



*Doing Our Best to Provide You the Best*

8C010267, Rev AB

7/10/18

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## SIDE DUMP

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**9CCR353AR3021**, 35' Chasis, 30' Tub

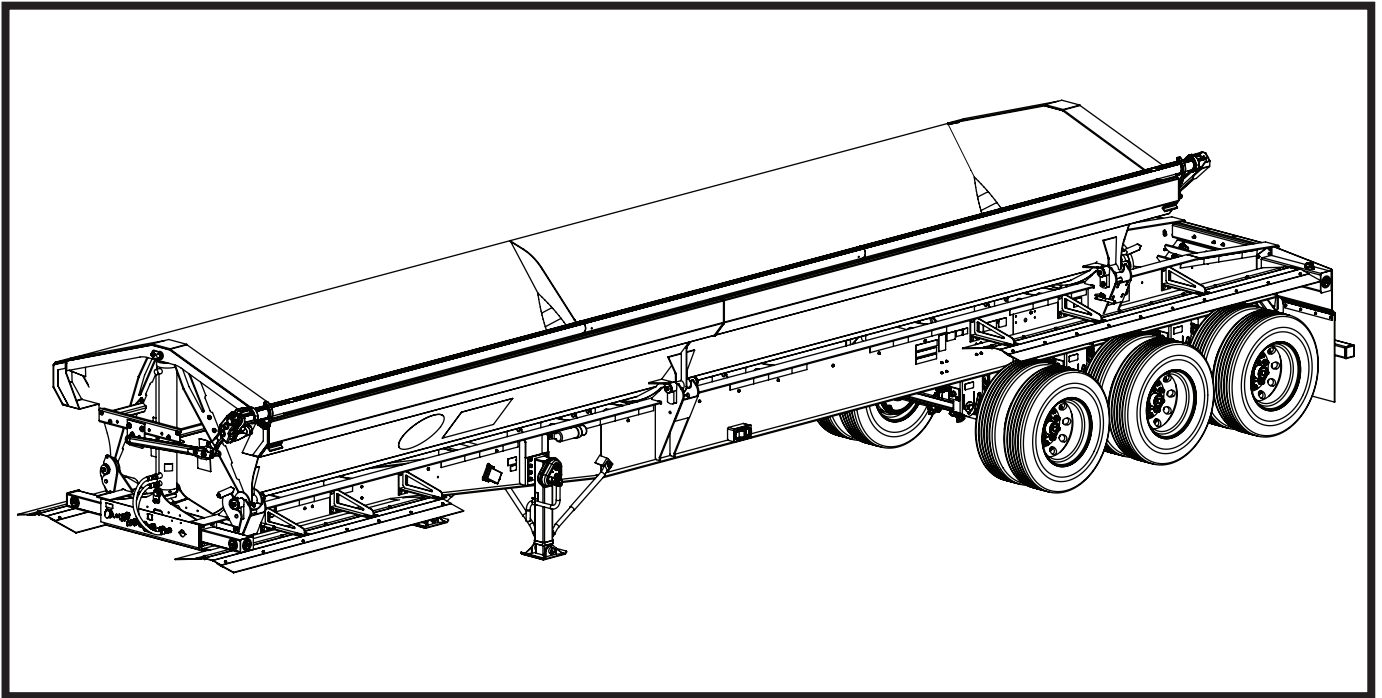
**9CCR403AR3424**, 40' Chasis, 34' Tub

**9CCR423AR3424**, 42' Chasis, 34' Tub

**9CCR443AR3424**, 44' Chasis, 34' Tub

**9CCR423ARRL3424**, 42' Chasis, 34' Tub w/ Rear Lift Axle

**9CCR443ARRL3424**, 44' Chasis, 34' Tub w/ Rear Lift Axle



**OPERATOR MANUAL**

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In this document you will find information based on available knowledge at the time of its publication. To be accurate with the information, every effort was made but may not cover all details or variations of a trailer or provide every possibility in connection with its production, operation and maintenance. A Feature and Option may be presented in the manual that is not relevant to this trailer. Demco assumes no obligation of notice, to holders of this document, with changes made to a product.

***SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE.***

Demco is often making improvements and developing new designs. In doing so, we reserve the right to make changes and/or improvements without obligation for equipment sold beforehand. Self-modification to our trailers may affect the operation, function, and safety, so this is not advised. If a replacement part is necessary, Demco should supply it, please contact your nearest dealer or Demco.

***DEMCO STATEMENT OF PRODUCT SAFETY:***

As a producer of agricultural and transportation equipment, Demco is fully aware of its responsibility of providing its customers products that perform their expected use, in a truly safe manner. Safety considerations shall be a fundamental and high precedence part of all engineering/design analysis and judgments involving Demco products. It is our stated policy that our products will be manufactured to coincide with the safety standards specified by the National Association of Trailer Manufacturers and/or any other officially recognized standards at the time manufactured. However, this statement should not be translated to mean that our product will uphold against a customer's own carelessness or disregard for common safety practices specified in each product's manual, nor will we be accountable for any such occurrence.

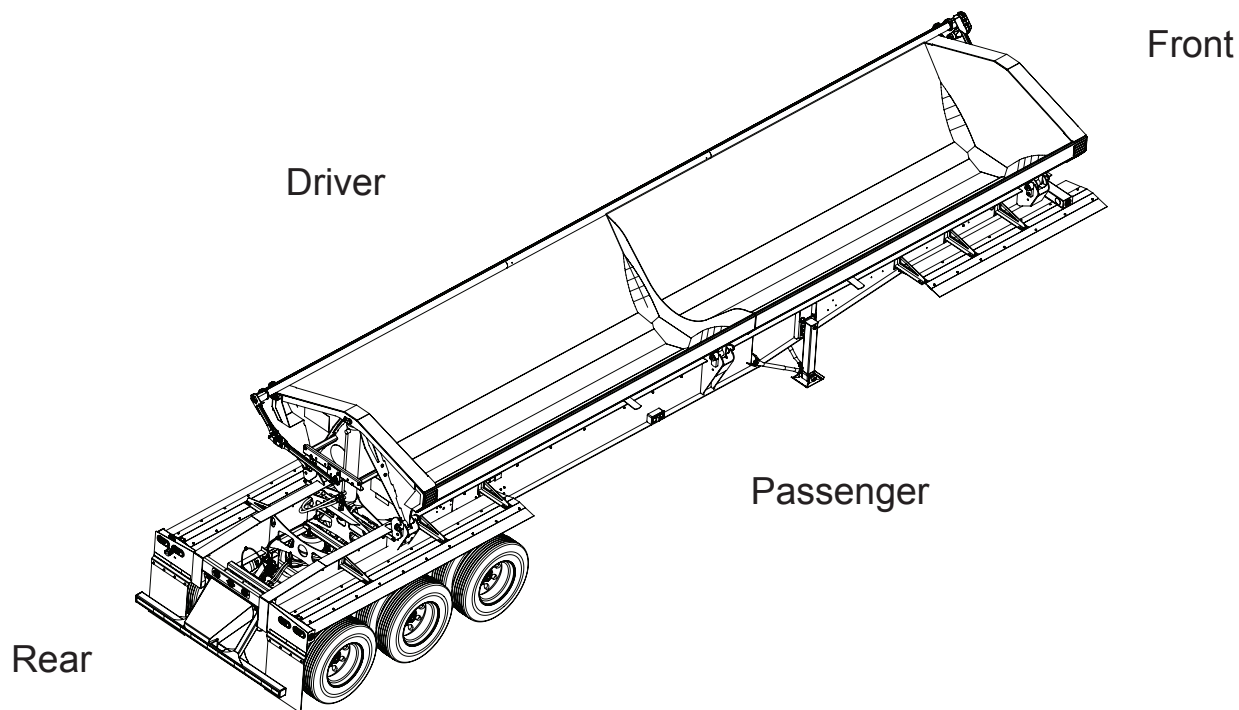
At Demco we strive to design, produce and deliver the highest quality trailer on the market. Our employees have a strong background of knowledge and combined experience in manufacturing to put quality workmanship into our products. In this manual you will find information covering all models of the Demco Side Dump Trailer line. Use the table of contents to locate specific areas of interest.

### **GENERAL INFORMATION:**

Demco requires that you and anyone else who will be operating and maintaining the trailer read and understand the guidelines in the manual for safe, efficient, and trouble free operations. Proper maintenance, adjustments and use will result in many years of service. Keep this manual handy for frequent reference and to pass on to new operators or owners. If assistance, information, or additional copies of the manual are needed, contact the nearest dealer, a distributor, or Demco.

### **PLEASE NOTE:**

- All documents within the manual referring to products not manufactured by Demco have been printed with the permission of the manufacturer specified.
- All references to driver, passenger, front and rear of the trailer are determined from a position behind the trailer and facing forward.



For your convenience we have four easy ways to register your warranty.

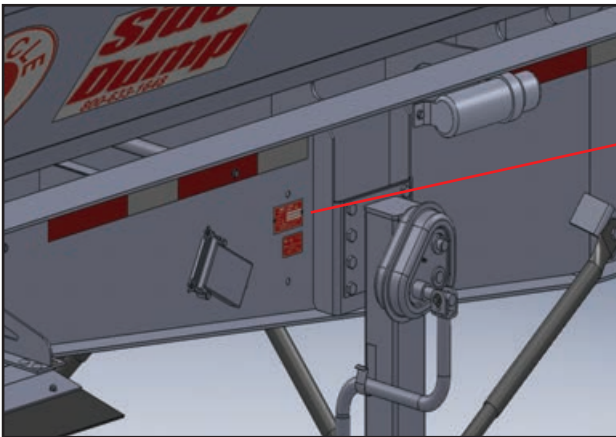
- **Call our toll free number and ask for warranty registration. 1-888-274-6010**
- **Fax completed warranty registration form. Fax: 712-262-1022**
- **Register on-line in warranty page at [www.demco-products.com](http://www.demco-products.com)**
- **Complete and return registration form.**

Demco Warranty does not cover the following:

- 1) Cleaning, transporting, mailing and service call charges.
- 2) Depreciation or damage caused by normal wear, accidents, improper protection or improper use.

***See complete Warranty for details.***

## Serial Number



Example: VIN Number Description

**57CKS4029CT627045**

Demco Side Dump 40' Length No. of Axles Check Digit Model Year Demco Trailer Sequence Identifier Number

**In addition to the VIN number Demco has placed a coded unit number on the chassis and the tub. Call Demco for location.**

Record your trailer model and serial number in the space provided below. Your dealer needs this information to give you prompt, efficient service when you order parts.

MODEL NO. \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

DATE PURCHASED \_\_\_\_\_

**GAWR (Gross Axle Weight Rating):** The maximum gross weight that an axle can support. It is the lowest of axle, wheel, or tire rating. Usually the tire or wheel rating is lower than the axle rating and determines the GAWR. The GAWR is listed on the VIN plate.

**GVWR (Gross Vehicle Weight Rating):** The maximum allowable gross weight of the trailer and its contents. The gross weight of the trailer includes the weight of the trailer and all of the items with it. GVWR is sometimes referred to as GTWR (Gross Trailer Weight Rating) or MGTW (Maximum Gross Trailer Weight). GVWR, GTWR and MGTW are all the same rating.

The sum total of the GAWR for all trailer axles may be less than the GVWR for the trailer, because some of the trailer load is to be carried by the tow vehicle, rather than by the trailer axle(s). The total weight of the cargo and trailer must not exceed the GVWR, and the load on an axle must not exceed its GAWR. The GVWR is listed on the VIN Plate.

**VIN (Vehicle Identification Number):** Identifies the trailer in four sections. The first section of three characters identifies the manufacturer. The second section consists of five characters (VIN positions 4-8), these are the attributes of the vehicle. The third section is one character which is the check digit. The fourth section consists of eight characters (VIN positions 10-17). The first character represents the vehicle model year, the second character represents the plant of manufacture. The third through eighth characters are a sequential production number. The VIN Plate is located on the passenger side of the bulkhead at the front of the trailer.

**PSI (Pounds Per Square Inch):** The tire pressure measurement. The PSI is listed on the VIN Plate.

**Empty Weight:** Some information that comes with the trailer is not a reliable source for 'empty' weight. The shipping documents list average or standard weights and your trailer may be equipped with options. To determine the 'empty' or weight of your trailer, have trailer weighed at a commercial scale.

**Kingpin:** The coupler on the front of the trailer that connects to the fifth wheel plate of the tow vehicle.

**Fifth Wheel Plate:** A device on the tow vehicle that pulls and supports the weight of the trailer.

**Trailer Lighting and Braking Connectors:** A device that connects electrical power from the tow vehicle to the trailer. If your trailer has electric brakes, the connector will also supply power to the brakes from the tow vehicle.

**Landing Gear:** A device on the trailer that is often referred to as the 'jack', used to raise and lower the trailer and for storage of the trailer. To operate the landing gear, pull the crank shaft outward for high gear and push in for low gear speed. Demco uses the Holland - Model Atlas 55 as standard equipment.

**Registration Holder:** Located on the driver side, under the front deck. Use this to keep the registration with the trailer at all times. The registration holder is often referred to as the "manifest" holder.

To The Dealer:

Inspect the trailer thoroughly after shipment to be certain it is functioning properly before delivering it to the customer. The following checklist is a reminder of points to cover. Check off each item as it is found satisfactory or after proper adjustment is made.

### **PRE-DELIVERY CHECKLIST**

- ☐ 1. All hardware properly tightened
- ☐ 2. Proper 5th wheel fit
- ☐ 3. Lubrication of grease fittings
- ☐ 4. Lug nuts are tight
- ☐ 5. All decals properly located and readable
- ☐ 6. Lights function properly
- ☐ 7. Air lines tight and no pinched lines
- ☐ 8. Brakes functioning properly
- ☐ 9. Overall condition (touch up any scratches, clean and polish)
- ☐ 10. Operator's manual

Date Delivered: \_\_\_\_\_

Signature of Salesman or Technician: \_\_\_\_\_

### **DELIVERY**

Review the operator's manual with the customer. Explain the following:

- ☐ 1. Safe operation and service
- ☐ 2. Correct trailer operation
- ☐ 3. Daily and periodic lubrication and maintenance
- ☐ 4. Daily and periodic inspections
- ☐ 5. Trouble shooting
- ☐ 6. Storing trailer
- ☐ 7. Demco parts and service policies
- ☐ 8. Have the customer write the trailer model and serial number in space provided in manual introduction.
- ☐ 9. Give customer the operator's manual and encourage the customer to read the manual carefully.
- ☐ 10. Completion and mailing of warranty registration form.

Date Delivered: \_\_\_\_\_

Signature: \_\_\_\_\_

Model No: \_\_\_\_\_

Serial No: \_\_\_\_\_

Thank you for your recent purchase of a new Demco Side Dump Trailer. The primary objective of Demco is to build and provide you with a quality product. However, in the event that a problem does occur, it is imperative that your warranty registration is on file in order to accurately respond to your specific service circumstances. For your convenience we have four easy ways to register your warranty:

**Register  
Warranty  
One of  
Four Ways**

- Call our toll free number and ask for warranty registration.  
1-888-274-6010
- Fax your completed warranty registration form.  
1-712-262-1022
- Register on-line at:  
[www.demco-products.com](http://www.demco-products.com)
- Complete and mail the warranty registration form.

This manual has been prepared to assist you in the operation of your new trailer and contains information pertaining to safety, operations and all of its parts. Our personnel in sales and service are always available to assist you when questions arise concerning the maintenance or operations of your trailer.

When ordering parts, please refer to part numbers and descriptions as listed throughout this book. All parts and whole goods will be shipped FOB Spencer, IA. Or FOB your regional distributor. Always check merchandise immediately upon receipt for damage or shortage. Note any discrepancy on carrier's bill of lading and notify Sender within 10 days. Returned goods will be subject to a 15% restocking charge. Demco reserves the right to make improvements and modifications on equipment without obligation to change previously built equipment. All prices are subject to change without notice.



## RECOGNIZE SAFETY INFORMATION

- This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Follow recommended precautions and safe operating practices.



## FOLLOW SAFETY INSTRUCTIONS

- Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety sign.
- Learn how to operate the machine and how to use controls properly.
- Do not let anyone operate without instruction.
- Keep your machine in proper working condition.
- Unauthorized modification to the machine may impair the function and/or safety and affect machine life



## PROTECT CHILDREN AND BYSTANDERS

- Before you back, LOOK CAREFULLY behind for children.
- Clear area of children, pets and bystanders.



## HIGHWAY AND TRANSPORT OPERATIONS

Adopt safe driving practices:

- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for a emergency stop to be safe and secure. Keep speed to a minimum.
- Reduce speed prior to turns to avoid the risk of overturning.
- Avoid sudden uphill turns on steep slopes.
- Always keep the tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
- Do not drink and drive.
- Comply with state and local laws governing highway safety and movement of equipment on public roads.
- Use approved accessory lighting and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport.





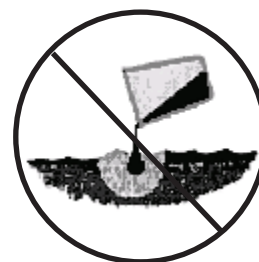
## HIGHWAY AND TRANSPORT OPERATIONS

- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersection, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.
- Always operate the tractor trailer in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.



## AVOID HIGH PRESSURE FLUIDS

- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.
- Search for leaks with a piece of cardboard.
- Protect hands and body from high pressure fluids.
- If an accident occurs, see a doctor immediately.



## DISPOSE OF FLUIDS PROPERLY

- Improperly disposing of fluids can harm the environment and ecology. Before draining any fluids, contact your local environmental agency for the proper waste disposal methods.
- Use proper container when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.
- DO NOT pour oil into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil and other harmful waste.

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH!**



**THIS SYMBOL MEANS:  
ATTENTION!  
BECOME ALERT!  
YOUR SAFETY IS INVOLVED!**

### **SIGNAL WORDS**

Note use of following signal words **DANGER**, **WARNING**, and **CAUTION** with safety messages. The appropriate signal word for each has been selected using the following guidelines:

**DANGER:** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

**CAUTION:** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



### **EQUIPMENT SAFETY GUIDELINES**

Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

Operator should be a responsible adult. **DO NOT ALLOW PERSONS TO OPERATE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

**DO NOT** modify the trailer in anyway. Doing so may impair the function and/or safety and could affect the life of the trailer.

Never exceed the maximum capacity of the trailer. By doing so you risk damage to your Demco trailer. If it's ability to do a job, or to do so safely is in question **DON'T TRY IT.**

Review safety instructions with all users annually.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice instructions on them.



## LOAD DISTRIBUTION SAFETY

The total weight of the load you put on the trailer, plus the empty weight of the trailer itself, must not exceed the trailer's Gross Vehicle Weight Rating (GVWR). You must distribute the load on the trailer such that the load on any tire or axle does not exceed the tire load rating or the Gross Axle Weight Rating (GAWR). If you do not know the weight of your trailer you must weigh it at a commercial scale. See your VIN Plate for proper ratings. Not following these guidelines could cause serious injury or even death.



## TIRE AND LUG NUT SAFETY

It is essential to inspect the trailer tires and wheels before each tow. Trailer tires are more likely to fail compared to car tires due to the heavier load the trailer carries. Please follow the list of guidelines and/or possibilities below that could cause serious injury or even death.

- ◆ Replace the tire before towing if the tire has a bald spot, cut, bulge, is showing any cords, or is cracked.
- ◆ If uneven tread is noticed, take the trailer to a dealer service center for an inspection. Tire imbalance, axle misalignment, or incorrect inflation could cause the uneven tread.
- ◆ Too little of tread will not be adequate enough for traction and can cause loss of control on wet highways.
- ◆ Tire pressure that is improper causes an unstable trailer and could blowout the tire causing loss of control.
- ◆ Check the tire pressure before towing, while the tire is cold. For the recommended PSI, see the VIN Plate or the side wall of the tire.
- ◆ Always order and install tires and wheels with appropriate type and load capacity to meet or exceed gross weight of unit.

The inspection of the tire and wheel lug nuts is necessary since they are prone to loosen after first being assembled. Please follow the list of guidelines and/or possibilities below that could cause serious injury or even death.

- ◆ When towing a new trailer, check the lug nuts after the first 50 to 100 miles of driving.
- ◆ Metal creep between the wheel and the lug nuts will cause wheel to loosen and could come off. Check to make sure the lug nuts are tight before each tow.
- ◆ Improper torque could cause the wheel to separate from trailer. A torque wrench should be used to tighten the lug nuts. If one is not available use a lug wrench then take to a trailer dealer or service garage to tighten them to the required torque.

# BOLT TORQUE, TORQUE DATA FOR STANDARD NUTS, BOLTS, AND CAPSCREWS.

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

**NOTE:** Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.

## Bolt Torque for Standard bolts \*



## Torque Specifications

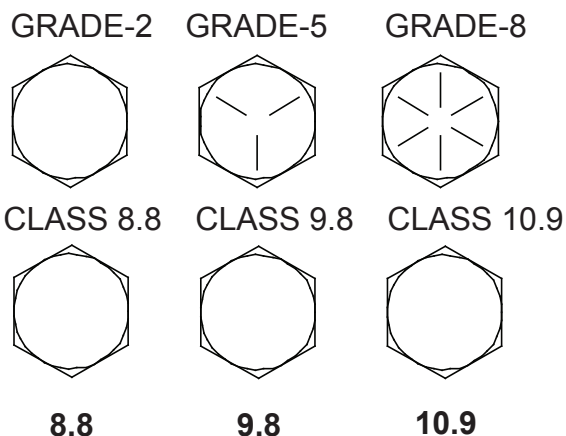
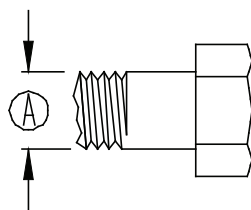
| "A"   | GRADE 2 |       | GRADE 5 |       | GRADE 8 |        |
|-------|---------|-------|---------|-------|---------|--------|
|       | lb-ft   | (N.m) | lb-ft   | (N.m) | lb-ft   | (N.m)  |
| 1/4"  | 6       | (8)   | 9       | (12)  | 12      | (16)   |
| 5/16" | 10      | (13)  | 18      | (25)  | 25      | (35)   |
| 3/8"  | 20      | (27)  | 30      | (40)  | 45      | (60)   |
| 7/16" | 30      | (40)  | 50      | (70)  | 80      | (110)  |
| 1/2"  | 45      | (60)  | 75      | (100) | 115     | (155)  |
| 9/16" | 70      | (95)  | 115     | (155) | 165     | (220)  |
| 5/8"  | 95      | (130) | 150     | (200) | 225     | (300)  |
| 3/4"  | 165     | (225) | 290     | (390) | 400     | (540)  |
| 7/8"  | 170     | (230) | 420     | (570) | 650     | (880)  |
| 1"    | 225     | (300) | 630     | (850) | 970     | (1310) |

## Bolt Torque for Metric bolts \*

Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

\* GRADE or CLASS value for bolts and capscrews are identified by their head markings.

| "A" | CLASS 8.8 |       | CLASS 9.8 |       | CLASS 10.9 |        |
|-----|-----------|-------|-----------|-------|------------|--------|
|     | lb-ft     | (N.m) | lb-ft     | (N.m) | lb-ft      | (N.m)  |
| 6   | 9         | (13)  | 10        | (14)  | 13         | (17)   |
| 7   | 15        | (21)  | 18        | (24)  | 21         | (29)   |
| 8   | 23        | (31)  | 25        | (34)  | 31         | (42)   |
| 10  | 45        | (61)  | 50        | (68)  | 61         | (83)   |
| 12  | 78        | (106) | 88        | (118) | 106        | (144)  |
| 14  | 125       | (169) | 140       | (189) | 170        | (230)  |
| 16  | 194       | (263) | 216       | (293) | 263        | (357)  |
| 18  | 268       | (363) | --        | --    | 364        | (493)  |
| 20  | 378       | (513) | --        | --    | 515        | (689)  |
| 22  | 516       | (699) | --        | --    | 702        | (952)  |
| 24  | 654       | (886) | --        | --    | 890        | (1206) |

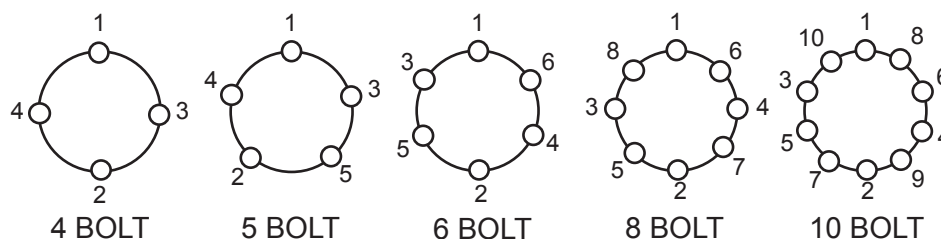


It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is a measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length times force. For example, a force of 90 pounds applied at the end of a wrench one foot long will yield 90 lbs-ft of torque. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

**NOTE:** Wheel nuts or bolts must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheel from your axle.

Be sure to use only the fasteners matched to the cone angle of your wheel (usually 60 degrees or 90 degrees). The proper procedure for attaching your wheels is as follows:

1. Start all bolts or nuts by hand to prevent cross threading.
2. Tighten bolts or nuts in the following sequence.
3. The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque requirements diagram:



4. Wheel nuts or bolts should be torqued before first road use and after each wheel removal. Check and re-torque after the first 50 miles and again at 100 miles. Check periodically thereafter.

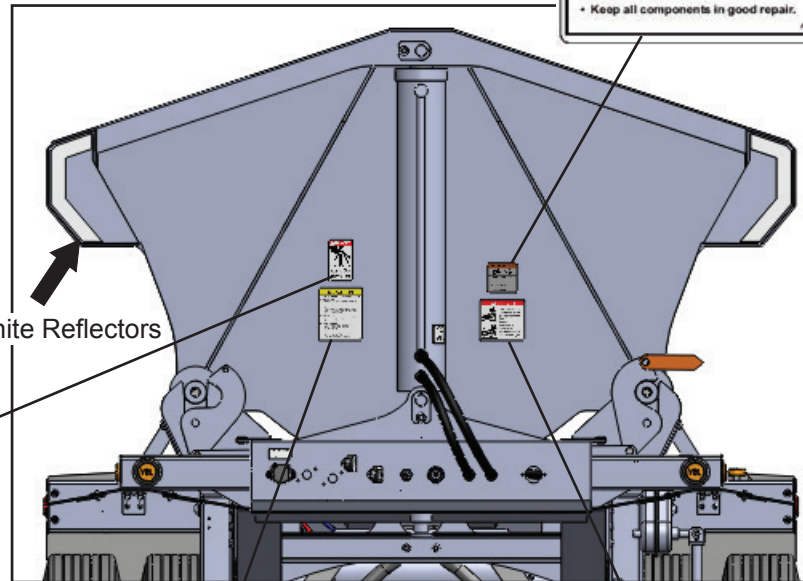
## WHEEL AND RIM TORQUE REQUIREMENTS

| Description          | Application               | Minimum Torque<br>(lbs-ft) | Maximum Torque<br>(lbs-ft) |
|----------------------|---------------------------|----------------------------|----------------------------|
| 1/2" Cone Nut        | 12" – 13" Wheel           | 50                         | 65                         |
|                      | 14" – 15" Wheel           | 90                         | 120                        |
| 5/8" Cone Nut        | Flat Disc Wheel           | 175                        | 225                        |
| 3/4" Hex Nut         | Demountable<br>Ring Clamp | 210                        | 260                        |
| 3/4" Spherical Nut   | Single Wheel              | 450                        | 500                        |
|                      | Inner Dual                | 450                        | 500                        |
| 1-1/2" Spherical Nut | Outer Dual                | 450                        | 500                        |
| 5/8" Flange Nut      | Wheels                    | 275                        | 325                        |

**Important:** Install new safety decals and reflectors if the old decals and reflectors are destroyed, lost, painted over or cannot be read. When parts are replaced that have decals or reflectors, make sure you install a new decal with each new part.



White Reflectors



1AQAP3669 (1) DANGER (LoadDumping Safety) 8"W x 5-1/2"L

1AQAP3670 (1) CAUTION (Side Dump Checklist and Operating Instructions) 6"W x 7"L

1AQAP2914 (1) Decal, WARNING, High Pressure Fluid

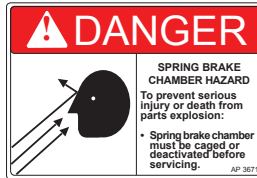
1AQAP4361 (2) Decal, Frame Area Maintenance, Trailer

**NOTE:** New decals and reflectors are available from your dealer.

AP4361



AP3671



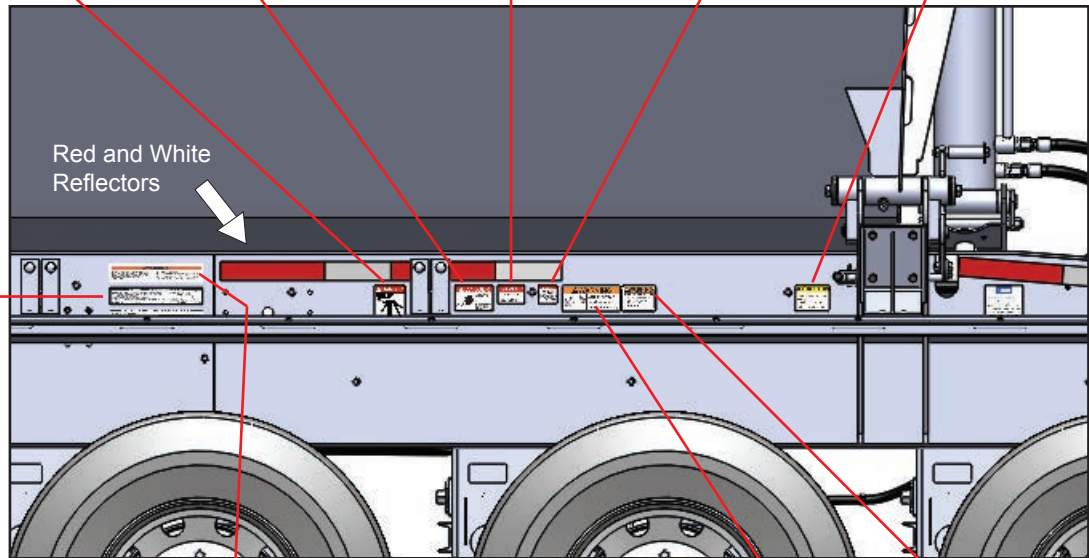
AP3672



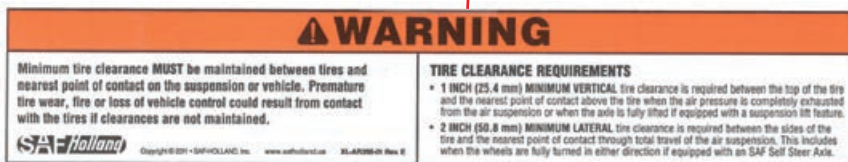
AP3673



AP4097



Red and White Reflectors



AP4478



AP2987



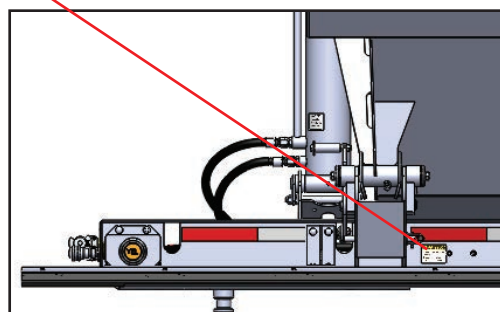
AP4281



AP4456

**Important:** Install new safety decals and reflectors if the old decals and reflectors are destroyed, lost, painted over or cannot be read. When parts are replaced that have decals or reflectors, make sure you install a new decal with each new part.

AP4097



AP 2987 (1) Decal, WARNING, Suspension Hazard 2-3/4" x 6-1/4"

\* AP 3671 (2) DANGER Spring Brake Chamber Hazard 2-3/4"W x 4"L

\* AP 3672 (2) DANGER Equipment Hazard 2"W x 3"L

\* AP 3673 (2) DANGER Emergency Parking Brake Hazard 2"W x 2" L

AP 4097 (2) Decal, CAUTION, lock tub latches

AP 4281 (1) Decal, WARNING, Wheel Nut Torque, 2-3/4" x 3-1/4"

AP 4361 (1) Decal, Frame Area Maintenance, Trailer

AP 4478 (1) Decal, Neway Tire Clearance

AP 4556 (1) Decal, Swing Align Instructions SAF-Holland, XL-AR 435

\* Safety decals are located at the rear of the trailer on both sides.

**HOW TO APPLY SAFETY DECALS:**

1. Be sure that the installation area is clean and dry.
2. Be sure temperature is above 50°F(10°C).
3. Decide on exact position before removing the backing paper.
4. Remove smallest portion of split backing paper.
5. Align decal over specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back remaining paper and carefully smooth remaining portions of decal into place.
7. Small air pockets can be pierced with a pin and smoothed out using a piece of decal backing paper.

Knowing how to couple and uncouple correctly is basic to safe operation of combination vehicles. General coupling and uncoupling steps are listed below. There are differences between different trucks, so learn the details of coupling and uncoupling the truck (s) you will operate.

**WARNING:**

**INCORRECT COUPLING AND UNCOUPLING CAN RESULT IN SERIOUS INJURY OR DEATH.**

**Coupling Tractor-Semitrailers****Step 1.** Inspect Fifth Wheel

- Check for damaged/missing parts.
- Check to see that mounting to tractor is secure, no cracks in frame, etc.
- Be sure that the fifth wheel plate is greased as required. Failure to keep the fifth wheel plate lubricated could cause steering problems because of friction between the tractor and the trailer.
- Check if fifth wheel is in proper position for coupling.
  - Wheel tilted down towards rear of tractor.
  - Jaws open.
  - Safety unlocking handle in the automatic lock position.
- If you have a sliding fifth wheel, make sure it is locked.
- Make sure the trailer kingpin is not bent or broken.

**Step 2.** Inspect Area and Chock Wheels

- Make sure area around the vehicle is clear.
- Be sure the trailer spring brakes are on.

**Step 3.** Position Tractor

- Pull the tractor directly in front of the trailer. (Never back under the trailer at an angle, because you might push the trailer sideways and break the landing gear.)
- Check position, using outside mirrors, by looking down both sides of the trailer.

**Step 4.** Back Slowly

- Back until fifth wheel just touches the trailer.
- Don't hit the trailer.

**Step 5.** Secure Tractor

- Put on the parking brake.
- Put transmission in neutral.

**Step 6. Check Trailer Height**

- The trailer should be low enough that it is raised slightly by the tractor when the tractor is backed under it. Raise or lower the trailer as needed. (If trailer is too low, tractor may strike and damage nose of trailer; if trailer is too high, it may not couple correctly.)
- Check that the kingpin and fifth wheel are aligned.

**Step 7. Connect Air Lines to Trailer**

- Check glad hand seals and connect tractor supply (emergency) air line to trailer supply (emergency) glad hand.
- Check glad hand seals and connect tractor control (service) air line to trailer control (service) glad hand.
- Make sure air lines are safely supported where they won't be crushed or caught while tractor is backing under the trailer.

**Step 8. Supply Air to Trailer**

- From cab, push in "air supply" knob or move tractor protection valve control from the "emergency" to the "normal" position to supply air to the trailer brake system.
- Wait until the air pressure is normal.
- Check brake system for crossed air lines.
  - Shut engine off so you can hear the brakes.
  - Apply and release trailer brakes, listen for sound of trailer brakes being applied and released. You should hear the brakes move when applied and air escape when the brakes are released.
  - Check air brake system pressure gauge for signs of major air loss.
- When you are sure trailer brakes are working, start engine.
- Make sure air pressure is up to normal.

**Step 9. Lock Trailer Brakes**

- Pull out the "air supply" knob, or move the tractor protection valve control from "normal" to "emergency."

**Step 10. Back Under Trailer**

- Use lowest reverse gear.
- Back tractor slowly under trailer to avoid hitting the kingpin too hard.
- Stop when the kingpin is locked into the fifth wheel.

**Step 11.** Check Connection for Security

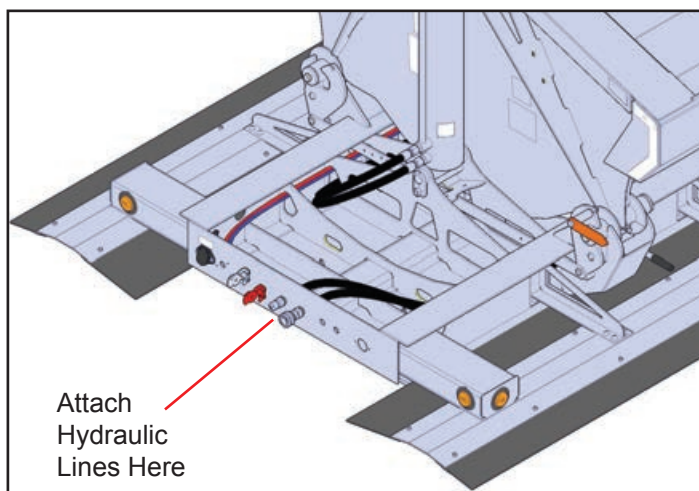
- Raise trailer landing gear slightly off ground.
- Pull tractor gently forward while the trailer brakes are still locked onto the tractor.

**Step 12.** Connect Hydraulic Couplers to Trailer

- Connect hydraulic hoses to trailer remotes.



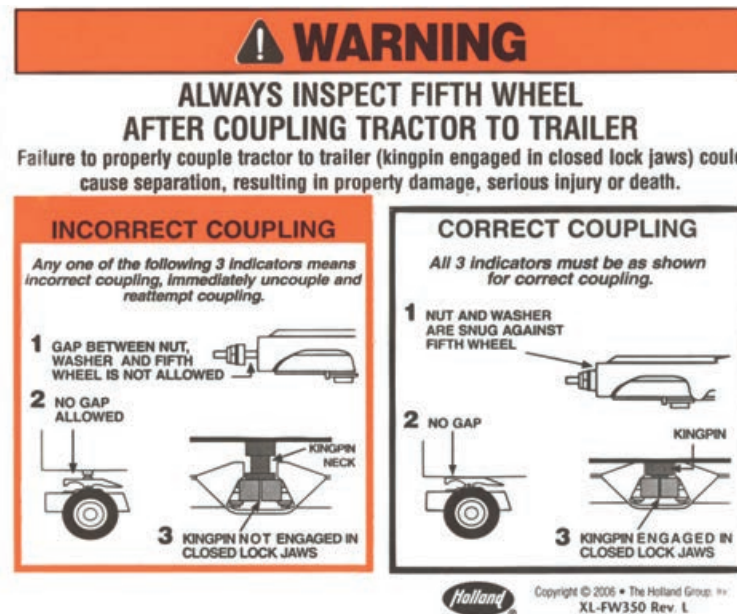
**WARNING:** Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic systems.

**Step 13.** Secure Vehicle

- Put transmission in neutral.
- Put parking brakes on.
- Shut off engine and take key with you so someone else won't move truck while you are under it.
- Make sure air and electrical lines will not hit any moving parts of the vehicle.

## Step 14. Inspection Coupling

- Use a flashlight if necessary.
- Make sure there is no space between upper and lower fifth wheel. If there is space, something is wrong (kingpin may be on top of closed fifth wheel jaws; trailer would come loose very easily).
- Go under trailer and look into the back of the fifth wheel. Make sure the fifth wheel jaws have closed around the shank of the kingpin.
- Check that the locking lever is in the “lock” position.
- Check that the safety catch is in position over locking lever. (On some fifth wheels, the catch must be put in place by hand.)
- If the coupling isn’t right, don’t drive the coupled unit; get it fixed.



## Step 15. Connect the Electrical Cord and Check Air Lines

- Plug the electrical cord into the trailer and fasten the safety catch.
- Check both air lines and electrical line for signs of damage.
- Make sure air and electrical lines will not hit any moving parts of the vehicle.

**Step 16.** Raise Front Trailer Supports (Landing Gear)

- Use low gear range (if so equipped) to begin raising the landing gear. Once free of weight, switch to the high gear range.
- Raise the landing gear all the way up. (Never drive with landing gear only part way up as it may catch on railroad tracks or other things.)
- After raising the landing gear, secure the crank handle safely.
- When full weight of trailer is resting on tractor:

Check for enough clearance between rear of tractor frame and landing gear. (When tractor turns sharply, it must not hit landing gear.)

Check that there is enough clearance between the top of the tractor tires and the nose of the trailer.

## Uncoupling Tractor-Semitrailers

The following steps will help you to uncouple safely.

**Step 1.** Position Rig

- Make sure surface of parking area can support weight of trailer.
- Have tractor lined up with the trailer. (Pulling out at an angle can damage landing gear.)

**Step 2.** Ease Pressure on Locking Jaws

- Shut off trailer air supply to lock trailer brakes.
- Ease pressure on fifth wheel locking jaws by backing up gently (this will help you release the fifth wheel locking lever).
- Put parking brakes on while tractor is pushing against the kingpin. This will hold rig with pressure off the locking jaws.

**Step 3.** Lower the Landing Gear

- If trailer is empty – lower the landing gear until it makes firm contact with the ground, turn crank in low gear a few extra turns; this will lift some weight off the tractor. (Do not lift trailer off the fifth wheel.) This will:
  - Make it easier to unlatch fifth wheel;
  - Make it easier to couple next time.

**Step 4.** Disconnect Air Lines, Electrical Cable and Hydraulic Lines

- Disconnect air lines from trailer. Connect air line glad hands to dummy couplers at back of cab, or couple them together.
- Hang electrical cable with plug down to prevent moisture from entering it.
- Hang hydraulic lines so dirt and moisture will not enter the couplers.
- Make sure lines are supported so they won't be damaged while driving the tractor.

**Step 5.** Unlock Fifth Wheel

- Raise release handle lock.
- Pull the release handle to "open" position.
- Keep legs and feet clear of the rear tractor wheels to avoid serious injury in case the vehicle moves.

**Step 6.** Pull Tractor Partially Clear of Trailer

- Pull tractor forward until fifth wheel comes out from under the trailer.
- Stop with tractor frame under trailer (prevents trailer from falling to ground if landing gear should collapse or sink).

**Step 7.** Secure Tractor

- Apply parking brake.
- Place transmission in neutral.

**Step 8.** Inspect Trailer Supports

- Make sure ground is supporting trailer.
- Make sure landing gear is not damaged.

**Step 9.** Pull Tractor Clear of Trailer

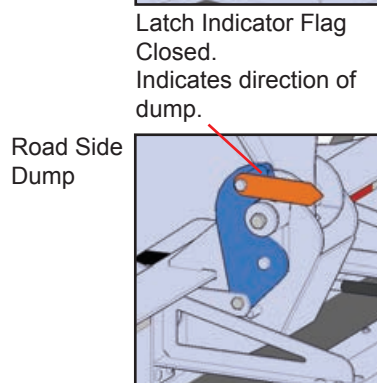
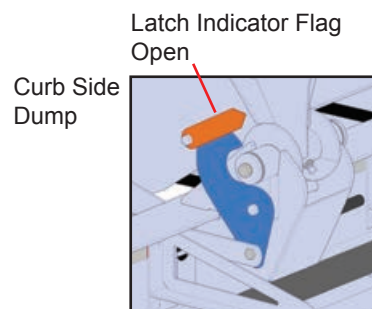
- Release parking brakes.
- Check the area and drive tractor clear.

## Setting the tub to dump curb side or roadside.



### CAUTION:

Make sure the latches on each end of the tub are locked in the same direction. Failure to do so will result in damage to the trailer, and/or tractor.



Before dumping the tub determine which direction the tub is going to dump when raised.

**All steps are performed on the driver's side only.**

### NOTE:

The following steps must be performed on both the front and the rear pivots.

#### Step two

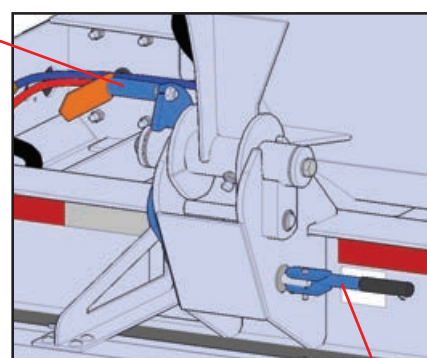
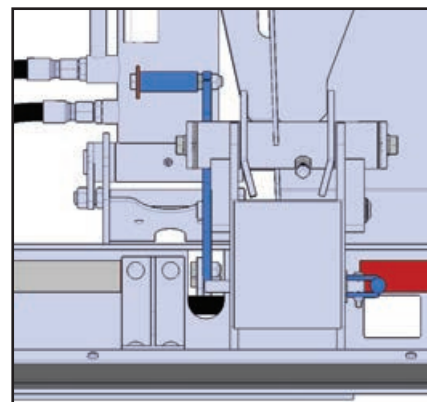
**Step one:** (Driver side only)  
Pull latch out to release pivot lock handle.

#### Step two:

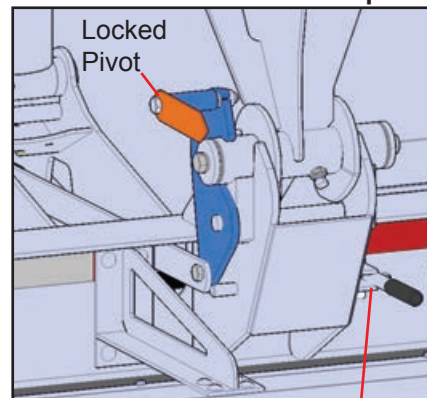
Pull bolt handle towards pivot pin to lock the tub in the left-hand (roadside) dump position.

Push bolt handle away from pivot pin to lock tub in the right-hand (curb side) dump position.

Return latch to the locked position.

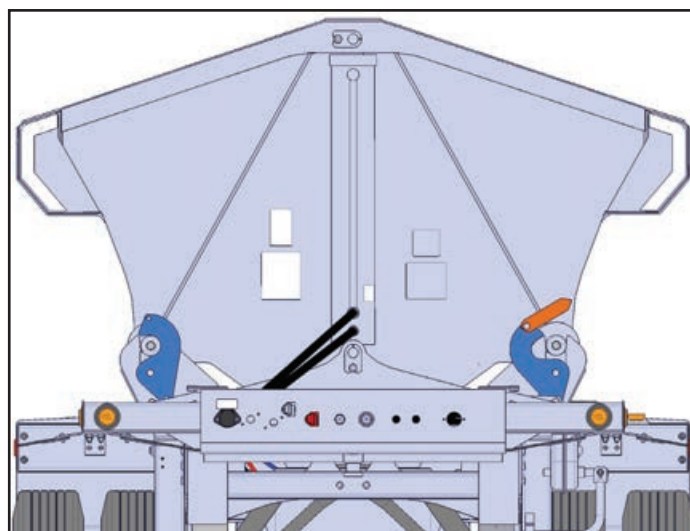


Step one



Locked Position

**Locked Position for right-hand dumping**



**First time hookup  
charging cylinders****DANGER:**

Clear area around trailer of bystanders before charging system.



Tilt tub part way several times to fill hydraulic cylinders before extending cylinders completely. Extend and retract cylinders completely. Check for proper operation.

**Filling and  
dumping trailer****DANGER:**

Clear area around trailer of bystanders before filling and dumping trailer.

**Filling:**

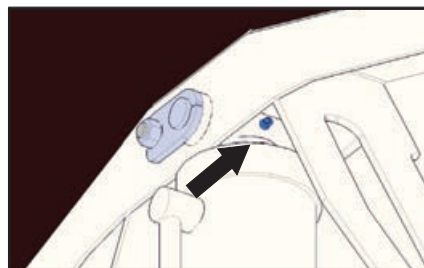
- The 34' tub holds 24 cubic yards when level full.
- Stand clear of trailer during filling.

**Dumping:**

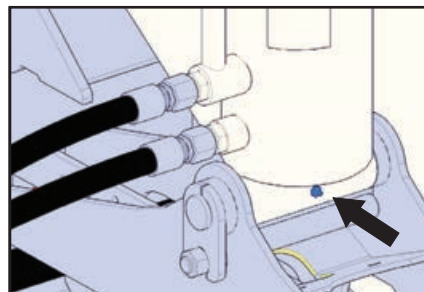
- Stand clear of load during dumping operation.
- Operator must remain at controls during dumping.
- Tub should dump in 20 seconds or less.
- Do not stop cylinder extension in middle of cycle, equipment may upset.
- Do not attempt to dump load on uneven or unstable ground.

**Lubrication Maintenance**

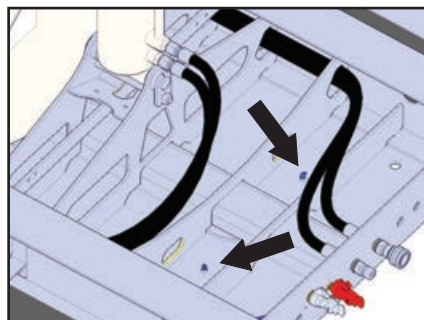
- Grease pivot point at top of lift cylinders front and rear weekly.



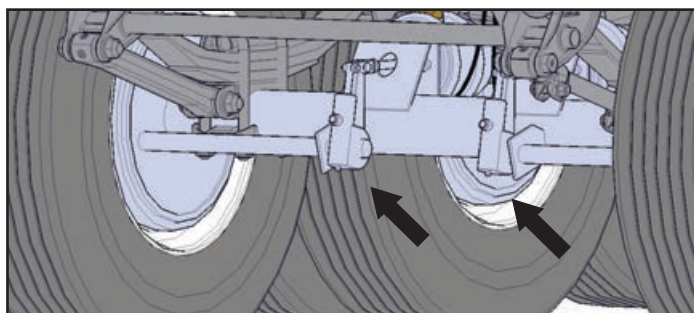
- Grease pivot point at bottom of lift cylinders front and rear weekly.



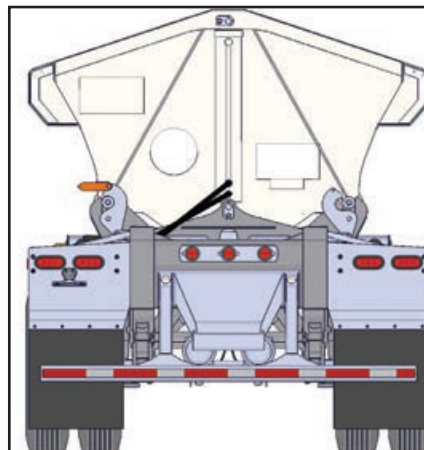
- Grease fifth wheel zerks under tub weekly.



- Grease slack adjuster pivot on all wheels monthly.

**Inspect lights daily**

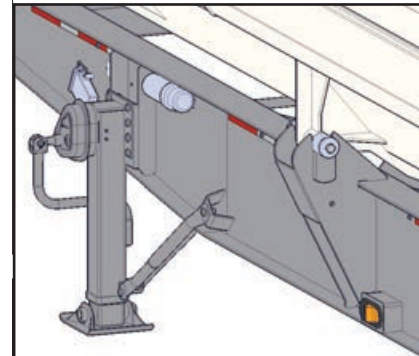
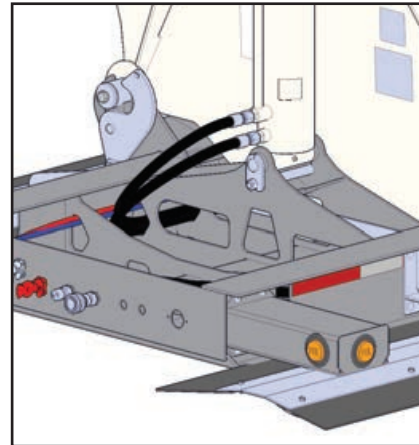
- Turn on truck lights and 4 way flashers. Walk around tractor and trailer to inspect that all lights are operating.

**CAUTION:**

Follow maintenance safety procedures on page 28 before greasing fifth wheel zerks.

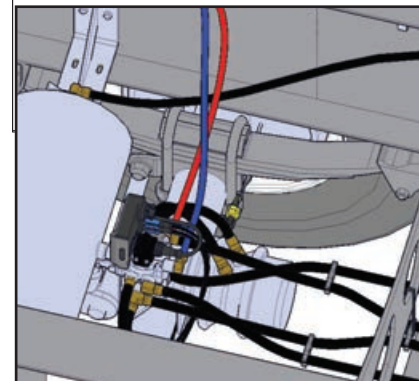
## Maintenance

### Inspection of lights



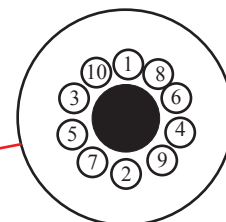
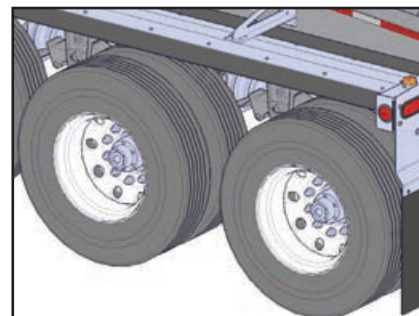
### Inspect hydraulic and air lines daily

- Inspect hydraulic air lines and valves for leaks, rubbing or crimped lines.



### Inspect tires and lug nuts daily

- Check Tire pressure. Inflate tires to pressure recommended by the tire manufacturer. Maximum tire pressures are molded into the tire sidewall
- Check all hubs for loose lug nuts.
- Re-torque all wheel lugs nuts. Recommended torque dry: 450-500 ft. lbs. See sequence below.
- Check all hubs for proper oil level.
- Check all valve stems for proper mounting.
- Check that tires and rims do not rub.
- Tighten flange nuts to recommended torque using sequence shown.



## Working on hydraulic systems



### **DANGER:**

Clear area around trailer of bystanders before raising tub.



### **DANGER:**

Do not preform maintenance on tub body without physically blocking body and cylinders to prevent lowering.



Before performing maintenance between the frame rails, the trailer should be hooked to tractor on a level surface, fully dumped, then hydraulic hoses uncoupled.

If service requires the tub to be partially dumped follow the proper safety procedures.

1. Make two tub braces using 1/4" x 3" x 3" angle iron.
2. Raise tub and insert angle iron over cylinder rod on each end. (See Photo)
3. After tub is secured in raised position:
  - a. Disengage the PTO; relieve the pressure from the hydraulic system by jogging control valve both directions to relieve pressure from the system.
  - b. When working on hydraulic systems, **EXTREME** caution must be used to avoid injuries from high pressure or hot oil.
  - c. Never attempt to work on loaded trailer.



1/4" x 3" x 3" Angle Iron  
(20" Min. Length)



**WARNING:** Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic systems.

## Tub and frame inspections

An important phase of trailer upkeep and maintenance is the inspection and repair, if any, of all structural steel members of the trailer frame and tub. It is readily apparent that the frame and tub must be one solid unit to carry the load safely and quickly without danger of accident or further damage to the trailer. This also prevents subsequent major repair, cost and trailer down time.

The need for a complete frame and tub inspection stems from various reasons:

- Trailer loaded to maximum rated capacity, or greater.
- Rough handling may also cause structural failures of varying degrees. The failures are the results of metal fatigue due to flexing, twisting, distortion.

Frame and tub failure will show up in the steel frame members as weld cracks, cracked and loosened steel sections.

To detect any fractures before they become major failures:

- Once a month thoroughly inspect the trailer for any sign of failure and correct any defects.
- It is desirable to have the trailer completely washed down so all the joints and welds may be closely viewed.

**Break-in procedure**

After the first twenty-four (24) hours of use, perform the following maintenance procedures:

1. Re-torque all suspension bolts and axle u-bolts. Torque specifications (as shown on the following page) are also on a decal located on the trailer sub-frame above the suspension.
2. Re-torque all wheel lug nuts.
3. Check all clearance lights, turn signal indicators, and stop lights.
4. Inspect all brake hoses and airlines for kinks and leaks.
5. Check hub oilers for leaks or low levels.
6. Check pintle hitch and/or push block mounting bolts for proper torque. (380 ft. lbs. Dry)
7. Inspect hydraulic lines and valves for leaks, chaffing or crimped lines.

## **Pre-Trip Checklist**

**Perform the Pre-Trip checklist whenever the tractor-trailer has been left unattended.**

1. Check that 5th wheel is properly coupled and locked.
2. Check that air hoses are securely attached to the trailer gladhands.
3. Check that electrical cord is properly connected to the trailer plug.
4. Walk around trailer to check conditions of tires, lights, and landing gear.
5. Check tub dump latches to ensure they are both set for dumping to the same side.

## **Daily Inspection Checklist**

**Perform the Daily Inspection Checklist each day before operating your side dump trailer.**

1. Perform the Pre-Trip Checklist.
2. Inspect air and hydraulic lines for leaks, crimps, and abrasions.
3. Visually inspect tires for damage. Check tire air pressure. Check hubs for loose lug nuts. Check hub caps for damage.
4. Check hub oil level and refill as needed.
5. Check trailer chassis and tub for loose fasteners of damaged parts.
6. Turn on lights and flashers. Walk around trailer to check that all lights are working. Replace any lights that are not working.

**Perform the Weekly Inspection Checklist at the beginning of each week or if the trailer has not been used for more than a week.**

1. Perform the Pre-Trip and Daily Inspection Checklists.
2. Grease the top and bottom cylinder pins on the front and rear cylinders.
3. Grease the fifth wheel using the two grease zerks located on top of the fifth wheel plate either side of the king pin. (If zerks are located under the tub, fully dump the tub to gain access to the zerks. See Maintenance Safety, page 28)

*Every 2,000 miles or 30 Days, perform the following checks on the unit:*

**AIR BRAKE SYSTEM**

- A. Check air brake hose and Synflex lines for chaffing and crimping.

**TIRES**

- A. Check for signs of uneven tire wear.
- B. Check tires for cuts, side wall breaks, tread cracking, or separation or feathered wear.
- C. Check duals for uneven wear, and rotate if necessary.

**BRAKE DRUMS AND WHEELS**

- A. Check and determine how much brake lining has worn.
- B. Inspect closely for worn stud holes, loose cap nuts and/or clamp nuts.
- C. Inspect wheel, rims, and hubs for cracks, breaks or other damage.
- D. Grease slack adjusters

**SUSPENSION ASSEMBLIES**

- A. Inspect rubber bushings.
- B. Inspect mounting brackets for damage or broken parts.
- C. Make certain lock nuts on alignment adjusting screws are tight.
- D. Check and re-torque all suspension bolts and pushblock bolts.

**HYDRAULIC SYSTEM**

- A. Check hydraulic hoses for chaffing, crimping and fasten securely.
- B. Check for hydraulic leaks.
- C. Make sure valves are not leaking and are operating properly.
- D. Hydraulic system is entirely dependent upon towing vehicle for its supply and control. Therefore, you must maintain hydraulic system on tow vehicle. Tow vehicle should maintain 30 GPM, oil flow at 2500 PSI.

***Every 25,000 miles or yearly, whichever comes first, perform the following checks:***

#### **AIR BRAKE SYSTEM**

- A. Inspect the brake linings and reline if necessary.
- B. Check the brake drum for distortion, heat checking, out of roundness and/or scoring.
- C. Remove the brake shoes to examine bushings and anchor pins.
- D. Examine the brake cam, brake cam rollers and/or brake shoe wear plate for wear.

***Every 50,000 miles or yearly, perform the following checks:***

#### **AIR BRAKE SYSTEM**

- A. Inspect the brake chambers. Replace if damaged.



**CAUTION:** WE DO NOT RECOMMEND DISASSEMBLING SPRING BRAKE CHAMBERS. REPLACE THE ENTIRE SPRING BRAKE.

- B. Check slack adjuster bushing and brake chamber yoke pin for wear.

**NOTE:** PERFORM THE ABOVE MAINTENANCE ON THE MINIMUM SCHEDULE, WHETHER ON THE MILE OR CALENDAR BASIS, WHICHEVER COMES FIRST.



**CAUTION:** BE CERTAIN THE PRECEDING CHECKLIST INSPECTIONS HAVE BEEN PERFORMED.

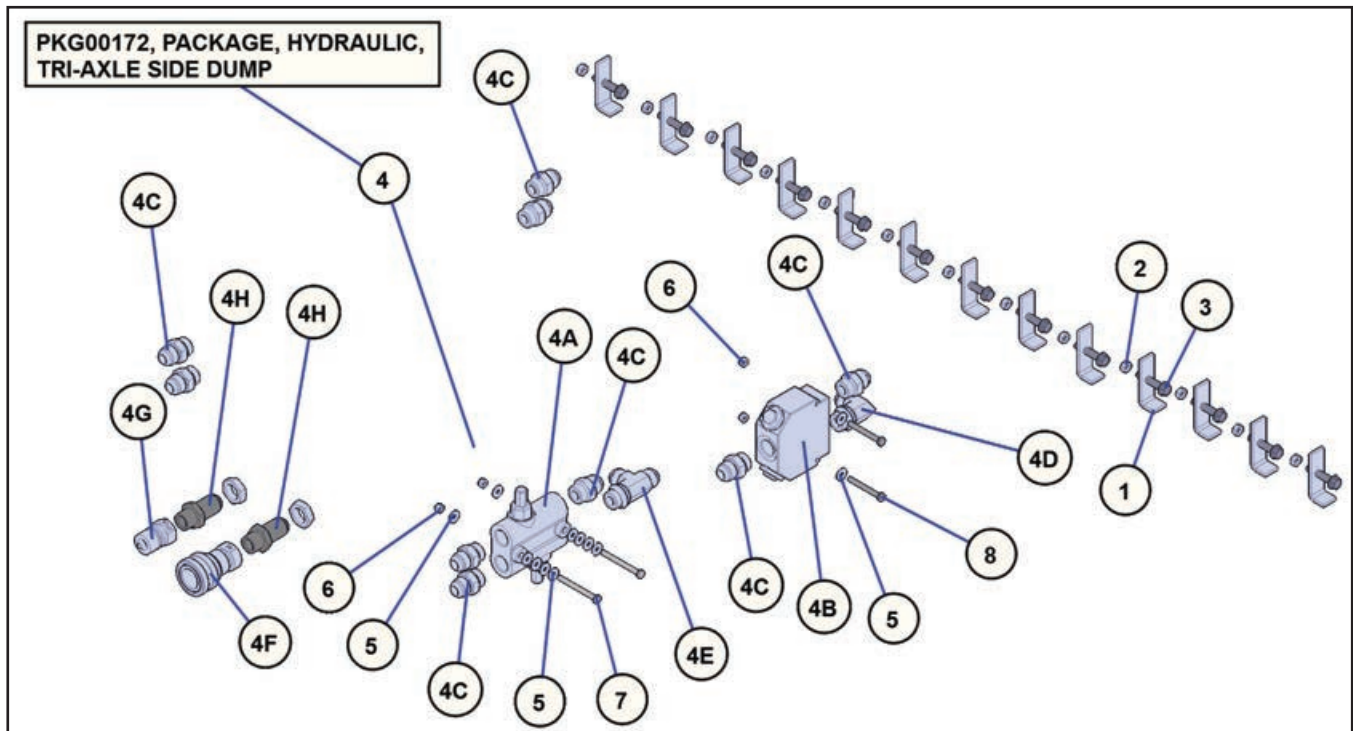
#### **AIR PRESSURE BRAKE SYSTEM**

The air system of a trailer is entirely dependent upon the air brake system of the towing vehicle for its air supply and control. Therefore, the air brake system of the towing vehicle must be in good condition, or it will be impossible to obtain good brake performance on the trailer.

#### **HYDRAULIC PRESSURE SYSTEM**

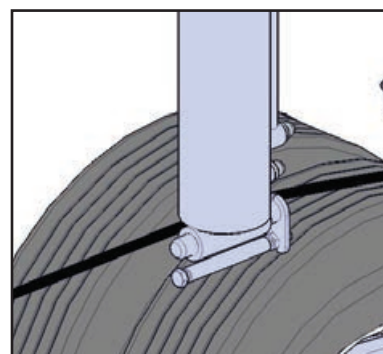
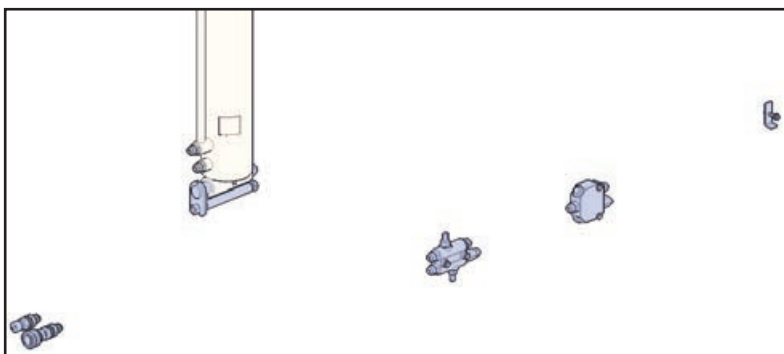
The hydraulic systems of these trailers are entirely dependent upon the hydraulic system of the towing vehicle for its oil supply, pressure and control. Therefore, the hydraulic pressure system of the towing vehicle must be in good condition, with steady clean oil supply for proper dumping performance on the trailer.

**NOTE:** CLEAN HYDRAULIC SYSTEM AT LEAST ONCE PER YEAR.



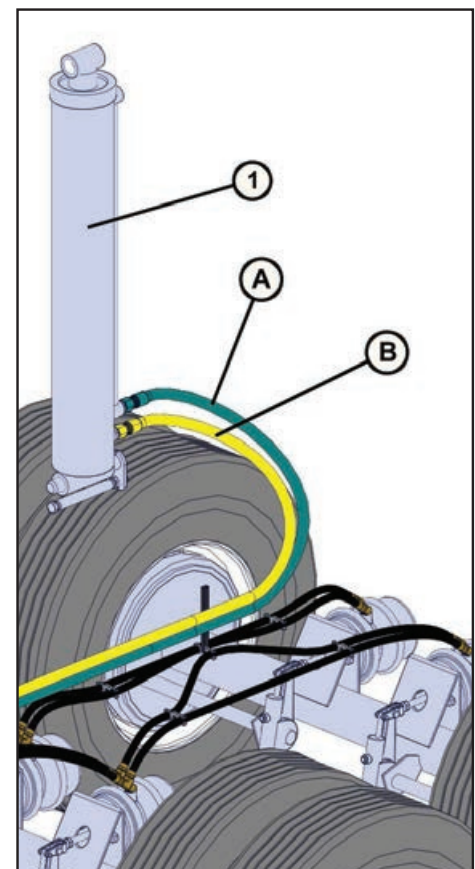
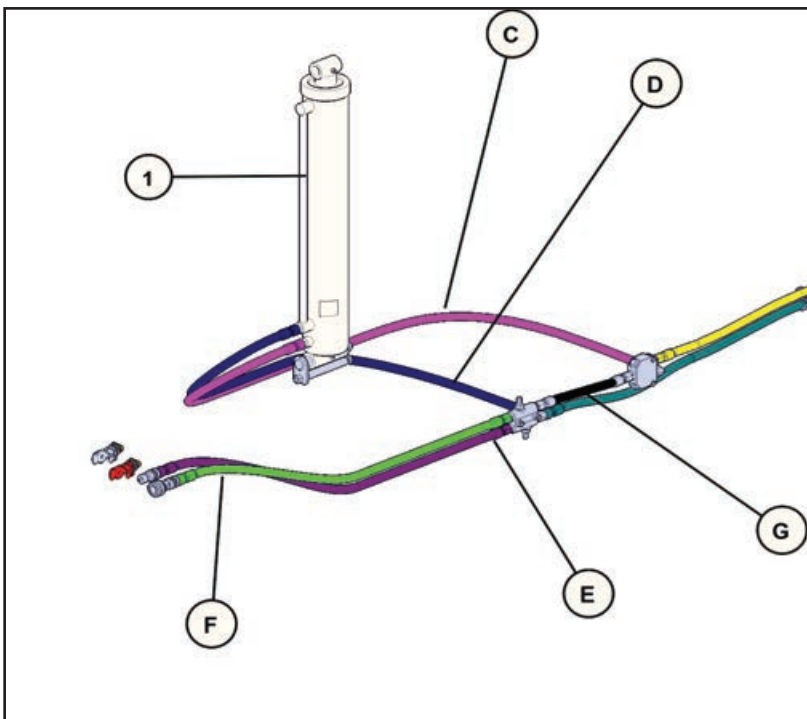
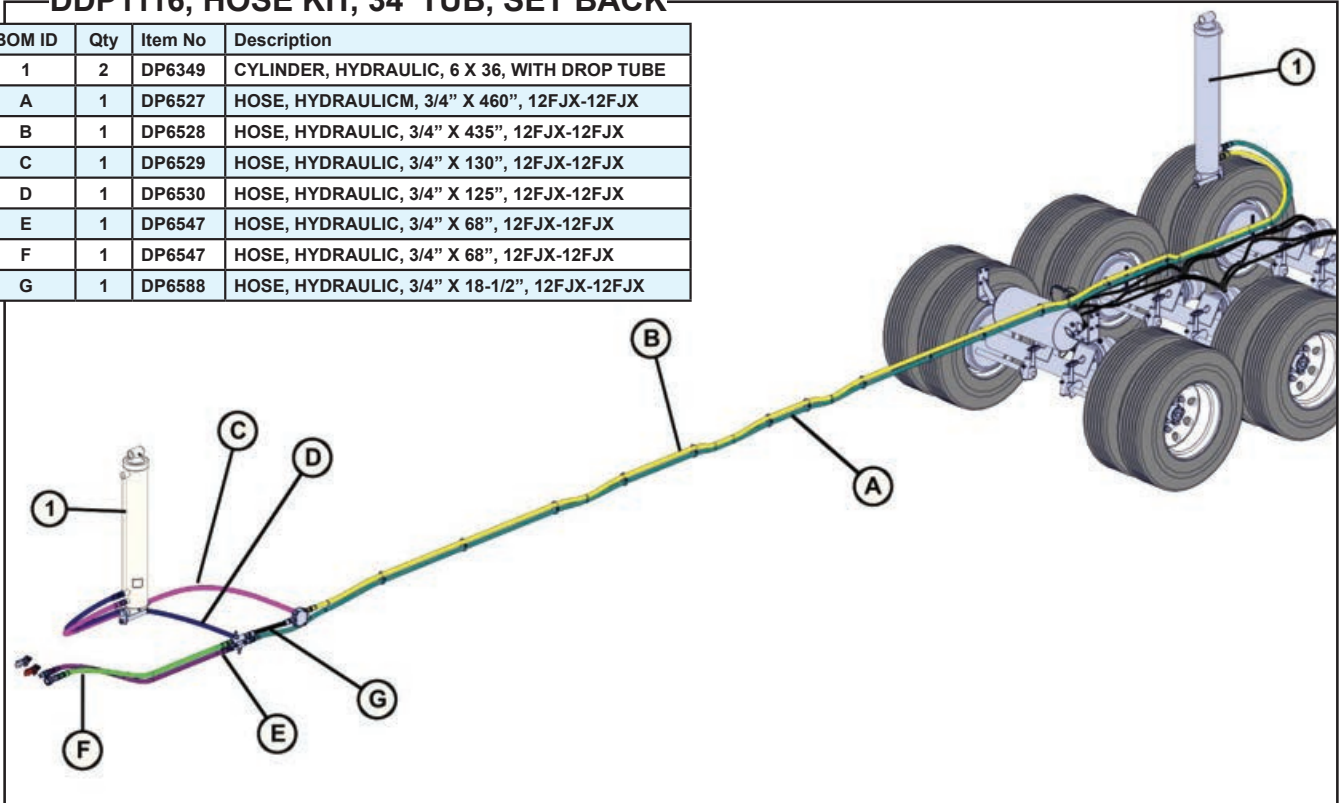
## 090018, STANDARD HYDRAULIC PACKAGE, SET BACK 34' TUB

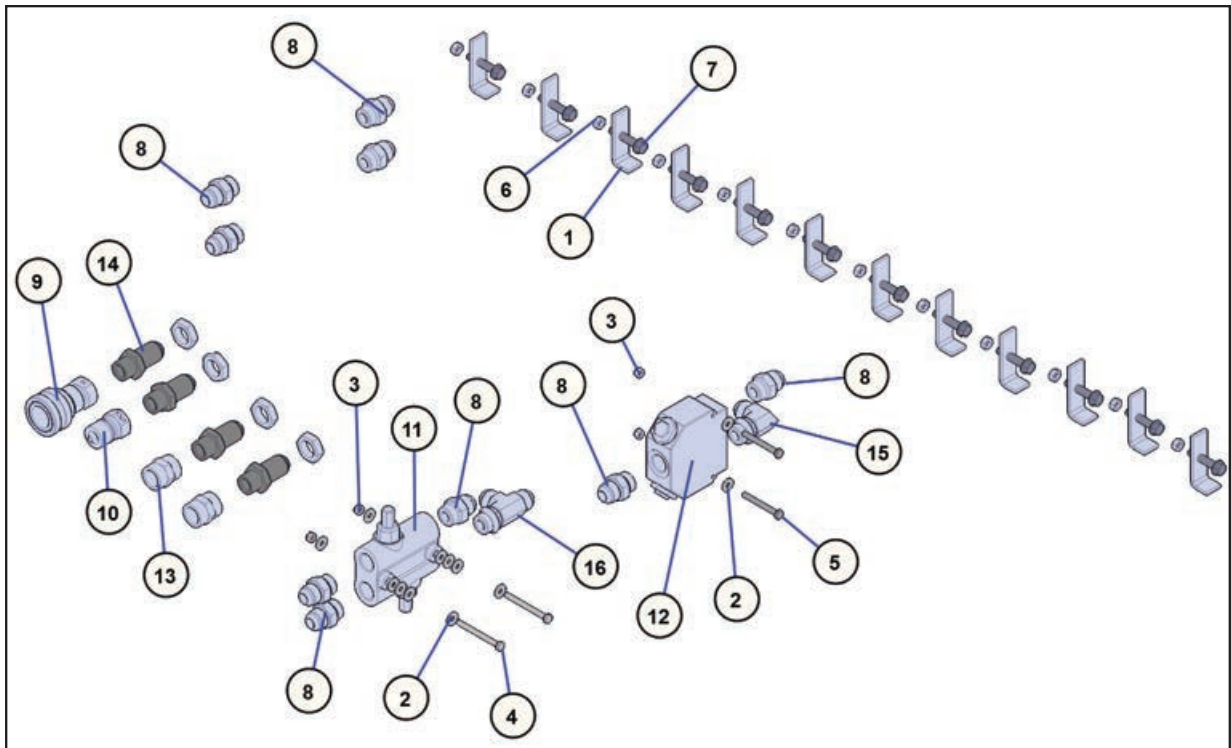
| BOM ID | Qty | Item No  | Description                                         |
|--------|-----|----------|-----------------------------------------------------|
| 1      | 13  | AM8053   | HOSE RETAINER, SINGLE                               |
| 2      | 13  | BP3612   | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 3      | 13  | BP3685   | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED    |
| 4      | 1   | PKG00172 | PACKAGE, HYDRAULIC, TRI-AXLE SIDE DUMP              |
| 4A     | 1   | DP6302   | VALVE, DOUBLE RELIEF, PRINCE, H-L                   |
| 4B     | 1   | DP6303   | VALVE, PROPORTIONAL DIVIDER, PRINCE                 |
| 4C     | 9   | DP4368   | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12           |
| 4D     | 1   | DP6538   | ADAPTER, 12MJ-12MSAE 90 DEGREE, 6801-12             |
| 4E     | 1   | DP6557   | TEE, 12MJ-12MSAE-12MJ, 6804-12                      |
| 4F     | 1   | DP6300   | COUPLER, QUICK, FEMALE, 3/4" NPT                    |
| 4G     | 1   | DP6301   | COUPLER, QUICK, MALE, 3/4" NPT                      |
| 4H     | 2   | DP6495   | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12 |
| 5      | 12  | BP3055   | WASHER, FLAT, 1/4", PLATED                          |
| 6      | 4   | BP3587   | NUT, HEX, 1/4" NYLOCK                               |
| 7      | 2   | BP3588   | HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED        |
| 8      | 2   | BP3589   | HEX CAP SCREW, 1/4"-20 x 2-1/2" GRADE 8             |



**DDP1116, HOSE KIT, 34' TUB, SET BACK**

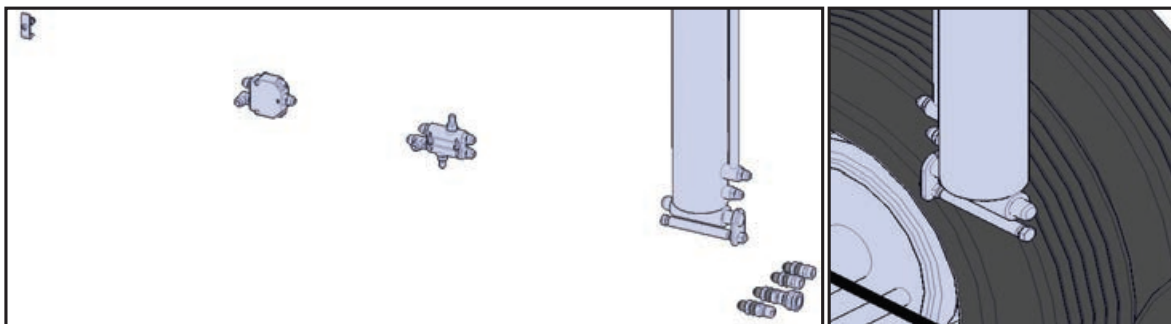
| BOM ID | Qty | Item No | Description                                  |
|--------|-----|---------|----------------------------------------------|
| 1      | 2   | DP6349  | CYLINDER, HYDRAULIC, 6 X 36, WITH DROP TUBE  |
| A      | 1   | DP6527  | HOSE, HYDRAULIC, 3/4" X 460", 12FJX-12FJX    |
| B      | 1   | DP6528  | HOSE, HYDRAULIC, 3/4" X 435", 12FJX-12FJX    |
| C      | 1   | DP6529  | HOSE, HYDRAULIC, 3/4" X 130", 12FJX-12FJX    |
| D      | 1   | DP6530  | HOSE, HYDRAULIC, 3/4" X 125", 12FJX-12FJX    |
| E      | 1   | DP6547  | HOSE, HYDRAULIC, 3/4" X 68", 12FJX-12FJX     |
| F      | 1   | DP6547  | HOSE, HYDRAULIC, 3/4" X 68", 12FJX-12FJX     |
| G      | 1   | DP6588  | HOSE, HYDRAULIC, 3/4" X 18-1/2", 12FJX-12FJX |

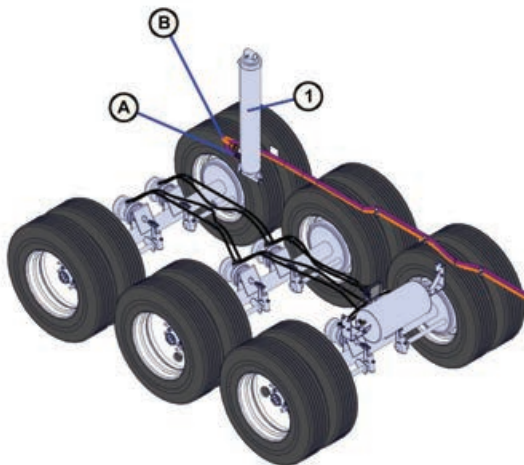




## 090019, STANDARD HYDRAULIC PACKAGE, SET FORWARD 34' TUB

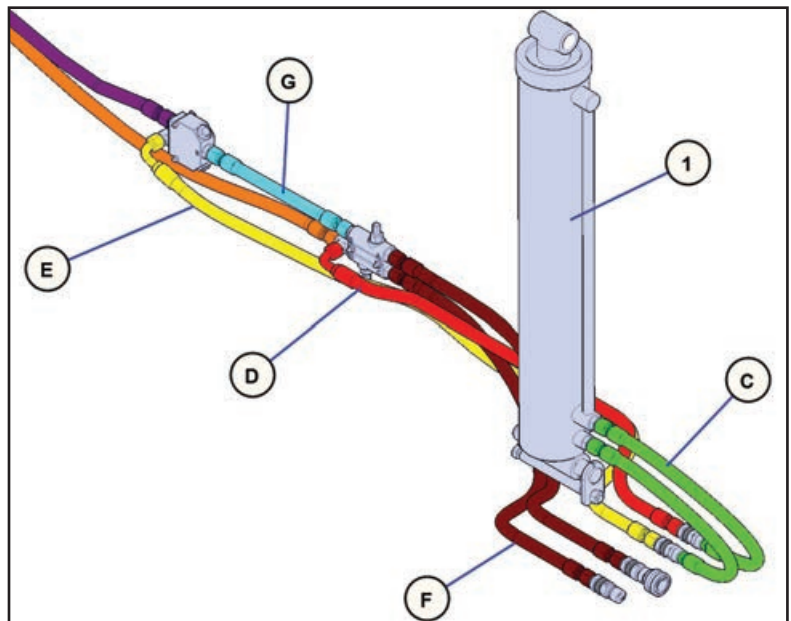
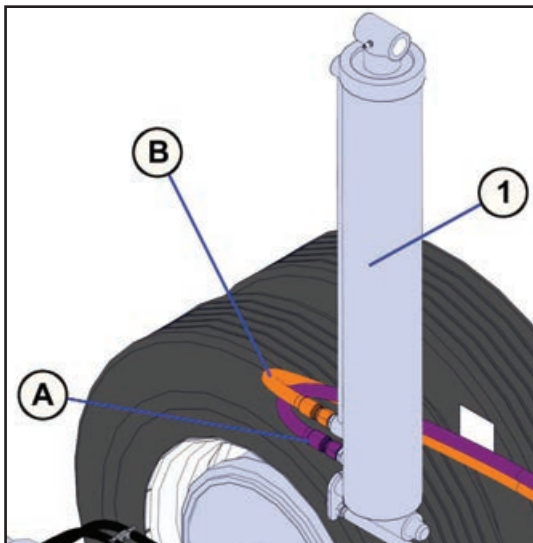
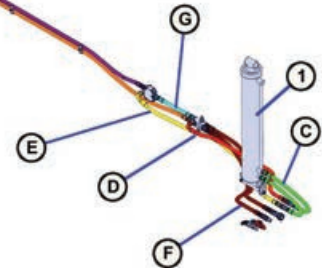
| BOM ID | Qty | Item No | Description                                         |
|--------|-----|---------|-----------------------------------------------------|
| 1      | 12  | AM8053  | HOSE RETAINER, SINGLE                               |
| 2      | 12  | BP3055  | WASHER, FLAT, 1/4", PLATED                          |
| 3      | 4   | BP3587  | NUT, HEX, 1/4" NYLOCK                               |
| 4      | 2   | BP3588  | HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED        |
| 5      | 2   | BP3589  | 1/4"-20 x 2-1/2" GRADE 8                            |
| 6      | 12  | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 7      | 12  | BP3685  | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED    |
| 8      | 9   | DP4368  | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12           |
| 9      | 1   | DP6300  | COUPLER, QUICK, FEMALE, 3/4" NPT                    |
| 10     | 1   | DP6301  | COUPLER, QUICK, MALE, 3/4" NPT                      |
| 11     | 1   | DP6302  | VALVE, DOUBLE RELIEF, PRINCE, H-L                   |
| 12     | 1   | DP6303  | VALVE, PROPORTIONAL DIVIDER, PRINCE                 |
| 13     | 2   | DP6307  | COUPLING, 12FP-12FP, 5000-12                        |
| 14     | 4   | DP6495  | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12 |
| 15     | 1   | DP6538  | ADAPTER, 12MJ-12MSAE 90, 6801-12                    |
| 16     | 1   | DP6557  | TEE, 12MJ-12MSAE-12MJ, 6804-12                      |



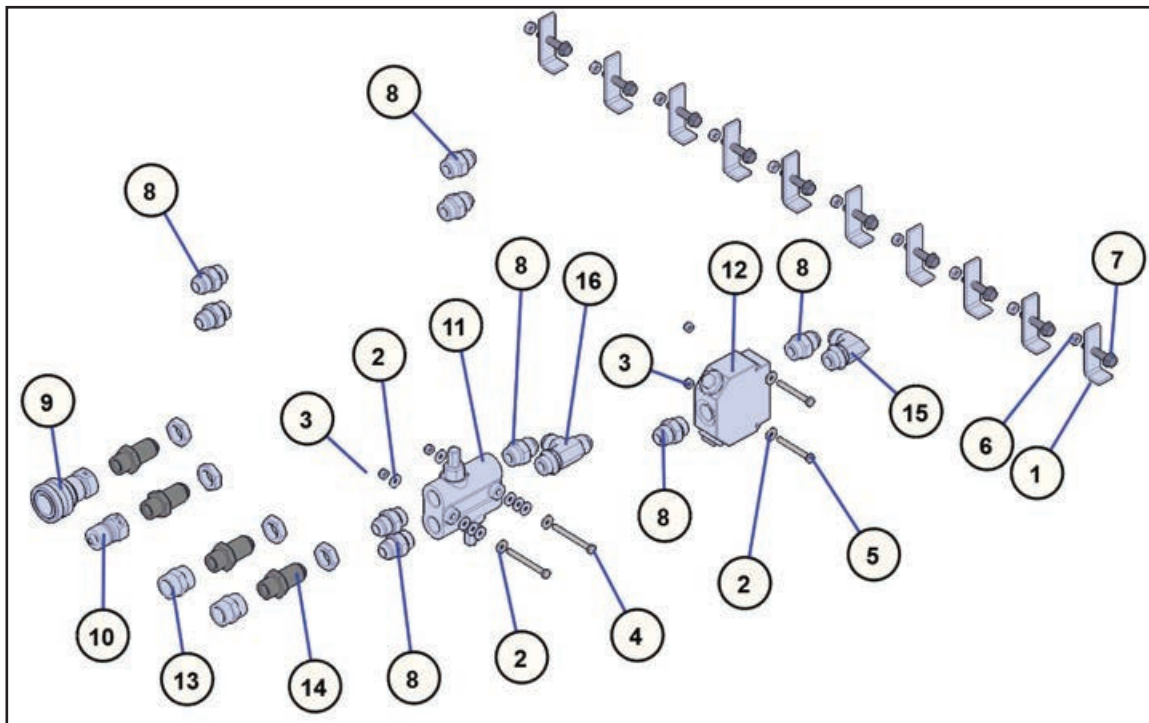


**DDP1117, HOSE KIT, 34' TUB SET FORWARD**

| BOM ID | Qty | Item No | Description                                  |
|--------|-----|---------|----------------------------------------------|
| 1      | 2   | DP6349  | CYLINDER, HYDRAULIC, 6 X 36, WITH DROP TUBE  |
| A      | 1   | DP6524  | HOSE, HYDRAULIC, 3/4" X 400", 12FJX-12FJX    |
| B      | 1   | DP6525  | HOSE, HYDRAULIC, 3/4" X 425", 12FJX-12FJX    |
| C      | 2   | DP6526  | HOSE, HYDRAULIC, 3/4" X 40", 12FJX-12MP      |
| D      | 1   | DP6534  | HOSE, HYDRAULIC, 3/4" X 62", 12FJX90-12FJX   |
| E      | 1   | DP6535  | HOSE, HYDRAULIC, 3/4" X 87", 12FJX90-12FJX   |
| F      | 2   | DP6546  | HOSE, HYDRAULIC, 3/4" X 57", 12FJX-12FJX     |
| G      | 1   | DP6558  | HOSE, HYDRAULIC, 3/4" X 18-1/2", 12FJX-12FJX |

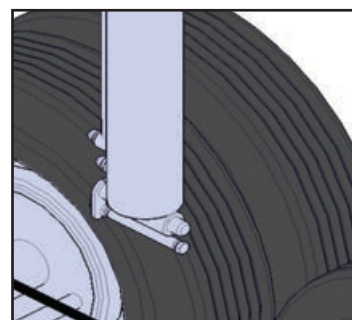
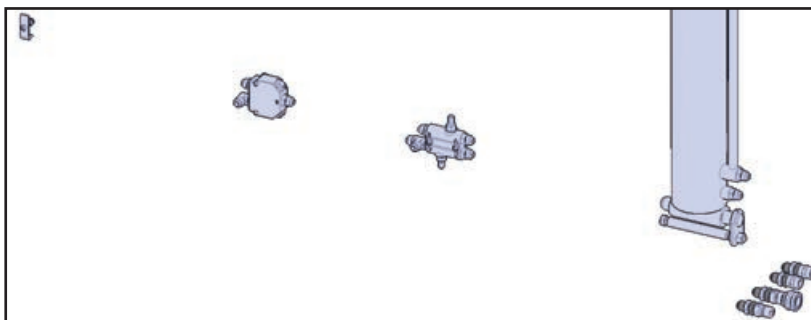


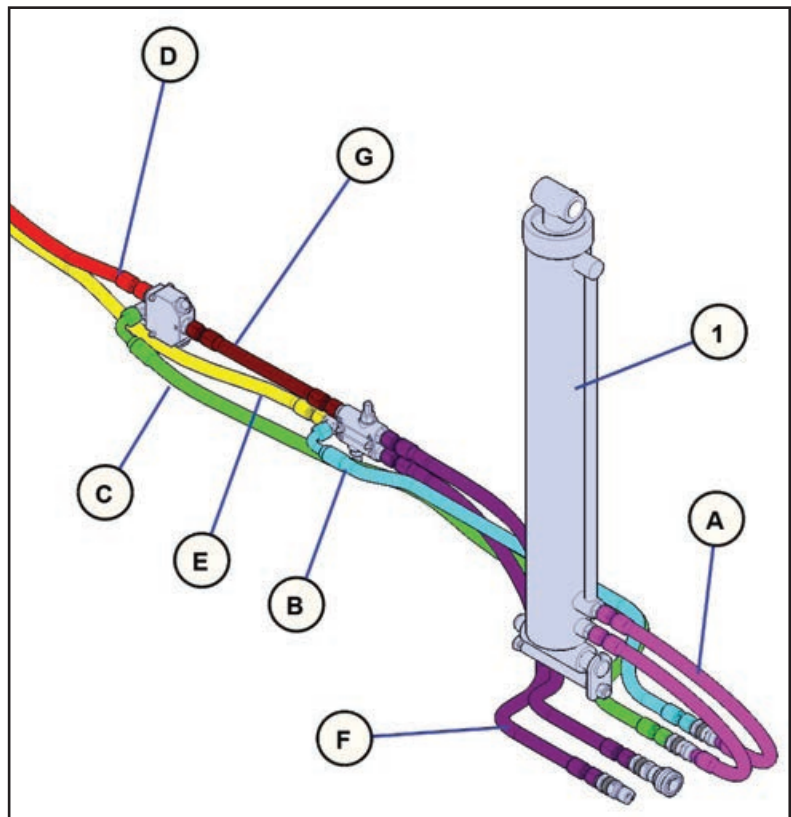
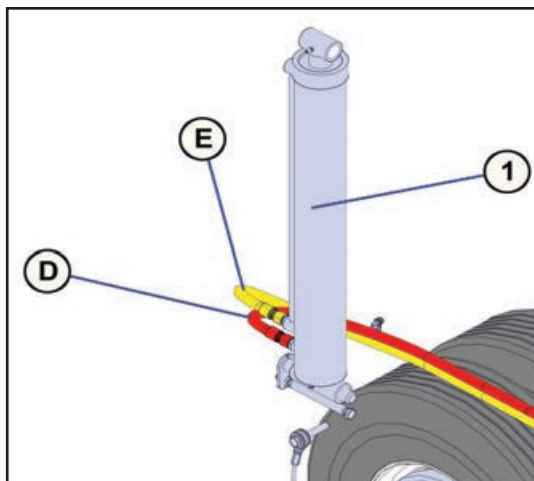
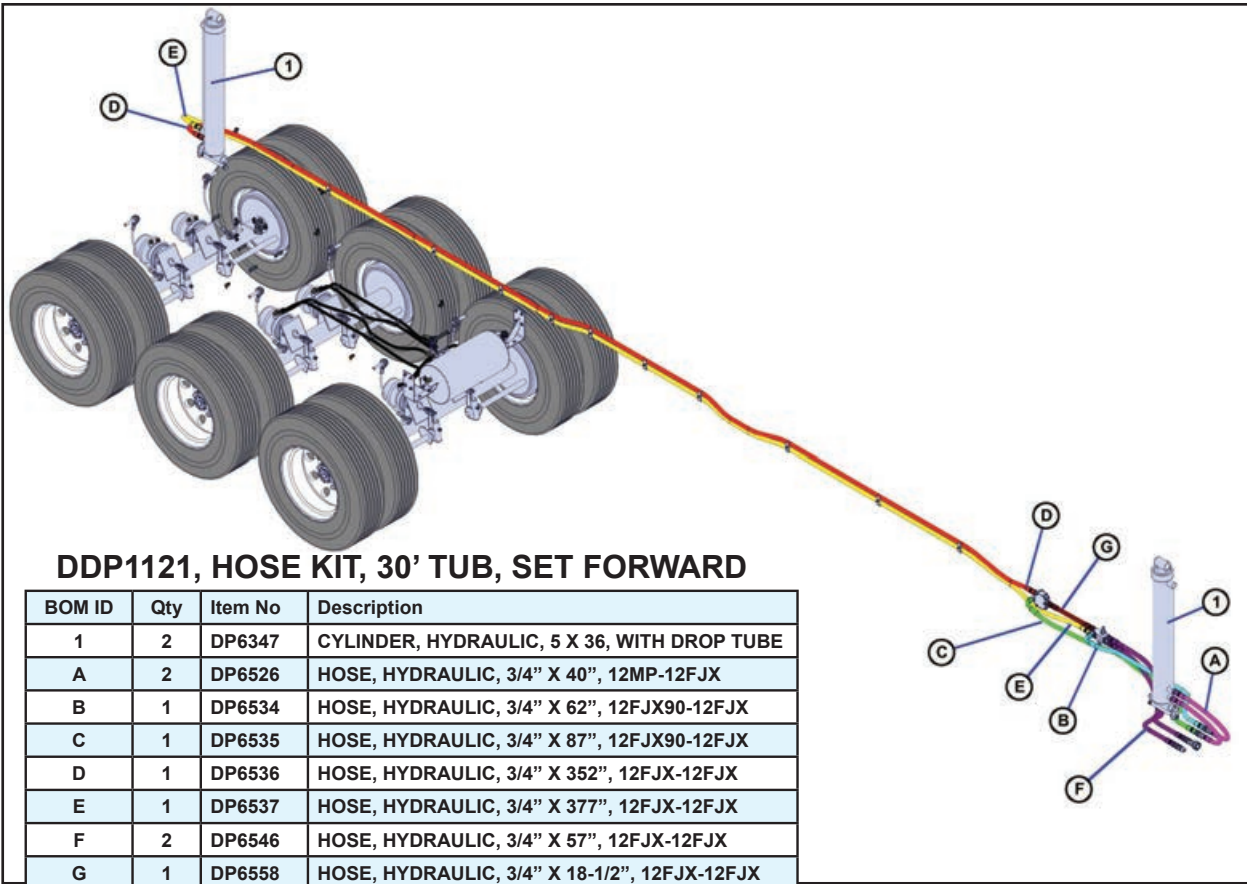
## Hydraulic Parts (090021)



**090021, STANDARD HYDRAULIC PACKAGE, SET FORWARD, 30' TUB**

| BOM ID | Qty | Item No | Description                                         |
|--------|-----|---------|-----------------------------------------------------|
| 1      | 10  | AM8053  | HOSE RETAINER, SINGLE                               |
| 2      | 12  | BP3055  | WASHER, FLAT, 1/4", PLATED                          |
| 3      | 4   | BP3587  | NUT, HEX, 1/4" NYLOCK                               |
| 4      | 2   | BP3588  | HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED        |
| 5      | 2   | BP3589  | 1/4"-20 x 2-1/2" GRADE 8                            |
| 6      | 10  | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 7      | 10  | BP3685  | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED    |
| 8      | 9   | DP4368  | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12           |
| 9      | 1   | DP6300  | COUPLER, QUICK, FEMALE, 3/4" NPT                    |
| 10     | 1   | DP6301  | COUPLER, QUICK, MALE, 3/4" NPT                      |
| 11     | 1   | DP6302  | VALVE, DOUBLE RELIEF, PRINCE, H-L                   |
| 12     | 1   | DP6303  | VALVE, PROPORTIONAL DIVIDER, PRINCE                 |
| 13     | 2   | DP6307  | COUPLING, 12FP-12FP, 5000-12                        |
| 14     | 4   | DP6495  | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12 |
| 15     | 1   | DP6538  | ADAPTER, 12MJ-12MSAE 90, 6801-12                    |
| 16     | 1   | DP6557  | TEE, 12MJ-12MSAE-12MJ, 6804-12                      |

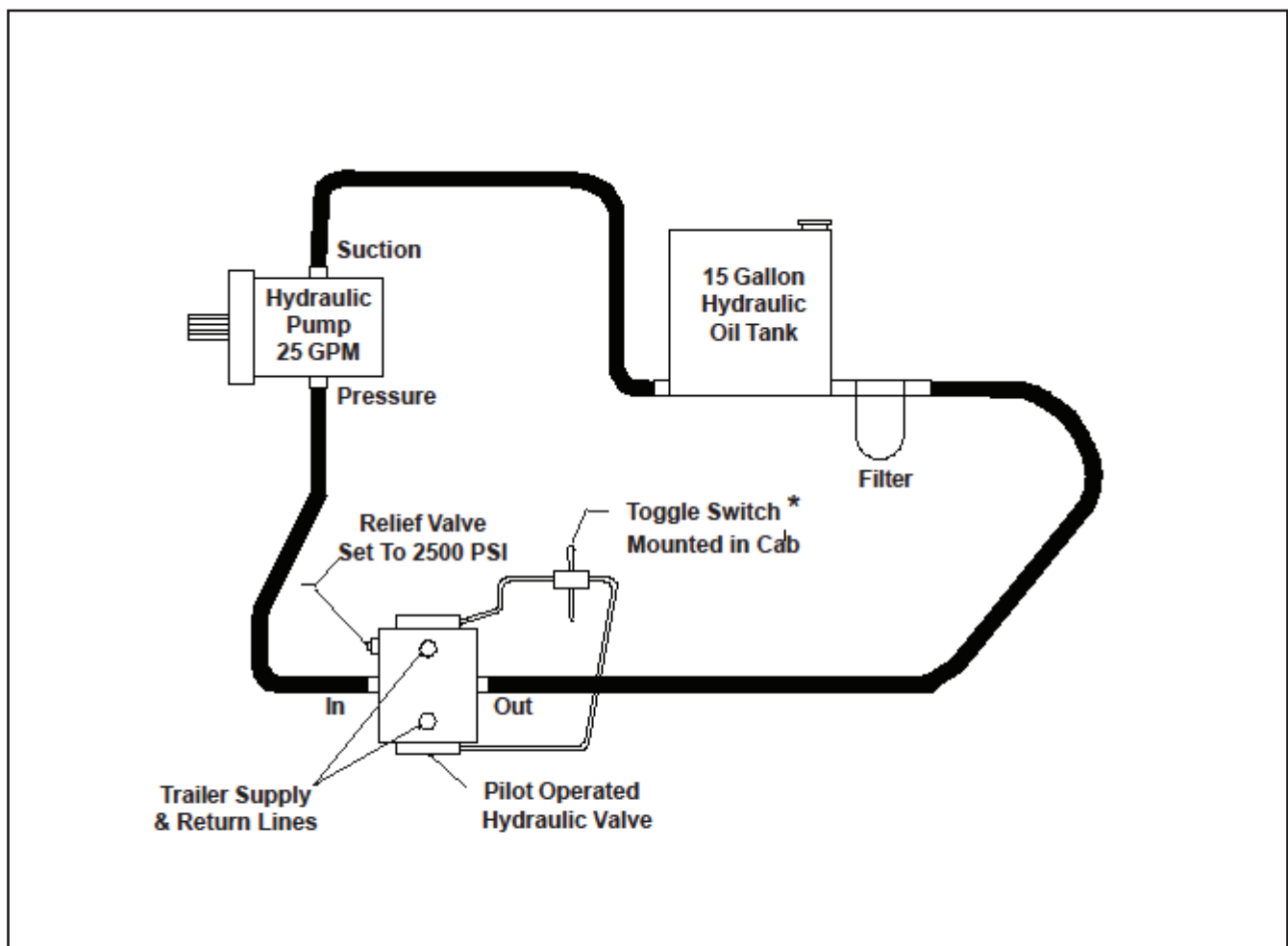




Efficient, safe operation of side dump trailers require that the tractor hydraulic system provide a clean, high pressure, high volume oil supply. The hydraulic pump pressure should be set at 2500 PSI with a minimum output of 25 GPM supply and a minimum 15 gallon filtered and strained reservoir.

**NOTE:**

Hydraulic Oil Filter should be Changed every 25,000 miles or yearly, which ever comes first and hydraulic system flushed every 50,000 miles with pressure and flow rates checked.

**Generic Tractor Hydraulic System**

All axles, except converter dolly axles, are equipped with spring brake chambers. Each spring brake chamber is separated into two units. The front unit operates the service brakes. The rear unit contains a high loading capability spring that must be pressurized by air within the chamber to compress the spring to release the spring brake portion of the chamber. Loss of air pressure to the brake chamber will automatically apply the spring brake portion of the chamber for parking and/or emergency braking.

**CAUTION:**

Spring brake chamber plug must remain in place when not being serviced. Chamber plugs prevent contaminants from entering brake chambers.

In the case of a service brake system air failure, when the spring brakes are applied in an emergency stop, a spring brake air reservoir retains enough stored air to release the spring brakes at least once by means of the tractor parking brake control.

In the absence of air pressure, a manual release is provided to allow release of the spring brake. Here's how to release spring brakes, which are standard on most Demco Side Dump trailers.

1. Always install wheel chocks at both front and rear of tires before manually releasing spring brakes.
2. An emergency parking brake release tool is stored in a pocket on the side of the brake chamber. See illustration.
3. Insert the detachable release bolt through hole in head and through the piston. Turn the release bolt clockwise until it stops and locks, then pull the release bolt out as far as possible, and run the nut down, holding the bolt in place.  
Using a hand wrench, turn the release bolt nut clockwise until the bolt extends about three inches. Make sure the release bolt is locked properly in the piston.
4. The parking brake is now caged.

**NOTE:**

For instructions on how to release makes of spring brakes refer, to the specific manufacturer's instructions.

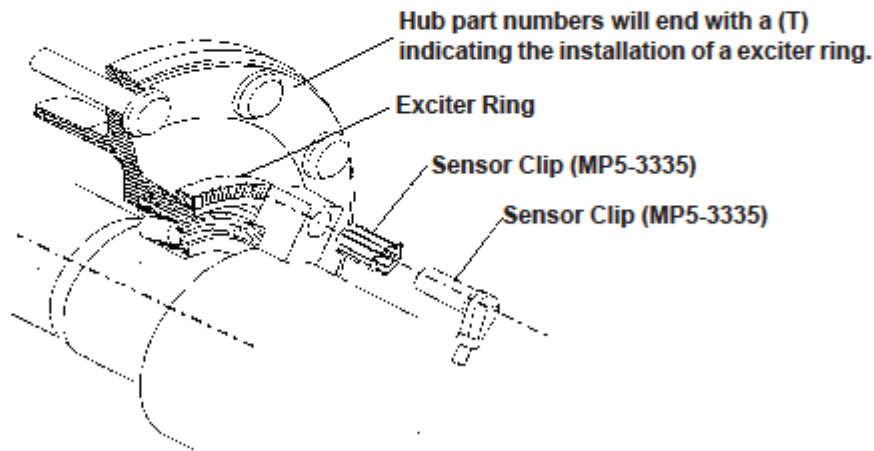
**WARNING:**

DO NOT operate your trailer with parking brakes caged or in any other way disabled. Never attempt to open a spring brake chamber. The internal spring is very dangerous.

**GENERAL OPERATION OF THE ABS SYSTEM**

The Full Function Anti-lock Brake System (FFABS) maintains stability and control during braking by preventing wheel lock-up. FFABS consists of Sensors and Exciters, Modulating Relay Valve, and an Electronic Control Unit (ECU) to maximize the braking ability of the trailer. The ECU monitors wheel speeds, and thus vehicle speed, through the use of sensors and exciters that are mounted on the hubs of the trailer. When the ECU detects the speed of a wheel or wheels decreasing rapidly during a braking application, it releases the air pressure in the brake chamber of the affected wheel (s) via the modulator. This allows the wheel(s) to begin rotating again, thus avoiding lock-up. As soon as the wheels begin to rotate again, the ECU reapplies pressure in the affected brake chambers to maximize braking effectiveness. If the condition that caused the lock up remains, the cycle is repeated until either the brake application or vehicle is stopped. Operation is totally automatic and can occur up to six times per second.

FFABS can be installed on a variety of trailer configurations capable of controlling 2, 4 or 6 service/spring brake chambers. When the system is installed on a multi-axle trailer, it is important the proper axle is selected for positioning of the ABS wheel end sensors. Several factors are involved in making this decision, but basically, the axle selected should be the one that carries the least load or is most likely to lock first in a hard brake application.



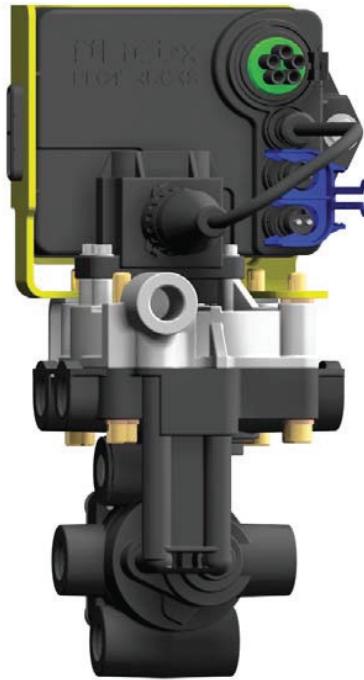
The Full Function ABS Valve was designed as a method of providing a complete trailer braking system combined with skid control in a single package. This valve combines the functions of several separate valves while providing all the valve needs for trailer service and spring brakes.

The FFABS valve has three control sections:

- Skid control unit that modulates signal pressure to prevent wheel lock up.
- Relay valve to provide the high flow of air from reservoir to brake chambers required for good brake response.
- Spring brake control module which incorporates pressure protection, one way check, double check for anti-compounding, and quick release.

The electronic control unit of the FFABS valve receives operating power from the seven-way connector. In the event of a power failure, the system will revert to a typical relay valve system; spring brake control is unaffected by a power failure.

# Haldex



***PLC Select ABS (1M)***

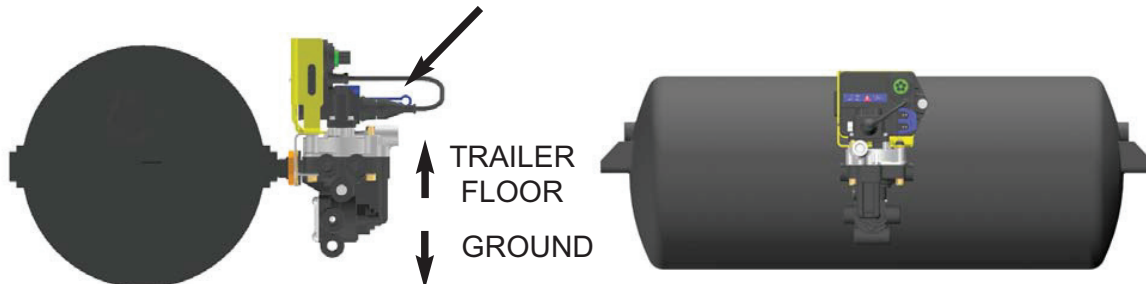
***Installation/Service Manual  
for  
2S/1M Systems***

**PLC Select 1M**

## PLC Select 1M & 2M Valve Orientation



*The ABS Valve Solenoid must be installed as shown below*

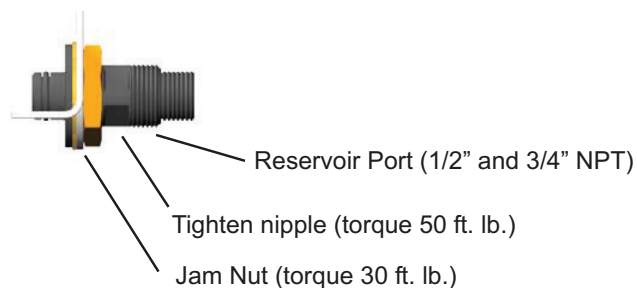


*Typical tank mount valve orientation*

1. Install fittings into valve. Sealant is not required on plastic threads or on fittings that go into plastic. **DO NOT** use teflon tape on fittings. It can break off and contaminate the air system. Liquid pipe sealant is approved for use if required.
2. For plastic ports, hand tighten fittings then rotate 1 to 1-1/2 additional turns. The maximum torque valve allowed is 210 in-lb.
3. Install valve nipple into reservoir port. Use 7/8" wrench to tighten the nipple.
4. Using a 1-1/2" wrench tighten the jam nut to 30 ft. lb, while holding the nipple with a 7/8" wrench.(see detail below).
5. Attach hoses to appropriate brake chambers. Use liquid thread sealant sparingly on all fittings (Loctite PST565 or equivalent).

**Note:** *If frame mounted follow same procedure for valve orientation.*

**Valve solenoid on a 2-port relay, 6-port relay or FFABS must be facing up when the trailer is in normal operation or service/ABS performance could be effected.**

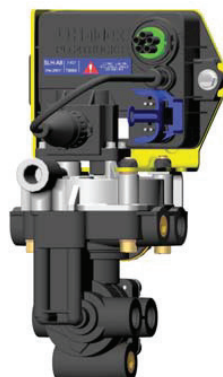


**Warning:** *Proper installation orientation shown above; otherwise, warranty is void.  
Installation behind the tank is recommended, facing the back of the trailer.*



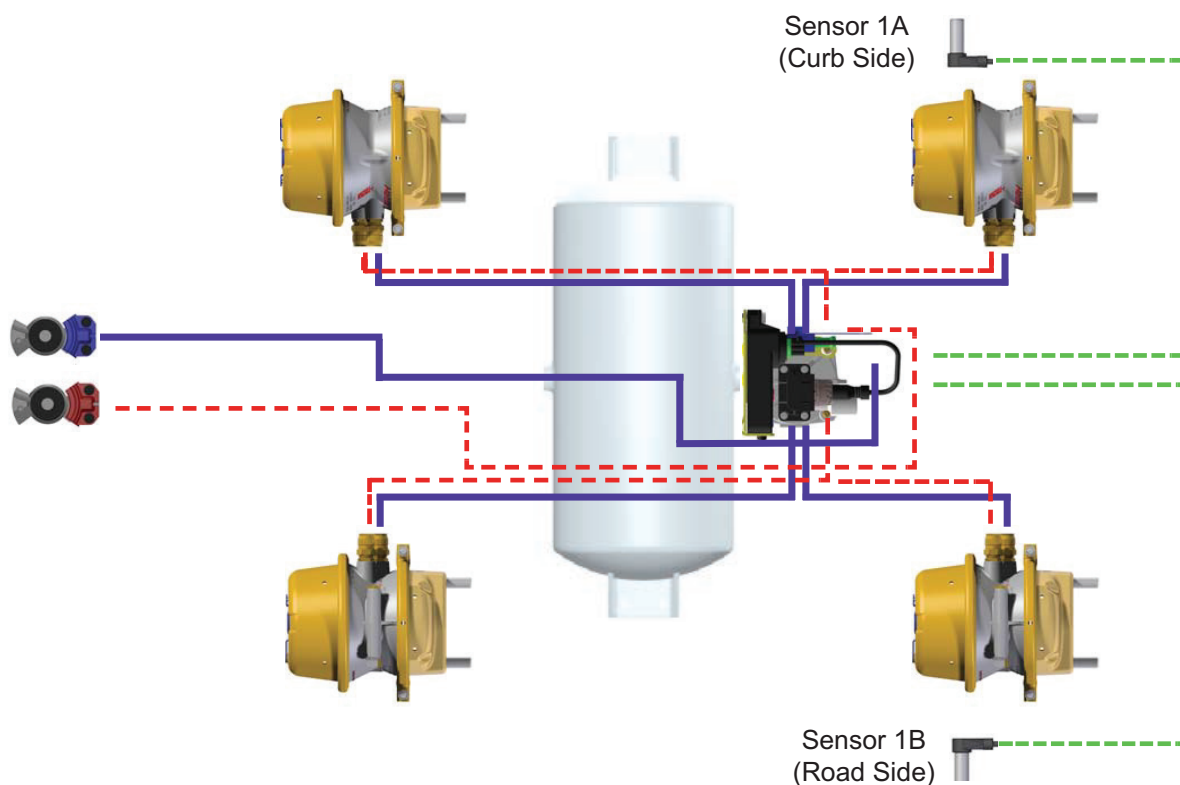
## PLC Select FFABS 2S/1M (4 Service Delivery Ports/ 4 Spring Brake Ports)

- Air suspension typically have the sensors on the rear axle
- Spring suspension typically have the sensors on the front axle



**PLC Select 1M (FFABS)**

### Plumbing Schematic (2S/1M) Top View



#### Legend:

|                       |  |
|-----------------------|--|
| Service/Control Line  |  |
| Emergency/Supply Line |  |
| Sensor Line           |  |

AIR BRAKE COMPONENTS AND SYSTEM SCHEMATIC ARE DESIGNED TO ALLOW COMPLIANCE WITH FMVSS 121.

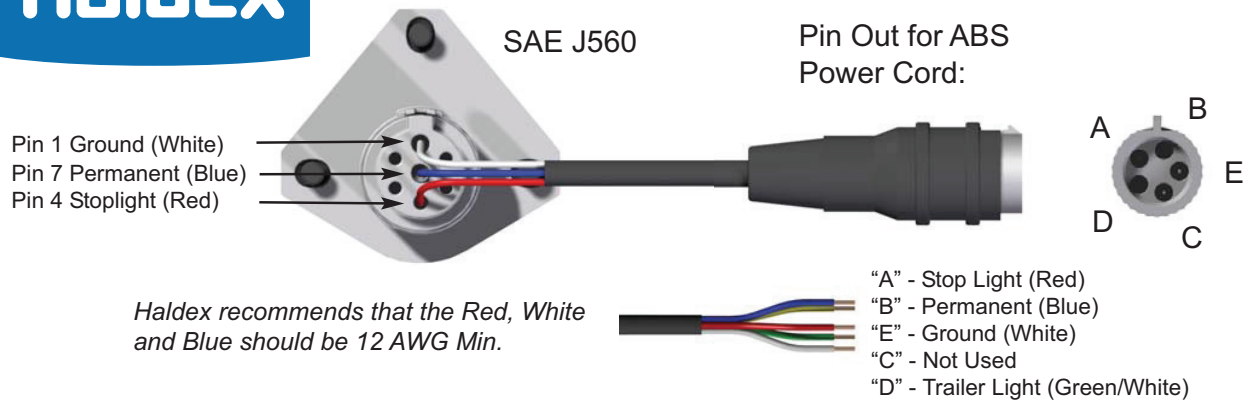
THIS SCHEMATIC IS FOR INFORMATION PURPOSE ONLY. IT IS THE VEHICLE MANUFACTURERS ULTIMATE RESPONSIBILITY TO CERTIFY THEIR SYSTEM MEETS ALL APPLICABLE REGULATIONS.

PIPE NIPPLES USED TO MOUNT BRAKE VALVES MUST BE HEAVY WALL TYPE PER SAE J514.

**PLC Select 1M**



## ABS Power Cord - Pin Out

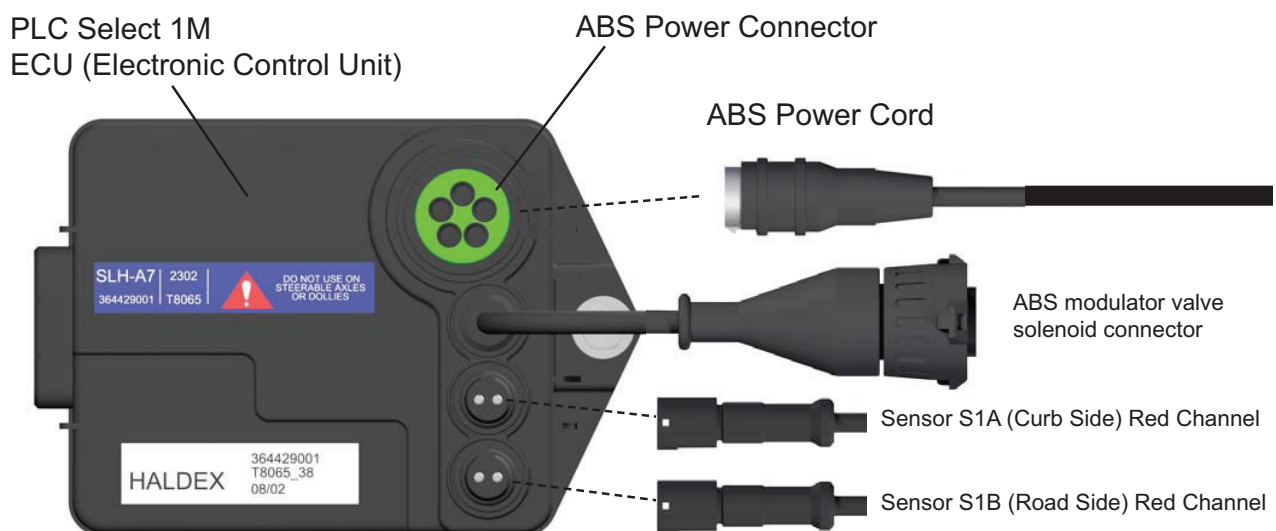


**Note:** Federal regulations mandate that new trailers, built after 3/1/2001, have the capability to provide an ABS fault signal from the trailer ABS into the tractor for an In-Cab trailer ABS Lamp. Option (1) is through Industry standard "PLC4Trucks" multiplexing (the signal is carried on Pin 7)

## PLC Select 1M ECU Overview

Correct location of the speed sensors at the wheel ends is critical for proper ABS operation and troubleshooting. The PLC Select 1M will adjust the braking air pressure in response to the input from the speed sensors. Incorrect installation or location of speed sensors, sensor block clips and exciter rings will result in poor ABS performance or sensors crossed leading to incorrect diagnostics troubleshooting.

The figure below shows the correct power and speed sensor connections on the PLC Select 1M ECU (Electronic Control Unit).



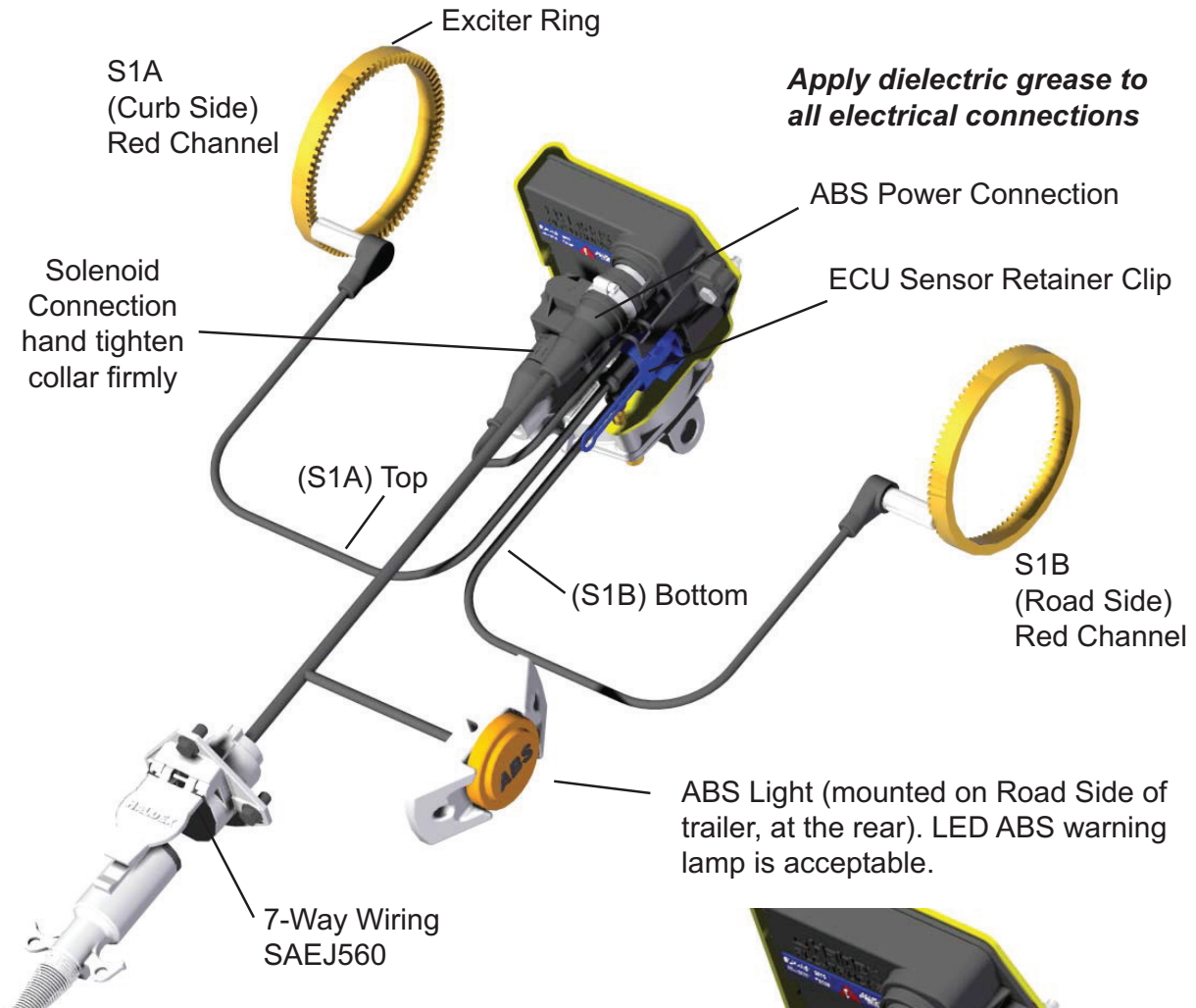
**Note:** When installing and servicing always apply small amount of dielectric grease to all electrical connections.

**PLC Select 1M**

## 2S/1M System Wiring - PLC Select



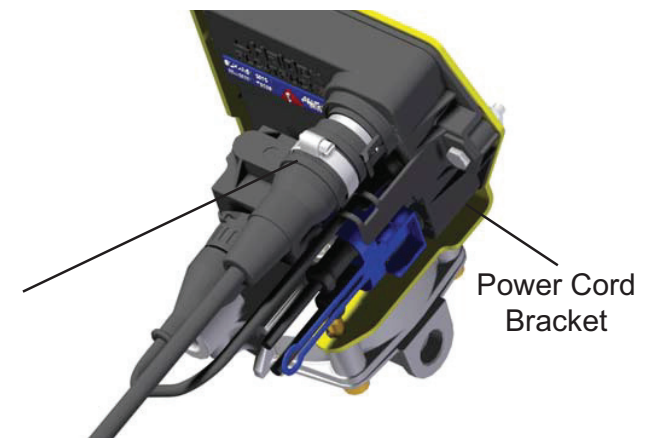
**Note: Cover all exposed electrical connections before painting**



\*Distance of ABS Light from Red rear clearance side marker light is 5.9" inches to 23" inches max.



Hose Clamp



The ABS Power Cord is secured to the power cord bracket (page 13) and is secured with a hose clamp (preferred) or tie strap.

**PLC Select 1M**

## Simplified Troubleshooting Procedures 2S/1M Anti-Lock System

After completion of a PLC FFABS or Modular installation, the following troubleshooting test procedures should be performed to ensure the ABS System is functioning properly. If any portion of these tests fail, consult with the Haldex Technical Department at 800-643-2374.

### Test Equipment

- 12VDC/30 AMP Power Supply (**DO NOT** use a Battery Charger).
- Jumper Cable from Power Supply to the 7-Way Receptacle.
- Shop Air.

### Step One

Charge the trailer brake system with supply and service air. Connect power supply to the 7-way receptacle and follow the checklist below to ensure the ABS System is functioning properly.

- **Modulator Blow-Down:** The ABS modulator should exhaust a brief shot of air, **do not rotate wheels during this test.**
- **ABS Light Sequence:** The ABS light should come on for 2.5 seconds, then go off, if no faults are detected. If faults are detected, the light will remain on.

### Step Two

Lift the ABS equipped axle on the trailer, release the service brakes and follow the checklist below.

- **Connect** constant power to the stop light circuit. (#4 conductor at 7-way receptacle)
- **Cycle** power to the trailer auxiliary circuit (#7 conductor at 7-way receptacle) ON, OFF, then ON to activate the system's simple diagnostic mode. (See chart for code interpretation.)
- **Rotate** the "curb" side wheel; the ABS lamp should flash 1 time. The lamp will remain on after the wheel is stopped, until the next wheel is rotated.
- **Rotate** the "road" side wheel; the ABS lamp should flash 2 times.

### Blink Code Diagnostics

#### Mode 1 - Simple Mode Diagnostic Fault Table (ON,OFF,ON)

| Item         | Flash Count   | Actual Fault               |
|--------------|---------------|----------------------------|
| System OK    | Lamp Stays On | 07                         |
| Sensor 1A    | 1 Flash       | 01, 11, 21                 |
| Sensor 1B    | 2 Flashes     | 02, 12, 22                 |
| Sensor 2A    | 3 Flashes     | 03, 13, 23                 |
| Sensor 2B    | 4 Flashes     | 04, 14, 24                 |
| Sensor 3A    | 5 Flashes     | 05, 15, 25                 |
| Sensor 3B    | 6 Flashes     | 06, 16, 26                 |
| Red Valve    | 7 Flashes     | 41, 61, 67, 71, 77, 81, 87 |
| Blue Valve   | 8 Flashes     | 42, 62, 68, 72, 78, 82, 88 |
| Yellow Valve | 9 Flashes     | 43, 63, 69, 73, 79, 83, 89 |
| Low Voltage  | 10 Flashes    | 90                         |
| ECU Failure  | 11 Flashes    | 93, 99, E-Codes            |

### Wheel Speed Mode

Wheel Speed Mode is accessible only when in Simple Mode. This mode is not activated until the ECU has received a signal from the wheel speed sensor of a spinning wheel. The hold solenoid of the modulator associated with the particular sensed spinning wheel will be cycled. The blink codes for the sensed wheels are:

|                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| <b>S1A:</b> 1 Flash   | <b>S1B:</b> 2 Flashes | <b>S2A:</b> 3 Flashes |
| <b>S2B:</b> 4 Flashes | <b>S3A:</b> 5 Flashes | <b>S3B:</b> 6 Flashes |

### Troubleshooting Notes

- **1** - Spin only one wheel at a time.
- **2** - Once a wheel is rotated, the ABS lamp will remain on after the wheel is stopped, until the next wheel is rotated.

### Haldex Commercial Vehicle Systems

Haldex Brake Products Corporation  
10930 N. Pomona Avenue  
Kansas City, MO 64153-1256  
Phone: 816-891-2470  
Fax: 816-891-9447

Haldex Limited  
525 Southgate Drive, Unit 1  
Guelph, Ontario Canada N1G 3W6  
Phone: 519-826-7723  
Fax: 519-826-9497

[www.haldex.com](http://www.haldex.com)

L55031W US 9/09 WEB ONLY



## **Welding on Trailers Equipped with Haldex ABS Products**

Haldex Commercial Vehicle Systems specifies very few requirements when welding on a trailer equipped with a Haldex ABS System:

- ✓ Weld only when the trailer is not attached to the towing vehicle.
- ✓ Take precautionary measures to protect against extreme heat, flying slag and/or molten metal.
- ✓ Never connect power to the 7-pin connector or to the ABS System when welding on the trailer.

Haldex does not require the disconnection of any ABS wire harnesses when welding on the trailer due to the fact that the ECU circuits have been specially designed to protect against transient voltages which can occur during welding.

For additional information or assistance, contact your local Haldex Sales Professional or a member of the Haldex ABS Engineering Team at (816) 891-2470.

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**Innovative Vehicle Technology**

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[www.hbsna.com](http://www.hbsna.com)

2/03 5M CM L55134

SERVICE  
BULLETIN

**L55134**

**CARE AND ADJUSTMENT OF BRAKES**

The trailer brake system will perform safely and efficiently only as long as you maintain it properly and do not abuse it. Trailer brakes should be inspected and adjusted frequently in connection with a Trailer Preventative Maintenance program. Out-of-adjustment brakes can cause increased stopping distance, shorter brake component life, and a greater tendency for the trailer to jackknife.

**AIR SYSTEM AND BRAKE OPERATION**

- Proper operation of the brake system requires a firm seal between the air brake glad hands. Inspect the glad hands for rubber washer damage and cracked housing. Inspect the air hoses for cracking and for frayed connections.
- Keep the air system clean. Primary and emergency air tanks should be drained daily to remove moisture and other contaminants, especially during cold weather operations.
- Some air valve manufacturers discourage the use of any kind of air line antifreeze. It may result in deterioration of seals in these valves.
- If you use Teflon tape or other thread sealers to seal threaded connections in your air lines, be careful not to allow pieces of the sealer to enter the air system. They can clog passages into the valves.
- Keep the air system tight. The air system cannot be charged properly if there are leaks in reservoirs, lines, hoses or valves. Always check the tractor pressure gauge for unusual drops or extended buildup times.
- Run the tractor engine until the air brake system pressure gauge shows at least 70 psi. Listen for air leaks. With the engine off, check the gauge reading with no brakes applied. The gauge reading loss should not exceed three pounds in one minute.
- With the engine still off, apply the brakes fully for two minutes. The gauge reading loss should not exceed four pounds per minute.
- With engine still off, slowly open a drain cock in an emergency or supply line and allow the pressure to drop gradually.
- In a system that does not employ spring brake control valves, the relay emergency valve should function and apply the brakes.

**AIR SYSTEM AND BRAKE OPERATION**

- In a system employing spring brake control valves, spring brakes should function and apply the brakes. Remember that serious air losses are extremely hazardous conditions that are likely to cause accidents or breakdowns.

**WARNING:**

Do not operate this vehicle with any brake defects or with brakes out of adjustment.

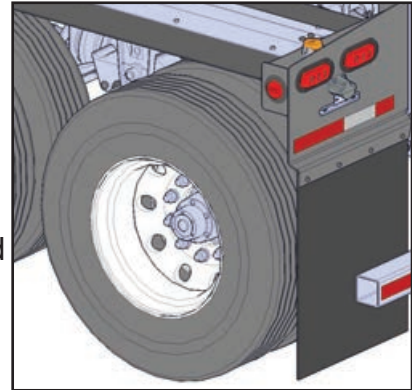
**CHECK BRAKE OPERATION**

Before entering traffic, check the operation of the trailer brakes to be sure they are in good working order. Try foot pedal, emergency dash control valve (push, pull or flip), and trailer brake lines to assure brake application and release in each instance. Listen for air leaks under each condition.



## TIRES

Do not over inflate. Check for proper inflation with an accurate gauge when the tires are cold. Inspect tires for nails and other objects embedded in the rubber, and for stones and other objects lodged between duals. Examine tires to see that they are free of breaks and other defects. Watch new and retread tires for signs of failure during break-in period. Dual tires on any axle end should have the same diameter.



### CAUTION:

The law requires that you inflate tires according to the inflation pressure molded on the tire by the tire manufacturer. Tires must be matched with proper compatible rims for safe operation.

Replace any tire that has fabric exposed through the tread or sidewall, or that has less than 2/32" tread depth.

## TIRE LOADS

Do not overload the trailer tires. Overloading tires creates a dangerous, unsafe condition that should be avoided.

The total load per tire must not exceed the tire manufacturer's specified load carrying capacity at stated inflation pressures for both tires and rims. Demco Side Dump trailers, as required by the certification regulations of the National Highway Traffic Safety Administration (CFR 49, Part 567), has a Gross Axle Weight Rating plate on each trailer for your information on the running gear capacity.

The GAWR and tire information shown on the vehicle identification plate was applicable at the time the trailer was manufactured. If the tires or other components of the running gear have been changed or altered since the trailer was manufactured, the GAWR may have changed. This should be checked with the Demco factory representative.

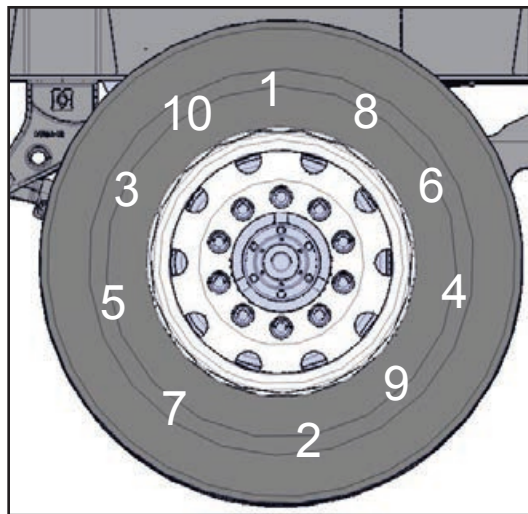
| GVWR: 34091 KG (75000 LB)                                                                                                             |                     |            |           |                       |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|-----------|-----------------------|
|                                                                                                                                       | GAWR                | WITH TIRES | RIMS AT   | COLD                  |
| FRONT                                                                                                                                 | 11364 KG (25000 LB) | 11R24.5    | 8.25X24.5 | 655 KPA (95 PSI) DUAL |
| INTER                                                                                                                                 | 11364 KG (25000 LB) | 11R24.5    | 8.25X24.5 | 655 KPA (95 PSI) DUAL |
| REAR                                                                                                                                  | 11364 KG (25000 LB) | 11R24.5    | 8.25X24.5 | 655 KPA (95 PSI) DUAL |
| THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. |                     |            |           |                       |
| SIDE DUMP TRAILER                                                                                                                     |                     |            |           |                       |

Located on the drivers side near landing gear.

Check all parts for damage. Insure that studs, nuts, and mounting faces of hub and wheels are clean and free from grease. Replace any defective parts.

Mount single wheel or inner and outer dual wheels over studs, being careful not to damage stud threads. Draw up nuts alternately in the sequence shown below. Do not tighten them fully, however. This procedure will permit the uniform seating of nuts and insure the even face-to-face contact of wheels and hub.

Tighten nuts fully, using the same alternate sequence. Be sure to tighten wheel nuts only to the torque level recommended below and to maintain them at that level through planned, periodic checks.



**CAUTION:** Do not intermix wheel types. Insufficient mounting torque can cause wheel shimmy, resulting in damage to parts and extreme tire tread wear. Excessive mounting torque can cause studs to break and discs to crack in the stud hole area.

**NOTE:** Lug nuts should be rechecked for proper torque after vehicle has been operated for 50-100 miles, and every 3,000 miles thereafter, as well as during regular maintenance checks.

1. Check all metal surfaces thoroughly while making tire inspections, including areas between duals and on inboard side of wheel. Watch for:
  - a. Excessive rust or corrosion buildup
  - b. Cracks in metal
  - c. Bent flanges, resulting from road obstructions
  - d. Deep rim tool marks on rings or in gutter areas
  - e. Loose, missing or damaged nuts or clamps
  - f. Bent or stripped studs
  - g. Damaged or missing rim drive plates
  - h. Mismatched rim parts

2. Pull damaged rims or wheels.



## **CAUTION:**

**Excessively corroded or cracked rims or rings can be dangerous. Deflate tires prior to the removal of rims or wheels from the vehicle.**

3. Mark damaged or hazardous areas with chalk so that part will be removed from service.

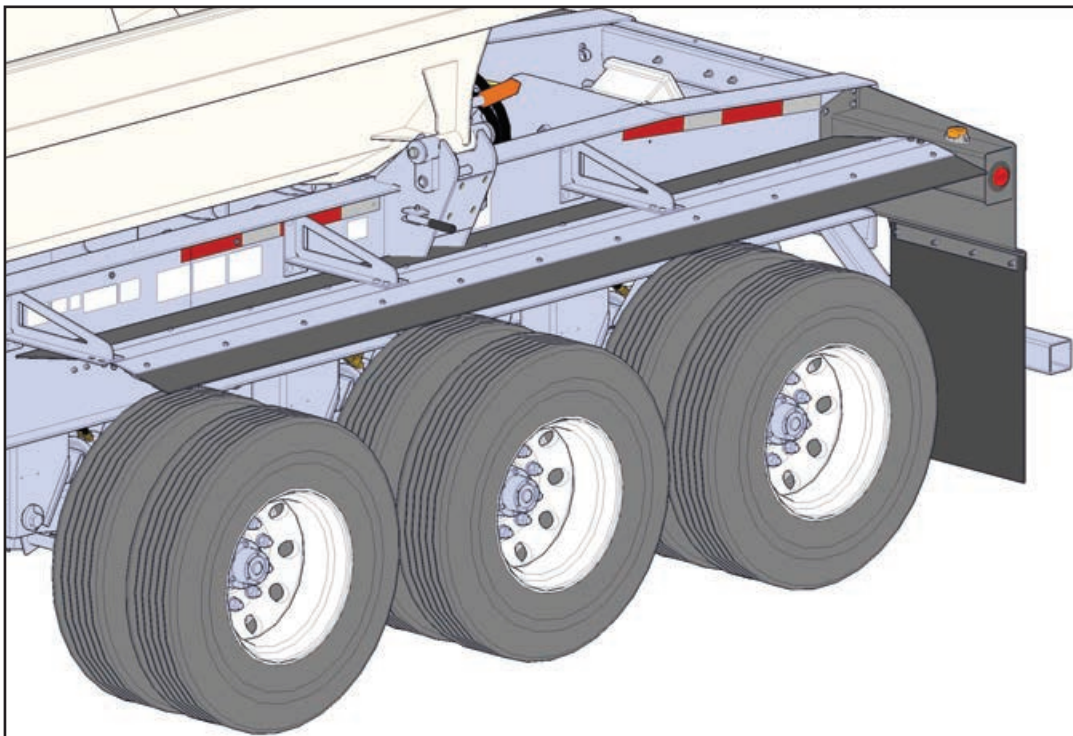
4. Replace damaged parts.



## **CAUTION:**

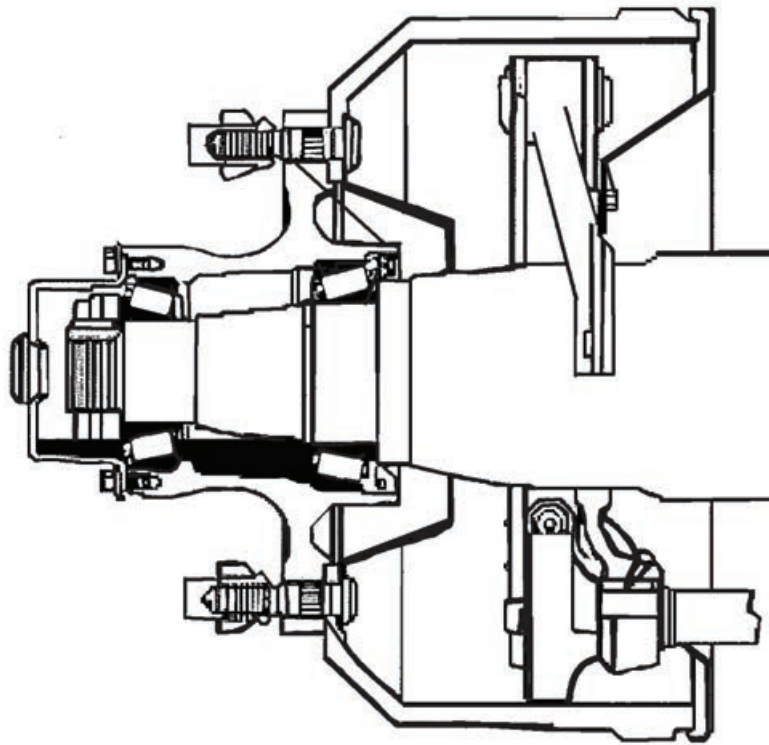
**Insure that replacements are made with the proper sizes and types of rims and rings.**

5. Inflate tires only to recommended air pressures.



Check hub gaskets and seals for oil leaks before each trip. Leaking seals can result in ruined wheel bearings and possible failure of the axle-wheel assembly.

Check oil level in hubs before every trip. Add oil when low, only to the level indicated by mark on the hub cap. **CAUTION! Too much oil can damage the wheel bearings.** Use a gear type oil: SAE 140 if temperature is above freezing, SAE 90 if temperature is below freezing, or a multipurpose oil with an SAE range of 85 to 140 for year round conditions.



## AXLE ALIGNMENT

Axle alignment must be checked at regular intervals. If the trailer is not following properly, this should be reported to the Maintenance Department.

### NOTE:

See Axle/Suspension manual pages for alignment procedures.

## **AIR SUSPENSION**

The air suspension height is controlled by height control valves that maintain a constant trailer height by pressurizing or exhausting air in the air springs as needed to support the load being carried.

You must build up and maintain your trailer's air pressure higher than 65 psi before operating the trailer. The air protection valve won't operate until you have 65 psi in the system. This valve automatically maintains a safe air brake pressure higher than 65 psi in the event of an air loss due to a failure in the suspension system.

If an air spring failure occurs on one side, it is recommended to completely deflate the suspension and temporarily operate on the air spring's internal rubber bumpers, to allow your trailer to be moved to a shop for repairs.

To deflate or cut off the air pressure to the damaged air spring, disconnect the height control valve actuating levers from their link assemblies and rotate to the vertical down position.

# Suspension Torque Specifications

## CBX / CB FIXED FRAME TRAILER AIR SUSPENSION TORQUE SPECIFICATIONS

Torques are with clean, lubricated threads.  
Always apply torque to nut, if possible.

### REQUIRED RE-TORQUING SCHEDULE:

- All fasteners after first three (3) months or 5,000 miles.
- At every routine preventative maintenance.
- At every brake relining.

| Fastener Size               | Pivot Connection     | Shock                | Air Spring       |                  | SwingAlign       |
|-----------------------------|----------------------|----------------------|------------------|------------------|------------------|
|                             | 1-1/8"               | 3/4"                 | 1/2"             | 3/4"             | 1/2"             |
| Torque<br>Ft.-Lbs.<br>(N•m) | 450-500<br>(608-676) | 140-175<br>(190-237) | 30-40<br>(41-54) | 40-45<br>(54-61) | 50-60<br>(68-81) |



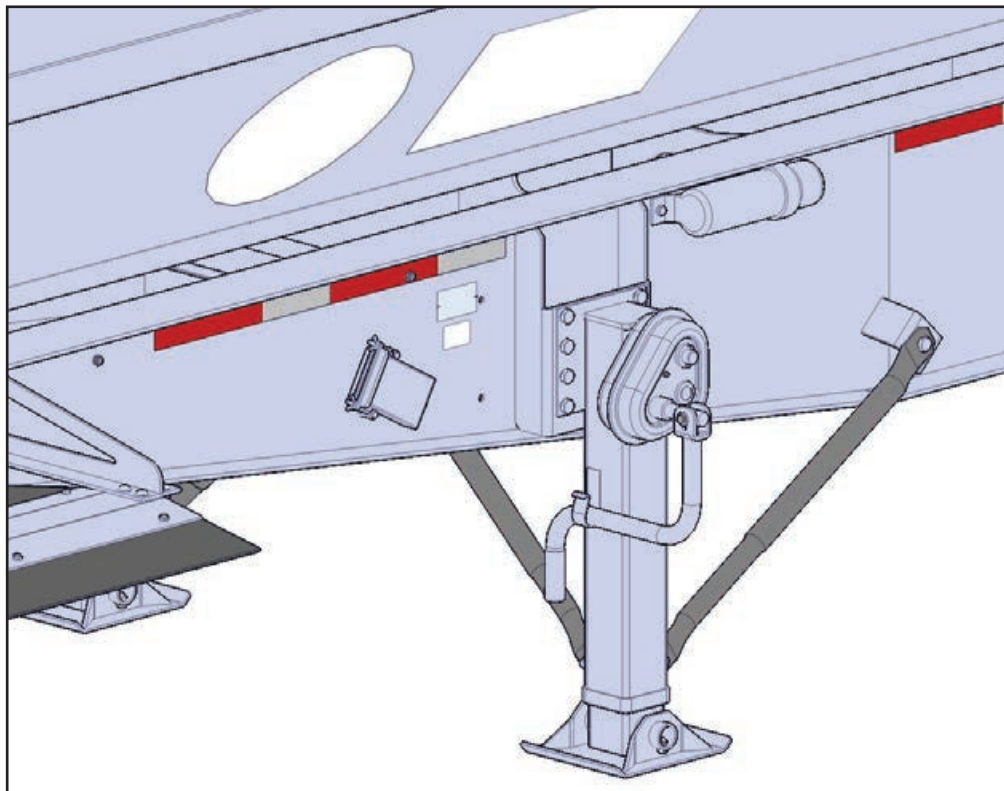
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XL-AR436 Rev. E

1. Always raise landing gear completely before moving the trailer.
2. Always use chock blocks or lock trailer brakes when uncoupling or coupling tractor and trailer on the road or in the terminal area. Chock as required for unusual conditions.
3. Always place sand shoes on a plank or smooth surface for flotation to prevent sinking into soil or soft asphalt when a loaded trailer is uncoupled from a tractor.
4. Always lower landing gear to the ground before disconnecting the tractor from the trailer.
5. Always store the crank in the crank holder.
6. Maintain landing gear as outlined in the owner's manual on page 84.

**NEVER** force landing gear supports beyond their normal raised or lowered positions.



See page 63 Demco Parts List.

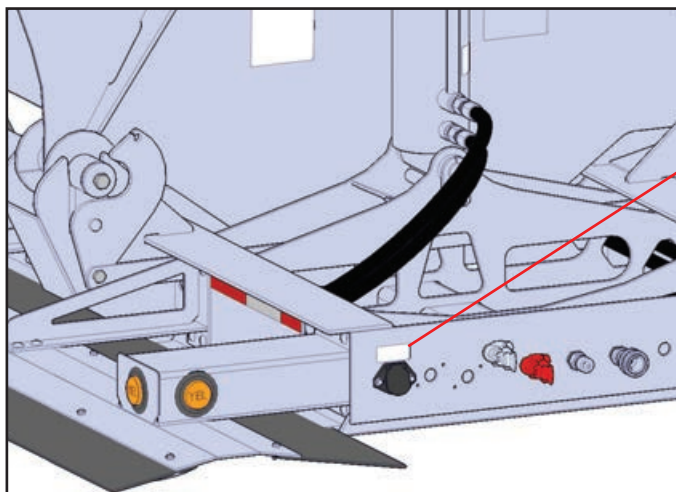
See page 84 Operating Instructions & Maintenance Procedures

## Electrical System

The lights and wiring system on every Demco Side Dump trailer meet or exceed all federal and state requirements in effect at the time of manufacture. Wherever required by law, lights and reflectors are marked by the manufacturer to indicate the appropriate specifications with which each complies.

For optimum performance and long life from the trailer's lights and wiring, follow this inspection procedure:

- Clean all reflectors and lights. See that all lights burn properly. Replace all burned out lights and broken reflectors. Factory approved replacement parts should be used, and replacement bulbs of equal candle power should be used for safety.
- **WARNING!** Use only a 12 volt DC battery for checking lights or anti-lock systems. Never use battery chargers or transformers.
- Inspect all wiring to see that it is not frayed, and that it is properly supported and protected, with all connections tight. See that the light cable is clean and long enough to permit jackknife parking. Be certain that the cable is supported so that it cannot be pinched or entangled by the lower and upper couplers. Keep the 7-way plug on the light cable and the 7-way connector on the trailer free of corrosion.
- Never replace fuses or breakers with metal foil or other devices.
- A decal is located on the front of each trailer. You may trace individual electrical circuits by the wire colors indicated. Refer to the schematic drawing and the decal for conductor number and wire colors.



### Wiring Harness Color Code

|                       |                         |
|-----------------------|-------------------------|
| <b>WHITE - Ground</b> | <b>YELLOW - Lt Turn</b> |
| <b>BLACK - Marker</b> | <b>GREEN - Rt Turn</b>  |
| <b>RED - Stop</b>     | <b>BLUE - Auxiliary</b> |
| <b>BROWN - Tail</b>   |                         |

AP 3674

| Malfunction                    | Probable Cause                                                                                     | Corrective Action                                                                                     |
|--------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| All lights fail to light.      | A. Inter-vehicular cable not properly plugged into receptacles on semi-trailer and towing vehicle. | A. Pull plugs out and reinsert them. be sure plugs seat properly.                                     |
|                                | B. Light switch on towing vehicle malfunctioning.                                                  | B. Check light switch.                                                                                |
|                                | C. No current from towing vehicle.                                                                 | C. Check circuit breaker and wiring on towing vehicle.                                                |
|                                | D. Short circuit in wiring.                                                                        | D. Check wiring for bare spots in insulation.                                                         |
|                                | E. Dirty or corroded contacts in receptacle or on plug of inter-vehicular cable.                   | E. Clean receptacle and plug.                                                                         |
|                                | F. Dirty or corroded contacts in connectors of semi-trailer wiring.                                | F. Clean corroded contacts in connectors.                                                             |
| Lights burn dim or flicker.    | A. Loose, dirty, or corroded terminals.                                                            | A. Clean and tighten terminals.                                                                       |
|                                | B. Poor or loose ground.                                                                           | B. Clean and tighten terminals on short (ground) cable in back of receptacle assembly on semi-trailer |
|                                | C. Defective lamps.                                                                                | C. Replace defective lamps.                                                                           |
|                                | D. Dirty or corroded lamp socket or contact in receptacle or on plug of inter-vehicular cable.     | D. Clean or replace lamp socket, receptacle or plug.                                                  |
| Individual lamps do not light. | A. Burned out lamp.                                                                                | A. Replace lamp.                                                                                      |
|                                | B. Broken or loose connection.                                                                     | B. Check cables for brakes and poor connections. Tighten, repair or replace. Clean connections.       |
|                                | C. Damaged light assembly.                                                                         | C. Repair or replace light assembly.                                                                  |
|                                | D. Dirty or corroded lamp socket.                                                                  | D. Remove lamp and clean contacts.                                                                    |
|                                | E. Dirty or corroded contact in receptacle or on plug of inter-vehicular cable.                    | E. Clean receptacle and plug.                                                                         |

| Malfunction                               | Probable Cause                                                                                                       | Corrective Action                                                                                                                                 |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hard Pulling                              | A. Dragging brakes.<br>B. Improper wheel bearing adjustment.<br>C. Bent axle.<br>D. Dragging axle, lost U-Bolt.      | A. Adjust brakes.<br>B. Adjust wheel bearings.<br>C. Repair or replace axle.<br>D. Align axles and secure.                                        |
| Excessively worn scuffed or cupped tires. | A. Improper tire pressure.<br>B. Loose wheels.<br>C. Loose wheel bearings.<br>D. Bent rim or wheel.<br>E. Bent axle. | A. Inflate tires to proper pressure.<br>B. Tighten cap nuts.<br>C. Adjust wheel bearings.<br>D. Replace wheel.<br>E. Repair or replace bent axle. |

## TUBULAR AXLE

| Malfunction           | Probable Cause                                                                                                                       | Corrective Action                                                                                |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Semi-trailer Swerves. | A. Accidental damage to axle from striking obstruction.<br>B. Damage to axle from overloading.<br>C. Loose nuts holding shackle box. | A. Replace axle.<br>B. Replace axle.<br>C. Tighten or replace shackle box or shackle box liners. |

## WHEELS, HUBS, BEARINGS, AND TIRES

| Malfunction    | Probable Cause                                                                                                                                                                                                                                                                                            | Corrective Action                                                                                                                                                                                                                                                |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Noise          | A. Brake shoes drag on drums.<br>B. Brake drums out of round.<br>C. Broken brake shoe return spring.<br>D. Loose wheel stud nuts.<br>E. Damaged wheel bearings.<br>F. Wheel bearings not properly adjusted.<br>G. Obstruction between dual wheels or in tire tread.<br>H. Bent or damaged wheels or hubs. | A. Adjust brakes.<br>B. Repair or replace brake drum.<br>C. Replace broken return spring.<br>D. Tighten loose wheel bearings.<br>E. Replace damaged wheel bearings.<br>F. Adjust wheel bearings.<br>G. Remove obstruction.<br>H. Replace damaged wheels or hubs. |
| Wobbly wheels. | A. Loose cap nuts.<br>B. Improperly adjusted or damaged wheel.<br>C. Bent axle spindle.<br>D. Bent or damaged wheel.                                                                                                                                                                                      | A. Tighten or replace cap nuts.<br>B. Adjust or replace wheel bearings.<br>C. Replace axle.<br>D. Replace damaged wheels.                                                                                                                                        |

| Malfunction                     | Probable Cause                                                                                                                                                                                                                                                                                | Corrective Action                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overheated hubs.                | <ul style="list-style-type: none"> <li>A. Lack of wheel bearing lubricant.</li> <li>B. Wheel bearings improperly adjusted.</li> <li>C. Damaged bearing or cup.</li> <li>D. Damaged hub.</li> <li>E. Bent axle spindle.</li> <li>F. Overloading or unbalanced distribution of load.</li> </ul> | <ul style="list-style-type: none"> <li>A. Lubricate wheel bearings.</li> <li>B. Adjust wheel bearings.</li> <li>C. Replace damaged bearing or cup.</li> <li>D. Replace damaged hub.</li> <li>E. Check for bends and replace tubular axle.</li> <li>F. Check load weights hauled and keep within rated gross capacity. Arrange load evenly to distribute weight.</li> </ul>                                                                          |
| Overheated brake drum.          | <ul style="list-style-type: none"> <li>A. Dragging brake shoe assembly.</li> <li>B. Broken brake lining.</li> <li>C. Broken or weak brake shoe return spring.</li> <li>D. Bent axle spindle.</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>A. Adjust brake shoe assembly.</li> <li>B. Replace brake shoe assembly.</li> <li>C. Replace return spring.</li> <li>D. Replace axle.</li> </ul>                                                                                                                                                                                                                                                              |
| Brakes erratic or unequal.      | <ul style="list-style-type: none"> <li>A. Improper lubricant or grease inside brake drum or outside of wheel.</li> <li>B. Loose hub cap.</li> <li>C. Defective oil seals.</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>A. Clean and lubricate.</li> <li>B. Tighten hub cap.</li> <li>C. Replace defective oil seals.</li> </ul>                                                                                                                                                                                                                                                                                                     |
| Undue wear of any or all tires. | <ul style="list-style-type: none"> <li>A. Incorrect tire inflation.</li> <li>B. Overloading.</li> <li>C. Brake action too severe.</li> <li>D. Tires not properly matched.</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>A. Inflate tires to proper pressure. Tighten valve cap finger tight.</li> <li>B. Check load weights hauled and keep within rated gross capacity.</li> <li>C. Check and adjust brakes.</li> <li>D. WITH TIRE PROPERLY INFLATED, CHECK OVERALL CIRCUMFERENCE OF TIRES. The difference in overall circumference must not exceed the 3/4 inch limits. Remove wheel and tire assembly and match tires.</li> </ul> |
| Air leakage from tires.         | <ul style="list-style-type: none"> <li>A. Valve core loose or damaged.</li> <li>B. Punctured tube.</li> </ul>                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>A. Tighten or replace.</li> <li>B. Repair tube.</li> </ul>                                                                                                                                                                                                                                                                                                                                                   |

## Troubleshooting Wheels, Hubs, Bearings, And Tires (Continued)

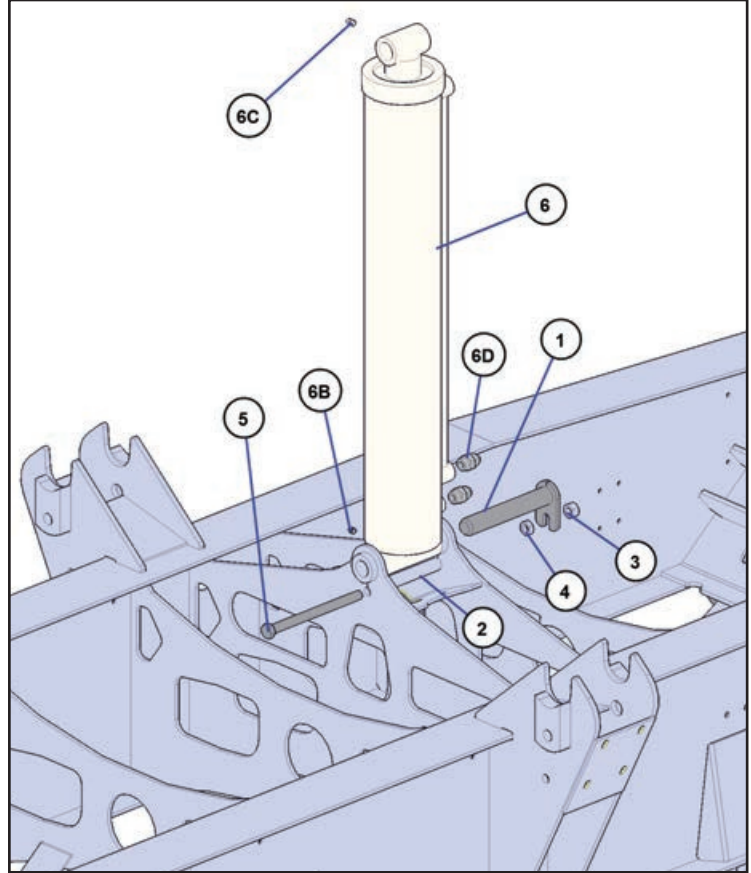
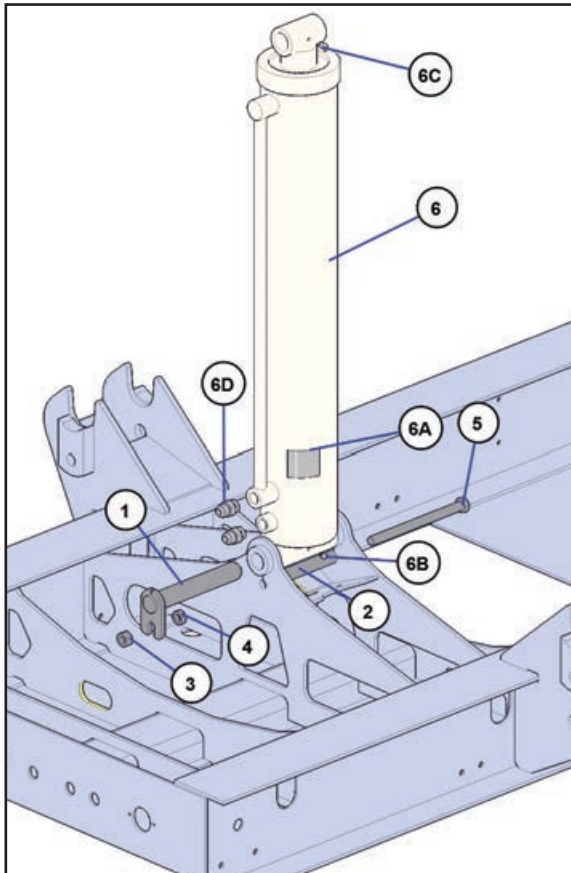
| Malfunction                             | Probable Cause                                                                                                       | Corrective Action                                                                                                                             |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| No brakes                               | A. Source of air supply shut off at towing vehicle.                                                                  | A. Open air line valves at rear of towing vehicle.                                                                                            |
|                                         | B. Air brake hose between semi-trailer and towing vehicle not properly coupled.                                      | B. Examine air brake hose to make sure that hoses marked SERVICE and EMERGENCY are properly connected to the semi-trailer and towing vehicle. |
|                                         | C. Air reservoir drain cock open.                                                                                    | C. Check air reservoir drain cocks on both semi-trailer and towing vehicle.                                                                   |
|                                         | D. To test for air leaks in the RE-6 valve.<br>1. Apply soap suds to cover plate, cover plate vent and exhaust port. | D. Replace with a new unit.                                                                                                                   |
|                                         | E. Air leakage in brake system.                                                                                      | E. Examine all air hoses, lines, and connecting units in the brake system for air leaks. Replace units that are found defective.              |
|                                         | F. Low air pressure.                                                                                                 | F. Check air pressure gauge on towing vehicle. Pressure must not be below 80 PSI.                                                             |
|                                         | G. Defective relay-emergency valve.                                                                                  | G. Replace defective valve.                                                                                                                   |
|                                         | H. Brake air chamber inoperative.                                                                                    | H. Check for punctured diaphragm.                                                                                                             |
|                                         | I. Brakes need adjustment.                                                                                           | I. Adjust brakes.                                                                                                                             |
| Insufficient Brakes.                    | A. Improper brake adjustment on worn brake linings.                                                                  | A. Adjust brakes or replace brake shoe assemblies as necessary.                                                                               |
|                                         | B. Improper slack adjuster adjustment.                                                                               | B. Adjust slack adjuster.                                                                                                                     |
|                                         | C. Air leakage in brake system.                                                                                      | C. Examine for air leaks in brake system. replace units that are found defective.                                                             |
|                                         | D. Low air pressure.                                                                                                 | D. Check air pressure gauge in towing vehicle cab. Pressure must not be below 80 PSI.                                                         |
|                                         | E. Restriction in air hose or lines.                                                                                 | E. Look for dented or kinked airlines. Examine air hose to make sure it is not pinched between other units on the same trailer.               |
| Slow brake application or slow release. | A. Maximum brake chamber pushrod travel.                                                                             | A. Adjust slack adjuster and adjust brakes as necessary.                                                                                      |
|                                         | B. Weak brake shoe return spring.                                                                                    | B. Check brake shoe return spring and Replace if found to be weak.                                                                            |

## Troubleshooting Wheels, Hubs, Bearings, And Tires (Continued)

| Malfunction                | Probable Cause                                                                                                 | Corrective Action                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Grabbing brakes or wheels. | A. Lubricant on brake lining.                                                                                  | A. Inspect for lubricant on brake lining. Replace brake shoe assembly if lubricant on lining is evident.                                                                 |
|                            | B. Loose brake lining.                                                                                         | B. Inspect brake lining for sheared or worn rivets or bolts. Replace defective brake shoe assembly.                                                                      |
|                            | C. Loose or worn wheel bearings.                                                                               | C. Adjust wheel bearings. If adjustment of wheel bearings does not correct the condition of loose wheels, replace bearings.                                              |
|                            | D. Distorted brake linings.                                                                                    | D. Replace brake shoe assembly.                                                                                                                                          |
| Noisy brakes.              | A. Lining or rivets loose.                                                                                     | A. Replace brake drum assembly.                                                                                                                                          |
|                            | B. Road grit, rust, or metal particles in brake drum or lining.                                                | B. Clean brake drum and lining. Replace Brake shoe assembly if grit or metal particles are embedded in the lining.                                                       |
|                            | C. Brake drum out of round or scored.                                                                          | C. Repair or replace brake drum.                                                                                                                                         |
| Not holding air Pressure.  | A. Excessive leakage in relay-emergency valve, and exhausts port.                                              | A. Replace relay – emergency valve.                                                                                                                                      |
|                            | B. Air leakage at line connectors.                                                                             | B. Tighten connectors until air leakage disappears. If air leakage persists, replace defective connectors or airlines.                                                   |
|                            | C. Leakage at service or emergency line couplings.                                                             | C. Couplings are improperly connected or packing ring gasket in hose coupling is defective. Connect couplings properly or replace packing ring gasket in hose couplings. |
|                            | D. Air leakage at service or emergency air hose coupling when towing vehicle service air hose is disconnected. | D. Replace relay – emergency valve.                                                                                                                                      |

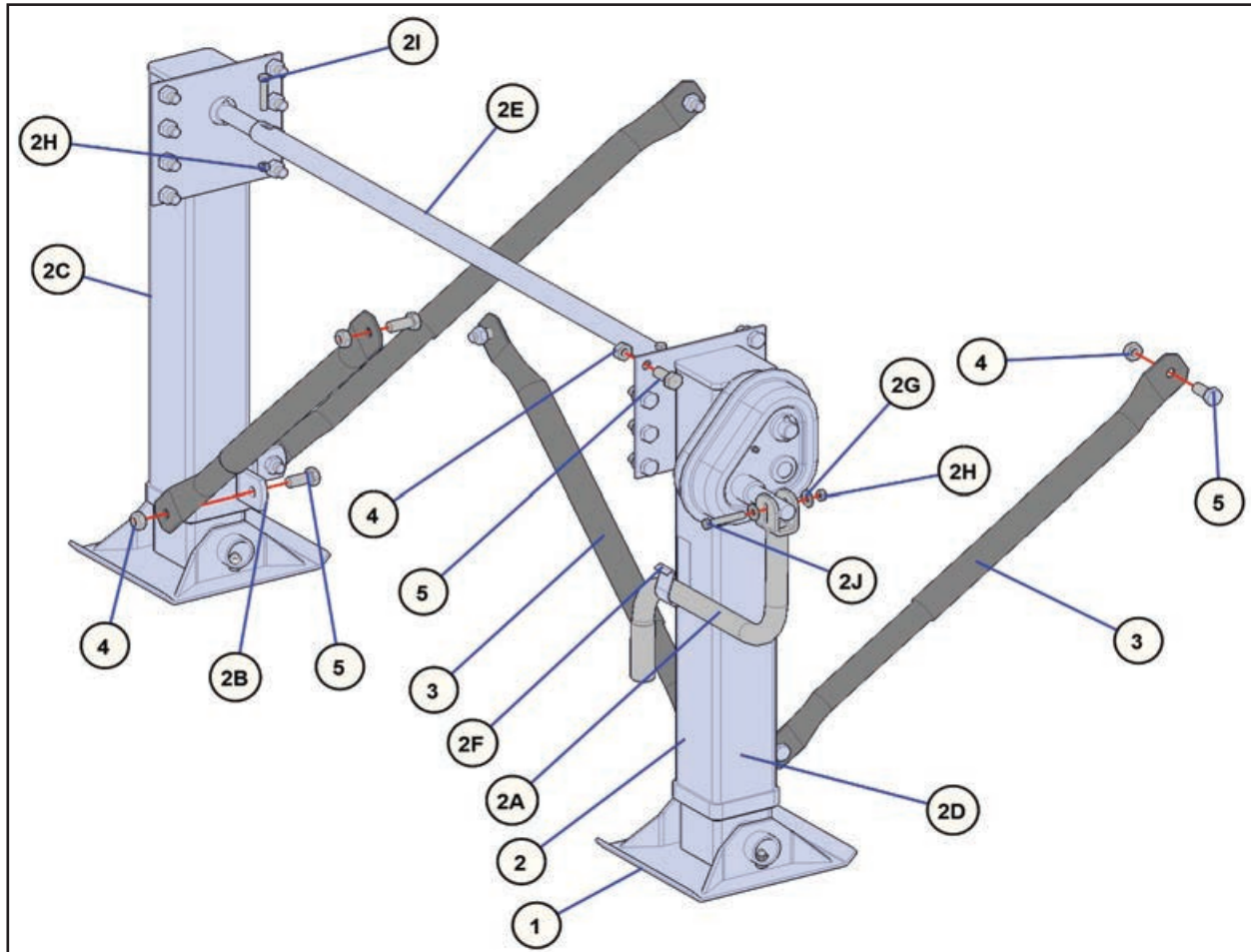
## HYDRAULIC SYSTEM

| Malfunction        | Probable Cause                        | Corrective Action                                                               |
|--------------------|---------------------------------------|---------------------------------------------------------------------------------|
| Tub will not dump  | A. Hoses not connected to power unit. | A. Clean hydraulic coupler and connect to Trailer.                              |
|                    | B. Power unit malfunction.            | B. Check power unit pressure and flow rate.                                     |
|                    | C. Ruptured line or loose fitting.    | C. Check for hydraulic leaks – replace hydraulic hose or fitting.               |
|                    | D. Hydraulic cylinder                 | D. Replace cylinder packing                                                     |
|                    | E. Proportional Valve                 | E. Check pressure at both cylinders for equal pressure.                         |
|                    | F. Double Relief Valve                | F. Adjust high-pressure relief cartridge                                        |
| Tub Dumping Slowly | A. Dirt in relief valve               | A. Disassemble valve. Clean with diesel fuel or kerosene, or replace cartridge. |
|                    | B. Chattering noise in relief valve   | B. Dirty valve or pressure set too low and by-passing. Check pressure setting.  |
|                    | C. Power unit hydraulic system        | C. Check pressure and flow rate on power unit.                                  |



| BOM ID | Qty | Item No   | Description                                       |
|--------|-----|-----------|---------------------------------------------------|
| 1      | 2   | 5CAM9019  | PIN, CYLINDER, 1-1/2" X 9-5/8"                    |
| 2      | 2   | 3CAM9129  | TUBE                                              |
| 3      | 2   | 1AFBP3027 | NUT, HEX LOCK, 3/4"-10, GRADE 2, PLATED           |
| 4      | 2   | 1AFBP3107 | NUT, HEX JAM, 3/4"-10, GRADE 2, PLATED            |
| 5      | 2   | 1AFBP3719 | HEX CAP SCREW, 3/4"-10 X 10-1/2", GRADE 5, PLATED |
| 6      | 2   | DP6349    | CYLINDER, HYDRAULIC, 6 X 36, WITH DROP TUBE       |
| 6A     | 1   | AP2986    | DECAL, GREASE TRAILER WEEKLY, 2-3/4"W X 3"T       |
| 6B     | 2   | 1AFBP3268 | GREASE ZERK, 1/8" NPT                             |
| 6C     | 2   | 1AFBP3654 | GREASE ZERK, 1/8" MP X 45 DEGREE ELBOW            |
| 6D     | 4   | 1AKDP4368 | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12         |

1AKDP6447 (1) SEAL KIT 6" PRINCE

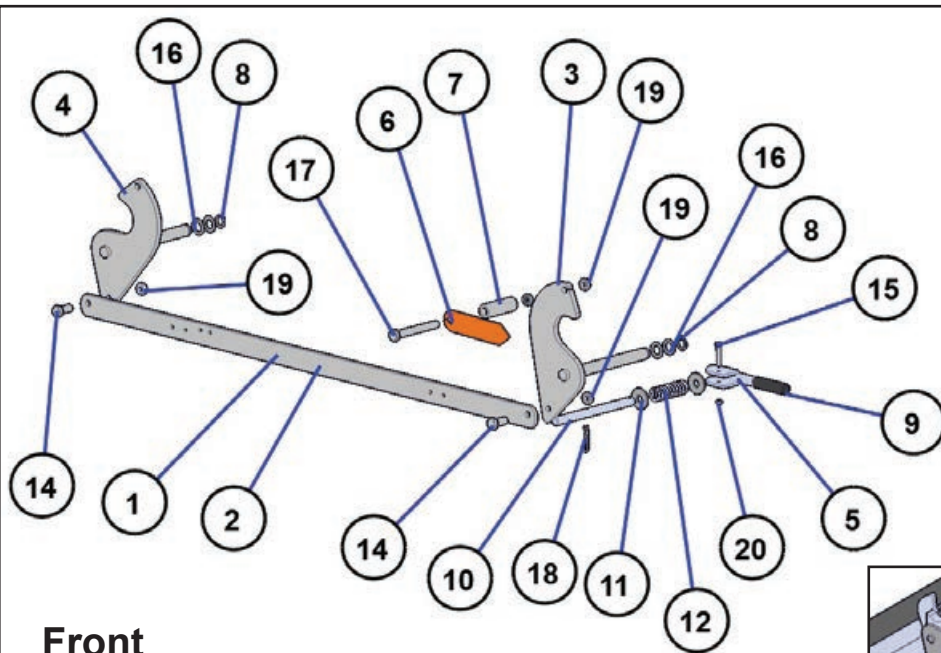


| BOM ID | Qty | Item No    | Description                                      |
|--------|-----|------------|--------------------------------------------------|
| 1      | 1   | 4CPKG00112 | PACKAGE, JACK, 2001 SIDE DUMP                    |
| 2      | 1   | 1AJAP3503  | JACK, LANDING LEG AND GEAR SET                   |
| 2A     | 1   | 1AJAP3504  | CRANK HANDLE                                     |
| 2B     | 2   | 1AJAP4061  | BRACKET, LANDING GEAR, "W"                       |
| 2C     | 1   | 1AJAP4098  | JACK LEG, CURB SIDE                              |
| 2D     | 1   | 1AJAP4099  | JACK LEG, ROAD SIDE                              |
| 2E     | 1   | 1AJAP4100  | CROSS SHAFT                                      |
| 2F     | 1   | 1AJAP4101  | CRANK HANDLE CLIP                                |
| 2G     | 2   | 1AFBP3015  | WASHER, FLAT, 3/8", PLATED                       |
| 2H     | 3   | 1AFBP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                 |
| 2I     | 2   | 1AFBP3625  | HEX CAP SCREW, 3/8"-16 X 2", GRADE 8, PLATED     |
| 2J     | 1   | 1AFBP3626  | HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 8, PLATED |
| 3      | 4   | 1ASAP3505  | ADJUSTABLE BRACE                                 |
| 4      | 24  | 1AFBP3615  | NUT, HEX LOCK, 5/8"-11, GRADE 8, PLATED, UTC     |
| 5      | 24  | 1AFBP3617  | HEX CAP SCREW, 5/8"-11 X 1-1/2", GRADE 8, PLATED |

**NOTE:**

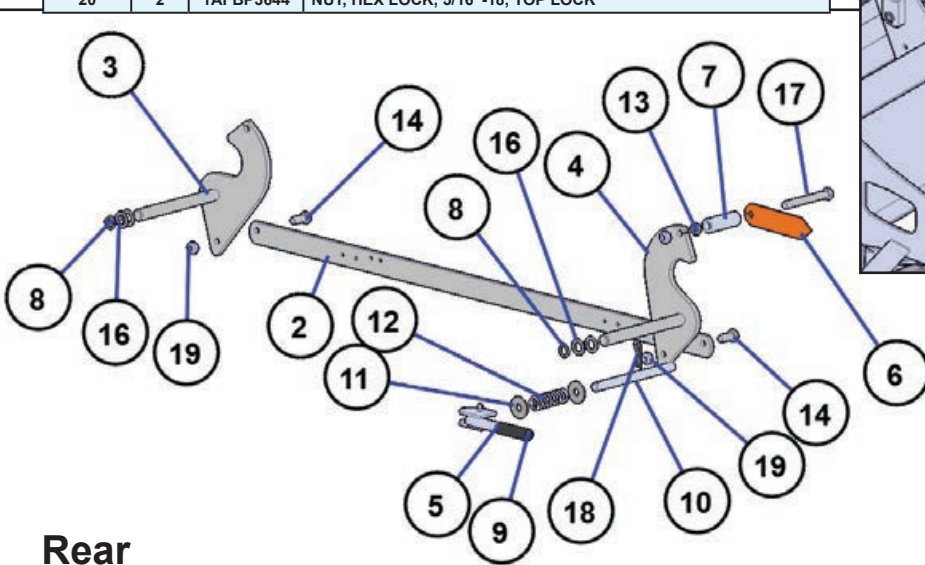
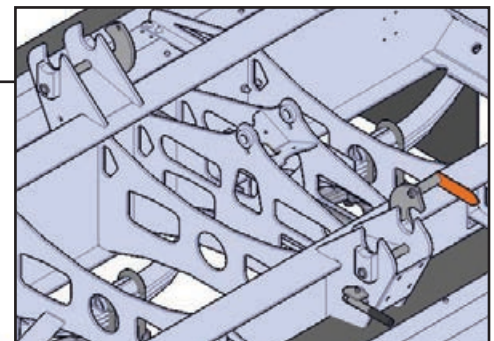
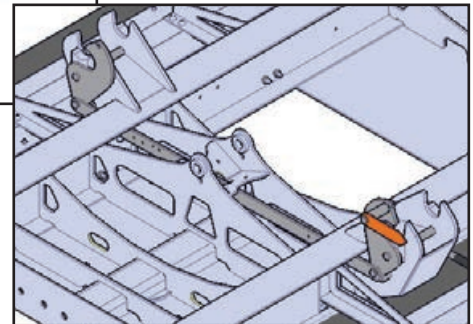
See Page 84 for Landing Gear Operating and Maintenance Manual.

# Pivot Latch Parts (4CPKG00113)

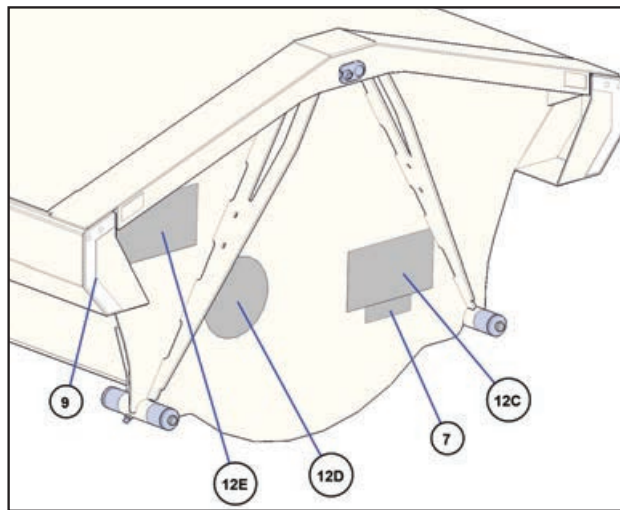
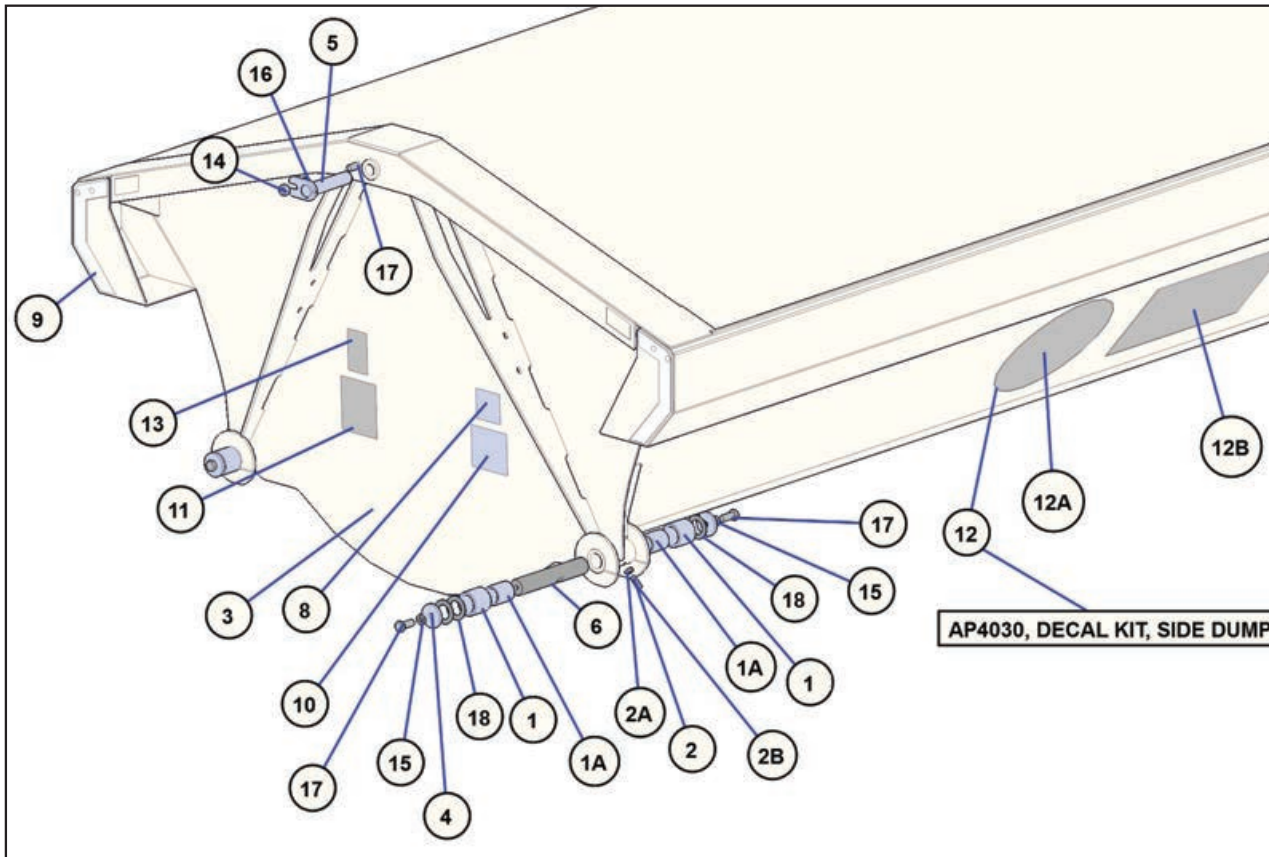


Front

| BOM ID | Qty | Item No    | Description                                            |
|--------|-----|------------|--------------------------------------------------------|
| 1      | 1   | 4CPKG00113 | PACKAGE, PIVOT LATCH, 2001 SIDE DUMP                   |
| 2      | 2   | 3CAM9078   | LATCH CONNECTOR                                        |
| 3      | 2   | 5CAM9123   | TUB PIVOT LOCK, LEFT HAND FRONT/RIGHT HAND REAR        |
| 4      | 2   | 5CAM9124   | TUB PIVOT LOCK, RIGHT HAND FRONT/ LEFT HAND REAR       |
| 5      | 2   | 5CAM9125   | LATCH LOCK HANDLE                                      |
| 6      | 2   | 3CAM9155   | LATCH INDICATOR FLAG                                   |
| 7      | 2   | 3CAM9156   | SPACER                                                 |
| 8      | 4   | 1AFAP2407  | SNAP RING, 1" EXTERNAL, HEAVY DUTY                     |
| 9      | 2   | 1ABAP4208  | GRIP, .843" ID X 4" OAL                                |
| 10     | 2   | 1AFBM3727  | PIN, LATCH LOCK, 3/4" X 10-3/8" OAL                    |
| 11     | 4   | 1AFBP3033  | WASHER, FLAT, 3/4", PLATED, STANDARD, TYPE A, SERIES W |
| 12     | 2   | 1AFBP3066  | COMPRESSION SPRING RIGID HITCH                         |
| 13     | 2   | 1AFBP3080  | NUT, HEX JAM, 5/8"-11, GRADE 2                         |
| 14     | 4   | 1AFBP3097  | HEX CAP SCREW, 5/8"-11 X 1-1/2", GRADE 5, PLATED       |
| 15     | 2   | 1AFBP3110  | HEX CAP SCREW, 5/16"-18 X 2", GRADE 5, PLATED          |
| 16     | 8   | 1AFBP3215  | MACHINERY BUSHING, 1-1/2" OD X 1" ID, 14 GAUGE, PLATED |
| 17     | 2   | 1AFBP3298  | HEX CAP SCREW, 5/8"-11 X 5-1/2", GRADE 5, PLATED       |
| 18     | 2   | 1AFBP3504  | PIN, HAIRCLIP, 1/8"                                    |
| 19     | 6   | 1AFBP3615  | NUT, HEX LOCK, 5/8"-11, GRADE 8, PLATED                |
| 20     | 2   | 1AFBP3644  | NUT, HEX LOCK, 5/16"-18, TOP LOCK                      |



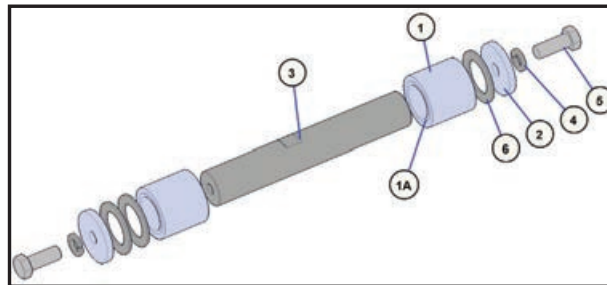
Rear



## FK2009 DECAL KIT DEMCO CHASSIS, 1995-PRESENT

1. AP3506 60ft. Reflective Tape, Red/Silver
2. AP4269 1 Decal Sheet, Demco Chassis & Tub
3. AP4361 1 Decal, DANGER, Frame Area Maintenance

## FK2005 PIVOT PIN & BUSHING KIT



| BOM ID | Qty | Item No | Description                                   |
|--------|-----|---------|-----------------------------------------------|
| 1      | 2   | AAM7990 | ASSEMBLY, TUB PIVOT BEARING                   |
| 1A     | 2   | AP3136  | BUSHING, SELF-LUBRICATED, 2" ID X 2-3/4" LONG |
| 2      | 2   | AM9026  | WASHER, PIVOT PIN                             |
| 3      | 1   | AM9136  | PIVOT PIN, 2" X 12-1/8" OAL                   |
| 4      | 2   | BP3035  | WASHER, LOCK, 3/4", PLATED                    |
| 5      | 2   | BP3139  | HEX CAP SCREW, 3/4"-10 X 2", GRADE 5, PLATED  |
| 6      | 3   | BP3599  | MACHINERY BUSHING, 3" OD X 2" ID X 10 GAUGE   |

## FK2008 DECAL KIT DEMCO TUB, 1995-PRESENT

1. AP3507 8ft. Reflective Tape, White
2. AP4030 1 Decal Kit, Side Dump Tub
3. AP4269 1 Decal Sheet, Demco Chassis & Tub
4. AP4361 1 Decal, DANGER, Frame Area Maintenance, Trailer

## 34' Tub Parts

| BOM ID | Qty | Item No | Description                                            |
|--------|-----|---------|--------------------------------------------------------|
| 1      | 12  | AAM7990 | ASSEMBLY, TUB PIVOT BEARING                            |
| 1A     | 12  | AP3136  | BUSHING, SELF-LUBRICATED, 2" ID X 2-3/4" LONG          |
| 2      | 6   | AAM7991 | ASSEMBLY, SET SCREW & JAM NUT, 5/8"-11 X 1-1/4" PLATED |
| 2A     | 6   | BP3080  | NUT, HEX JAM, 5/8"-11, GRADE 2                         |
| 2B     | 6   | BP3673  | SET SCREW, SQ HEAD, 5/8"-11 X 1-1/4", PLATED           |
| 3      | 1   | AM9021  | TUB, 34', 6MM AR400F, ROUND BOTTOM                     |
| 4      | 12  | AM9026  | WASHER, PIVOT PIN                                      |
| 5      | 2   | AM9057  | PIN, CYLINDER, 1-1/2" X 7-1/8"                         |
| 6      | 6   | AM9136  | PIVOT PIN, 2" X 12-1/8" OAL                            |
| 7      | 1   | AP2491  | DECAL, PATENT PROTECTION                               |
| 8      | 1   | AP2914  | DECAL, WARNING, HIGH-PRESSURE FLUID                    |
| 9      | 4   | AP3507  | REFLECTIVE TAPE USED ON TUB CORNER                     |
| 10     | 1   | AP3669  | DECAL, DANGER, LOAD DUMPING SAFETY                     |
| 11     | 1   | AP3670  | DECAL, CAUTION, SIDE DUMP CHECKLIST & INSTRUCTIONS     |
| 12     | 1   | AP4030  | DECAL KIT, SIDE DUMP TUB                               |
| 12A    | 2   | AP4031  | DECAL                                                  |
| 12B    | 2   | AP4032  | DECAL, STACK SIDE DUMP, 14" X 24"                      |
| 12C    | 1   | AP4039  | DECAL, STACK SIDE DUMP WITH PATENT #, 9" X 16"         |
| 12D    | 1   | AP4040  | DECAL                                                  |
| 12E    | 1   | AP4041  | DECAL, TMC, STACKED                                    |
| 13     | 1   | AP4361  | DECAL, DANGER, FRAME AREA MAINTENANCE                  |
| 14     | 2   | BP3027  | NUT, HEX LOCK, 3/4"-10, GRADE 2, PLATED                |
| 15     | 12  | BP3035  | WASHER, LOCK, 3/4", PLATED                             |
| 16     | 2   | BP3107  | NUT, HEX JAM, 3/4"-10, GRADE 2, PLATED                 |
| 17     | 14  | BP3139  | HEX CAP SCREW, 3/4"-10 X 2", GRADE 5, PLATED           |
| 18     | 18  | BP3599  | MACHINERY BUSHING, 3" OD X 2" ID X 10 GAUGE            |



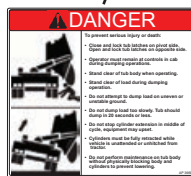
13  
AP4361



11  
AP3670



8  
AP2914



10  
AP3669

THURSTON  
MANUFACTURING  
COMPANY

12E  
AP4041



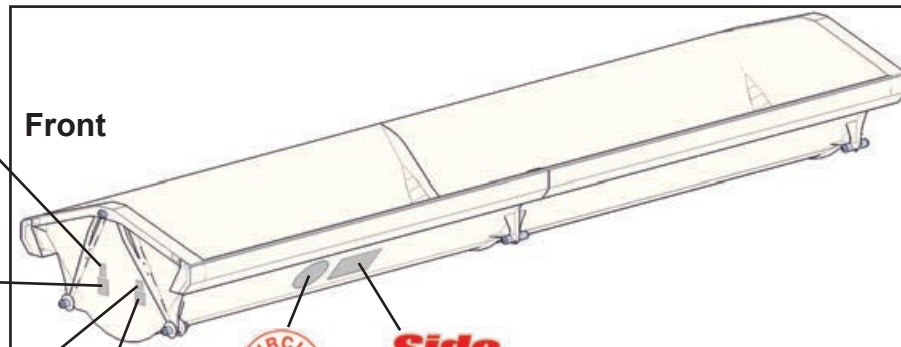
12D  
AP4040



12C  
AP4039

7  
AP2491

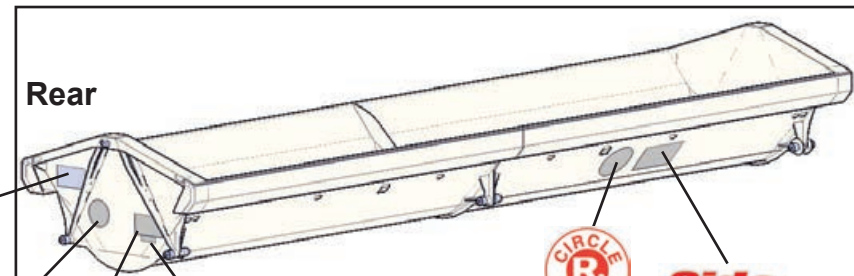
This product is protected under one or more of the following  
Thurston Manufacturing Company Patents:  
4,997,203; 5,489,214; 5,845,971; 5,967,815;  
6,915,250; 6,956,386; 6,757,575; 6,179,503 B1;  
6,189,808 B1; 6,402,453 B1; 6,435,738; 6,428,364  
Other patents pending.



12A  
AP4031



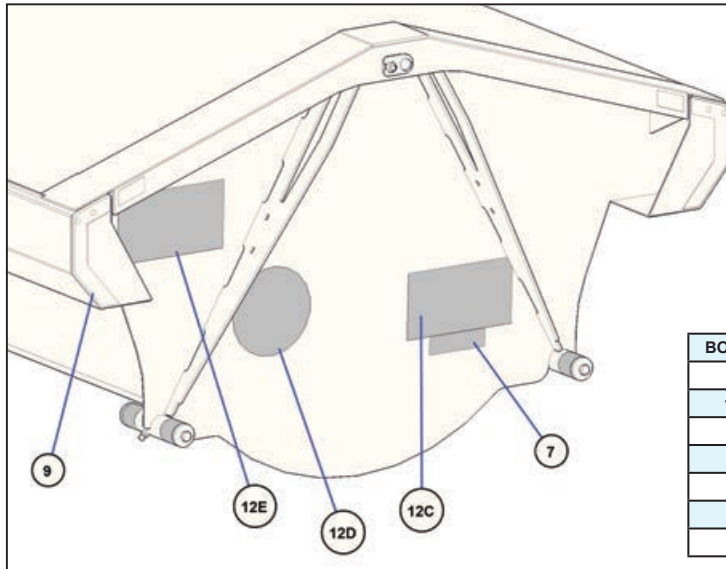
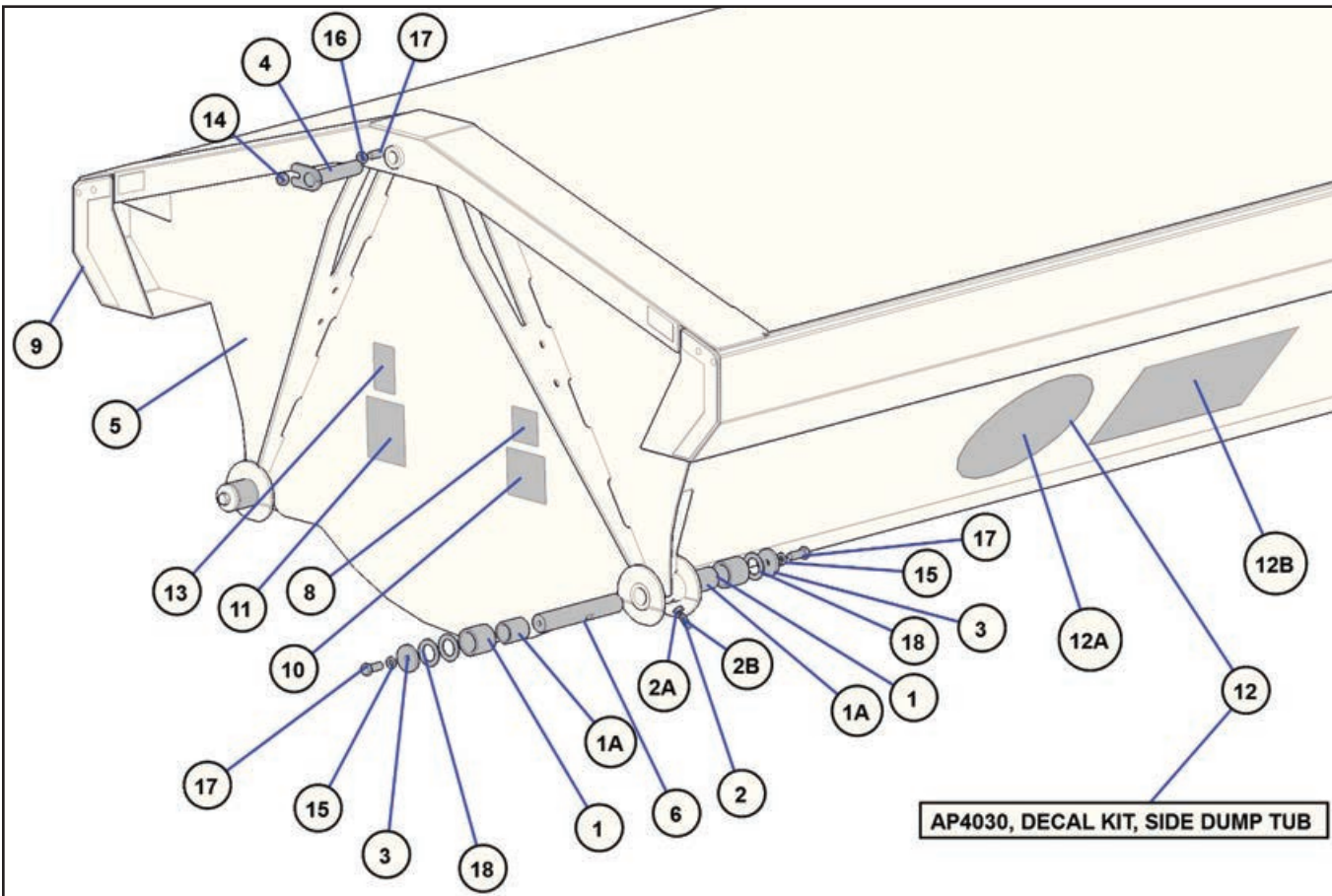
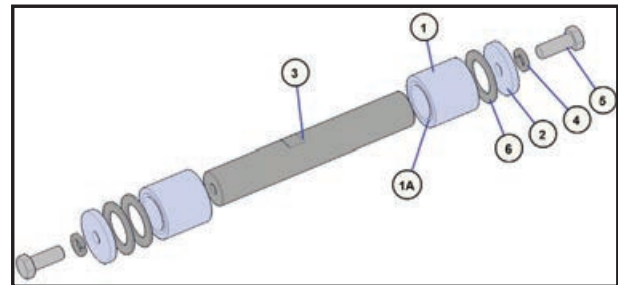
12B  
AP3669



12A  
AP4031



12B  
AP4032


**FK2005 PIVOT PIN & BUSHING KIT**


| BOM ID | Qty | Item No | Description                                   |
|--------|-----|---------|-----------------------------------------------|
| 1      | 2   | AAM7990 | ASSEMBLY, TUB PIVOT BEARING                   |
| 1A     | 2   | AP3136  | BUSHING, SELF-LUBRICATED, 2" ID X 2-3/4" LONG |
| 2      | 2   | AM9026  | WASHER, PIVOT PIN                             |
| 3      | 1   | AM9136  | PIVOT PIN, 2" X 12-1/8" OAL                   |
| 4      | 2   | BP3035  | WASHER, LOCK, 3/4", PLATED                    |
| 5      | 2   | BP3139  | HEX CAP SCREW, 3/4"-10 X 2", GRADE 5, PLATED  |
| 6      | 3   | BP3599  | MACHINERY BUSHING, 3" OD X 2" ID X 10 GAUGE   |

**FK2009 DECAL KIT DEMCO CHASSIS, 1995-PRESENT**

1. AP3506 60ft. Reflective Tape, Red/Silver
2. AP4269 1 Decal Sheet, Demco Chassis & Tub
3. AP4361 1 Decal, DANGER, Frame Area Maintenance

**FK2008 DECAL KIT DEMCO TUB, 1995-PRESENT**

1. AP3507 8ft. Reflective Tape, White
2. AP4030 1 Decal Kit, Side Dump Tub
3. AP4269 1 Decal Sheet, Demco Chassis & Tub
4. AP4361 1 Decal, Danger, Frame Area Maintenance, Trailer

# 30' Tub Parts

| BOM ID | Qty | Item No | Description                                             |
|--------|-----|---------|---------------------------------------------------------|
| 1      | 12  | AAM7990 | ASSEMBLY, TUB PIVOT BEARING                             |
| 1A     | 12  | AP3136  | BUSHING, SELF-LUBRICATED, 2" ID X 2-3/4" LONG           |
| 2      | 6   | AAM7991 | ASSEMBLY, SET SCREW & JAM NUT, 5/8"-11 X 1-1/4", PLATED |
| 2A     | 6   | BP3080  | NUT, HEX JAM, 5/8"-11, GRADE 2                          |
| 2B     | 6   | BP3673  | SET SCREW, SQ HEAD, 5/8"-11 X 1-1/4", PLATED            |
| 3      | 12  | AM9026  | WASHER, PIVOT PIN                                       |
| 4      | 2   | AM9057  | PIN, CYLINDER, 1-1/2" X 7-1/8"                          |
| 5      | 1   | AM9084  | TUB, 30', 6MM AR400, ROUND BOTTOM                       |
| 6      | 6   | AM9136  | PIVOT PIN, 2" X 12-1/8" OAL                             |
| 7      | 1   | AP2491  | DECAL, PATENT PROTECTION, Demco                         |
| 8      | 1   | AP2914  | DECAL, WARNING, HIGH-PRESSURE FLUID                     |
| 9      | 4   | AP3507  | REFLECTIVE TAPE USED ON TUB CORNER                      |
| 10     | 1   | AP3669  | DECAL, DANGER, LOAD DUMPING SAFETY                      |
| 11     | 1   | AP3670  | DECAL, CAUTION, SIDE DUMP CHECKLIST & INSTRUCTIONS      |
| 12     | 1   | AP4030  | DECAL KIT, SIDE DUMP TUB                                |
| 12A    | 2   | AP4031  | DECAL, Demco LOGO, 18"                                  |
| 12B    | 2   | AP4032  | DECAL, STACK SIDE DUMP, 14" X 24"                       |
| 12C    | 1   | AP4039  | DECAL, STACK SIDE DUMP WITH PATENT #, 9" X 16"          |
| 12D    | 1   | AP4040  | DECAL, Demco LOGO, 12"                                  |
| 12E    | 1   | AP4041  | DECAL, TMC, STACKED                                     |
| 13     | 1   | AP4361  | DECAL, DANGER, FRAME AREA MAINTENANCE                   |
| 14     | 2   | BP3027  | NUT, HEX LOCK, 3/4"-10, GRADE 2, PLATED                 |
| 15     | 12  | BP3035  | WASHER, LOCK, 3/4", PLATED                              |
| 16     | 2   | BP3107  | NUT, HEX JAM, 3/4"-10, GRADE 2, PLATED                  |
| 17     | 14  | BP3139  | HEX CAP SCREW, 3/4"-10 X 2", GRADE 5, PLATED            |
| 18     | 18  | BP3599  | MACHINERY BUSHING, 3" OD X 2" ID X 10 GAUGE             |



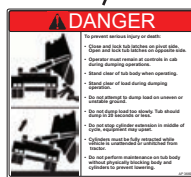
13  
AP4361



11  
AP3670



8  
AP2914



10  
AP3669

THURSTON  
MANUFACTURING  
COMPANY

12E  
AP4041



12D  
AP4040

12C  
AP4039

12A  
AP4031

12B  
AP3669

Rear

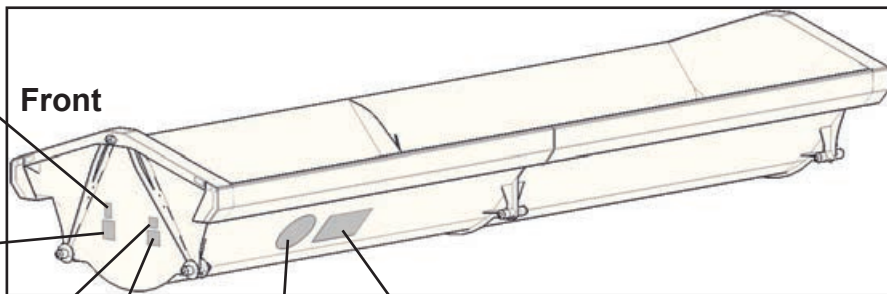
7  
AP2491

This product is protected under one or more of the following:  
Thurston Manufacturing Company Patents:  
4,987,202; 5,480,274; 5,545,971; 5,567,455;  
5,919,215; 6,046,380; 6,257,870; 6,179,589 B1;  
6,189,989 B1; 6,402,433 B1; 6,402,758; 6,402,964  
Other patents pending.

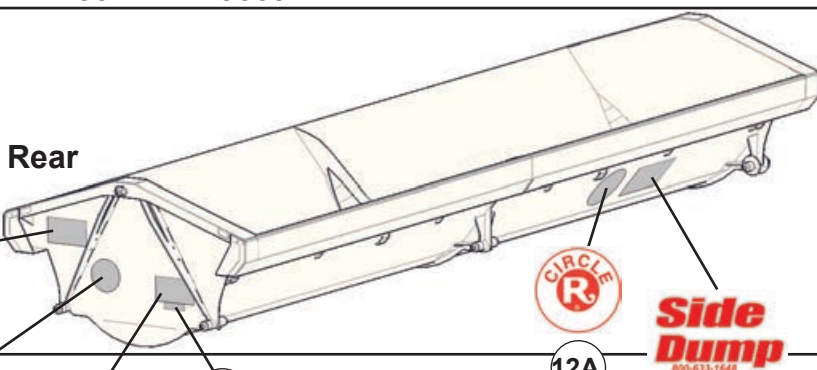
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AP4031

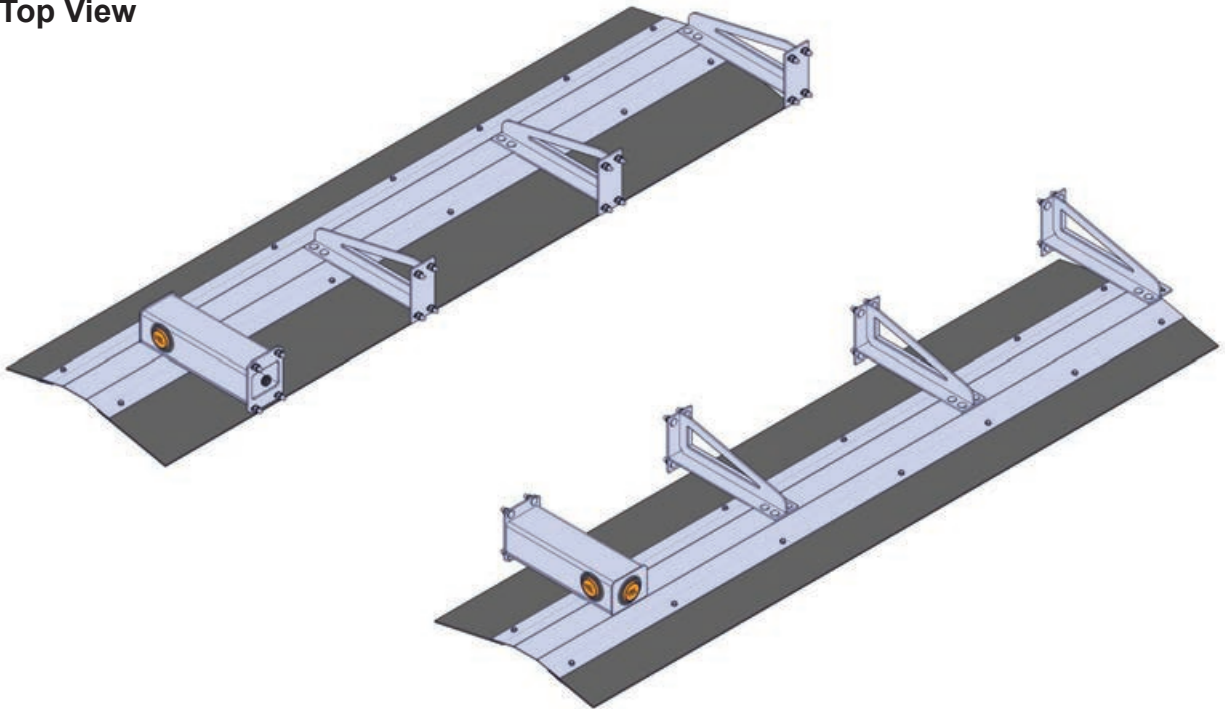
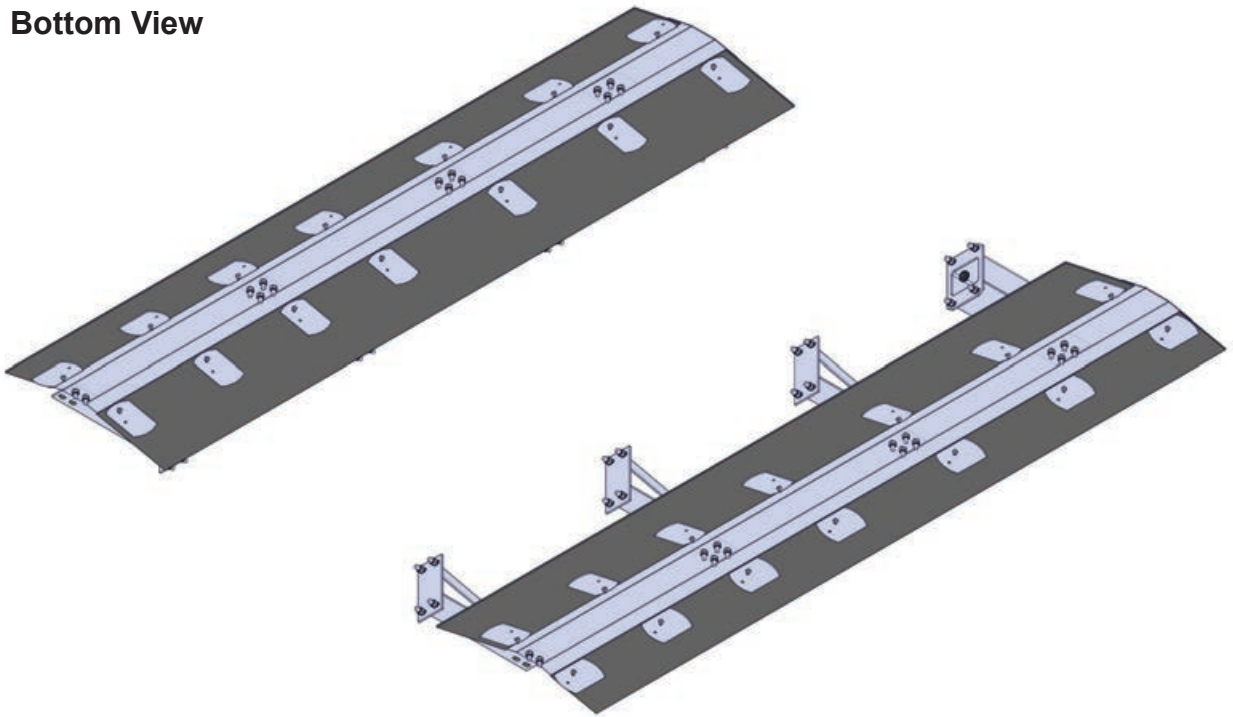
12B  
AP4032

Side Dump  
800-633-1648

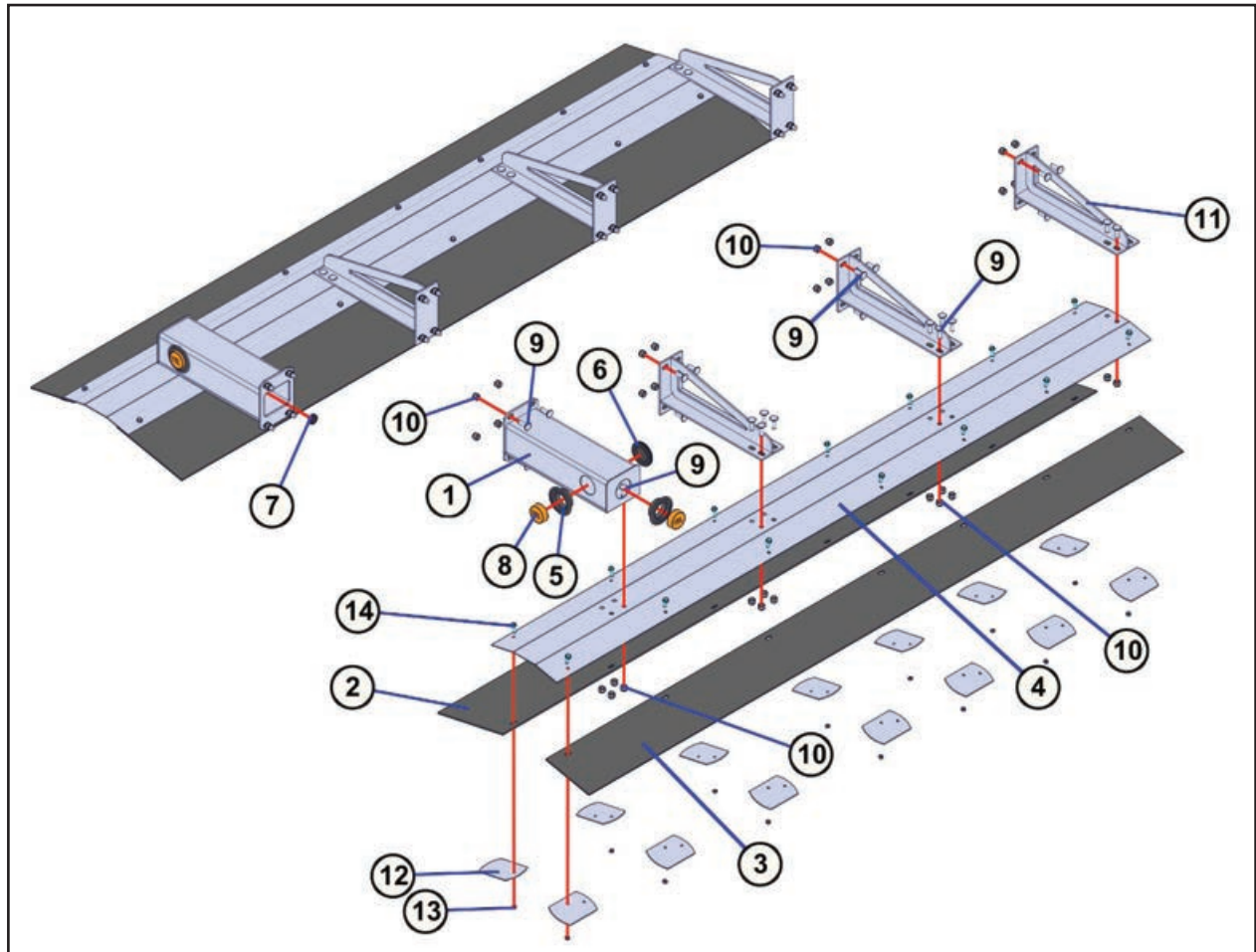


Side Dump  
800-633-1648



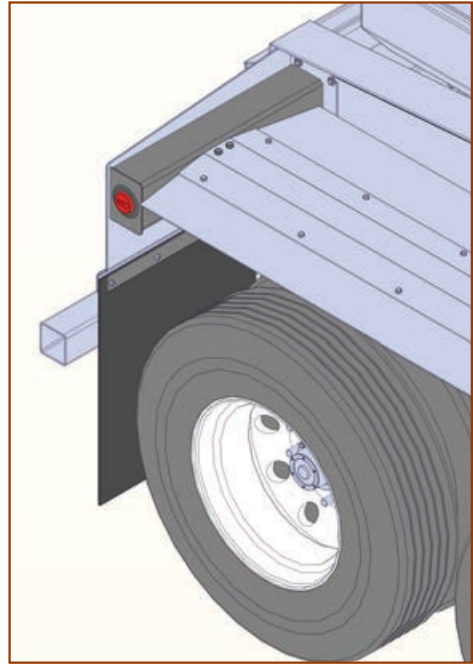
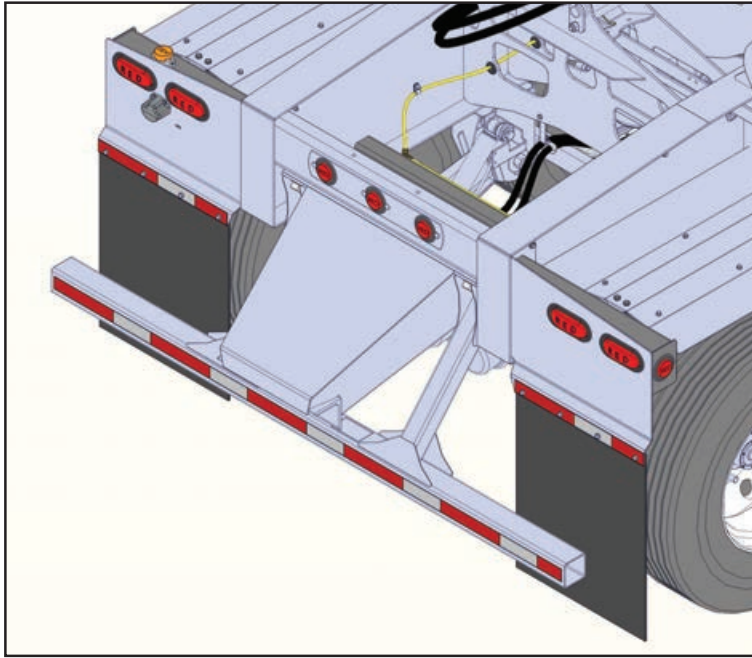
**Top View****Bottom View**

## Front Fender Parts (All Models)

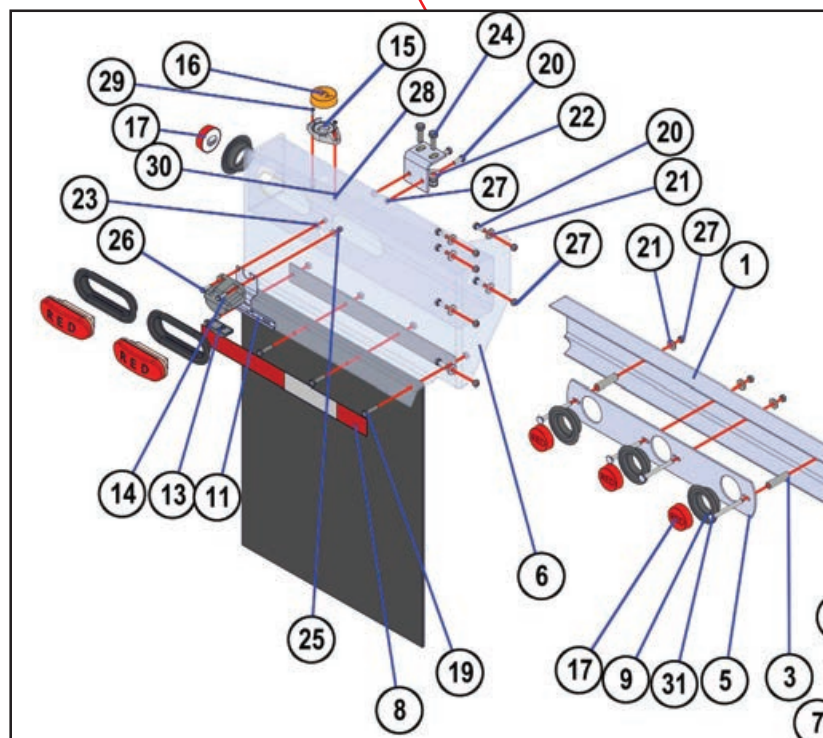
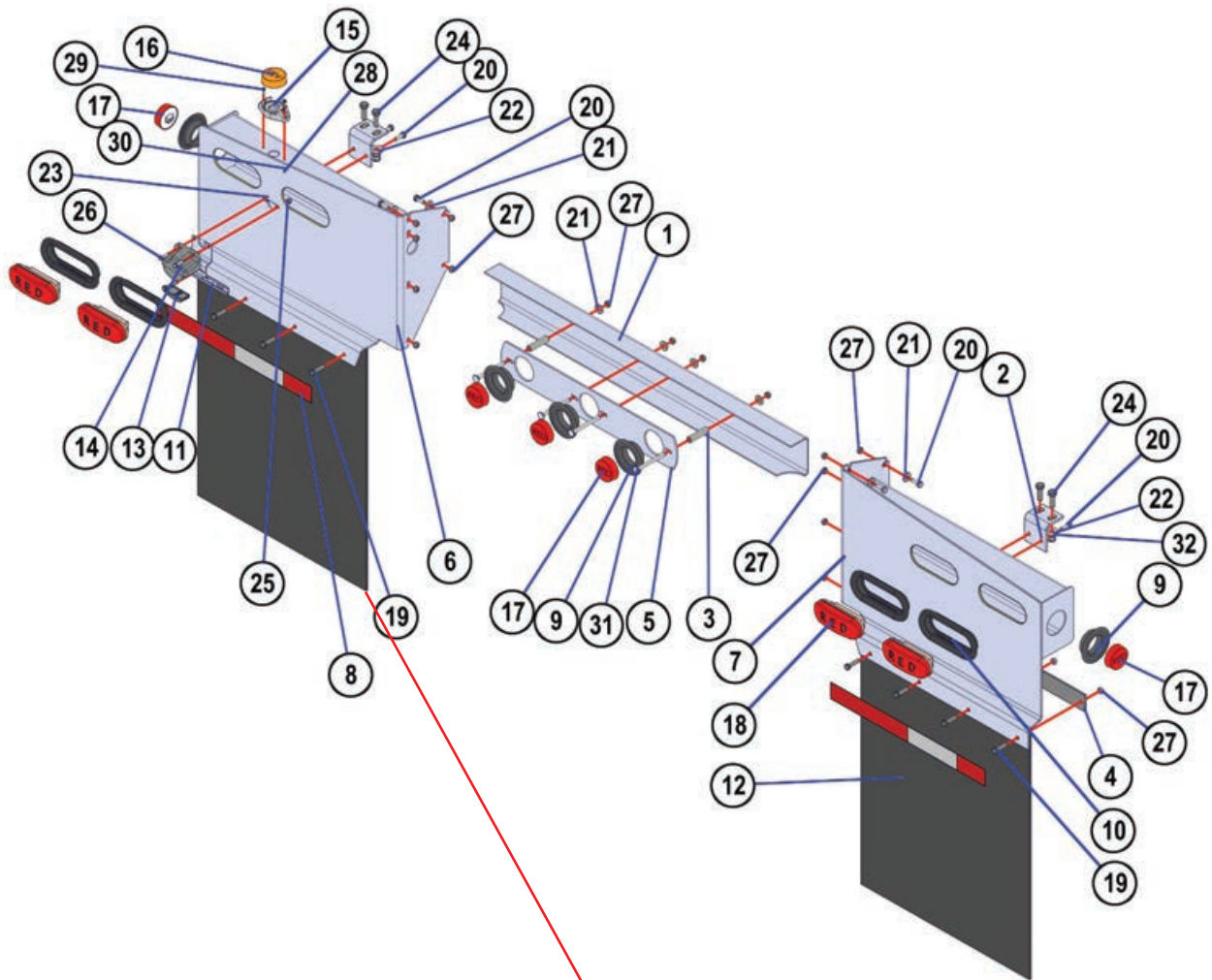


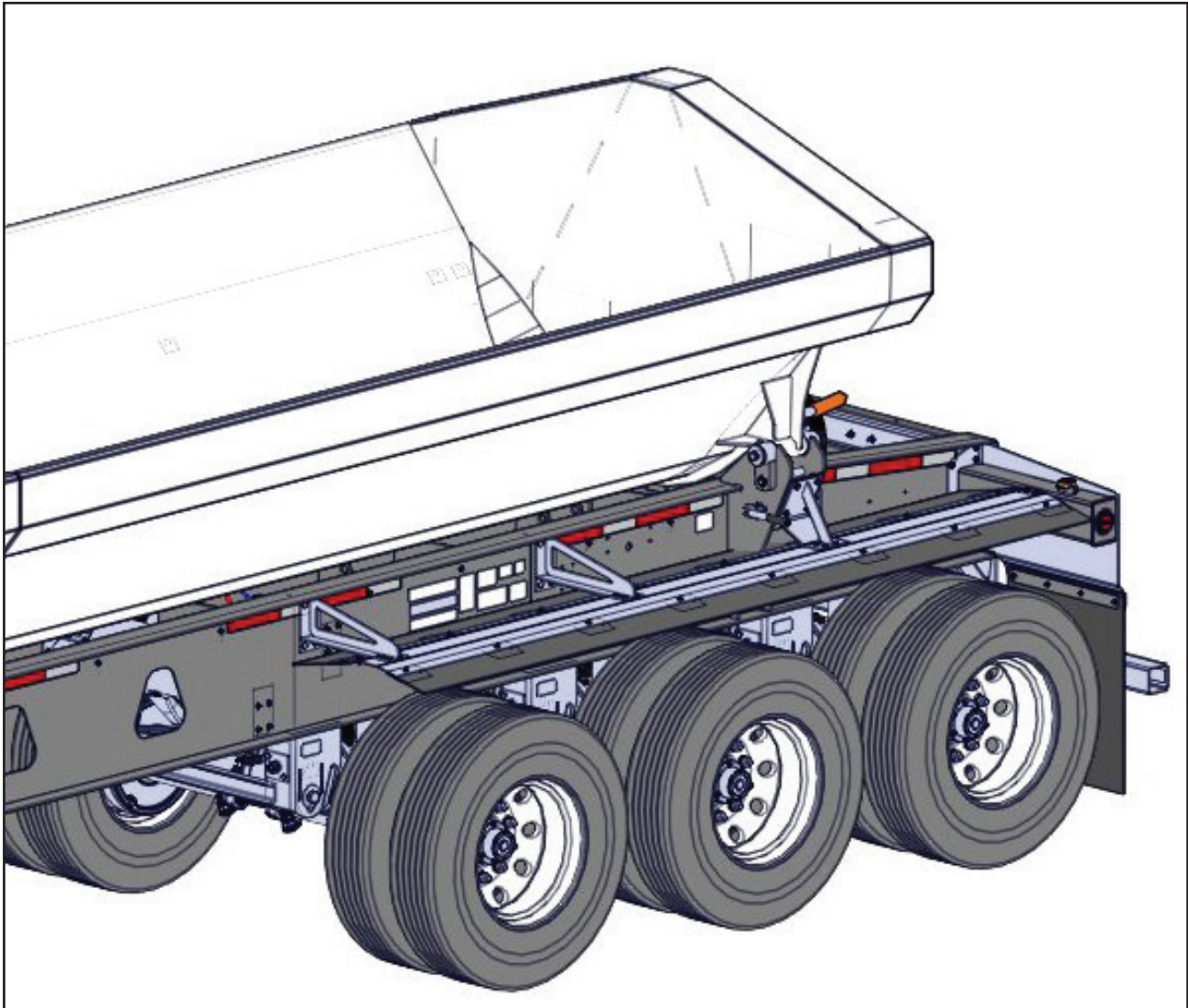
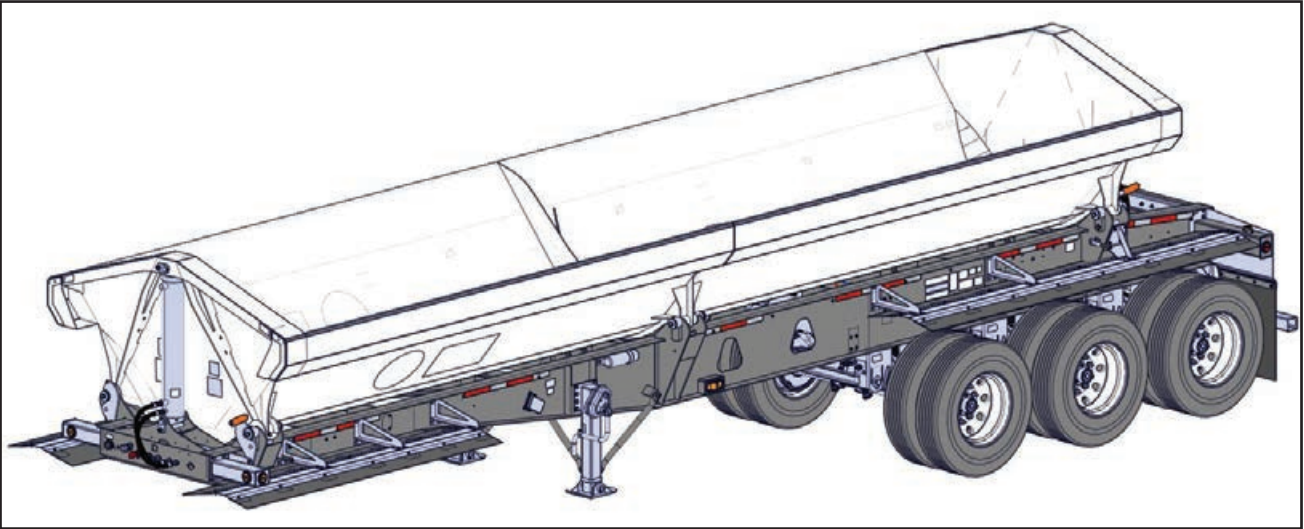
| BOM ID | Qty | Item No   | Description                                       |
|--------|-----|-----------|---------------------------------------------------|
| 1      | 2   | 5CAM9005  | FRONT LIGHT/FENDER MOUNT                          |
| 2      | 2   | 3CAM9091  | FENDER RUBBER, 12" X 108", FRONT                  |
| 3      | 2   | 3CAM9092  | FENDER RUBBER, 8" X 108", FRONT                   |
| 4      | 2   | 3CAM9386  | FENDER SUPPORT, FRONT, 2013                       |
| 5      | 4   | 1AEAP3548 | LAMP, SUPER 10 GROMMET, 10700-3                   |
| 6      | 2   | 1ARAP4010 | GROMMET, PLUG, 2-3/4" HOLE, G8077-046000          |
| 7      | 2   | 1ARAP4045 | GROMMET, 3/4" ID G3137-016                        |
| 8      | 4   | 1AEAP4311 | LAMP, LED, CLEAR/MARKER, YELLOW, 2-1/2"           |
| 9      | 60  | 1AFBP3232 | BOLT, CARRIAGE, 1/2"-13 X 1-1/2", GRADE 5         |
| 10     | 60  | 1AFBP3704 | NUT, LOCK, NYLON INSERT, 1/2"-13                  |
| 11     | 6   | 5CAM9004  | FRAME FENDER MOUNT                                |
| 12     | 28  | 3CAM9089  | FENDER WASHER                                     |
| 13     | 28  | 1AFBP3644 | NUT, HEX LOCK, 5/16"-18, TOP LOCK                 |
| 14     | 28  | 1AFBP3709 | BOLT, FLANGE HEAD, 5/16"-18 X 1", GRADE 8, PLATED |

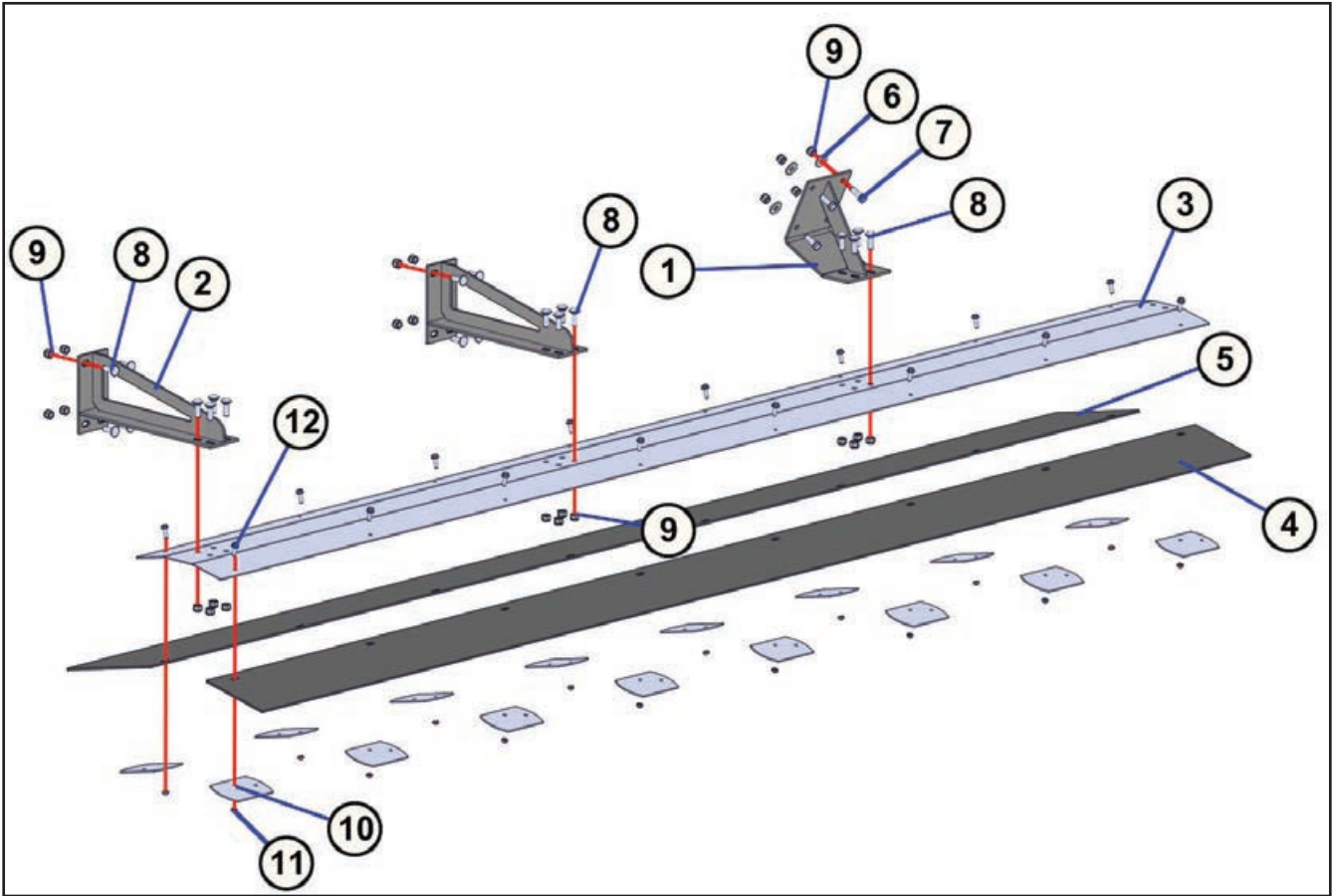
## Rear Fender Panel Parts (All Models)



| BOM ID | Qty | Item No | Description                                      |
|--------|-----|---------|--------------------------------------------------|
| 1      | 1   | AM9008  | BACK COVER, ID LIGHTS                            |
| 2      | 2   | AM9010  | BRACKET, FENDER MOUNT                            |
| 3      | 2   | AM9011  | SPACER TUBE                                      |
| 4      | 2   | AM9035  | MUD FLAP BACKING STRAP                           |
| 5      | 1   | AM9058  | ID LIGHT FACE PLATE                              |
| 6      | 1   | AM9341  | WELDMENT, FENDER REAR PANEL, ROAD SIDE           |
| 7      | 1   | AM9342  | WELDMENT, FENDER REAR PANEL, CURB SIDE           |
| 8      | 2   | AP3506  | REFLECTIVE TAPE, RED/SILVER                      |
| 9      | 5   | AP3548  | LAMP, SUPER 10 GROMMET, 10700-3                  |
| 10     | 4   | AP3551  | GROMMET, OVAL, MODEL 60                          |
| 11     | 1   | AP3878  | LICENSE PLATE BRACKET                            |
| 12     | 2   | AP4027  | MUD FLAP, BLACK, RUBBER                          |
| 13     | 1   | AP4120  | LICENSE PLATE LAMP, CLEAR, 12 VOLT               |
| 14     | 1   | AP4121  | LICENSE PLATE LAMP MOUNTING BRACKET, GREY        |
| 15     | 1   | AP4301  | ABS LIGHT BRACKET, 102008HP                      |
| 16     | 1   | AP4302  | ABS LIGHT, 101731F                               |
| 17     | 5   | AP4310  | LAMP, LED, CLEAR/MARKER, RED, 2-1/2"             |
| 18     | 4   | AP3549  | LAMP, LED, OVAL, STOP TURN & TAIL, RED           |
| 19     | 8   | BP3692  | BOLT, FLANGE HEAD, 3/8"-16 X 1", GRADE 8, PLATED |
| 20     | 16  | BP3006  | HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED     |
| 21     | 16  | BP3015  | WASHER, FLAT, 3/8", PLATED                       |
| 22     | 4   | BP3050  | WASHER, FLAT, 1/2", PLATED                       |
| 23     | 2   | BP3055  | WASHER, FLAT, 1/4", PLATED                       |
| 24     | 4   | BP3126  | HEX CAP SCREW, 1/2"-13 X 1-1/2", GRADE 5, PLATED |
| 25     | 2   | BP3587  | NUT, HEX, 1/4" NYLOCK                            |
| 26     | 2   | BP3600  | HEX CAP SCREW, 1/4"-20 X 1" GRADE 8, PLATED      |
| 27     | 28  | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                 |
| 28     | 2   | BP3641  | NUT, HEX LOCK, #10-24, NYLOCK                    |
| 29     | 2   | BP3642  | PAN HEAD MACHINE SCREW, #10-24 X 3/4"            |
| 30     | 2   | BP3643  | WASHER, #10 USS FLAT Z                           |
| 31     | 4   | BP3687  | BOLT, CARRIAGE, 3/8-16 X 4, GRADE 5, PLATED      |
| 32     | 4   | BP3704  | NUT, LOCK, NYLON INSERT, 1/2"-13                 |

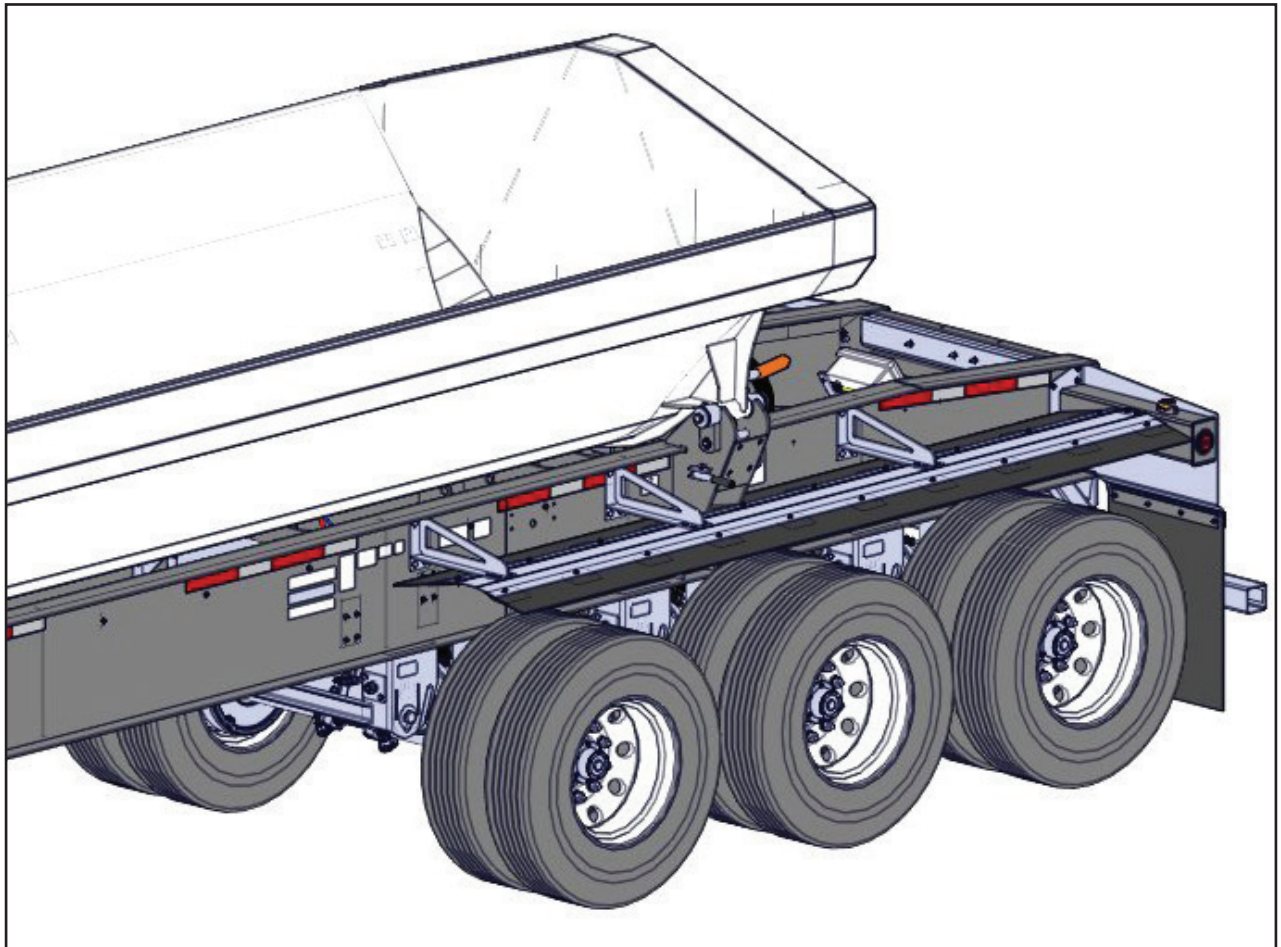
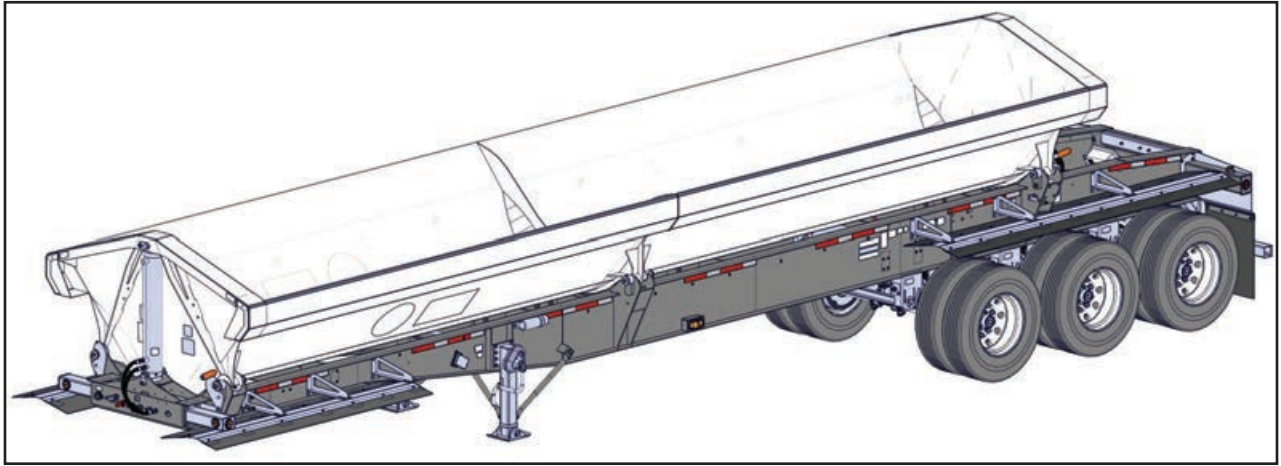


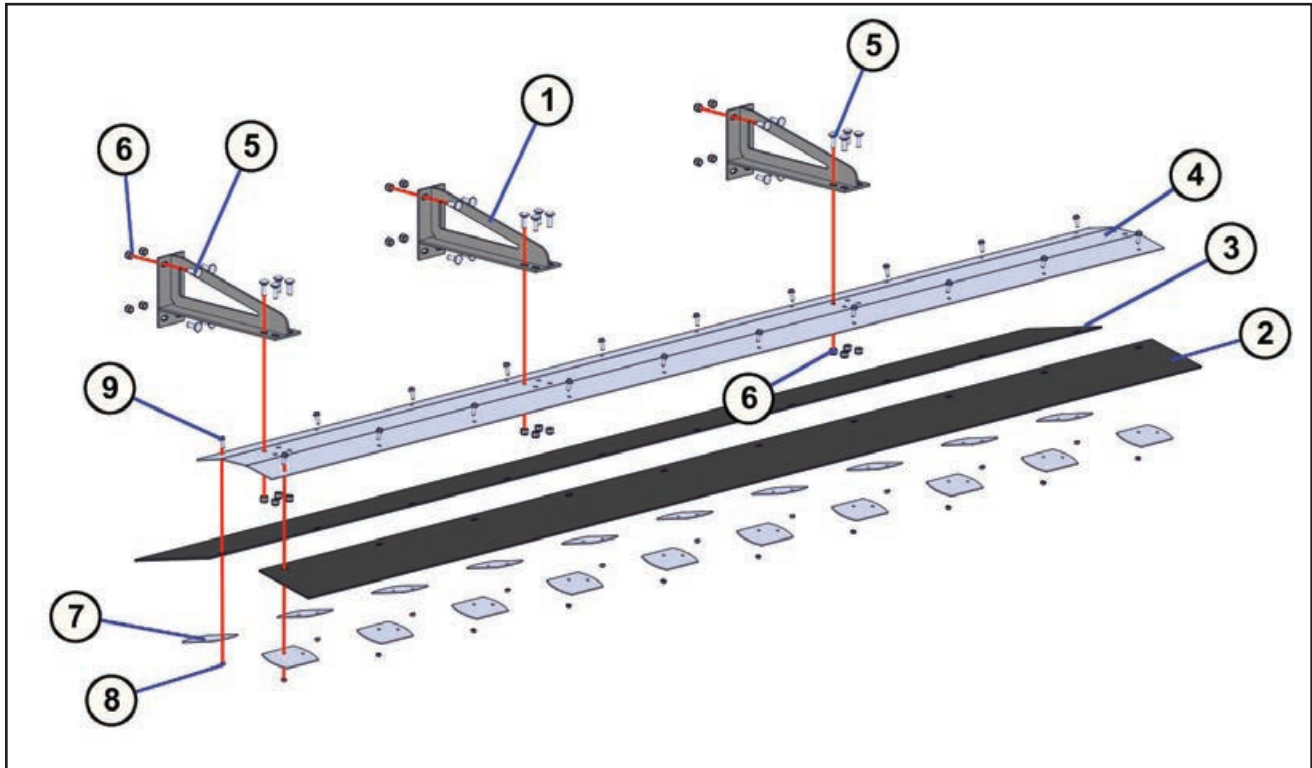




| BOM ID | Qty | Item No | Description                                       |
|--------|-----|---------|---------------------------------------------------|
| 1      | 2   | AM9003  | SADDLE FENDER MOUNT                               |
| 2      | 4   | AM9004  | FRAME FENDER MOUNT                                |
| 3      | 2   | AM9408  | FENDER SUPPORT, REAR, CBX TRI, 139"               |
| 4      | 2   | AM9409  | FENDER RUBBER, REAR, 8" X 139"                    |
| 5      | 2   | AM9410  | FENDER RUBBER, REAR, 12" X 139"                   |
| 6      | 8   | BP3050  | WASHER, FLAT, 1/2", PLATED                        |
| 7      | 8   | BP3126  | HEX CAP SCREW, 1/2"-13 X 1-1/2", GRADE 5, PLATED  |
| 8      | 40  | BP3232  | BOLT, CARRIAGE, 1/2"-13 X 1-1/2", GRADE 5         |
| 9      | 48  | BP3704  | NUT, LOCK, NYLON INSERT, 1/2"-13                  |
| 10     | 32  | AM9089  | FENDER WASHER                                     |
| 11     | 32  | BP3644  | NUT, HEX LOCK, 5/16"-18, TOP LOCK                 |
| 12     | 32  | BP3709  | BOLT, FLANGE HEAD, 5/16"-18 X 1", GRADE 8, PLATED |

**(QUANTITIES FOR A SET OF 2 FENDERS)**



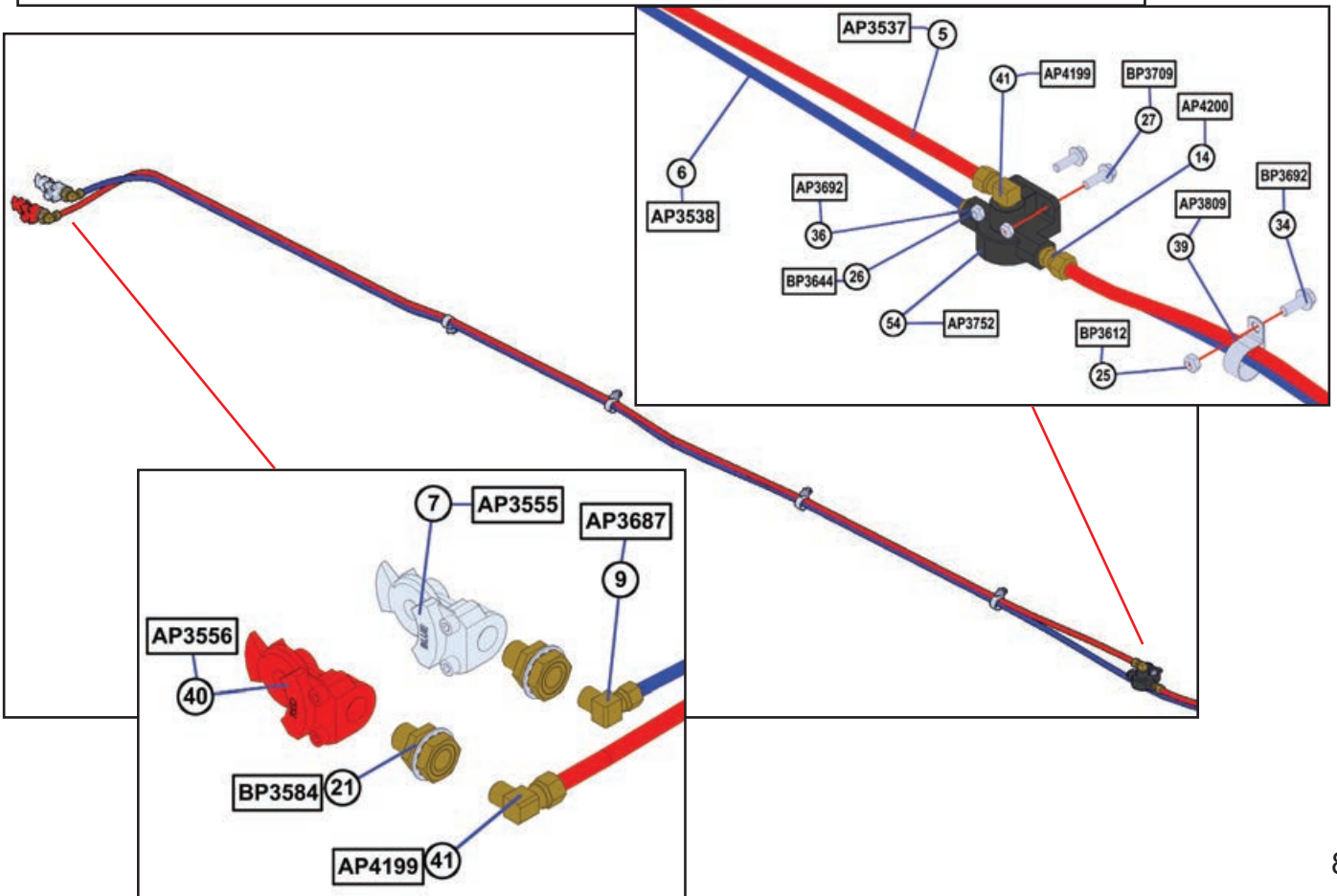
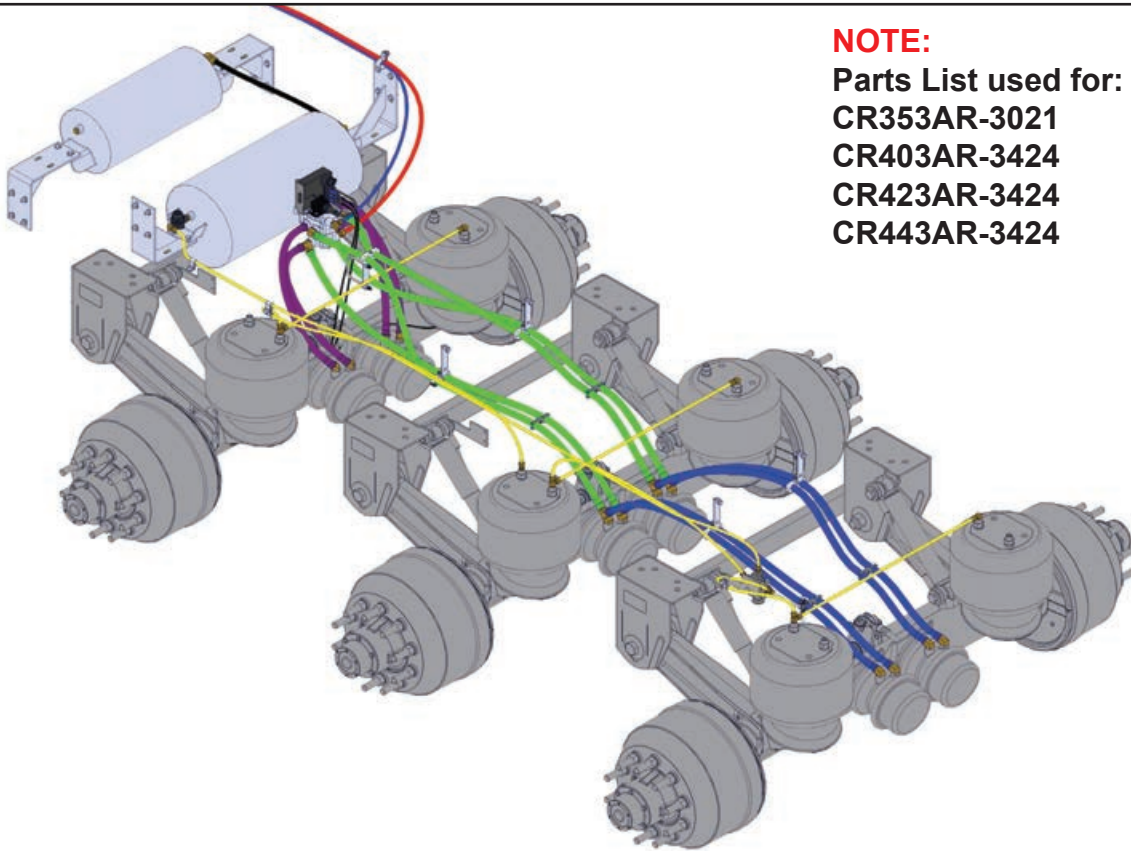


| BOM ID | Qty | Item No | Description                                            |
|--------|-----|---------|--------------------------------------------------------|
| 1      | 6   | AM9004  | FRAME FENDER MOUNT                                     |
| 2      | 2   | AM9370  | FENDER RUBBER, REAR, 8" X 141", CBX AIR RIDE TRI-AXLE  |
| 3      | 2   | AM9371  | FENDER RUBBER, REAR, 12" X 141", CBX AIR RIDE TRI-AXLE |
| 4      | 2   | AM9389  | FENDER SUPPORT, REAR, AIR TRI, 141"                    |
| 5      | 48  | BP3232  | BOLT, CARRIAGE, 1/2"-13 X 1-1/2", GRADE 5              |
| 6      | 48  | BP3704  | NUT, LOCK, NYLON INSERT, 1/2"-13                       |
| 7      | 40  | AM9089  | FENDER WASHER                                          |
| 8      | 40  | BP3644  | NUT, HEX LOCK, 5/16"-18, TOP LOCK                      |
| 9      | 40  | BP3709  | BOLT, FLANGE HEAD, 5/16"-18 X 1", GRADE 8, PLATED      |

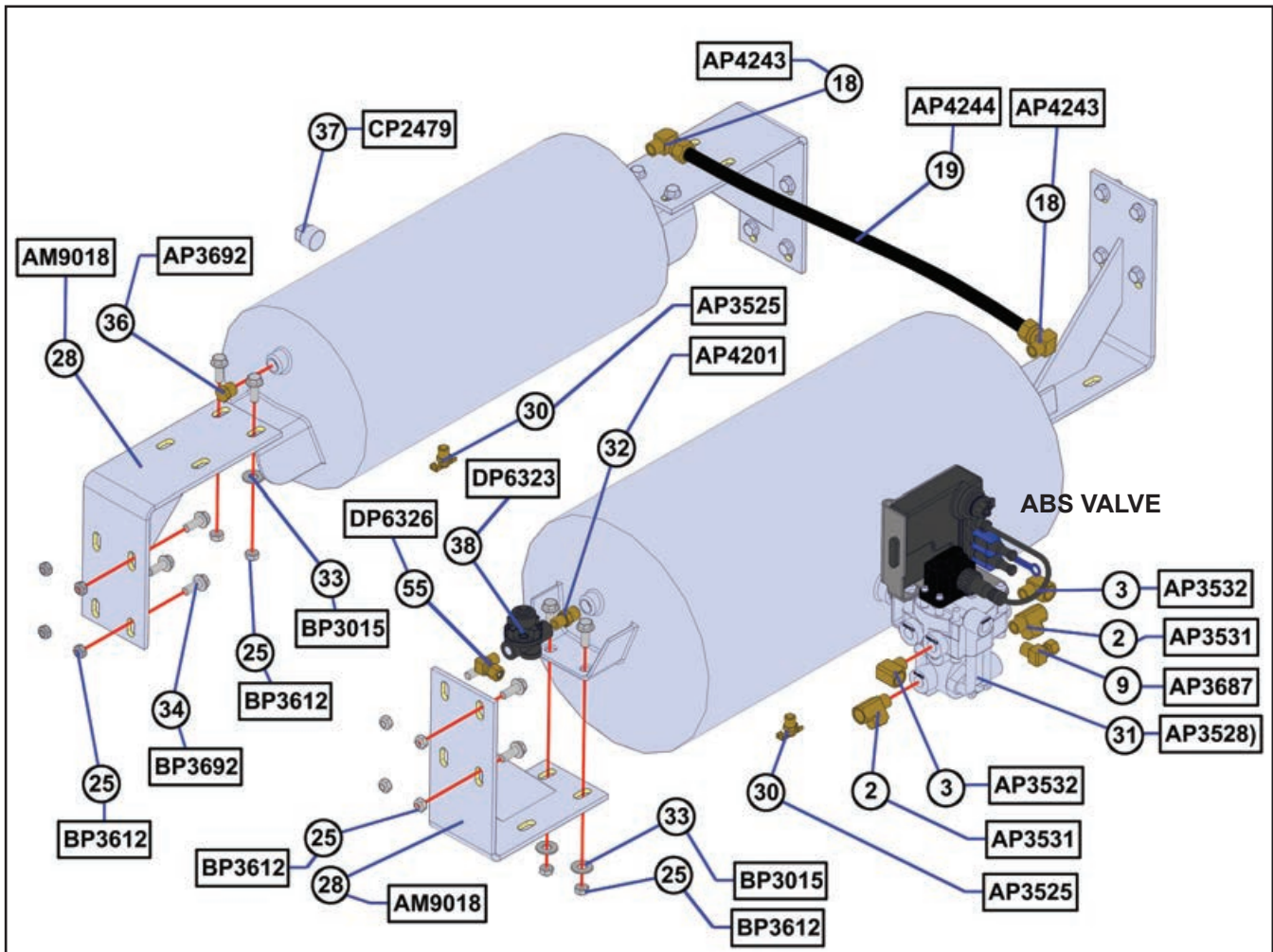
**(QUANTITIES FOR A SET OF 2 FENDERS)**

**NOTE:**

Parts List used for:  
CR353AR-3021  
CR403AR-3424  
CR423AR-3424  
CR443AR-3424



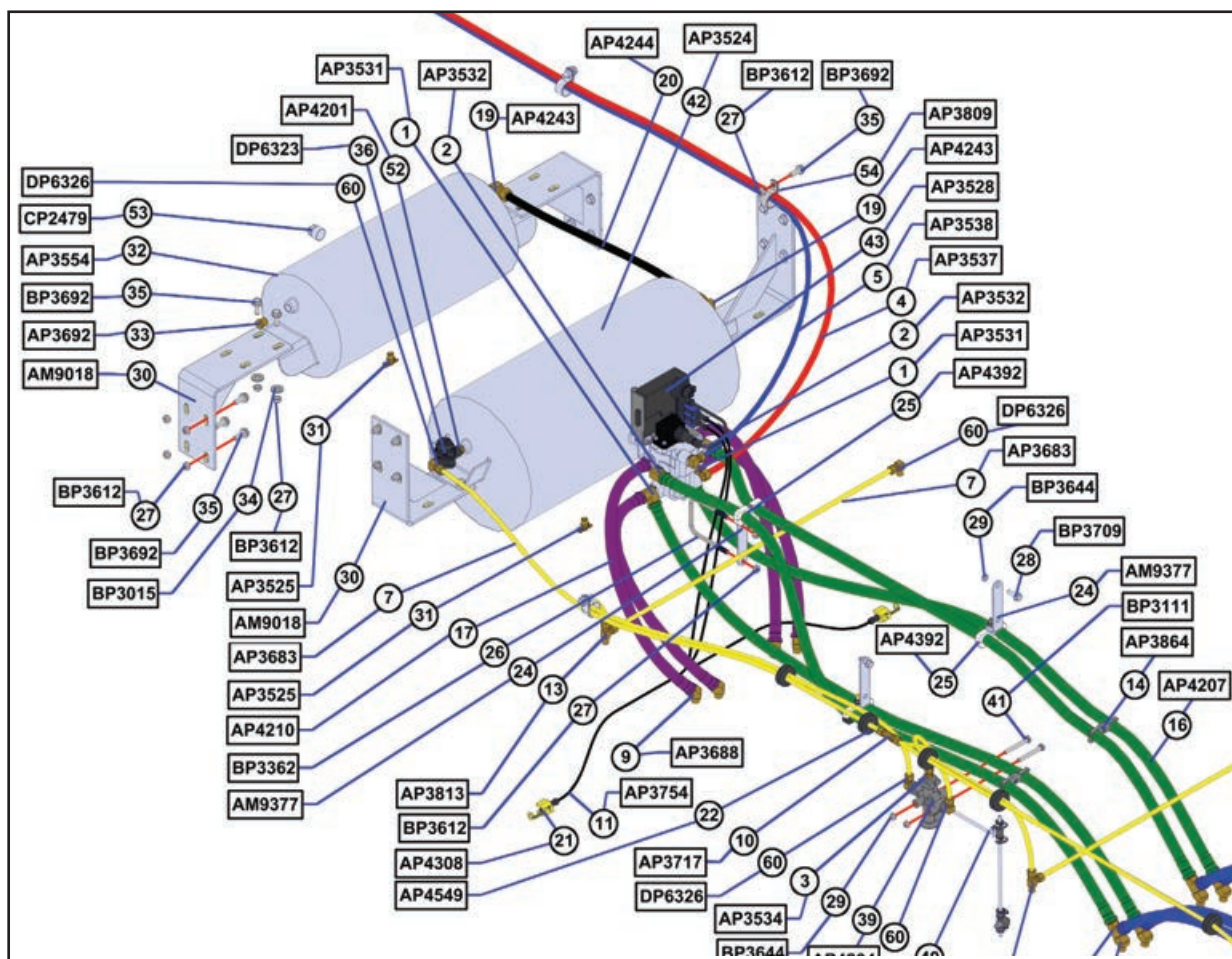
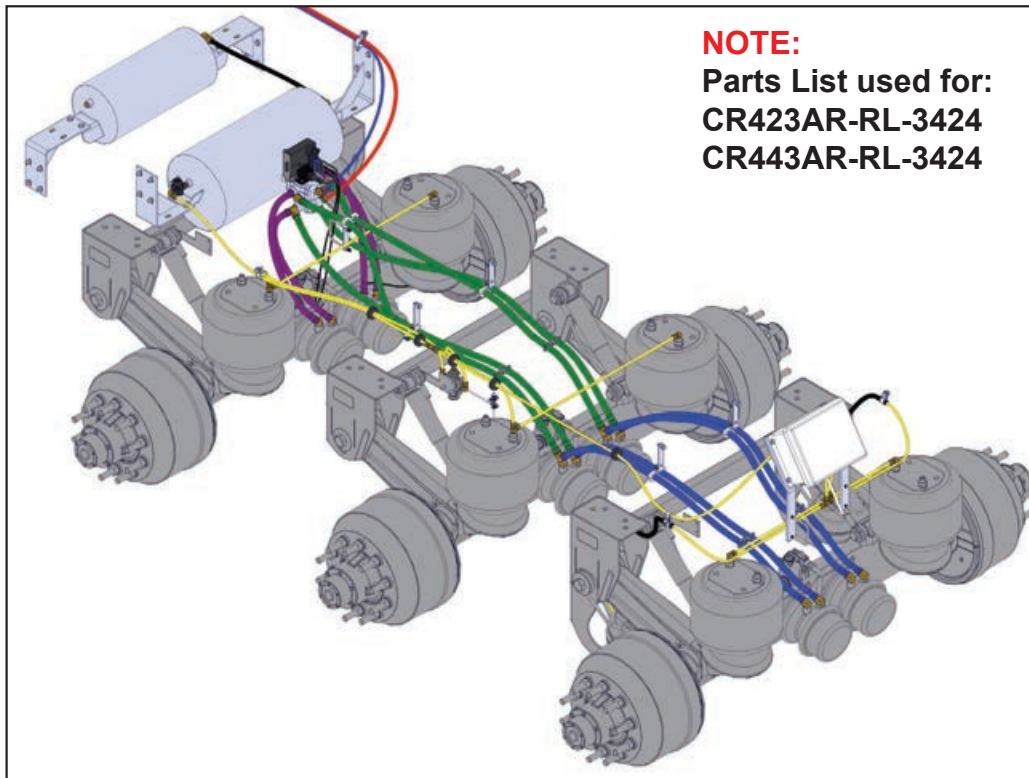


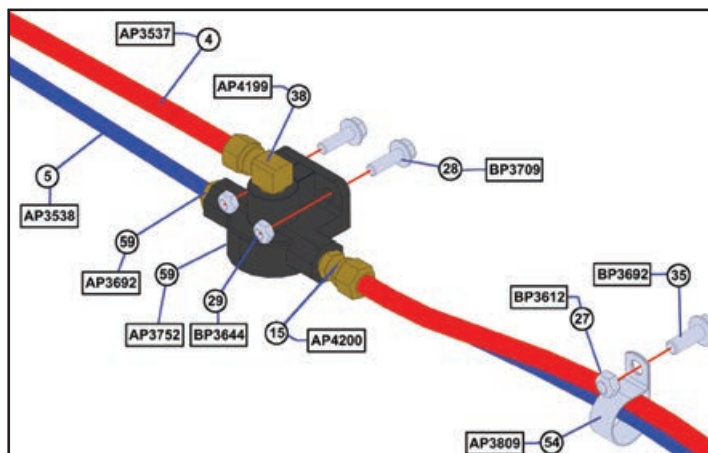
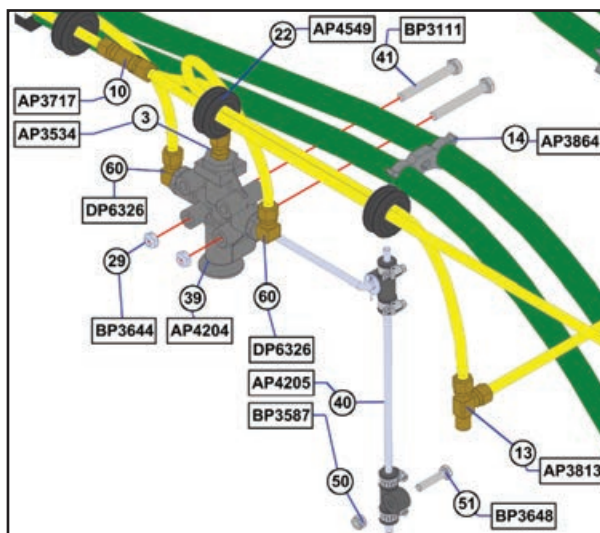


| BOM ID | Qty | Item No      | Description                                          |
|--------|-----|--------------|------------------------------------------------------|
| 1      | 1   | CR443AR-3424 | 44' TRIAXLE, 34' TUB CBX AIR SUSPENSION              |
| 2      | 6   | AP3531       | STREET TEE, 3/8", 90 DEGREES                         |
| 3      | 6   | AP3532       | STREET ELBOW, 3/8", 90 DEGREES                       |
| 4      | 2   | AP3534       | ADAPTER, 1/4" MP X 3/8 TUBE, STRAIGHT, BRASS         |
| 5      | 2   | AP3537       | NYLON TUBING, RED, 1/2"                              |
| 6      | 1   | AP3538       | NYLON TUBING, BLUE, 3/8"                             |
| 7      | 1   | AP3555       | GLADHAND, SERVICE, BLUE                              |
| 8      | 7   | AP3683       | NYLON TUBING, YELLOW, 3/8"                           |
| 9      | 2   | AP3687       | ELBOW, 3/8" MP X 3/8" TUBE, 90, BRASS                |
| 10     | 8   | AP3688       | STREET ELBOW, 3/8", 45 DEGREE                        |
| 11     | 2   | AP3754       | ABS SENSOR EXT. CORD, 1 METER                        |
| 12     | 3   | AP3813       | TEE, RUN, 1/4" MP X 3/8" TUBE X 3/8" TUBE, BRASS     |
| 13     | 4   | AP3864       | AIR BRAKE HOSE SEPARATOR, 1/2" HOSE                  |
| 14     | 2   | AP4200       | TUBE, 1/2" X 3/8" MP, STRAIGHT, NUT & FERRULE, BRASS |
| 15     | 4   | AP4207       | HOSE, 1/2" AIR BRAKE X 66" 3/8"MP-3/8"MPX            |

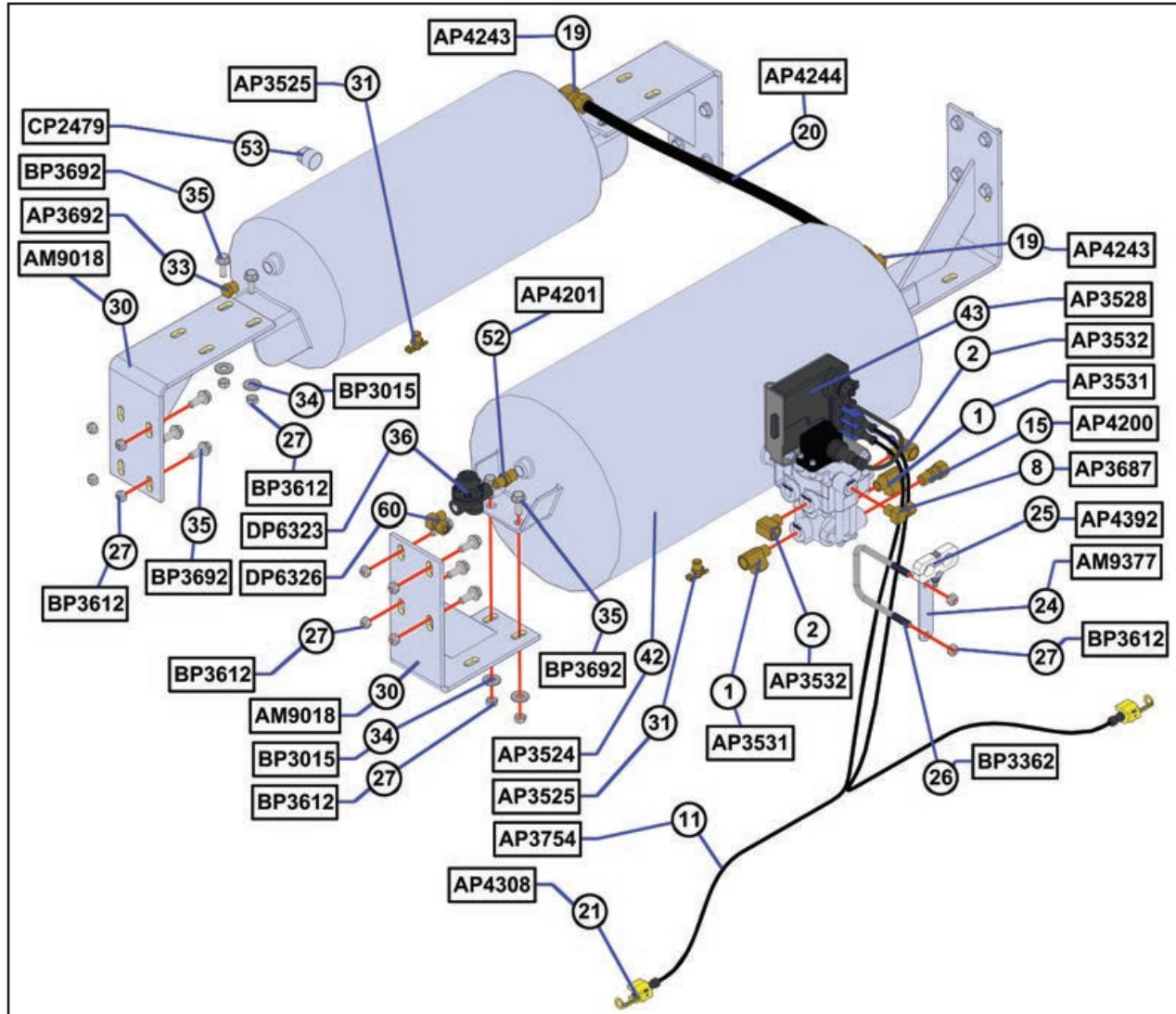
|    |    |        |                                                   |
|----|----|--------|---------------------------------------------------|
| 16 | 4  | AP4210 | HOSE, 1/2" AIR BRAKE X 26"                        |
| 17 | 4  | AP4242 | HOSE, 1/2" AIR BRAKE X 56", 3/8"MP-3/8"MPX        |
| 18 | 2  | AP4243 | TUBE, 5/8" X 3/8" MP, 90, NUT & FERRULE, BRASS    |
| 19 | 1  | AP4244 | NYLON TUBING, BLACK, 5/8"                         |
| 20 | 2  | AP4308 | RETAINING CLIP, ABS SENSOR PLUG                   |
| 21 | 2  | BP3584 | BOLT, TERMINAL, HB646                             |
| 22 | 5  | AM9377 | HOSE HOLDER, AIR BRAKE                            |
| 23 | 5  | AP4392 | HOSE CLAMP, 2 HOLE, 1/2" AIR BRAKE HOSE           |
| 24 | 1  | BP3362 | U-BOLT, 3/8"-16 X 3W X 4L                         |
| 25 | 43 | BP3612 | NUT, HEX LOCK, 3/8"-16, TOP LOCK                  |
| 26 | 11 | BP3644 | NUT, HEX LOCK, 5/16"8, TOP LOCK                   |
| 27 | 7  | BP3709 | BOLT, FLANGE HEAD, 5/16"-18 X 1", GRADE 8, PLATED |
| 28 | 4  | AM9018 | BRACKET, AIR TANK MOUNTING                        |
| 29 | 1  | AP3524 | AIR TANK, 2800 CU IN                              |
| 30 | 2  | AP3525 | DRAIN COCK, 1/4" NPT                              |
| 31 | 1  | AP3528 | VALVE, FFABS, 3/4" NPT, HALDEX N9001BB, TRAILER   |
| 32 | 1  | AP4201 | NIPPLE, HEX REDUCER, 3/8" MP X 1/4" MP, BRASS     |
| 33 | 8  | BP3015 | WASHER, FLAT, 3/8", PLATED                        |
| 34 | 41 | BP3692 | BOLT, FLNG HEAD, 3/8"-16 X 1", GRADE 8, PLATED    |
| 35 | 1  | AP3554 | AIR TANK, 1488 CU IN                              |
| 36 | 2  | AP3692 | HEX PLUG, 3/8", BRASS                             |
| 37 | 1  | CP2479 | PLUG, SQUARE HEAD, 3/4" NPT, BLACK                |
| 38 | 1  | DP6323 | VALVE, AIR PRESSURE PROTECTION WITH FILTER        |
| 39 | 14 | AP3809 | 1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT              |
| 40 | 1  | AP3556 | GLADHAND, EMERGENCY, RED                          |
| 41 | 2  | AP4199 | TUBE, 1/2" X 3/8" MP, 90, NUT & FERRULE, BRASS    |
| 42 | 1  | AP4204 | AIR CONTROL VALVE, IR, HOLLAND-NEWAY              |
| 43 | 1  | AP4205 | HEIGHT CONTROL VALVE LINKAGE KIT                  |
| 44 | 2  | BP3111 | HEX CAP SCREW, 5/16"-18 S 2-1/2", GRADE 5, PLATED |
| 45 | 2  | BP3587 | NUT, HEX, 1/4" NYLOCK                             |
| 46 | 1  | AP4297 | ABS ECU, HALDEX PLC SELECT, AL919323, TRAILER     |
| 47 | 1  | AP4298 | ABS VALVE, LESS ECU, HALDEX AL430624, TRAILER     |
| 48 | 1  | AP4354 | ABS VALVE SOLENOID, 12V, HALDEX AQ40525           |
| 49 | 1  | AP4356 | ABS VALVE ECU MOUNT, HALDEX 015505209             |
| 50 | 1  | AP4357 | ABS VALVE SENSOR CORD RETAINER, DOUBLE, HALDEX    |
| 51 | 4  | BP3055 | WASHER, FLAT, 1/4", PLATED                        |
| 52 | 2  | BP3648 | BOLT, 1/4" X 1-1/4" GRADE 8                       |
| 53 | 4  | AP3805 | 1/2" HOSE SUPPORT CLAMP, 3/8" BOLT                |
| 54 | 1  | AP3752 | QUICK RELEASE VALVE                               |
| 55 | 6  | DP6326 | ELBOW, 1/4" MP X 3/8" TUBE, 90, BRASS             |

# Air Supply (Air Ride With Rear Lift Axle) Parts





## Air Tank Parts (Rear Lift)

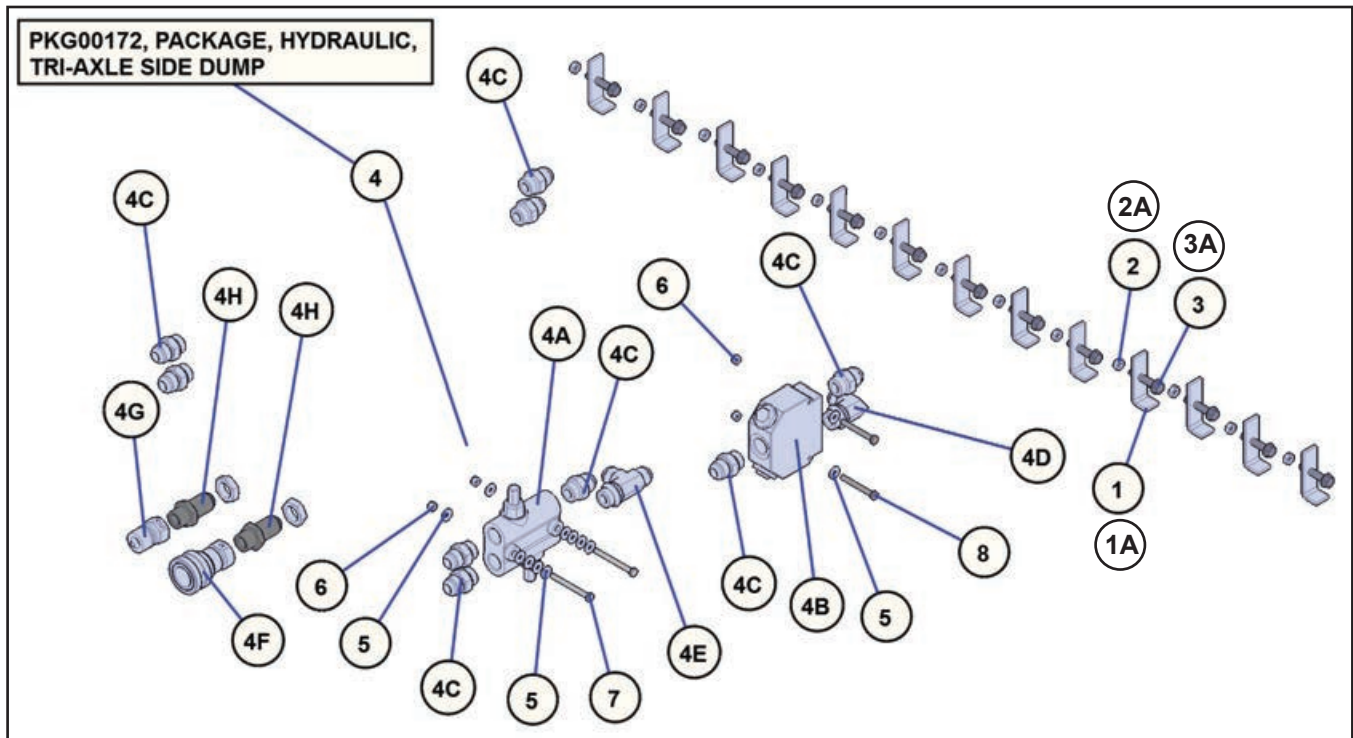


| BOM ID | Qty | Item No | Description                                          |
|--------|-----|---------|------------------------------------------------------|
| 1      | 6   | AP3531  | STREET TEE, 3/8", 90 DEGREES                         |
| 2      | 6   | AP3532  | STREET ELBOW, 3/8", 90 DEGREES                       |
| 3      | 1   | AP3534  | ADAPTER, 1/4" MP X 3/8" TUBE, STRAIGHT, BRASS        |
| 4      | 2   | AP3537  | NYLON TUBING, RED, 1/2"                              |
| 5      | 1   | AP3538  | NYLON TUBING, BLUE, 3/8"                             |
| 6      | 1   | AP3555  | GLADHAND, SERVICE, BLUE                              |
| 7      | 13  | AP3683  | NYLON TUBING, YELLOW, 3/8"                           |
| 8      | 2   | AP3687  | ELBOW, 3/8" MP X 3/8" TUBE, 90, BRASS                |
| 9      | 8   | AP3688  | STREET ELBOW, 3/8", 45 DEGREE                        |
| 10     | 3   | AP3717  | TEE, UNION, 3/8" TUBE                                |
| 11     | 2   | AP3754  | ABS SENSOR EXTENSION. CORD, 1 METER                  |
| 12     | 1   | AP3805  | 1/2" HOSE SUPPORT CLAMP, 3/8" BOLT                   |
| 13     | 2   | AP3813  | TEE, RUN, 1/4" MP X 3/8" TUBE X 3/8" TUBE, BRASS     |
| 14     | 4   | AP3864  | AIR BRAKE HOSE SEPERATOR, 1/2" HOSE                  |
| 15     | 2   | AP4200  | TUBE, 1/2" X 3/8" MP, STRAIGHT, NUT & FERRULE, BRASS |

## Air Supply Parts (Rear Lift)

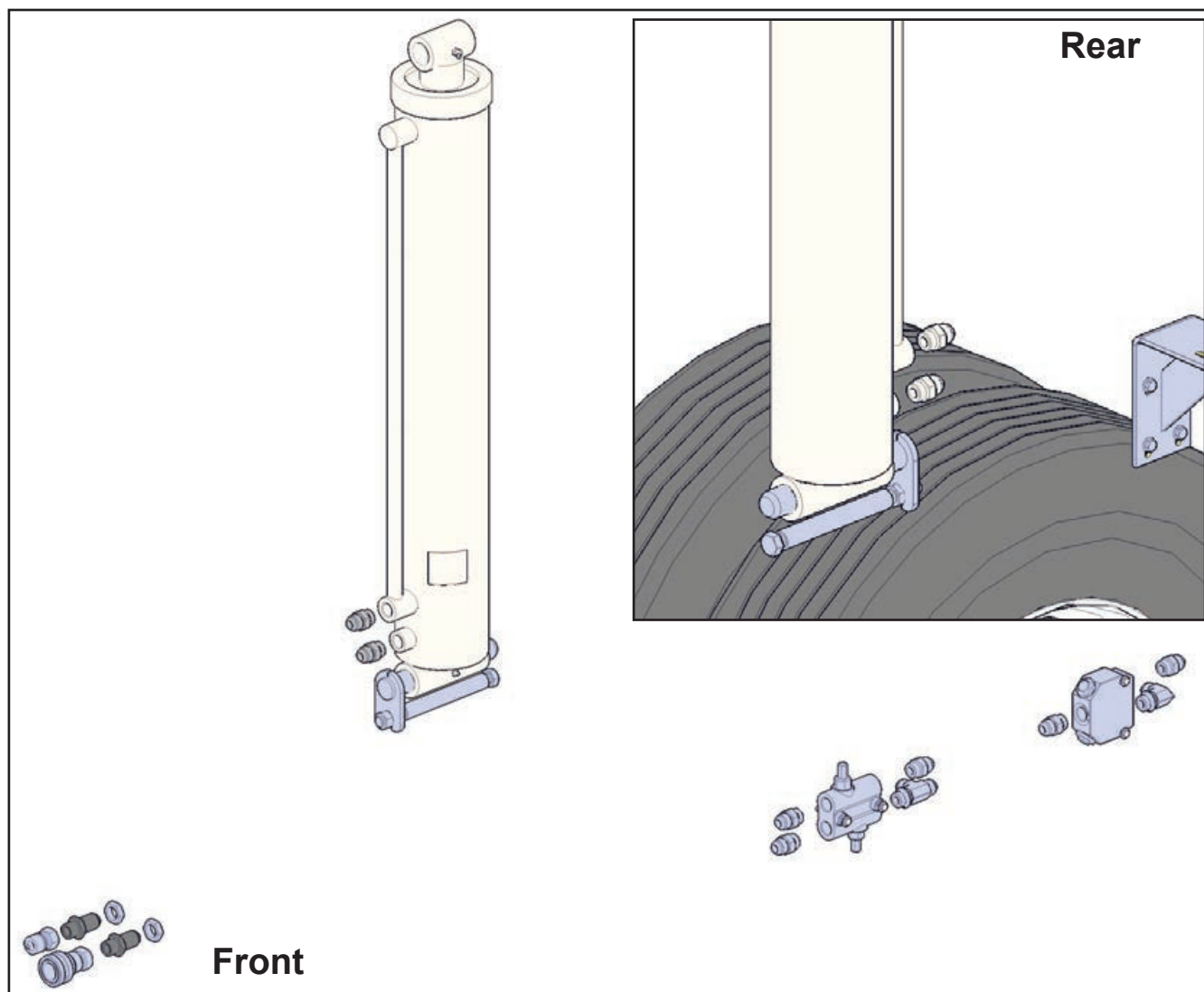
|    |    |        |                                                           |
|----|----|--------|-----------------------------------------------------------|
| 16 | 4  | AP4207 | HOSE, 1/2" AIR BRAKE X 66", 3/8" MP-3/8" MPX              |
| 17 | 4  | AP4210 | HOSE, 1/2" AIR BRAKE X 26"                                |
| 18 | 4  | AP4242 | HOSE, 1/2" AIR BRAKE X 56", 3/8" MP-3/8" MPX              |
| 19 | 2  | AP4243 | TUBE, 5/8" X 3/8" MP, 90, NUT & FERRULE, BRASS            |
| 20 | 3  | AP4244 | NYLON TUBING, BLACK, 5/8"                                 |
| 21 | 2  | AP4308 | RETAINING CLIP, ABS SENSOR PLUG                           |
| 22 | 5  | AP4549 | GROMMET, 1-3/8" OD X 1" ID X 3/8"                         |
| 23 | 2  | BP3584 | BOLT, TERMINAL, HB646                                     |
| 24 | 5  | AM9377 | HOSE HOLDER, AIR BRAKE                                    |
| 25 | 5  | AP4392 | HOSE CLAMP, 2 HOLE, 1/2" AIR BRAKE HOSE                   |
| 26 | 3  | BP3362 | U-BOLT, 3/8"-16 X 3W X 4L                                 |
| 27 | 47 | BP3612 | NUT, HEX LOCK, 3/8"-16, TOP LOCK                          |
| 28 | 11 | BP3709 | BOLT, FLNG HEAD, 5/16"-18 X 1", GRADE 8, PLATED           |
| 29 | 15 | BP3644 | NUT, HEX LOCK, 5/16"-18, TOP LOCK                         |
| 30 | 4  | AM9018 | BRACKET, AIR TANK MOUNTING                                |
| 31 | 2  | AP3525 | DRAIN COCK, 1/4" NPT                                      |
| 32 | 1  | AP3554 | AIR TANK, 1488 CUBIC INCH                                 |
| 33 | 1  | AP3692 | HEX PLUG, 3/8", BRASS                                     |
| 34 | 8  | BP3015 | WASHER, FLAT, 3/8", PLATED                                |
| 35 | 41 | BP3692 | BOLT, FLANGE HEAD, 3/8"-16 X 1", GRD 8, PLTD              |
| 36 | 1  | DP6323 | VALVE, AIR PRESSURE PROTECTION WITH FILTER                |
| 37 | 1  | AP3556 | GLADHAND, EMERGENCY, RED                                  |
| 38 | 2  | AP4199 | TUBE, 1/2" X 3/8" MP, 90, NUT & FERRULE, BRASS            |
| 39 | 1  | AP4204 | AIR CONTROL VALVE, IR, HOLLAND-NEWAY                      |
| 40 | 1  | AP4205 | HEIGHT CONTROL VALVE LINKAGE KIT                          |
| 41 | 2  | BP3111 | HEX CAP SCREW, 5/16"-18 S 2-1/2", GRADE 5, PLATED         |
| 42 | 1  | AP3524 | AIR TANK, 2800 CU IN                                      |
| 43 | 1  | AP3528 | VALVE, FFABS, 3/4" NPT, HALDEX N9001BB, TRAILER           |
| 44 | 1  | AP4297 | ABS ECU, HALDEX PLC SELECT, AL919323, TRAILER             |
| 45 | 1  | AP4298 | ABS VALVE, LESS ECU, HALDEX AL430624, TRAILER             |
| 46 | 1  | AP4354 | ABS VALVE SOLENOID, 12V, HALDEX AQ40525                   |
| 47 | 1  | AP4356 | ABS VALVE ECU MOUNT, HALDEX 015505209                     |
| 48 | 1  | AP4357 | ABS VALVE SENSOR CORD RETAINER, DOUBLE, HALDEX            |
| 49 | 4  | BP3055 | WASHER, FLAT, 1/4", PLATED                                |
| 50 | 2  | BP3587 | NUT, HEX, 1/4" NYLOCK                                     |
| 51 | 2  | BP3648 | BOLT, 1/4" X 1-1/4" GRADE 8                               |
| 52 | 1  | AP4201 | NIPPLE, HEX REDUCER, 3/8" MP X 1/4" MP, BRASS             |
| 53 | 1  | CP2479 | PLUG, SQUARE HEAD, 3/4" NPT, BLACK                        |
| 54 | 15 | AP3809 | 1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT                      |
| 55 | 2  | AP3806 | 3/4" HOSE SUPPORT CLAMP, 3/8" BOLT                        |
| 56 | 2  | AM9193 | BRACKET, MOUNTING, LIFT AXLE CONTROL BOX                  |
| 57 | 1  | AP4306 | VALVE ASSEMBLY, LIFT AXLE CONTROL WITH BOX & INSTRUCTIONS |
| 58 | 1  | AP3692 | HEX PLUG, 3/8", BRASS                                     |
| 59 | 1  | AP3752 | QUICK RELEASE VALVE                                       |
| 60 | 12 | DP6326 | ELBOW, 1/4" MP X 3/8" TUBE, 90, BRASS                     |

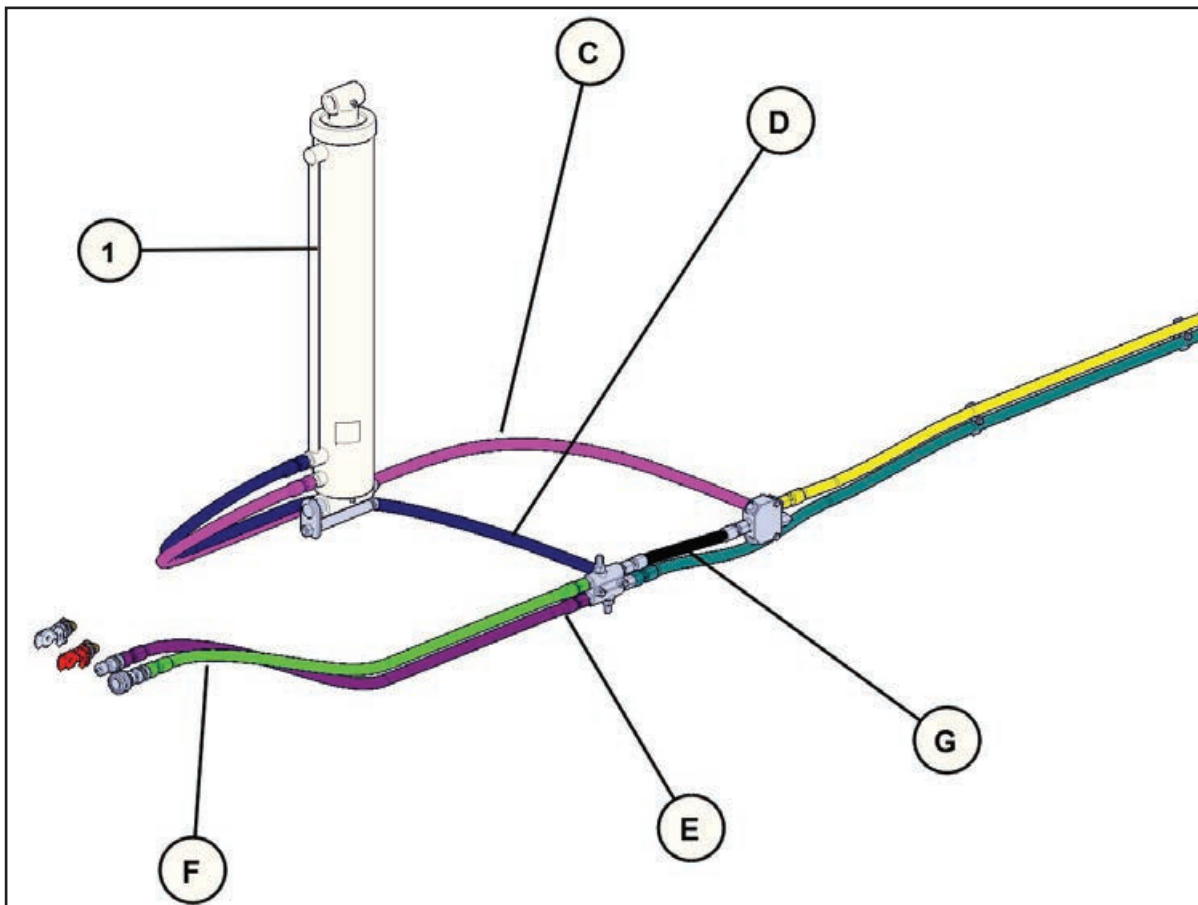
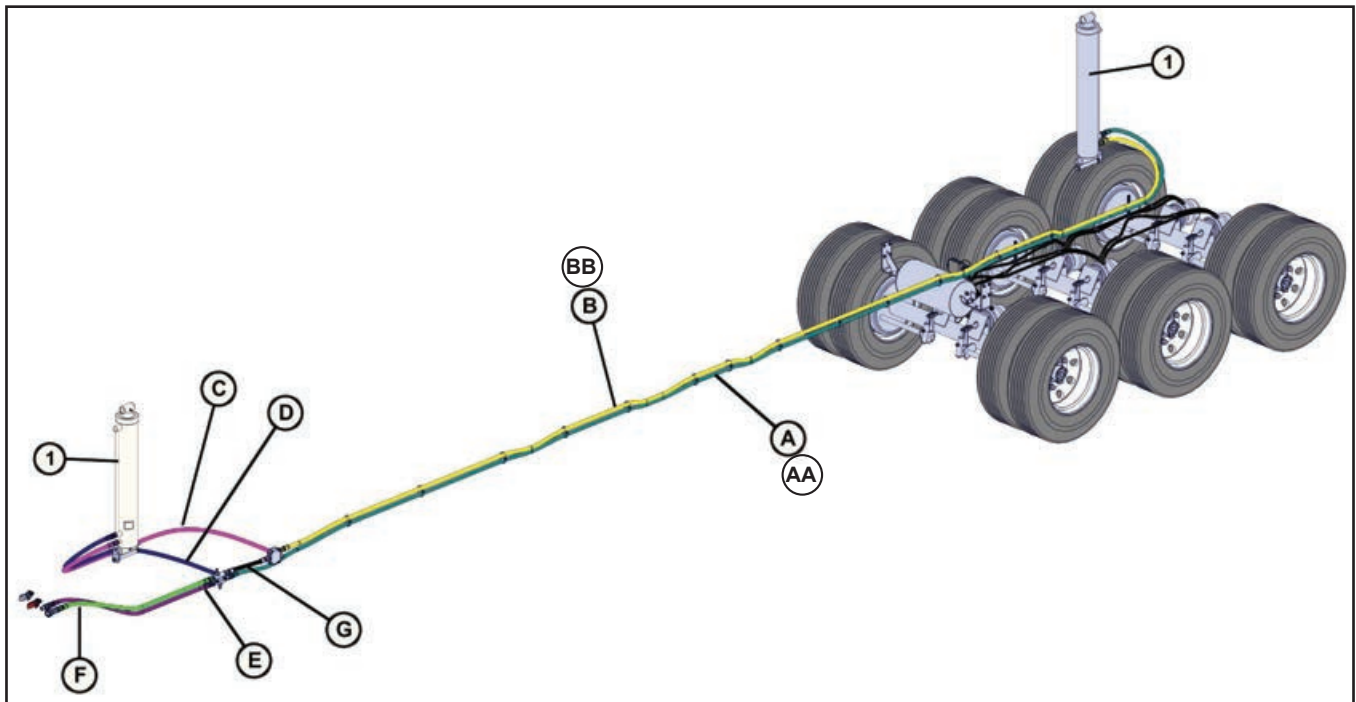
## 44' Chassis Hydraulic Package Tri-Axle Parts



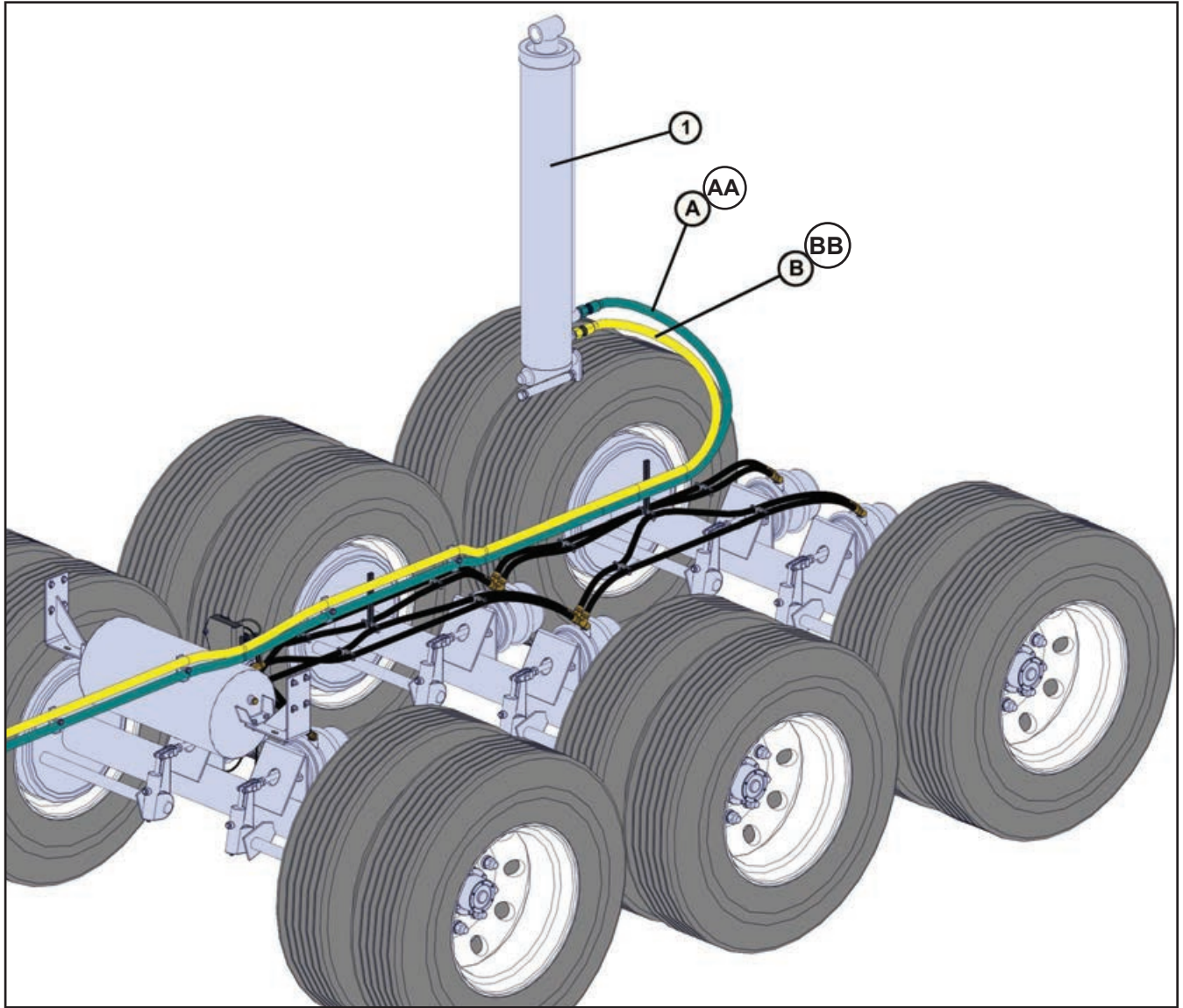
| BOM ID | Qty | Item No  | Description                                         |
|--------|-----|----------|-----------------------------------------------------|
| 1      | 13  | AM8053   | HOSE RETAINER, SINGLE                               |
| 2      | 13  | BP3612   | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 3      | 13  | BP3685   | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED    |
| 4      | 1   | PKG00172 | PACKAGE, HYDRAULIC, TRI-AXLE SIDE DUMP              |
| 4A     | 1   | DP6302   | VALVE, DOUBLE RELIEF, PRINCE, H-L                   |
| 4B     | 1   | DP6303   | VALVE, PROPORTIONAL DIVIDER, PRINCE                 |
| 4C     | 9   | DP4368   | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12           |
| 4D     | 1   | DP6538   | ADAPTER, 12MJ-12MSAE 90, 6801-12                    |
| 4E     | 1   | DP6557   | TEE, 12MJ-12MSAE-12MJ, 6804-12                      |
| 4F     | 1   | DP6300   | COUPLER, QUICK, FEMALE, 3/4" NPT                    |
| 4G     | 1   | DP6301   | COUPLER, QUICK, MALE, 3/4" NPT                      |
| 4H     | 2   | DP6495   | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12 |
| 5      | 12  | BP3055   | WASHER, FLAT, 1/4", PLATED                          |
| 6      | 4   | BP3587   | NUT, HEX, 1/4" NYLOCK                               |
| 7      | 2   | BP3588   | HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED        |
| 8      | 2   | BP3589   | HEX CAP SCREW, 1/4"-20 X 2-1/2", GRADE 8            |

|                     |    |    |        |                                                |
|---------------------|----|----|--------|------------------------------------------------|
| 40' AND 42' CHASSIS | 1A | 12 | AM8053 | HOSE RETAINER, SINGLE                          |
|                     | 2A | 12 | BP3612 | NUT, HEX LOCK, 3/8-16, TOP LOCK                |
|                     | 3A | 12 | BP3685 | BOLT, FLANGE HEAD, 3/8-16 X 2, GRADE 8, PLATED |



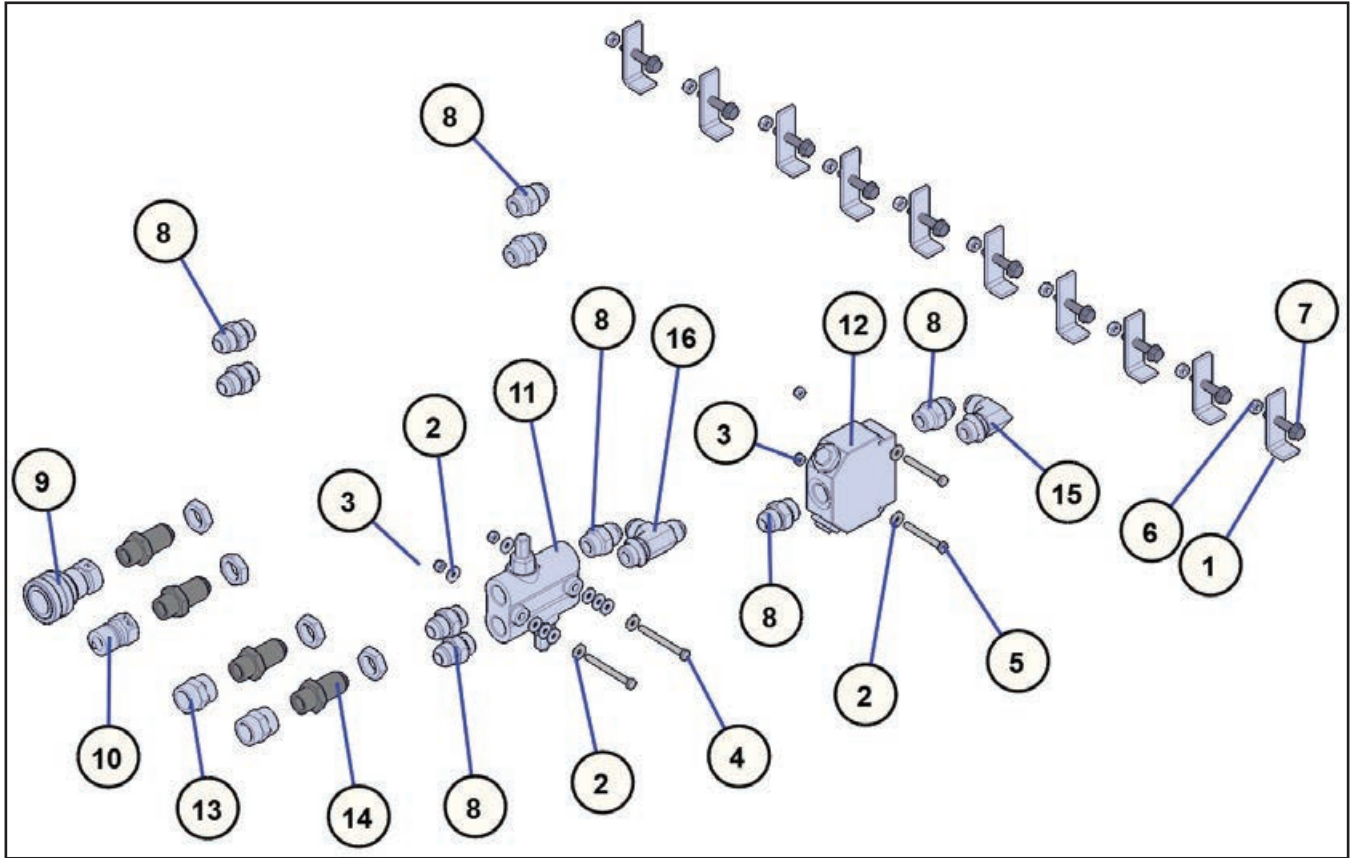


## 44' Chassis Hydraulic Package Tri-Axle Parts

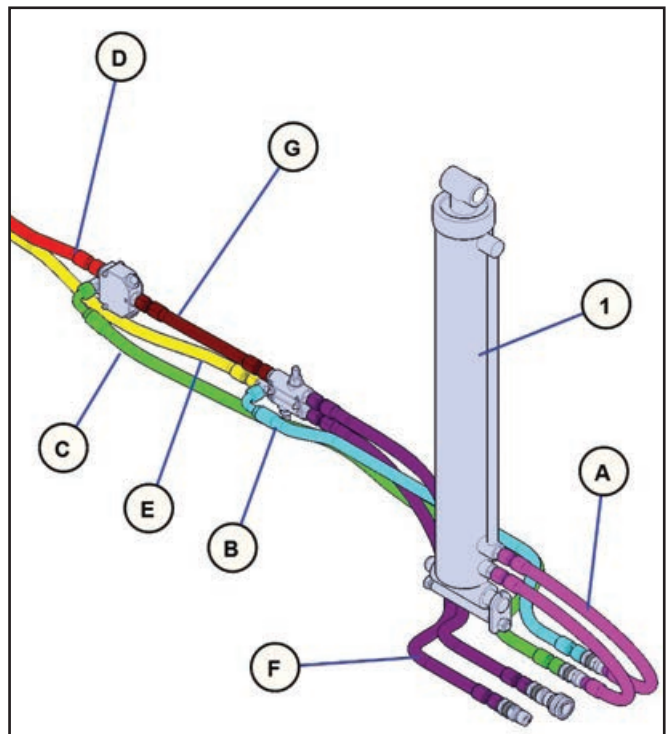
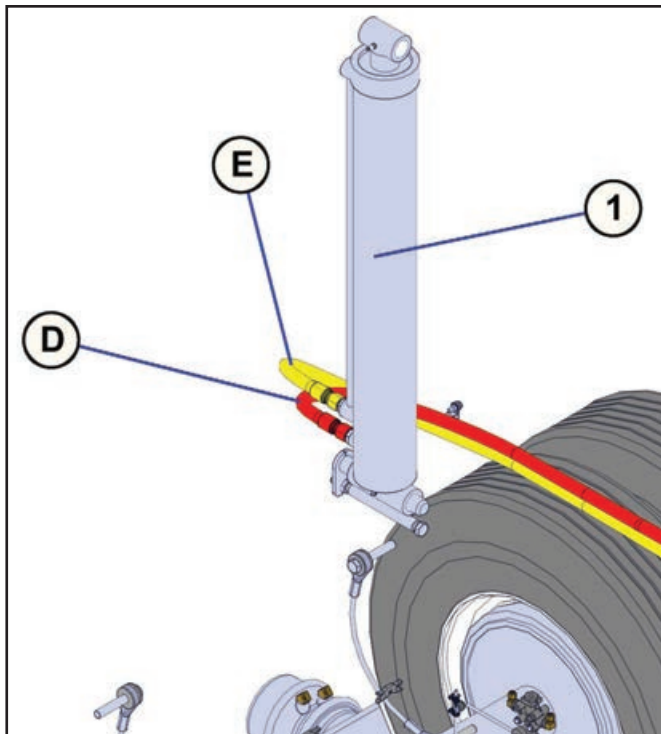
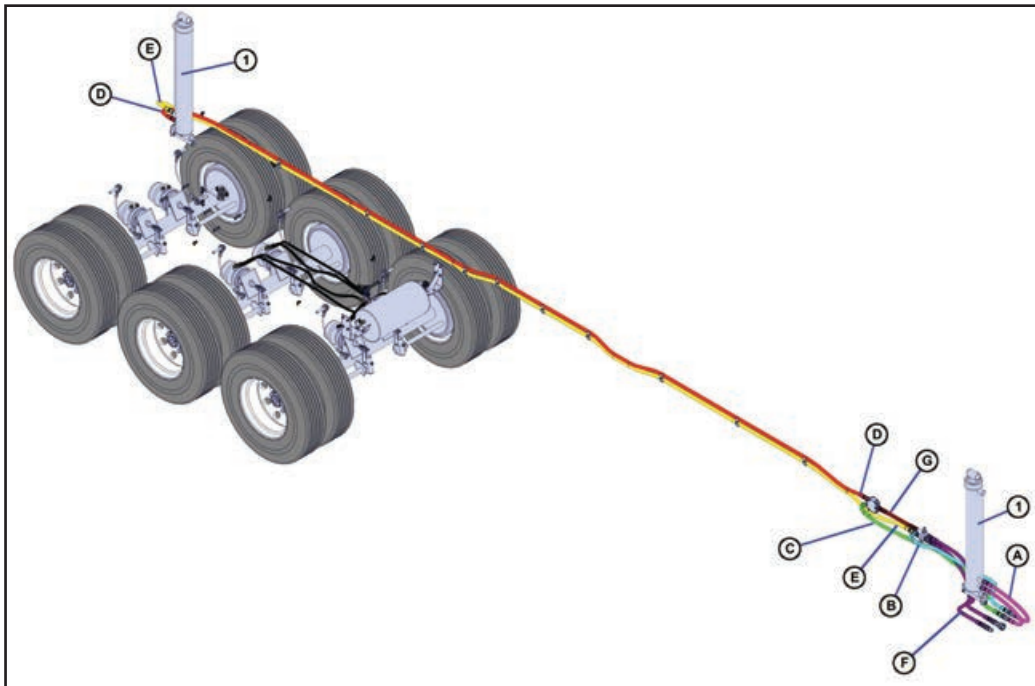


| BOM ID | Qty | Item No | Description                                  |
|--------|-----|---------|----------------------------------------------|
| 1      | 2   | DP6349  | CYLINDER, HYDRAULIC, 6 X 36, WITH DROP TUBE  |
| A      | 1   | DP6527  | HOSE, HYDRAULIC, 3/4" X 460", 12FJX-12FJX    |
| B      | 1   | DP6528  | HOSE, HYDRAULIC, 3/4" X 435", 12FJX-12FJX    |
| C      | 1   | DP6529  | HOSE, HYDRAULIC, 3/4" X 130", 12FJX-12FJX    |
| D      | 1   | DP6530  | HOSE, HYDRAULIC, 3/4" X 125", 12FJX-12FJX    |
| E      | 1   | DP6547  | HOSE, HYDRAULIC, 3/4" X 68", 12FJX-12FJX     |
| F      | 1   | DP6547  | HOSE, HYDRAULIC, 3/4" X 68", 12FJX-12FJX     |
| G      | 1   | DP6588  | HOSE, HYDRAULIC, 3/4" X 18-1/2", 12FJX-12FJX |

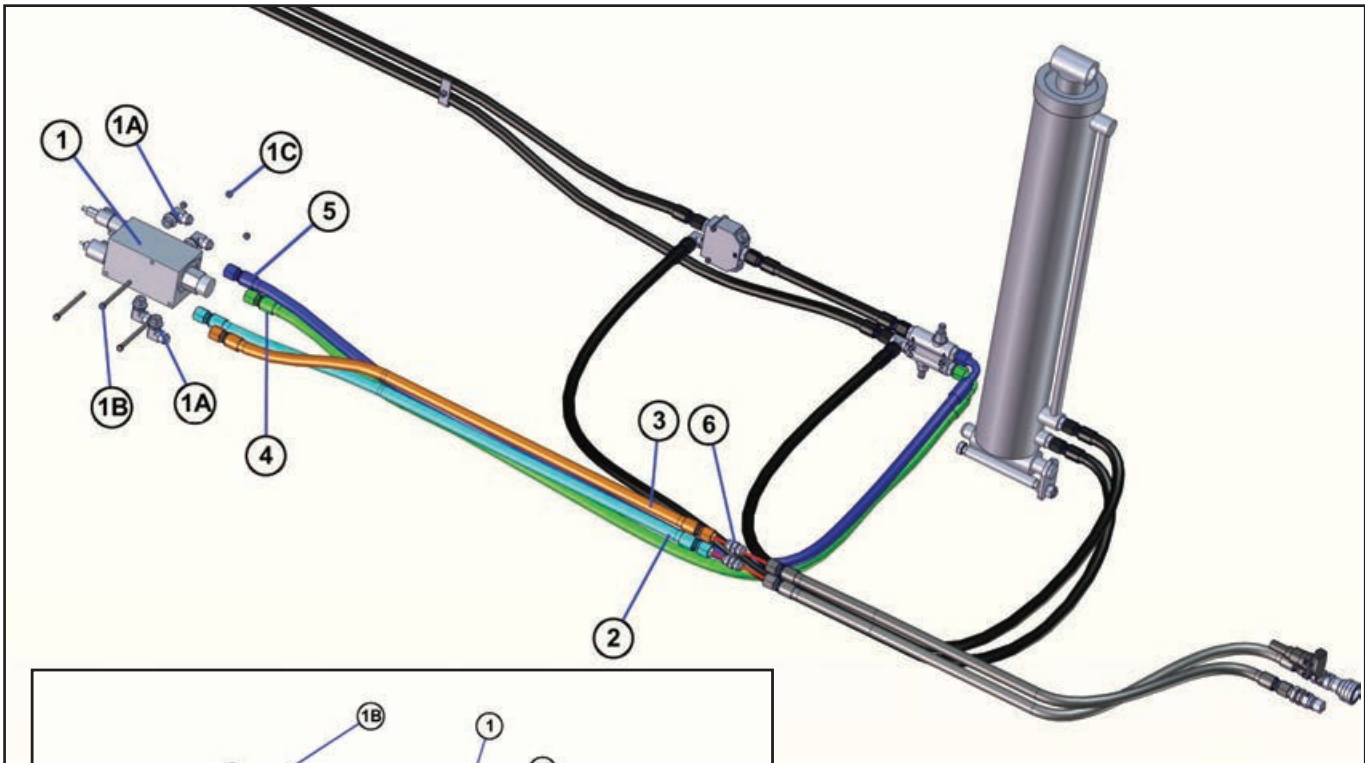
40' AND 42' CHASSIS    AA   1   DP6525    HOSE, HYDRAULIC 3/4" X 425", 12FJX-12FJX  
                                  BB   1   DP6524    HOSE, HYDRAULIC 3/4" X 400", 12FJX-12FJX



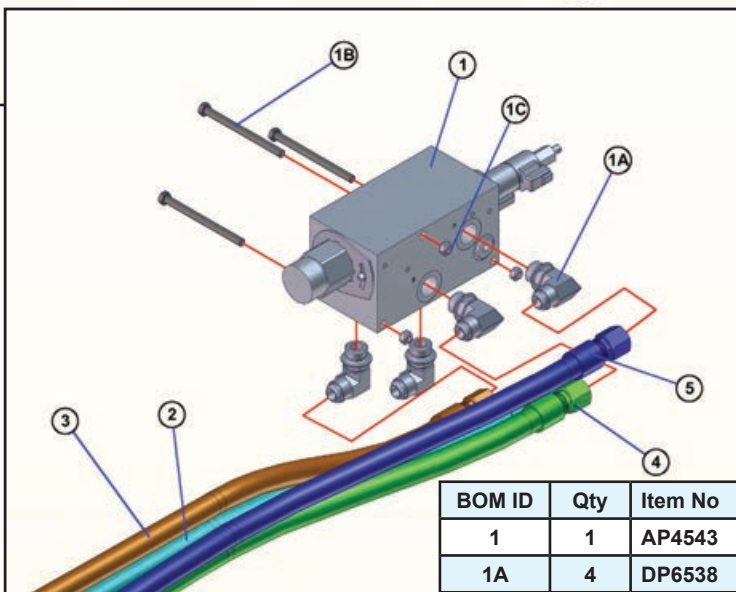
| BOM ID | Qty | Item No | Description                                         |
|--------|-----|---------|-----------------------------------------------------|
| 1      | 10  | AM8053  | HOSE RETAINER, SINGLE                               |
| 2      | 12  | BP3055  | WASHER, FLAT, 1/4", PLATED                          |
| 3      | 4   | BP3587  | NUT, HEX, 1/4" NYLOCK                               |
| 4      | 2   | BP3588  | HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED        |
| 5      | 2   | BP3589  | HEX CAP SCREW, 1/4"-20 x 2-1/2", GRADE 8            |
| 6      | 10  | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 7      | 10  | BP3685  | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED    |
| 8      | 9   | DP4368  | ADAPTER, 12MJIC-12MSAE, STRAIGHT, 6400-12           |
| 9      | 1   | DP6300  | COUPLER, QUICK, FEMALE, 3/4" NPT                    |
| 10     | 1   | DP6301  | COUPLER, QUICK, MALE, 3/4" NPT                      |
| 11     | 1   | DP6302  | VALVE, DOUBLE RELIEF, PRINCE, H-L                   |
| 12     | 1   | DP6303  | VALVE, PROPORTIONAL DIVIDER, PRINCE                 |
| 13     | 2   | DP6307  | COUPLING, 12FP-12FP, 5000-12                        |
| 14     | 4   | DP6495  | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12 |
| 15     | 1   | DP6538  | ADAPTER, 12MJ-12MSAE 90 DEGREE, 6801-12             |
| 16     | 1   | DP6557  | TEE, 12MJ-12MSAE-12MJ, 6804-12                      |



| BOM ID | Qty | Item No | Description                                  |
|--------|-----|---------|----------------------------------------------|
| 1      | 2   | DP6347  | CYLINDER, HYDRAULIC, 5 X 36, WITH DROP TUBE  |
| A      | 2   | DP6526  | HOSE, HYDRAULIC, 3/4" X 40", 12MP-12FJX      |
| B      | 1   | DP6534  | HOSE, HYDRAULIC, 3/4" X 62", 12FJX90-12FJX   |
| C      | 1   | DP6535  | HOSE, HYDRAULIC, 3/4" X 87", 12FJX90-12FJX   |
| D      | 1   | DP6536  | HOSE, HYDRAULIC, 3/4" X 352", 12FJX-12FJX    |
| E      | 1   | DP6537  | HOSE, HYDRAULIC, 3/4" X 377", 12FJX-12FJX    |
| F      | 2   | DP6546  | HOSE, HYDRAULIC, 3/4" X 57", 12FJX-12FJX     |
| G      | 1   | DP6558  | HOSE, HYDRAULIC, 3/4" X 18-1/2", 12FJX-12FJX |



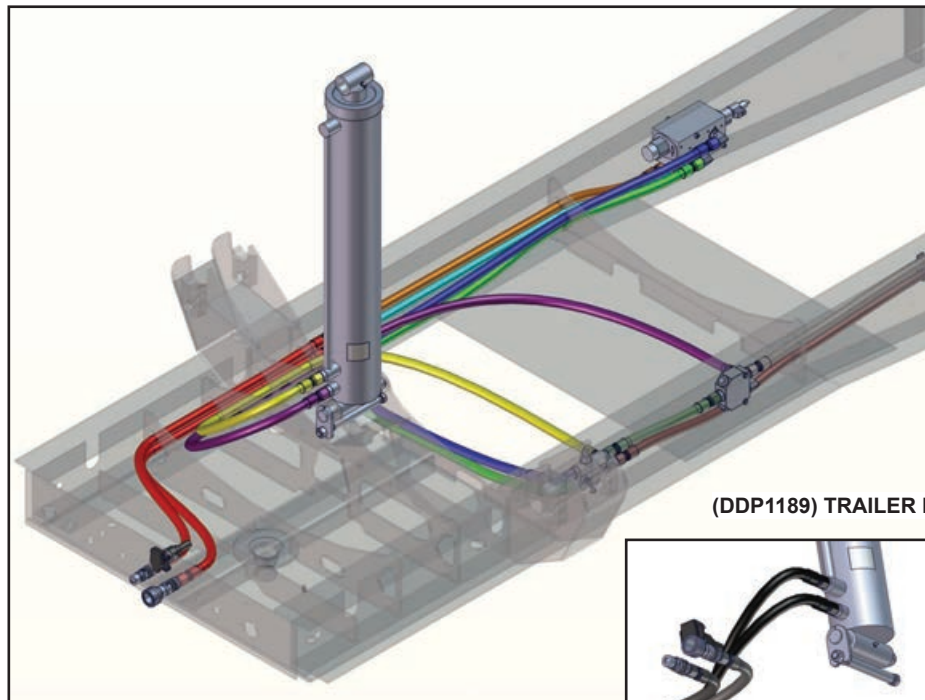
TO CONVERT YOUR DEMCO TRAILER TO **TRAILER PRO** ELECTRIC CONTROLS, SEE YOUR DEALER FOR COMPLETE KIT AND PRICING FOR **FK2018**.



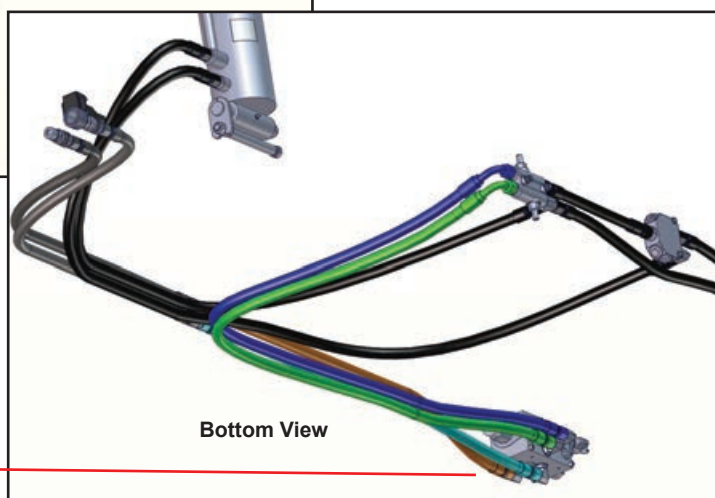
| BOM ID | Qty | Item No | Description                                  |
|--------|-----|---------|----------------------------------------------|
| 1      | 1   | AP4543  | VALVE, ELECTRIC/HYDRAULIC                    |
| 1A     | 4   | DP6538  | ADAPTER, 12MJ-12MSAE 90 DEGREE, 6801-12      |
| 1B     | 3   | BP3118  | HEX CAP SCREW, 3/8"-16 X 5", GRADE 5, PLATED |
| 1C     | 3   | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK             |
| 2      | 1   | DP6546  | HOSE, HYDRAULIC, 3/4" X 57", 12FJX-12FJX     |
| 3      | 1   | DP6554  | HOSE, HYDRAULIC, 3/4" X 53", 12FJX-12FJX     |
| 4      | 1   | DP6614  | HOSE, HYDRAULIC, 3/4" X 105", 12FJX-12FJX90  |
| 5      | 1   | DP6615  | HOSE, HYDRAULIC, 3/4" X 108", 12FJX-12FJX90  |
| 6      | 2   | DP4388  | UNION, 12MJ-12MJ, 2403-12                    |

**FK2017 KIT, TRAILER PRO CONTROL BOX FOR 2ND TRACTOR, WITH ROLL RITE**

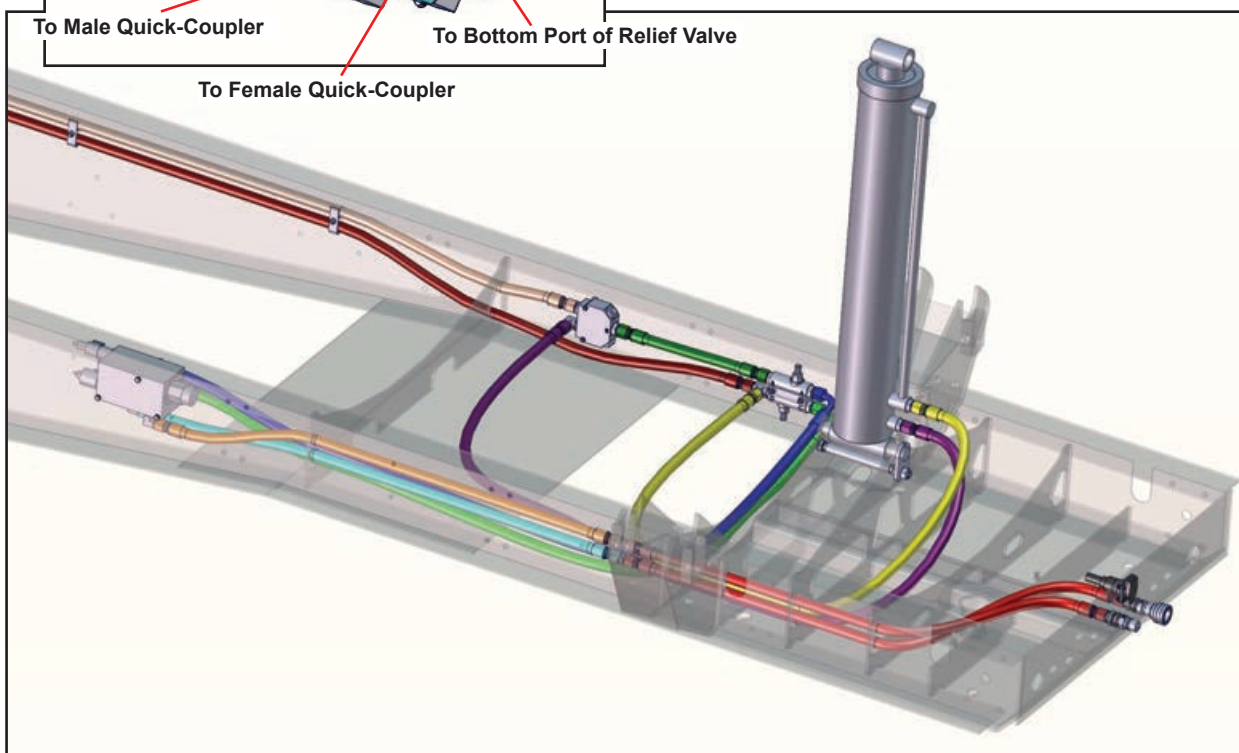
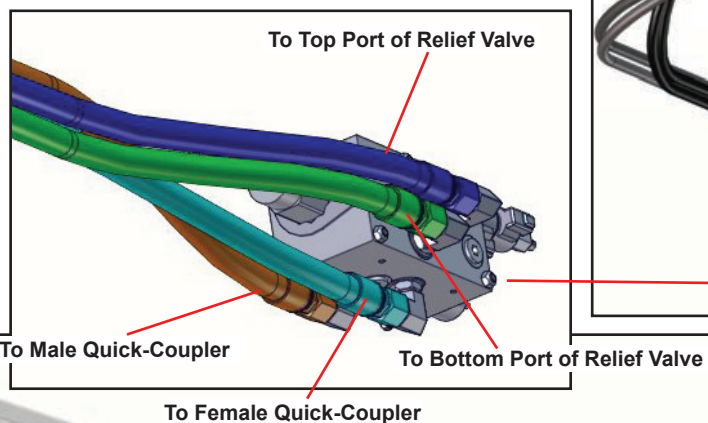
- |    |        |   |                                                           |
|----|--------|---|-----------------------------------------------------------|
| 1. | AP4235 | 1 | Plug, 2 Pin, Male, Cole Hersee, Tarp                      |
| 2. | AP4296 | 1 | Tarp Motor Wire, Per Ft, Roll Rite 11330                  |
| 3. | AP4533 | 2 | Ring Terminal, #6 Wire, 3/8" Ring, Aero 0755-626503       |
| 4. | AP4534 | 2 | Ring Terminal, #6 Wire, 3/16" Ring, Aero                  |
| 5. | AP4548 | 1 | Control Box, 3 Function, Electric/Hydraulic 2013, 304-060 |
| 6. | AP4568 | 1 | Circuit Breaker, 35 Amp. Roll Rite 17918                  |
| 7. | 010259 | 1 | Instructions, Tractor Wiring, Trailer Pro/Roll Rite       |

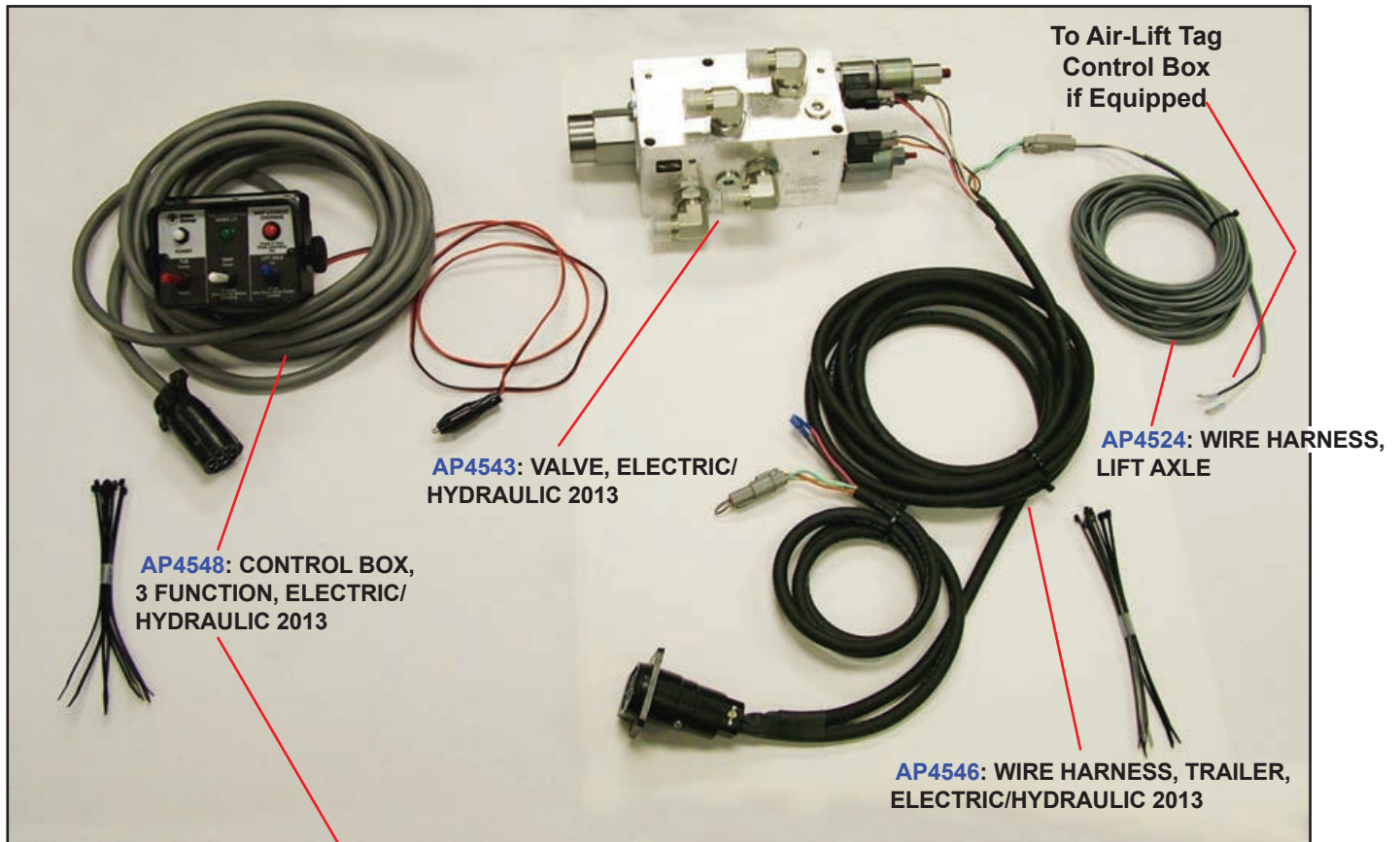


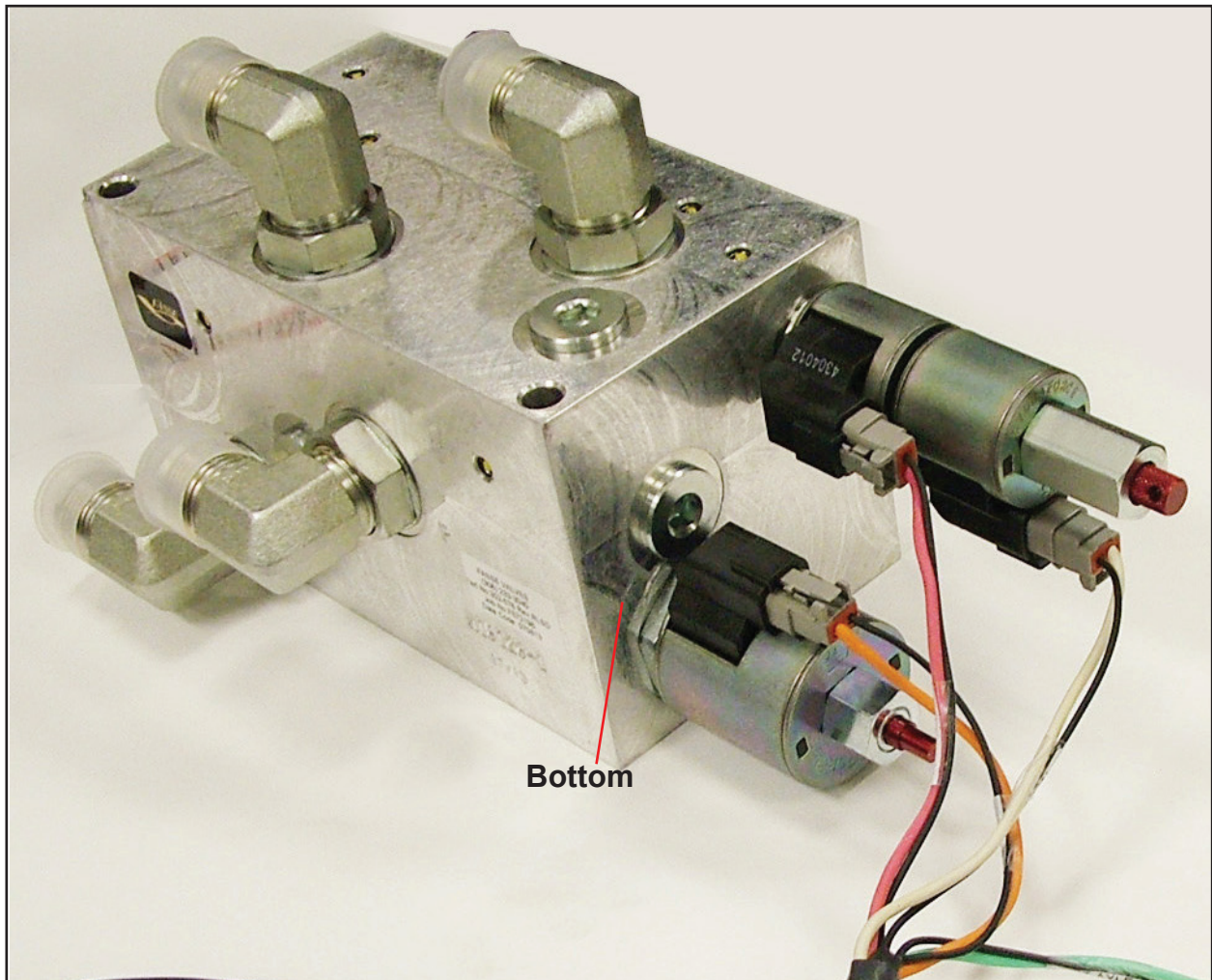
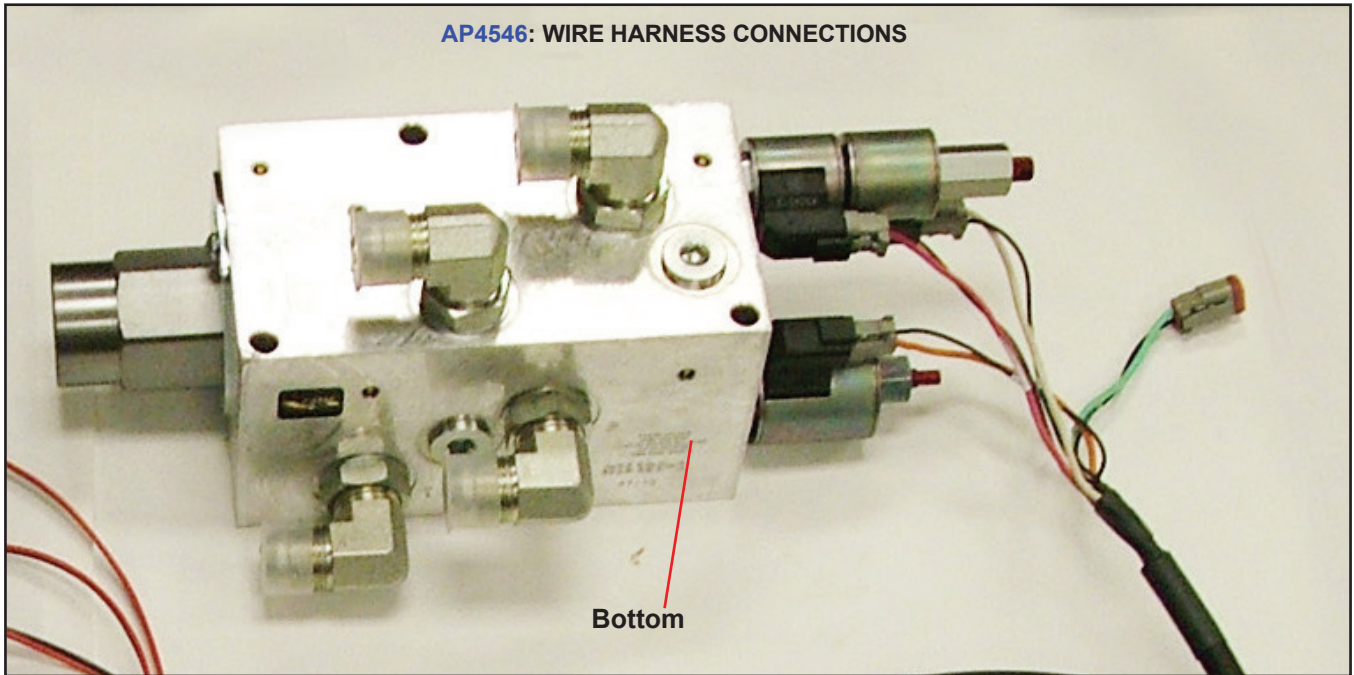
(DDP1189) TRAILER PRO HOSE KIT; FK2018



Bottom View





**AP4546: WIRE HARNESS CONNECTIONS**

### **Installing the Control Box in the Tractor**

Find a suitable location in the cab of the tractor and mount the control box. The red and black two wire cable attached to the back of the box is the power cable. Plug the cigarette lighter end into a power outlet in the cab.

If you do not have an available outlet for the cigarette lighter end, use the following instructions: Cut the cigarette lighter plug off. Split apart the wires and connect the red wire to a 12 volt dc power source and the black wire to ground. (A bag of terminals is included to allow you to tap into most fuse panels.)



**CAUTION:** Red wire must be positive and black wire negative.

Reversing these wires can damage the control system.

Route the gray cord and male 9 pole plug out of the cab and to the front bulkhead of the trailer. Plug the cord into the female 9 pole socket on the trailer bulkhead.

To operate your Demco trailer, your tractor will need a hydraulic pump that can supply 25 to 30 gallons per minute of oil to the trailer at 2,500 to 3,000 psi. See page 32 for more information on the tractor's hydraulic requirements.

If your trailer is equipped with a tarp, you will also need to wire a power cord from the tractor's battery to the trailer to supply power to the tarp's motor. For detailed wiring instructions, see page 101 if you have a Roll Rite tarp or page 114 for an Aero tarp.

### **Operating the TrailerPro Control Box**

Press the "Power" button to turn the system on. The button will light up to indicate the power is on. Press the button again to turn the system off.

### **Dumping the Tub**

When the green light in the top center is illuminated, the tub can be dumped. (See Tarp Lock Out Option below)

The red switch in the lower left corner operates the tub. To dump the tub, turn on the tractor's hydraulic pump and then lift and hold the red toggle in the "dump" position to raise the tub and empty its contents. Release the switch when the cylinders reach the fully extended position.



**WARNING:** Do not stop dumping the load in mid dump and then try to return the tub to the transport position. You may tip over the trailer instead of returning the tub.

Push and hold the red switch in the "Return" position to bring the tub back to its transport position. Release the switch when the cylinders are fully retracted.

### Operating the Tarp (If Equipped)

The white switch in the lower middle operates the tarp. Lift and hold the white switch to unroll the tarp and cover the tub. Push down and hold the switch to roll the tarp and uncover the tub.

 **CAUTION:** When rolling the tarp do not continue to hold the switch after the tarp has reached its fully rolled position. Damage to the tarp or the motor can occur when the motor continues to try to roll the tarp after it has reached its fully rolled position.

### Operating the Lift Axle (If Equipped)

The blue switch in the lower right corner controls the lift axle option. Lifting the switch to the up position raises the lift axle and pushing the switch down lowers the lift axle.

There is a manual control switch for the lift axle in the gray plastic box at the back of the trailer. There is also a regulator in the box that adjusts the amount of weight the lift axle carries. Instructions are printed inside the box.

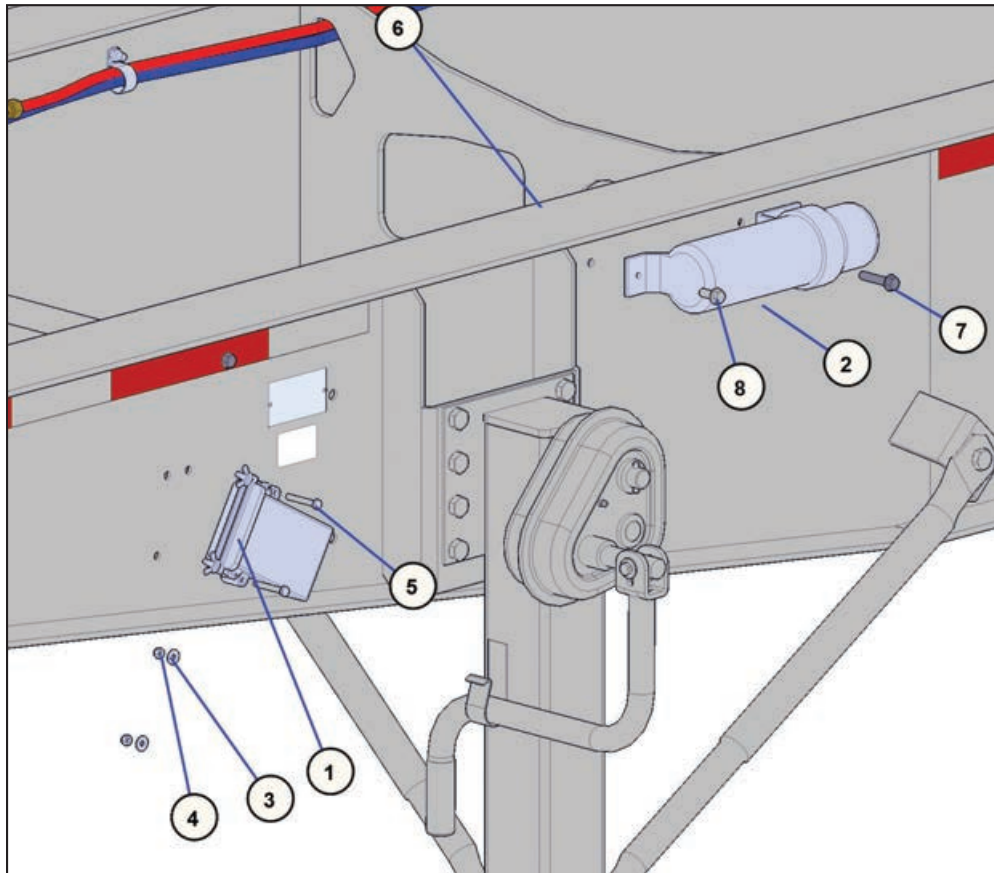
 **CAUTION:** Always lower the lift axle when the trailer is loaded. Damage to the trailer's frame can occur if the trailer is transported loaded with the lift axle in the raised position.

### Using the Tarp Lock Out Option

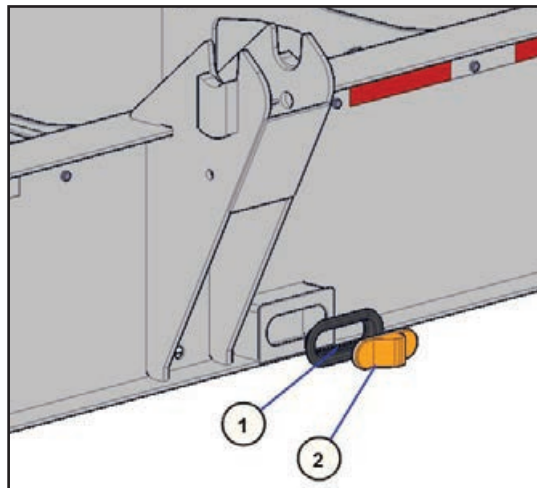
The Tarp Lock Out prevents the tub from being dumped while the tarp is covering the tub. Dumping the contents of the tub while the tarp covers the tub will ruin the tarp and may cause the trailer to tip over. If your trailer has a tarp and you purchased the tarp lockout option, the green light and the red button in the top row of the control box will be used. The green light will illuminate when the tarp is in the fully rolled up position. Once the green light is on, the red switch will be able to operate the tub. If the green light is not illuminated the red switch is "locked out" and the tub can't be moved.

The red button will allow you to dump the tub regardless of the position of the tarp. If the sensor for the green light is damaged or fails, or if you want to tip the tub with the tarp unrolled for maintenance, you can push and hold the red button while using the red switch to move the tub.

If the Tarp Lock Out option is not installed on your trailer, the green light will be illuminated all the time, regardless of the tarp's position. The Tarp Lock Out can be added to any trailer with a TrailerPro control box. Contact your Demco Dealer for more information. Specify the brand of tarp you have when placing your order.

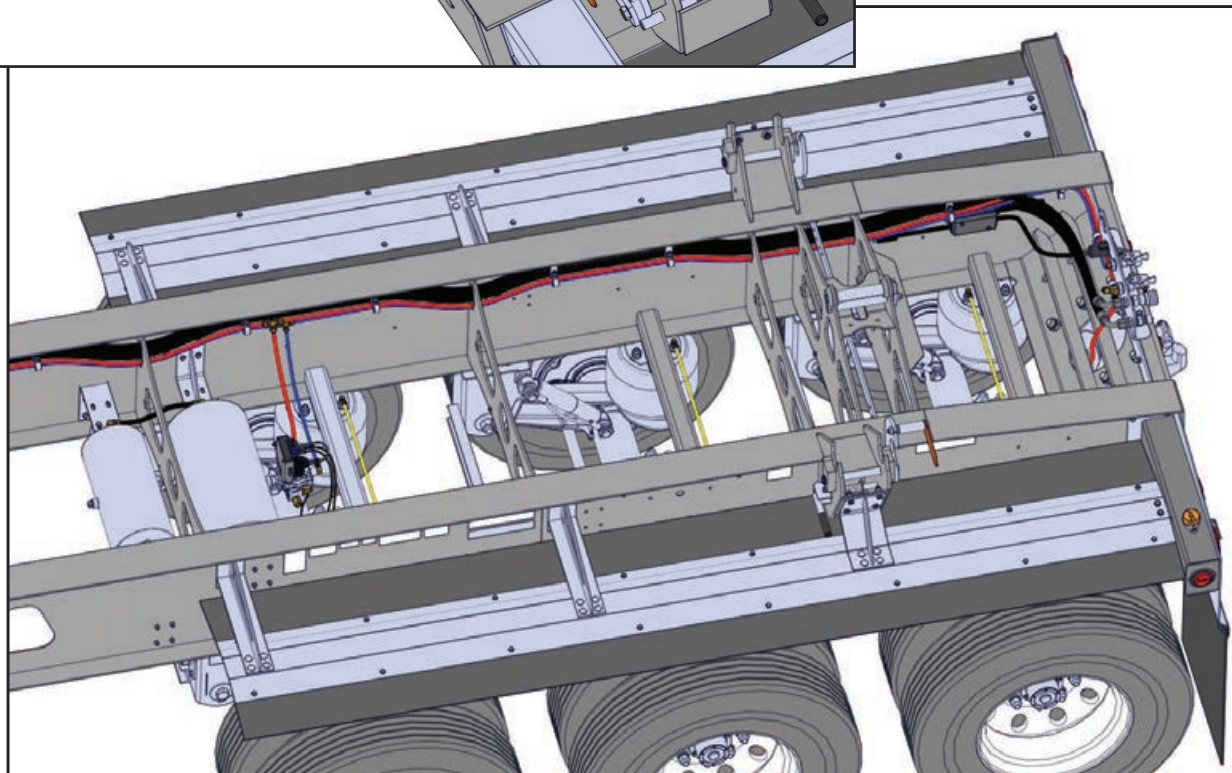
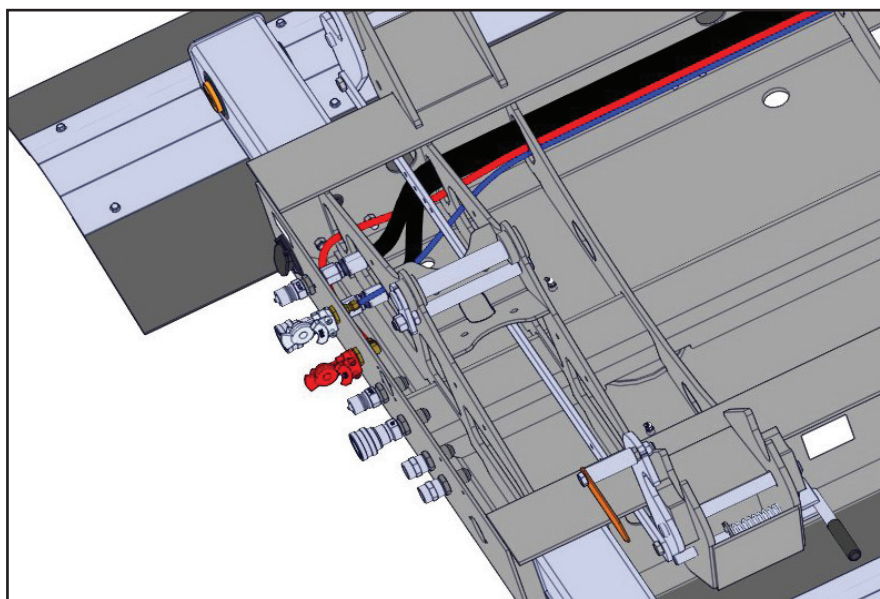
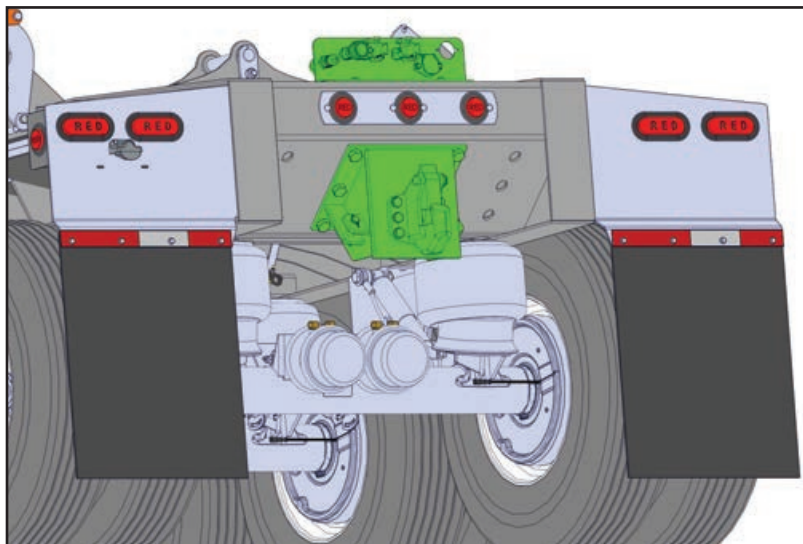


| BOM ID | Qty | Item No | Description                                      |
|--------|-----|---------|--------------------------------------------------|
| 1      | 1   | AP3811  | JAMES KING DOCUMENT BOX, NO. 300                 |
| 2      | 1   | AP4254  | MANUAL HOLDER, BLACK                             |
| 3      | 2   | BP3055  | WASHER, FLAT, 1/4", PLATED                       |
| 4      | 2   | BP3587  | NUT, HEX, 1/4" NYLOCK                            |
| 5      | 2   | BP3601  | HEX CAP SCREW, 1/4"-20 X 2", GRADE 8, PLATED     |
| 6      | 1   | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                 |
| 7      | 1   | BP3685  | BOLT, FLANGE HEAD, 3/8"-16 X 2", GRADE 8, PLATED |
| 8      | 1   | BP3692  | BOLT, FLANGE HEAD, 3/8"-16 X 1", GRADE 8, PLATED |

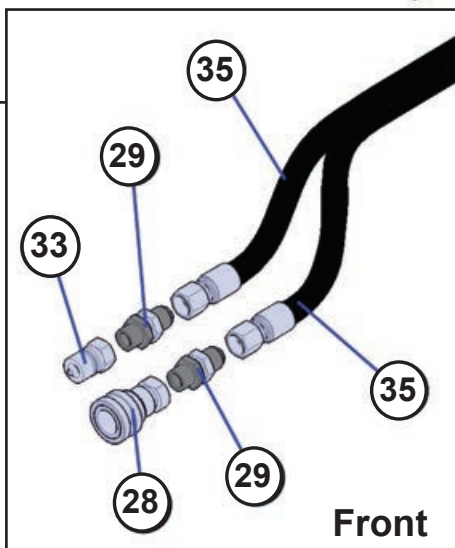
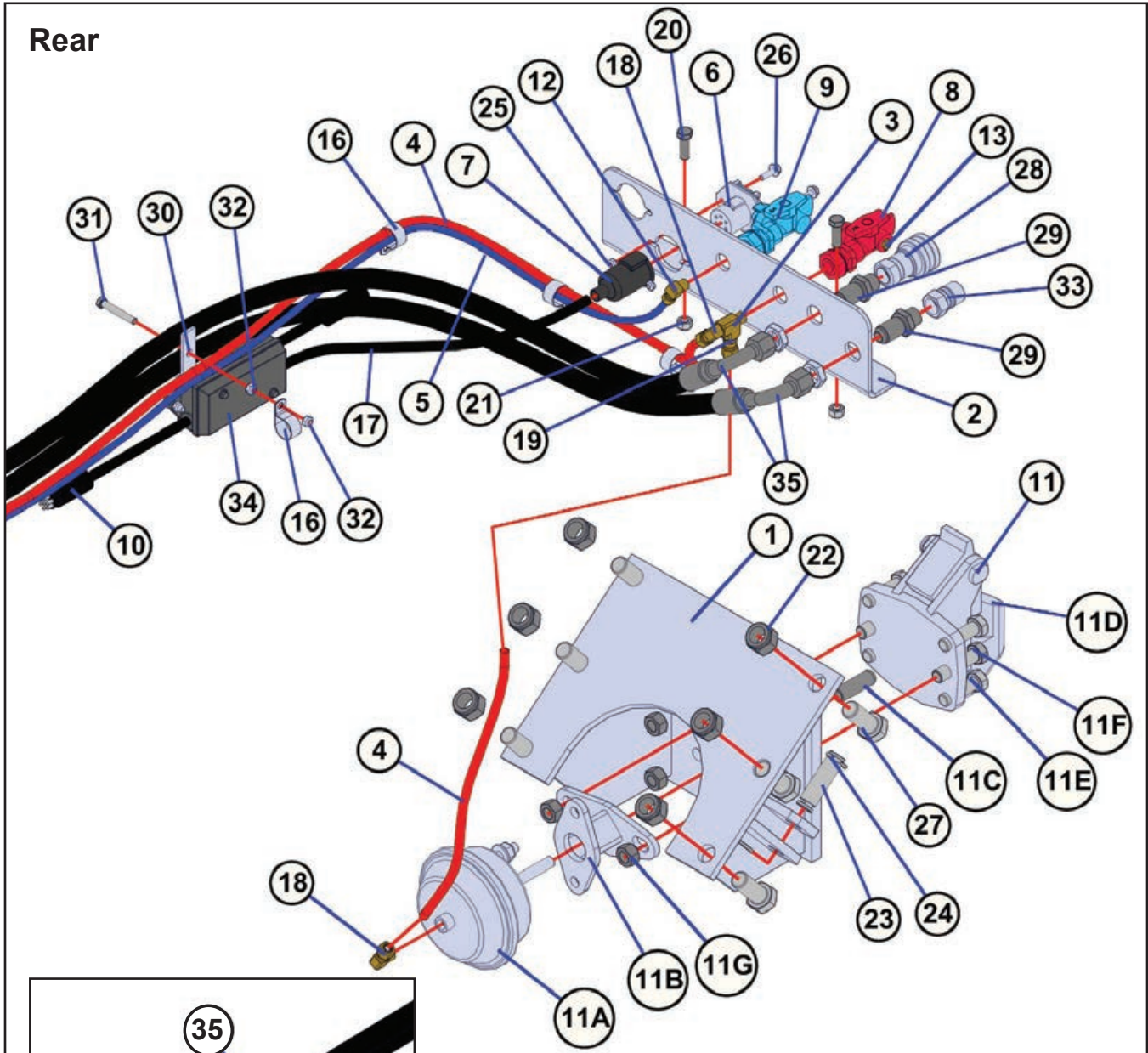


| BOM ID | Qty | Item No | Description                        |
|--------|-----|---------|------------------------------------|
| 1      | 2   | AP3551  | GROMMET, OVAL, MODEL 60            |
| 2      | 2   | AP4313  | LAMP, LED, TURN/SIDE, OVAL, YELLOW |

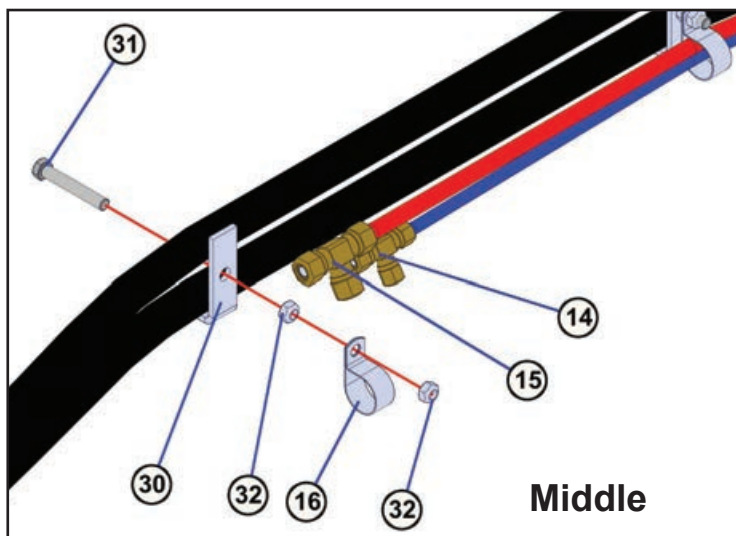
## Lead Trailer Kit, Pintle Chassis, Standard Hydraulics (150001, 40' Chassis)



**Rear**



**Front**



**Middle**

## Lead Trailer Kit, Pintle Chassis, Standard Hydraulics (150001, 40' Chassis)

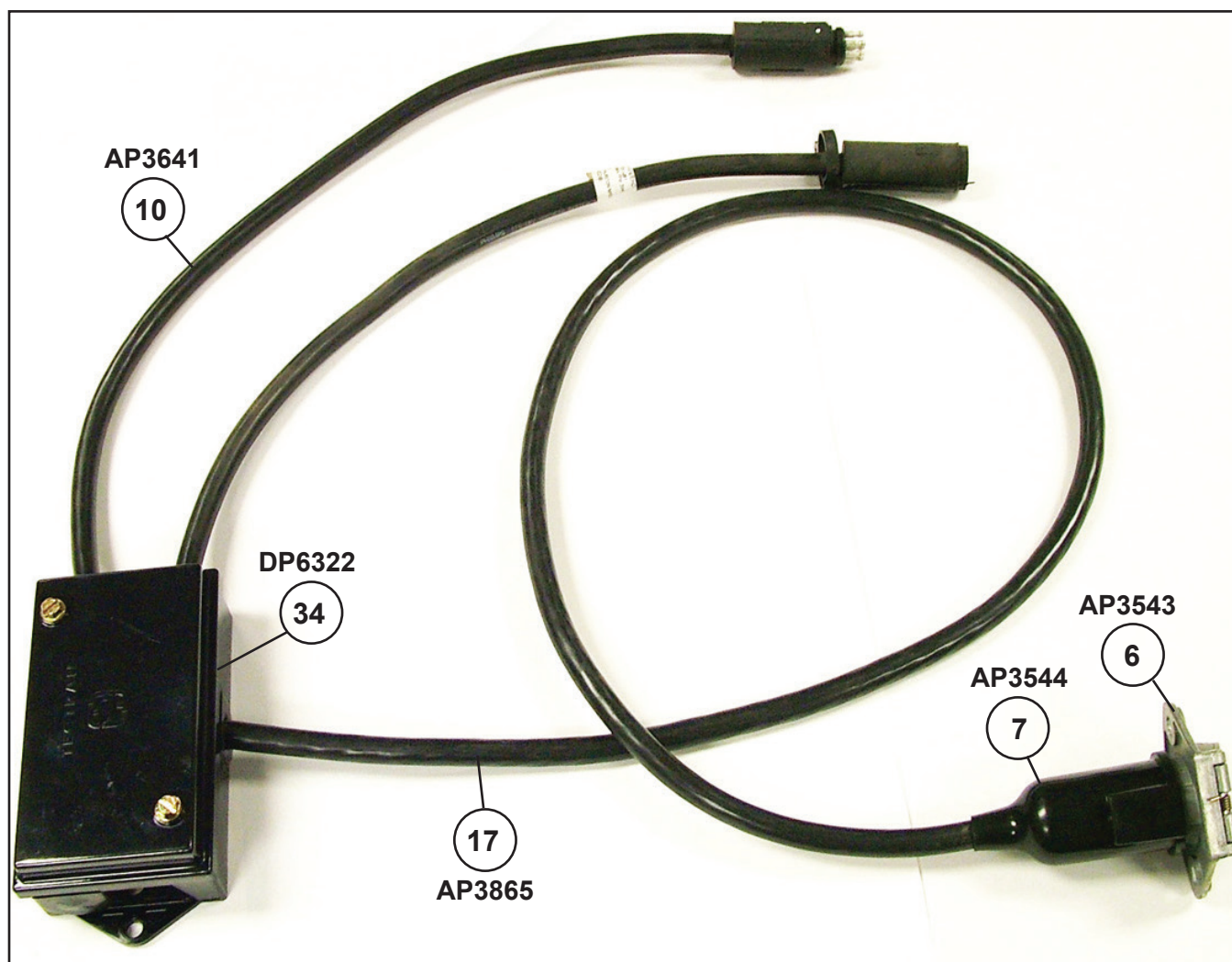
| BOM ID | Qty | Item No | Description                                           |
|--------|-----|---------|-------------------------------------------------------|
| 1      | 1   | AM8103  | PINTLE HITCH MOUNT                                    |
| 2      | 1   | AM9234  | HOSE MOUNT PLATE, LEAD TRAILER                        |
| 3      | 1   | AP3531  | STREET TEE, 3/8", 90 DEGREE                           |
| 4      | 2   | AP3537  | NYLON TUBING, RED, 1/2"                               |
| 5      | 1   | AP3538  | NYLON TUBING, BLUE, 3/8"                              |
| 6      | 1   | AP3543  | SOCKET, 7 WAY, TRAILER                                |
| 7      | 1   | AP3544  | WEATHERGUARD BOOT FOR 7-WAY PLUG                      |
| 8      | 1   | AP3636  | GLADHAND, EMERGENCY, RED, WITH SHUTOFF                |
| 9      | 1   | AP3637  | GLADHAND, SERVICE, BLUE, WITH SHUTOFF                 |
| 10     | 1   | AP3641  | WIRING HARNESS EXTENSION CORD                         |
| 11     | 1   | AP3644  | PINTLE HOOK ASSEMBLY WITH AIR LOCK, PREMIER 2300A     |
| 11A    | 1   | AP4105  | AIR CHAMBER, TYPE 24                                  |
| 11B    | 1   | AP4449  | ADAPTER BRACKET, PREMIER #467, PINTLE HITCH           |
| 11C    | 1   | AP4450  | THIMBLE, PREMIER #271, PINTLE HITCH                   |
| 11D    | 1   | AP4451  | PINTLE COUPLING, PREMIER 2300                         |
| 11E    | 4   | BP3197  | HEX CAP SCREW, 3/4"-10 X 2-1/2", GRADE 8, PLATED      |
| 11F    | 2   | BP3209  | HEX CAP SCREW, 3/4"-10 X 3", GRADE 8, PLATED          |
| 11G    | 6   | BP3442  | NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED     |
| 12     | 1   | AP3687  | ELBOW, 3/8" MP X 3/8" TUBE, 90 DEGREE, BRASS          |
| 13     | 1   | AP3691  | HEX PLUG, 1/4", BRASS                                 |
| 14     | 1   | AP3717  | TEE, UNION, 3/8" TUBE                                 |
| 15     | 1   | AP3718  | TEE, UNION, 1/2" TUBE                                 |
| 16     | 18  | AP3809  | 1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT                  |
| 17     | 1   | AP3865  | WIRE, 6-#12, 1-#10, TRAILER CORD                      |
| 18     | 2   | AP4199  | TUBE, 1/2" X 3/8" MP, 90 DEGREE, NUT & FERRULE, BRASS |
| 19     | 1   | AP4200  | TUBE, 1/2" X 3/8" MP, STRAIGHT, NUT & FERRULE, BRASS  |
| 20     | 2   | BP3126  | HEX CAP SCREW, 1/2"-13 X 1-1/2", GRADE 5, PLATED      |
| 21     | 2   | BP3244  | NUT, HEX LOCK, 1/2"-13, PLATED                        |
| 22     | 6   | BP3295  | NUT, HEX LOCK, 1"-8, NYLOCK                           |
| 23     | 2   | BP3403  | PIN, CLEVIS, 1" X 2-3/4"                              |
| 24     | 4   | BP3511  | PIN, COTTER, 3/16" X 1-3/4"                           |
| 25     | 4   | BP3644  | NUT, HEX LOCK, 5/16"-18, TOP LOCK                     |
| 26     | 4   | BP3709  | BOLT, FLANGE HEAD, 5/16"-18 X 1", GRADE 8, PLATED     |
| 27     | 6   | BP3721  | HEX CAP SCREW, 1"-8 X 2-1/2", GRADE 8, PLATED         |
| 28     | 2   | DP6300  | COUPLER, QUICK, FEMALE, 3/4" NPT                      |
| 29     | 4   | DP6495  | BULKHEAD ADAPTER WITH NUT, 12MP-12MJ, 2706-LN-12-12   |
| 30     | 15  | AM8053  | HOSE RETAINER, SINGLE                                 |
| 31     | 15  | BP3096  | HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 5, PLATED      |
| 32     | 30  | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                      |
| 33     | 2   | DP6301  | COUPLER, QUICK, MALE, 3/4" NPT                        |
| 34     | 1   | DP6322  | JUNCTION BOX                                          |
| 35     | 2   | DP6620  | HOSE, HYDRAULIC, 3/4" X 500", 12FJX-12FJX90           |

### LEAD TRAILER PINTLE KITS: (STANDARD HYDRAULICS)

35' CHASSIS: 150003

42' CHASSIS: 150007

44' CHASSIS: 150002





# LANDING GEAR

## **OPERATING INSTRUCTIONS & MAINTENANCE PROCEDURES**



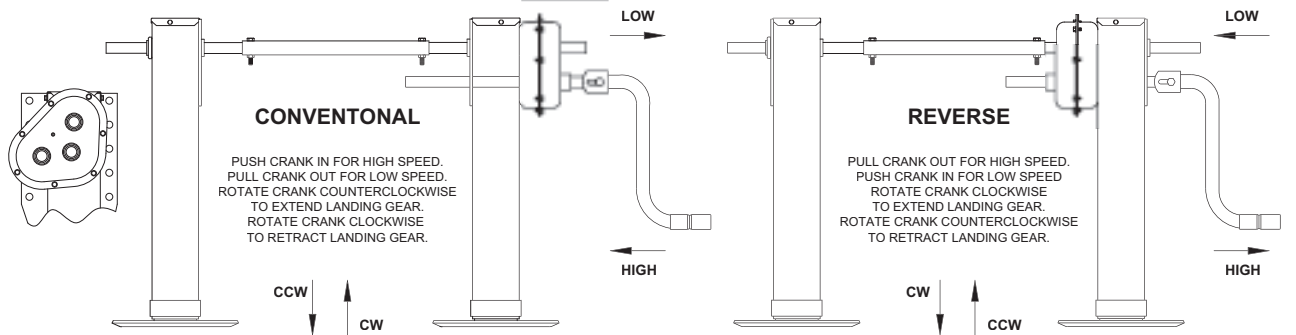
**Challenger Series - Model 50000**

**Contender Series - Model 51000**

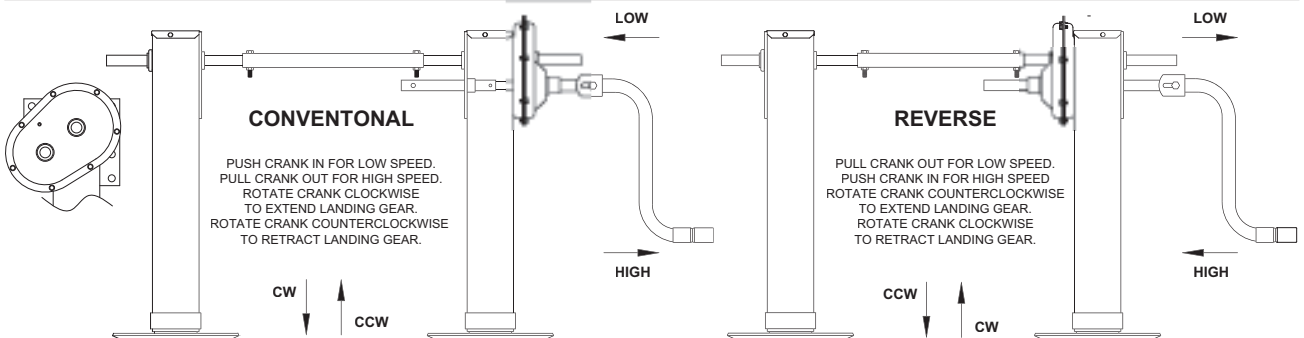
**Fast Gear Series - FG4000**



## OPERATION Model 51,000 (8 Bolt) Model 50,000 (10 Bolt)



## OPERATION Fast Gear



## TO REMOVE TRACTOR FROM TRAILER:

1. Position the trailer so that the landing gear shoes will rest on a firm level surface when landing gear is extended.
2. Shift landing gear to high gear and extend landing gear until shoes contact ground.
3. Shift landing gear to low gear and lift trailer approximately (1) inch.
4. Unlock fifth wheel, uncouple air lines, and drive the tractor out from under the trailer.

## TO CONNECT TRACTOR TO TRAILER:

1. Ensure that the trailer is at a sufficient height to allow coupling of the tractor and trailer.
2. Connect air lines from tractor to trailer, then lock trailer brakes and back tractor under trailer, then lock fifth wheel.
3. Retract landing gears to fully retracted position.
4. Store crank on the crank holder.

## LUBRICATION – STANDARD:

When manufactured, the landing gears have been adequately greased with high quality lubricant. It will be necessary to periodically supplement this lubricant to maintain satisfactory performance. Use a molybdenum type grease with appropriate temperature range for your operating conditions. Gearbox leg has (3) grease fittings; leg without gearbox has (2) grease fittings.

1. Prior to lubrication, extend legs approximately (2) inches from maximum retracted position.
2. For optimum performance, every (6) months lube both legs at all grease fittings.
3. Add 1/4-lb grease at each grease fitting.

## LUBRICATION – NoLube:

No additional grease is required.

## TROUBLE SHOOTING:

In normal trailer operating service, certain components such as shafts, bushings, bearings, gears, and screw and nut assemblies are subject to wear and will require replacement.

However, under extreme usage condition exceeding AAR-931 Durability Requirements the same components may require replacement more frequently.

## Landing gears hard to crank—check the following:

### PROBLEM

1. Cross driveshaft in a bind or tight between shafts.
2. To determine which leg turns hard
3. Inadequate lubrication.
4. Alignment.
5. Upper housing or retracting tube may be bent.
6. Screw and nut assembly may have excessive wear and be hard to turn or inoperable.
7. Check for proper clearance between pinion and bevel gear.
8. Excessive wear or damage to pinion, bevel, input, idler and/or output gears.
9. Landing gear jack shafts and/or shift shaft binding.
10. Bent retracting screw.
11. Damaged thrust bearing.
12. Damaged collar.
13. Damaged shift lock boss and/or shaft bearing boss.
14. Weld blow through where strut bracket is welded to housing. (With no-load on landing gear, the retract tube should have free play inside housing.)
15. Impact to jack shaft end has pressed bearing boss into gearbox half.

### SOLUTION

- Bolts must be loose and cross driveshaft free to move in slots provided.
- Remove cross driveshaft bolt and crank each leg on the jack shaft.
- (See Lubrication Instructions).
- Legs must be timed together, parallel to each other and perpendicular to the trailer crossmembers.
- Replace damaged part.
- Disassemble and inspect for wear. If screw and/or nut show considerable wear, then replace entire retracting tube assembly.
- Minimum end play 1/32".
- Replace damaged gears.
- Check to see if trailer mounting bracket has sufficient size clearance hole to miss landing gear boss or shift shaft.
- Replace entire retracting tube assembly.
- Replace.
- Replace.
- Replace.
- Grind weld as required and re-weld.
- Press boss back into position.

## Trouble Shooting/General:

- |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Right-hand leg (gearbox leg) operates but left-hand leg does not move.</li> <li>2. Legs will not operate when turning jack shaft.</li> <li>3. Right-hand leg will not operate, shift shaft will turn but jack shaft does not turn.</li> <li>4. Leg locked and will not turn.</li> <li>5. Right-hand leg will not stay fully shifted in low gear.</li> <li>6. Noisy gearbox.</li> </ol> | <p>Broken cross driveshaft bolt or damaged cross driveshaft. Replace damaged part.</p> <p>Damaged pinion or bevel gear. Replace damaged part.</p> <p>Damaged input, idler, and/or output gear. Replace damaged part.</p> <p>Bent retracting screw or damaged riser nut and screw. Replace entire retracting tube assembly.</p> <p>Shift lock ball and shift lock spring missing or damaged shift lock spring. Replace missing or damaged part.</p> <p>Check that shift shaft movement is 1" when shifted between gears.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## CAUTIONS:

Landing gears are designed to meet T.T.M.A. recommended practice RP-4 and A.A.R.-931 requirements.

When operating the landing gears, it is necessary to observe some cautions. By doing so you will ensure long trouble free service.



1. Do not over extend or over retract landing gears.
2. Never drop trailer on landing gears. Always extend landing gears until sand shoes contact ground, then lift trailer approximately 1 inch before removing tractor from trailer.
3. Always ensure that landing gear shoes or foot pads will rest on a hard ground surface or concrete pad. If necessary, place shoes on a support plank to prevent the landing gears from sinking into the ground surface. (This is especially important with liquid cargo where a shift in the contents could overturn the trailer!).
4. Always retract landing gears fully before moving the trailer.
5. Always store the crank on the crank holder after extending or retracting the landing gear.
6. Replace all damaged or missing parts.
7. Failure to replace worn or damaged riser nut and retracting screw assembly could cause a failure.



**GO THE DISTANCE.**

HOLLAND USA, INC.

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www.thehollandgroupinc.com

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### Holland Hitch of Canada, Ltd.

Woodstock, Ontario • Canada  
Phone: 519-537-3494  
Fax: 800-565-7753

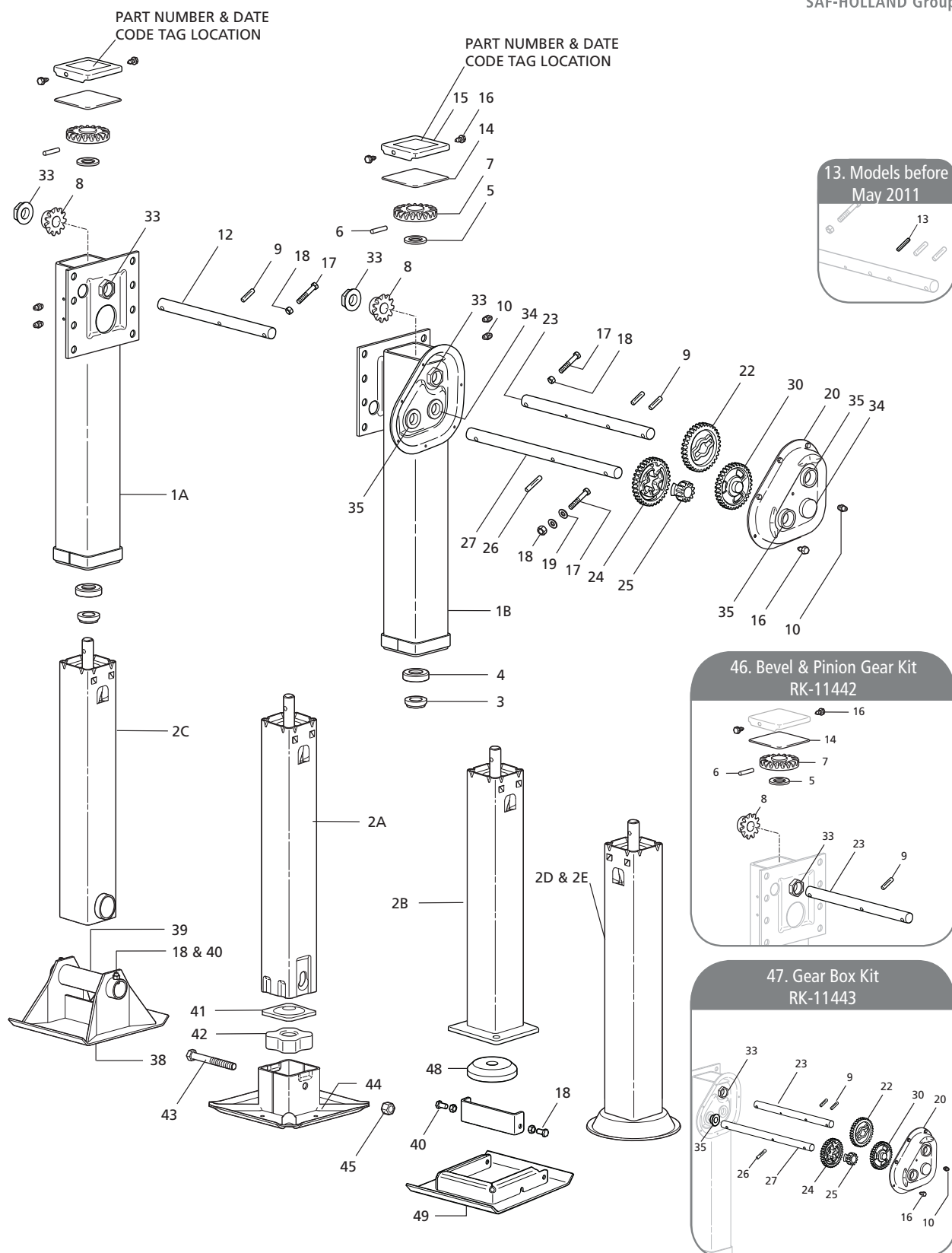
### Holland Equipment, Ltd.

Norwich, Ontario • Canada  
Phone: 519-863-3414  
Fax: 519-863-2398

### Holland Hitch Western, Ltd.

Surrey, British Columbia • Canada  
Phone: 604-574-7491  
Fax: 604-574-0244

## Atlas 55 Standard - Exploded View





SAF-HOLLAND Group

## Atlas 55 Standard - Parts List

| NO. | DESCRIPTION                      | RETRACT<br>TUBE CODE | TRAVEL    |           |           |           |           |
|-----|----------------------------------|----------------------|-----------|-----------|-----------|-----------|-----------|
|     |                                  |                      | 13.50"    | 15.50"    | 17"       | 17"*CAN.  | 19"       |
| 2A  | Retract Tube - RCF               | 0 or 5 (MRL)         | LG3053-01 | LG3053-02 | LG3053-03 | LG3053-04 | LG3053-05 |
| 2B  | Retract Tube - Low Profile RCF   | 0                    | LG3097-01 | LG3097-02 | LG3097-03 | N/A       | NA        |
| 2C  | Retract Tube - Axle              | 0                    | LG3012-01 | LG3012-02 | LG3012-03 | N/A       | LG3012-04 |
| 2D  | Retract Tube - Shockfoot 10" DIA | 0 or *6 (Can)        | LG3061-02 | LG3061-03 | LG3061-04 | LG3061-07 | LG3061-13 |
| 2E  | Retract Tube - Shockfoot 12" DIA | 0 or *6 (Can)        | LG3061-01 | N/A       | LG3061-05 | LG3061-08 | LG3061-14 |

| NO. | DESCRIPTION                                     | PART NO.       | SPEED |     |
|-----|-------------------------------------------------|----------------|-------|-----|
|     |                                                 |                | ONE   | TWO |
| 1A  | Upper Housing LH                                | N/A            | -     | -   |
| 1B  | Upper Housing RH                                | N/A            | -     | -   |
| 3   | Collar                                          | XB-LG0544      | 1     | 1   |
| 4   | Thrust Bearing                                  | XB-BRG-013-77  | 1     | 1   |
| 5   | Washer - FL 2" OD x 1.19" ID x .13" THK         | XB-PW-016-62   | 1     | 1   |
| 6   | Pin - DIA .38" x 2"                             | XA-CRP-V-06635 | 1     | 1   |
| 7   | Bevel Gear                                      | LG2884         | 1     | 1   |
| 8   | Pinion Gear                                     | LG1823-02      | 1     | 1   |
| 9   | Groove Pin - DIA .38" x 1.50"                   | XB-GP-014-18   | 1     | 2   |
| 10  | Ftg - Grease .25" - 28 Self Tapping             | XB-GRF-022-16  | 2     | 3   |
| 12  | Jack Shaft LH - Universal Mount                 | LG2964-01      | 1     | -   |
|     | - I-Beam Mount                                  | LG2964-04      | 1     | -   |
|     | - Conventional Mount                            | LG2964-02      | 1     | -   |
|     | - Reverse Mount                                 | LG2964-03      | 1     | -   |
| 13  | Pin - Spring DIA .25" x 1.5" (Not Required)     | N/A            | -     | -   |
| 14  | Cover Gasket                                    | XB-LG0893      | 1     | 1   |
| 15  | Top Cover                                       | XA-LG0880      | 1     | 1   |
| 16  | Self-Tapping Screw .25" - 20 x .5" Lg           | XB-ST5-008-11  | 2     | 9   |
| 17  | Screw, Hex Cap .38" - 16 x 2.25" Lg GR5         | XB-HHC-050-42  | 1     | 2   |
| 18  | Self-Locking Nut .38" - 16 - Sandshoe           | XB-SLN-012-04  | 2     | 3   |
|     | - Low Profile RCF                               | XB-SLN-012-04  | 4     | 5   |
| 19  | Washer .38" Std Type A                          | XB-PW-016-03   | -     | 2   |
| 20  | Gearbox Half, Outside w/Hole for Grease Fitting | LG2996         | -     | 1   |
| 22  | Output Gear                                     | LG2980         | -     | 1   |
| 23  | Jackshaft RH - Universal Mount                  | LG2963-01      | -     | 1   |
|     | - I-Beam Mount                                  | LG2963-04      | -     | 1   |
|     | - Conventional Mount                            | LG2963-02      | -     | 1   |
|     | - Reverse Mount                                 | LG2963-03      | -     | 1   |
| 24  | Input Gear - High                               | LG2968         | -     | 1   |
| 25  | Input Gear - Low                                | LG2969         | -     | 1   |
| 26  | Groove Pin, Type E DIA .38" x 2.00" Lg          | XB-GP-052-21   | -     | 1   |
| 27  | Shift Shaft - Universal                         | LG3011-01      | -     | 1   |
|     | - I-Beam & Conventional                         | LG3011-02      | -     | 1   |
|     | - Reverse                                       | LG3011-03      | -     | 1   |
| 30  | Idler Gear                                      | LG2975         | -     | 1   |
| 33  | Hex Lock Boss                                   | LG2926         | 2     | 2   |
| 34  | Output Shaft Bushing                            | LG3005         | -     | 2   |
| 35  | Boss Bearing - Sealed                           | LG0659-10      | -     | 3   |

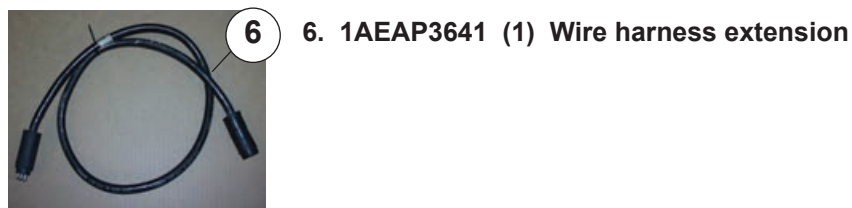
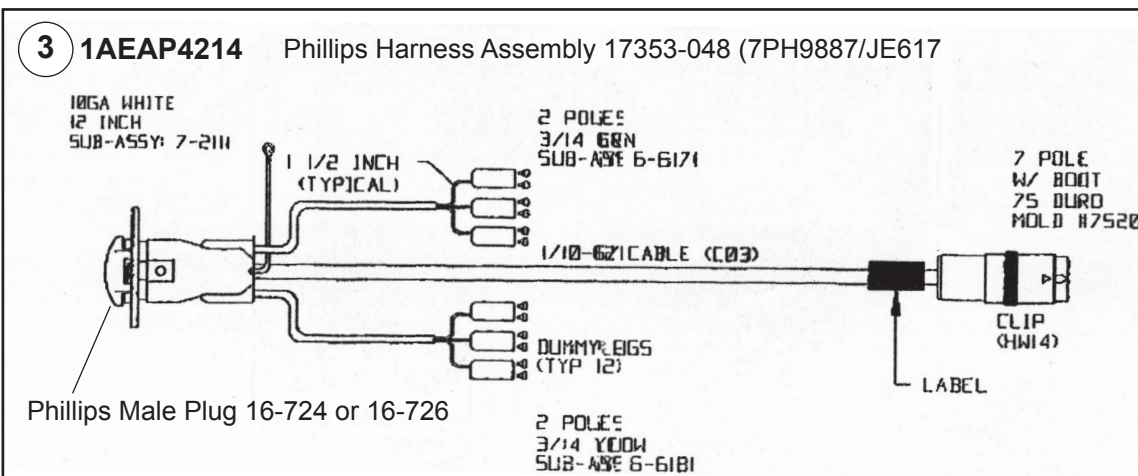
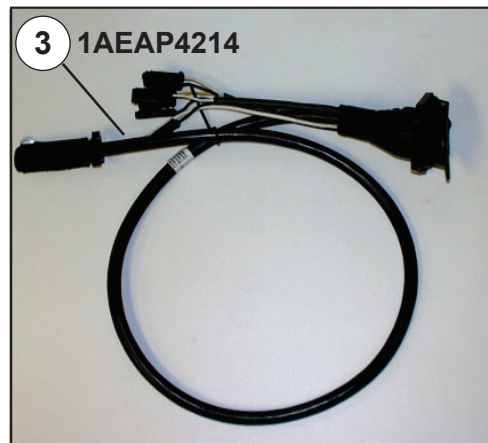
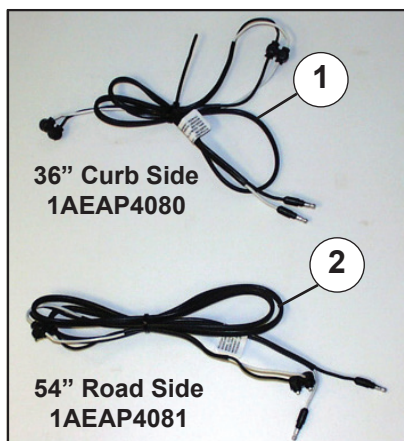
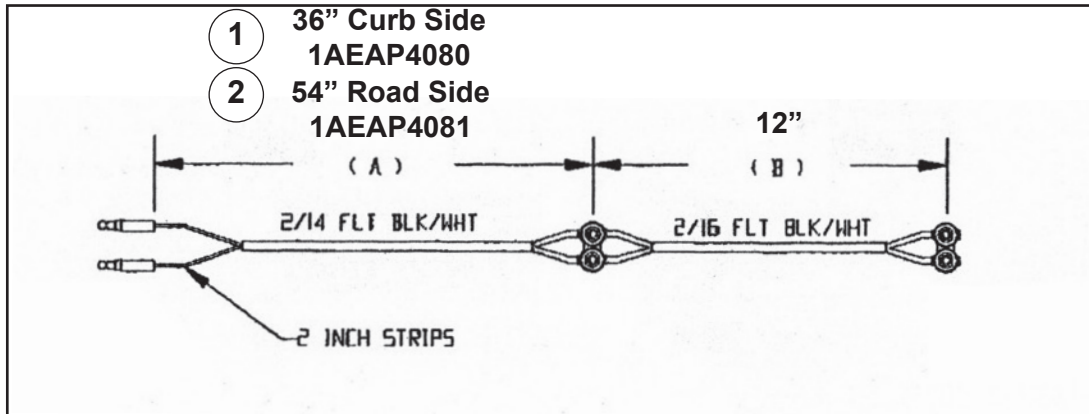
| NO. | DESCRIPTION                                              | PART NO.      | SPEED |     |
|-----|----------------------------------------------------------|---------------|-------|-----|
|     |                                                          |               | ONE   | TWO |
| 38  | Sandshoe - 10" x 10" x 4.50"                             | 50616001      | 1     | 1   |
|     | - 10" x 12" x 4.50"                                      | 50616000      | 1     | 1   |
|     | - 10" x 10" x 2.00"                                      | 50616008      | 1     | 1   |
|     | - 10" x 12" x 2.00"                                      | 50616007      | 1     | 1   |
| 39  | Sandshoe Axle - Hollow Axle 8.50" Lg                     | LG0070-02     | 1     | 1   |
| 40  | Screw, Hex Cap .38" - 16 x .75" Lg GR5 - Sandshoe        | XB-HHC-050-69 | 1     | 1   |
|     | Screw, Hex Cap .38" - 16 x .75" Lg GR5 - Low Profile RCF | XB-HHC-050-69 | 2     | 2   |
| 41  | Cushion Foot Plate                                       | LG0725        | 1     | 1   |
| 42  | Cushion Foot Rubber                                      | XB-LG0726     | 1     | 1   |
| 43  | Bolt - Hex Head .63" - 11 x 5.50"                        | XB-HHB-050-70 | 1     | 1   |
| 44  | R.C.F. - DIA 10"                                         | LG0718-01     | 1     | 1   |
|     | - DIA 12"                                                | LG0740-01     | 1     | 1   |
|     | - 10" x 10"                                              | LG0732-01     | 1     | 1   |
| 45  | Self-Locking Nut - .63" - 11"                            | XB-SP0012-10  | 1     | 1   |
| 46  | Bevel & Pinion Gear Repair Kit                           | RK-11442      | 1     | 1   |
| 47  | Gear Box Repair Kit                                      | RK-11443      | -     | 1   |
| 48  | Cushion Foot Pad - Low Profile RCF                       | 728003        | 1     | 1   |
| 49  | Interchangeable Collar - Low Profile RCF                 | 730639        | 1     | 1   |
| 50  | Black Armour™ Touchup Kit (not shown)                    | RK-10919      | 1     | 1   |

For technical assistance please go to  
[www.safholland.us](http://www.safholland.us) or call 800.876.3929

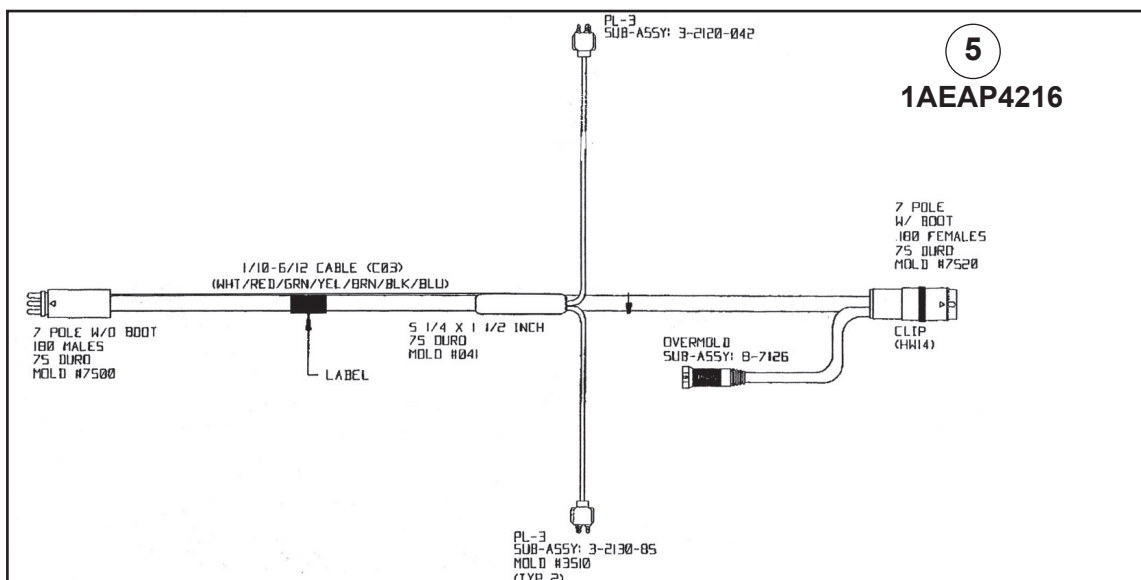
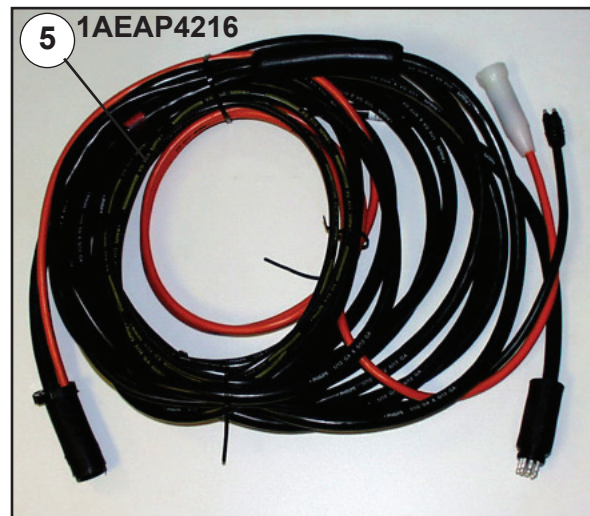
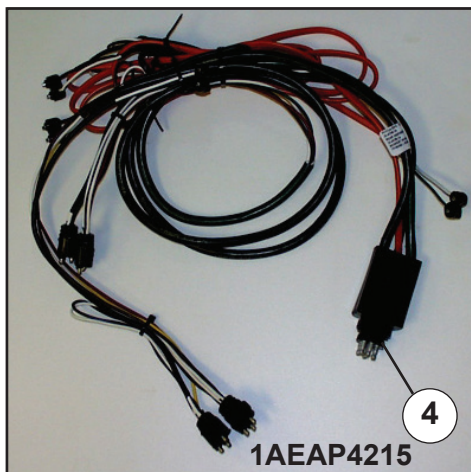
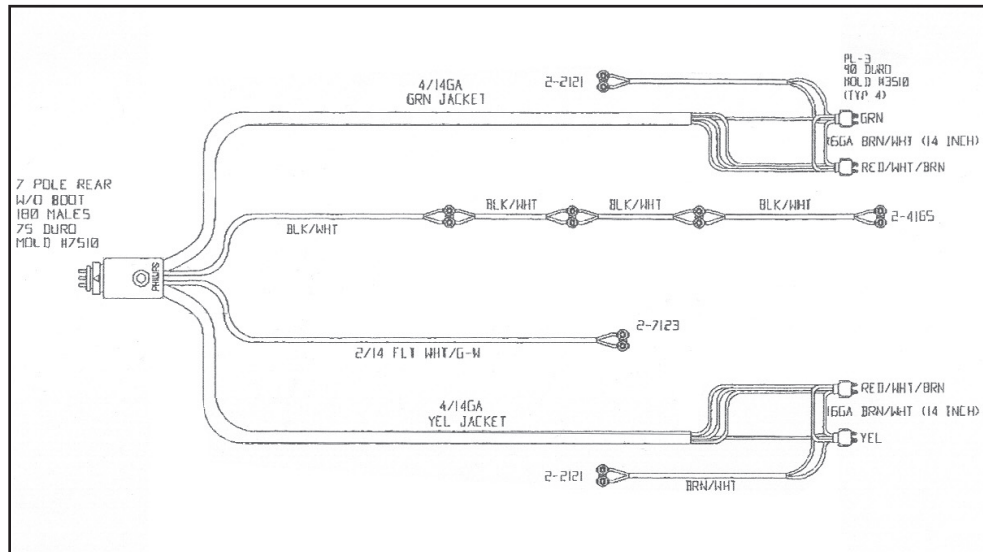
## Wiring Harness

**1AEAP4196 (1) Wiring harness, trailer, complete, 2003**

1. 1AEAP4080 (1) Harness, curb side front
2. 1AEAP4081 (1) Harness, road side front
3. 1AEAP4214 (1) Harness, main socket, 17353-048
4. 1AEAP4215 (1) Harness, rear, 20-4036-14
5. 1AEAP4216 (1) Harness, main with/splice, 11-7078-01
6. 1AEAP3641 (1) Wire harness extension



## Wiring Harness



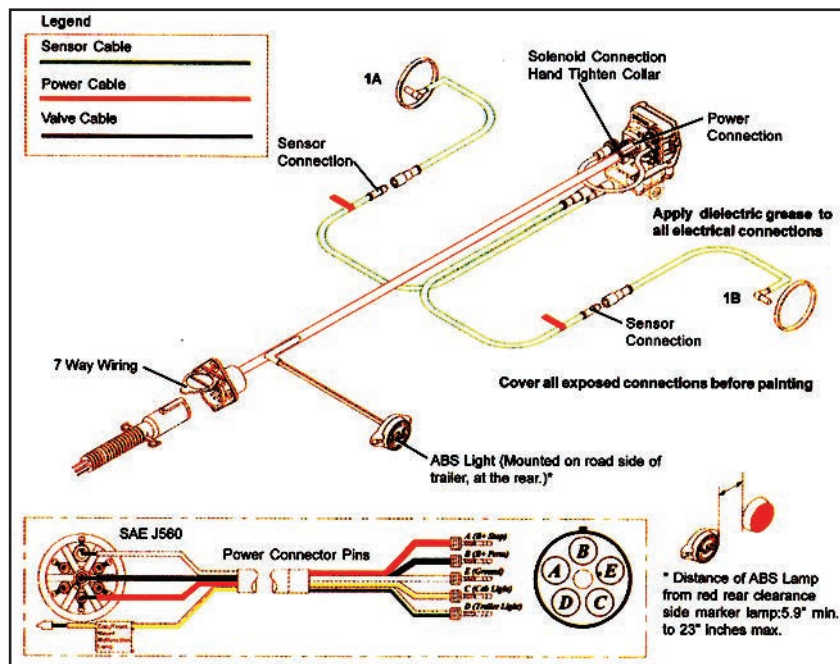
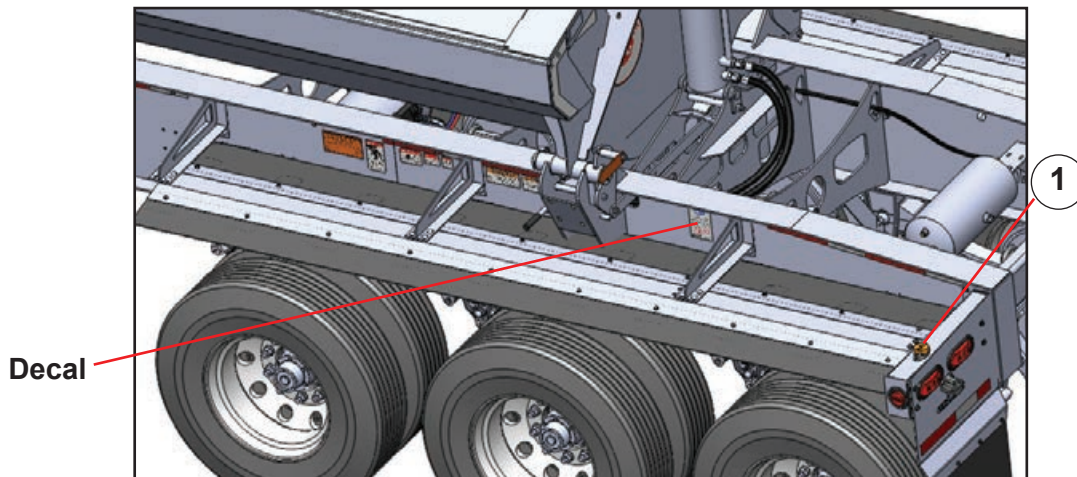
# ABS Brake Parts

## ABS-1 Axle 2S1M System

### 1ABAP4180 (1) ABS Kit PLC Select

1. 1AUAP3515 (1) Light kit, Warning 1-SN154FC
2. 1ABAP3528 (1) MOD 1 FF-ABS SB PRTY 3/4"NPT (Includes Decals)
3. 1ABAP3754 (2) ABS sensor extension cord 1 meter

**Haldex-Midland**  
**816-891-2470**  
**Valve-AL430624**  
**ECU-AL919323**  
**midland.com**



This Manual is included with your Demco Trailer. On-line Manuals are also available on the company's web site, [www.safholland.us](http://www.safholland.us)  
Your Trailer is equipped with Axle Model: CBX23-245 With 17" Ride Height.

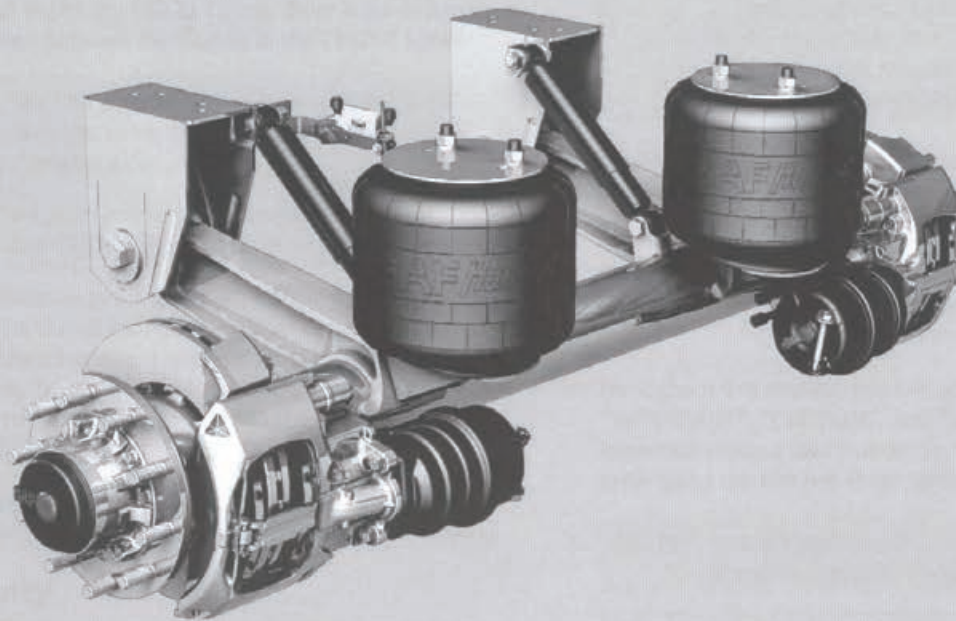


## Installation and Operation Manual

### CBX/CB Series

#### Fixed Frame Top Mount Trailer Air Suspension

- For Disc & Drum Brake Applications





From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly. SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or worse yet counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to specify SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

### **Contact Information**

SAF-HOLLAND USA, Inc. 888.396.6501 Fax 800.356.3929  
SAF-HOLLAND Canada Limited 519.537.3494 Fax 800.565.7753  
Western Canada 604.574.7491 Fax 604.574.024  
[www.safholland.us](http://www.safholland.us)



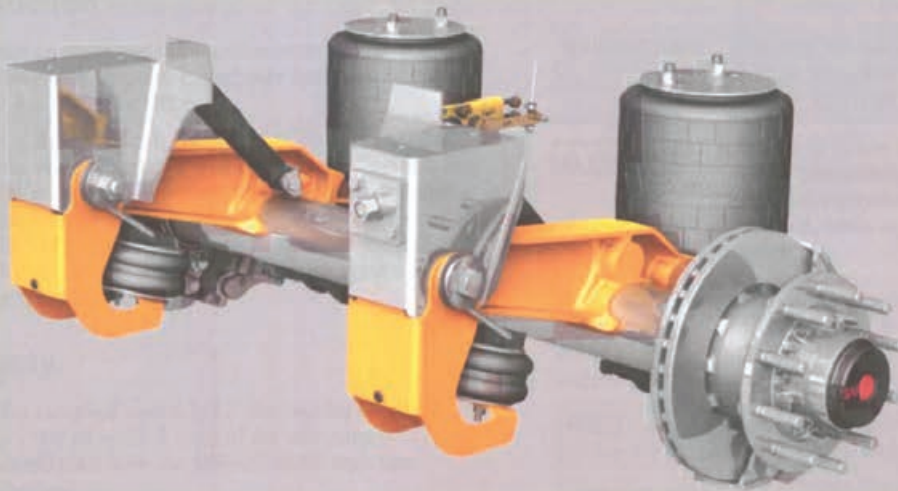
This Manual is included with your Demco Trailer. On-line Manuals are also available on the company's web site, [www.safholland.us](http://www.safholland.us)  
Your Trailer is equipped with Axle Model: CBX23-245 With 17" Ride Height.



## Installation and Maintenance Manual

### PosiLift™ Air Lift

- Fixed Frame CBX Series
- CB-2300 Series



XL-AR462 Rev. F





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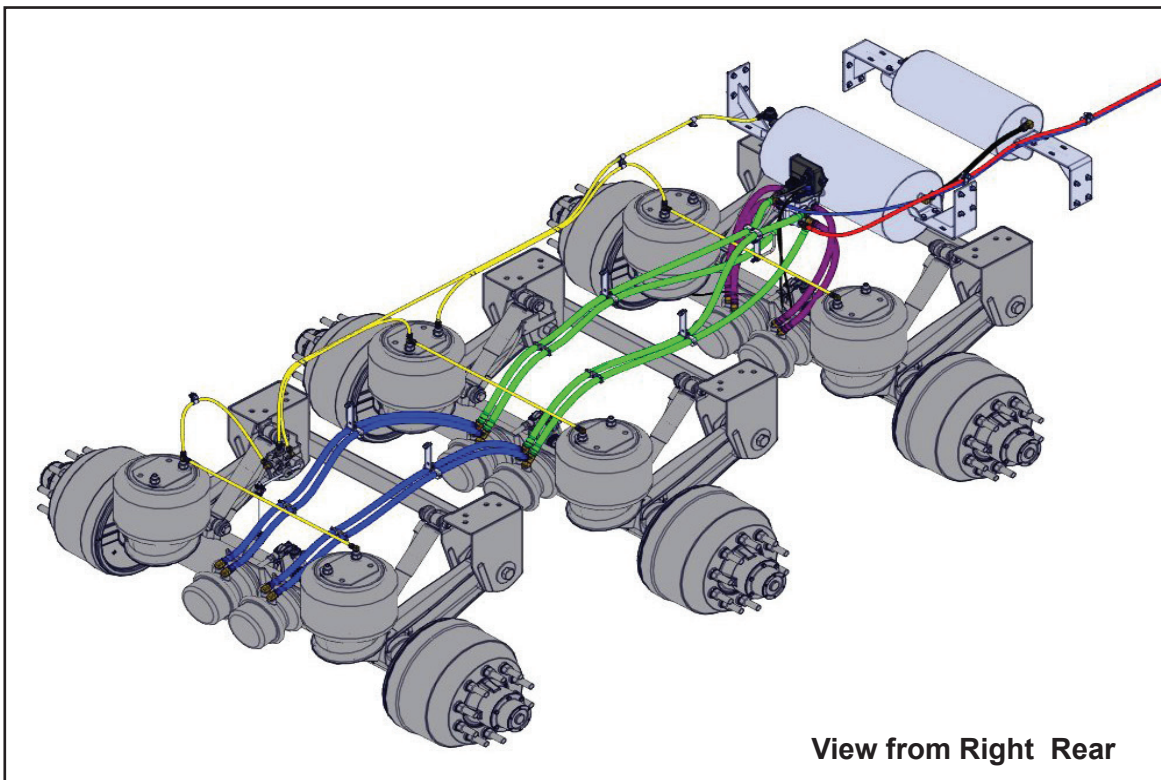
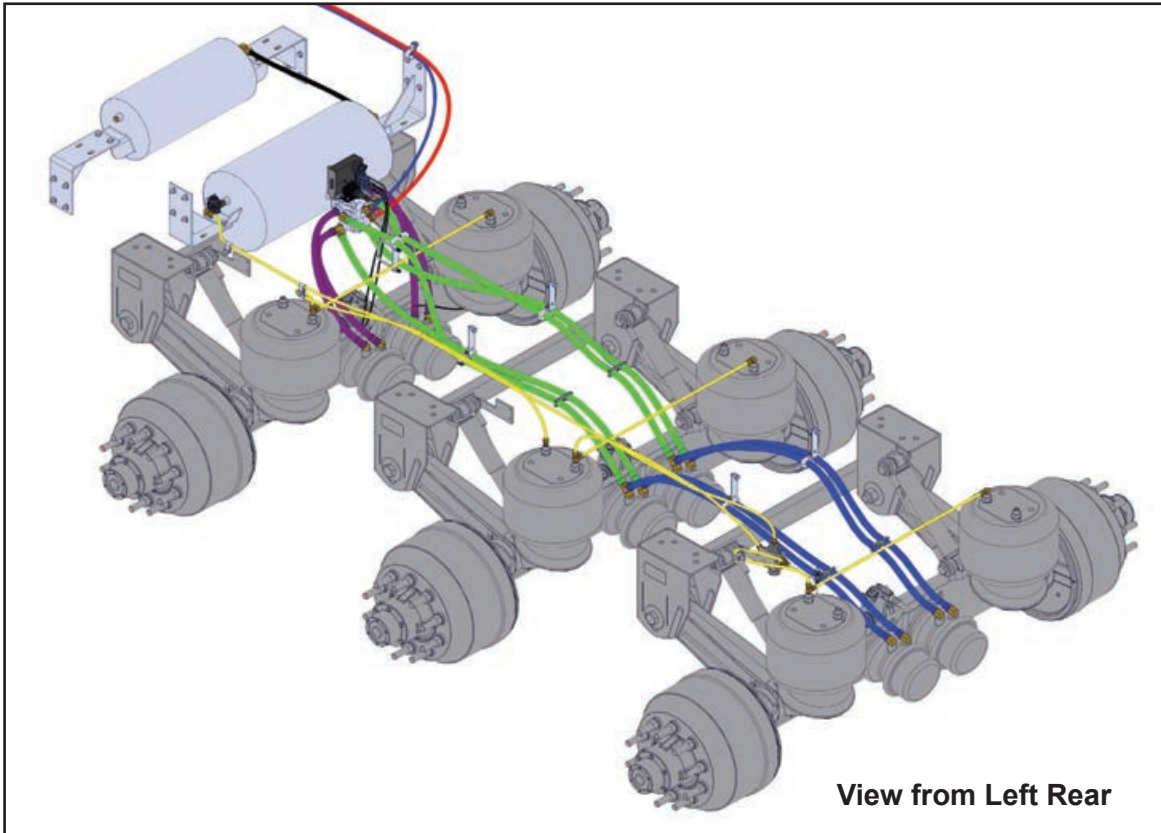
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**[www.safholland.com.mx](http://www.safholland.com.mx)**

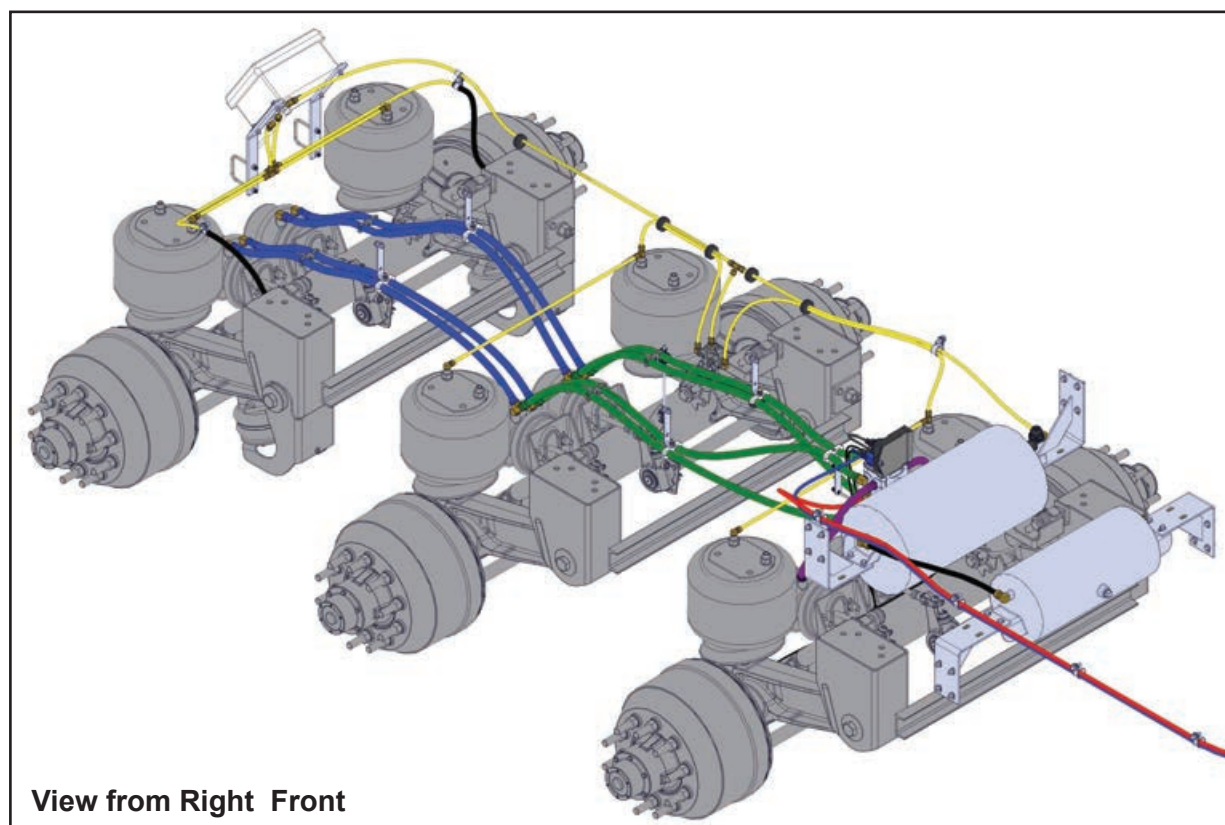
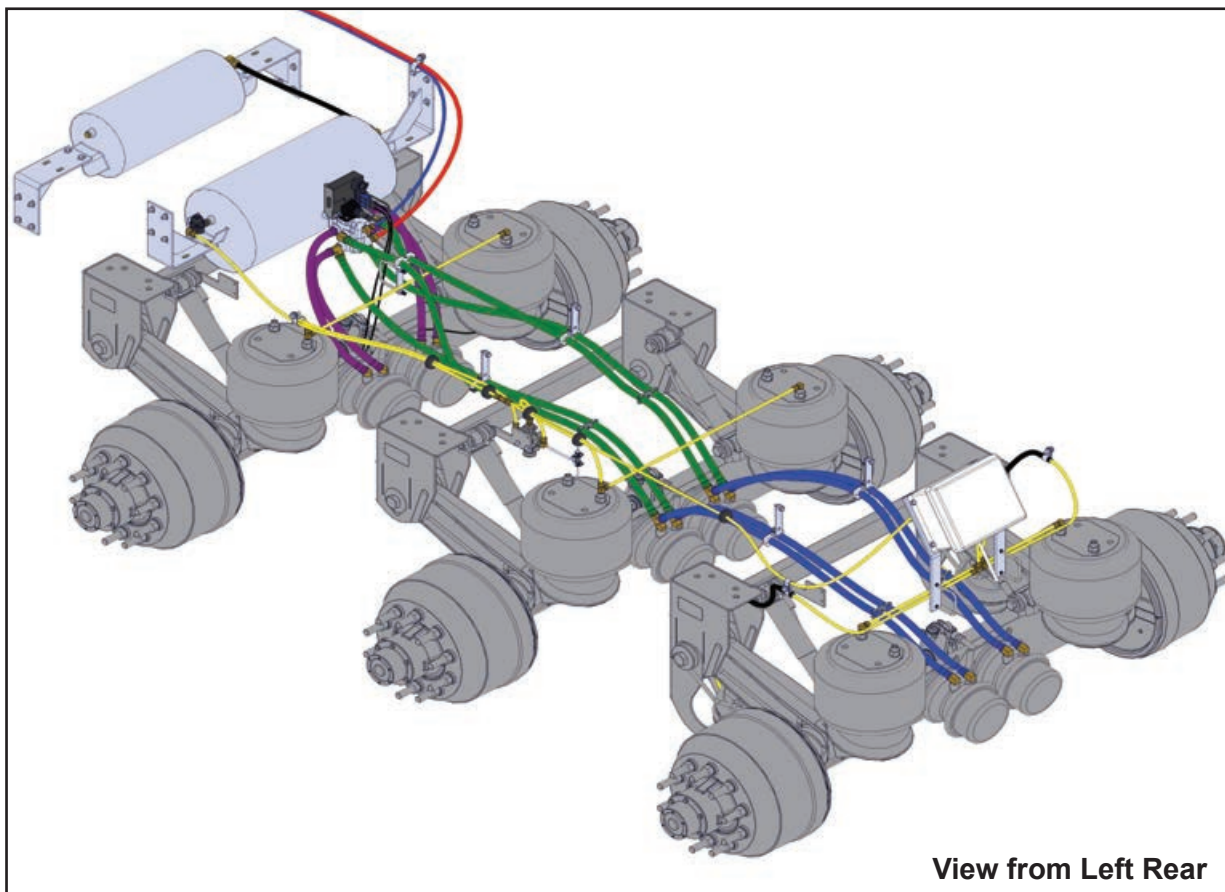
**[info@safholland.com](mailto:info@safholland.com)**

SAF-HOLLAND USA, INC.  
1950 Industrial Blvd, Muskegon, MI 49443  
[www.safholland.com](http://www.safholland.com)

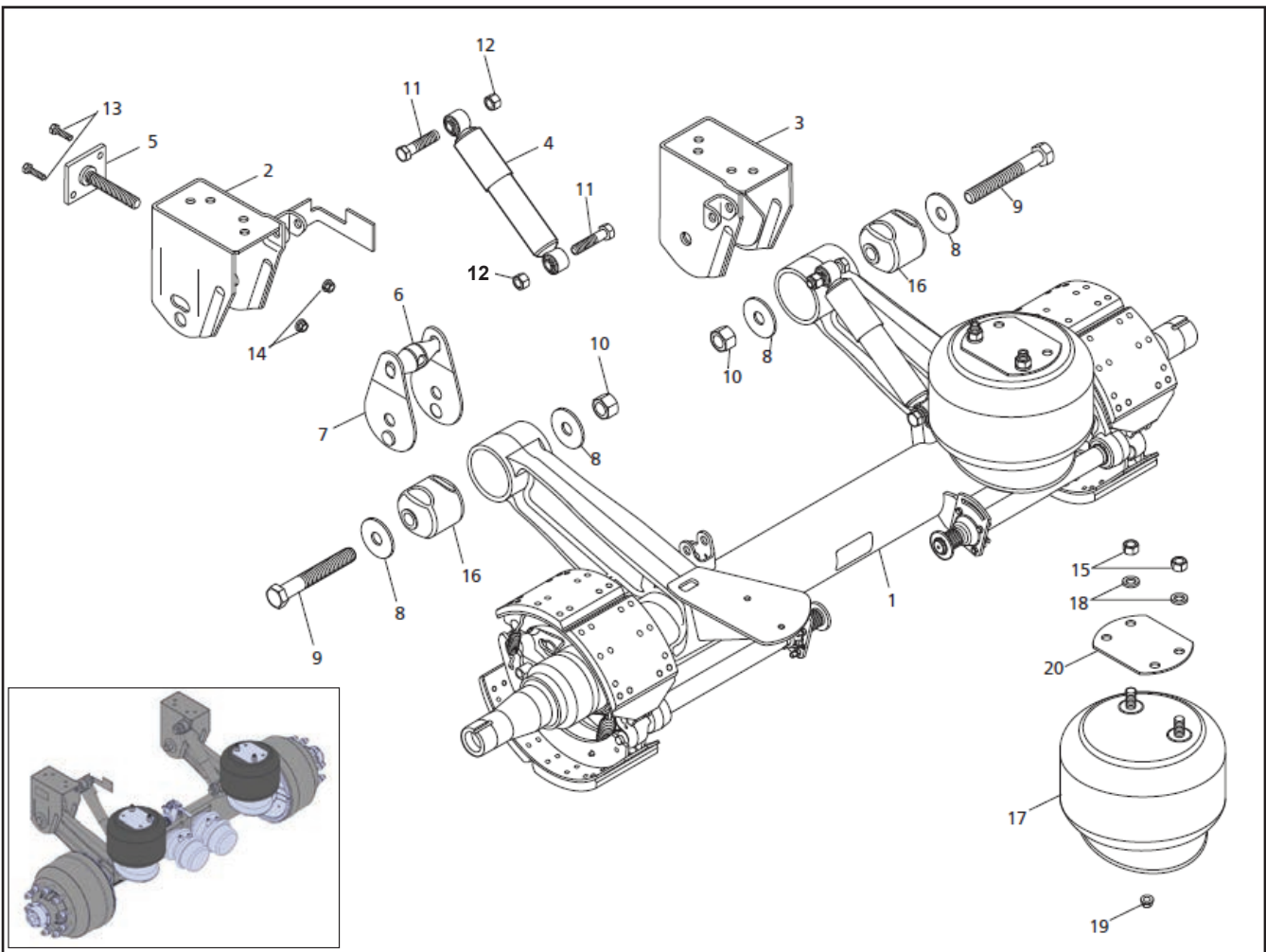


XI-438462 Rev. F - 2010-01-16. Amendments and errors reserved. © SAF-HOLLAND, Inc.



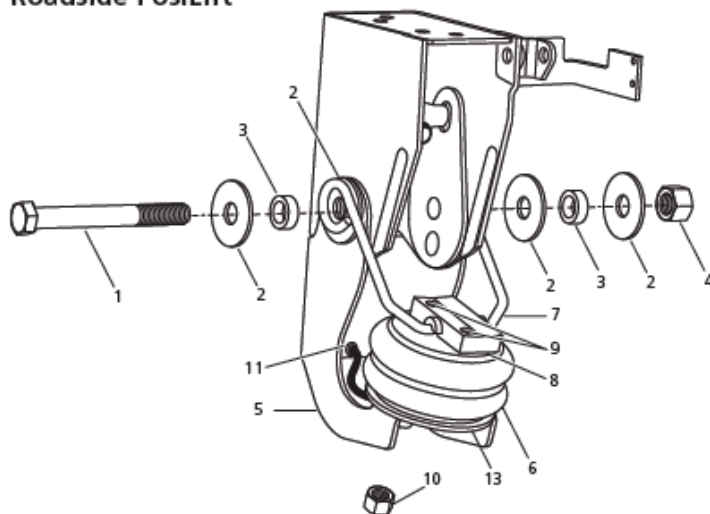


# CBX23 Standard Suspension Parts List

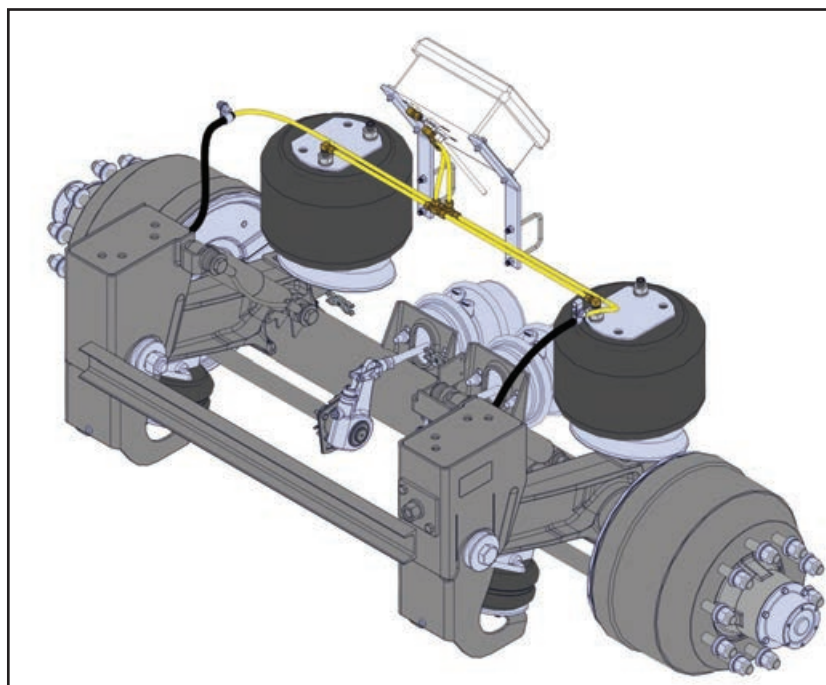
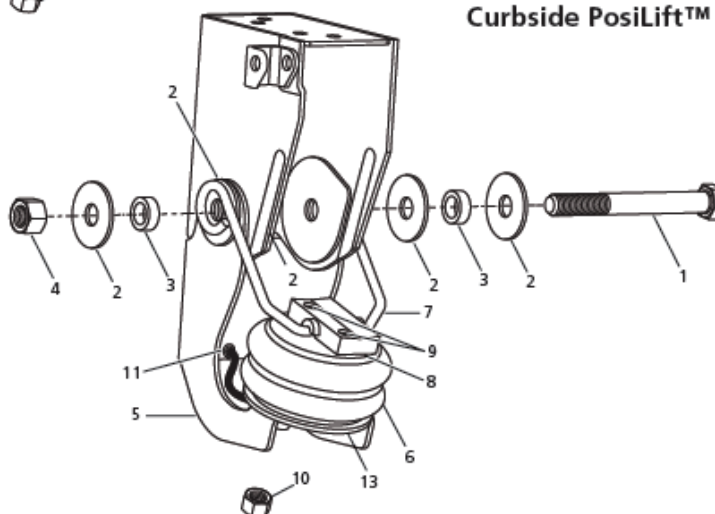


| ITEM | DESCRIPTION                                                             | PART NUMBER   | TMC PART # | QTY / AXLE |
|------|-------------------------------------------------------------------------|---------------|------------|------------|
| 1    | CBX23 W/245 AXLE AND BEAM ASSEMBLY                                      | NOT AVAILABLE | -          | 1          |
| 2    | FRAME BRACKET STYLE #2                                                  | 90522010      | AP4625     | 1          |
| 3    | FRAME BRACKET STYLE #2                                                  | 90522013      | AP4624     | 1          |
| 4    | SHOCK ABSORBER FOR BRACKET STYLE #2, 17" RIDE HEIGHT (43.18 cm)         | 90045040      | AP4628     | 2          |
| 5    | THREADED ROD ASSEMBLY                                                   | 90548007      | AP4682     | 1          |
| 6    | SWING ALIGN YOKE                                                        | 90045491      | AP4683     | 1          |
| 7    | PLATE WELDMENT                                                          | 90531339      | AP4684     | 2          |
| 8    | WASHER 1.14" I.D. x 3.50" O.D. GRADE 8 (28.96 mm X 8.9 cm)              | 93600553      | AP4685     | 4          |
| 9    | BOLT 1.125"-7 X 8.00", GRADE 8 (28.59 mm X 20.32 cm)                    | 93201070      | AP4686     | 2          |
| 10   | NUT HEX 1.125"-7 GRADE C (28.58 mm)                                     | 93400506      | AP4429     | 2          |
| 11   | BOLT, HEX .75"- 10 X 4.50", GRADE 5 (19 mm X 11.5 cm)                   | 93006035      | BP3145     | 4          |
| 12   | NUT HEX .75"-10 GRADE B (19 mm)                                         | 93400492      | BP3442     | 4          |
| 13   | SCREW HEX CAP .50"-13 x 1.75" GRADE-5 ZINC COATED (13 mm x 45 mm)       | XB-HHC-001-33 | BP3041     | 2          |
| 14   | NUT FLANGE .50"-13 GRADE B (13 mm)                                      | 93400623      | BP3471     | 2          |
| 15   | AIR SPRING TOP MOUNTING NUT .75"-16 GRADE B (19 mm)                     | 93400149      | AP4687     | 4          |
| 16   | BUSHING, CAST BEAM SEE 48100394                                         | 90008247      | AP4688     | 2          |
| 17   | AIR SPRING ASSEMBLY, 16.0"- 19.0" RIDE HEIGHT (40.64 cm - 48.26 cm)     | 90557399      | AP4689     | 2          |
| 18   | AIR SPRING MOUNTING WASHER .76" I.D. x 1.27" O.D. (19.30 mm x 32.26 mm) | 93600077      | BP3035     | 4          |
| 19   | AIR SPRING BOTTOM MOUNTING NUT .50"-13 GRADE B (13 mm)                  | 93400623      | BP3471     | 2          |
| 20   | AIR SPRING MOUNT PLATE                                                  | 90034247      | AP4690     | 2          |
| 21   | SHOCK LIMIT CABLE                                                       | 90045361      | AP4629     | 2          |

**Roadside PosiLift™**

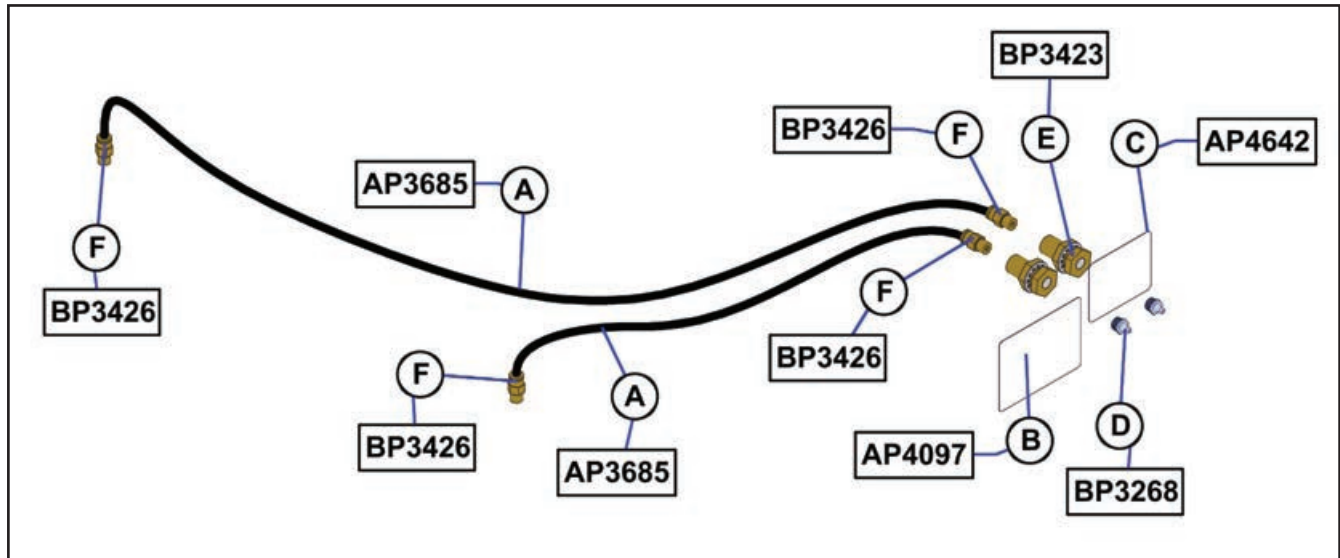


**Curbside PosiLift™**

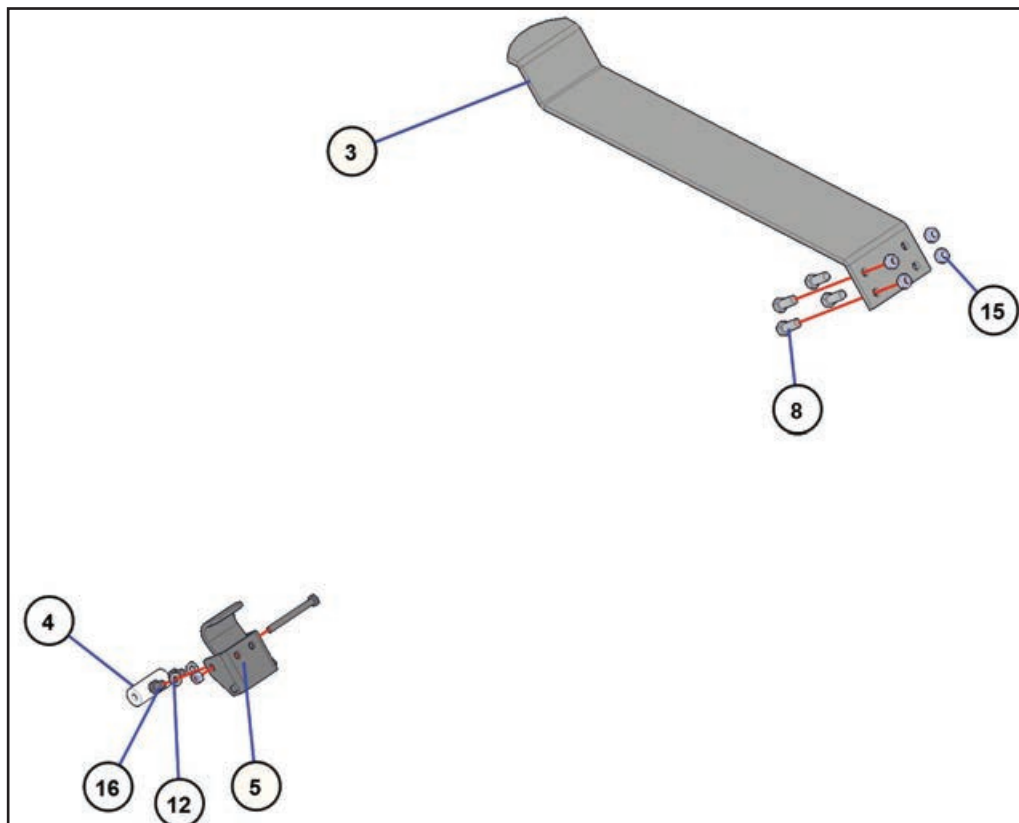
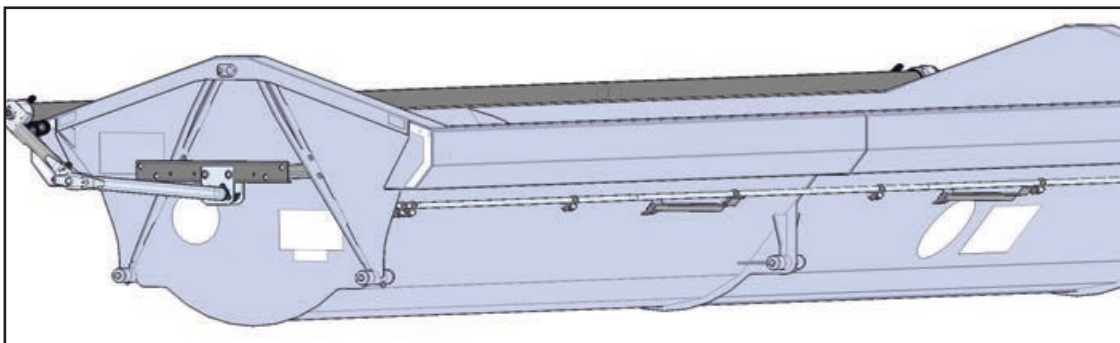
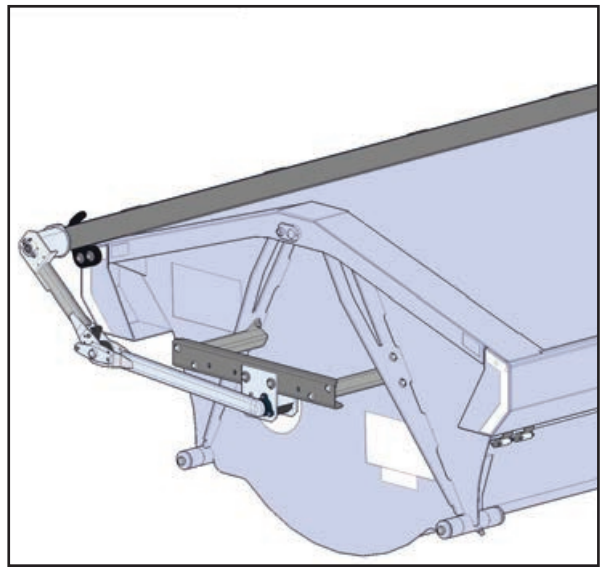
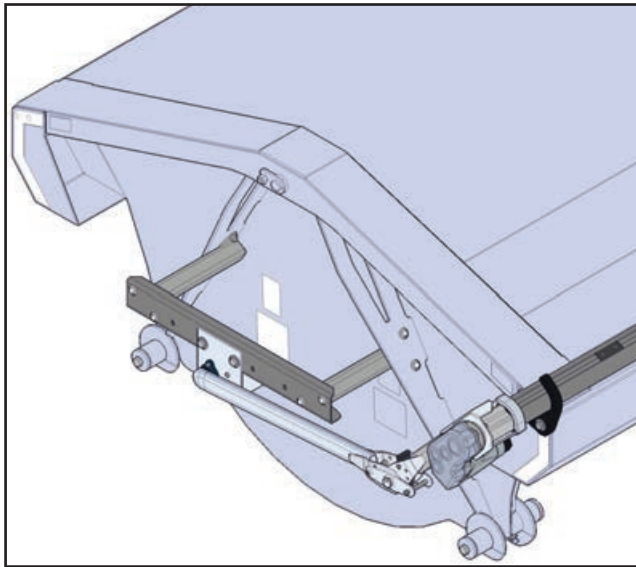


| ITEM | DESCRIPTION                 | PART NUMBER | QTY |
|------|-----------------------------|-------------|-----|
| 1    | PIVOT BOLT, 1-1/8"          | 93201072    | 2   |
| 2    | WASHER                      | 93600553    | 8   |
| 3    | SPACER                      | 93900295    | 4   |
| 4    | LOCK NUT, 1-1/8"            | 93400506    | 2   |
| 5    | PIVOT MOUNT BRACKET         | 90026334    | 2   |
| 6    | AIR SPRING                  | 90557366    | 2   |
| 7    | GUIDE ARM                   | 90006624    | 2   |
| 8    | BEARING BLOCK               | 90045590    | 2   |
| 9    | SCREW, FLAT-HEAD CAP        | 93006039    | 4   |
| 10   | HEX NUT FLANGE 0.5"-13 GR B | 93400623    | 4   |
| 11   | GROMMET                     | 90045591    | 2   |
| 12   | ELBOW FITTING (NOT SHOWN)   | XB-09226    | 2   |
| 13   | AIR SPRING MOUNTING PLATE   | 90034803    | 2   |

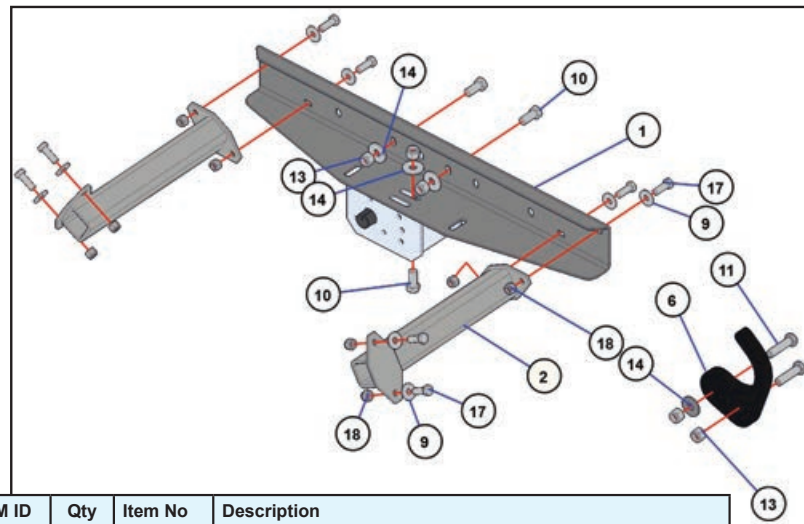
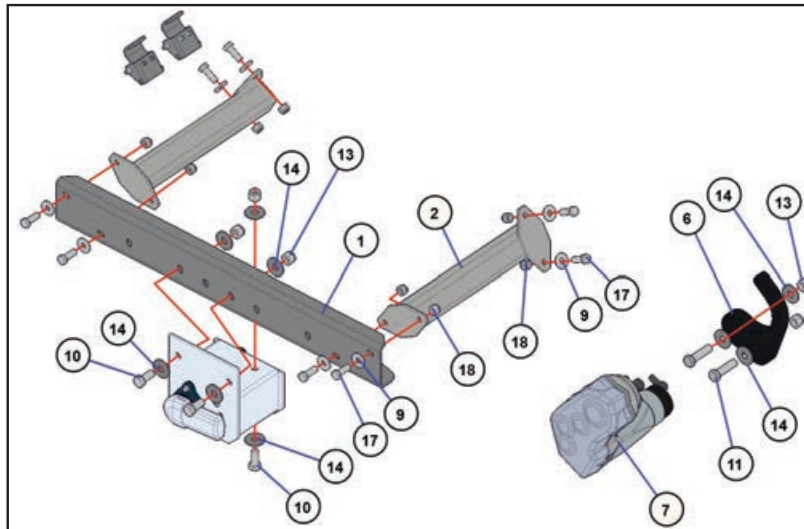
**NOTE:** ALL SUSPENSION COMPONENTS ON THE LIFT AXLE ARE IDENTICAL TO THE STANDARD AXLE, EXCEPT FOR THE **POSILIFT™** COMPONENTS LISTED ON THESE TWO PAGES.



| BOM ID | Qty | Item No | Description                                                    |
|--------|-----|---------|----------------------------------------------------------------|
| A      | 2   | AP3685  | NYLON TUBING, BLACK, 1/4" (6.4 mm)                             |
| B      | 1   | AP4097  | DECAL, CAUTION, LOCK TUB LATCHES                               |
| C      | 1   | AP4642  | DECAL, GREASE BANK, 2-3/4" X 2-1/4" (70 mm x 57 mm)            |
| D      | 2   | BP3268  | GREASE ZERK, 1/8" NPT (3.2 mm)                                 |
| E      | 2   | BP3423  | BULKHEAD ADAPTER, 1/8"FP-1/8"FP (3.2 mm x 3.2 mm)              |
| F      | 4   | BP3426  | ADAPTER, 1/4" (6.4 mm) TUBE X 1/8 (3.2 mm)MP, STRAIGHT, 244047 |



## Roll Rite Electric Tarp Brackets



| BOM ID | Qty | Item No | Description                                         |
|--------|-----|---------|-----------------------------------------------------|
| 1      | 2   | AM9037  | TARP MOUNTING CHANNEL                               |
| 2      | 4   | AM9038  | TARP CHANNEL MOUNT                                  |
| 3      | 2   | AM9072  | BRACKET, TARP SUPPORT                               |
| 4      | 8   | AM9073  | SPACER, TARP MOUNTING, 7/8" OD X 11/32" ID X 2" OAL |
| 5      | 8   | AP 4108 | TARP ROD CLAMP                                      |
| 6      | 2   | AP4152  | TARP SPOOL HOOK, PLASTIC, ROLL RITE 36840           |
| 7      | 1   | AP4293  | MOTOR, ROLL RITE TARP, 10200                        |
| 8      | 8   | BP3006  | HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED        |
| 9      | 16  | BP3050  | WASHER, FLAT, 1/2", PLATED                          |
| 10     | 6   | BP3097  | HEX CAP SCREW, 5/8"-11 X 1-1/2", GRADE 5, PLATED    |
| 11     | 4   | BP3133  | HEX CAP SCREW, 5/8"-11 X 2-1/2", GRADE 5, PLATED    |
| 12     | 16  | BP3158  | WASHER, LOCK, 5/16", PLATED                         |
| 13     | 10  | BP3375  | NUT, HEX LOCK, 5/8"-11, NYLOCK                      |
| 14     | 18  | BP3524  | WASHER, FLAT, 5/8", PLATED                          |
| 15     | 8   | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                    |
| 16     | 16  | BP3657  | HEX CAP SCREW, 5/16"-18 X 1/2", GRADE 5, PLATED     |
| 17     | 16  | BP3674  | HEX CAP SCREW, 1/2"-13 X 1-1/2" GRADE 8, PLATED     |
| 18     | 16  | BP3704  | NUT, LOCK, NYLON INSERT, 1/2"-13                    |

**FOR USE ON  
TRAILERS WITH  
STANDARD  
HYDRAULICS**

**FK2014 KIT, CR, ROLL RITE TARP, CONTROL BOX FOR 2ND TRACTOR**

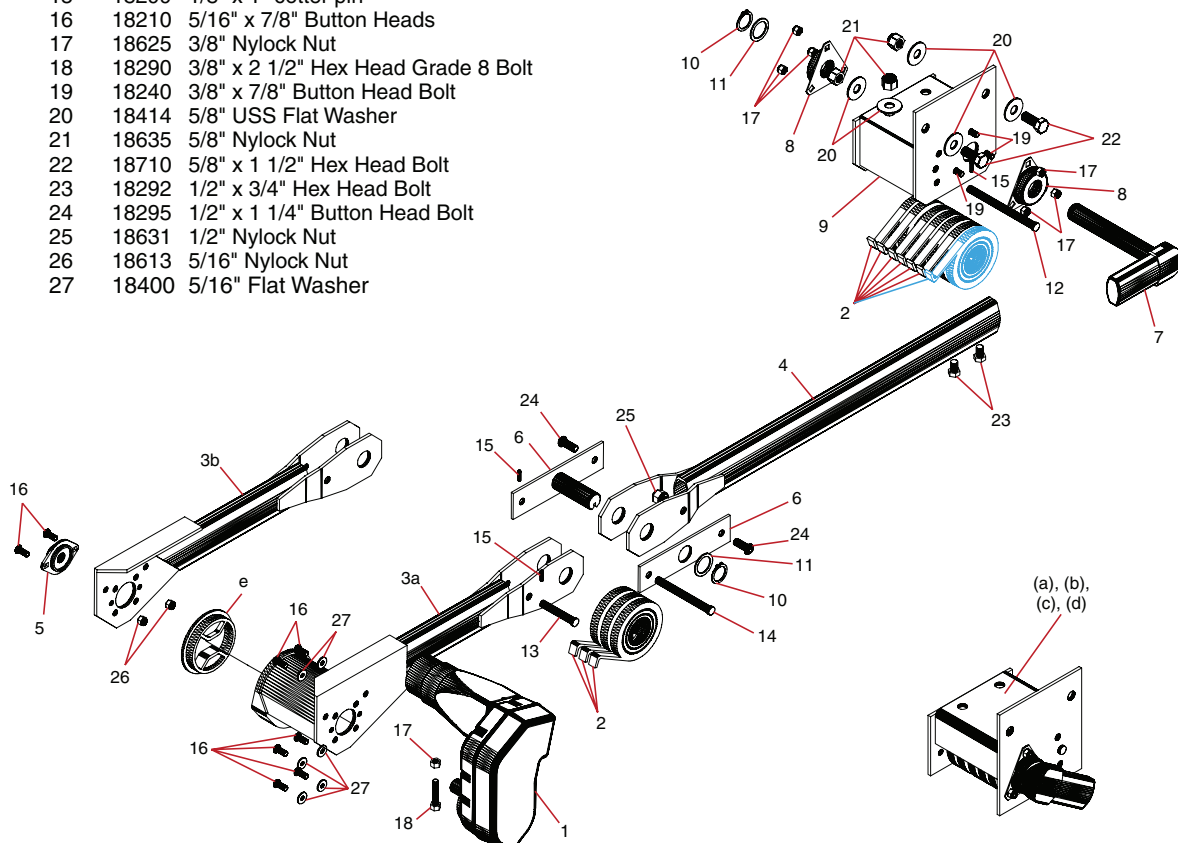
1. AP4235 1 Plug, 2 Pin, Male, Cole Hersee, Tarp
2. AP4294 1 Tarp Control Electric Kit, Roll Rite 10800
3. AP4295 1 Tarp Control Wire, 14-3 x 20', Roll Rite 11411
4. AP4296 1 Tarp Motor Wire, Per Ft, Roll Rite 11330

## Side Dump Power Kit Parts —

Includes: 37200 & 37220 Power Kit w/ Two Under Body Mount Pivots for Side Dump Trailer

### Ref# Part# Description

|     |       |                                                                                               |
|-----|-------|-----------------------------------------------------------------------------------------------|
| (a) | 46070 | Assembled 6-Spring Under-Body Pivot w/o Tube (Driver Side)                                    |
| (b) | 46080 | Assembled 6-Spring Under-Body Pivot w/o Tube (Passenger Side)                                 |
| (c) | 48500 | Assembled 7-Spring Under-Body Pivot w/o Tube (Driver Side)                                    |
| (d) | 48510 | Assembled 7-Spring Under-Body Pivot w/o Tube (Passenger Side)                                 |
| (e) | 37580 | Axle Stabilizer Bushing for 4" Axle                                                           |
| 1   | 10200 | Gear Motor, TarpStretcher                                                                     |
| 2   | 47230 | Spiral Torsion Spring (Fits All Roll-Rite Pivots w/ 1 1/4" Pivot Pins)                        |
| 3a  | 46890 | Upper Pivot Tube w/ Side Plates & Spool Brkts for Side-to-Side Knuckle Pivot (3 Spring Front) |
| 3b  | 47890 | Upper Pivot Tube w/ Side Plates & Spool Brkts for Side-to-Side Knuckle Pivot (3 Spring Back)  |
| 4   | 46980 | Base Pivot Tube w/ Side Plates and Set Screws for Side-to-Side Knuckle Pivot (3 Spring)       |
| 5   | 31050 | 3/4" Axle Bearing w/ Flanges (Includes Mounting Bolts)                                        |
| 6   | 47960 | 3 Spring Knuckle Pin w/ Stop Plate for Side-to-Side Knuckle Pivots (Motor End Front or Back)  |
| 7a  | 47400 | Pivot Pin for 8-Spring Roller Bearing Pivot (Driver Side/Front)                               |
| 7b  | 46370 | Pivot Pin for 6-Spring Roller Bearing Pivot (PassSide/Rear)                                   |
| 7c  | 47410 | Pivot Pin for 8-Spring Roller Bearing Pivot (Pass Side/Rear)                                  |
| 7d  | 46360 | Pivot Pin for 6-Spring Roller Bearing Pivot (Driver Side/Front)                               |
| 8   | 47800 | 1 1/4" Carrier Bearing w/ Triangular Flange for Roller-Bearing Pivots                         |
| 9a  | 47520 | Bracket for 8-Spring Under-Body Pivots (Driver Side/Front)                                    |
| 9b  | 46020 | Bracket for 6-Spring Under-Body Pivots (Pass. Side/Rear)                                      |
| 9c  | 47530 | Bracket for 8-Spring Under-Body Pivots (Pass Side/Rear)                                       |
| 9d  | 46010 | Bracket for 6-Spring Under-Body Pivots (Driver Side/Front)                                    |
| 10  | 47000 | Snap Ring for Pivot Pins                                                                      |
| 11  | 47010 | Machinery Bushing for Pivot Pins                                                              |
| 12a | 18550 | 1/2" x 6-5/8" Clevis Pin for 8 spring box                                                     |
| 12b | 18540 | 1/2" x 5-1/4" Clevis Pin for 6 spring box                                                     |
| 13  | 18520 | 1/2" x 3-1/2" Clevis Pin                                                                      |
| 14  | 18530 | 1/2" x 4-3/8" Clevis Pin                                                                      |
| 15  | 18299 | 1/8" x 1" cotter pin                                                                          |
| 16  | 18210 | 5/16" x 7/8" Button Heads                                                                     |
| 17  | 18625 | 3/8" Nylock Nut                                                                               |
| 18  | 18290 | 3/8" x 2 1/2" Hex Head Grade 8 Bolt                                                           |
| 19  | 18240 | 3/8" x 7/8" Button Head Bolt                                                                  |
| 20  | 18414 | 5/8" USS Flat Washer                                                                          |
| 21  | 18635 | 5/8" Nylock Nut                                                                               |
| 22  | 18710 | 5/8" x 1 1/2" Hex Head Bolt                                                                   |
| 23  | 18292 | 1/2" x 3/4" Hex Head Bolt                                                                     |
| 24  | 18295 | 1/2" x 1 1/4" Button Head Bolt                                                                |
| 25  | 18631 | 1/2" Nylock Nut                                                                               |
| 26  | 18613 | 5/16" Nylock Nut                                                                              |
| 27  | 18400 | 5/16" Flat Washer                                                                             |

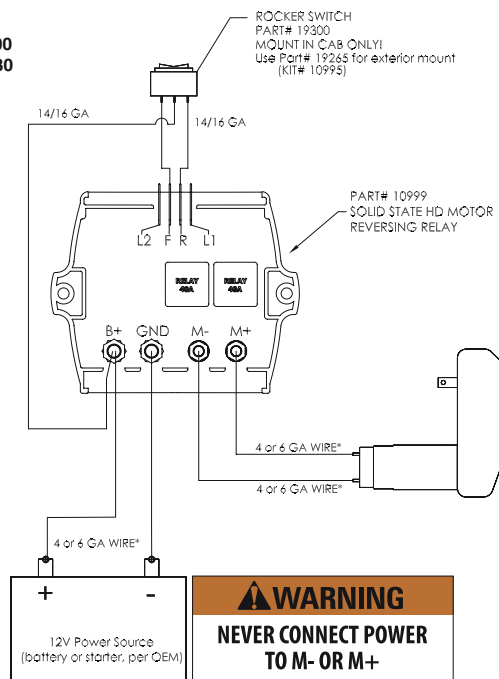


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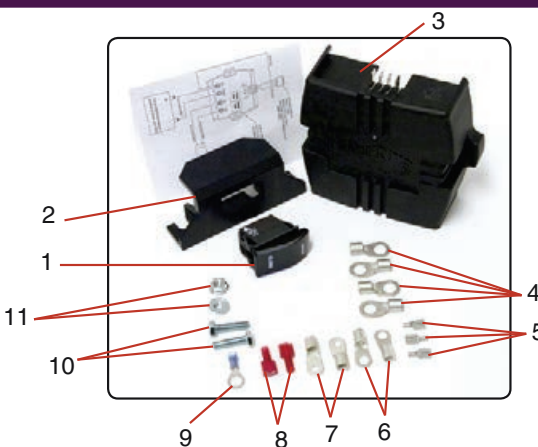
## Solid State Relay Wiring Specifications:

- Motor Reversing Relay #10999
- Momentary Rocker Switch #19300
- 6 Ga. Dual Conductor Wire #11330
- 14 Ga. 3-Conductor Wire #11410



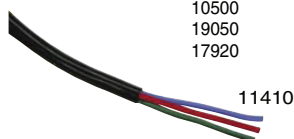
## 10990 Electric Kit & Replacement Parts:

| Ref# | Part# | Description                                     |
|------|-------|-------------------------------------------------|
| 1    | 10390 | Bracket, Mounting for Rocker Switch             |
| 2    | 19300 | Rocker Switch (OPEN-CLOSE)                      |
| 3    | 10999 | Relay, Solid State HD Motor Reversing (12 Volt) |
| 4    | 16030 | Terminal, E1R-38 6 ga. for Battery              |
| 5    | 16180 | Terminal, B3FE-250 14 ga. Quick Disconnect      |
| 6    | 16021 | 6ga Terminal w/ 1/4" Ring                       |
| 7    | 16020 | E1R-10 Terminal for the Switch                  |
| 8    | 16118 | Terminal, 18 ga. insulated Quick Disconnect     |
| 9    | 16080 | Terminal, B4R-38 14 ga. insulated w/ 3/8" ring  |
| 10   | 18700 | 1/4" x 1" Hex Head Bolt                         |
| 11   | 16020 | 1/4" Wiz Nut                                    |



## Other Electrical Components

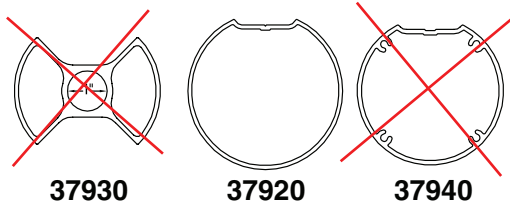
| Part# | Description                                 |
|-------|---------------------------------------------|
| 11320 | 6 ga. Dual Conductor 12' Coil Cord          |
| 11330 | 6 ga. Dual Conductor 255 Strand Wire        |
| 11410 | 14 ga. 3-Conductor Wire                     |
| 12760 | SureFlex Dual Conductor Plug Set            |
| 12770 | Socket Half of SureFlex Dual Conductor Plug |
| 12780 | Plug Half of SureFlex Dual Conductor Plug   |
| 10500 | Electric Kit (Rotary Switch Kit)            |
| 19050 | Heavy Duty Rotary Switch                    |
| 17920 | 25 Amp. Manual Reset Circuit Breaker        |



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## Side Dump Axle Kit Parts & Diagram

### Axle Profiles:



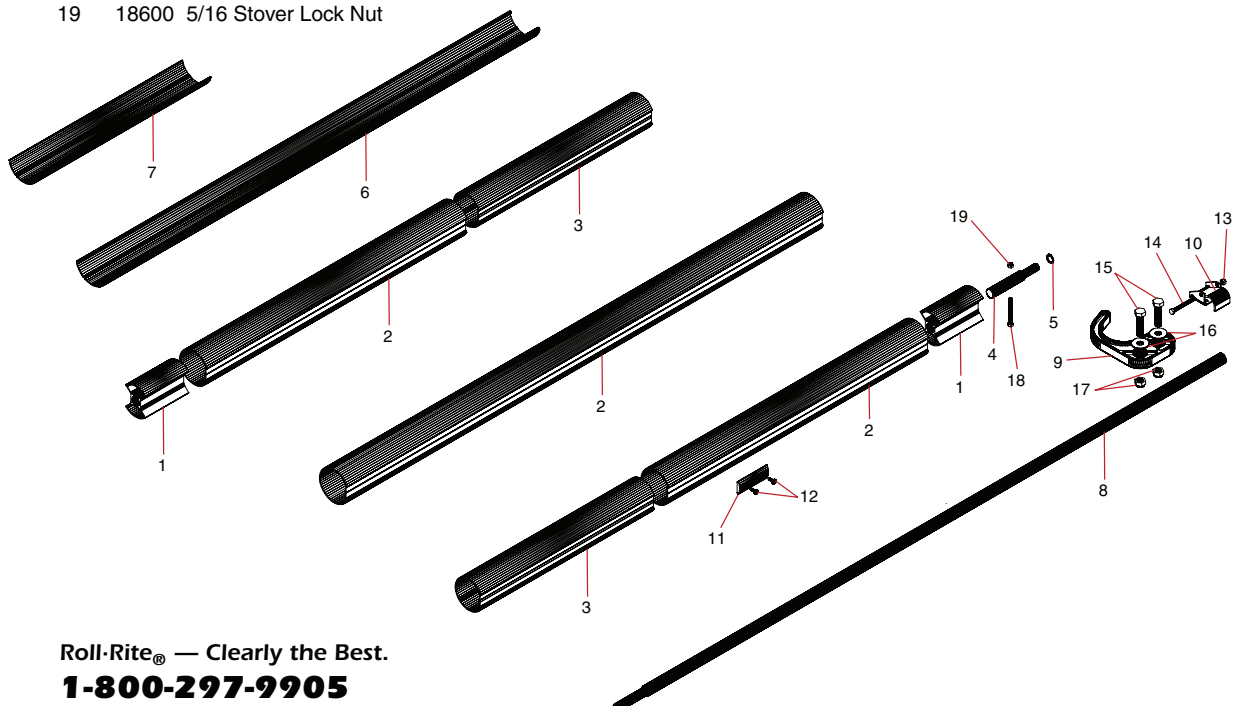
**NOTE:**  
Demco Uses 37920

## Side Dump Axle Kit Parts — From Axle Kits, p. 13

Includes: 37260 & 37270 Axle Kits for Side Dump Systems

### Ref# Part# Description

- |     |       |                                                                                                            |
|-----|-------|------------------------------------------------------------------------------------------------------------|
| 1   | 37930 | 4" Side-to-Side Axle Motor Adapter (profile shown above)                                                   |
| 2   | 37920 | 4" Side-to-Side Axle (profile shown above, Specify Motor End, Bearing End, or Center Section)              |
| 3   | 37940 | 4" Side-to-Side Axle Splice (profile shown above)                                                          |
| 4   | 10170 | 3/4" x 5 1/2" Axle Stub Shaft w/ Snap Ring Groove                                                          |
| 5   | 47020 | Snap Ring for Stub Shaft                                                                                   |
| 6   | 37950 | Ridge Pole for 4" Axle                                                                                     |
| 7   | 37960 | Ridge Pole Splice for 4" Ridge Pole                                                                        |
| 8   | 36820 | Tarp Securing Rod for Side-to-Side System                                                                  |
| 9   | 36840 | Tarp Spool Hook for Side Dump System                                                                       |
| 10  | 36830 | Steel Clamp for Tarp Securing Rod                                                                          |
| --- | 36870 | Center Braces for Side Dump Tarp Spool (not shown)                                                         |
| 11  | 37830 | Tarp Clip for Side-to-Side Axle                                                                            |
| --- | 36810 | 3" Ribbed Tarp Spool Axle for Side-to-Side Systems (Specify Motor End, Bearing End, or Center Section)     |
| --- | 37820 | 3" Clip Style Tarp Spool Axle for Side-to-Side Systems (Specify Motor End, Bearing End, or Center Section) |
| --- | 36960 | Side-to-Side Axle Splice w/ 3/4" Shaft Adapter                                                             |
| --- | 36970 | Side-to-Side Axle Splice w/ 1" Shaft Adapter                                                               |
| 12  | 18140 | 1/4" x 3/4" Pan Phillips Self Drilling                                                                     |
| 13  | 18613 | 5/16" Nylock Nut                                                                                           |
| 14  | 18222 | 5/16" x 3" Bolt                                                                                            |
| 15  | 18713 | 5/8" x 2 1/2" Bolt                                                                                         |
| 16  | 18414 | 5/8" USS Flat Washer                                                                                       |
| 17  | 18635 | 5/8" Nylock Nut                                                                                            |
| 18  | 18270 | 5/16 x 2" Hex Head Grade 8 Bolt                                                                            |
| 19  | 18600 | 5/16 Stover Lock Nut                                                                                       |



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**Wiring the Tractor**

There are two items to wire on the tractor before you can operate your Demco side dump trailer. The control box and the tarp power wire.

To install the control box, find a suitable location in the cab of the tractor and mount the control box. The red and black two wire cable attached to the back of the box is the power wire. Plug the cigarette lighter end into a power connection in the cab.

***[If you do not have an available outlet for the cigarette lighter end, use the following instructions:*** Cut the cigarette lighter plug off. Split apart the wires and connect the red wire to a 12v dc power source and the black to ground. **Red wire must be positive and Black negative. Reversing these wires can damage the control system.** A bag of terminals is included to allow you to tap into most truck fuse panels.]

Route the gray cord and male 9 pole plug out of the cab and to the front bulkhead of the trailer. Plug the cord into the female 9 pole socket on the trailer bulkhead. You will now be able to raise and lower the rear axle and dump the tub.

**(NOTE:** Air must be supplied to the trailer for the lift axle to operate properly. Hydraulic oil must be supplied to the trailer to dump the tub.)

To use the tarp you will need to supply 12 volt power to the trailer to operate the tarp motor. Due to the large power draw of the tarp motor, the electrical supply must be hooked directly to the battery and the heavy #6 wire included with the kit must be used.

Refer to the Roll Rite wiring diagram for reference. The relay has been already mounted on the trailer and the momentary switch that rolls/unrolls the tarp is in the control box installed previously. All that needs to be done is to run a wire from the battery to the female two pole socket on the road side front corner of the trailer.

Locate the circuit breaker as close to the positive battery post as possible. If the circuit breaker is not mounted to the battery box or truck frame, make sure that the terminals cannot touch anything that would create a short circuit.

Separate enough of the white wire on the #6 white/black cord to reach from the positive battery terminal to the circuit breaker. Cut off the white wire. Strip the white wire and crimp on ring terminals to match the battery cable bolt and the post on the circuit breaker. **(Don't hook the white wire to the battery until everything else is wired.)**

Crimp a ring terminal on the white wire on the remaining white/black cord and attach it to the circuit breaker.

Crimp a ring terminal on the black wire and attach it to the negative battery post.

Route the white/black cord to the female socket on the trailer. Cut the cord and strip the ends back to slip into the terminals on the back of the male 2 pin plug.

Match the white and black wires to the corresponding wires in the trailer socket. You may need to slip the cover off the back of the socket to make sure that the wires match up. Secure the white/black cord to the truck frame.

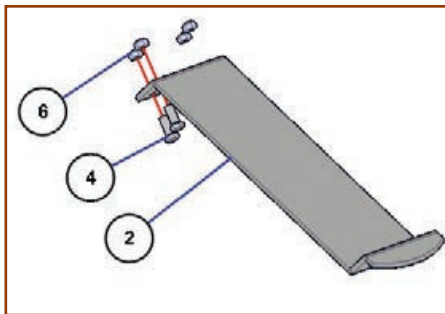
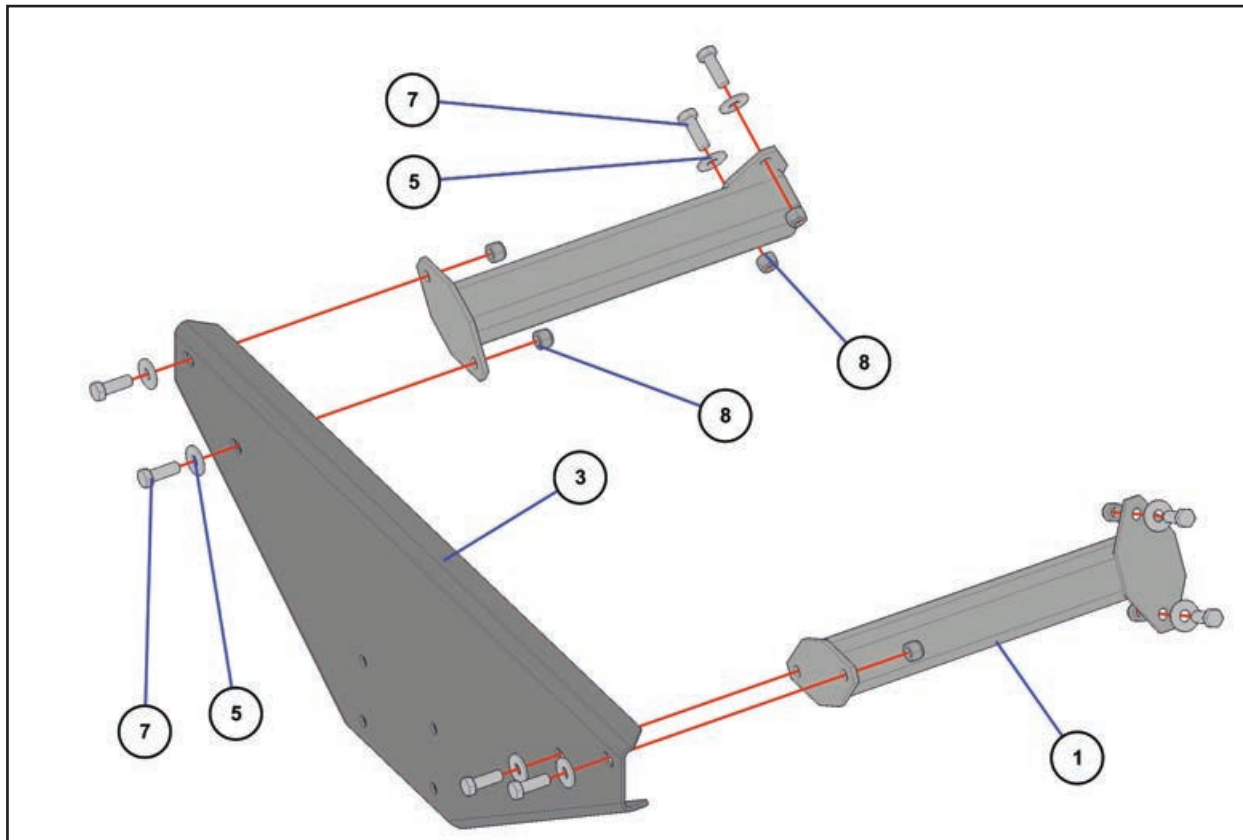
Hook the white wire to the battery.

The tarp will now operate from the control box. It is best to have the tractor running while operating the tarp.

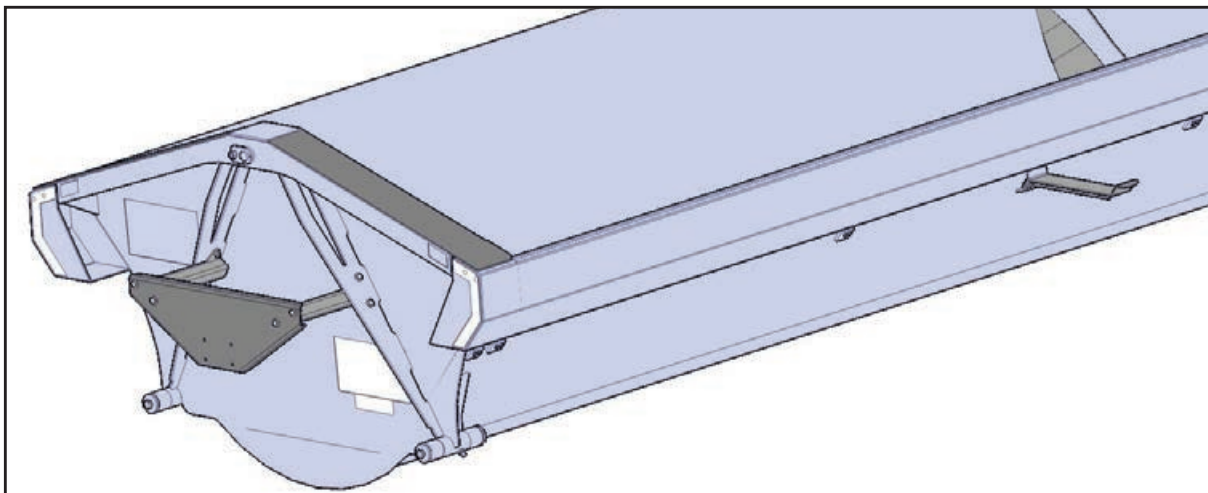
### **Hydraulic Hook-up**

The tractor must have a hydraulic pump and reservoir to supply hydraulic oil to the trailer to dump the tub. The pump needs to supply 25 to 30 gallons per minute of oil at 2500 to 3000 psi. We recommend a minimum of a 15 gallon system reservoir. The tractor should also have a relief valve to protect the tractor's hydraulic system.

When hooking the tractor to the trailer, the pressure line from the pump must hook up to the female quick coupler on the trailer and the return to the reservoir must hook up to the male quick coupler. The control valve on the trailer will not operate properly if the oil flow is reversed. The quick couplers on the trailer are marked "in" and "out" as a reminder.



| BOM ID | Qty | Item No | Description                                     |
|--------|-----|---------|-------------------------------------------------|
| 1      | 4   | AM9038  | TARP CHANNEL MOUNT                              |
| 2      | 2   | AM9072  | BRACKET, TARP SUPPORT                           |
| 3      | 2   | AM9340  | MOUNTING, AERO TARP PIVOT BOX                   |
| 4      | 8   | BP3006  | HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED    |
| 5      | 16  | BP3050  | WASHER, FLAT, 1/2", PLATED                      |
| 6      | 8   | BP3612  | NUT, HEX LOCK, 3/8"-16, TOP LOCK                |
| 7      | 16  | BP3674  | HEX CAP SCREW, 1/2"-13 X 1-1/2" GRADE 8, PLATED |
| 8      | 16  | BP3704  | NUT, LOCK, NYLON INSERT, 1/2"-13                |



## Side Kick 2

### Operation & Maintenance

#### How to operate the Tarp System

**NOTE:** Read all the safety considerations before operating the Side Kick 2 tarp system.

- 1) Turn the rotary switch to the "UNCOVER" position. The tarp should wind onto the roll tube until it rests on the passenger-side supports, under the side-rail of the tub.
- 2) To reverse the tarp operation, turn the switch to the "COVER" position. The tarp should deploy over the driver-side roll-up bar supports.

#### Safety Considerations

**⚠ WARNING:** Never operate the tarp system while under obstructions, such as trees or power lines.

**⚠ WARNING:** Always check to make sure that no one is in the immediate area of the tarp as it operates. Keep everyone clear of the area.

**⚠ WARNING:** Keep all clothing clear of moving parts.

#### How to Maintain the Side Kick 2 Cover

Minimal maintenance is required for the Side Kick 2 cover. Individual usage and operating conditions will determine when to check the Side Kick 2 Cover. Aero Industries recommends a weekly inspection of the following items:

**Bearings:** Pull the shafts from side to side and in and out. If there is excessive play, replace the bearings. Lubricate as often as necessary with penetrating oil. DO NOT use an excessive amount of lubricant.

**Springs:** Examine springs for breakage.

**Screws:** Make sure that all mounting bolts and screws are in place and tight and that no parts are worn or damaged.

**Electrical Connections:** Check all electrical connections and tighten any that have become loose.

**General:** replace all worn or broken parts immediately.

Replacement parts may be obtained from the dealer or by contacting Aero Industries.



## Side Kick 2

### Operation & Maintenance

## Power Loss Repair Bulletin

This repair bulletin describes a temporary field repair for the Side Kick 2 cover system in the event of a power loss or other failure while the cover is partially deployed and can **NOT** get to covered position.

**⚠ WARNING:** The Side Kick 2 cover system operates under extreme spring tension to drive the swing-arms. To reduce the possibility of personal injury, the swing-arms must be secured before servicing the system.

**NOTE:** This procedure requires the use of two come-a longs or power pull devices.

**NOTE:** This is a temporary field repair. Contact Aero Industries or your Side Kick dealer for standard repairs.

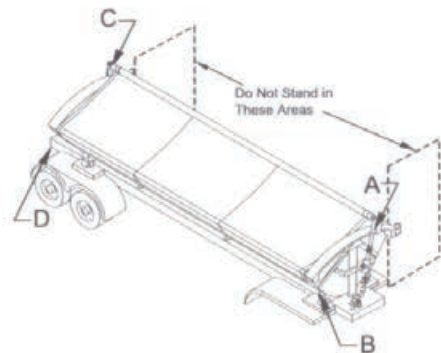
### STEP 1

#### How to Secure the Swing-Arms

**⚠ WARNING:** Both the front and rear swing-arms must be secure.

**NOTE:** To safely secure the swing-arms, come-a longs must be attached to the swing-arms, NOT the roll bar.

- 1) **See Figure 1.** Attach one end of the come-along to the front swing-arm (A), near the motor housing. Attach the other end of the come-along to the trailer on the side the tarp is anchored (B).
- 2) **See Figure 1.** Attach another come-along between the rear swing-arm (C) and trailer (D).
- 3) Tighten the come-a longs equally until the tarp becomes slack and the swing-arms are secure.



**Figure 1**

### STEP 2

#### How to Disengage the Motor

- 1) Once the swing-arms are secure, remove 3 hex head cap screws from front roll-up bar adaptor attached to front of roll tube and slide front swing arm (with front roll-up bar adaptor) out of front of roll-up bar and remove rear swing arm by removing outside 1 1/4" lock collar from rear roll-up bar adaptor and sliding arm off back of roll tube.

### STEP 3

#### How to Complete the Covering Process

**⚠ WARNING:** The come-a longs are now retaining the force of the swing-arm spring tension. Use great care and make sure you understand how the come-along operates before adjusting.

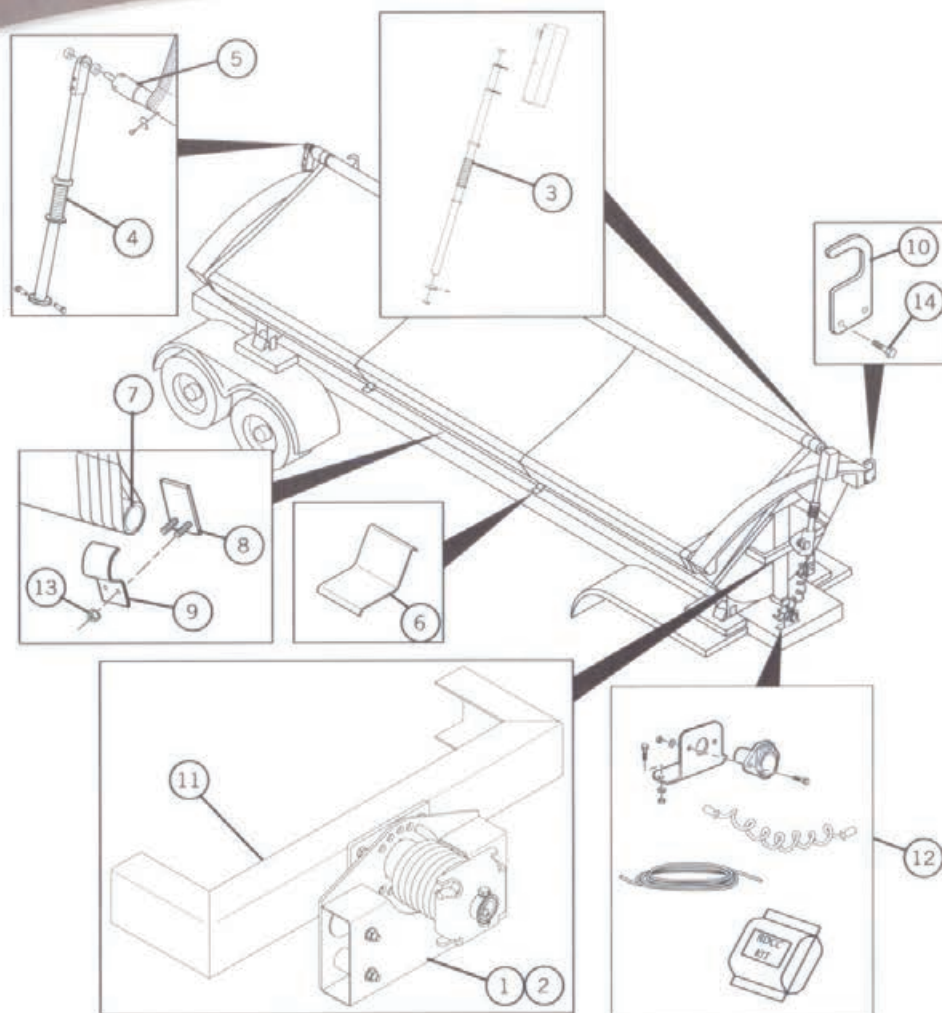
- 1) To cover the trailer, slowly and equally adjust the come-a longs until the roll tube is resting in the supports on the driver-side of the trailer. Remove or secure the come-a longs before transport.

**⚠ WARNING:** The tarp must be in the fully unrolled position and not under the latch plate, before any service/repair work can be performed.



# Side Kick 2

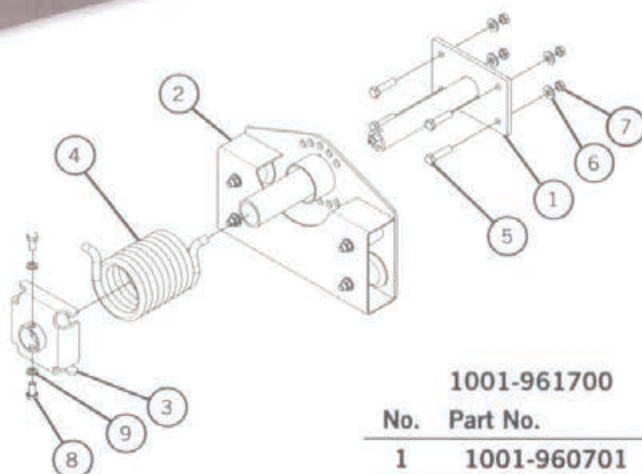
## Parts List



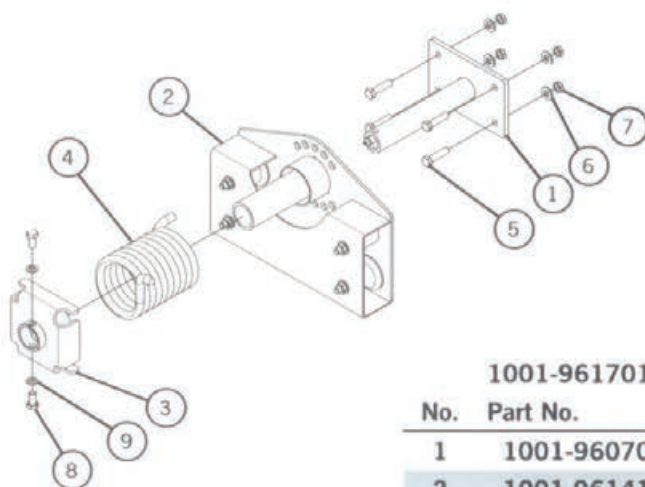
| No. | Part No.    | Description                  | Qty | Page  |
|-----|-------------|------------------------------|-----|-------|
| 1   | 1001-961700 | Spring Mount Assembly Front  | 1   | 19-20 |
| 2   | 1001-961701 | Spring Mount Assembly Rear   | 1   | 19-20 |
| 3   | 1001-961703 | Front Swing Arm Assembly     | 1   | 21-22 |
| 4   | 1001-961705 | Rear Swing Arm Assembly      | 1   | 23    |
| 5   | 1001-961702 | Roll Tube Assemble           | 1   |       |
| 6   | 1001-860166 | Tarp Cradle                  | 2   |       |
| 7   | 1440-281223 | Fixed Tube                   | 2   |       |
| 8   | 1001-961304 | Quick Release Clamp Weldment | 7   |       |
| 9   | 1040-960158 | Quick Release Clamp          | 7   |       |
| 10  | 1001-861320 | Tarp Stop Hook               | 2   |       |
| 11  |             | Swing Arm Mounting Hardware  |     | 18    |
| 12  |             | Electrical Hardware          |     | 24    |
| 13  | 0815-660210 | 5/16-18 Flange Nut           | 14  |       |
| 14  | 0810-650510 | 5/16 Self-Tapping Screw      | 4   |       |

# Side Kick 2

## Parts List



| 1001-961700 |             | Spring Mount Assembly Front |     |
|-------------|-------------|-----------------------------|-----|
| No.         | Part No.    | Description                 | Qty |
| 1           | 1001-960701 | Spring Mount Post           | 1   |
| 2           | 1001-961410 | Roller Plate Assembly       | 1   |
| 3           | 1001-960703 | Spring Stop Assy            | 1   |
| 4           | 1001-861408 | SK2 Hub Spring LH           | 1   |
| 5           | 0810-600002 | 1/2-13 x 2 Hex Bolt         | 4   |
| 6           | 0820-680810 | 1/2 Flat Washer             | 4   |
| 7           | 0815-660127 | 1/2-13 NYLOCK Hex Jam Nut   | 4   |
| 8           | 0810-650553 | 1/2-13 x 3/4 SHCS           | 2   |
| 9           | 0820-680820 | 1/2 Lock Washer             | 2   |

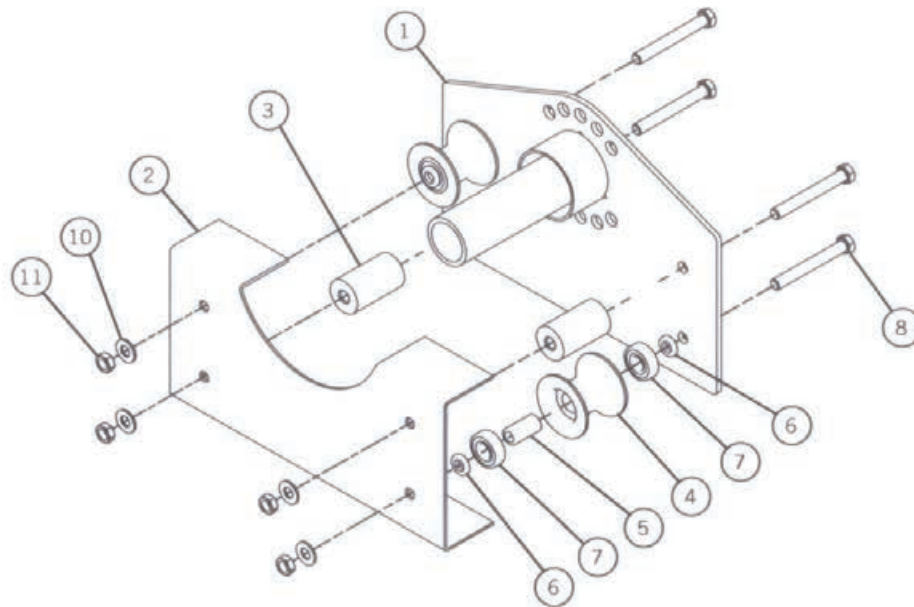


| 1001-961701 |             | Spring Mount Assembly Rear |     |
|-------------|-------------|----------------------------|-----|
| No.         | Part No.    | Description                | Qty |
| 1           | 1001-960701 | Spring Mount Post          | 1   |
| 2           | 1001-961410 | Roller Plate Assembly      | 1   |
| 3           | 1001-960703 | Spring Stop Assy           | 1   |
| 4           | 1001-861400 | SK2 Hub Spring RH          | 1   |
| 5           | 0810-600002 | 1/2-13 x 2 Hex Bolt        | 4   |
| 6           | 0820-680810 | 1/2 Flat Washer            | 4   |
| 7           | 0815-660127 | 1/2-13 NYLOCK Hex Jam Nut  | 4   |
| 8           | 0810-650553 | 1/2-13 x 3/4 SHCS          | 2   |
| 9           | 0820-680820 | 1/2 Lock Washer            | 2   |



# Side Kick 2

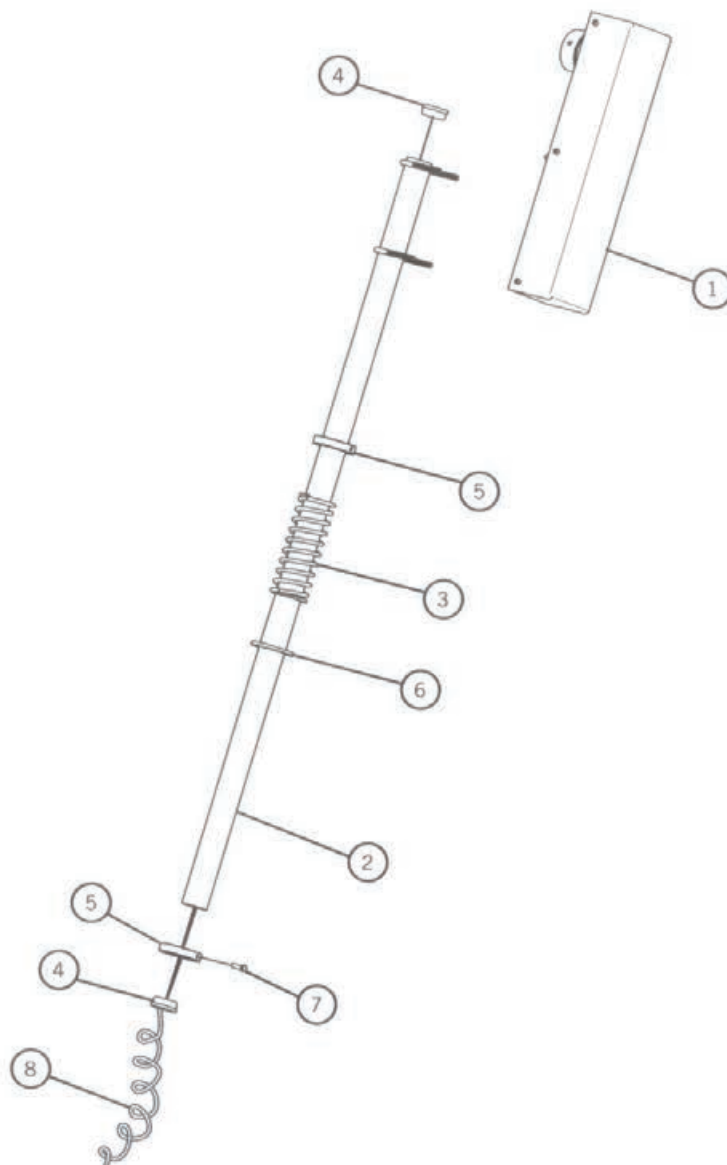
## Parts List



| 1001-961410 |             | Roller Plate Assembly      |     |
|-------------|-------------|----------------------------|-----|
| No.         | Part No.    | Description                | Qty |
| 1           | 1001-960702 | Swivel Collar Assembly     | 1   |
| 2           | 1001-861411 | Roller Plate               | 1   |
| 3           | 1001-861412 | Roller Block               | 2   |
| 4           | 1001-861325 | Roller Radius              | 2   |
| 5           | 1001-861304 | Roller Spacer "V"          | 2   |
| 6           | 1001-861307 | Steel Washer               | 4   |
| 7           | 0710-602144 | Bearing .5" ID x 1.575" OD | 4   |
| 8           | 0810-650839 | 1/2-13 x 4 Hex Bolt        | 4   |
| 9           | 0815-660127 | 1/2-13 NYLOCK Hex Nut      | 4   |
| 10          | 0820-680810 | 1/2 Flat Washer            | 4   |

## Side Kick 2

### Parts List

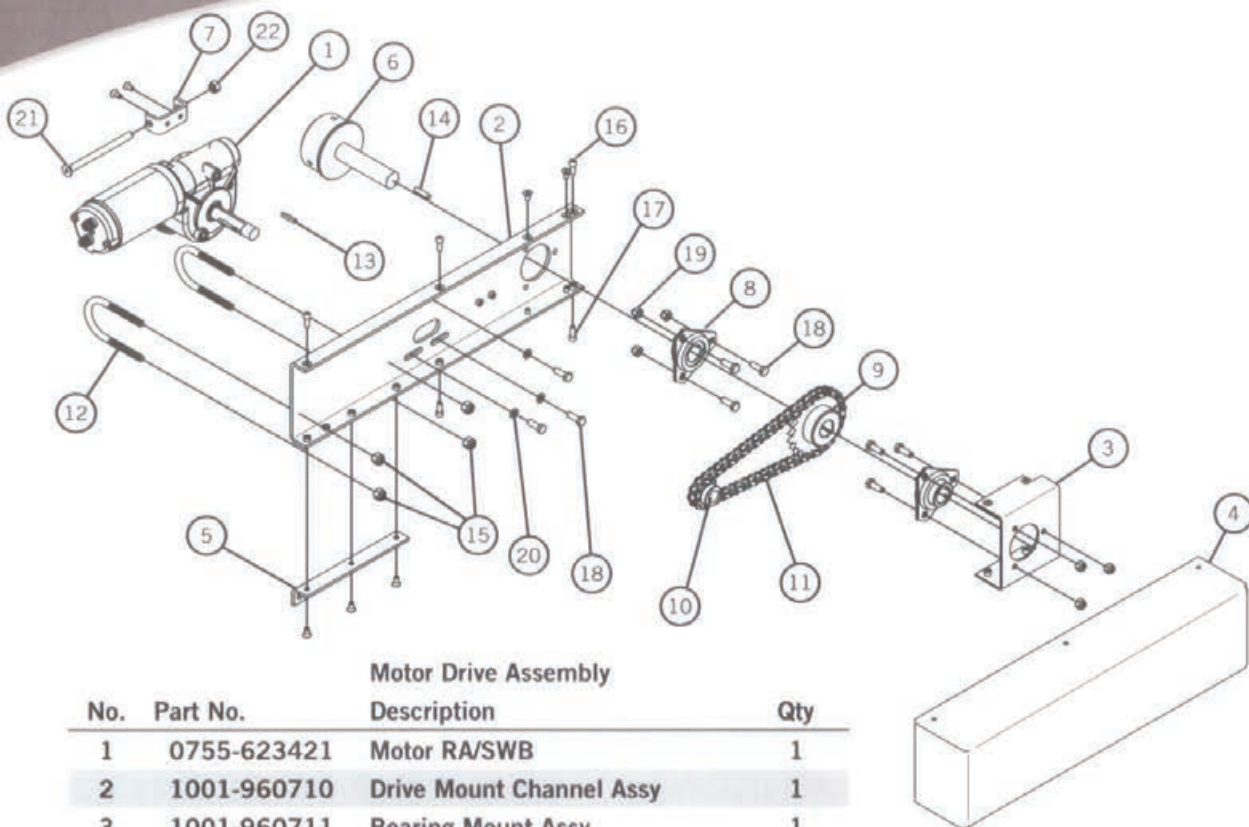


| 1001-961703 |             | Front Swing Arm                         |     |
|-------------|-------------|-----------------------------------------|-----|
| No.         | Part No.    | Description                             | Qty |
| 1           |             | Motor Drive Unit Assembly (See Page 22) |     |
| 2           | 1440-281635 | Steel Tube 2" Rd x 5' Lg                | 1   |
| 3           | 0715-619405 | Compression Spring Jumbo                | 1   |
| 4           | 1001-861309 | Swing Arm Tube Plug                     | 2   |
| 5           | 1001-861316 | Collar Lock Swing Arm                   | 2   |
| 6           | 0820-680401 | Washer 1/4 x 2 1/4 x 3 1/4              | 1   |
| 7           | 0810-650170 | 5/16-18 x 1 Hex Bolt W/Patch            | 2   |
| 8           | 0755-626433 | Flex Cord Motor to Plug                 | 1   |



## Side Kick 2

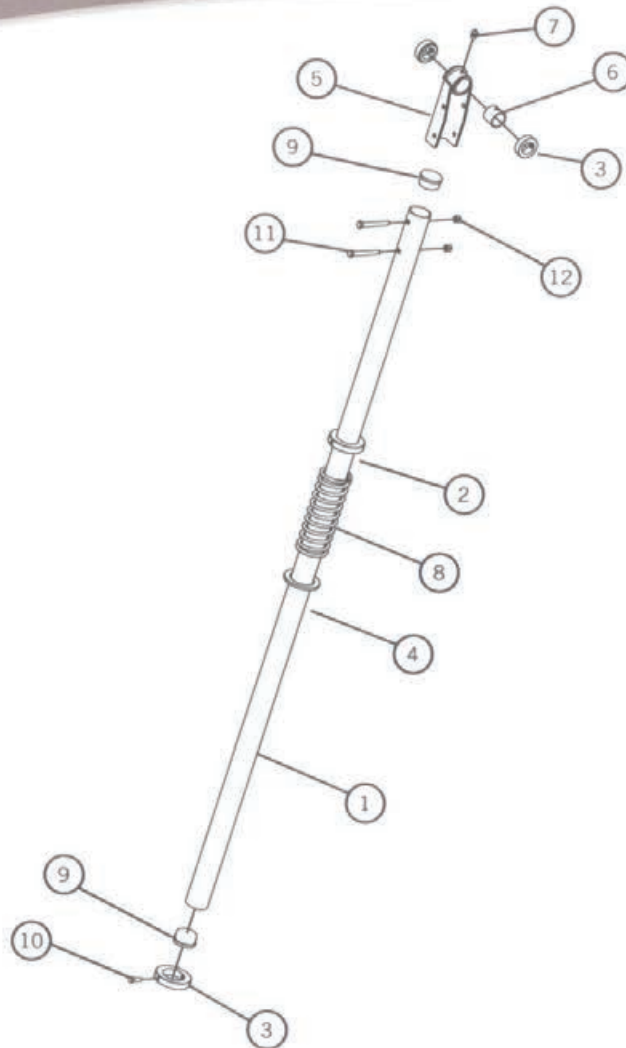
### Parts List



| Motor Drive Assembly |             |                             |     |
|----------------------|-------------|-----------------------------|-----|
| No.                  | Part No.    | Description                 | Qty |
| 1                    | 0755-623421 | Motor RA/SWB                | 1   |
| 2                    | 1001-960710 | Drive Mount Channel Assy    | 1   |
| 3                    | 1001-960711 | Bearing Mount Assy          | 1   |
| 4                    | 1001-861722 | Drive Unit Cover            | 1   |
| 5                    | 1001-861716 | Swing Arm Extension Bracket | 1   |
| 6                    | 1001-861717 | Roll Pipe Adapter           | 1   |
| 7                    | 1001-860704 | Chain Tension Bracket       | 1   |
| 8                    | 1001-861714 | Bearing Set 1" Bore         | 2   |
| 9                    | 1001-861719 | Sprocket 40B24 1" Bore      | 1   |
| 10                   | 1001-861720 | Sprocket 40B10 3/4" Bore    | 1   |
| 11                   | 1001-861721 | #40 Roller Chain            | 1   |
| 12                   | 1001-861718 | U-Bolt 2" Swing Arm Mount   | 2   |
| 13                   | 1001-861723 | Key 1/4" x 1"               | 1   |
| 14                   | 1001-861724 | Key 3/16" x 1"              | 1   |
| 15                   | 0815-660660 | 3/8-16 NYLOCK Hex Nut       | 4   |
| 16                   | 0810-650497 | 1/4-20 x 1/2 FHCS           | 9   |
| 17                   | 0825-617251 | 1/4-20 x 5/8 SHCS           | 6   |
| 18                   | 0810-650552 | 5/16-18 x 7/8" Hex Bolt     | 9   |
| 19                   | 0815-660550 | 5/16-18 NYLOCK Hex Nut      | 6   |
| 20                   | 0820-680520 | 5/16 Lock Washer            | 3   |
| 21                   | 0810-650496 | 3/8-16 x 5 FHCS             | 1   |
| 22                   | 0815-661640 | 3/8-16 Hex Nut              | 1   |

## Side Kick 2

### Parts List

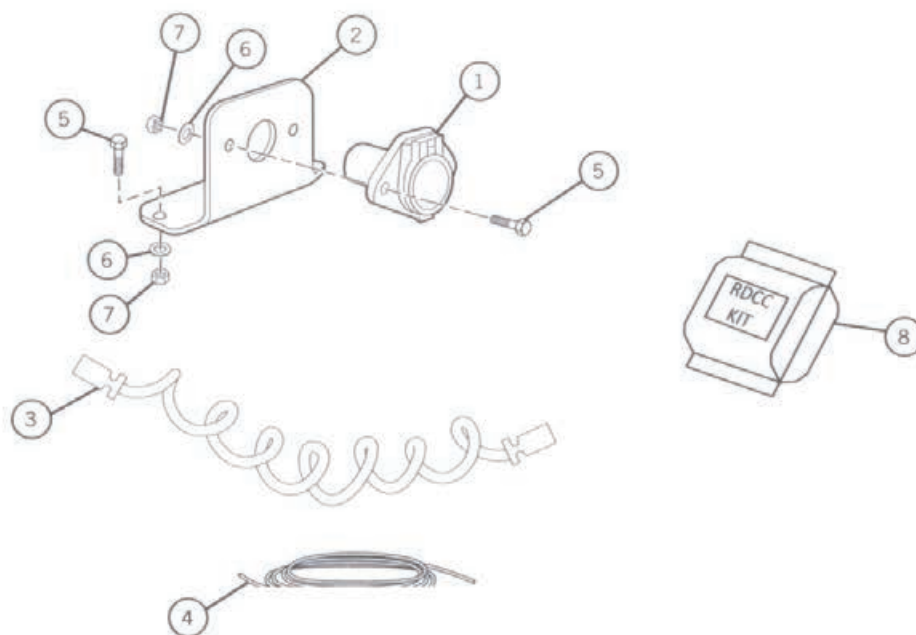


| 1001-961705 Rear Swing Arm |             |                              |     |
|----------------------------|-------------|------------------------------|-----|
| No.                        | Part No.    | Description                  | Qty |
| 1                          | 1440-281636 | Steel Tube 2" Rd x 6' Lg     | 1   |
| 2                          | 1001-861316 | Collar Lock Swing Arm        | 2   |
| 3                          | 0785-690335 | Collar Shaft 1 1/4" ID       | 2   |
| 4                          | 0820-680401 | Washer 1/4 x 2 1/4 x 3 1/4   | 1   |
| 5                          | 1001-962122 | Motor Mount Bracket Assy     | 1   |
| 6                          | 0845-691233 | Bronze Bushing               | 1   |
| 7                          | 0825-670394 | Zerk 1/4-28 Straight         | 1   |
| 8                          | 0715-619405 | Compression Spring Jumbo     | 1   |
| 9                          | 1001-861308 | Swing Arm Tube Plug-Top      | 2   |
| 10                         | 0810-650170 | 5/16-18 x 1 Hex Bolt W/Patch | 2   |
| 11                         | 0810-670657 | 3/8-16 x 3 Hex Bolt          | 2   |
| 12                         | 0815-660660 | 3/8-16 NYLOCK Hex Nut        | 2   |



## Side Kick 2

### Parts List



| No. | Part No.    | Electrical Hardware      |     |
|-----|-------------|--------------------------|-----|
|     |             | Description              | Qty |
| 1   | 1041-860143 | Female Electrical Socket | 2   |
| 2   | 1001-860165 | Socket Mounting Bracket  | 2   |
| 3   | 0755-626434 | Flex Cord with Plugs     | 1   |
| 4   | 0755-626540 | #6 Wire (20')            | 1   |
| 5   | 0810-650552 | 5/16-18 x 7/8 Hex Bolt   | 4   |
| 6   | 0820-680510 | 5/16 Flat Washer         | 4   |
| 7   | 0815-660461 | 5/16-18 NYLOCK Hex Nut   | 4   |
| 8   | 0755-962108 | RDCC Kit                 | 1   |

## Side Kick 2



Call 1-800-535-9545

[www.aeroindustries.com](http://www.aeroindustries.com)

INDIANAPOLIS, IN  
Indianapolis, IN 46241  
800-535-9545  
FAX: 317-244-1311

OMAHA, NE  
Omaha, NE 68137  
800-535-9545  
FAX: 402-895-6129

STREETSBORO, OH  
Streetsboro, OH 44241  
888-237-2262  
FAX: 330-626-3277

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Aero Industries, Inc. 0930-861676

7/20/11 Rev. B

There are two items to wire on the tractor before you can operate your Demco side dump trailer. The control box and the tarp power wire.

To install the control box, find a suitable location in the cab of the tractor and mount the control box. The red and black two wire cable attached to the back of the box is the power wire. Plug the cigarette lighter end into a power connection in the cab.

***[If you do not have an available outlet for the cigarette lighter end, use the following instructions:*** Cut the cigarette lighter plug off. Split apart the wires and connect the red wire to a 12v dc power source and the black to ground. **Red wire must be positive and Black negative. Reversing these wires can damage the control system.** A bag of terminals is included to allow you to tap into most truck fuse panels.]

Route the gray cord and male 9 pole plug out of the cab and to the front bulkhead of the trailer. Plug the cord into the female 9 pole socket on the trailer bulkhead. You will now be able to raise and lower the rear axle and dump the tub.

**(NOTE:** Air must be supplied to the trailer for the lift axle to operate properly. Hydraulic oil must be supplied to the trailer to dump the tub.)

To use the tarp you will need to supply 12 volt power to the trailer to operate the tarp motor. Due to the large power draw of the tarp motor, the electrical supply must be hooked directly to the battery and the heavy #6 wire included with the kit must be used.

Refer to the Aero wiring diagram for reference. The relay has been already mounted on the trailer and the momentary switch that rolls and unrolls the tarp is in the control box installed previously. All that needs to be done is to run a wire from the battery to the female two pole socket on the road side front corner of the trailer.

Find a suitable location on the tractor to mount the included female two pole socket. A mounting bracket and hardware is also supplied.

Locate the circuit breaker as close to the positive battery post as possible. If the circuit breaker is not mounted to the battery box or truck frame, make sure that the terminals cannot touch anything that would create a short circuit.

Separate enough of the red wire on the #6 red/black cord to reach from the positive battery terminal to the circuit breaker. Cut off the red wire. Strip the red wire and crimp on ring terminals to match the battery cable bolt and the post on the circuit breaker.

**(Don't hook the red wire to the battery until everything else is wired.)**

Crimp a ring terminal on the red wire on the remaining red/black cord and attach it to the circuit breaker.

Crimp a ring terminal on the black wire and attach it to the negative battery post.

Route the red/black cord to the female socket. Cut the cord and crimp ring terminals on the end of the wires. Slip the cover for the back of the socket over the cord and bolt the ring terminals to the socket. Match the positive and negative wires to the corresponding terminals marked on the socket. Slip the cover over the back of the socket. Secure the red/black cord to the truck frame.

Hook the red wire to the battery. A double male stretch cord is included to connect the tractor to the trailer.

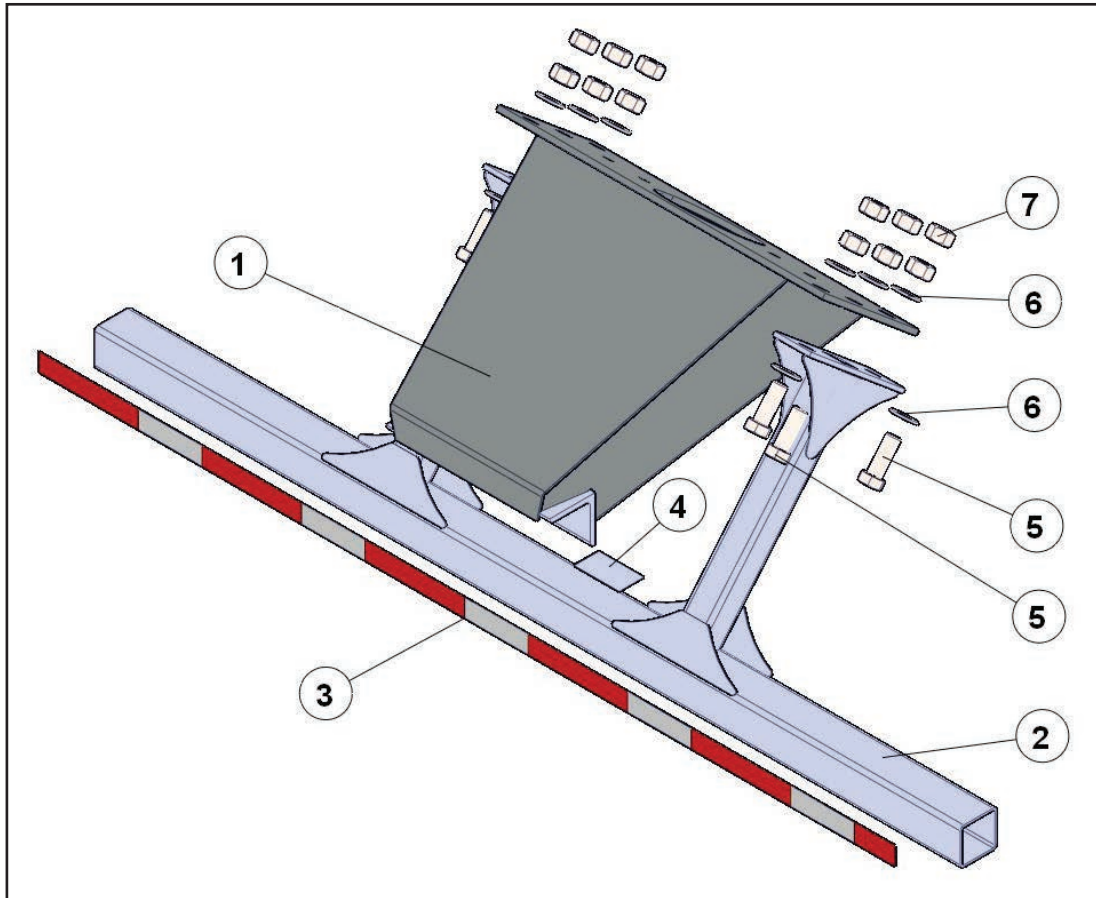
The tarp will now operate from the control box. It is best to have the tractor running while operating the tarp.

### **Hydraulic Hook-up**

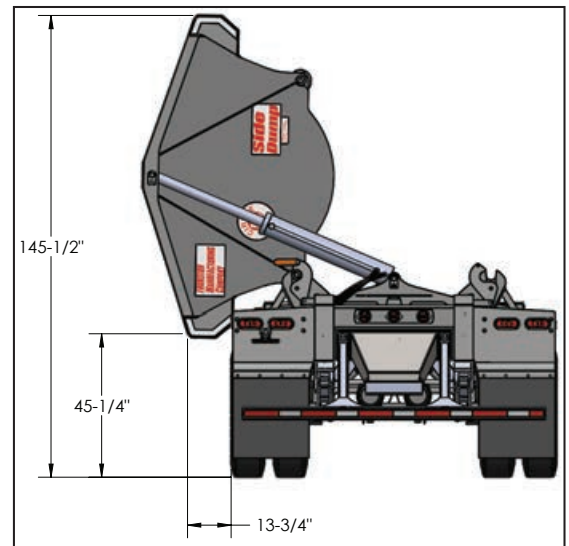
The tractor must have a hydraulic pump and reservoir to supply hydraulic oil to the trailer to dump the tub. The pump needs to supply 25 to 30 gallons per minute of oil at 2500 to 3000 psi. We recommend a minimum of a 15 gallon system reservoir. The tractor should also have a relief valve to protect the tractor's hydraulic system.

When hooking the tractor to the trailer, the pressure line from the pump must hook up to the female quick coupler on the trailer and the return to the reservoir must hook up to the male quick coupler. The control valve on the trailer will not operate properly if the oil flow is reversed. The quick couplers on the trailer are marked "in" and "out" as a reminder.

**Bundle Number**  
**5C080002**

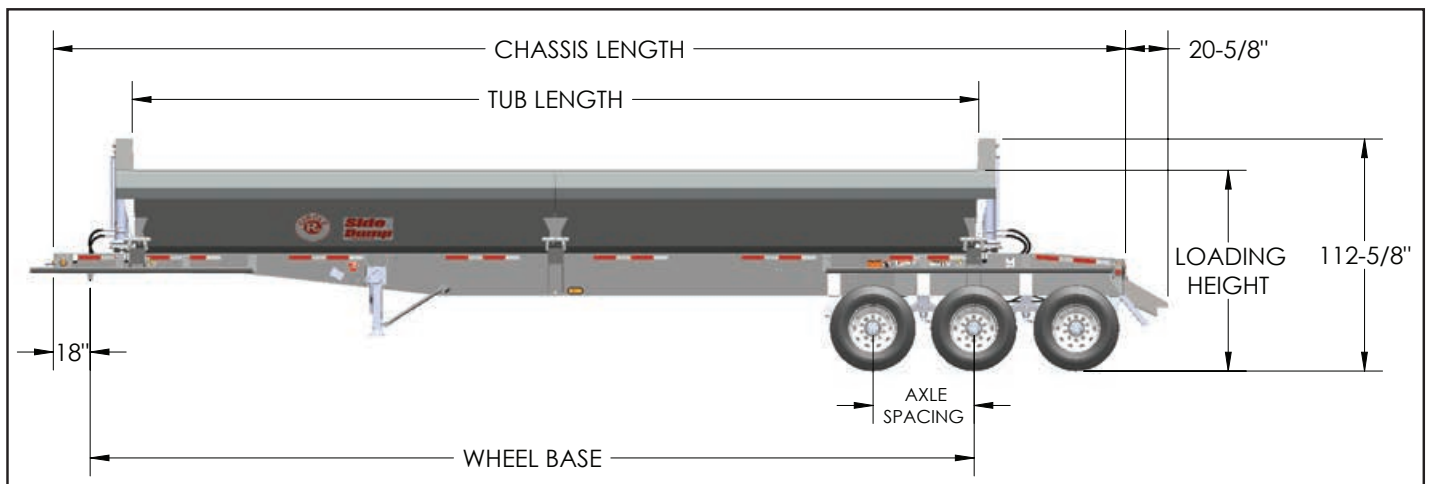


| BOM ID | Qty | Item No   | Description                              |
|--------|-----|-----------|------------------------------------------|
| 1      | 1   | 5CAM8104  | PUSHBLOCK, 2001                          |
| 2      | 1   | 5CAM8105  | UNDER-RIDE BUMPER GUARD                  |
| 3      | 1   | 1AQAP3506 | REFLECTIVE TAPE, RED/SILVER              |
| 4      | 1   | 1AQAP4058 | DECAL, UNDER-RIDE CERTIFICATION          |
| 5      | 6   | 1AFBP3632 | BOLT, 1-1/4"-7 X 3-1/2", GRADE 8, PLATED |
| 6      | 10  | 1AFBP3634 | WASHER, FLAT, 1-1/4", SAE, PLATED        |
| 7      | 12  | 1AFBP3720 | NUT, HEX, 1-1/4"-7, GRADE 8, PLATED      |



### **Tri-Axle Trailer Specifications and Features**

- 20" Deep Twin "I" Beam Chassis with 3/8" Fifth Wheel Plate
- Tub dump direction indicators visible in truck mirrors
- Holland 51000 Landing Gear WITH 2 Speed Gear Box
- Holland 23,000 lb, 5-3/4" OD. Axle
- Haldex 2S1M ABS System
- Six Integrated Tub Pivot Points with Greaseless Pivot Bearings.
- Tub dump direction controlled from two places on the left side. No need to walk all around the trailer to change dump direction.
- Rubber "EdgeFlex" fenders with bolt-on mounts. Easily replace damaged fender parts.
- 1/4" FLX-500 Tub with Exclusive "Flex Corner" Design. (1/4" AR400 Available)
- Large Single "G" Rail on Tub. Lighter and Stronger than two rail systems.
- Suspensions: Holland CBX23-17 Air Ride. Rear Axle Air Lift Available.
- Wheel & Tire Options: 11R22.5 or 11R24.5 on Steel or Aluminum Rim, 385/65R22.5 on Aluminum Rim  
New or Recap Tires Available. Other sizes available upon request.
- Hydraulic System: 3000 psi rated 3/4" Hoses, Fittings, Flow Divider, and Relief Valve. Trailer Mounted Electric Over Hydraulic Control Valve Available.
- Twin 3000 psi rated 5" Cylinders (Optional 6" Cylinders Available)
- Standard LED lights in enclosed boxes with sealed plugs.
- Bolt-on Push/Lift block with Under Ride Bumper conform to Federal Motor Vehicle Safety Standards.
- Standard Colors: Black, White, Yellow, and Burgundy. Custom Colors Available.
- Optional Electric Tarps: Roll Rite / Aero / Shurco.



| Model        | Suspension | Chassis Length | Wheel Base | Axle Spacing | Tub Length | Tub Volume | Loading Height |
|--------------|------------|----------------|------------|--------------|------------|------------|----------------|
| CR353AR-3021 | Air Ride   | 35'-4"         | 324.5"     | 49"          | 30'-3"     | 21.4 Cu Yd | 97-1/2"        |
| CR403AR-3424 | Air Ride   | 40'-5"         | 383"       | 49"          | 34'-3"     | 24.2 Cu Yd | 97-1/2"        |
| CR423AR-3424 | Air Ride   | 42'-1"         | 404"       | 49"          | 34'-3"     | 24.2 Cu Yd | 97-1/2"        |
| CR443AR-3424 | Air Ride   | 44'-2"         | 428"       | 49"          | 34'-3"     | 24.2 Cu Yd | 97-1/2"        |



# Tarp Tips...

This section will be occasionally featured in your TarpTalk™ to address frequently asked questions or to refresh you on various technical issues. As always, if you have a question or encounter frequent technical issues, please contact the Roll-Rite Customer Service Center at 1-800-297-9905 or check out our FAQs online at [www.RollRite.com](http://www.RollRite.com) under Customer Support.

**Q.** *My motor is not working. How do I tell if the problem is with the motor, the relay, or the switch?*

**A.** Follow steps 1-4 below to trouble-shoot your system:

- 1.** Disconnect both power wires from the motor. Using jumper cables and a fully charged spare battery, momentarily supply power to the motor terminals, first one direction, and then the other. If the motor does not run, please call our Customer Service department at 1-800-297-9905. If the motor runs when connected to the spare battery, then the motor is OK and you need to re-connect the original power wires to the motor and continue Step 2.
- 2.** Using a test light or a voltage meter, verify that the BATT+ and BATT- terminals on the relay are properly connected. If not, check the wiring and circuit breaker between the battery and the relay for problems such as loose terminals and/or worn, broken, or pinched spots on the wire. If power is reaching the relay, continue to Step 3.
- 3.** Using a small piece of jumper wire, momentarily connect first the T1 terminal and then the T2 terminal to BATT+. You should be able to hear the relay click each time and the motor should operate each time. If you do not hear the relay click, please call our Customer Service department. If you hear the relay click but the motor does not operate, then you need to check the wiring between the relay and the motor. If you hear the relay click **and** the motor operates, then the relay is OK and you need to continue to Step 4.
- 4.** The following procedure assumes that you are using a standard SPST switch similar to the one that was shipped with the relay. If you are using something else, such as a lighted switch, you may have to adjust the procedure accordingly. Using a small piece of jumper wire, momentarily connect the center terminal (common) first to one of the outer terminals, and then to the other outer terminal. If the motor does not operate during this test, then you need to check the wiring between the switch and the relay. If the motor operates during this test, then the problem is in the switch, please call our Customer Service department. ■

## **SIDE DUMP TRAILER LIMITED GENERAL WARRANTY**

This warranty applies to all side dump trailers manufactured by Demco. All goods manufactured by Demco shall be free from all defects in materials or workmanship under normal use and service, with loads not to exceed Manufacturer's rated capacity and speed. Applied only to the original owner, as evidenced by a completed warranty registration on file at Demco, for a period ending 12 months from the date of delivery.

**THE WARRANTY REGISTRATION MUST BE COMPLETED AND RETURNED TO DEMCO WITHIN 30 DAYS OF DELIVERY OF THE PRODUCT TO THE ORIGINAL OWNER OR ALL WARRANTIES WILL BE NULL AND VOID.**

All claims, for defective goods arising under this limited warranty, must be made in writing immediately upon discovery, but in no event, later than 12 months from the date of delivery to the original owner.

The limited warranty is the sole and exclusive warranty made or given by Demco in connection with the manufacture of sale of goods and is in lieu of all other warranties of any type or kind whatsoever, whether expressed or implied, written or oral. The provision hereof may not be modified, altered, or extended except in writing signed by an authorized representative of Demco.

- ◆ This warranty applies only to parts or components manufactured by Demco, which is defective in material or workmanship.
- ◆ This warranty does not cover normal maintenance, service or adjustments.
- ◆ This warranty does not cover depreciation or damage as a result of accident, negligent handling, inadequate maintenance, or improper operation.
- ◆ This warranty does not cover damage due to unauthorized modifications or repairs by purchaser prior to Demco inspection and approval.
- ◆ This warranty does not cover any purchased components such, as but not limited to; couplers, tires, axle assemblies, suspensions or any nonstandard feature or items specified by the purchaser.
- ◆ This warranty does not expand, enlarge upon, or alter in any way, the warranties provided by the manufacturers of purchased components.

In the event that a claim shall arise under this limited warranty, Demco may at its option repair the affected goods, replace the affected goods, or refund an equitable portion of the purchase price of the affected goods. The purchaser understands and agrees that, in the event of a defect in material or workmanship, the remedies are limited to repair or replacement, at Demco's option, such part or parts which examination shall disclose to manufacturer's satisfaction to have been defective.

All affected goods shall be held for inspection by Demco or its representatives and no claim hereunder shall be payable in connection with repairs made by purchaser prior to Demco's inspection or without Demco prior consent.

No claim shall be payable under this limited warranty unless purchaser shall provide Demco with the following information in writing in a timely manner:

- ◆ VIN (Vehicle Identification Number) of affected goods.
- ◆ Number of days, weeks or months affected goods in service.
- ◆ Location of affected goods.
- ◆ Description and pictures of alleged defect.

## SIDE DUMP TRAILER LIMITED GENERAL WARRANTY (CONTINUED)

In no event shall company be liable to purchaser for indirect, incidental or consequential damages or injuries including, but not limited to downtime, cost of labor or materials, loss of profits to purchaser's business or goodwill, resulting from breach of warranty hereunder and all damages resulting from defective goods, whether arising in tort, contract, or warranty except as specifically herein provided are waived by purchaser.

With respect to all other parts not manufactured by Demco, the respective manufacturers warranty will be assigned to the purchaser.

|                          |                                  |
|--------------------------|----------------------------------|
| Axles Limited            | 5 years or 500,000 miles         |
| Spring Suspension        | limited 3 years                  |
| Air Ride Suspension      | limited 3 years                  |
| Landing Legs             | limited 2 years                  |
| Anti-Lock Braking System | limited 3 years or 300,000 miles |
| Lights                   | limited 1 years                  |
| Valves                   | limited 6 months                 |

Tire Warranty can be found in the manifest holder on the driver side, under the front deck.

There are no warranties for used products or products that have been repaired, altered, modified, overlooked, subjected to misuse, negligence, accident or ordinary wear and tear.

**Operator is required to check wheel nuts, U-Bolts, radius rod bolts, and all other fasteners. Axle alignment, tire wear, tarp wear, and oil level in hubs must be inspected.** If needed, operator should make proper adjustments to insure full life of equipment. **These item's need to be checked the first 100 miles and again at 500 miles and periodically thereafter.** These inspections and adjustments are very important and must be performed.

State and Federal Laws require a daily inspection of this vehicle by the operator.

Demco, products are sold without any express warranty except as set forth by this warranty.

This warranty is effective June 1, 2007 and supersedes all previous Demco, warranty policies.

### **Cold Climate Warranty Disclaimer**

Operation of Demco Side Dump trailers in arctic temperatures may result in catastrophic failure of frame or tub components due to low temperature brittleness of steel and other materials. Material failures resulting from low temperature brittleness is beyond the control of Demco, the manufacturer of Demco Side Dump Trailers. Therefore, any warranty claims beyond workmanship will be disallowed in all circumstances.

The engineering phenomenon related to cold climate service of materials is known as Nil Deformation Transition Temperature, which is the transition of material from ductile to brittle. Steels and other materials used in the production of Demco trailers may experience brittleness at arctic temperatures. Since Demco cannot control the forces applied to trailers or components of trailers in arctic climates, claims resulting from brittle fractures or failures will not be warranted and Demco will not be held liable for the results of such failures.

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## DEMCO

### SIDE DUMP TRAILER LIMITED WARRANTY REGISTRATION

Your new Side Dump Trailer is covered by a limited warranty.  
To initiate the warranty this form **MUST** be completed and returned to  
Demco within **30 days** of delivery.

**PLEASE PRINT OR TYPE**

|                                                                                                                                                                                                                                                                                                                                                                                  |                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Owner's Name                                                                                                                                                                                                                                                                                                                                                                     | Vehicle Identification Number |
| PO Box / Street Address                                                                                                                                                                                                                                                                                                                                                          | Trailer Description           |
| City, State, Zip                                                                                                                                                                                                                                                                                                                                                                 | Dealership Name               |
| Telephone Number                                                                                                                                                                                                                                                                                                                                                                 | City, State, Zip              |
| Date of Purchase                                                                                                                                                                                                                                                                                                                                                                 | Telephone Number              |
| Intended Use: <input type="checkbox"/> Rental <input type="checkbox"/> Personal<br><input type="checkbox"/> Farm/Ranch <input type="checkbox"/> Commercial <input type="checkbox"/> Government                                                                                                                                                                                   | Dealer Representative         |
| <p>The Operator's Manual has been given to me and explained. I have read and fully understand the safe operation and the proper servicing and maintenance of the above trailer and the terms of the limited warranty shown inside the manual.</p> <p>Purchaser's Signature: _____ Date: _____</p>                                                                                |                               |
| <p>Pre-Delivery Service: This trailer was carefully prepared for delivery, inspected and adjusted according to factory recommendations before delivery to the retail purchaser.</p> <p>Delivery Service: The limited warranty was explained and a copy was presented to the retail purchaser along with the Operator's Manual.</p> <p>Dealer Representative Signature: _____</p> |                               |

**Please mail to the following:**

**DEMCO**  
**4010 320th street**  
**Boyden, IA 51234**



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## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



4010 320th St., Boyden, IA. 51234

Phone: (712) 725-2311

Fax: (712) 725-2380

Toll Free: 1-800-54DEMCO (1-800-543-3626)

**Demco warranty policies, operator manuals, and product registration  
can be found online:**

**[www.demco-products.com](http://www.demco-products.com)**



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Follow proper safety practices. If in doubt, consult a professional RV technician.