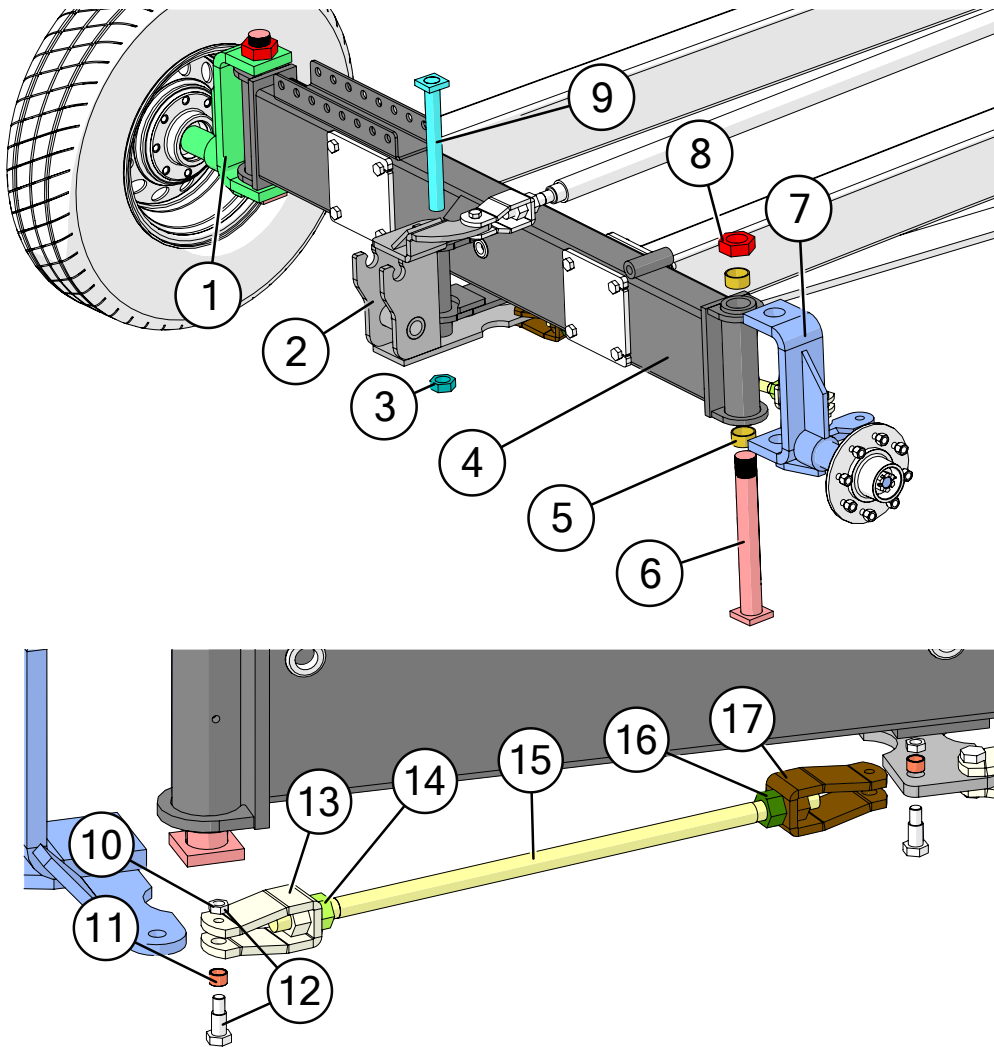
Installing Optional Brakes

NOTE: If there is not a hole in the upper bar behind the rear support arm, cut a 1-3/4" diameter hole in the bottom of the upper bar. Cut the hole 2" behind the rear support arm.

- Run the brake wiring harness through the center and out the left hole of the front running gear.
- Connect the left front brake and run the two rear connections up the support arm and through the upper bar.
- Drill two holes in support arm and secure brake harness using (2) zip ties.
- Run the right side connector through the axle and out the right side hole. Connect the front right brake.
- Run the brake harness down the rear support arm, drill (2) holes and secure with zip ties.
- Run the harness through the center hole and pull one connector through each of the left and right holes.
- Connect the rear brakes.

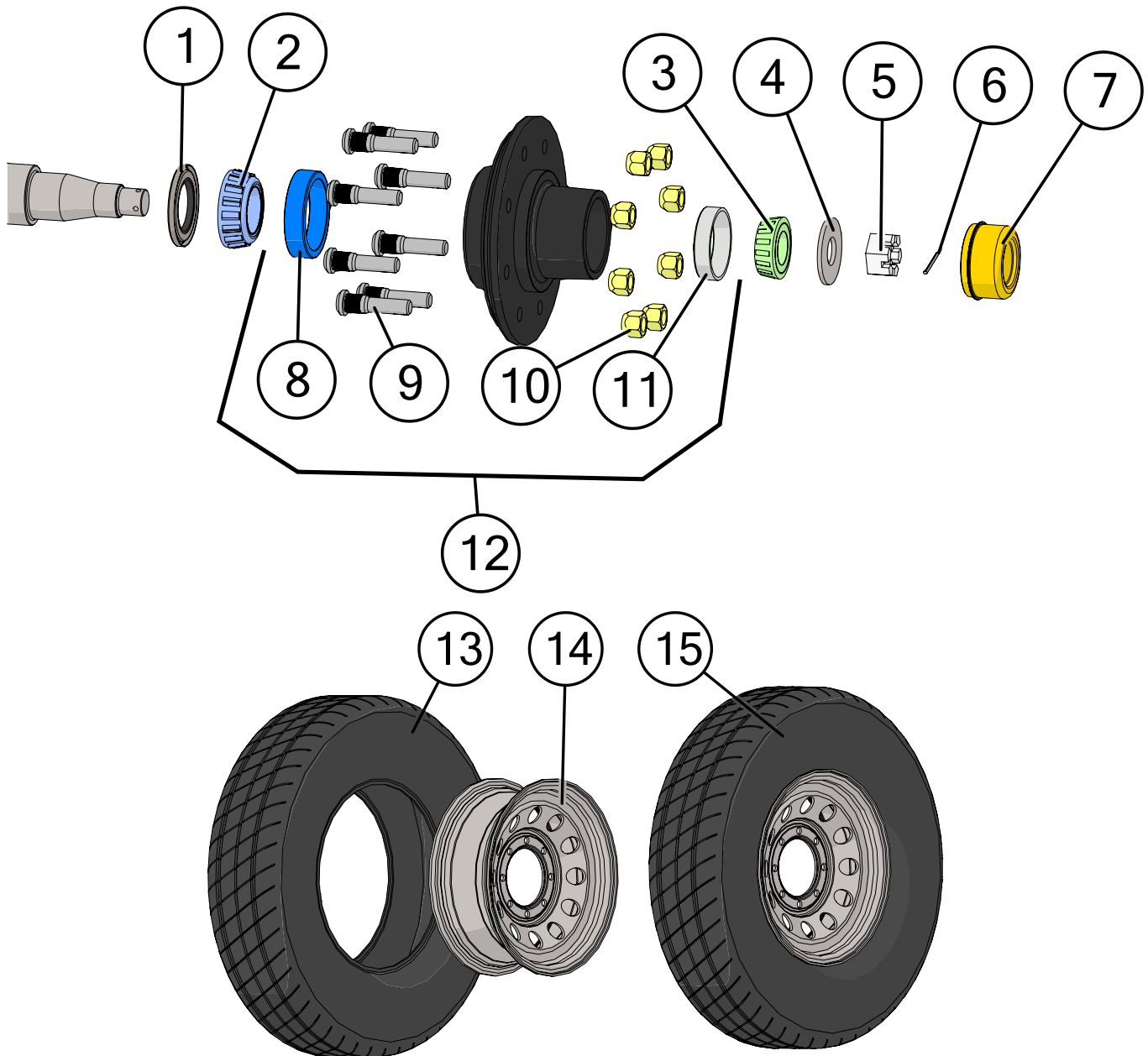


Axles



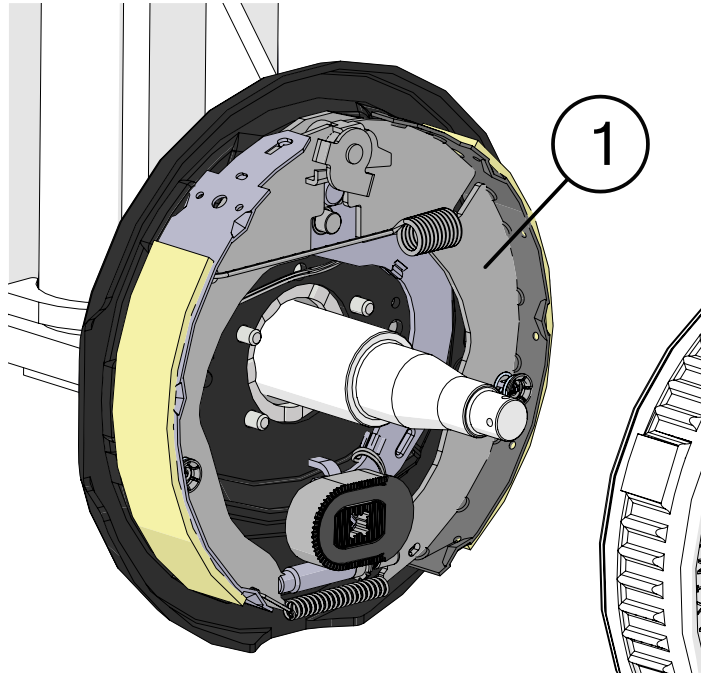
Description	Part No.
1 Right Spindle Assembly (4WS)	JM0003187
2 Front Hitch Weldment (4WS)	JM0015576
3 1-1/4"-12 PN Gr2 Hex Jam Nut	JM0001606
4 4WS Front Axle Assembly	JM0015557
5 1-3/4" ID Bronze Bushing (2" OD x 1" Length) (EB-134)	JM0002244
6 1-3/4" x 14-1/4" King Pin Weldment	JM0003180
7 Left Spindle Assembly (4WS)	JM0003170
8 1-3/4"-12 Z Gr2 Hex Jam Nut	JM0009752
9 11-1/2" x 1-1/4" King Pin Weldment (TB-610)	JM0003038
10 Nut for 5/8" Shoulder Bolt	JM0003185
11 5/8" ID x 3/4" OD x 1/2" Bronze Bushing (BB-58)	JM0003189
12 5/8" Shoulder Dia x 1" Shoulder Length x 1/2"-13 Shoulder Bolt and Nut (SB-58)	JM0002408
13 6-10 Ton Clevis Weldment (Left) (TRE-78L)	JM0003168
14 7/8"-14 Gr5 Z LH Hex Nut	JM0027686
15 Tie Rod (7/8" x 26") (4WS) (10 Ton)	JM0003188
16 7/8"-14 Gr5 Z Hex Nut	JM0025714
17 6-10 Ton Clevis Weldment (Right) (TRE-78R)	JM0030149
18 Rear Axle Assembly (4WS)	JM0003166
19 1-1/4" x 15-1/8" King Pin Weldment (4WS)	JM0003165
20 Rear Hitch Weldment (4WS)	JM0003164

7k Idler Hub and Wheel



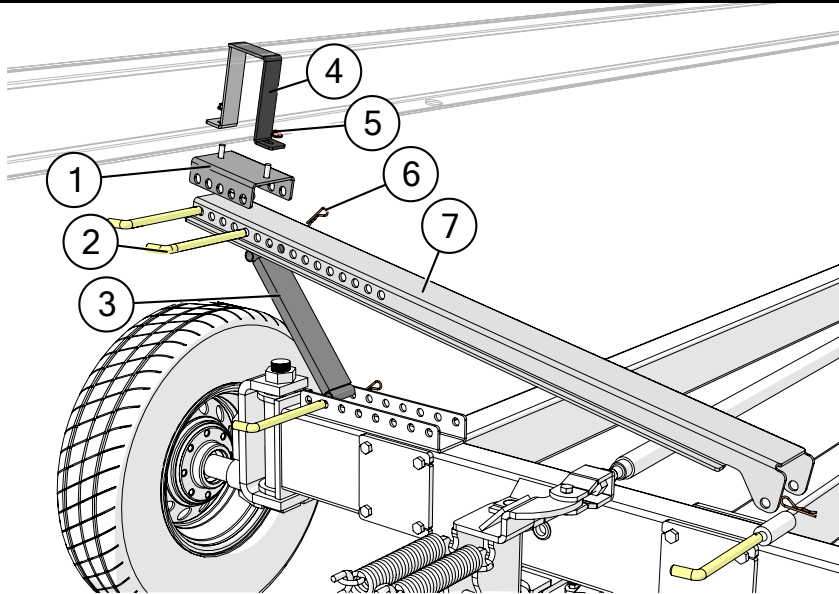
	Description	Part No.
1	Seal 18823 (Type A) for G783	JM0003223
2	Tapered Bearing Cone 25580, 12 Ton	JM0018104
3	14125A Roller Bearing	JM0039542
4	1" USS Flat Washer	JM0003063
5	1"-14 Gr2 Z Castle Hex Nut	JM0002139
6	Cotter Pin (for 1" x 3-2/5" Clevis Pin)	JM0003064
7	Grease Cap (Solid) for 1530290.9 8-6.5" Hub (4WS 170052)	JM0058750
8	Cup, Large Inner, 12 Ton, 25520	JM0018102
9	Stud 9/16"-18 x 2-13/16"	JM0020625
10	9/16"-18 Conical Lugnut (4WS) (ST)	JM0008525
11	Bearing Cup for Superior Gearbox (14-20") (414276)	JM0025077
12	7K Idler Hub with studs, nuts & races	JM0058743
13	235-85-R16 Load Range E - 8 Bolt Tire	JM0003232
14	Wheel Rim, 8 Hole, 16" x 6" (16x6-8)	JM0003233
15	Wheel & Tire (235-85-R16 Load Range E - 8 Bolt Tire and 16x6-8 Hole Wheel Rim)	JM0009977

Brakes for 7k Axles



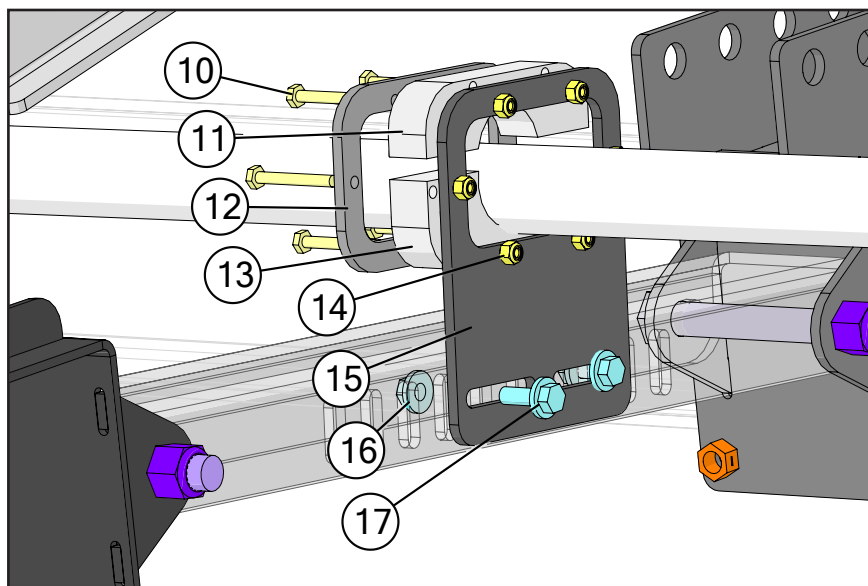
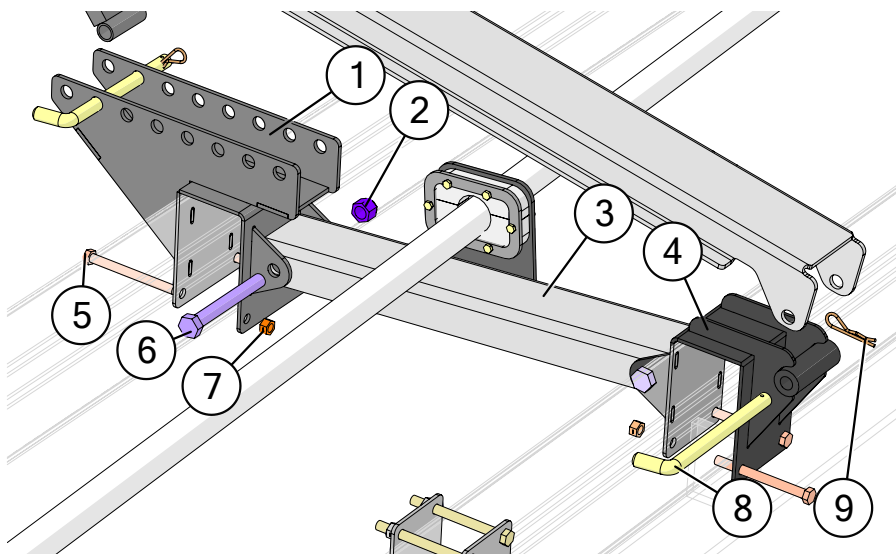
	Description	Part No.
1	7K Brake Drum Assembly Left Hand	JM0035973
2	7K Brake Drum Assembly Right Hand	JM0035974

Lifting Arms Ends



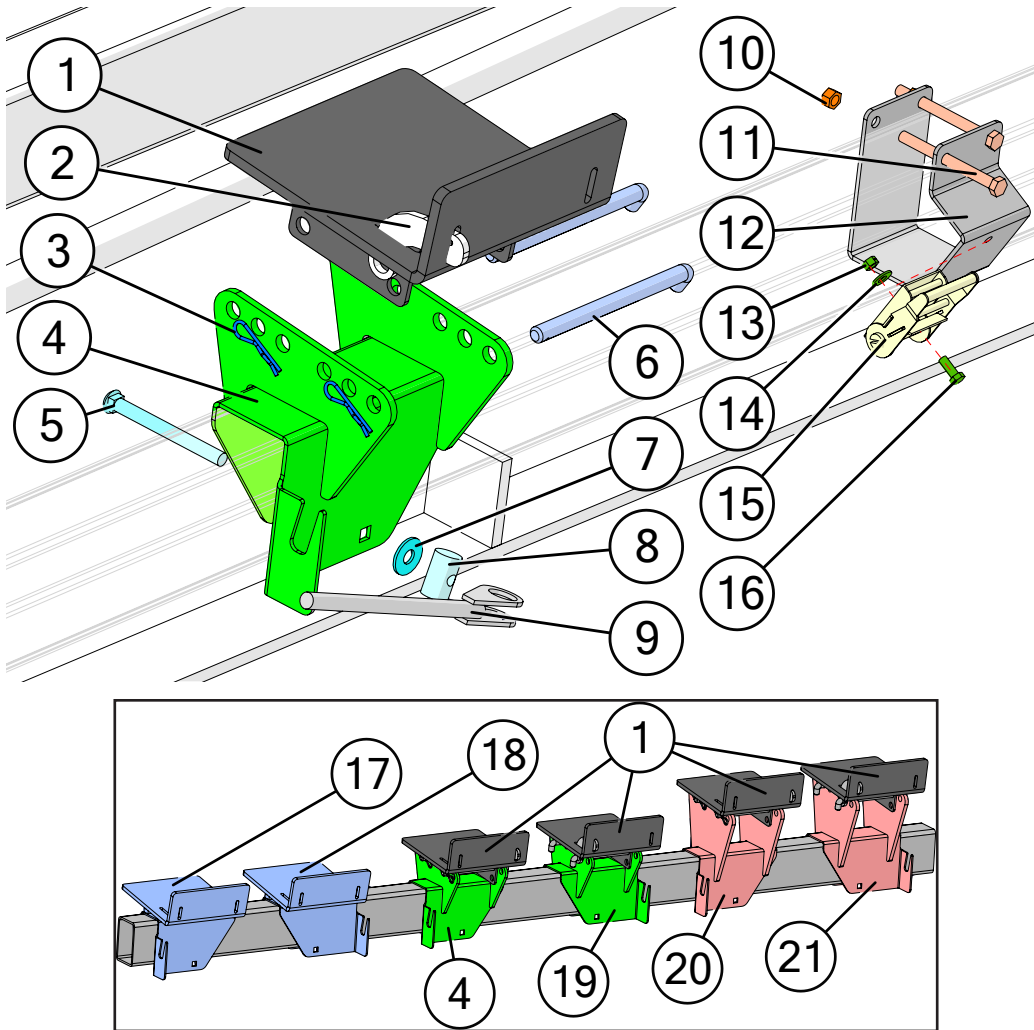
	Description	Part No.
1	Upper Bar Slide Mount (UBSM-3)	JM0015133
2	3/4" x 8" Z L Pin (Header Wagon, c450)	JM0029738
3	Upper Bar Support Arm (UBSA-3)	JM0003077
4	Upper Bar Clamp (4x8) (UBC-3)	JM0003081
5	1/2"-13 Gr5 Z SF Hex Nut	JM0002153
6	3/16" x 2-1/2" Hair Clip Pin (316HP)	JM0001657
7	Lifting Arm - 60" Hole Spread (4WS)	JM0003078

Lifting Arms Middle



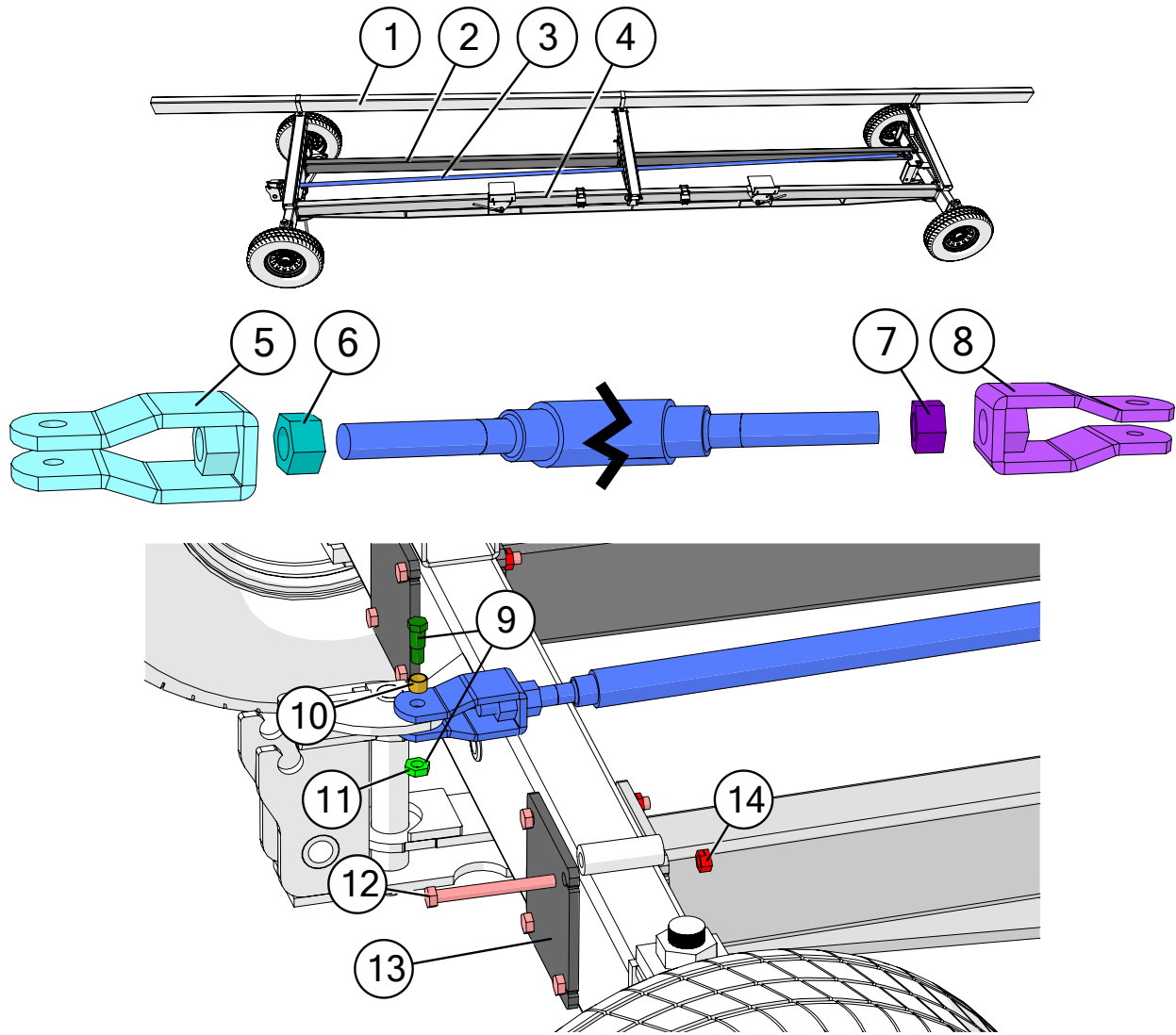
	Description	Part No.
1	Back Center Leg Mount (4WS)	JM0054582
2	3/4"-10 Gr2 Z Nylon Locking Hex Nut	JM0026756
3	Middle Support Leg Cross Support (4WS)	JM0054578
4	Front Center Leg Pivot Mount (4WS)	JM0054576
5	1/2"-13 x 5" Gr5 Z Hex Bolt	JM0001621
6	3/4"-10 x 6" Gr5 Z Hex Bolt	JM0016683
7	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
8	3/4"x 8" Z L Pin (Header Wagon, c450)	JM0029738
9	3/16"x 2-1/2" Hair Clip Pin (316HP)	JM0001657
10	1/4"-20 x 2" Gr5 Z Hex Bolt	JM0001591
11	1" Wide UHMW Small Guide Block (1-1/2" Tall) (4WS)	JM0014583
12	Center Slide Brace, Small Flat Plate	JM0055081
13	1" Wide UHMW Large Guide Block (2" Tall) (4WS)	JM0014584
14	1/4"-20 Gr2 Z Nylon Locking Hex Nut	JM0002159
15	Center Slide Brace, Large Flat Plate	JM0055079
16	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
17	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092

Header Mount and Tie Down Straps



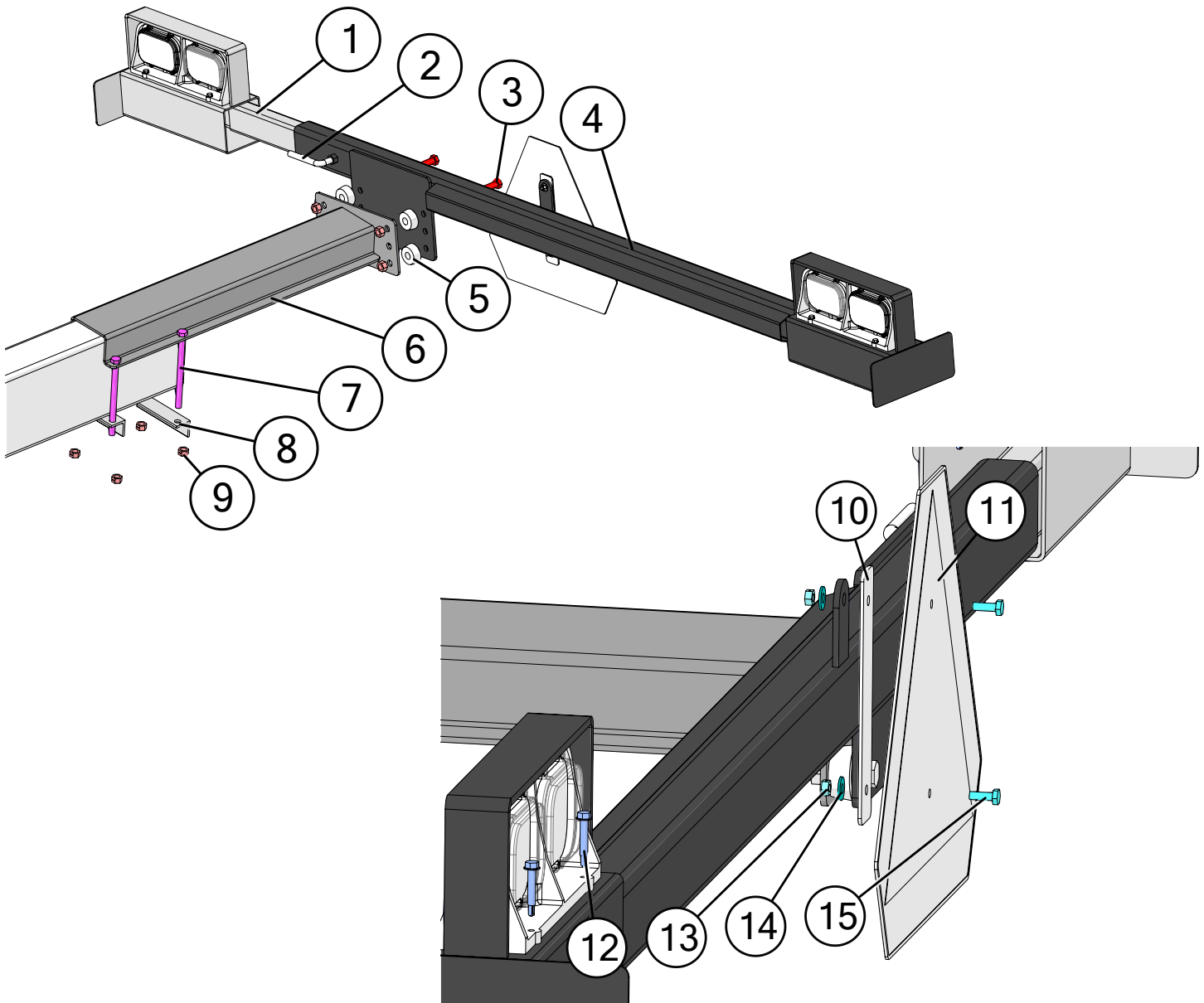
Description	Part No.
1 Upper Header Wagon Mount	JM0014351
2 Removable Header Stop Gusset	JM0003075
3 3/16" x 2-1/2" Hair Clip Pin (316HP)	JM0001657
4 Low Profile Bottom Mount Weldment 4" x 6" (Front)	JM0037718
5 5/8"-11 x 6-1/2" Gr5 Z Carriage Bolt	JM0001651
6 3/4" L Pin (10-9/32" Length)	JM0003076
7 5/8" USS Flat Washer	JM0003073
8 Header Saddle Mount Bolt (Coupler)	JM0001653
9 Clamp Handle Assembly (CHA2)	JM0001656
10 1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
11 1/2"-13 x 5" Gr5 Z Hex Bolt	JM0001594
12 Ratchet Strap Bracket (60 Degree) (HT974, 4WS)	JM0002314
13 3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
14 3/8" ID, 1" OD Z Flat Washer	JM0003061
15 2" Tie-down Ratchet (10,000 lb) (RA-1)	JM0003084
16 3/8"-16 x 1" Gr8 YZ Hex Bolt	JM0001485
17 Extra Low Profile Mount 4" x 6" Saddle (Front)	JM0046210
18 Extra Low Profile Mount 4" x 6" Saddle (Back)	JM0028948
19 Low Profile Bottom Mount Weldment 4" x 6" (Back)	JM0003072
20 High Profile Bottom Mount Weldment 4" x 6" (Front)	JM0032573
21 High Profile Bottom Mount Weldment 4" x 6" (Back)	JM0007140

Upper Bar, Frame, 4WS Rod, and Connections



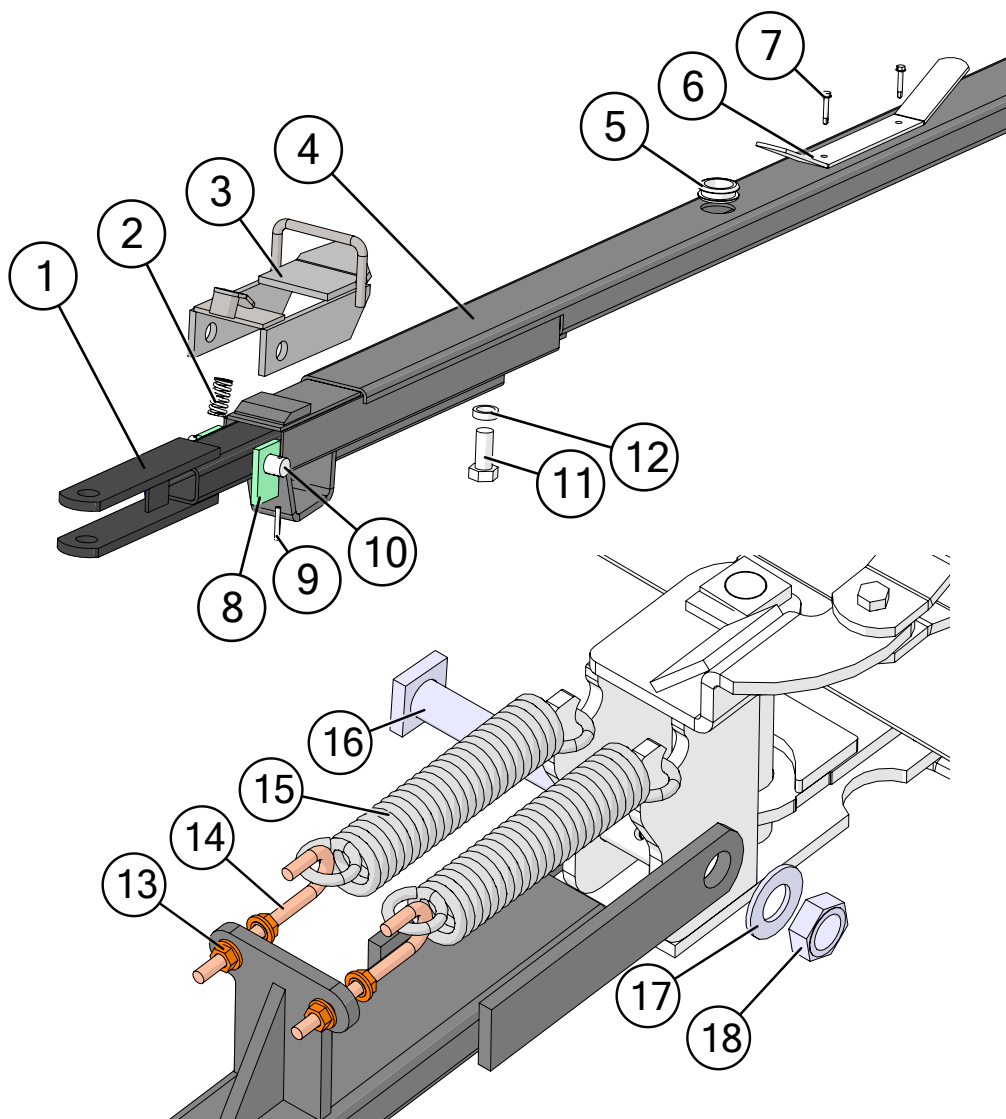
	Description	Part No.
1	4" x 8" x 32' Upper Bar	JM0008541
1	4" x 8" x 38' Upper Bar	JM0008542
1	4" x 8" x 42' Upper Bar	JM0008539
1	4" x 8" x 48' Upper Bar	JM0058688
2	4WS15 Small Lower Bar (4" x 6" x 316")	JM0008540
2	4WS17 Small Lower Bar (4" x 6" x 354")	JM0008528
3	4WS15 Push Pull Rod ASM	JM0008544
3	4WS17 Push Pull Rod ASM	JM0008529
4	4WS15 Truss Bar (315")	JM0008543
4	4WS17 Truss Bar (354")	JM0000444
5	12-15 Ton Clevis Weldment (Right) (TRE-1R)	JM0001822
6	1"-14 Gr5 RH Hex Nut	JM0014282
7	1"-14 Gr5 LH Hex Nut	JM0014281
8	12-15 Ton Clevis Weldment (Left) (TRE-1L)	JM0019189
9	3/4" Shoulder Dia x 1" Shoulder Length x 5/8"-11 Hex Head Shoulder Bolt and Nut (SB-34)	JM0003181
10	3/4" ID x 7/8" OD x 5/8" LG Bronze Bushing (BB-34)	JM0009455
11	3/4" Shoulder Bolt Nut	JM0003184
12	5/8"-11 x 6" Gr5 Z Hex Bolt	JM0001623
13	Bolt-on Washer Plate (4WS)	JM0015526
14	5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146

Upper Bar Extension and Lightbar



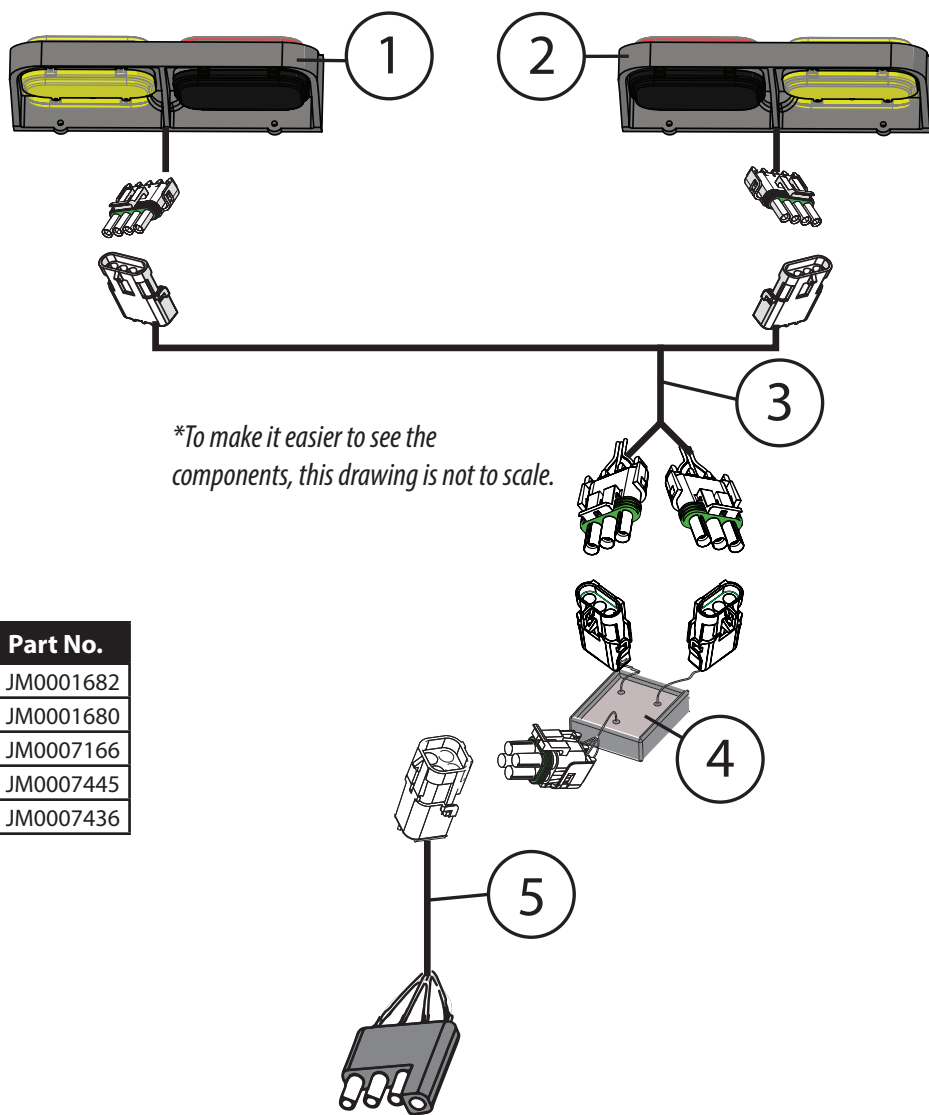
	Description	Part No.
1	Telescoping Arm for Header Transport Light Kit (TA-1)	JM0001375
2	1/2"-13 x 4" Gr5 Z Bent L Bolt	JM0021419
3	1/2"-13 x 2" Gr8 Z Hex Bolt	JM0001620
4	Header Transport Light Mounting Bracket (LMB-1)	JM0001374
5	Neoprene Vibration Damping Mount with 5/8" Diameter Hole	JM0001869
6	Header Transport Light Mount Extension Bracket (EB-1)	JM0001393
7	1/2"-13 x 7" Gr5 Hex Bolt	JM0001595
8	Header Transport Light Bar Angle Iron Support (AIS-2)	JM0001440
9	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
10	Slow Moving Vehicle Sign Bracket	JM0001645
11	Slow Moving Vehicle Sign	JM0001616
12	1/4" x 1-1/2" Self Tapping Screw	JM0001571
13	1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
14	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
15	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507

Tongue



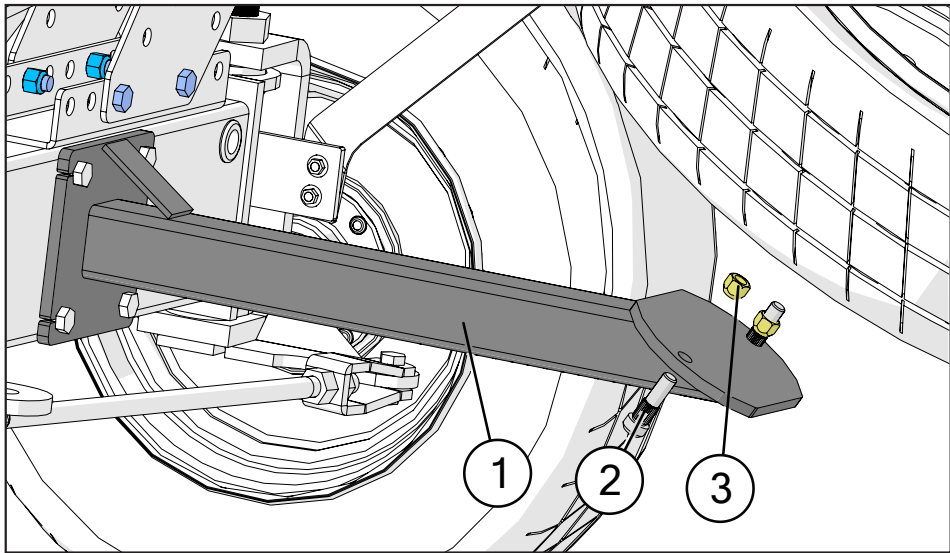
	Description	Part No.
1	Short Inner Tongue (40") (Header Transport)	JM0001683
2	Compression Spring (1" x 1-3/4") for Door Assembly & Tongue Latch	JM0001688
3	Tongue Latch (Flapper Weldment) 10 Ton	JM0003033
4	12' Outer Tongue Weldment (4WS15)	JM0015676*
4	14'10" Outer Tongue Weldment (AWS17)	JM0003041*
5	1-1/2" ID x 3/8" Wall GW x 1-3/4" GD Rubber Grommet (GR-134)	JM0000830
6	Wire Harness Storage Bracket (WHB-1)	JM0001438
7	1/4" x 1-1/2" Self Tapping Screw	JM0001571
8	Spacer Blocks, 2-1/2", 6-15 Ton (SB-212)	JM0003032
9	17/64" x 1-3/4" Z Roll Pin	JM0001652
10	1" x 5-3/4" Flapper Pivot Shaft - Case Hardened and Zinced (LS-610)	JM0027732
11	7/8"-9 x 2" Gr5 Z Hex Bolt	JM0002108
12	Tongue Stop Bolt Ring	JM0001649
13	1/2"-13 Gr5 Z SF Hex Nut	JM0002153
14	1/2"-13 x 6" Gr5 Z J-Bolt	JM0002168
15	Large Tongue Spring (1-3/4" x 12-1/2") (TS-615H)	JM0014200
16	6-1/2" x 1-1/4" King Pin Weldment (TB-1082)	JM0003036
17	1-1/4" ID x 2-1/2" OD x 1/8" Z Flat Washer	JM0020322
18	1-1/4"-12 PN Gr2 Hex Jam Nut	JM0001606

Lights and Wiring



Description	Part No.
1 Right LED Light Assembly - Header Transport	JM0001682
2 Left LED Light Assembly - Header Transport	JM0001680
3 Rear Harness (4WS)	JM0007166
4 Light Enhancer (4WS)	JM0007445
5 Main Harness (4WS)	JM0007436

Spare Tire Mount



Description	Part No.
1 4WS Spare Tire Mount Weldment	JM0050283
2 9/16" x 2-1/4" Stud	JM0037502
3 9/16"-18 Conical Lugnut (4WS) (ST)	JM0008525

