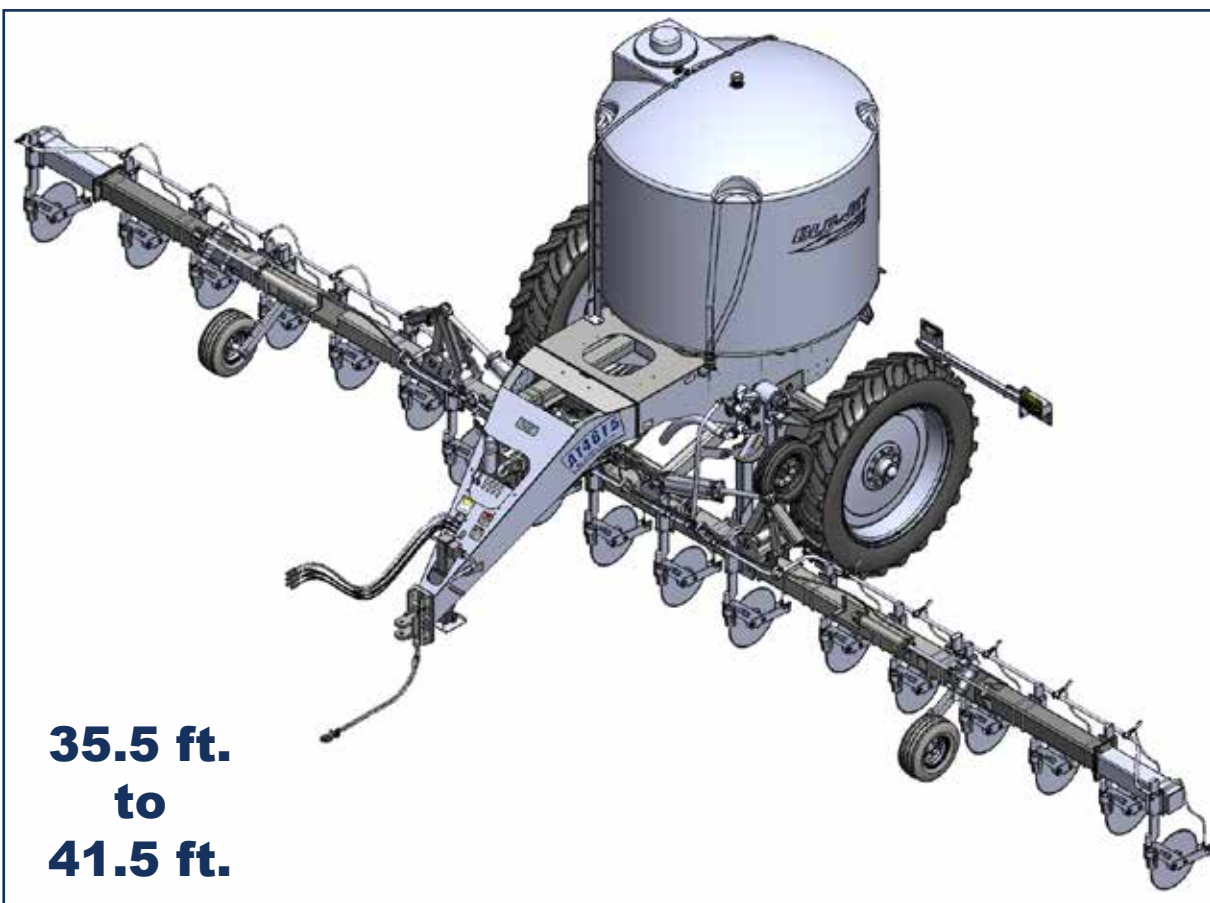


BLU-JET

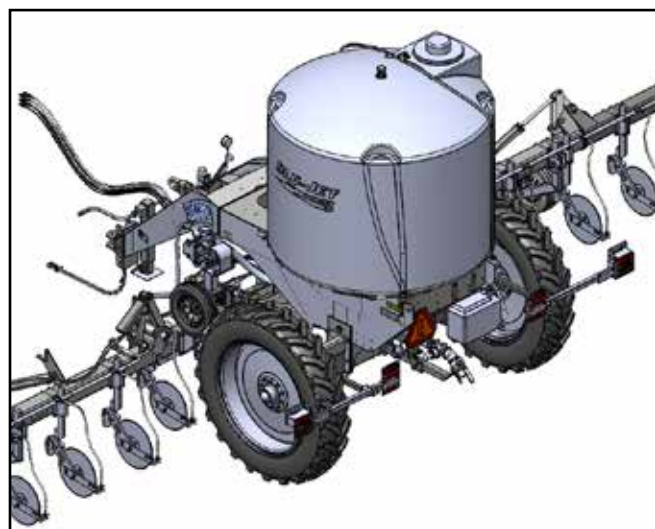
ALL TERRAIN INJECTION

AT4615™



Assembly and Operators Manual

**15R30
17R30
24R18
27R18
33R15**



**Manual Number
0604618
7-07-17**

\$20.00 Net.

ThurstonTM Manufacturing Company



Simonsen
IRON WORKS



CHUCK WAGONTM
Mobile Grilling Systems

Thurston Manufacturing Company • 1708 H Ave • Box 218 • Thurston, Nebraska, 68062-0218
Phone: 402-385-3041 • E-mail: box218@thurstonmfgco.com

Design specifications and features as described are subject to change without notice. BLU-JET is a registered trademark of Thurston Manufacturing Company, Thurston NE.



/BLU-JET



@BLU-JET01



/SironWorks



@SironWorks

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35.5 ft. to 41.5 ft.

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- **W**elcome to Thurston Manufacturing Company. Our goal is to provide quality products and services to our customers. The company's BLU-JET products have a reputation for quality, excellence in design and proven durability. Energetic, resourceful and continuous improvement goals in Environmental, Safety, Quality, Production and Engineering keep our firm at the cutting edge of technology.
We hope your BLU-JET equipment will give you years of service.

Read this manual carefully. It will instruct you on how to operate and service your machine safely and correctly. Failure to do so could result in personal injury and, or equipment damage.

- **SAFETY INFORMATION**



DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. The sign will have the color combination of *red* and *white*.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The sign will have the color combination of *orange* and *black*.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. The sign will have the color combination of *yellow* and *black*.

NOTE: *Indicates a special point of information.*

Carefully read and follow all safety signs. Reinstall safety signs that are damaged or missing.

- **R**ight-hand and left-hand sides of the implement are determined by facing in the direction the implement will travel when going forward.

► **General Information:**

The BLU-JET AT4615 Applicator places fertilizer deep in the root zone. The BLU-JET original JetStream nozzle injects the fertilizer into the soil directly behind a 20" coultter blade. The high clearance frame, 5° up and down, full flexing wings make it ideal for pre-plant, side dress, RidgeTill, and NoTill applications. The Gullwing lift design provides additional crop clearance during turn-around; and high flotation tires reduce the risk of deep compaction within the soil profile. The 1775 gallon cone bottom tank provides the capacity needed to run longer between fills while reducing movement of liquid inside the tank without the use of a baffle. The AT4615 is designed for BLU-JET's JetStream coultter injection or coultter knife injection.

► **F**or your convenience we have four easy ways to register your warranty.

- Call our toll free number and ask for warranty registration.

1-800-658-3127

- Register on-line at: www.BLU-JET.com

- Complete and mail this Product Registration form to:

Attn: Thurston Manufacturing Company

Product Registration

PO Box 218

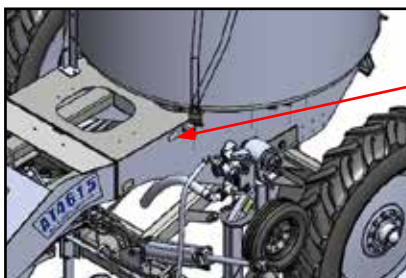
Thurston, NE. 68062

- Email a copy to: warranty@thurstonmfgco.com

Thurston Manufacturing Company 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.



The Serial Number is located from the rear of the tool bar on the left-hand side behind the tongue pull plate.

► Record your implement 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 _____

Dealer Checklist



To The Dealer:

Inspect the implement thoroughly after assembly 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. Lubrication of grease fittings
- ☐ 3. All decals properly located and readable
- ☐ 4. Other adjustments for machine level height, etc.
- ☐ 5. Overall condition (touch up any scratches, clean and polish)
- ☐ 6. Operator's manual

DATE SET UP _____

SIGNATURE _____



DELIVERY

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

- ☐ 1. Safe operation and service
- ☐ 2. Correct machine installation and operation
- ☐ 3. Daily and periodic lubrication and maintenance
- ☐ 4. Daily and periodic inspections
- ☐ 5. Trouble shooting
- ☐ 6. Storing machine
- ☐ 7. Thurston Manufacturing Company parts and service
- ☐ 8. Have the customer write the machine 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 BLU-JET implement. The primary objective of Thurston Manufacturing Company 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:

- Call our toll free number and ask for warranty registration.
1-800-658-3127**
- Register on-line at: www.BLU-JET.com**
- Complete and mail this Product Registration form to:
Attn: Thurston Manufacturing Company
Product Registration
PO Box 218
Thurston, NE. 68062**
- Email a copy to: warranty@thurstonmfgco.com**

This manual has been prepared to assist you in the assembly of your new machine 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 assembly or operations of your tool bar.

When ordering parts, please refer to part numbers and descriptions as listed throughout this book. All parts and whole goods will be shipped FOB Thurston, Nebraska. 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. Thurston Manufacturing Company 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.

Limited Warranty



Thurston Manufacturing Company warrants each new BLU-JET machine primary framework to be free from defects in material and workmanship for a period of five (5) years, normal wear of wearing parts excepted. Thurston Manufacturing Company further warrants each new BLU-JET product to be free from defects in material and workmanship, normal wear of wearing parts excepted, for a period of one (1) year. All accessories purchased and resold by Thurston Manufacturing Company will be warranted according to their respective manufacturer. Tires on BLU-JET equipment are warranted through their respective tire manufacturers and their network of dealers in your local area.

Warranty begins from date of delivery to the original purchaser and applies to all new BLU-JET products that have not been altered and are being used for the intended purpose. Negligence, abuse or modification of equipment manufactured by or purchased and resold by Thurston Manufacturing Company will void this warranty.

The obligation of Thurston Manufacturing Company to honor this warranty is limited to the repair or replacement of defective merchandise, to the original purchaser, subject to inspection of equipment in question by an authorized Thurston Manufacturing Company sales or service technician. In the USA, freight of warranty replacement parts including main frame centers and wings will be prepaid for a period of one (1) Year by Thurston Manufacturing Company. Shipments of repaired or replaced parts including main frame centers and wings after one year will be paid by the customer.

Return of defective goods must be made within thirty (30) days of failure to Thurston Manufacturing Company, Thurston, Nebraska USA or to the nearest authorized BLU-JET Distributor or Rep Sales and service outlet.

Thurston Manufacturing Company will not be held responsible for any repair charges made by customers without prior written consent and prior equipment inspection by an authorized Thurston Manufacturing Company sales or service technician.

This warranty shall not be interpreted to render liability for injury or damages of any kind, direct, consequential or contingent to person or property. This warranty does not extend to loss of crops, economic and/or commercial loss, loss because of delay in crop production or any expense incurred for labor, supplies, substitute machinery, rental or for any other reason. This warranty is subject to any existing condition of supply, which may directly affect Thurston Manufacturing Company's ability to obtain materials of manufacture and delivery of replacement parts.

Thurston Manufacturing Company reserves the right to make improvements in design and changes in specifications at any time without incurring any obligation to owners of units previously sold.

No one is authorized to alter, modify or enlarge this warranty nor its exclusions, limitations and reservations. Thurston Manufacturing Company makes no representations or warranties, expressed or implied (including implied warranties of merchantability and fitness), except for those set forth in Thurston Manufacturing Company's current applicable published warranty policies and procedures.

Layton W. Jensen, President

022398\mgmt



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:

- Keep the brake pedals latched together at all times. NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.
- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an 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 farm machinery 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.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- When driving the tractor and equipment on the road or highway under (20 m.p.h. max.) (40 k.p.h. max.) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.





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 equipment 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.



TRANSPORT SAFETY

- A safety chain will help control drawn equipment should it accidentally separate from the drawbar.
- Attach the chain to the tractor drawbar support or other anchor location. Provide only enough slack in the chain to permit turning.
- Use hydraulic cylinder transport lockup during road transportation.
- **Maximum road speed is 20 m.p.h. with an empty tank.**



Tank Fill Gallons	Maximum Highway	Maximum Application Speed
0	20 m.p.h.	12 m.p.h.
600	20 m.p.h.	12 m.p.h.
750	15 m.p.h.	12 m.p.h.
1000	10 m.p.h.	12 m.p.h.
1400	5 m.p.h.	10 m.p.h.



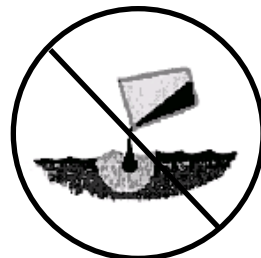
AVOID HIGH PRESSURE FLUIDS

- 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.

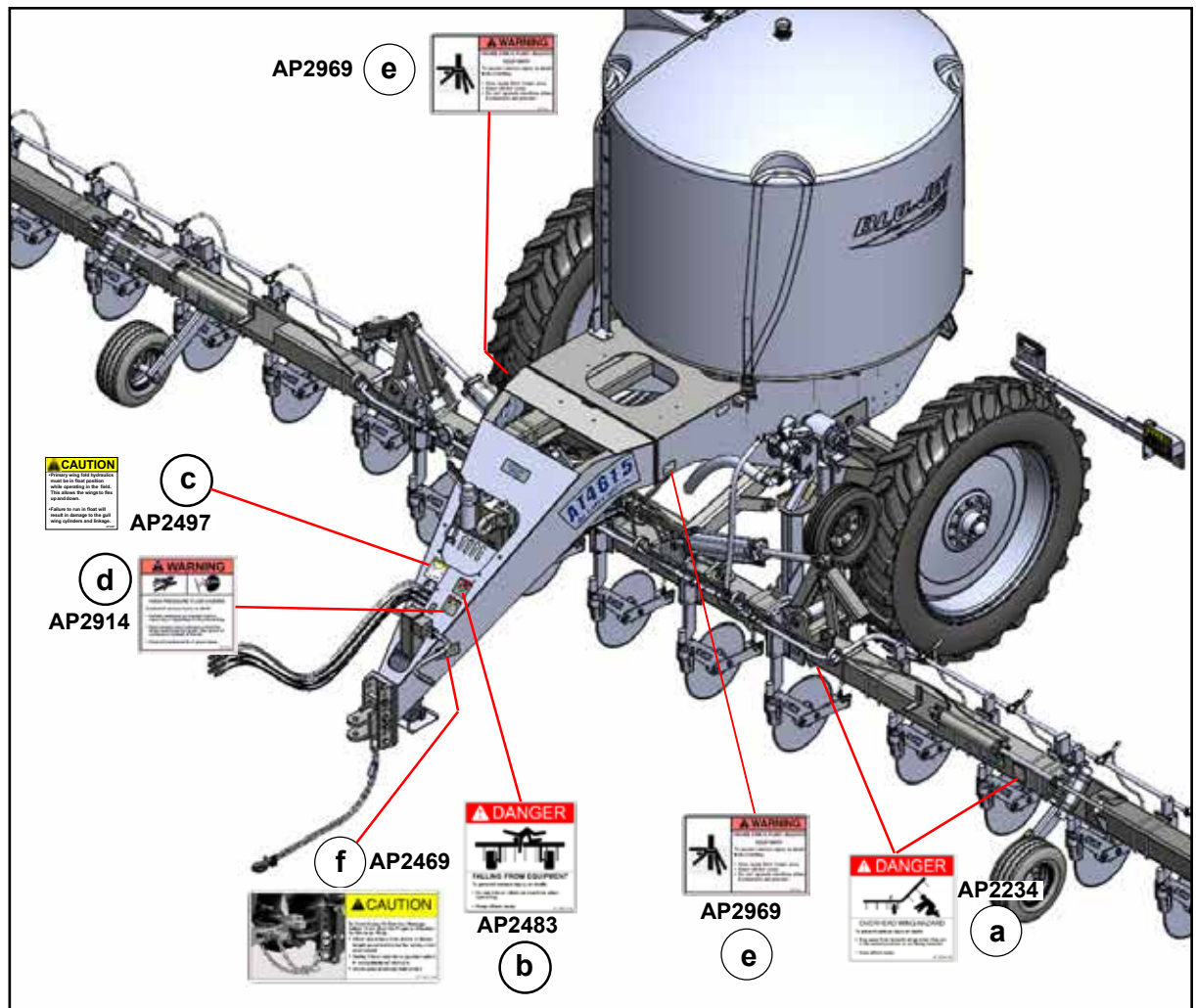


DISPOSE OF FLUIDS PROPERLY

- 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.

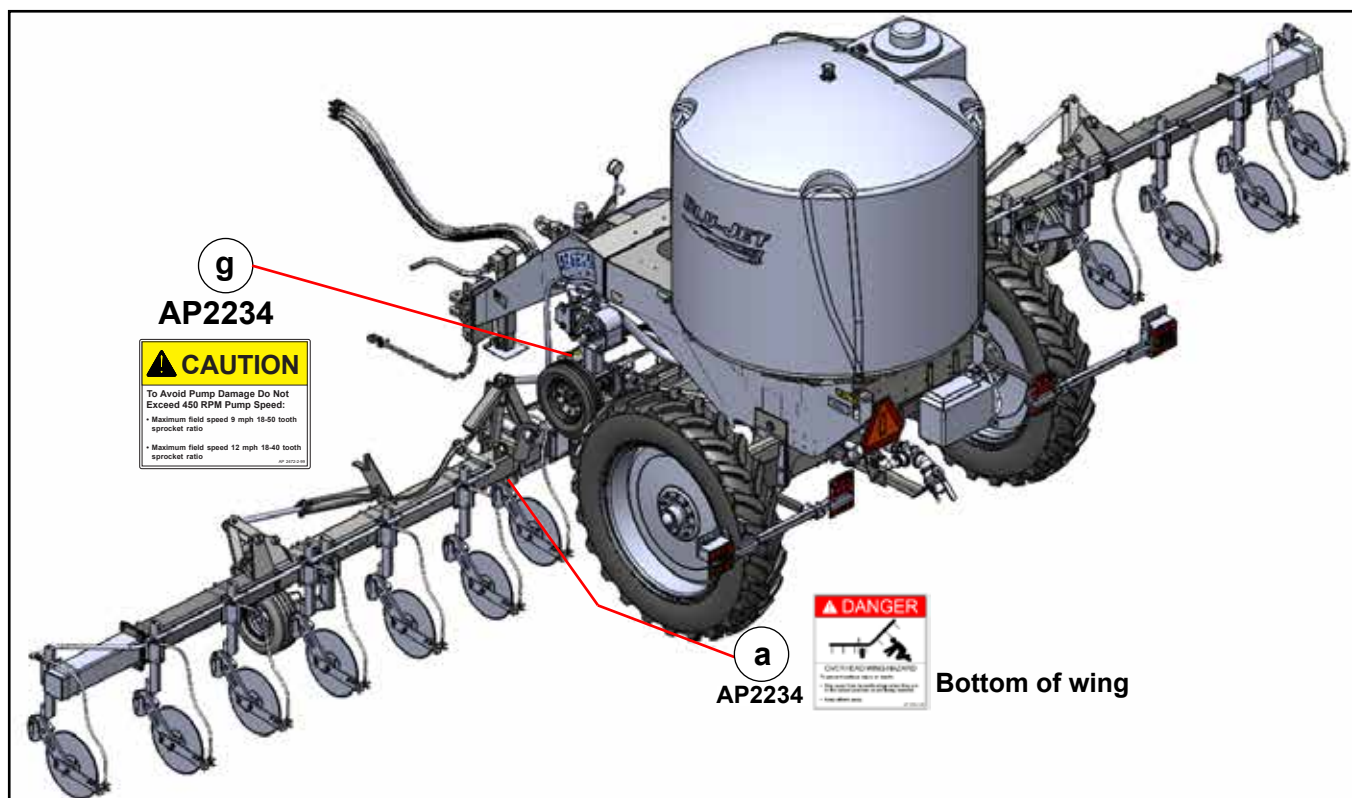


BLU-JET AT4615	Safety (Decals)		
	Task	Procedures	Illustrations



- | | | | |
|----|---|--------|--|
| a. | 4 | AP2234 | Decal, Danger stand clear falling wing |
| b. | 1 | AP2483 | Decal, Danger, falling from equipment |
| c. | 1 | AP2497 | Decal, Caution, AT3000 primary wing hydraulic in float |
| d. | 1 | AP2914 | Decal, Warning, high pressure fluid |
| e. | 2 | AP2969 | Decal, Warning, pinch point |
| f. | 1 | AP2469 | Decal, Safety Chain
(Part of Safety Chain Package) |

BLU-JET AT4615	Safety (Decals)		
	Task	Procedures	Illustrations



- | | | | |
|----|---|--------|---|
| a. | 4 | AP2234 | Decal, Danger stand clear falling wing |
| g. | 1 | AP2472 | Decal, Caution, Avoid Pump Damage
(Part of Pump Package) |

Operating Instructions

Task

Procedures

Illustrations

Hitch

NOTE: Implement hitch weights are designed to match tractor size ranges. Check the following chart to confirm your particular implement specifica-

1. The tractor must be equipped with a drawbar and a drawbar safety chain clevis. For rigid frame tractors equipped with swinging drawbar, the drawbar must be located in a fixed position in the center of the tractor. Refer to your tractor operators manual for drawbar adjustment and drawbar operating instructions.



Category	PTO (HP)	Maximum Vertical Static Load (lbs)		
		Drawbar Position		
		Short	Regular	Extended
0	≤ 38	1,574	1,124	787
1	≤ 64	2,698	1,798	1,349
2	≤ 154	4,946	3,372	2,473
3	≤ 248	6,070	4,046	2,922
4	≤ 402	7,418	4,946	3,597
5	≤ 671	10,116	6,744	N/A

Tractor to toolbar connection

2. Before connecting the tool bar to the tractor drawbar, raise the tractor three point hitch (if equipped) to prevent interference between the implement and the tractor. Connect the tool bar to tractor drawbar ONLY. DO NOT connect the tool bar to any other part of the tractor. Connect the tool bar clevis to the tractor drawbar with hitch pin. Install the safety chain through the tractor drawbar support bracket.

Safety hitch pin

3. Always use a safety hitch pin of the correct diameter. Make sure that the hitch pin is locked in place with a safety type lock pin or other locking device.

Safety chain

4. Always use a safety chain between the toolbar and the tractor. Install the chain to the tractor drawbar support bracket. Support the center of the chain with a clevis installed to the tractor drawbar.



WARNING In case the tractor hitch pin is lost during transporting. The safety chain must be attached between the implement and tractor to prevent separated implement from running freely and causing damage or injury.

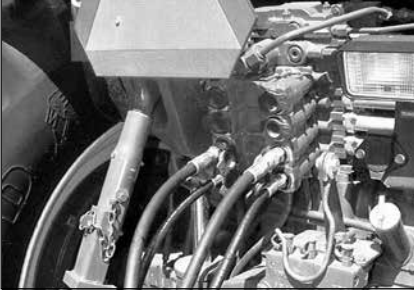


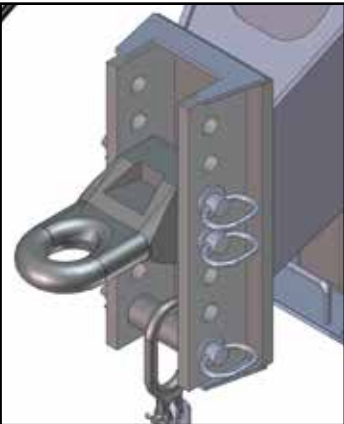
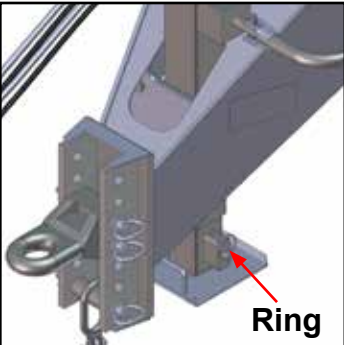



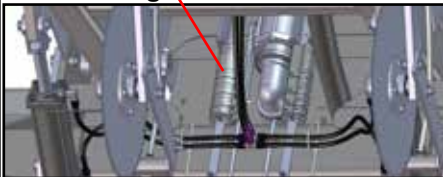
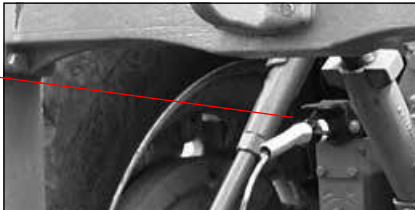
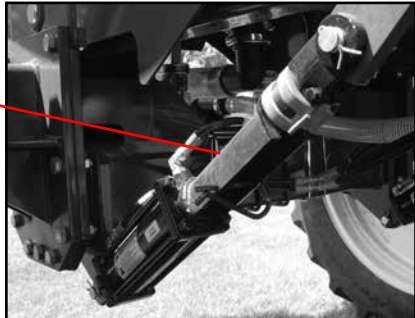

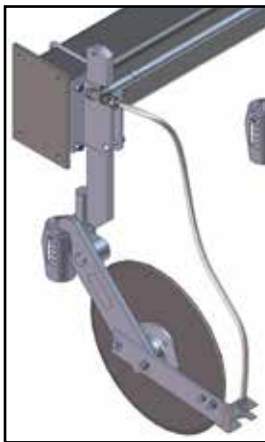
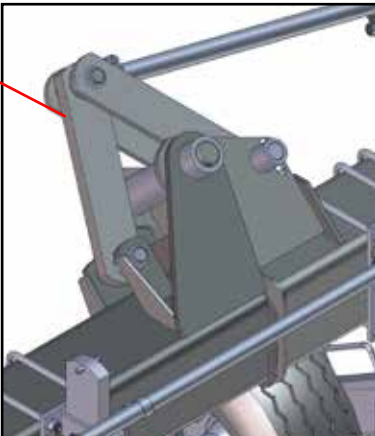
WARNING Do not move articulated tractor steering wheel until everyone is clear of the equipment. Moving the steering wheel can swing or move attached equipment which could cause serious personal injury.



WARNING Tractor drawbar must be in a fixed position before transporting implement. Implement will sway or slam against tractor resulting in equipment damage or injury to personnel.

Operating Instructions

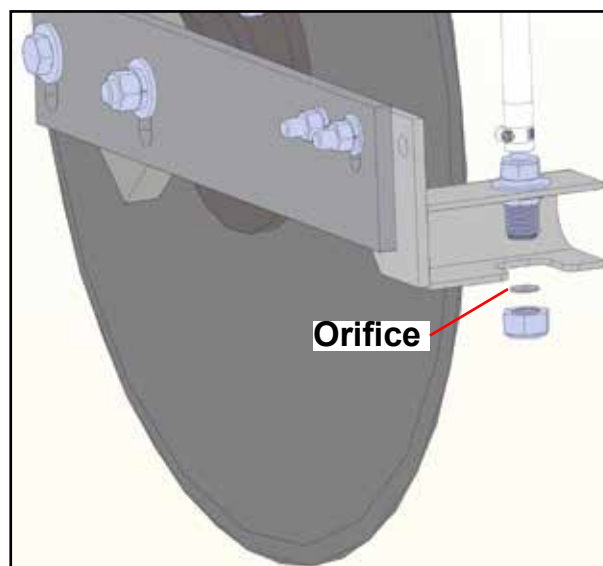
	Task	Procedures	Illustrations
►	Remote hydraulic	5. Connect the tool bar hydraulic hoses to the tractor remote couplers. The 3/8" hoses supply oil to the tool bar lift cylinders. The 1/4" hoses supply oil to the wing fold cylinders.	
►	NOTE: Always connect the hoses so the toolbar raises when the tractor remote control lever is moved rearward and lowers when the lever is moved forward.	<div>  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. </div>	
►	Remote hydraulic	6. It may be necessary to tie the hydraulic hoses up to keep them away from the hitch area. A tarp strap around the hoses and between the two point arms works well.	
►	Leveling mainframe	7. Before leveling the machine tire pressure should be checked. Inflate mainframe tires to 56 P.S.I. Max. Before beginning operation of this machine the mainframe must be level. Place toolbar on level surface. Adjust the hitch up or down in the tongue connector and connect to tractor.	
►	Jack stand	8. Pull ring on drop leg jack plunger to lower or raise sand pad.	

BLU-JET AT4615		Operating Instructions	
Task		Procedures	Illustrations
<div>▶ Attaching electrical harness</div> <div>▶ Starting depth collar depth control</div> <div>⚠ CAUTION Primary wing fold cylinders hydraulics must be in float position while operating in the field.</div> <div>▶ Coulter shank adjustments</div> <div>▶  Hinge and linkage lubrication daily</div>	<div>9. Attach 7 pin electrical harness before road transport.</div> <div>10. Before road transport install lock collars.</div> <div>10a. Use 4-1/4" depth collars as starting depth. Adjust as desired. Depth collar storage</div> <div></div> <div>11. Gull wing hydraulic: Read decal located on lift hoses.</div> <div>12. Loosen carriage bolts and adjust coulter shanks in flatback until the blade is running at a depth of 4 to 5 inches.</div> <div>13. Grease all secondary wing linkage zerks on both sides. (Gull wing deluxe fold toolbar)</div>	<div></div> <div></div> <div><div> CAUTION</div><div><ul style="list-style-type: none">• Primary wing fold hydraulics must be in float position while operating in the field. This allows the wings to flex up and down.• Failure to run in float will result in damage to the gull wing cylinders and linkage.</div><div>AP 2493</div></div> <div></div> <div></div>	

BLU-JET AT4615	Operating Instructions Rate Orifice Installation		
Task	Procedures	Illustrations	



14. Consult row spacing rate chart for orifice size.
15. Remove nozzle nut and insert orifice.



Operating Instructions

Task

Procedures

Illustrations


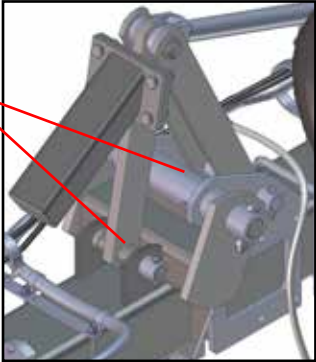
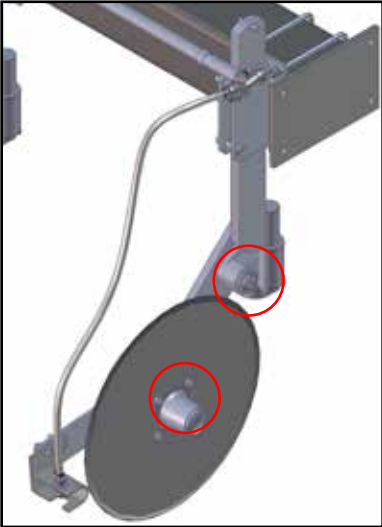

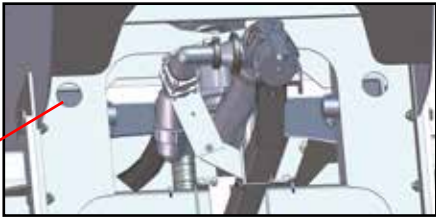
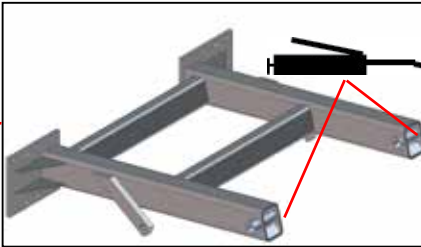


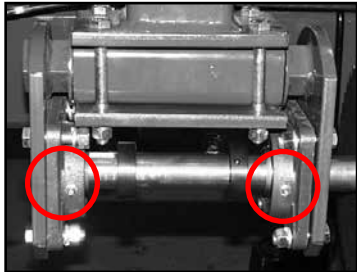

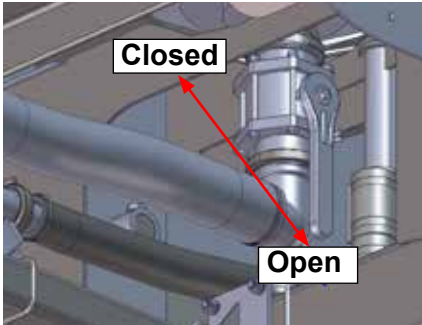
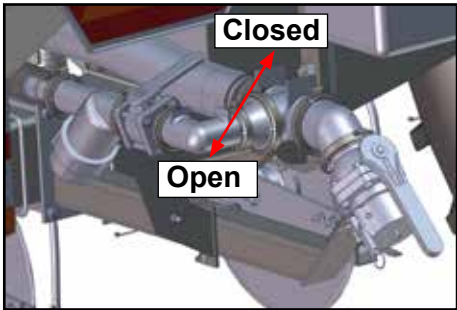
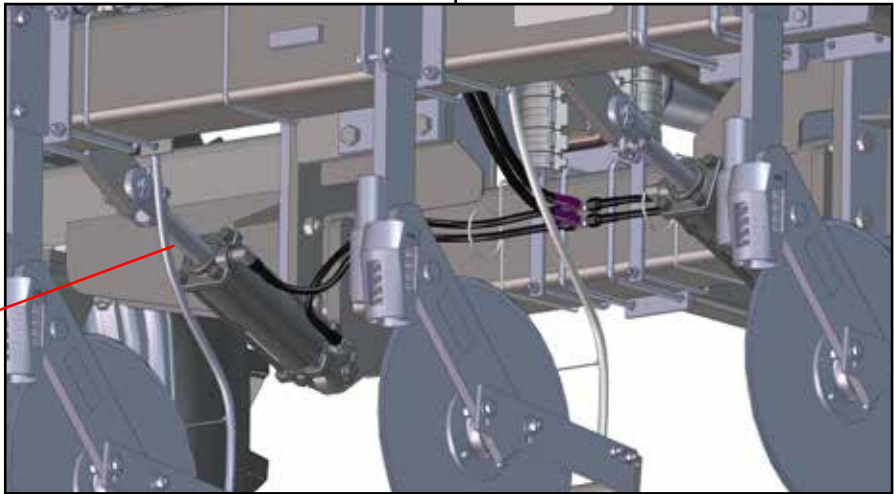

Generic Photo

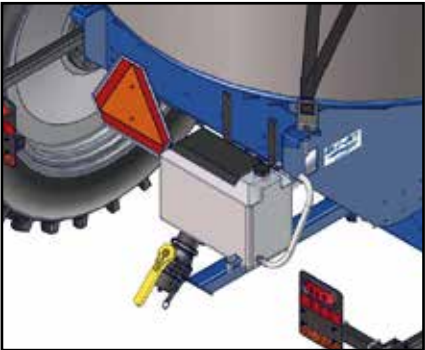


16. Travel a few meters and check blade depth. Adjust gauge wheels or coulters to achieve the 4" depth.
17. Check all nozzles for stream of liquid behind blade.
18. Make adjustment to nozzle assembly so stream is in line with the blade trench.



Operating Instructions

Task	Procedures	Illustrations
<p>▶  Primary wing lubrication Gull wing daily</p> <p>▶ NOTE: Grease all zerks daily.</p> <p>▶ Coulter pivot shaft lubrication</p>	<p>19. Grease primary wing hinge on both sides. (Gull wing deluxe fold toolbar)</p> <p>20. Grease all coulter arm pivots The plug on the coulter hub can be removed. A zerk can be installed. Hub and spindle assembly should be <i>greased twice seasonally</i>.</p>	 
<p>▶  Arm hinge lubrication daily</p> <p>Rear opening to access lift arm zerk.</p>	<p>21. Grease the zerk in the center of the arm hinge area. Lubricate every day.</p> 	

BLU-JET AT4615		Operating Instructions	
	Task	Procedures	Illustrations
►	Pump lubrication	22. Grease the zerks on the pillow block bearing at the bottom of the pump assembly.	
►	Bottom fill plumbing screen	23. Screen should be checked and cleaned periodically.	
►	Bottom fill valve operation	24. After the tank is filled open valve before engaging pump.	
►	NOTE: Do not engage pump until valve is opened.		
►	Road transport	25. Before road transport raise tool bar. Install transport locks and 1-1/2" depth collars as on both cylinders.	
			

BLU-JET AT4615	Operating Instructions		
	Task	Procedures	Illustrations
<p>►</p>	<p>Emergency water tank operation and maintenance</p>	<p>26. Location of Nine-gallon emergency water tank/toolbox. Change water daily to provide fresh clean water to flush exposed skin or eyes. Drain water daily in cold temperatures to prevent freezing and bursting tank.</p> <p>27. In case of exposure to fertilizer, open faucet or pull top end of hose loose to flush exposed part of body. Remove contaminated clothes as soon as possible.</p>	 
<p>►</p>	<p>Tire maintenance</p>	<p>28. Check tire pressure. (52 lbs. PSI) Check wheel lugs (Torque to 250-265 ft. lbs.)</p>	

- Calibration of these systems involves two separate sets of calculations. The first being a procedure of setting rate and the second being a procedure of obtaining system pressure.

FIRST: These systems utilize a positive-displacement, ground-driven, piston pump to establish the GPA (Gallon per acre) rate. Because the pump is ground-driven, this rate will be very consistent provided you do not exceed the pumps capacity or pressure ratings (120 PSI Maximum).

SECOND: The injection system nozzles are what determine system operation pressure at a particular flow rate and ground speed. Because the system requires nozzle pressure in the 60 PSI to 120 PSI range to inject fertilizer into the soil properly, it becomes necessary to size the nozzle correctly to maintain this 60-120 PSI optimum operating pressure at various speeds. In effect, the operating speed is limited by the range of pressure necessary for proper injection system operation.

Remember that nozzle size has no affect on rate, only system operating pressure.

High Pressure Injection System Pump Calibration Work sheet

Step 1: Rate Calculation (Gallons per acre)

Actual pounds of nitrogen per acre desired ÷ percent of nitrogen in solution equals pounds of solution per acre

Actual N ÷ % of N = lbs. solution per acre

Examples:

100 lbs. of actual N desired .28 (% of N in solution) = 357 lbs. per acre

100 lbs. of actual N desired .32 (% of N in solution) = 312 lbs. per acre

Step 2: Pounds per acre of solution ÷ weight per Gallon of solution equal GPA
(GPA= Gallons per acre of solution)

lbs. solution per acre ÷ weight per Gallon = GPA

Examples:

357 lbs. of 28% N solution 10.65 lbs. per Gallon = 33.5 GPA

312 lbs. of 32% N solution 11.4 lbs. per Gallon = 27.37 GPA

Step 3: Use the John Blue, pump setting, slide-rule chart. The standard BLU-JET sprocket combination is 18 to 50.

Step 4: Loaded Radius:

We recommend using a loaded radius of 10" for the standard BLU-JET tire drive wheel when used with the John Blue LM 4450 pump.

Add 1/2" to the loaded radius if soil builds up on the small tire in wet conditions.

- **Step 5:** Swath width is the number of rows being applied (Example: A 15 row 30" machine will cover 16 rows.) times the spacing between the rows.

Rows x Spacing = Swath width

16 rows x 30" = 480" (swath width)

Step 6: Example:

1. Using the chart, align loaded radius (10") with 18 to 50 sprocket combination setting.
2. Using the chart, align swath width (480") with arrow under sprocket ratio.
3. Using the chart, GPA rate (LM 4450) pump) from step 2 above will align with correct pump setting.

Once the correct pump setting has been obtained from the pump calibration work sheet it becomes necessary to select a nozzle size that will result in a system operating pressure that falls within the recommended range of 60 PSI to 120 PSI. It is important to remember that GPA rate will not be affected by changing nozzle sizes. The only way the GPA rate will change is if you change pump settings. A gauge is provided to double check calculations and monitor pressure during operation.

To simplify calibration we supplied a chart based on 28% nitrogen solution in 30" row spacings.

Example: Using the 30" spacing chart, with 7 MPH as the target operating speed and 115 lbs. N/acre as the target rate; you can see that nozzle size 4916-95 will produce 80 PSI @ 7 MPH. Also if you look under the 8 MPH column you will see that this nozzle size will produce 100 PSI.

It is recommended that a mid-range pressure of 80 to 100 PSI is used to allow for speed variances in field operation, if possible.

It is recommended that the stream stabilizer nozzle inserts always be used with these nozzles to improve the solid-stream characteristics of the spray pattern and consequently the injection and overspray reduction characteristics of nozzle. These stainless steel nozzle orifices are commercially available almost everywhere and there are several sizes available between those on our chart if needed.

It is recommended that a fine line (80 mesh) stainer be used on extremely low rate applications to prevent plugging nozzles.

Helpful Hints:

If the actual applied rate is not correct after system calibration has been completed, the cause is probably slippage of the pump ground drive wheel tire. To remedy this, you should increase the spring pressure on the tire. If extremely difficult conditions continue to cause slippage, increase slightly.

	<h1>30 Inch Spacing Rate Chart</h1>		
Task	Procedures	Illustrations	

		GPM 10.65 lb./gal 28%	Gallons per Acre 30 Inch Spacing							
			5	6	7	8	9	10	11	12
Orifice #	PSI		mph	mph	mph	mph	mph	mph	mph	mph
4916 49	60	0.320	12.7	10.5	9.0	7.9	7.0	6.3	5.8	5.3
	80	0.369	14.6	12.2	10.4	9.1	8.1	7.3	6.6	6.1
	100	0.413	16.3	13.6	11.7	10.2	9.1	8.2	7.4	6.8
	120	0.452	17.9	14.9	12.8	11.2	9.9	8.9	8.1	7.5
4916 57	60	0.432	17.1	14.3	12.2	10.7	9.5	8.6	7.8	7.1
	80	0.499	19.8	16.5	14.1	12.4	11.0	9.9	9.0	8.2
	100	0.558	22.1	18.4	15.8	13.8	12.3	11.1	10.0	9.2
	120	0.612	24.2	20.2	17.3	15.1	13.5	12.1	11.0	10.1
*4916 63	60	0.528	20.9	17.4	14.9	13.1	11.6	10.5	9.5	8.7
	80	0.610	24.2	20.1	17.3	15.1	13.4	12.1	11.0	10.1
	100	0.682	27.0	22.5	19.3	16.9	15.0	13.5	12.3	11.3
	120	0.747	29.6	24.7	21.1	18.5	16.4	14.8	13.4	12.3
*4916 70	60	0.652	25.8	21.5	18.4	16.1	14.3	12.9	11.7	10.8
	80	0.753	29.8	24.9	21.3	18.6	16.6	14.9	13.6	12.4
	100	0.842	33.3	27.8	23.8	20.8	18.5	16.7	15.2	13.9
	120	0.922	36.5	30.4	26.1	22.8	20.3	18.3	16.6	15.2
*4916 78	60	0.810	32.1	26.7	22.9	20.0	17.8	16.0	14.6	13.4
	80	0.935	37.0	30.9	26.4	23.1	20.6	18.5	16.8	15.4
	100	1.045	41.4	34.5	29.6	25.9	23.0	20.7	18.8	17.2
	120	1.145	45.3	37.8	32.4	28.3	25.2	22.7	20.6	18.9
*4916 86	60	0.984	39.0	32.5	27.8	24.4	21.7	19.5	17.7	16.2
	80	1.137	45.0	37.5	32.2	28.1	25.0	22.5	20.5	18.8
	100	1.271	50.3	41.9	35.9	31.5	28.0	25.2	22.9	21.0
	120	1.392	55.1	45.9	39.4	34.5	30.6	27.6	25.1	23.0
*4916 95	60	1.201	47.6	39.6	34.0	29.7	26.4	23.8	21.6	19.8
	80	1.387	54.9	45.8	39.2	34.3	30.5	27.5	25.0	22.9
	100	1.551	61.4	51.2	43.9	38.4	34.1	30.7	27.9	25.6
	120	1.699	67.3	56.1	48.1	42.0	37.4	33.6	30.6	28.0
4916 107	60	1.524	60.3	50.3	43.1	37.7	33.5	30.2	27.4	25.1
	80	1.760	69.7	58.1	49.8	43.5	38.7	34.8	31.7	29.0
	100	1.967	77.9	64.9	55.6	48.7	43.3	39.0	35.4	32.5
	120	2.155	85.3	71.1	61.0	53.3	47.4	42.7	38.8	35.6
4916 120	60	1.917	75.9	63.2	54.2	47.4	42.2	37.9	34.5	31.6
	80	2.213	87.6	73.0	62.6	54.8	48.7	43.8	39.8	36.5
	100	2.474	98.0	81.7	70.0	61.2	54.4	49.0	44.5	40.8
	120	2.710	107.3	89.4	76.7	67.1	59.6	53.7	48.8	44.7

The 4916 series of orifices are available in many sizes falling between those listed on this chart.

* Standard equipment sizes.

15 Inch Spacing Rate Chart

Task	Procedures	Illustrations
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		GPM 10.65 lb./gal 28%	Gallons per Acre 15 Inch Spacing							
			5	6	7	8	9	10	11	12
Orifice #	PSI		mph	mph	mph	mph	mph	mph	mph	mph
4916 49	60	0.320	25.3	21.1	18.1	15.8	14.1	12.7	11.5	10.5
	80	0.369	29.2	24.4	20.9	18.3	16.2	14.6	13.3	12.2
	100	0.413	32.7	27.2	23.3	20.4	18.2	16.3	14.9	13.6
	120	0.452	35.8	29.8	25.6	22.4	19.9	17.9	16.3	14.9
4916 57	60	0.432	34.2	28.5	24.5	21.4	19.0	17.1	15.6	14.3
	80	0.499	39.5	33.0	28.2	24.7	22.0	19.8	18.0	16.5
	100	0.558	44.2	36.8	31.6	27.6	24.6	22.1	20.1	18.4
	120	0.612	48.4	40.4	34.6	30.3	26.9	24.2	22.0	20.2
*4916 63	60	0.528	41.8	34.9	29.9	26.1	23.2	20.9	19.0	17.4
	80	0.610	48.3	40.3	34.5	30.2	26.8	24.2	22.0	20.1
	100	0.682	54.0	45.0	38.6	33.8	30.0	27.0	24.6	22.5
	120	0.747	59.2	49.3	42.3	37.0	32.9	29.6	26.9	24.7
*4916 70	60	0.652	51.7	43.0	36.9	32.3	28.7	25.8	23.5	21.5
	80	0.753	59.6	49.7	42.6	37.3	33.1	29.8	27.1	24.9
	100	0.842	66.7	55.6	47.6	41.7	37.0	33.3	30.3	27.8
	120	0.922	73.0	60.9	52.2	45.7	40.6	36.5	33.2	30.4
*4916 78	60	0.810	64.1	53.4	45.8	40.1	35.6	32.1	29.2	26.7
	80	0.935	74.1	61.7	52.9	46.3	41.1	37.0	33.7	30.9
	100	1.045	82.8	69.0	59.1	51.7	46.0	41.4	37.6	34.5
	120	1.145	90.7	75.6	64.8	56.7	50.4	45.3	41.2	37.8
*4916 86	60	0.984	78.0	65.0	55.7	48.7	43.3	39.0	35.4	32.5
	80	1.137	90.0	75.0	64.3	56.3	50.0	45.0	40.9	37.5
	100	1.271	100.6	83.9	71.9	62.9	55.9	50.3	45.7	41.9
	120	1.392	110.3	91.9	78.8	68.9	61.3	55.1	50.1	45.9
*4916 95	60	1.201	95.1	79.3	68.0	59.5	52.9	47.6	43.2	39.6
	80	1.387	109.9	91.5	78.5	68.7	61.0	54.9	49.9	45.8
	100	1.551	122.8	102.3	87.7	76.8	68.2	61.4	55.8	51.2
	120	1.699	134.5	112.1	96.1	84.1	74.7	67.3	61.2	56.1
4916 107	60	1.524	120.7	100.6	86.2	75.4	67.0	60.3	54.9	50.3
	80	1.760	139.4	116.1	99.5	87.1	77.4	69.7	63.3	58.1
	100	1.967	155.8	129.8	111.3	97.4	86.6	77.9	70.8	64.9
	120	2.155	170.7	142.2	121.9	106.7	94.8	85.3	77.6	71.1
4916 120	60	1.917	151.8	126.5	108.4	94.9	84.3	75.9	69.0	63.2
	80	2.213	175.3	146.1	125.2	109.5	97.4	87.6	79.7	73.0
	100	2.474	196.0	163.3	140.0	122.5	108.9	98.0	89.1	81.7
	120	2.710	214.7	178.9	153.3	134.2	119.3	107.3	97.6	89.4

The 4916 series of orifices are available in many sizes falling between those listed on this chart.

* Standard equipment sizes.

18 Inch Spacing Rate Chart

Task

Procedures

Illustrations

Orifice #	PSI	GPM 10.65 lb./gal 28%	Gallons per Acre 18 Inch Spacing							
			5	6	7	8	9	10	11	12
			mph	mph	mph	mph	mph	mph	mph	mph
4916 49	60	0.320	21.1	17.6	15.1	13.2	11.7	10.5	9.6	8.8
	80	0.369	24.4	20.3	17.4	15.2	13.5	12.2	11.1	10.1
	100	0.413	27.2	22.7	19.4	17.0	15.1	13.6	12.4	11.3
	120	0.452	29.8	24.9	21.3	18.6	16.6	14.9	13.6	12.4
4916 57	60	0.432	28.5	23.8	20.4	17.8	15.9	14.3	13.0	11.9
	80	0.499	33.0	27.5	23.5	20.6	18.3	16.5	15.0	13.7
	100	0.558	36.8	30.7	26.3	23.0	20.5	18.4	16.7	15.4
	120	0.612	40.4	33.6	28.8	25.2	22.4	20.2	18.3	16.8
*4916 63	60	0.528	34.9	29.1	24.9	21.8	19.4	17.4	15.8	14.5
	80	0.610	40.3	33.5	28.8	25.2	22.4	20.1	18.3	16.8
	100	0.682	45.0	37.5	32.2	28.1	25.0	22.5	20.5	18.8
	120	0.747	49.3	41.1	35.2	30.8	27.4	24.7	22.4	20.5
*4916 70	60	0.652	43.0	35.9	30.7	26.9	23.9	21.5	19.6	17.9
	80	0.753	49.7	41.4	35.5	31.1	27.6	24.9	22.6	20.7
	100	0.842	55.6	46.3	39.7	34.7	30.9	27.8	25.3	23.2
	120	0.922	60.9	50.7	43.5	38.0	33.8	30.4	27.7	25.4
*4916 78	60	0.810	53.4	44.5	38.2	33.4	29.7	26.7	24.3	22.3
	80	0.935	61.7	51.4	44.1	38.6	34.3	30.9	28.1	25.7
	100	1.045	69.0	57.5	49.3	43.1	38.3	34.5	31.4	28.7
	120	1.145	75.6	63.0	54.0	47.2	42.0	37.8	34.4	31.5
*4916 86	60	0.984	65.0	54.1	46.4	40.6	36.1	32.5	29.5	27.1
	80	1.137	75.0	62.5	53.6	46.9	41.7	37.5	34.1	31.3
	100	1.271	83.9	69.9	59.9	52.4	46.6	41.9	38.1	34.9
	120	1.392	91.9	76.6	65.6	57.4	51.0	45.9	41.8	38.3
*4916 95	60	1.201	79.3	66.1	56.6	49.5	44.0	39.6	36.0	33.0
	80	1.387	91.5	76.3	65.4	57.2	50.9	45.8	41.6	38.1
	100	1.551	102.3	85.3	73.1	64.0	56.9	51.2	46.5	42.6
	120	1.699	112.1	93.4	80.1	70.1	62.3	56.1	51.0	46.7
4916 107	60	1.524	100.6	83.8	71.8	62.9	55.9	50.3	45.7	41.9
	80	1.760	116.1	96.8	83.0	72.6	64.5	58.1	52.8	48.4
	100	1.967	129.8	108.2	92.7	81.1	72.1	64.9	59.0	54.1
	120	2.155	142.2	118.5	101.6	88.9	79.0	71.1	64.7	59.3
4916 120	60	1.917	126.5	105.4	90.4	79.1	70.3	63.2	57.5	52.7
	80	2.213	146.1	121.7	104.3	91.3	81.1	73.0	66.4	60.9
	100	2.474	163.3	136.1	116.6	102.1	90.7	81.7	74.2	68.0
	120	2.710	178.9	149.1	127.8	111.8	99.4	89.4	81.3	74.5

The 4916 series of orifices are available in many sizes falling between those listed on this chart.

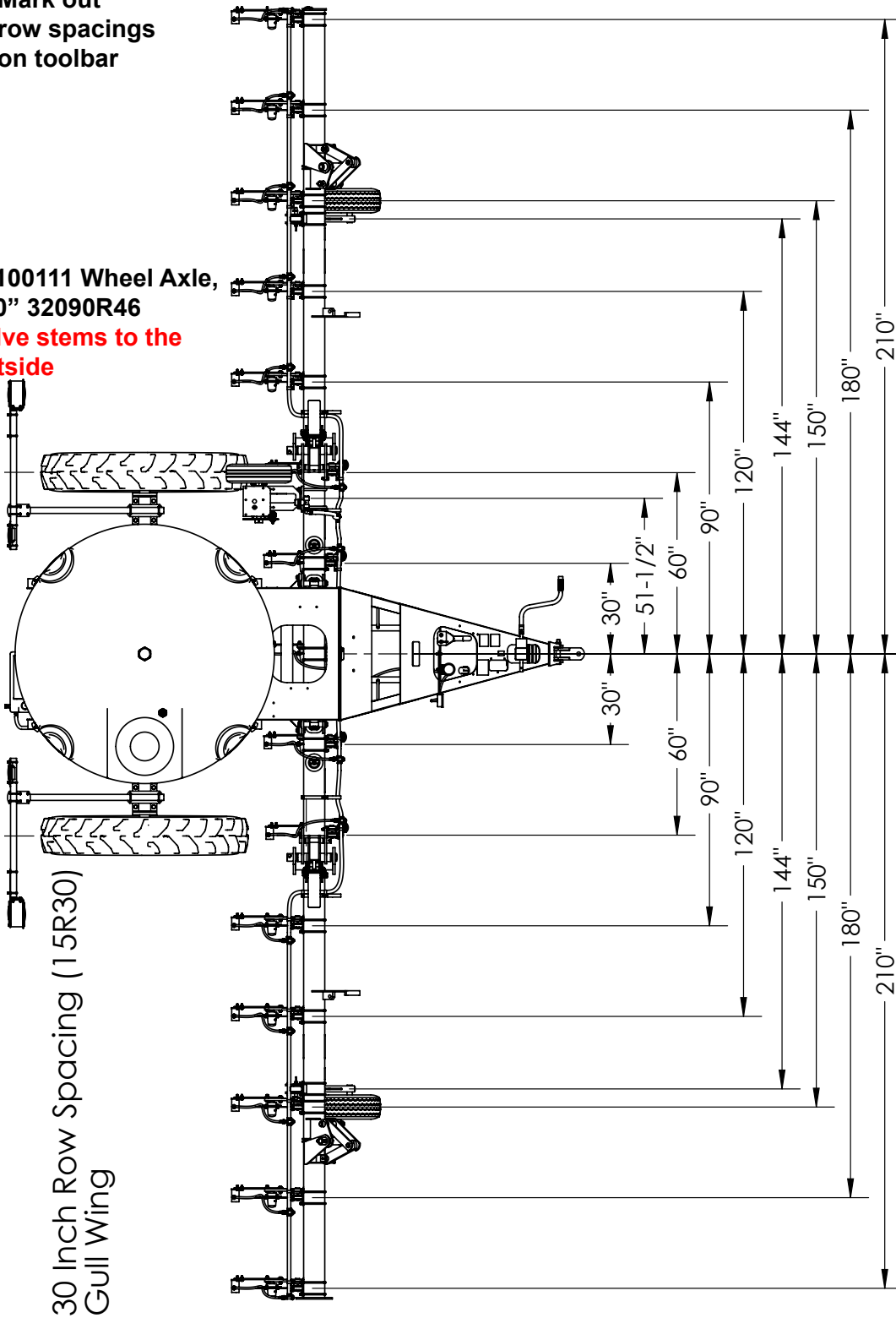
* Standard equipment sizes.

30 Inch Row Spacing (15 Row 30") Gull Wing

Task	Procedures	Illustrations
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► Mark out row spacings on toolbar

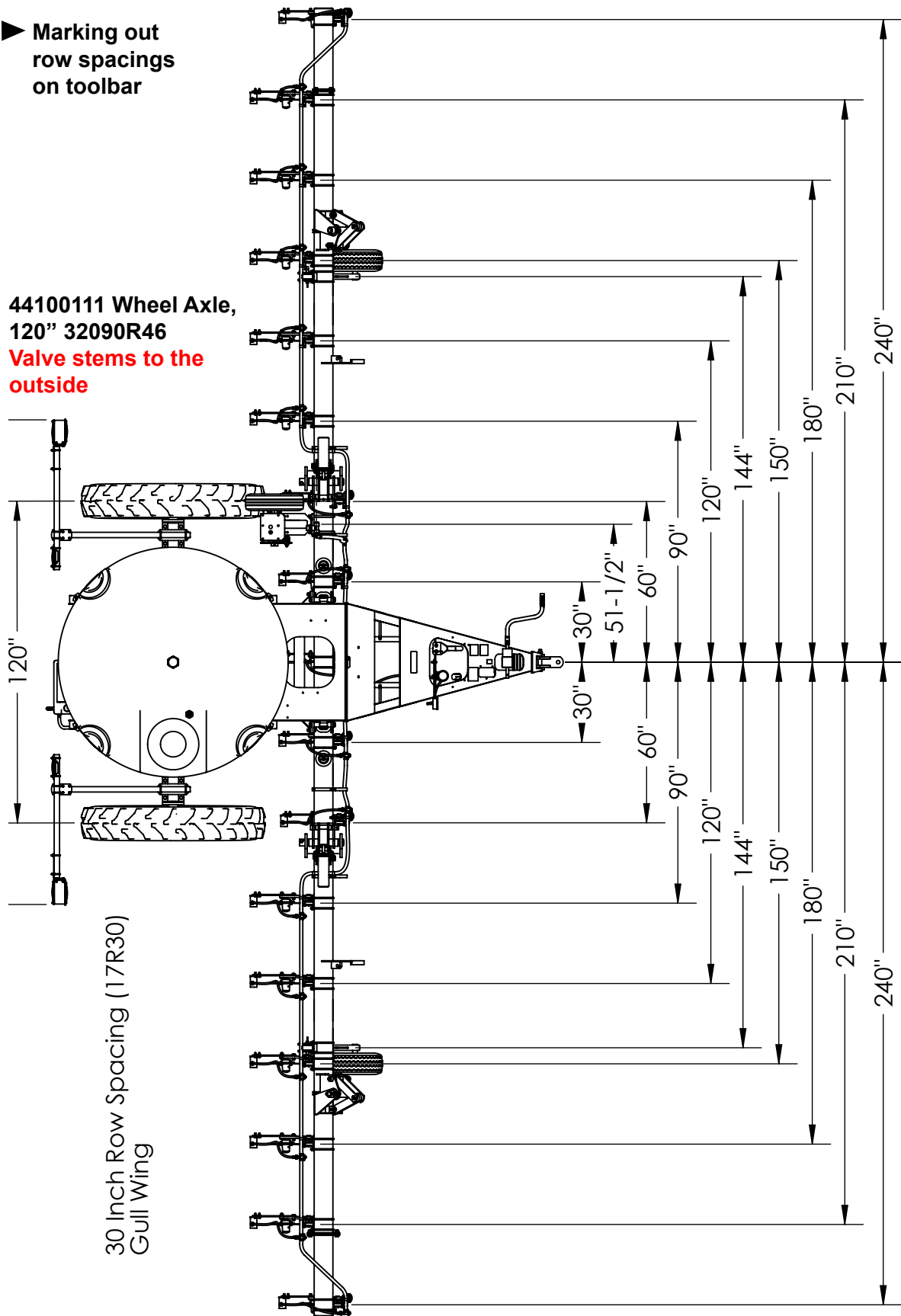
44100111 Wheel Axle,
120" 32090R46
Valve stems to the
outside



BLU-JET AT4615	30 Inch Row Spacing (17 Row 30") Gull Wing	
Task	Procedures	Illustrations

► Marking out row spacings on toolbar

44100111 Wheel Axle,
120" 32090R46
Valve stems to the
outside

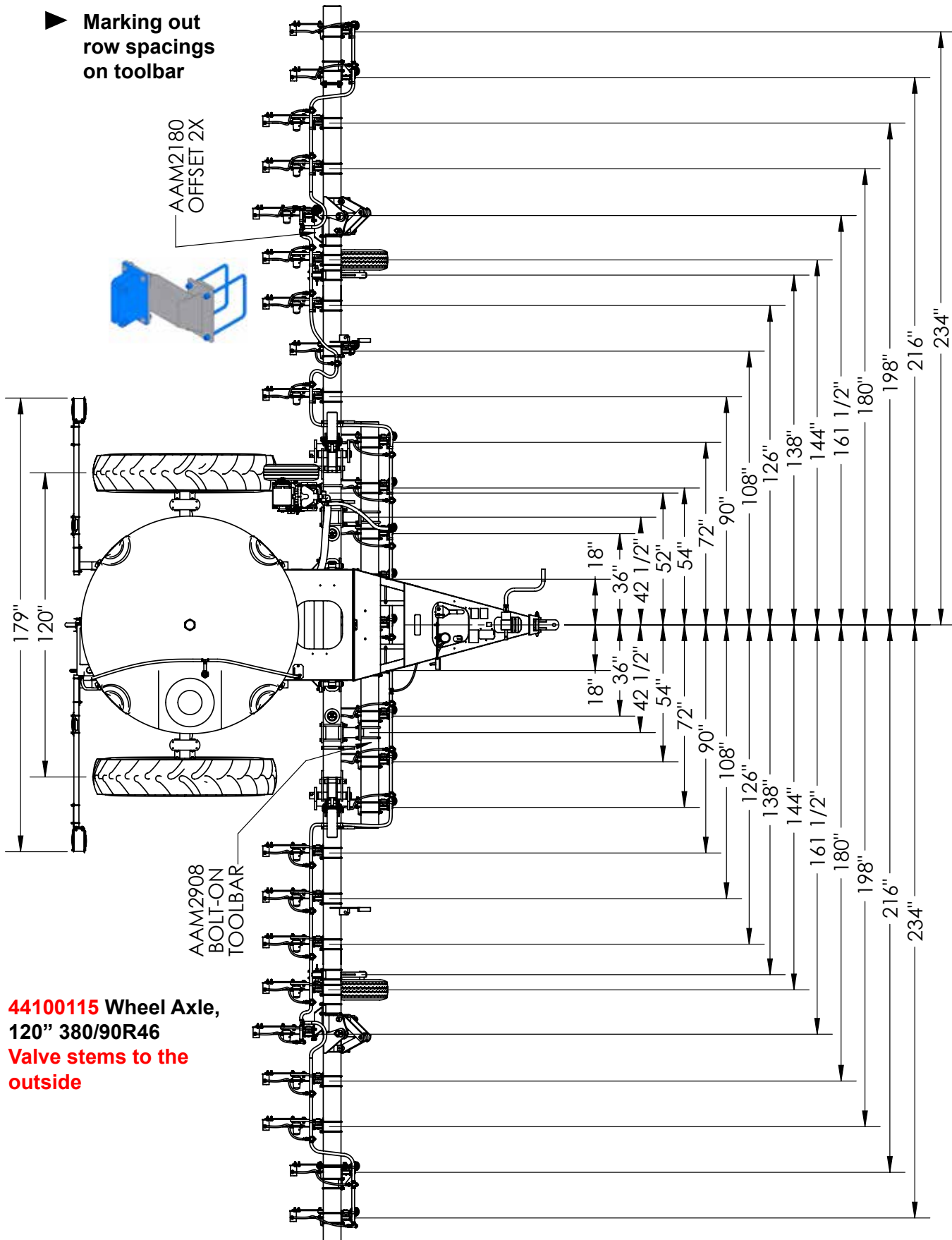


30 Inch Row Spacing (17R30)
Gull Wing

18 Inch Row Spacing (27 Row 18") Gull Wing

Task	Procedures	Illustrations
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▶ Marking out row spacings on toolbar



15 Inch Row Spacing (33 Row 15" Small Grain)

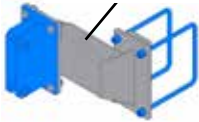
Task

Procedures

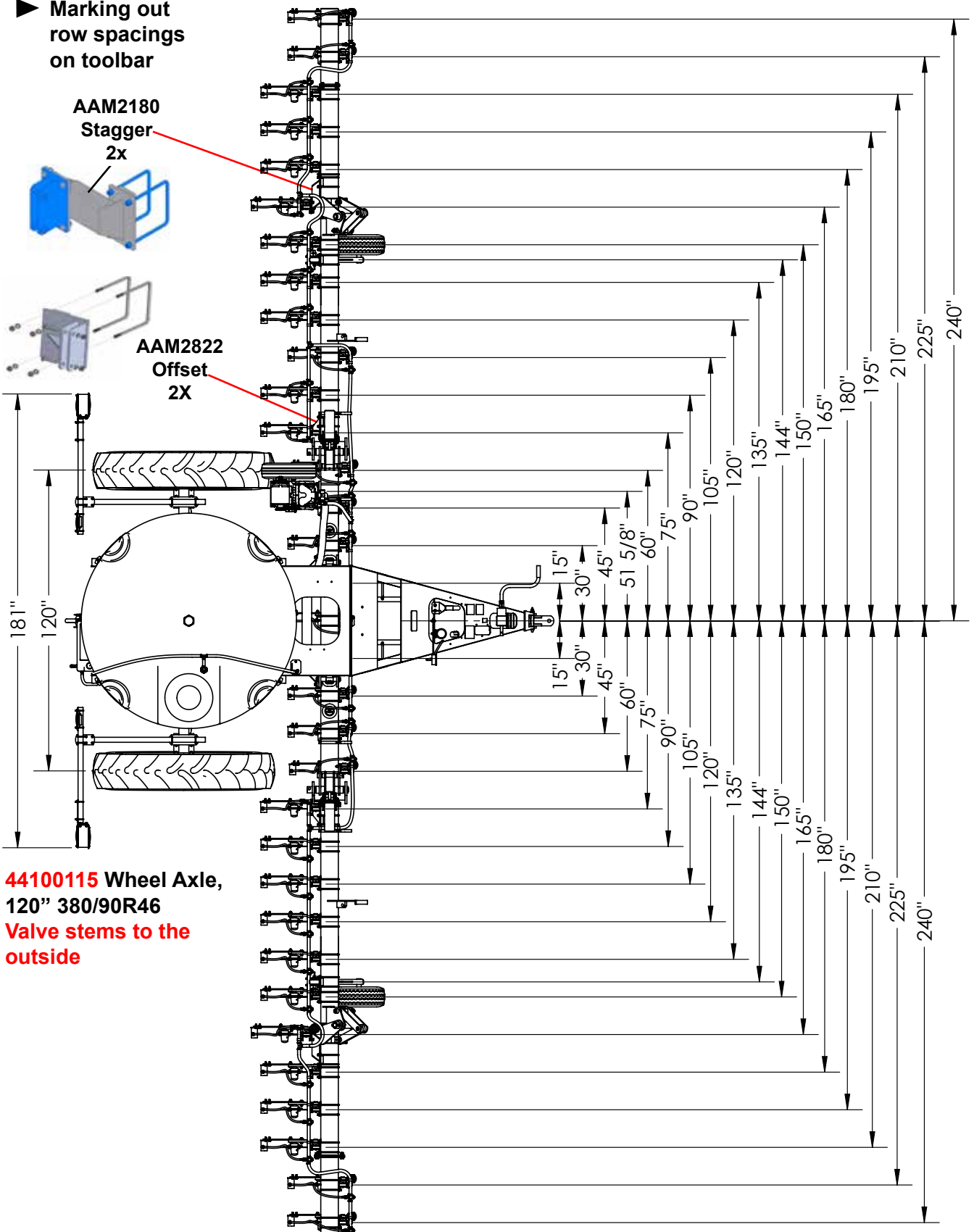
Illustrations

► Marking out row spacings on toolbar

AAM2180
Stagger
2x

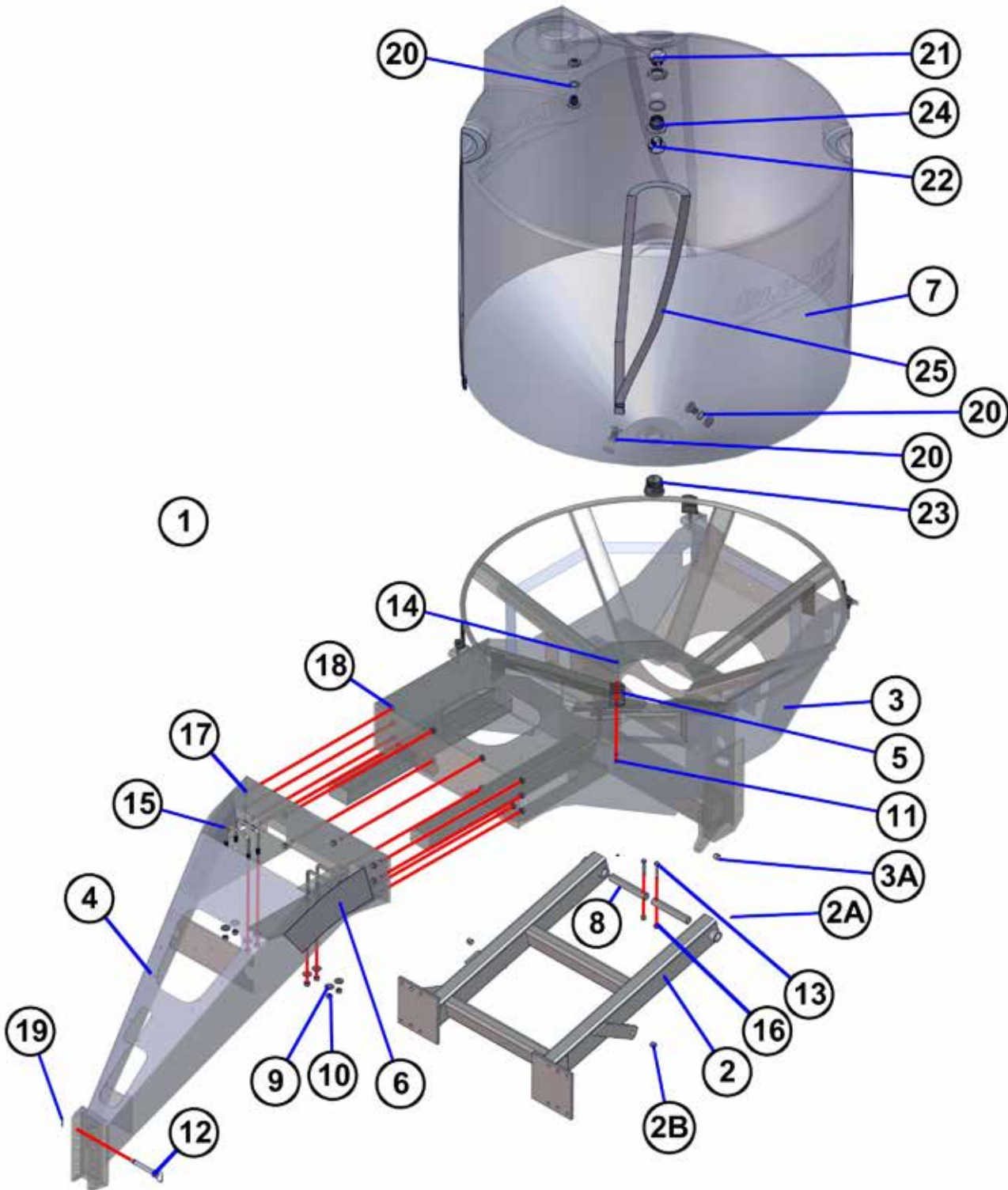


AAM2822
Offset
2X



44100115 Wheel Axle,
120" 380/90R46
Valve stems to the
outside

AT4615 Main Frame (AAM2844)



AT4615 Main Frame (AAM2844)

BOM ID	Qty	Item No	Description
1	1	AAM2844	ASSEMBLY, AT4615, CART FRAME, TANK & LIFT ARM
2	1	AM3638	ARM, TOOLBAR LIFT, AT COMBO
2A	2	BP3072	GREASE ZERK, 1/4"-28
2B	2	BP3516	TENSION BUSHING, 1-1/4" X 1" X 1" OAL
3	1	AM3648	FRAME, MAIN, TANK, AT4
3A	2	BP3516	TENSION BUSHING, 1-1/4" X 1" X 1" OAL
4	1	AM3687	TONGUE, AT4015 / AT4615
5	4	AM4432	BRACKET, TANK STRAP ADJUSTMENT, 2" STRAP
6	2	AP2582	DECAL, AT4615, ALL-TERRAIN INJECTION
7	1	AP3209	TANK, 1775 GALLON, 30° CONE BOTTOM, GRAY
8	2	BM3496	PIN, 1-3/4" X 10-3/4" OAL, W/ 21/32" HOLE, PLATED
9	8	BP3033	WASHER, FLAT, 3/4", PLATED, STD TYPE A, SERIES W
10	8	BP3034	NUT, HEX, 3/4"-10, GRADE 2, PLATED
11	8	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
12	1	BP3051	PIN, 1" X 6", HITCH, PLATED
13	2	BP3135	HEX CAP SCREW, 5/8"-11 X 3-1/2", GRADE 5, PLATED
14	4	BP3217	HEX CAP SCREW, 1/2"-13 X 5, FULL THREAD, GRADE 8, PLATED
15	4	BP3352	U-BOLT, 3/4"-10 X 6"W X 5-11/16"L, PLATED
16	2	BP3375	NUT, HEX LOCK, 5/8"-11, NYLOCK
17	12	BP3441	HEX CAP SCREW, 3/4"-10 X 2", GRADE 8, PLATED
18	12	BP3442	NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED
19	1	BP3511	PIN, COTTER, 3/16" X 1-3/4"
20	3	CP2040	TANK OUTLET FITTING 1/2" FPT, FITS 1-3/8" HOLE
21	1	CP2042	HOODED VENT, 2" MPT POLY W/SCREEN
22	1	CP2043	HOODED VENT, 2" MPT POLY WO/SCREEN
23	1	CP2065	ADAPTER, 3 MPT X 3 FLANGE
24	1	CP2550	TANK OUTLET FITTING, 2" FITS 3" HOLE
25	4	MP0053_144	TANK STRAP, 2" BULK, POLYESTER WEBBING, BLACK, 144"

AT4615 Crated Items, Single Bar (PKG00242)

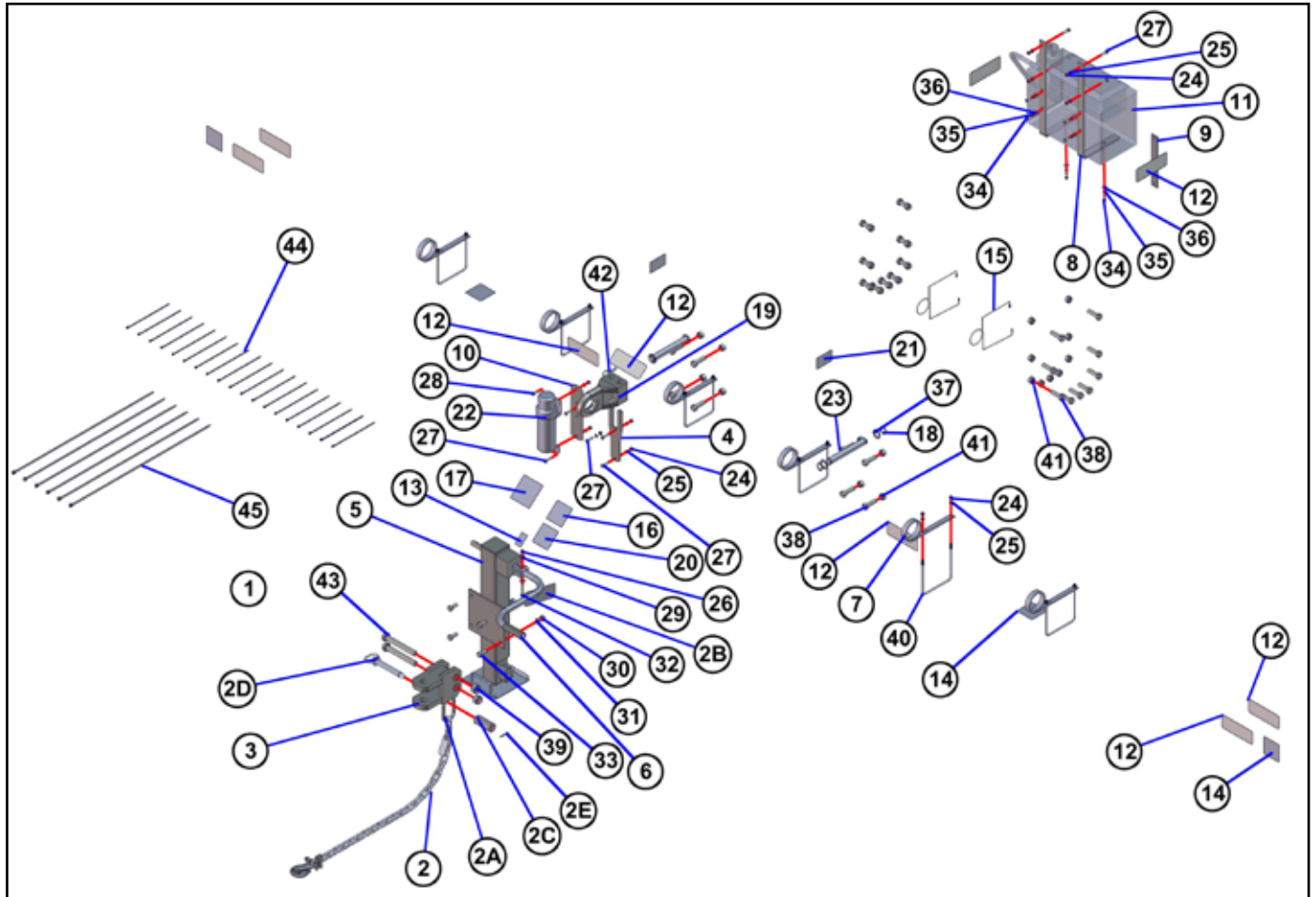
BOM ID	Qty	Item No	Description
1	1	PKG00242	PACKAGE, AT4615 CRATED ITEMS, SINGLE BAR
2	1	AAM2423	TRANSPORT CHAIN KIT, 30,000 #
2A	1	AP2195	TRANSPORT CHAIN, 30000#, 7/16"
2B	1	AP2469	DECAL, SAFETY CHAIN
2C	1	BM3498	BUSHING, SAFETY CHAIN
2D	1	BP3051	PIN, 1" X 6", HITCH, PLATED
2E	1	BP3511	PIN, COTTER, 3/16" X 1-3/4"
3	1	AM2144	HITCH, CLEVIS
4	1	AM2145	BRACKET, HITCH STORAGE, 6" MOUNTING
5	1	AM3582	JACK, 12SWDL 2-SPEED, W/ MOUNTING PLATE, AT3
6	1	AM3590	CRANK, 90°, SWIVEL GRIP
7	6	AM4015	HOSE RETAINER, CLOSED LOOP, 6" & 7" MOUNTING
8	2	AM4421	BRACKET, TANK MOUNTING, 9 GAL, AT4000
9	1	AM4422	BRACKET, SMV MOUNTING
10	1	AM7640	BRACKET, MOUNTING, MANUAL HOLDER
11	1	AP2137	SAFETY TANK, 9 GALLON
12	9	AP2215	DECAL, BLU-JET, 3" X 8"
13	1	AP2231	DECAL, FEMA, 2-1/2" X 1-1/2"
14	4	AP2234	DECAL, DANGER STAND CLEAR FALLING WING
15	2	AP2284-1	HOSE RETAINER, 7" X 7", W/PLASTIC CAPS
16	1	AP2483	DECAL, DANGER, FALLING FROM EQUIPMENT
17	1	AP2497	DECAL, CAUTION, AT3000 PRIMARY WING HYDRAULICS IN FLOAT
18	4	AP2711	SNAP RING, 1-1/4" EXTERNAL, HEAVY DUTY
19	1	AP2850	PERFECT HITCH, CAT III, BLACK
20	1	AP2914	DECAL, WARNING, HIGH-PRESSURE FLUID
21	2	AP2969	DECAL, WARNING, PINCH POINT, 2-1/2" X 4"
22	1	AP4254	MANUAL HOLDER, BLACK
23	2	BM3544	PIN, 1-1/4" X 9" USEABLE
24	22	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
25	22	BP3002	WASHER, LOCK, 3/8", PLATED
26	1	BP3003	NUT, HEX LOCK, 3/8"-16, GRADE 2, PLATED
27	9	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
28	1	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
29	2	BP3015	WASHER, FLAT, 3/8", PLATED
30	4	BP3038	NUT, HEX, 5/8"-11, GRADE 2
31	4	BP3039	WASHER, LOCK, 5/8", PLATED
32	1	BP3096	HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 5, PLATED
33	4	BP3097	HEX CAP SCREW, 5/8"-11 X 1-1/2", GRADE 5, PLATED
34	6	BP3108	HEX CAP SCREW, 5/16"-18 X 1", GRADE 5, PLATED
35	6	BP3158	WASHER, LOCK, 5/16", PLATED
36	6	BP3159	WASHER, FLAT, 5/16", PLATED
37	4	BP3192	MACHINERY BUSHING, 1-7/8" OD X 1-1/4" ID X 10GA, PLATED
38	26	BP3197	HEX CAP SCREW, 3/4"-10 X 2-1/2", GRADE 8, PLATED
39	2	BP3295	NUT, HEX LOCK, 1"-8, NYLOCK
40	6	BP3335	U-BOLT, 3/8"-16 X 7"W X 8"L, PLATED
41	26	BP3442	NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED
42	1	BP3500	PIN, HAIR CLIP, 3/16"
43	2	BP3577	HEX CAP SCREW, 1"-8 X 7-1/2", GRADE 8, PLATED
44	20	DP4086	CABLE TIE 11-3/8" STD
45	6	DP4296	CABLE TIE 33"

AT4615 Crated Items, Single Bar (PKG00242)

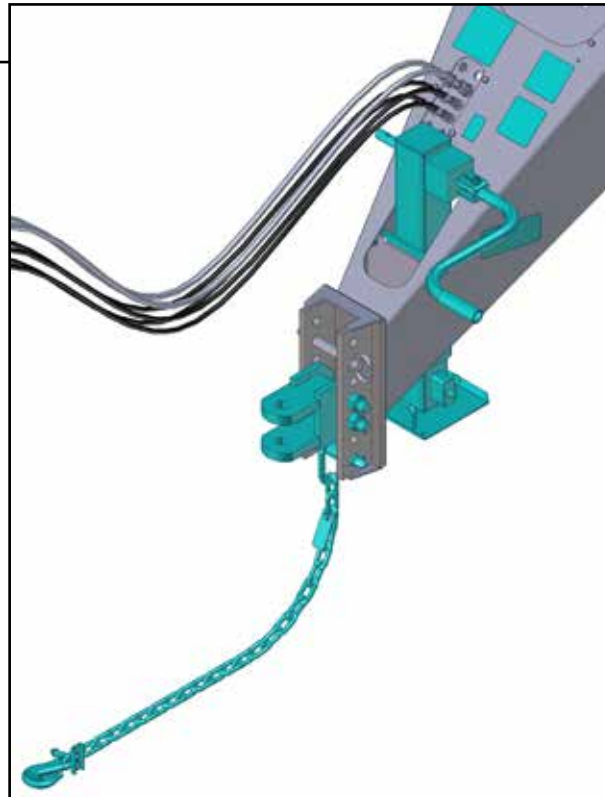
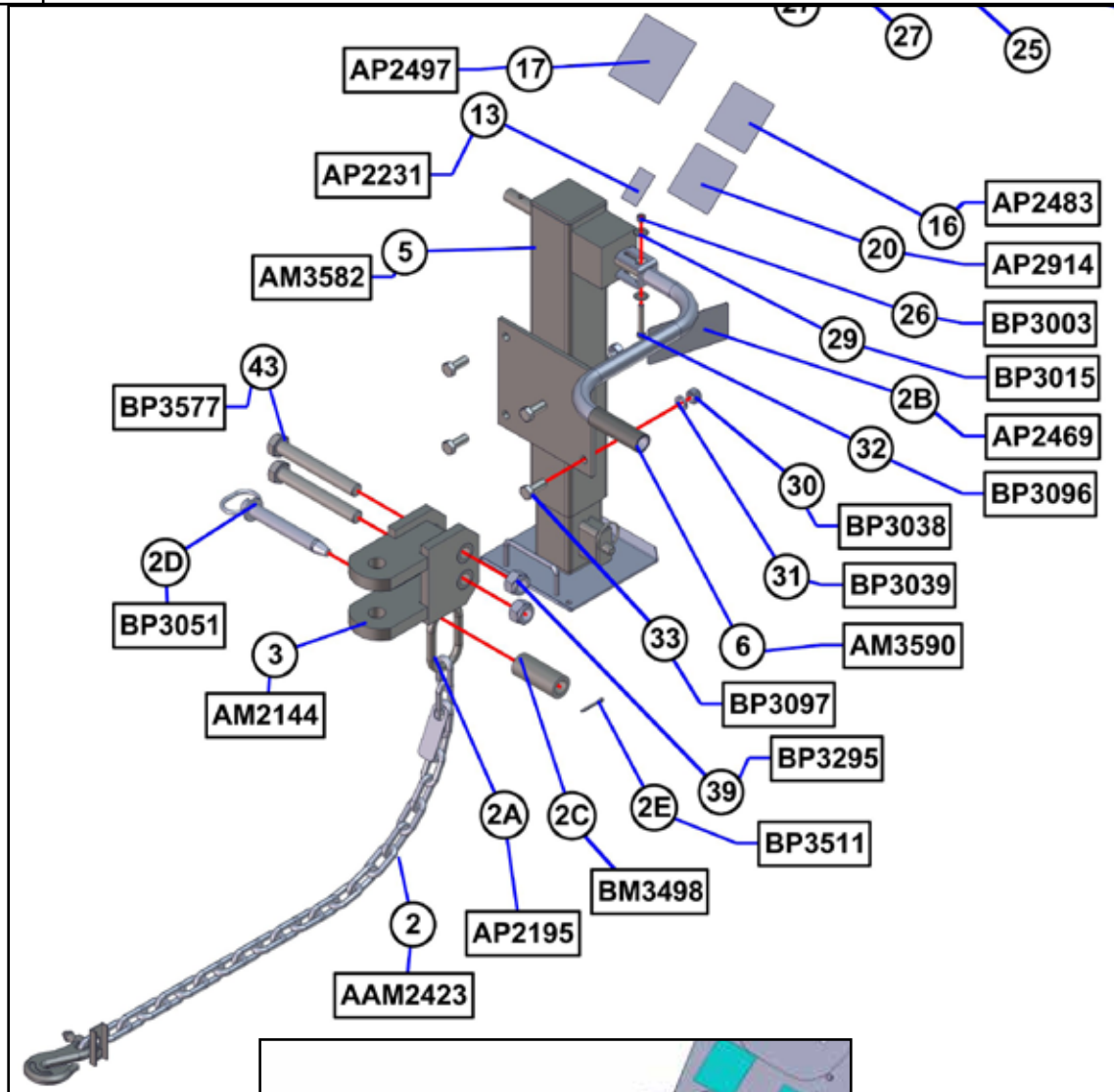
Task

Procedures

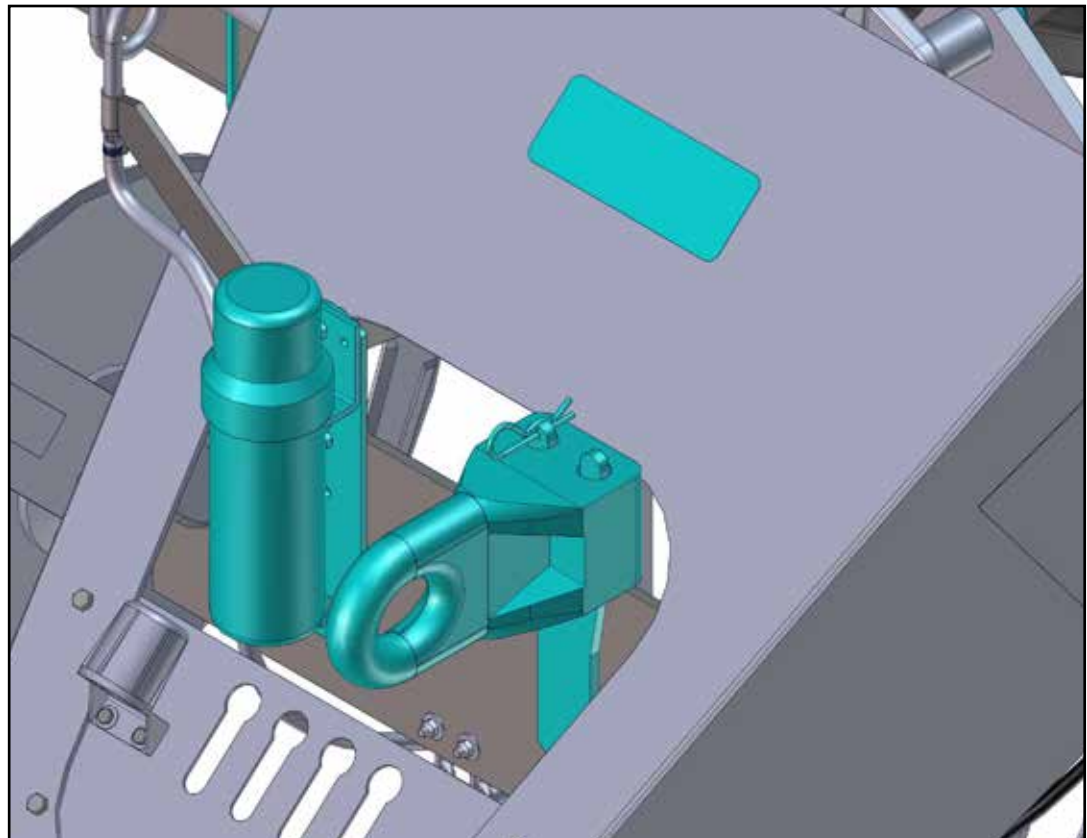
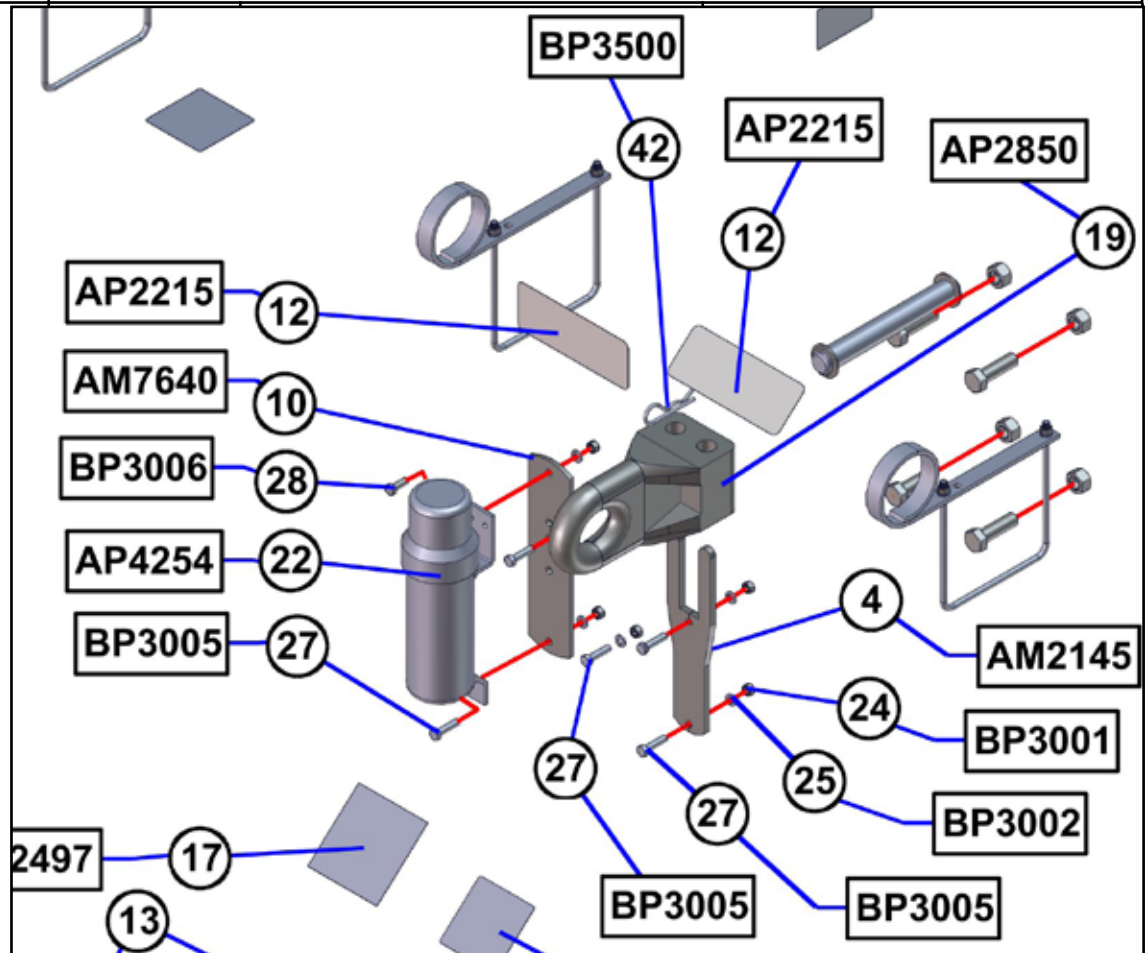
Illustrations



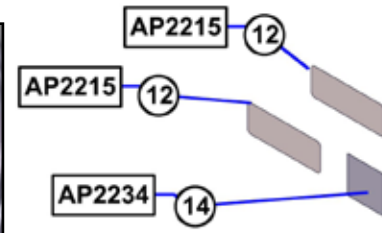
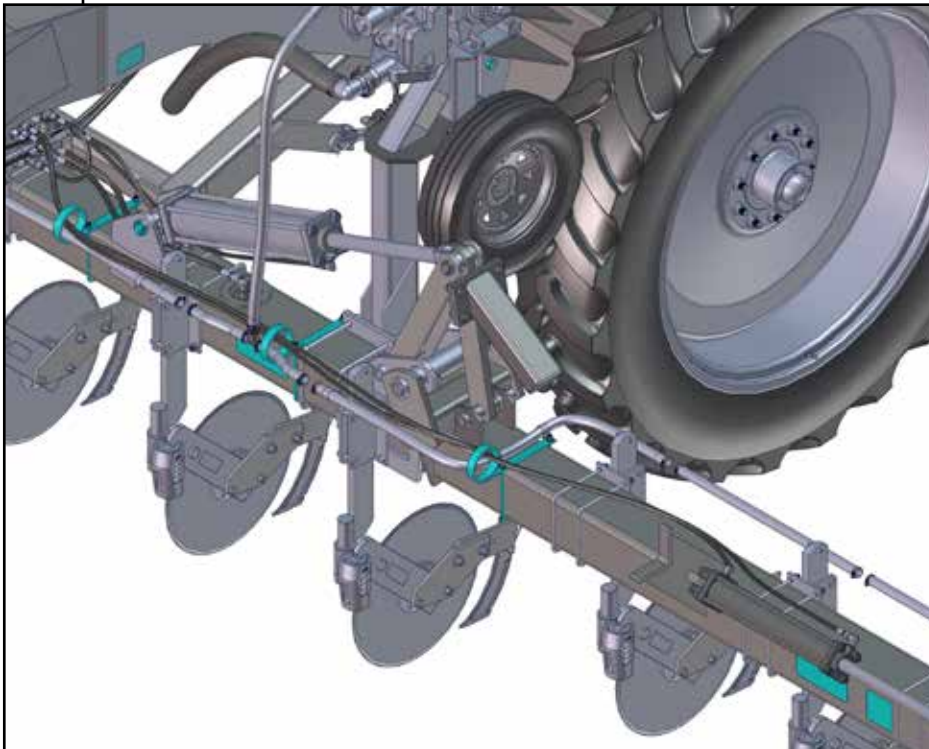
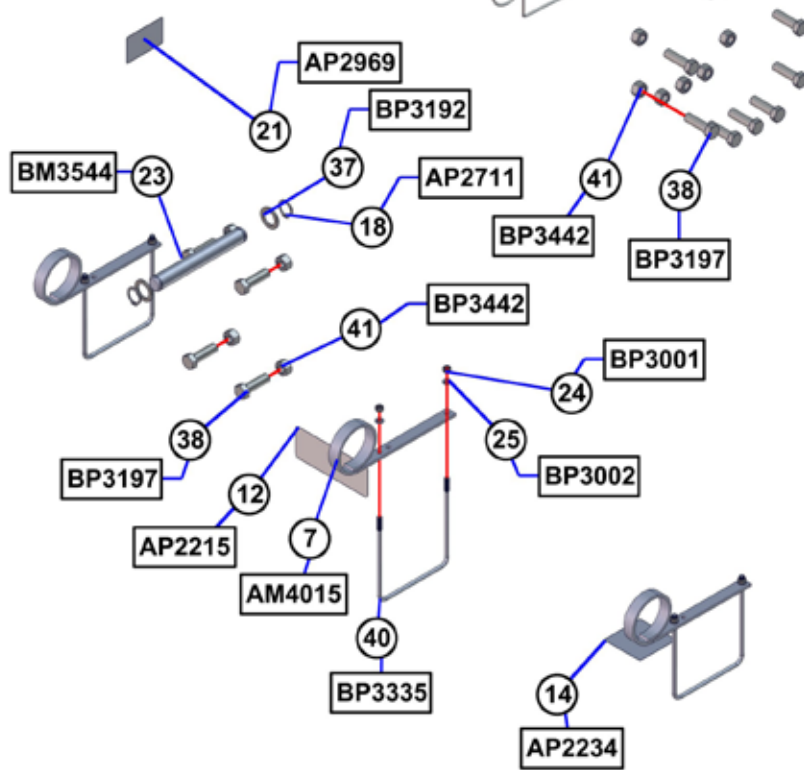
AT4615 Crated Items, Single Bar (PKG00242)



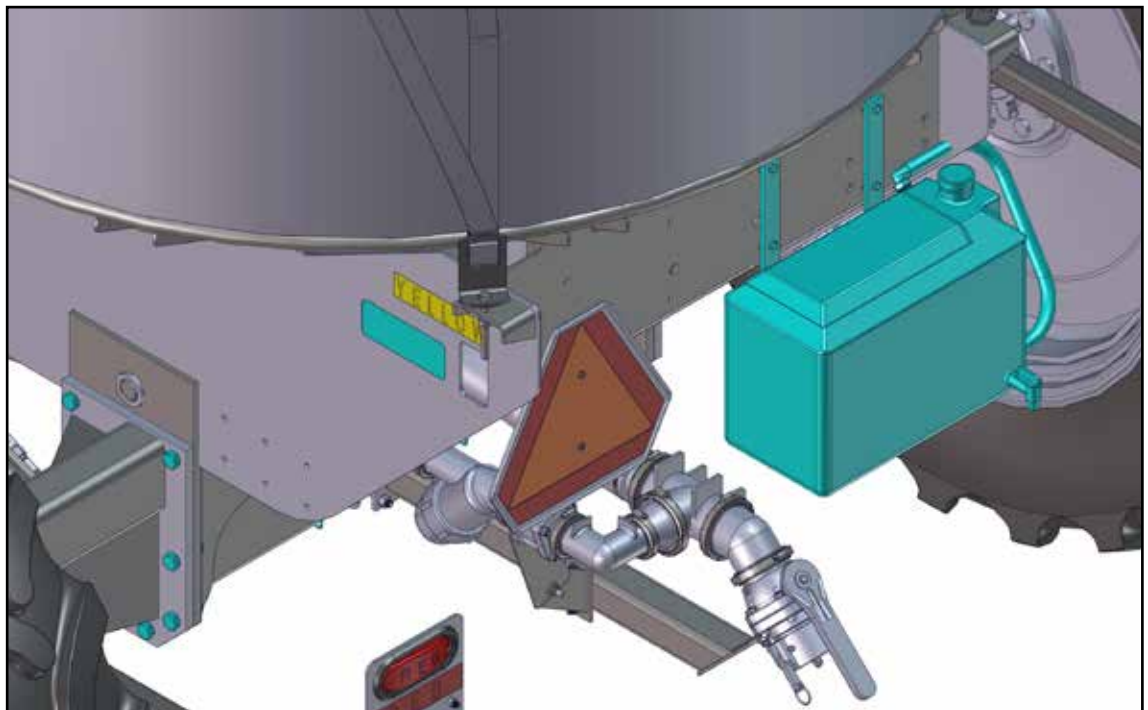
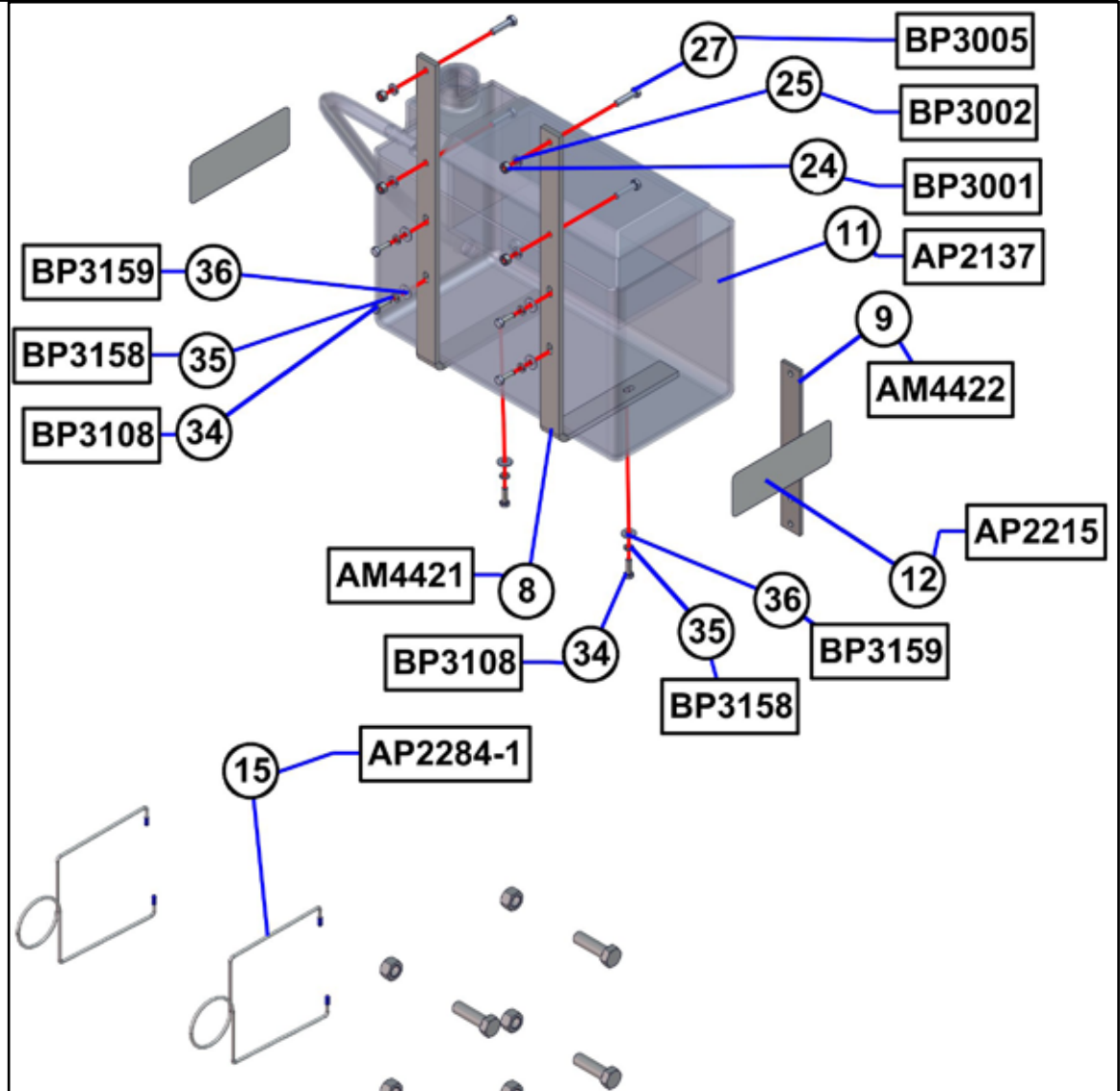
AT4615 Crated Items, Single Bar (PKG00242)

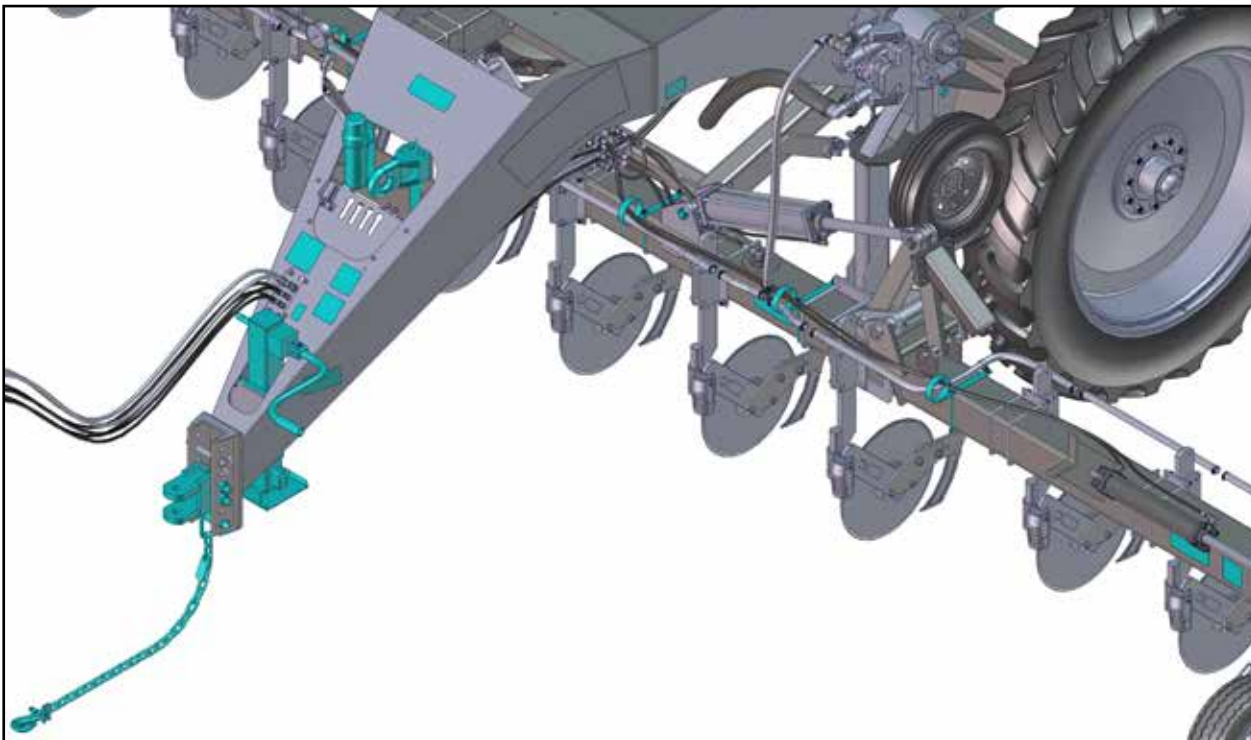
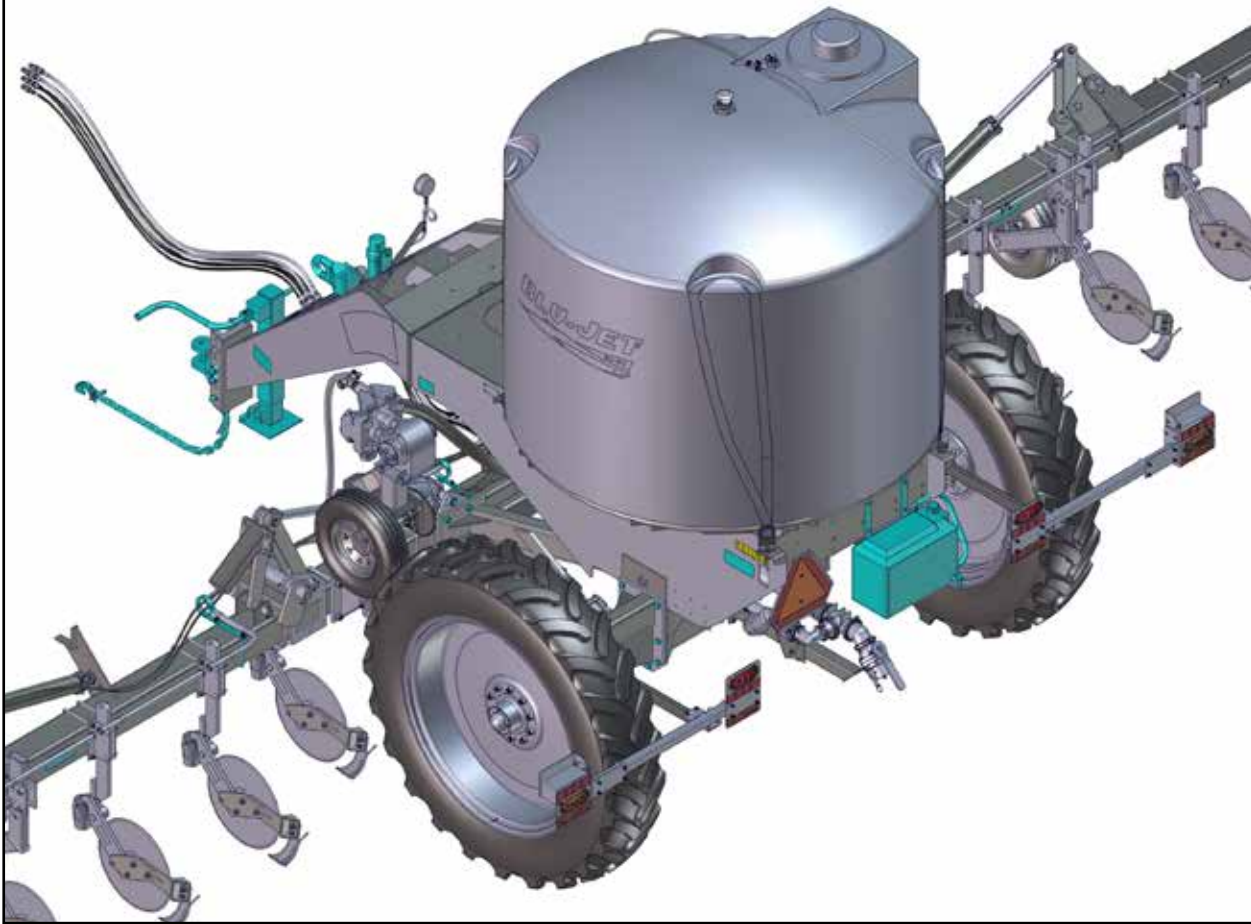


AT4615 Crated Items, Single Bar (PKG00242)

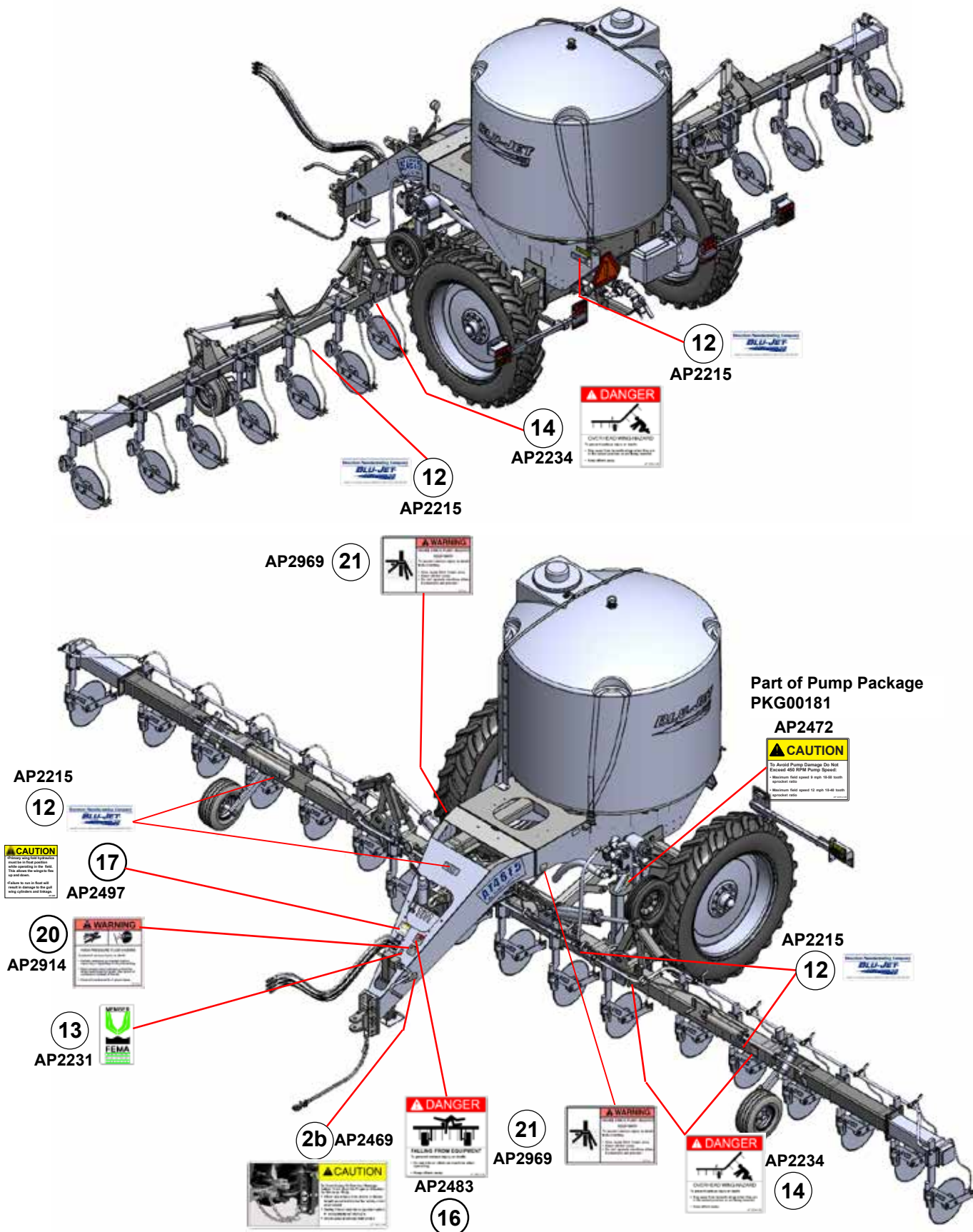


AT4615 Crated Items, Single Bar (PKG00242)

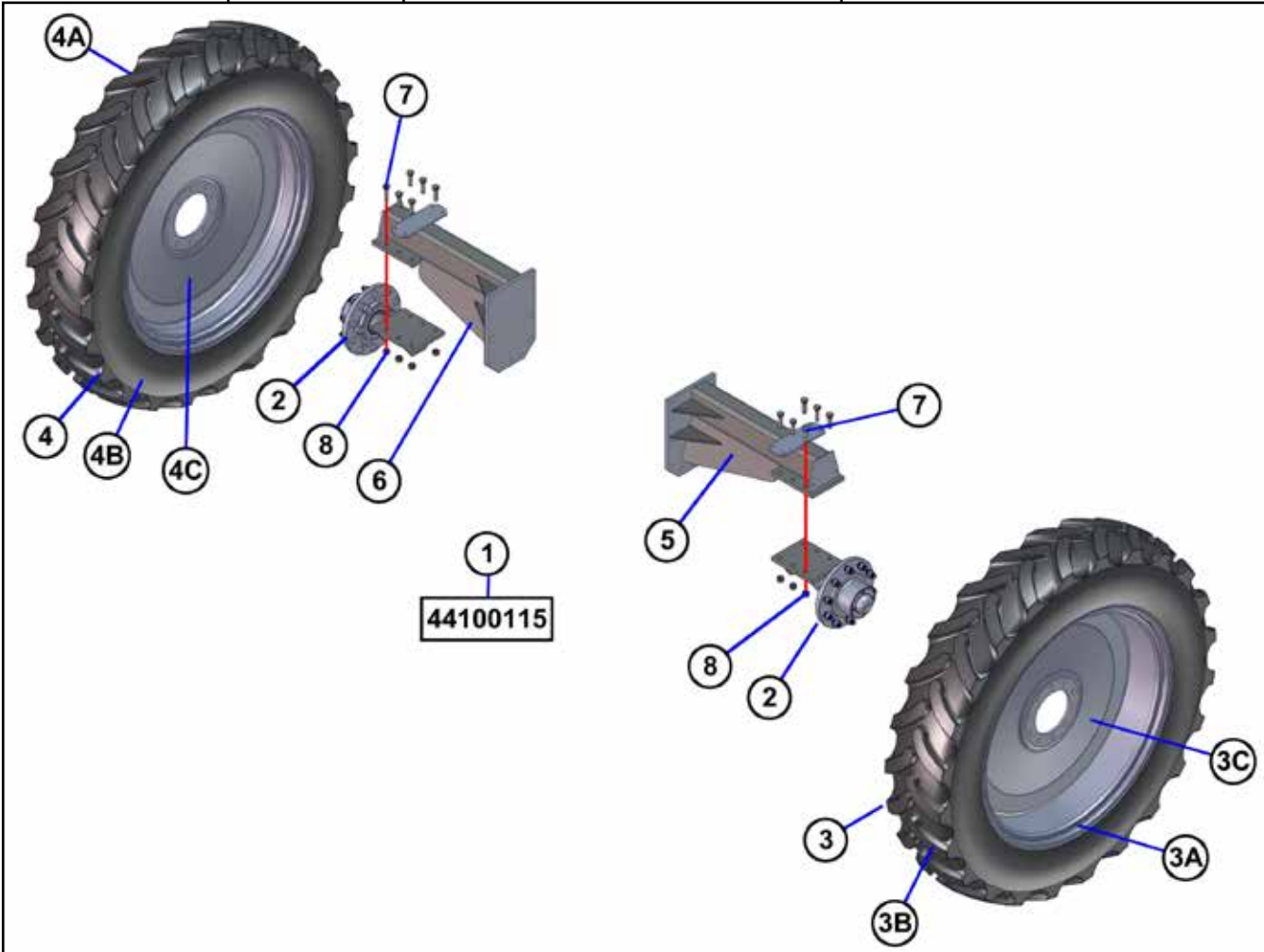




AT4615 Crated Items, Single Bar (PKG00242)

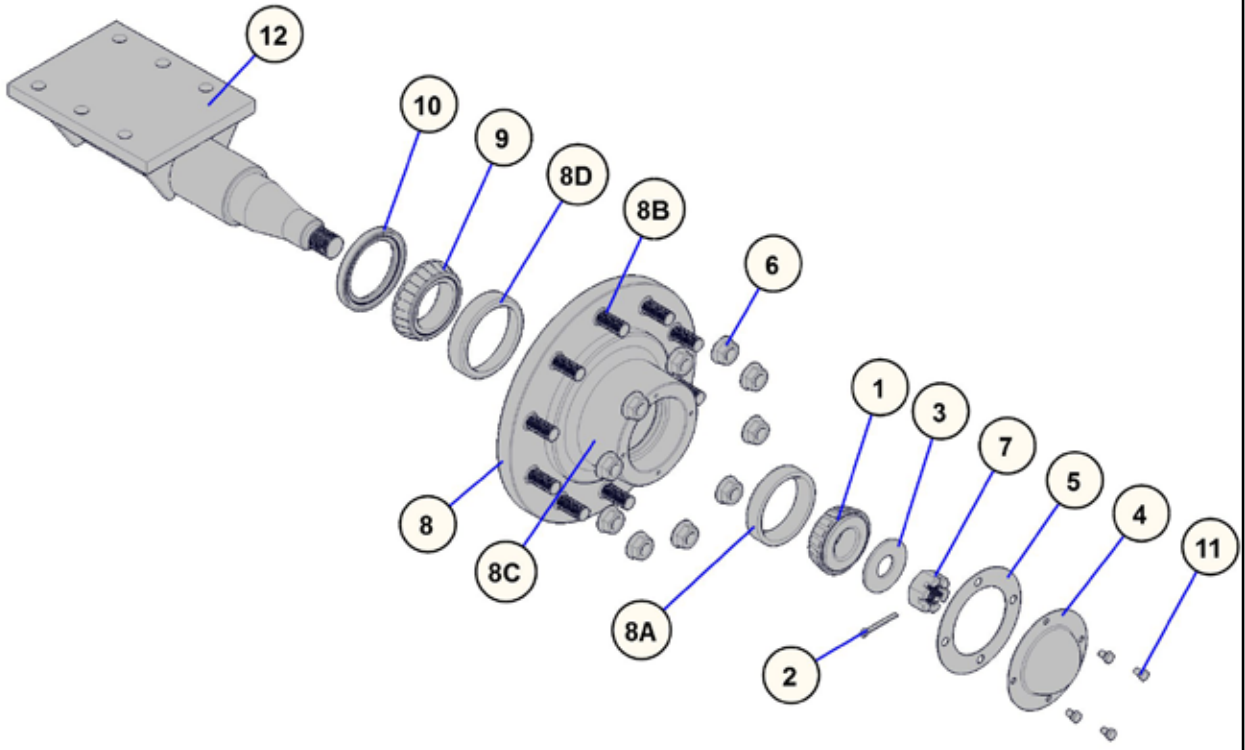


Wheel/Axle, AT4615 120" (44100115)



BOM ID	Qty	Item No	Description
1	1	44100115	WHEEL/AXLE, AT4615 120", SINGLE, 380/90R46
2	2	AAM2791	HUB & SPINDLE ASSEMBLY, 873 W/ BOLT ON SPINDLE ASSEMBLY
3	1	AAM2921	WHEEL, 380/90R46, 168A8, LH ASSEMBLY, GRAY
3A	1	AP2790	VALVE STEM, METAL
3B	1	AP3154	TIRE, 380/90R46, 168A8, ULTRA SPRAY TL
3C	1	AP3211	RIM, 46 X 13 X 10, GRAY, 0" OFFSET, 11.25" BC
4	1	AAM2922	WHEEL, 380/90R46, 168A8, RH ASSEMBLY, GRAY
4A	1	AP2790	VALVE STEM, METAL
4B	1	AP3154	TIRE, 380/90R46, 168A8, ULTRA SPRAY TL
4C	1	AP3211	RIM, 46 X 13 X 10, GRAY, 0" OFFSET, 11.25" BC
5	1	AM3655	AXLE, 120" SPACING, LH, AT4615, 380/90R46 TIRE
6	1	AM3656	AXLE, 120" SPACING, RH, AT4615, 380/90R46 TIRE
7	12	BP3197	HEX CAP SCREW, 3/4"-10 X 2-1/2", GRADE 8, PLATED
8	12	BP3442	NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED

AAM2791 Hub and Spindle

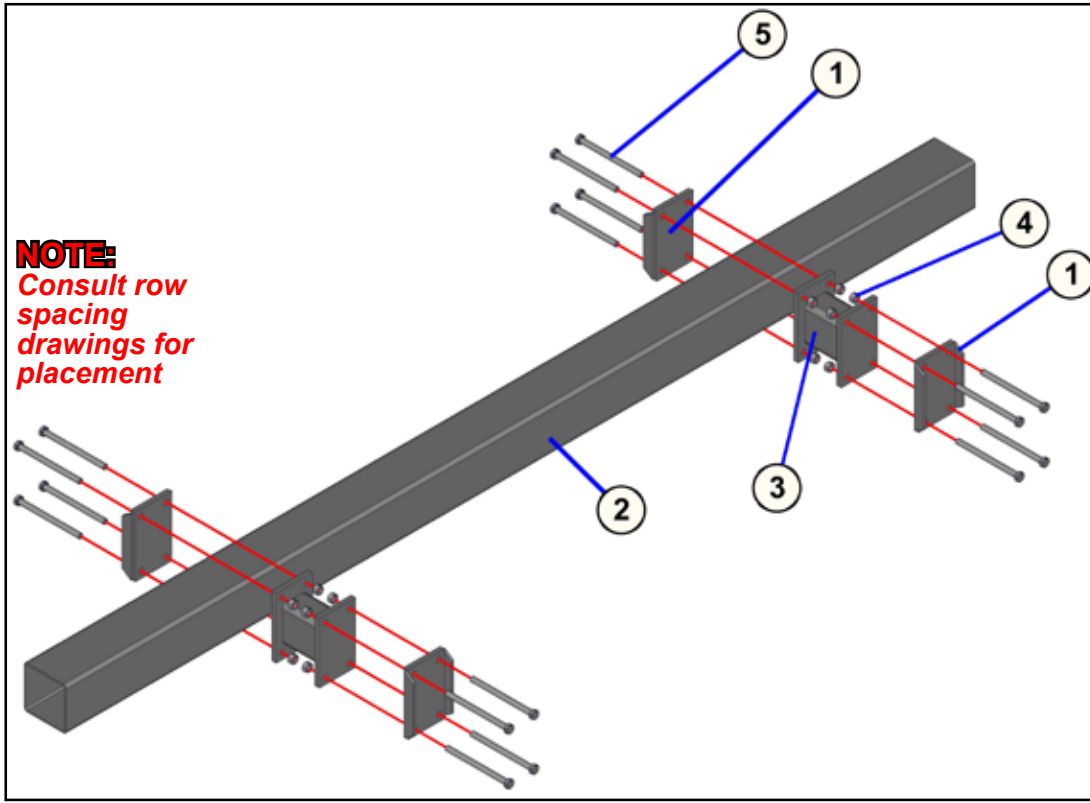


BOM ID	Qty	Item No	Description
1	1	AP2352	BEARING CONE, 460
2	1	AP2355	PIN, COTTER, 7/32" X 2"
3	1	AP2356	WASHER, SPINDLE, 3" X 1-5/16" X .156"
4	1	AP2357	HUB CAP
5	1	AP2358	GASKET, HUB CAP
6	10	AP2362	NUT, HEX FLANGE, 3/4"-16
7	1	AP2388	NUT, SPINDLE, 1-1/4"-12
8	1	AP4225	HUB WITH CUPS, 10 BOLT, 873, 11.25" BOLT CIRCLE, 8.65" PILOT
8A	1	AP2360	BEARING CUP, 453A
8B	10	AP2361	BOLT, WHEEL STUD, 3/4"-16 X 2-3/4"
8C	1	AP4225-HUB	HUB
8D	1	AP4229	BEARING CUP, 33462
9	1	AP4226	BEARING CONE, 33275
10	1	AP4228	GREASE SEAL, CR 33772
11	4	BP3262	BOLT, HEX HEAD MACHINE, 5/16"-18 X 1/2", PLATED
12	1	EM7279	SPINDLE & MOUNTING PLATE

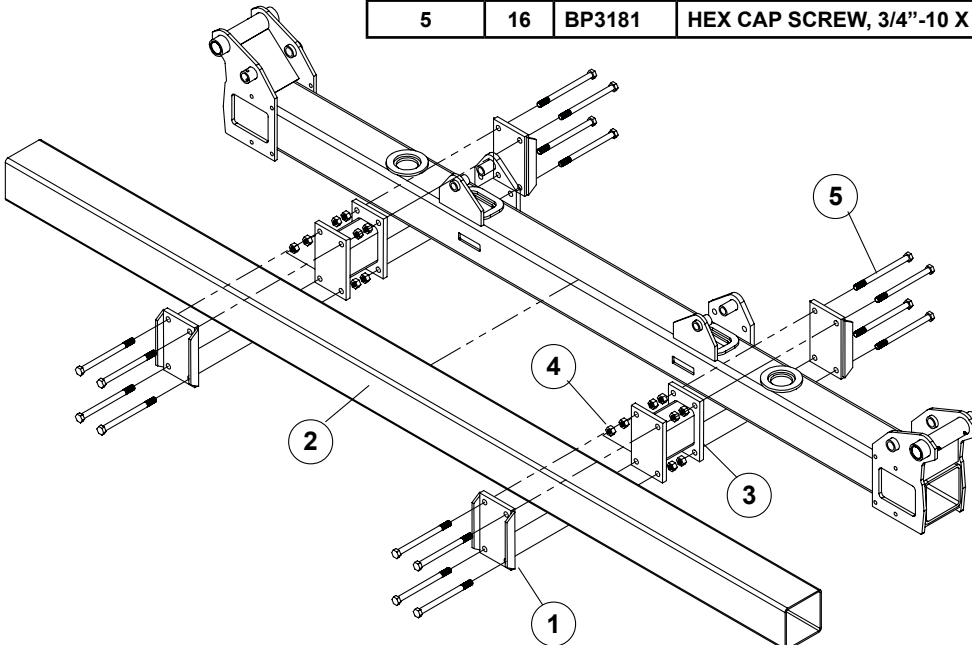
AAM2647 Bolt-on Coulter Bar

► AAM2647 COULTER BAR, BOLT-ON, AT LIQUID GULL WING, CENTER

NOTE:
Consult row
spacing
drawings for
placement

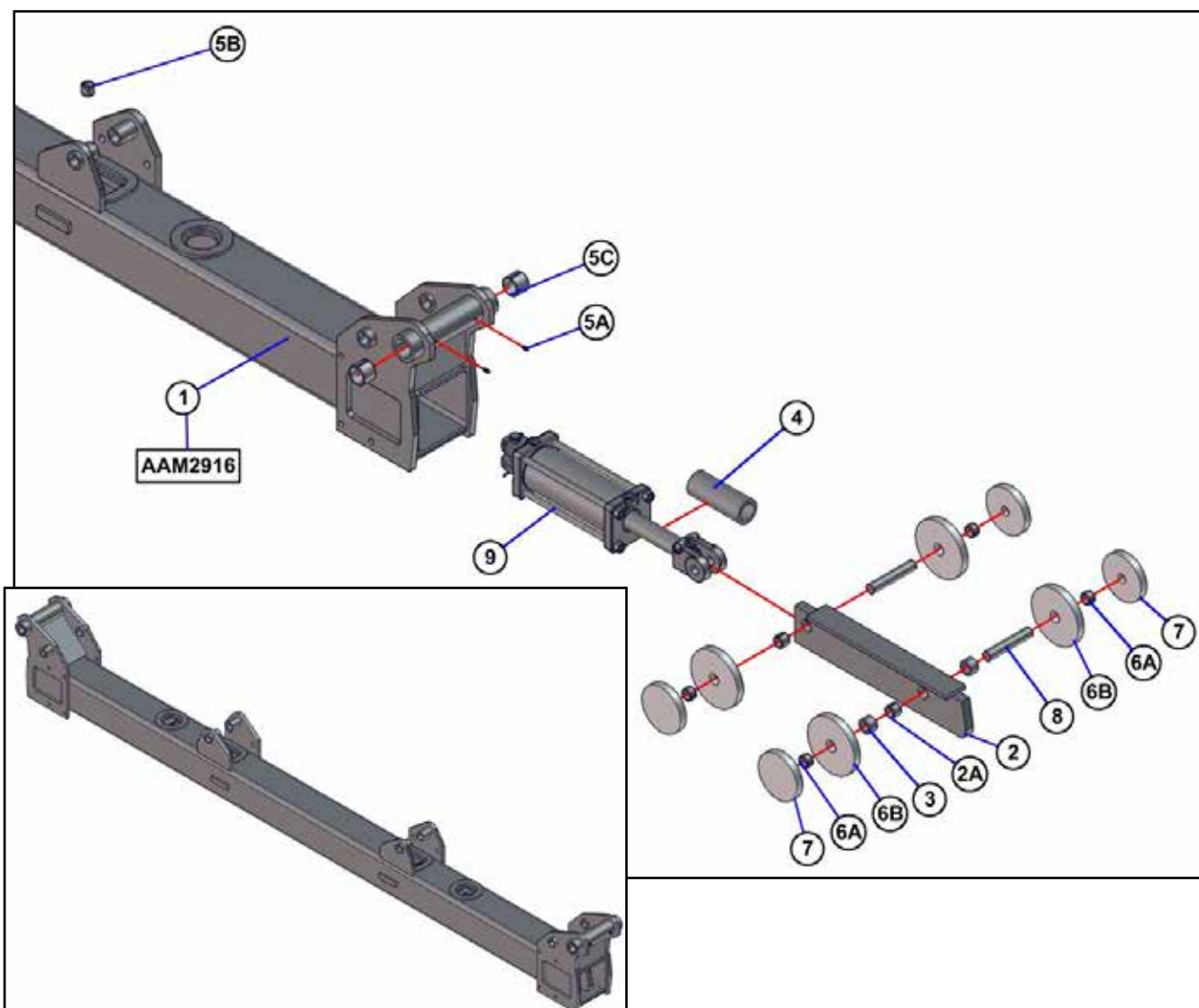


BOM ID	Qty	Item No	Description
1	4	AM3099	BACKING PLATE
2	1	AM3545	TUBE (12'6")
3	2	AM7536	BRACE, BOLT-ON FRAME SUPPORT
4	16	BP3034	NUT, HEX, 3/4"-10, GRADE 2, PLATED
5	16	BP3181	HEX CAP SCREW, 3/4"-10 X 10, GRADE 5, PLATED



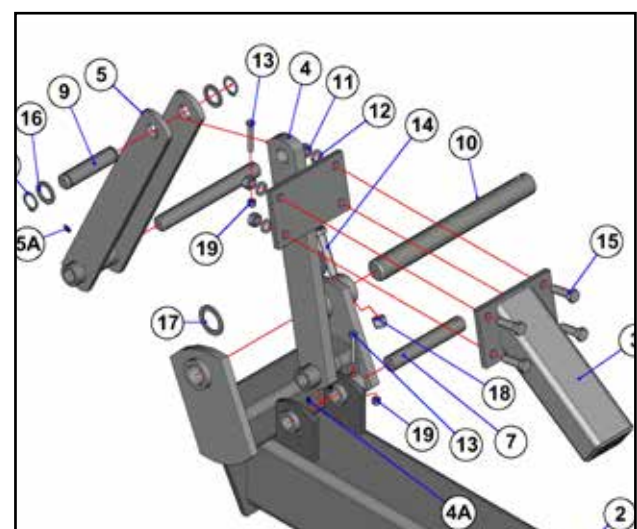
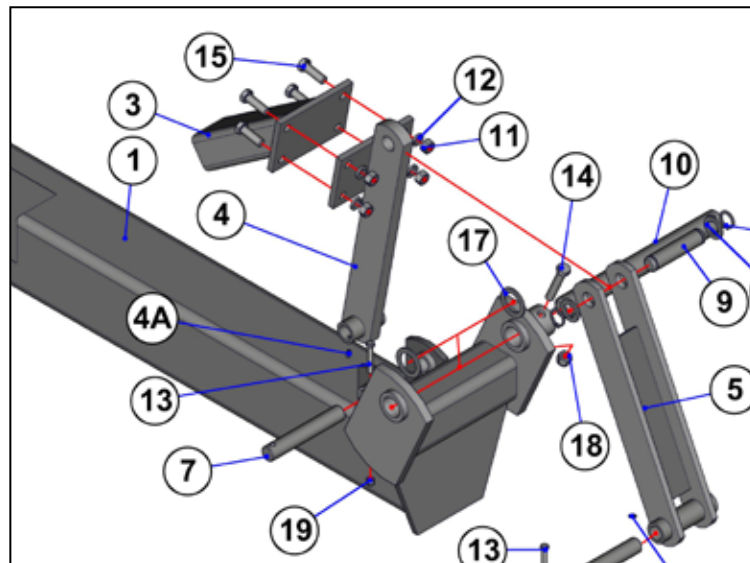
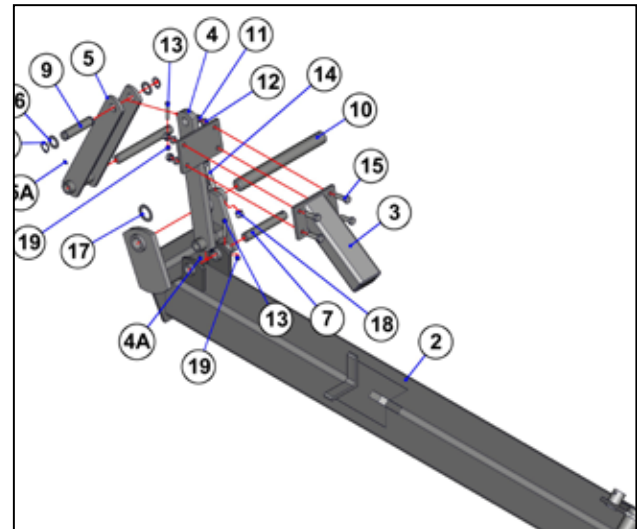
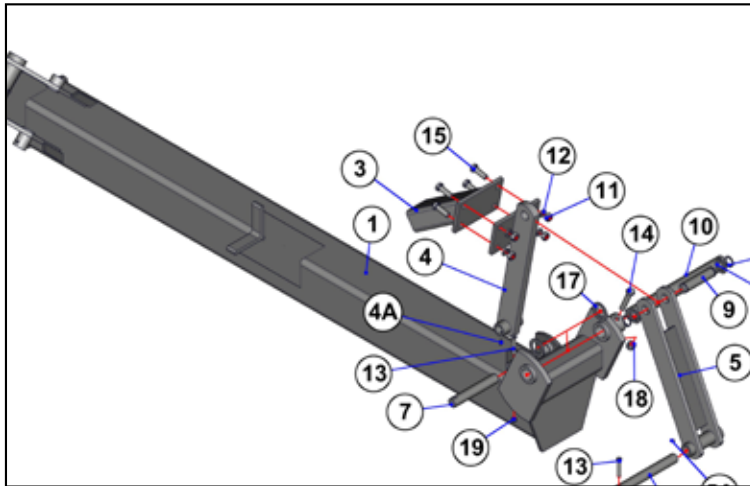
Gull Wing Toolbar (Center AAM2916)

BOM ID	Qty	Item No	Description
1	1	AAM2916	ASSEMBLY, GULL WING CENTER SECTION FRAME, AT LIQUID
2	2	AM3539	LINKAGE, GULL WING, AT LIQUID TOOLBAR
2A	4	BP3516	TENSION BUSHING, 1-1/4" X 1" X 1" OAL
3	4	AM3540	BUSHING
4	2	AM3541	BUSHING
5	1	AM3584	FRAME, GULL WING CENTER SECTION, AT LIQUID
5A	4	BP3072	GREASE ZERK, 1/4"-28
5B	2	BP3516	TENSION BUSHING, 1-1/4" X 1" X 1" OAL
5C	4	BP3538	TENSION BUSHING, 2" X 1-3/4" X 1-1/2" OAL
6	8	AM4410	ASSEMBLY, ROLLER, AT4000
6A	8	BP3572	TENSION BUSHING, 1-1/4" X 1" X 3/4" OAL
6B	8	EM4047	ROLLER PLATE
7	8	AP2385	ROLLER, 5" DIAMETER, INTERNAL CYL FOLD
8	4	BM3492	PIN, 1" X 5-1/2" OAL, PLATED
9	2	DP4490	CYLINDER, HYD, 4 X 8, SIDE PORTED, A400080BBACB07E



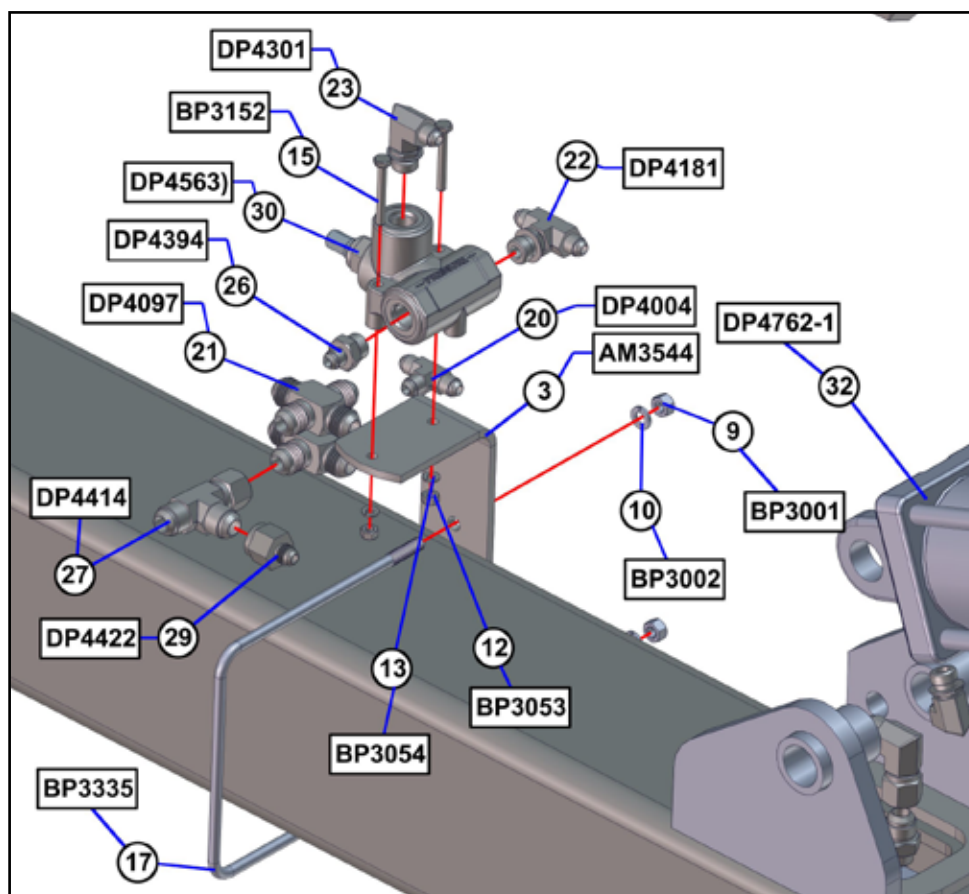
Gull Wing Toolbar (Primary Wings PKG00176)

BOM ID	Qty	Item No	Description
1	1	AM3534	WING, PRIMARY, RIGHT HAND, GULL WING TOOLBAR
2	1	AM3535	WING, PRIMARY, LEFT HAND, GULL WING TOOLBAR
3	2	AM3542	WING STOP
4	2	AM3653	LINKAGE, WING FOLD, 19", WITH WING STOP MOUNT
4A	4	BP3072	GREASE ZERK, 1/4"-28
5	2	AM3654	LINKAGE, WING FOLD, DOUBLE 19"
5A	2	BP3072	GREASE ZERK, 1/4"-28
6	4	AP2711	SNAP RING, 1-1/4" EXTERNAL, HEAVY DUTY
7	2	BM3465	PIN, 1-1/4" X 7-3/4" OAL, WITH 13/32" HOLE, PLATED
8	2	BM3486	PIN, 1-1/4" X 10-7/16" OAL, WITH 13/32" HOLE, PLATED
9	2	BM3548	PIN, 1-1/4" X 4-3/4", DOUBLE GROOVED, PLATED
10	2	BM3664	PIN, 1-3/4" X 16-9/16" OAL, WITH 21/32" HOLE
11	8	BP3038	NUT, HEX, 5/8"-11, GRADE 2
12	8	BP3039	WASHER, LOCK, 5/8", PLATED
13	4	BP3096	HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 5, PLATED
14	2	BP3135	HEX CAP SCREW, 5/8"-11 X 3-1/2", GRADE 5, PLATED
15	8	BP3171	HEX CAP SCREW, 5/8"-11 X 2", GRADE 5, PLATED
16	4	BP3192	MACHINERY BUSHING, 1-7/8" OD X 1-1/4" ID X 10 GAUGE
17	4	BP3205	MACHINERY BUSHING, 2-1/2" OD X 1-3/4" ID, 10 GAUGE
18	2	BP3375	NUT, HEX LOCK, 5/8"-11, NYLOCK
19	4	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK



Right-Hand as viewed from the rear.

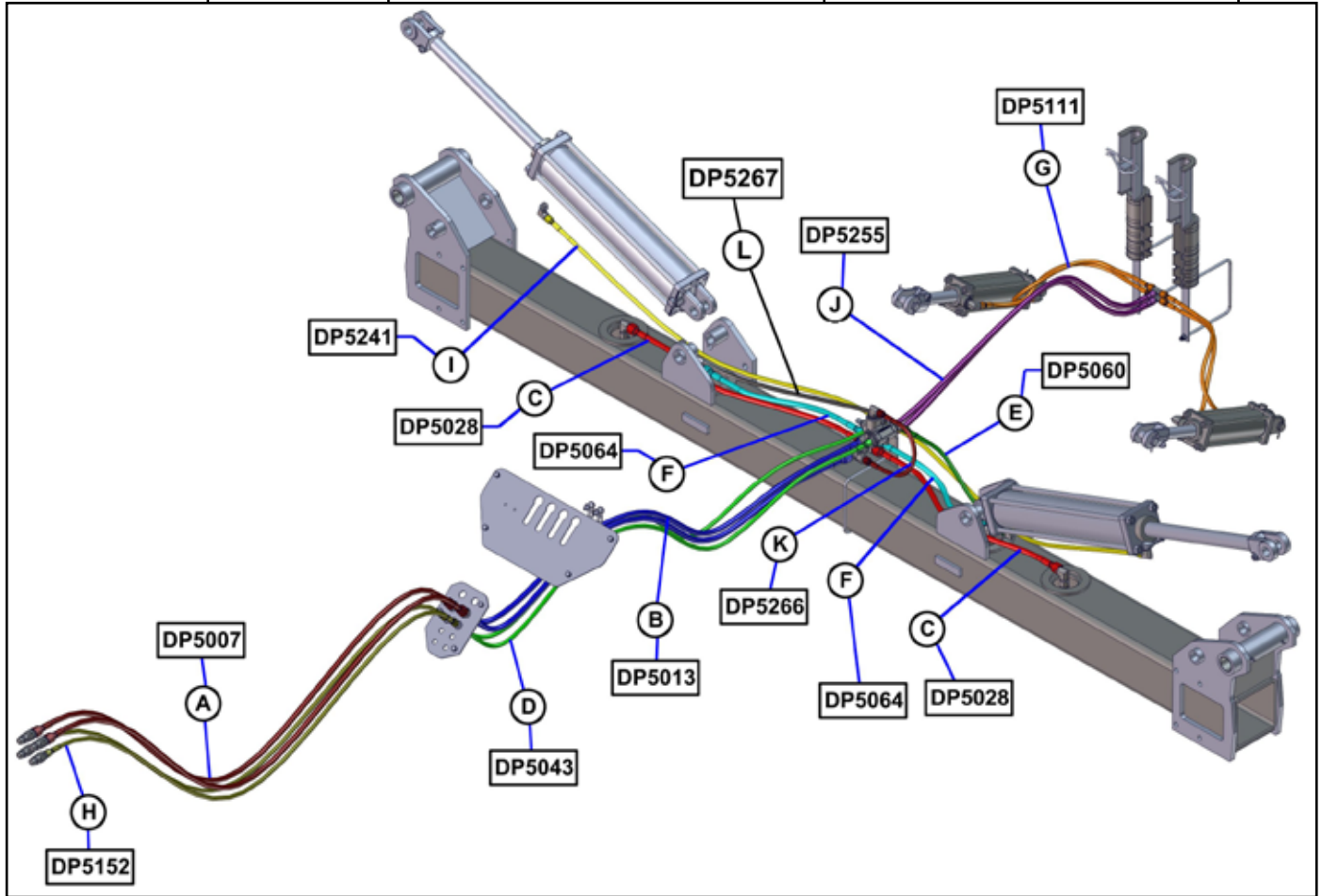
Left-Hand as viewed from the rear.



Gull Wing Hydraulics (PKG00203)

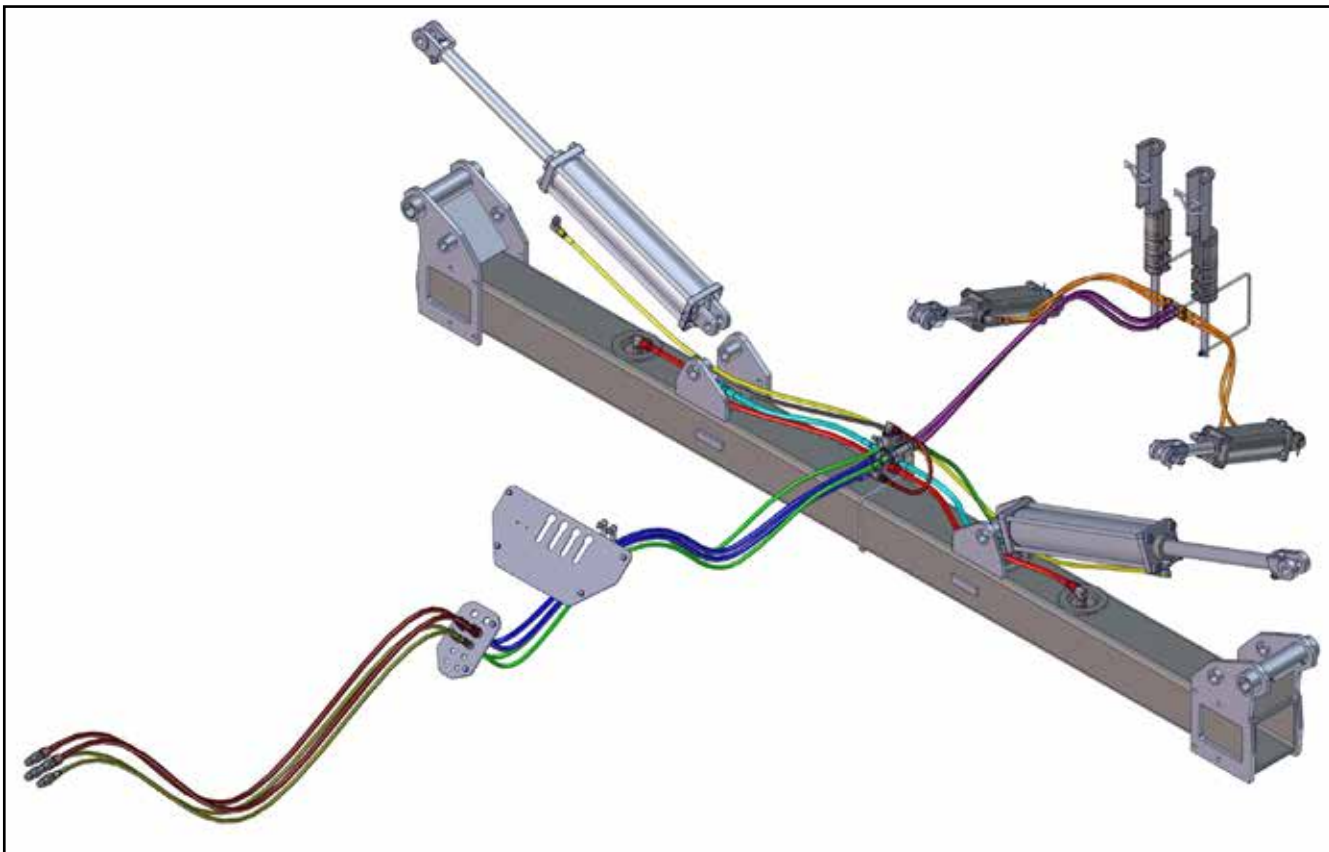
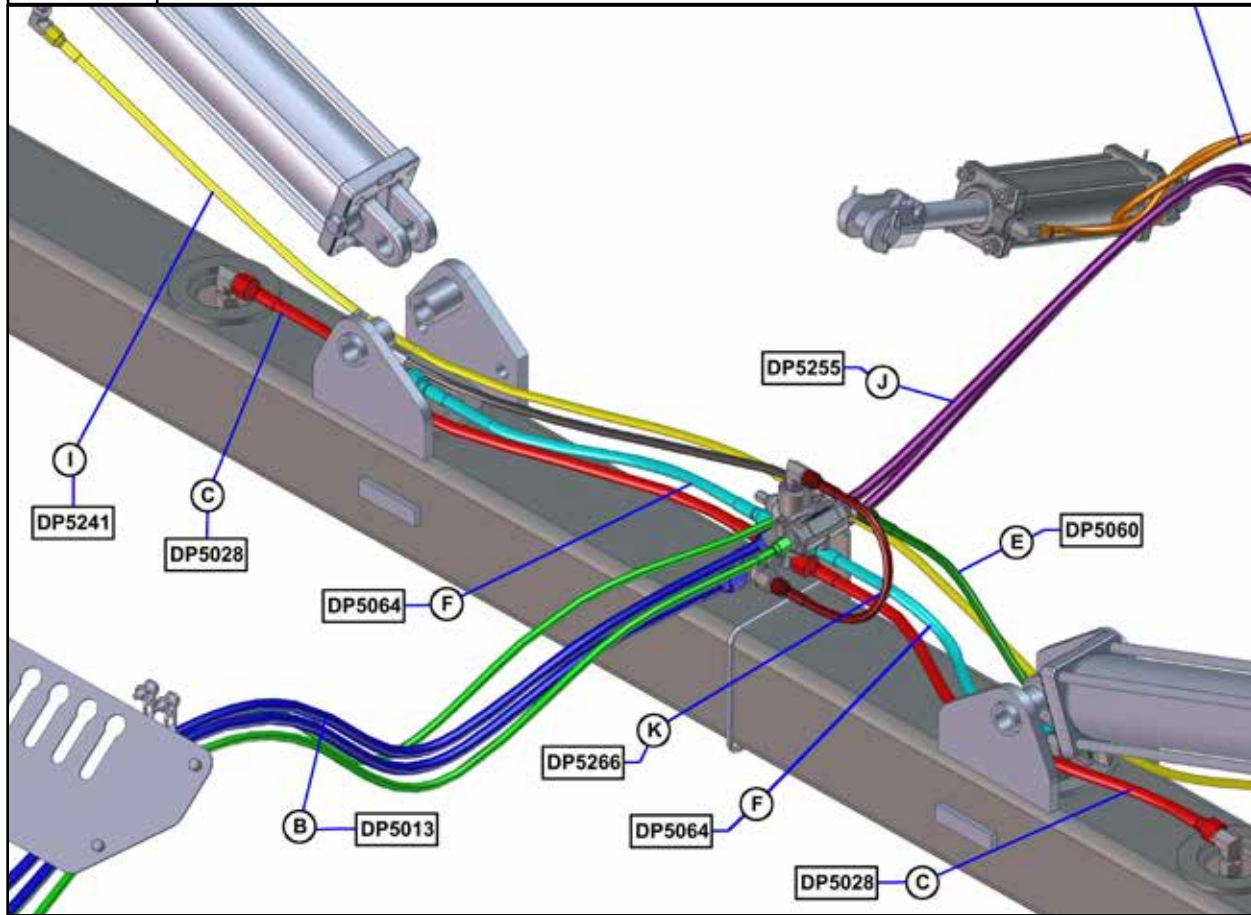
BOM ID	Qty	Item No	Description
1	1	PKG00203	PACKAGE, HYD KIT, AT 4015 PRIMARY WING
2	2	AM3039	TRANSPORT CYLINDER LOCK
3	1	AM3544	BRACKET, RELIEF VALVE MOUNTING, AT LIQUID
4	1	AM3589	UTILITY PLATE
5	1	AM3690	BULKHEAD PLATE, AT4
6	2	AM4817	BRACKET, DEPTH COLLAR STORAGE
7	1	AP3212	CHAIN, HOSE HOLDER, 3/16" X 15 LINKS, PLATED
8	2	BM3520	CLIP PIN, TRANSPORT LOCK
9	13	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
10	13	BP3002	WASHER, LOCK, 3/8", PLATED
11	7	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
12	2	BP3053	NUT, HEX, 1/4"-20, GRADE 2
13	2	BP3054	WASHER, LOCK, 1/4", PLATED
14	2	BP3076	DEPTH COLLAR SET, 1-1/4" TO 1-1/2", WINGED
15	2	BP3152	HEX CAP SCREW, 1/4"-20 X 2, GRADE 5, PLATED
16	4	BP3159	WASHER, FLAT, 5/16, PLATED
17	3	BP3335	U-BOLT, 3/8"-16 X 7W X 8L, PLATED
18	2	BP3644	NUT, HEX LOCK, 5/16-18, TOP LOCK
19	2	BP3812	HEX CAP SCREW, 5/16"-18 X 1-1/4, GRADE 5, PLATED
20	3	DP4004	TEE, 6MJ-6MJ-6MJ
21	2	DP4097	CROSS, 10MJ-10MJ-10MJ-10MJ, 2650-10
22	1	DP4181	TEE, BRANCH, 8MSAE X 6MJ-6MJ, 6803-6-6-8
23	9	DP4301	ADAPTER, 6MJ-8MSAE, 90*
24	4	DP4383	COUPLER, PIONEER, 8MQBA-8FSAE
25	6	DP4392	ADAPTER, 8MSAE-10MJIC, STRAIGHT, 6400-10-8
26	3	DP4394	ADAPTER, 8MSAE-6MJIC, 6400-6-8
27	1	DP4414	TEE, 10MJIC-10FJX-10MJIC RUN, 6602-10
28	4	DP4418	ELBOW, 90*, 10MJIC-10FJX, 6500-10
29	1	DP4422	ADAPTER, 10FJ-6MJ, 2406-10-6
30	1	DP4563	VALVE, RELIEF, RV-5H, PRINCE, 1500-3000 PSI
31	2	DP4656	CYLINDER, HYD, 3 X 8, 3000 PSI, SIDE PORT, A300080BBAAA07A
32	2	DP4762-1	CYLINDER, HYD, 4 X 20, W/1-1/4 ENDS & SPACER
33	2	DP4763	BULKHEAD UNION, 6MJ-6MJ
34	2	DP5220	BULKHEAD UNION W/ NUT, 10MJ-10MJ, 2700-LN-10

Gull Wing Hydraulics (PKG00203)

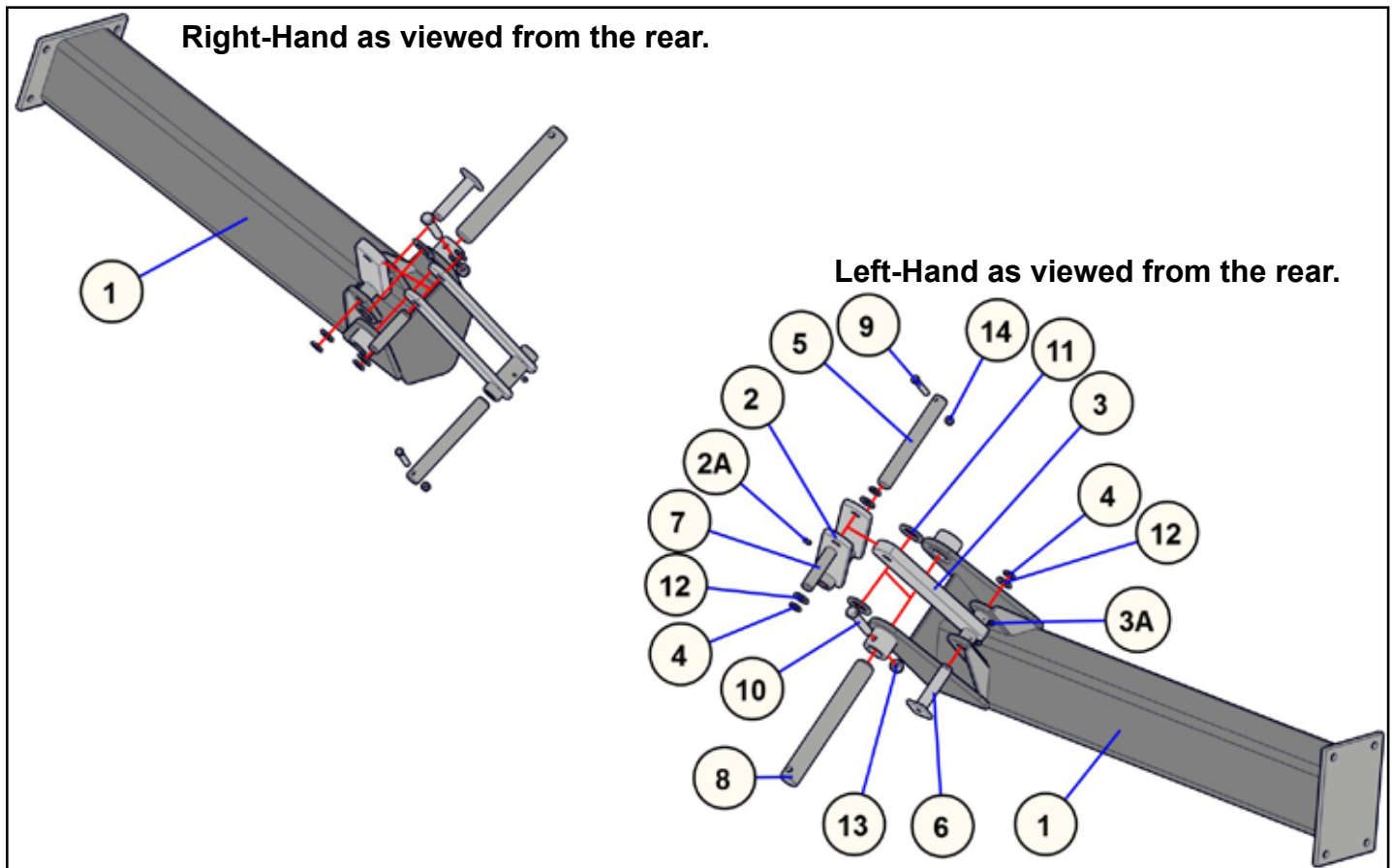


BOM ID	Qty	Item No	Description
A	2	DP5007	HOSE, HYD, 3/8" X 84", 10FJX-10FJX
B	2	DP5013	HOSE, HYD, 3/8" X 72", 10FJX-10FJX
C	2	DP5028	HOSE, HYD, 3/8" X 36", 10FJX-10FJX
D	2	DP5043	HOSE, HYD, 1/4" X 72", 6FJX-6FJX
E	1	DP5060	HOSE, HYD, 1/4" X 24", 6 FJX-6FJX
F	2	DP5064	HOSE, HYD, 3/8" X 24", 10FJX-1
G	4	DP5111	HOSE, HYD, 1/4" X 30", 6FJX-6FJX
H	2	DP5152	HOSE, HYD, 1/4" X 84", 6FJX-6FJX
I	2	DP5241	HOSE, HYD, 1/4" X 52", 6FJX-6FJX
J	2	DP5255	HOSE, HYD, 3/8" X 56", 10FJX-6FJX
K	1	DP5266	HOSE, HYD, 1/4" X 18", 6FJX-6FJX
L	1	DP5267	HOSE, HYD, 1/4" X 32", 6FJX-6FJX

Gull Wing Hydraulics (PKG00203)



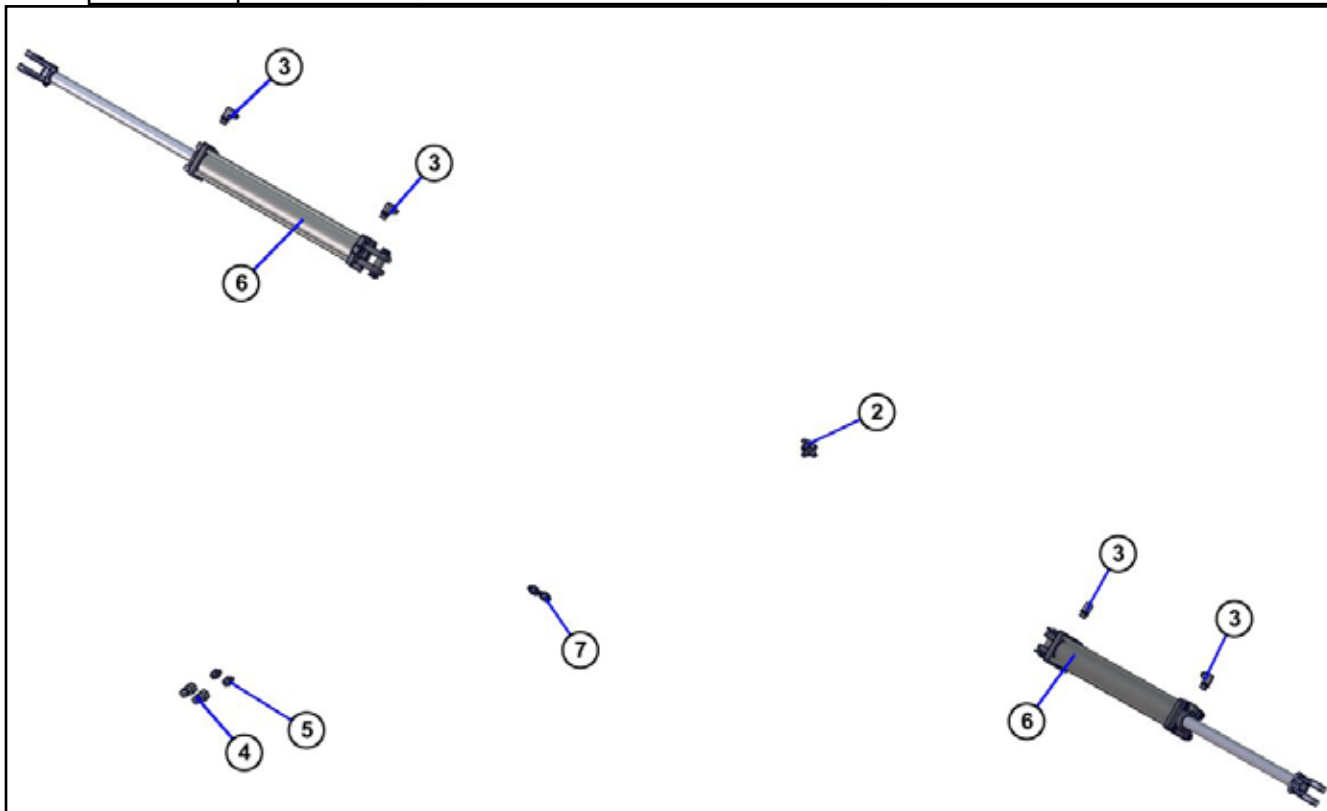
Secondary Gull Wings (PKG00175)



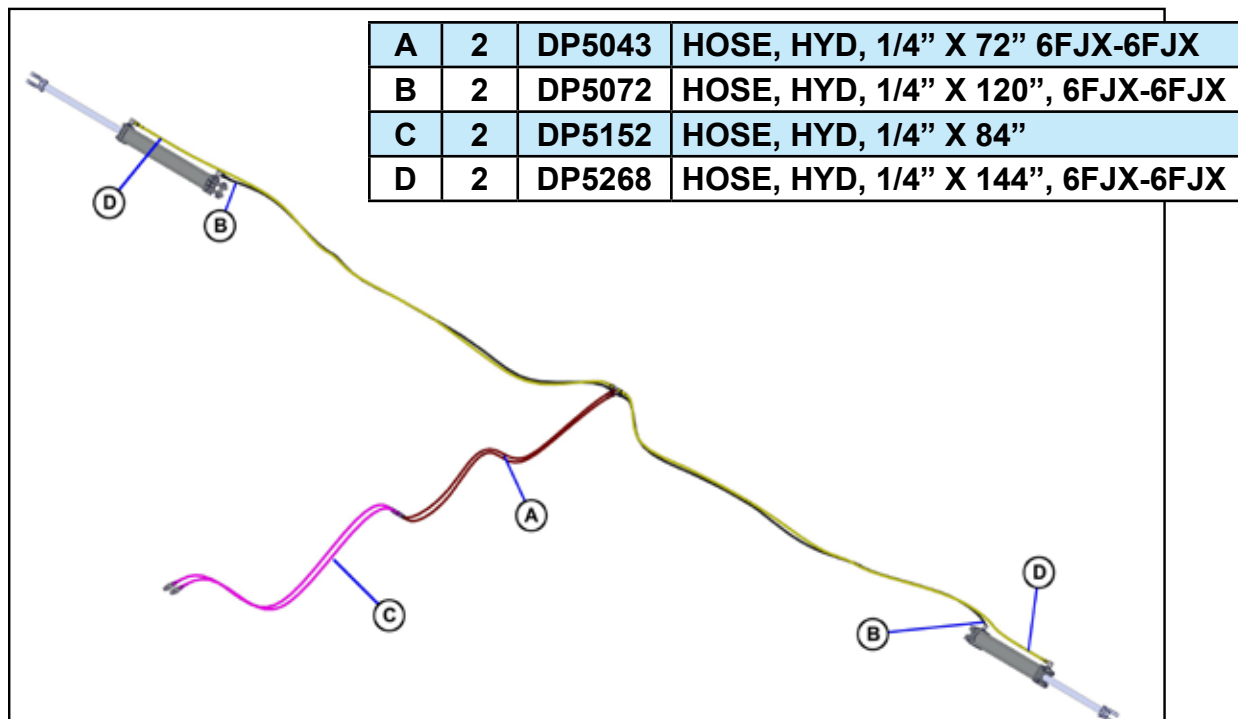
► PKG00175 WING, SECONDARY, AT3000 W/HARDWARE

BOM ID	Qty	Item No	Description
1	2	AM3532	WING, SECONDARY, GULL WING TOOLBAR, AT LIQUID
2	2	AM4515	LINKAGE, SECONDARY WING
2A	2	BP3072	GREASE ZERK, 1/4"-28
3	2	AM4516	LINKAGE, SECONDARY WING
3A	4	BP3072	GREASE ZERK, 1/4"-28
4	6	AP2407	SNAP RING, 1" EXTERNAL, HEAVY DUTY
5	2	BM3486	PIN, 1-1/4" X 10-7/16" OAL, WITH 13/32" HOLE, PLATED
6	2	BM3542	PIN, 1" X 4-5/8", WITH ANTI-ROTATION HEAD
7	2	BM3543	PIN, 1" X 4-5/16", DOUBLE GROOVED, PLATED
8	2	BM3570	PIN, 1-3/4" X 14" OAL, WITH 21/32" HOLE, PLATED
9	2	BP3096	HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 5, PLATED
10	2	BP3135	HEX CAP SCREW, 5/8"-11 X 3-1/2", GRADE 5, PLATED
11	4	BP3205	MACHINERY BUSHING, 2-1/2" OD X 1-3/4" ID, 10 GAUGE
12	6	BP3215	MACHINERY BUSHING, 1-1/2" OD X 1" ID, 14 GAUGE, PLATED
13	2	BP3375	NUT, HEX LOCK, 5/8"-11, NYLOCK
14	2	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK

Secondary Gull Wing Hydraulics (PKG00178)



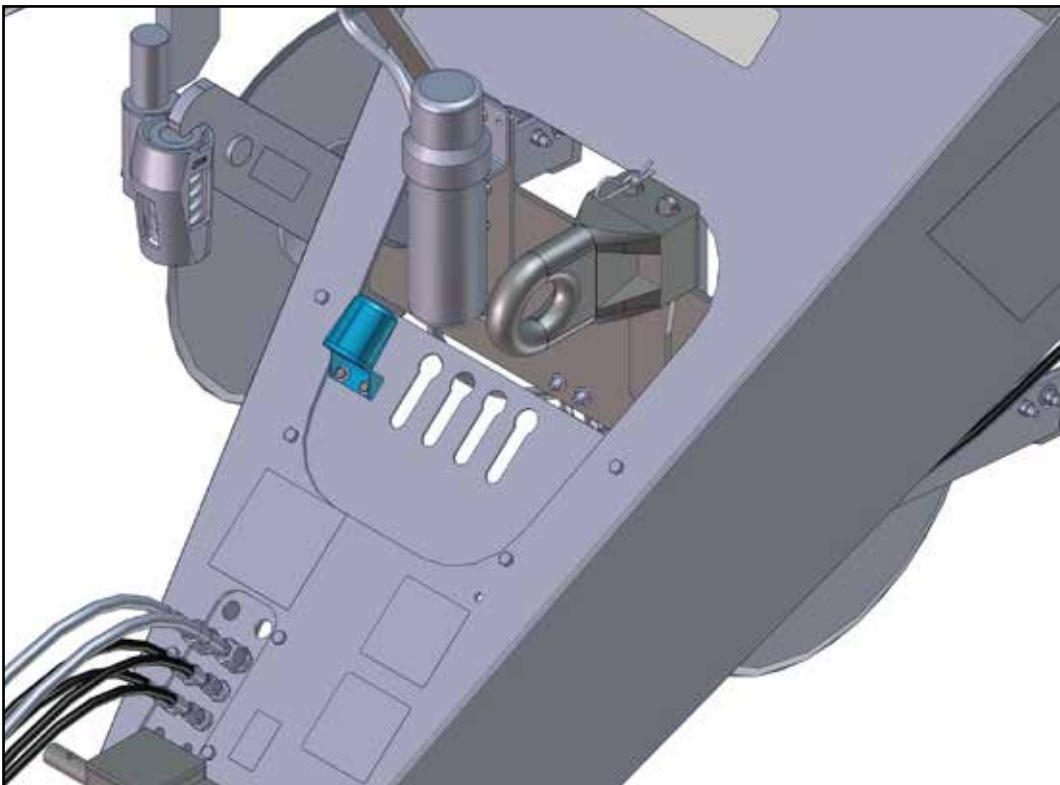
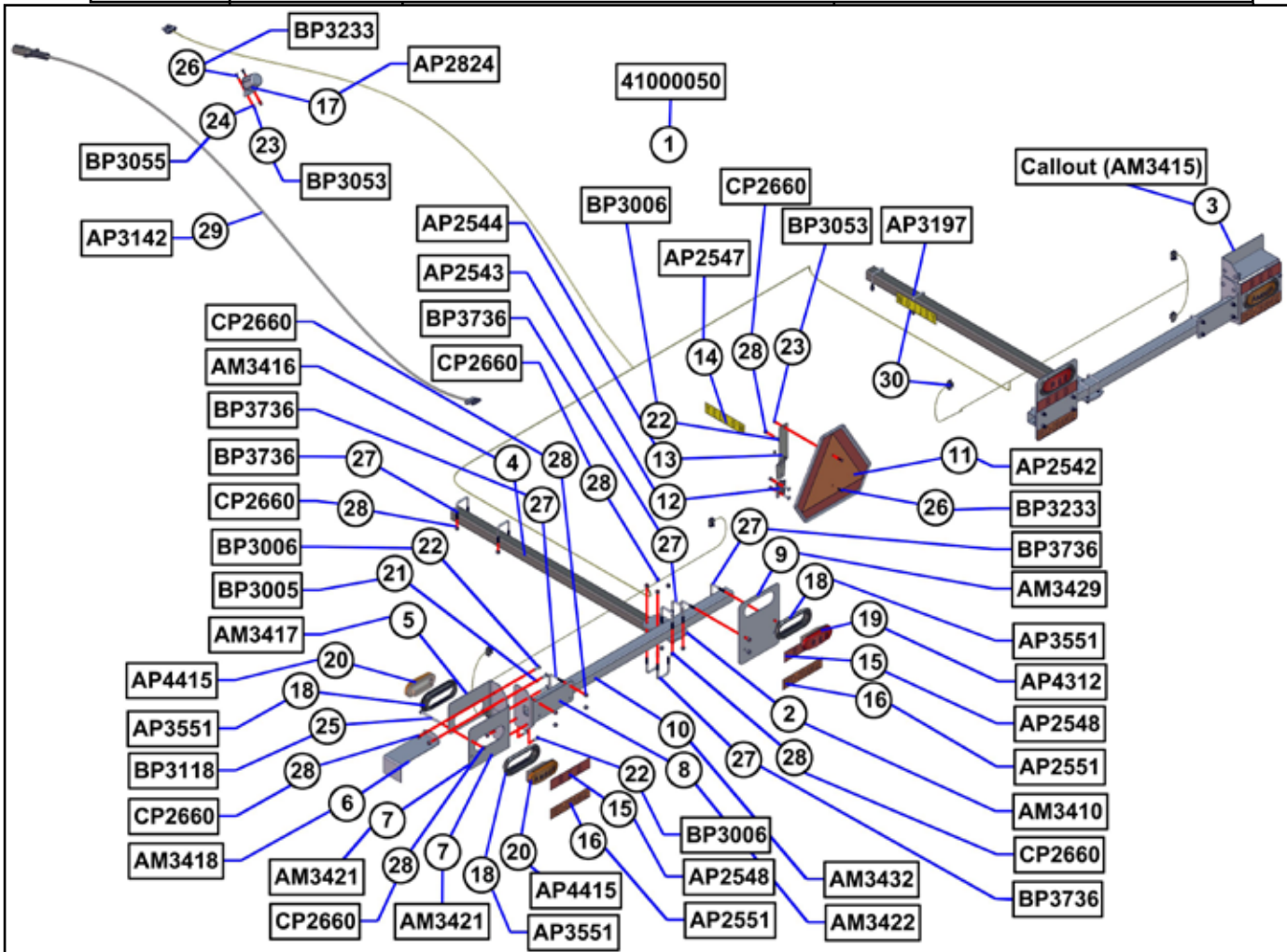
BOM ID	Qty	Item No	Description
1	1	PKG00178	PACKAGE, HYDRAULICS KIT, AT LIQUID SECONDARY WING KIT
2	2	DP4004	TEE, 6MJ-6MJ-6MJ
3	4	DP4301	ADAPTER, 6MJ-8MSAE, 90°
4	2	DP4383	COUPLER, PIONEER, 8MQBA-8FSAE
5	2	DP4394	ADAPTER, 8MSAE-6MJIC, 6400-6-8
6	2	DP4492	CYLINDER, HYD, 3 X 20, SIDE PORTED, B300200ABAAA03B
7	2	DP4763	BULKHEAD UNION, 6MJ-6MJ



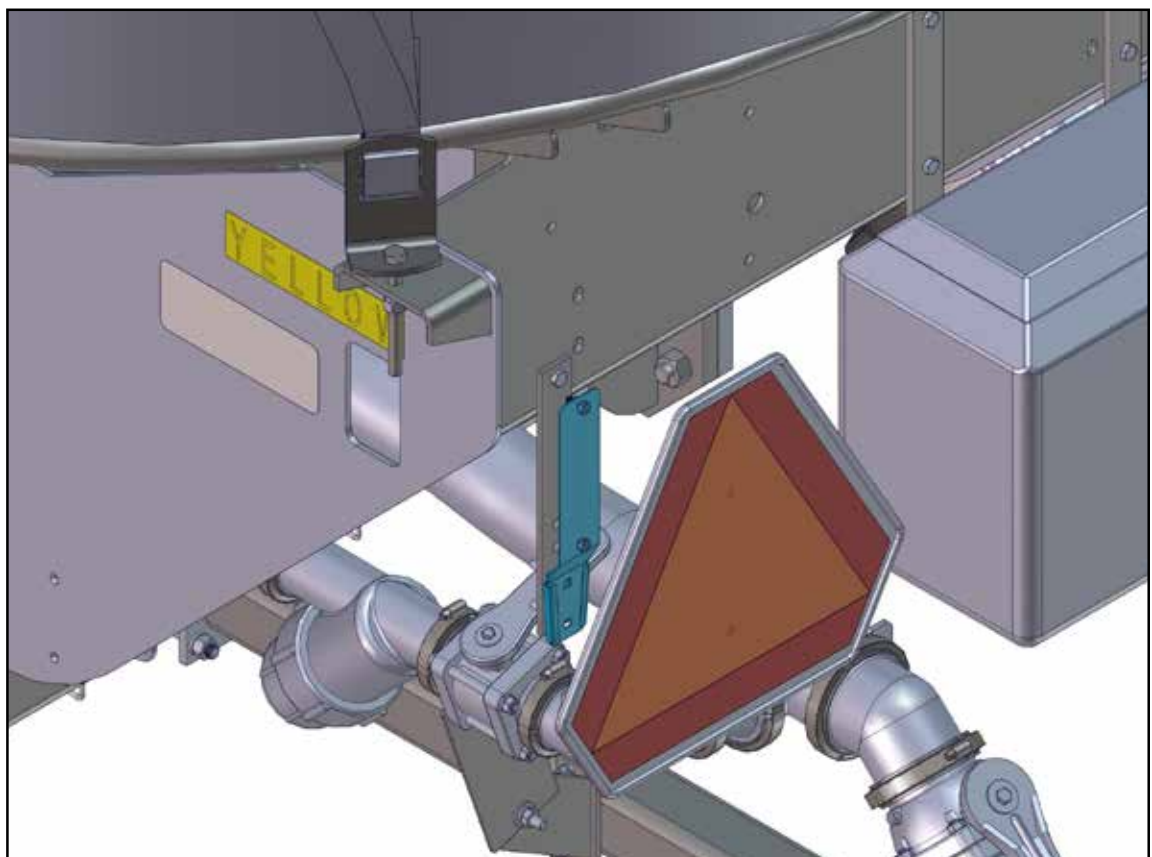
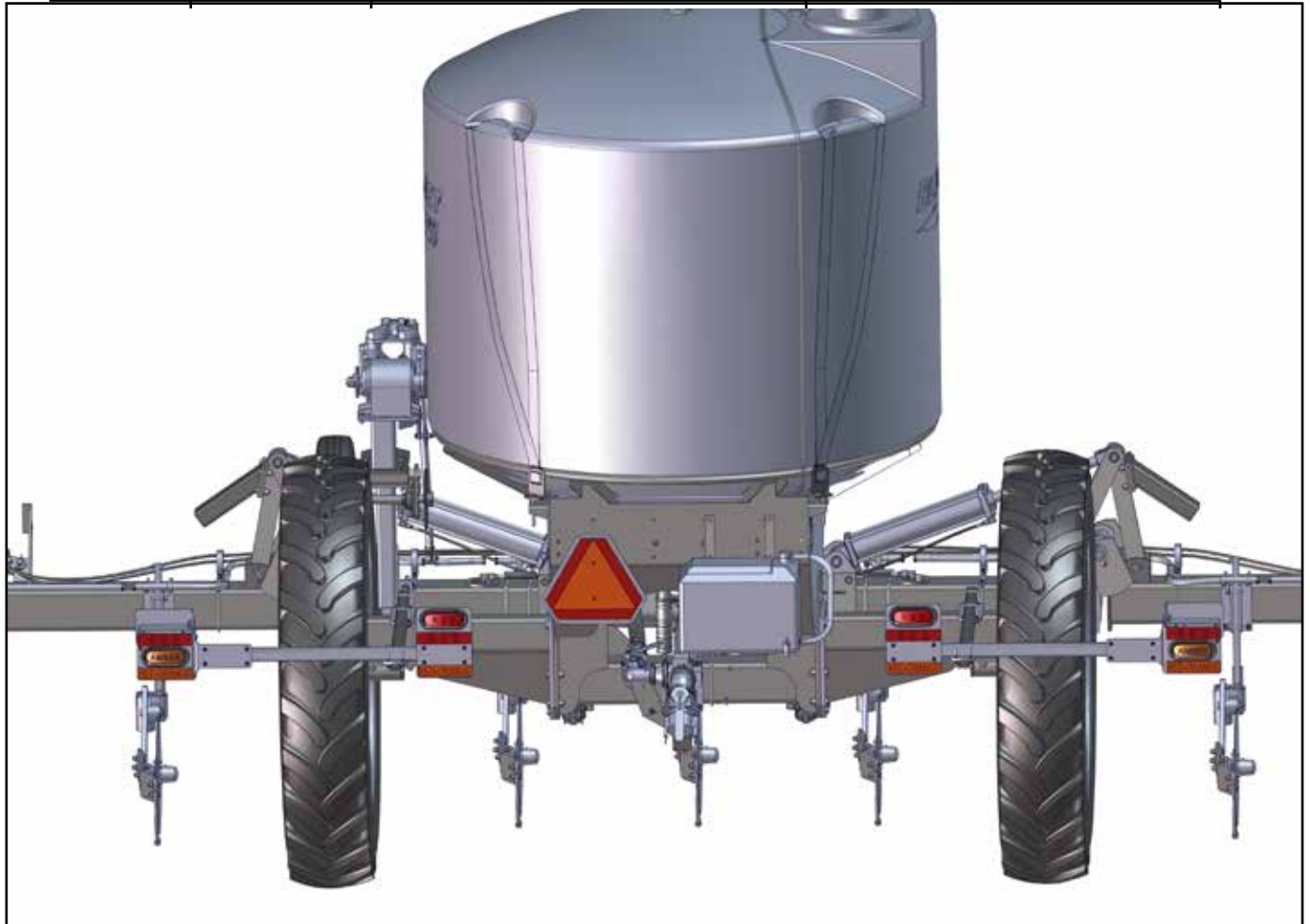
Light Kit Parts (41000050)

BOM ID	Qty	Item No	Description
1	1	41000050	LIGHTING KIT, AT4015/AT4615
2	2	AM3410	MOUNTING PLATE, LIGHT POST
3	1	AM3415	LIGHT BRACKET, FRONT, LEFT-HAND
4	2	AM3416	TUBE, LIGHT BRACKET, (4'0")
5	1	AM3417	LIGHT BRACKET, FRONT, RIGHT-HAND
6	2	AM3418	SHIELD, LIGHT BRACKET
7	2	AM3421	LIGHT BRACKET, SIDE MOUNT
8	2	AM3422	LIGHT BRACKET, SIDE MOUNT BAR
9	2	AM3429	LIGHT MOUNT
10	2	AM3432	TUBE, LIGHT BRACKET, (3'10")
11	1	AP2542	SMV SIGN
12	1	AP2543	SMV MOUNTING SOCKET
13	1	AP2544	SMV MOUNTING SPADE
14	4	AP2547	DECAL, REFLECTOR, YELLOW, 2 X 9
15	4	AP2548	DECAL, REFLECTOR, RED, 2 X 9
16	4	AP2551	DECAL, FLUORESCENT, RED-ORANGE, 2 X 9, NON-REFLECTIVE
17	1	AP2824	ELECTRICAL HARNESS, 10' MAIN, 7 PIN & DUST CAP
18	6	AP3551	GROMMET, OVAL, MODEL 60
19	2	AP4312	LAMP, LED, OVAL, STOP TURN & TAIL, RED
20	4	AP4415	LAMP, LED, OVAL, TURN SIGNAL, AMBER, LED
21	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
22	9	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
23	4	BP3053	NUT, HEX, 1/4"-20, GRADE 2
24	2	BP3055	WASHER, FLAT, 1/4", PLATED
25	2	BP3118	HEX CAP SCREW, 3/8"-16 X 5, GRADE 5, PLATED
26	4	BP3233	HEX CAP SCREW, 1/4"-20 X 3/4, GRADE 2, PLATED
27	20	BP3736	U-BOLT, 3/8"-16 X 2W X 3L, PLATED
28	55	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK
29	1	AP3142	ELECTRICAL HARNESS, 10' MAIN 5-WIRE, 7 PIN & DUST CAP
30	1	AP3197	ELECTRICAL HARNESS, 17' 2 POST, 5 WIRE

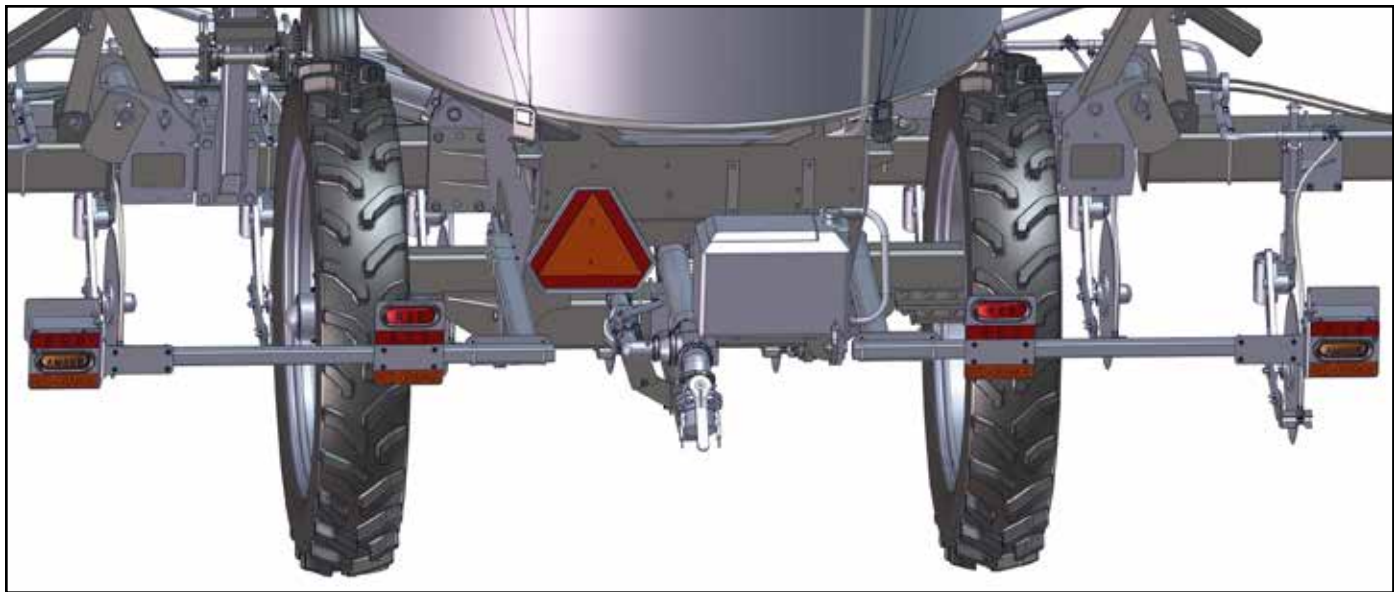
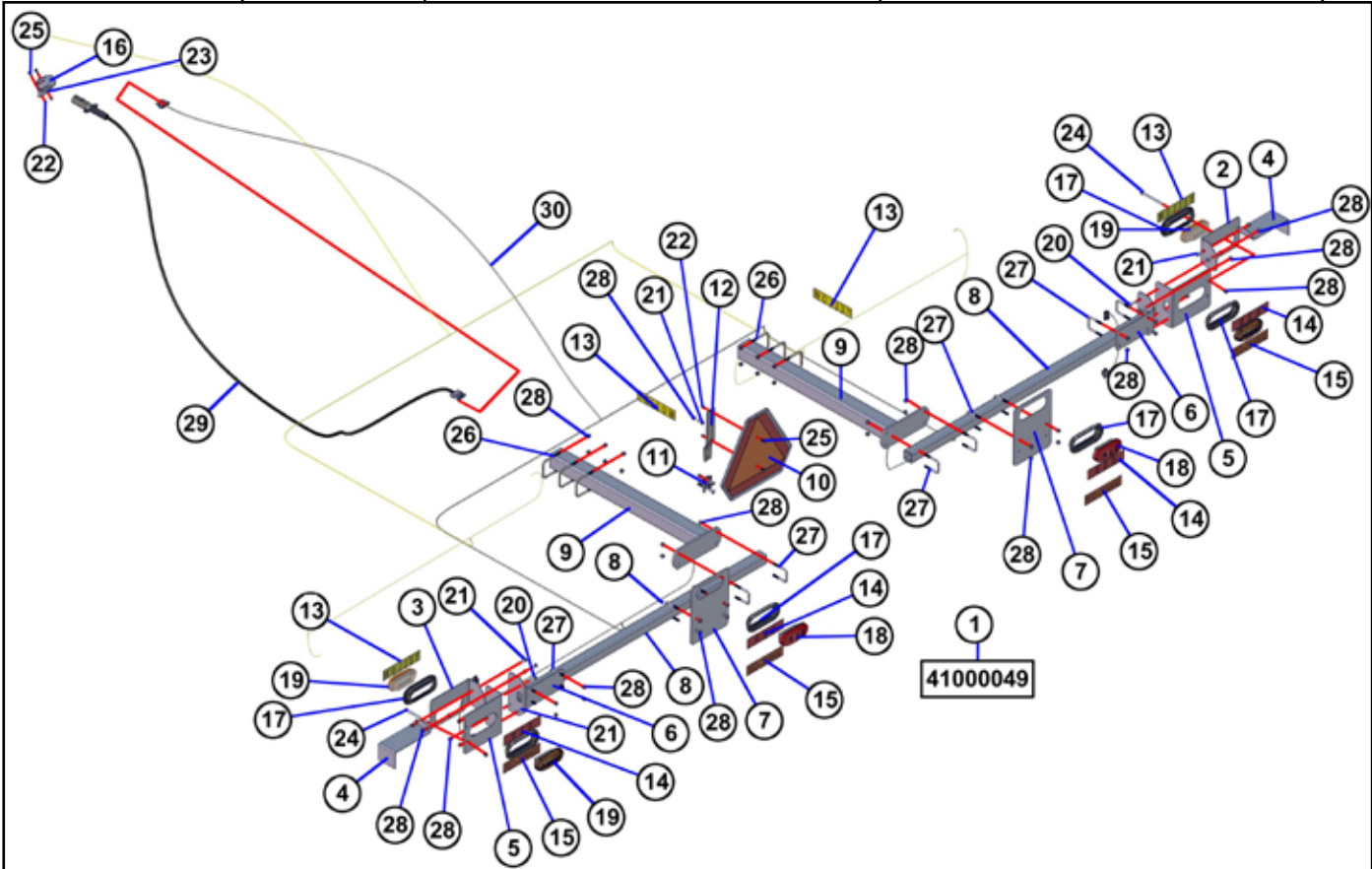
Light Kit Parts (41000050)



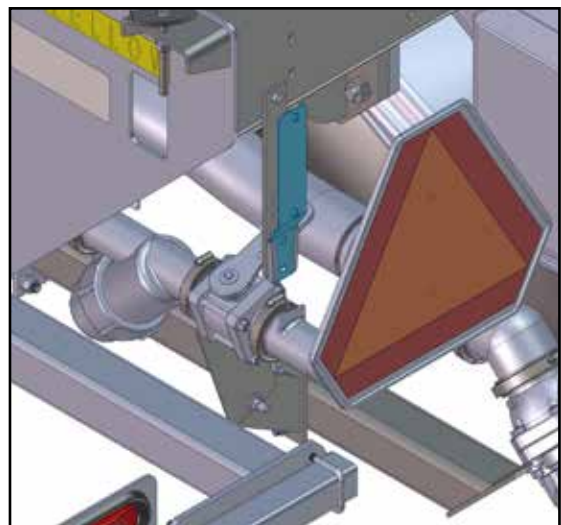
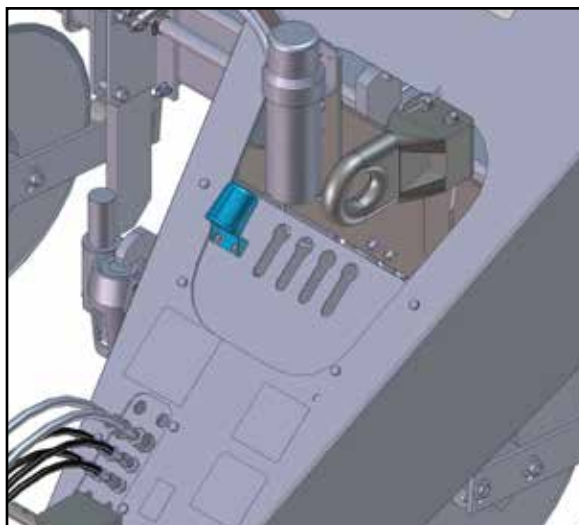
Light Kit Parts (41000050)



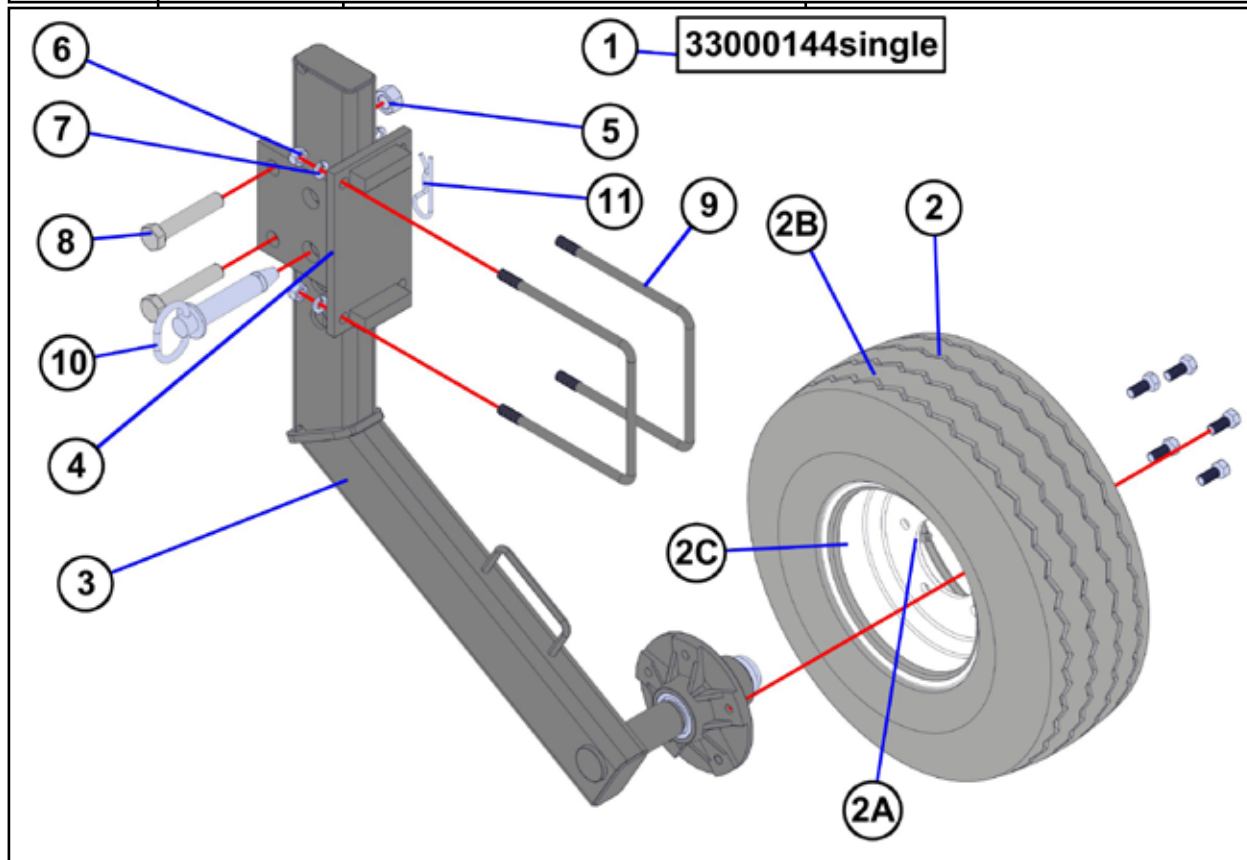
Light Kit Parts (41000049) Narrow Wheel Spacing



BLU-JET AT4615		Light Kit Parts (41000049) Narrow Wheel Spacing		
		Task	Procedures	Illustrations
BOM ID	Qty	Item No	Description	
1	1	41000049	LIGHTING KIT, AT LIQUID, NARROW WHEELS	
2	1	AM3415	LIGHT BRACKET, FRONT, LH	
3	1	AM3417	LIGHT BRACKET, FRONT, RH	
4	2	AM3418	SHIELD, LIGHT BRACKET	
5	2	AM3421	LIGHT BRACKET, SIDE MOUNT	
6	2	AM3422	LIGHT BRACKET, SIDE MOUNT BAR	
7	2	AM3429	LIGHT MOUNT	
8	2	AM3433	TUBE, LIGHT BRACKET, (4'11-3/4")	
9	2	AM3434	LIGHT BRACKET	
10	1	AP2542	SMV SIGN	
11	1	AP2543	SMV MOUNTING SOCKET	
12	1	AP2544	SMV MOUNTING SPADE	
13	4	AP2547	DECAL, REFLECTOR, YELLOW, 2 X 9	
14	4	AP2548	DECAL, REFLECTOR, RED, 2 X 9	
15	4	AP2551	DECAL, FLUORESCENT, RED-ORANGE, 2 X 9, NON-REFLECTIVE	
16	1	AP2824	ELECTRICAL HARNESS, 10' MAIN, 7 PIN & DUST CAP	
17	6	AP3551	GROMMET, OVAL, MODEL 60	
18	2	AP4312	LAMP, LED, OVAL, STOP TURN & TAIL, RED	
19	4	AP4415	LAMP, LED, OVAL, TURN SIGNAL, AMBER, LED	
20	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED	
21	9	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED	
22	4	BP3053	NUT, HEX, 1/4"-20, GRADE 2	
23	2	BP3055	WASHER, FLAT, 1/4", PLATED	
24	2	BP3118	HEX CAP SCREW, 3/8"-16 X 5, GRADE 5, PLATED	
25	4	BP3233	HEX CAP SCREW, 1/4"-20 X 3/4, GRADE 5, PLATED	
26	6	BP3362	U-BOLT, 3/8"-16 X 3W X 4L	
27	12	BP3736	U-BOLT, 3/8"-16 X 2W X 3L, PLATED	
28	51	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK	
29	1	AP3142	ELECTRICAL HARNESS, 10' MAIN 5-WIRE, 7 PIN & DUST CAP	
30	1	AP3197	ELECTRICAL HARNESS, 17' 2 POST, 5 WIRE	

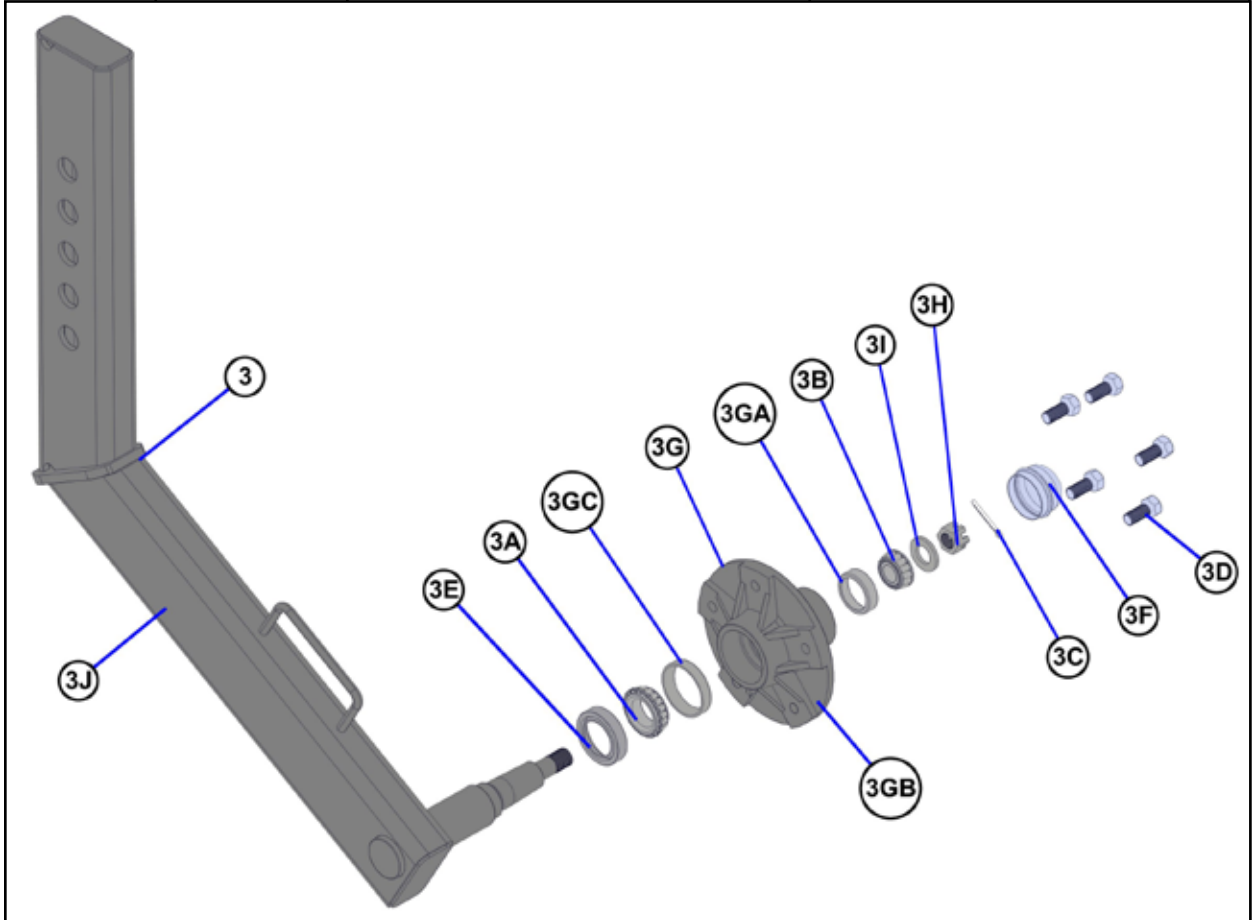


Gauge Wheel, Vertical Pin Adjust, Angled Narrow (33000144)



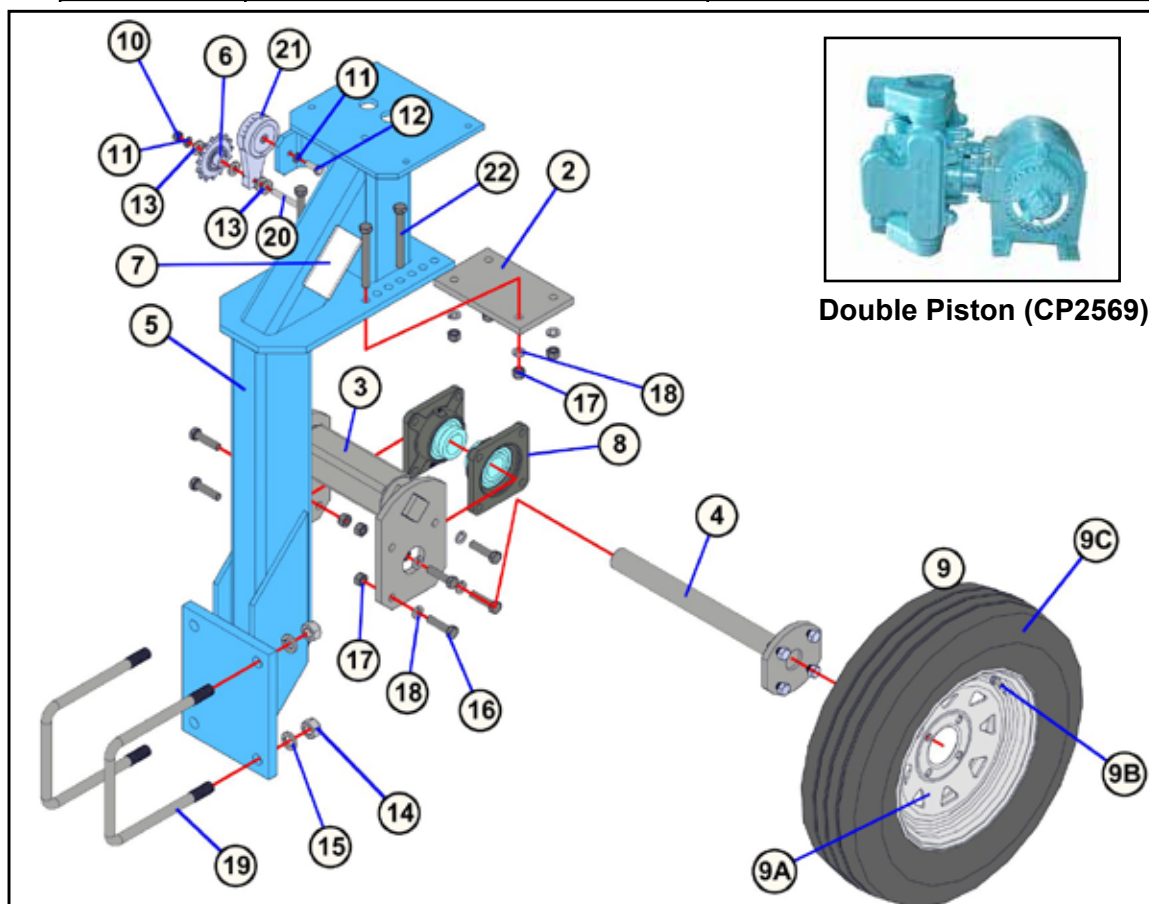
BOM ID	Qty	Item No	Description
1	1	33000144	GAUGE WHEEL, VERTICAL PIN ADJUST, ANGLED, NARROW
2	1	AAM2781	WHEEL, 20.5 X 8.0-10, 10 X 6, WHITE
2A	1	AP2395	VALVE STEM, METAL
2B	1	AP2834	TIRE, 20.5 X 8.0-10, LOAD RATING E
2C	1	AP2893	RIM, 10 X 6, 5 BOLT, 5.5" BC, 4" PILOT
3	1	AM3585	GAUGE WHEEL LEG, LH, VERTICAL PIN ADJUST, ANGLED
	1	AM3586	GAUGE WHEEL LEG, RH, VERTICAL PIN ADJUST, ANGLED
4	1	AM3587	BRACKET, GAUGE WHEEL MOUNTING
5	2	BP3027	NUT, HEX LOCK, 3/4"-10, GRADE 2, PLATED
6	4	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
7	4	BP3043	WASHER, LOCK, 1/2", PLATED
8	2	BP3143	HEX CAP SCREW, 3/4"-10 X 4", GRADE 5, PLATED
9	2	BP3356	U-BOLT, 1/2"-13 X 7W X 8-1/4L, GLOSS BLACK
10	1	BP3475	PIN, 1" X 4", HITCH, PLATED
11	1	BP3500	PIN, HAIR CLIP, 3/16"

Gauge Wheel, Vertical Pin Adjust, Angled Narrow (33000144)



BOM ID	Qty	Item No	Description
3	1	AM3585	GAUGE WHEEL LEG, LH, VERTICAL PIN ADJUST, ANGLED
3A	1	AP2023	BEARING CONE, LM 67048
3B	1	AP2024	BEARING CONE, LM 11949
3C	1	AP2029	PIN, COTTER, 5/32 X 1-1/2
3D	5	AP2049	WHEEL BOLT, 1/2"-20 X 1
3E	1	AP2052	GREASE SEAL, CR 14974
3F	1	AP2053	HUB CAP, 1524
3G	1	AP2124	HUB W/ CUPS, 5 BOLT, 511300-5
3GA	1	AP2075	BEARING CUP, LM 11910
3GB	1	HUB	HUB, 5 BOLT, 5.5" BC, 4" PILOT
3GC	1	AP2524	BEARING CUP, LM 67010
3H	1	AP2704	NUT, SPINDLE, 3/4"-16
3I	1	AP2705	WASHER, SPINDLE, 1-1/2 X 13/16 X .134
3J	1	EM7675	WELDMENT, GAUGE WHEEL LEG, LH, VERTICAL PIN ADJUST, ANGLED

Combo Pump Package (PKG00181)

Task
Procedures
Illustrations


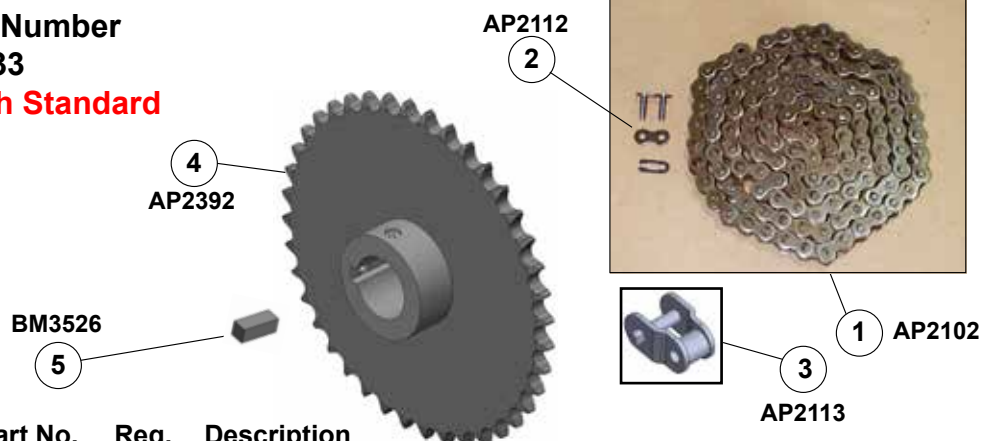
► PKG00181, PACKAGE, COMBO PUMP DRIVE

BOM ID	Qty	Item No	Description
1	1	PKG00181	PACKAGE, COMBO PUMP DRIVE
2	1	AM3513	BACKING PLATE, PUMP DRIVE
3	1	AM3515	AXLE MOUNT
4	1	AM3516	PUMP DRIVE WHEEL MOUNT
5	1	AM3639	FRAME, PUMP DRIVE
6	1	AP2382	SPROCKET, IDLER, 15T #50 CHAIN, WITH CLEVIS ADAPTER
7	1	AP2472	DECAL, CAUTION, AVOID PUMP DAMAGE
8	2	AP2697	BEARING, 1-1/2" WITH SQUARE 4 BOLT FLANGE & LOCK COLLAR
9	1	AP4240	WHEEL, 155/80R12, 12 X 4 X 4, 4" BOLT CIRCLE
9A	1	AP2374	RIM, 12 X 4 X 4, WHITE, 12440
9B	1	AP2790	VALVE STEM, METAL
9C	1	AP4241	TIRE, P155/80R12
10	1	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
11	2	BP3002	WASHER, LOCK, 3/8", PLATED
12	1	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
13	4	BP3015	WASHER, FLAT, 3/8", PLATED
14	4	BP3034	NUT, HEX, 3/4"-10, GRADE 2, PLATED
15	4	BP3035	WASHER, LOCK, 3/4", PLATED
16	8	BP3041	HEX CAP SCREW, 1/2"-13 X 2", GRADE 5, PLATED
17	12	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
18	12	BP3043	WASHER, LOCK, 1/2", PLATED
19	2	BP3058	U-BOLT, 3/4"-10 X 7"W X 9"L
20	1	BP3116	HEX CAP SCREW, 3/8"-16 X 3", GRADE 5, PLATED
21	1	BP3239	TENSIONER, RT1002
22	4	BP3693	HEX CAP SCREW, 1/2"-13 X 4-1/2", GRADE 5, PLATED

Sprockets & Roller Chains

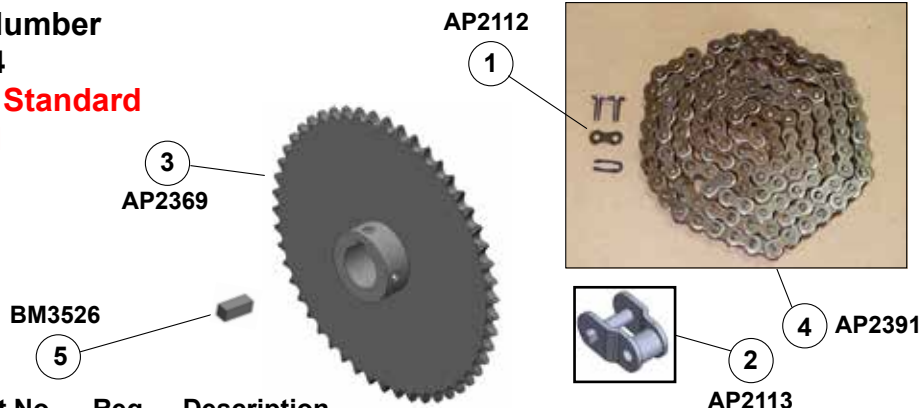
Task	Procedures	Illustrations
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► **Bundle Number**
33000133
40 Tooth Standard
Rate



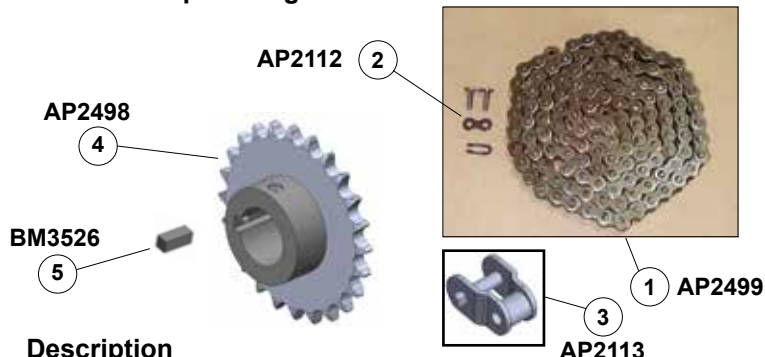
Ref.	Part No.	Req.	Description
1.	AP2102	1	Chain, roller, stainless steel, #50, 57"
2.	AP2112	1	#50 stainless connector link
3.	AP2113	1	#50 stainless 1/2" link
4.	AP2392	1	Sprocket, 5040 x with/hub, 1-1/2" RND bore, 3/8" key
5.	BM3526	1	Key, 3/8" x 3/8" x 1"
6.	PKG00137	1	AT3000 Pump Package

► **Bundle Number**
33000134
50 Tooth Standard
Standard
Rate



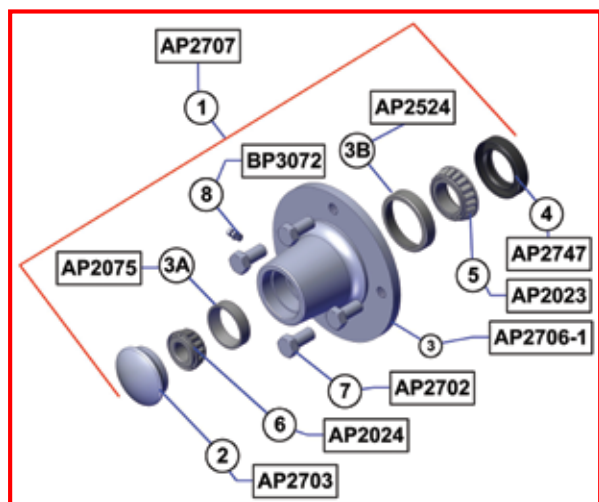
Ref.	Part No.	Req.	Description
1.	AP2112	1	#50 stainless connector link
2.	AP2113	1	#50 stainless 1/2" link
3.	AP2369	1	Sprocket, 5050 x with/hub 1-1/2" RND bore, 3/8" key
4.	AP2391	1	Chain, roller, stainless steel, #50, x 60"
5.	BM3526	1	Key, 3/8" x 3/8" x 1"
6.	PKG00137	1	AT3000 Pump Package

► **Bundle Number**
33000130
24 Tooth Low Rate
Rate



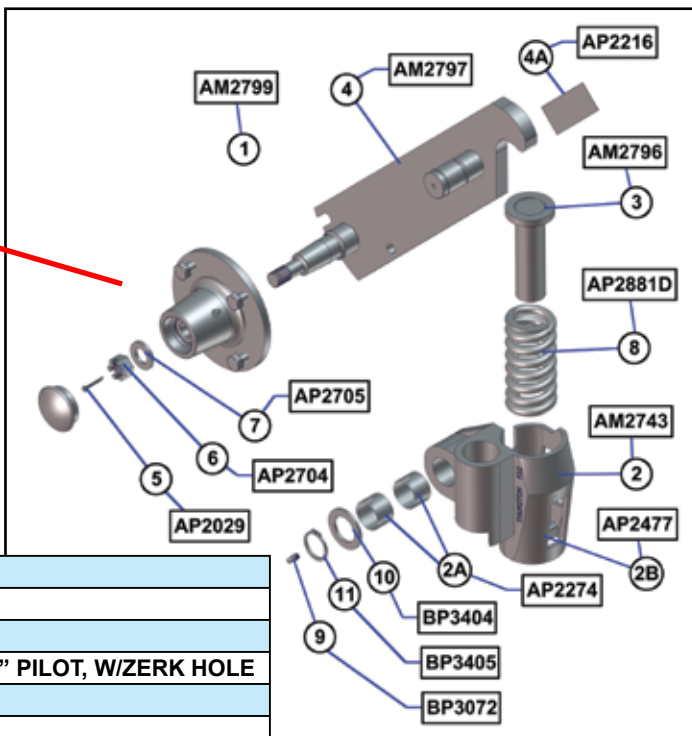
Ref.	Part No.	Req.	Description
1.	AP2499	1	Chain, roller, stainless steel, #50, 84 Pitch 52-1/2"
2.	AP2112	1	#50 stainless connector link
3.	AP2113	1	#50 stainless 1/2" link
4.	AP2498	1	Sprocket, 5024 x with/hub, 1-1/2" RND bore, 3/8" key
5.	BM3526	1	Key, 3/8" x 3/8" x 1"
6.	PKG00137	1	AT3000 Pump Package

Super 1200 Coultter and Shank Parts



AP2707, HUB ASSEMBLY, 4 BOLT

BOM ID	Qty	Item No	Description
1	1	AP2707	HUB ASSEMBLY, 4 BOLT
2	1	AP2703	HUB CAP, 1610
3	1	AP2706-1	HUB W/ CUPS, 4 BOLT, 5" BC, 3.62" PILOT, W/ZERK HOLE
3A	1	AP2075	BEARING CUP, LM 11910
3B	1	AP2524	BEARING CUP, LM 67010
4	1	AP2747	GREASE SEAL, 15235TB
5	1	AP2023	BEARING CONE, LM 67048
6	1	AP2024	BEARING CONE, LM 11949
7	4	AP2702	HEX CAP SCREW, 1/2"-20 X 1", GRADE 5, PLATED
8	1	BP3072	GREASE ZERK, 1/4"-28

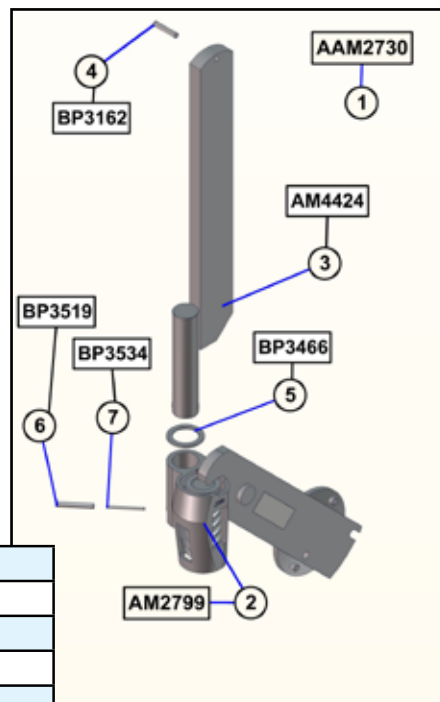


AM2799, ASSEMBLY, COULTTER ARM WITH HUB & KNEE CASTING, HD

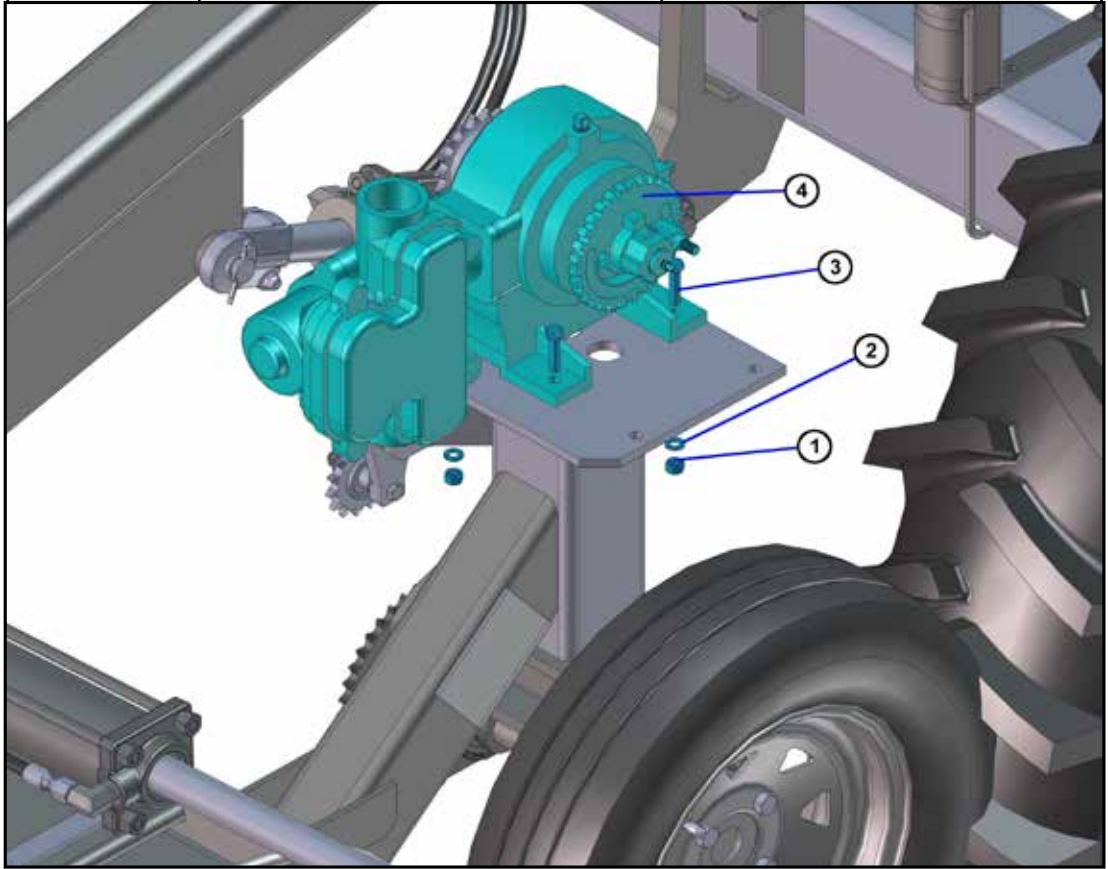
BOM ID	Qty	Item No	Description
1	1	AM2799	ASSEMBLY, COULTTER ARM WITH HUB & KNEE CASTING, HD
2	1	AM2743	CASTING, COULTTER KNEE, HD, MACHINED WITH BUSHINGS
2A	2	AP2274	BUSHING, 1-17/32" OD X 1-3/8" ID" X 1" OAL
2B	1	AP2477-1	CASTING, COULTTER KNEE, MACHINED
3	1	AM2796	SPRING CAP & GUIDE, HD COULTER
4	1	AM2797	COULTER ARM, HD
4A	1	AP2216	DECAL, BLU-JET, SMALL, 1-1/2" X 4"
5	1	AP2029	PIN, COTTER, 5/32" X 1-1/2"
6	1	AP2704	NUT, SPINDLE, 3/4"-16
7	1	AP2705	WASHER, SPINDLE, 1-1/2" X 13/16" X .134"
8	1	AP2881D	SPRING, 2.472" OD X 5.875" OAL, .468 WIRE DIAMETER
9	1	BP3072	GREASE ZERK, 1/4"-28
10	1	BP3404	MACHINERY BUSHING, 2-1/8" OD X 1-3/8" ID X 10 GAUGE, PLATED
11	1	BP3405	SNAP RING, 1-3/8" EXTERNAL, 5160-137

AAM2730 COULTER, SUPER 1200, 23, 1 ROW

BOM ID	Qty	Item No	Description
1	1	AAM2730	COULTER, SUPER 1200, 23" SHANK, 1 ROW
2	1	AM2799	COULTER ARM WITH HUB & KNEE CASTING, HEAVY DUTY
3	1	AM4424	COULTER SHANK, 23"
4	1	BP3162	PIN, ROLL, 3/8" X 2", PLATED
5	1	BP3466	MACHINERY BUSHING, 2-1/2" X 1-3/4" X 10 GAUGE, STAINLESS STEEL
6	1	BP3519	PIN, ROLL, 3/8" X 2-1/2"
7	1	BP3534	PIN, ROLL, 7/32" X 2-1/2"



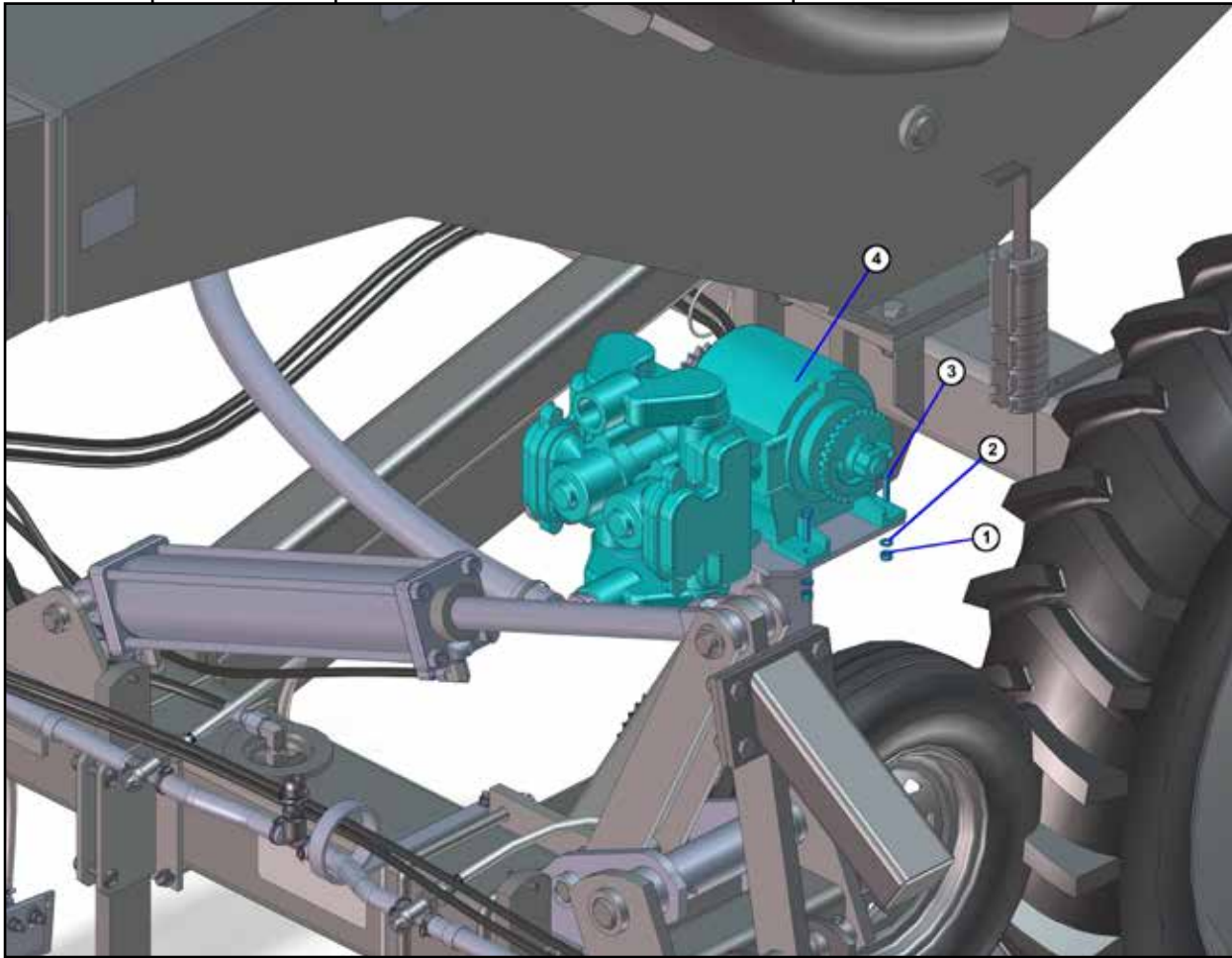
CP2568, Single Piston Pump, NGP-7055



CP2568 PUMP, SINGLE PISTON, NGP-7055, 34.2 GALLON

BOM ID	Qty	Item No	Description
1	4	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
2	4	BP3002	WASHER, LOCK, 3/8", PLATED
3	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
4	1	CP2568	PUMP, SINGLE PISTON, NGP-7055, 34.2 GALLON

CP2569, Twin Piston Pump, NGP-9055

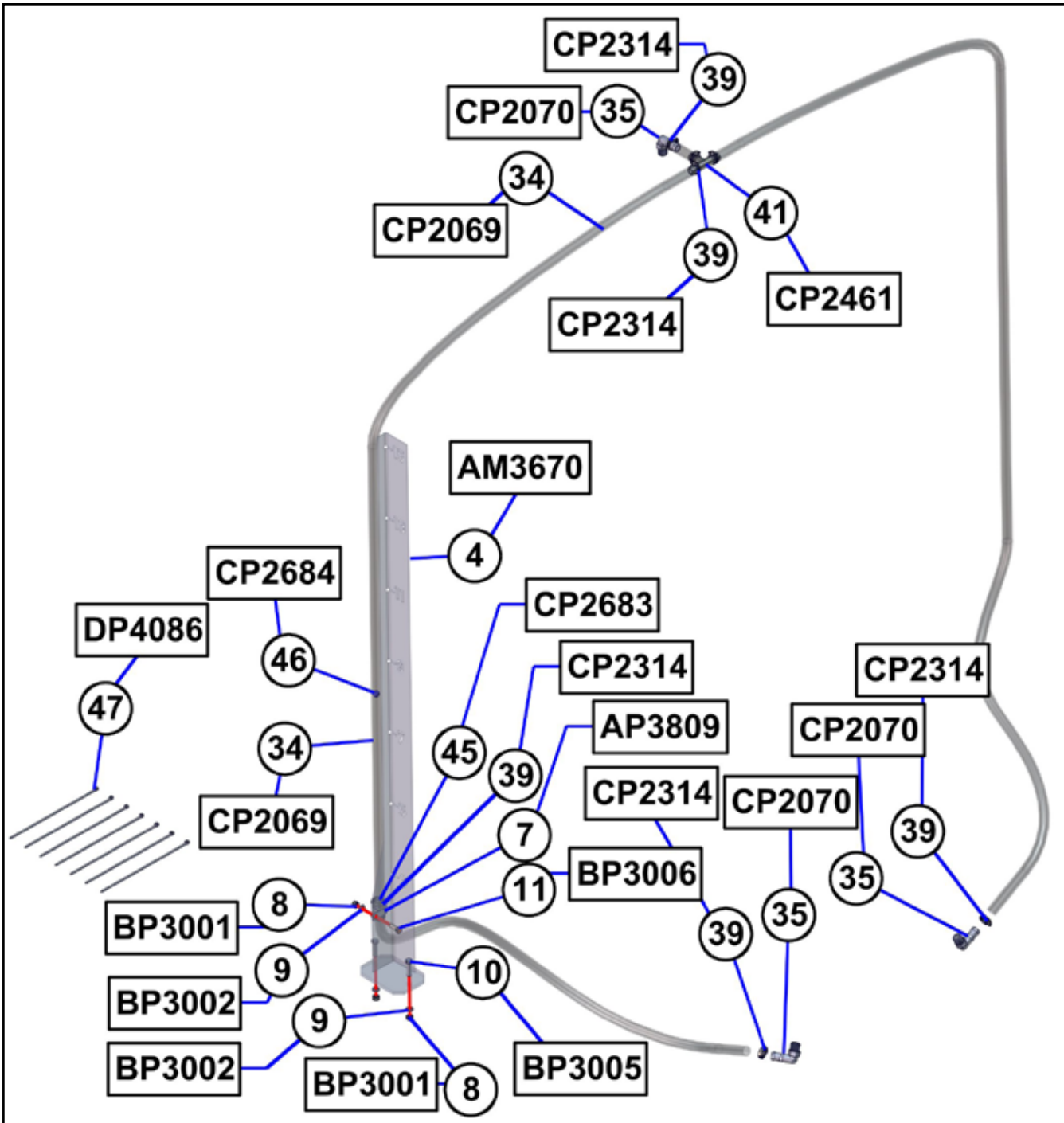


CP2569 PUMP, TWIN PISTON, NGP-9055, 68.4 GALLON

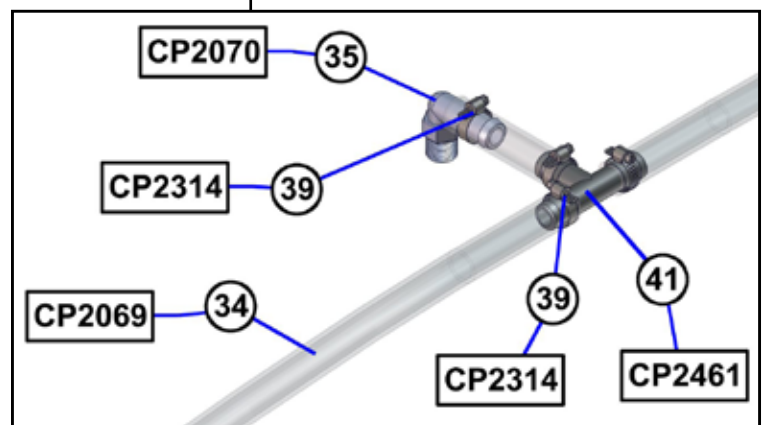
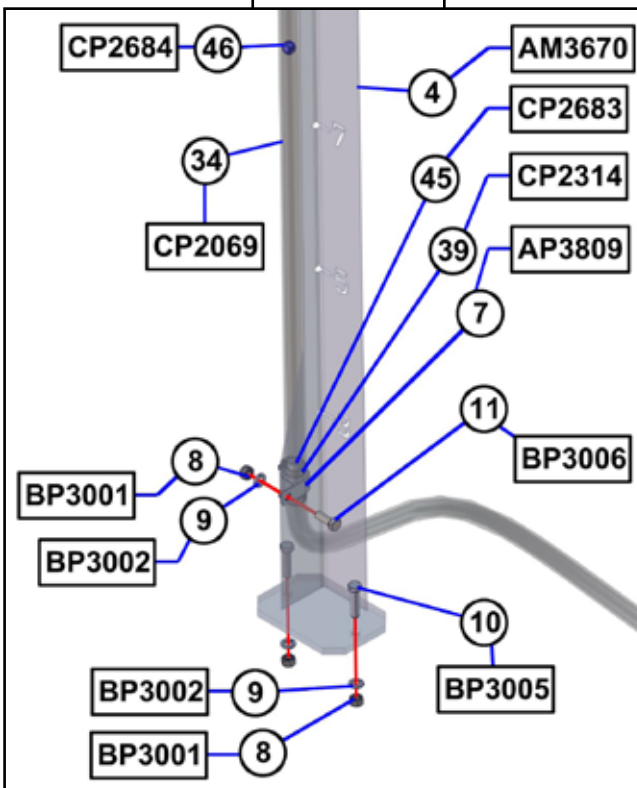
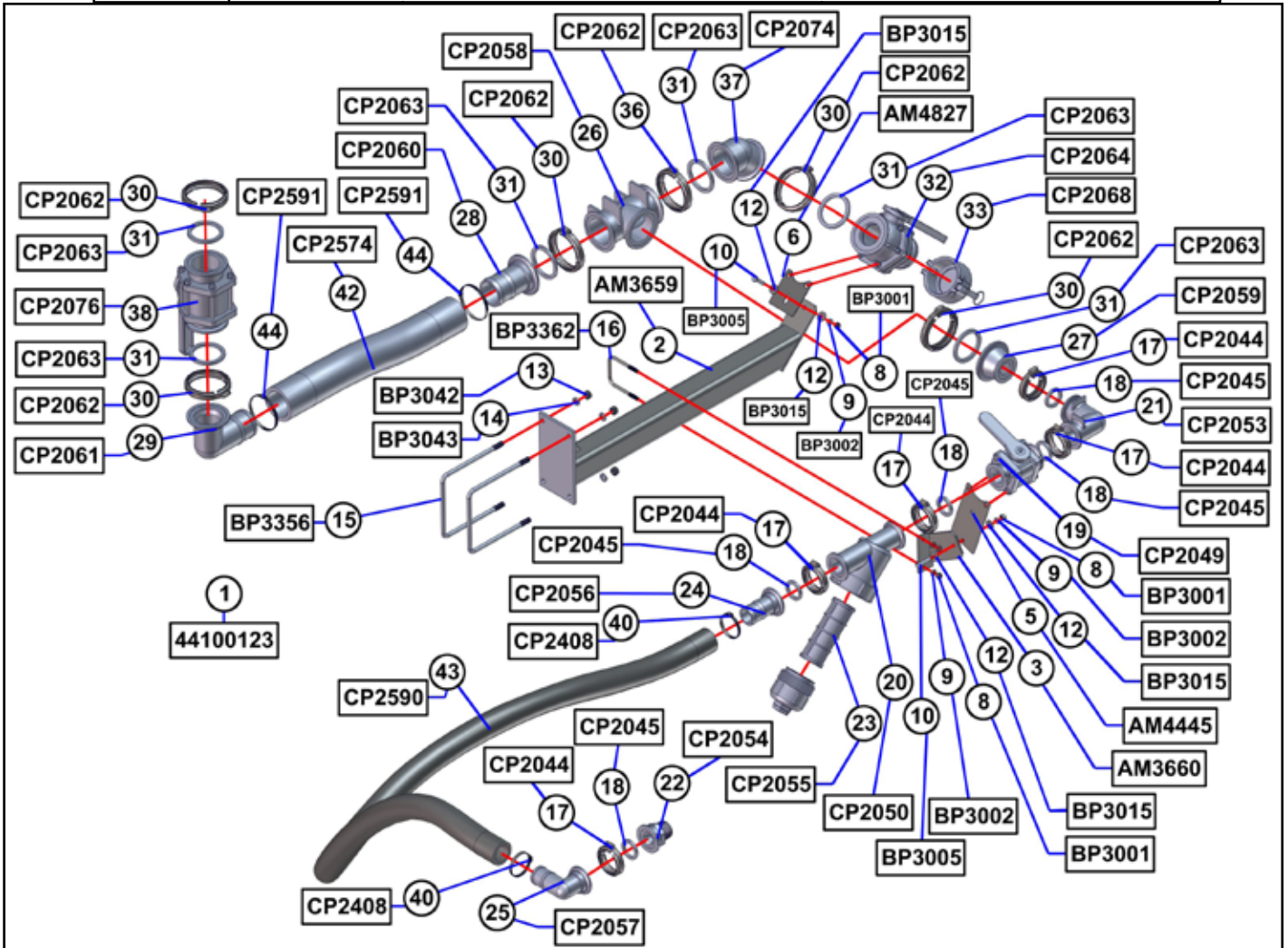
BOM ID	Qty	Item No	Description
1	4	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
2	4	BP3002	WASHER, LOCK, 3/8", PLATED
3	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
4	1	CP2569	PUMP, TWIN PISTON, NGP-9055, 68.4 GALLON

Bottom Fill Plumbing Kit AT4615 (44100123)

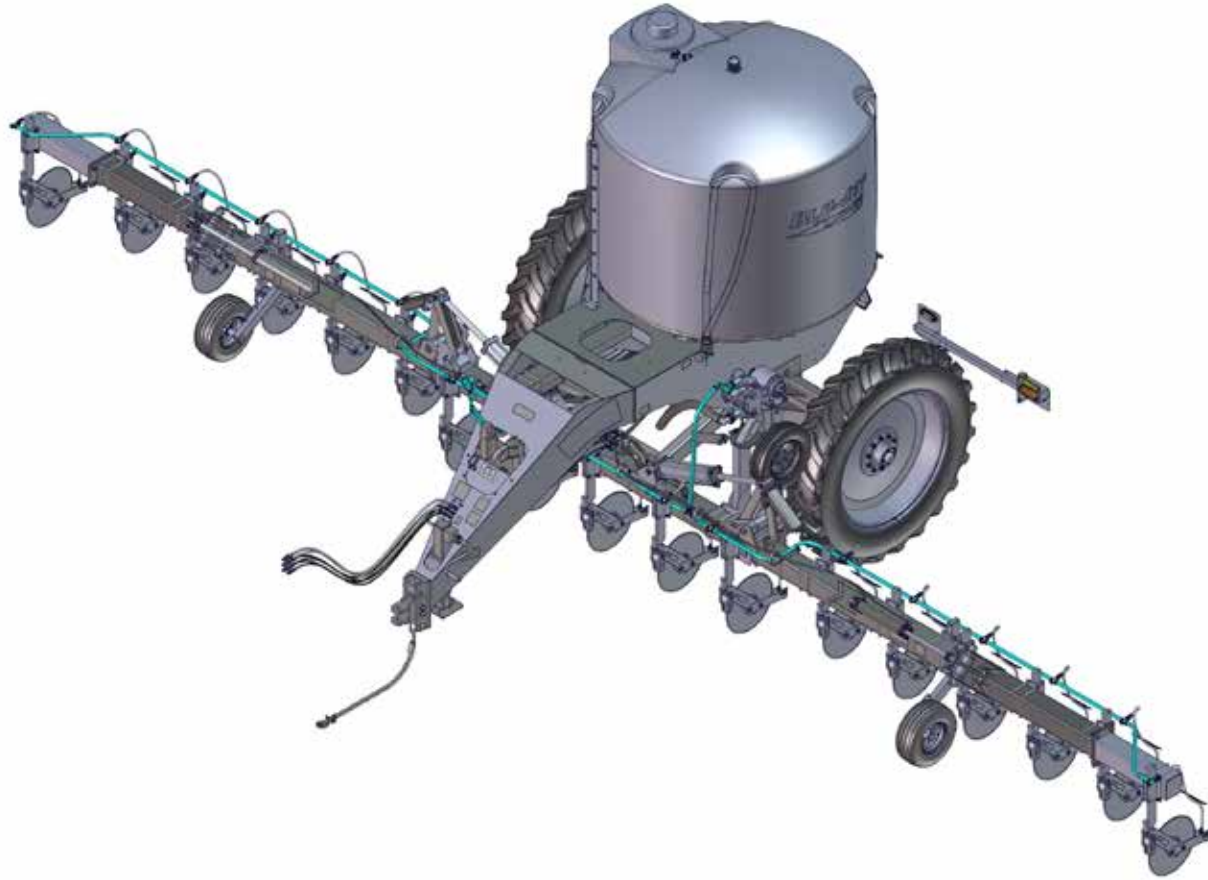
BOM ID	Qty	Item No	Description
1	1	44100123	BOTTOM FILL PLMBG KIT, AT4615, 1 PUMP, 3" FILL
2	1	AM3659	BRACKET, BOTTOM FILL VALVE MTG, AT4610
3	1	AM3660	BRACKET, VALVE SUPPORT
4	1	AM3670	BRACKET, TANK MARKING, AT4615
5	1	AM4445	VALVE MOUNTING PLATE
6	1	AM4827	BRACKET, FILL VALVE SUPPORT PLATE
7	1	AP3809	1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
8	7	BP3001	NUT, HEX, 3/8"-16, GRADE 2. PLATED
9	7	BP3002	WASHER, LOCK, 3/8", PLATED
10	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5. PLATED
11	1	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5. PLATED
12	4	BP3015	WASHER, FLAT, 3/8", PLATED
13	4	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
14	4	BP3043	WASHER, LOCK, 1/2", PLATED
15	2	BP3356	U-BOLT, 1/2"-13 X 7W X 8-1/4L, GLOSS BLACK
16	1	BP3362	U-BOLT, 3/8"-16 X 3W X 4L
17	5	CP2044	CLAMP, 2" WORM SCREW, FLANGE
18	5	CP2045	GASKET, EPDM, 2 FLANGE, 3/4 BLKHD, 150G
19	1	CP2049	VALVE, BALL, 2" - 1-1/2" PORT
20	1	CP2050	STRAINER, 2" FLANGE, LINE
21	1	CP2053	ELBOW, 90*, 2" FLANGE
22	1	CP2054	ADAPTER, 1-1/2" MPT X 2" FLANGE
23	1	CP2055	STRAINER SCREEN, 30 MESH, LS230
24	1	CP2056	HOSE BARB, 2" FLANGE X 2" HOSE
25	1	CP2057	ELBOW, 90*, 2" FLANGE X 2" HOSE BARB
26	1	CP2058	TEE, 3" FLANGE
27	1	CP2059	REDUCER, 3" FLANGE X 2" FLANGE, STD PORT
28	1	CP2060	HOSE BARB, 3" FLANGE X 3" HOSE
29	1	CP2061	ELBOW, 90*, 3" FLANGE X 3" HOSE BARB
30	5	CP2062	CLAMP, 3" WORM SCREW, FLANGE
31	6	CP2063	GASKET, EPDM, 3 FLANGE, 300G
32	1	CP2064	VALVE, BALL, 3 FLANGE X 3 MALE ADAPTER
33	1	CP2068	CAP, 3" 300 CAP
34	1	CP2069	HOSE, SITE GAUGE, 3/4"
35	3	CP2070	ELBOW, 90*, 1/2"MP X 3/4" HOSE BARB, POLY
36	1	CP2062	CLAMP, 3" WORM SCREW, FLANGE
37	1	CP2074	ELBOW, 45*, 3" FLANGE X 3" FLANGE, POLY
38	1	CP2076	VALVE BALL, 3" FLANGE POLY
39	8	CP2314	HOSE CLAMP, WORM GEAR, 1/2" - 1" TUBING, SS
40	2	CP2408	HOSE CLAMP, WORM GEAR, 2" - 2-1/2" TUBING, SS
41	1	CP2461	TEE, 3/4HB-3/4HB-3/4HB, POLY TT9121212PP
42	1	CP2574	HOSE, EPDM RUBBER, REINFORCED, 85#
43	1	CP2590	HOSE, EPDM RUBBER, 2", REINFORCED, 100#
44	2	CP2591	HOSE CLAMP, WORM GEAR, 3" TUBING, SS
45	1	CP2683	HOSE MENDER, 3/4" HB
46	1	CP2684	SIGHT GAUGE BALL, BLUE
47	7	DP4086	CABLE TIE 11-3/8" STD



Bottom Fill Plumbing Kit AT4615 (44100123)

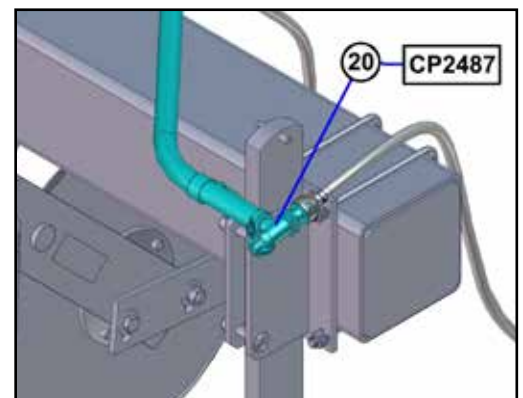
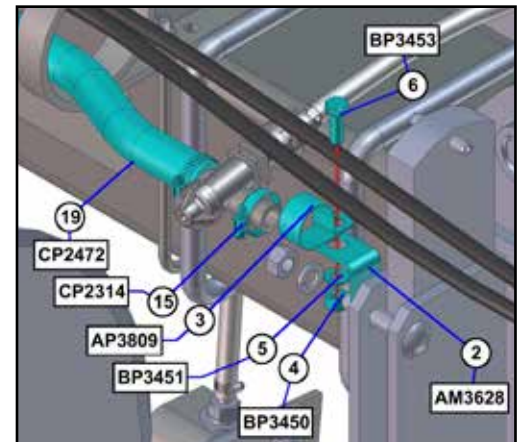
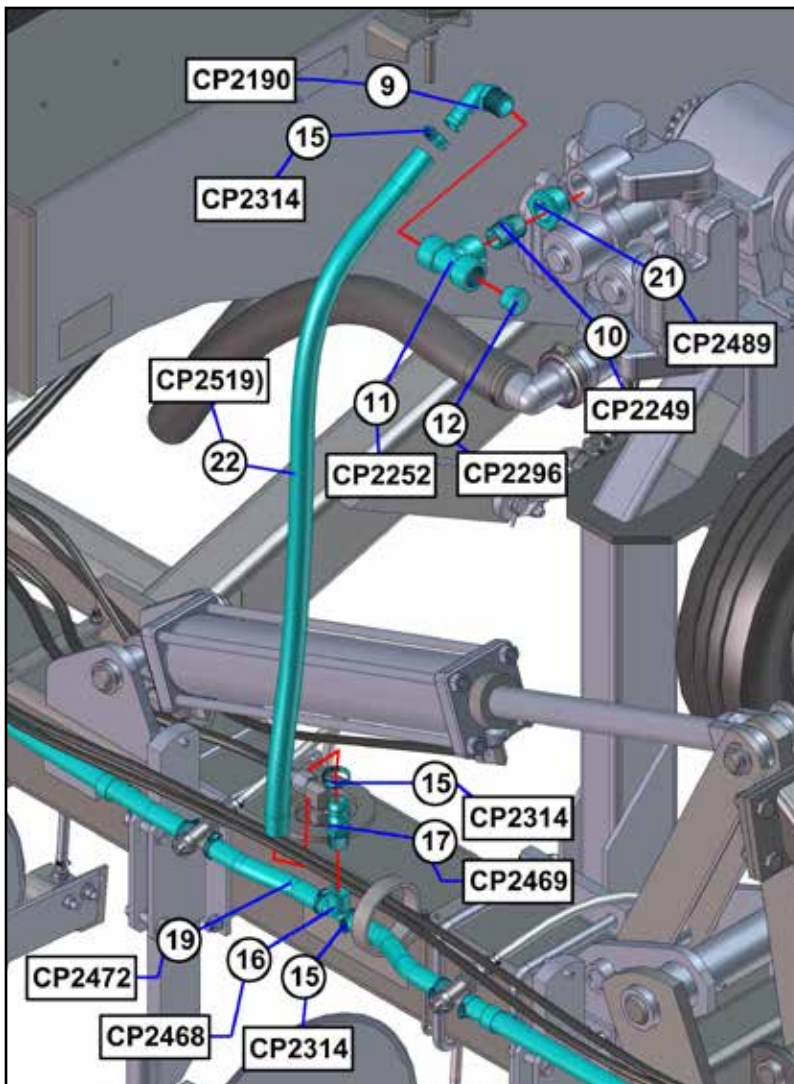
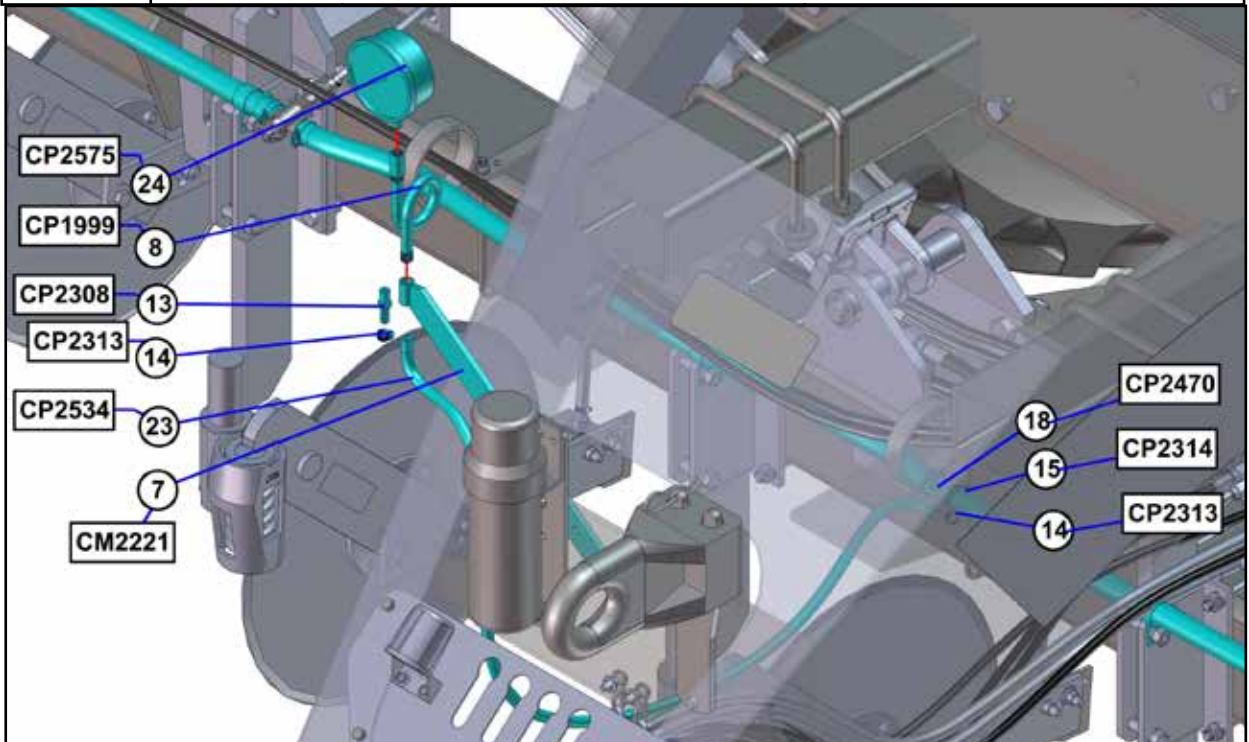


Manifold Liquid Injection Assembly (Gull Wing Toolbar)



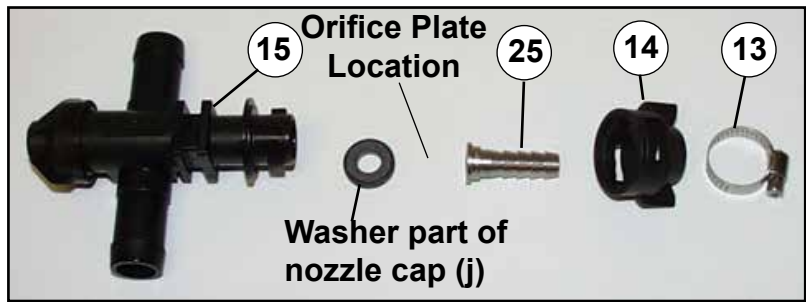
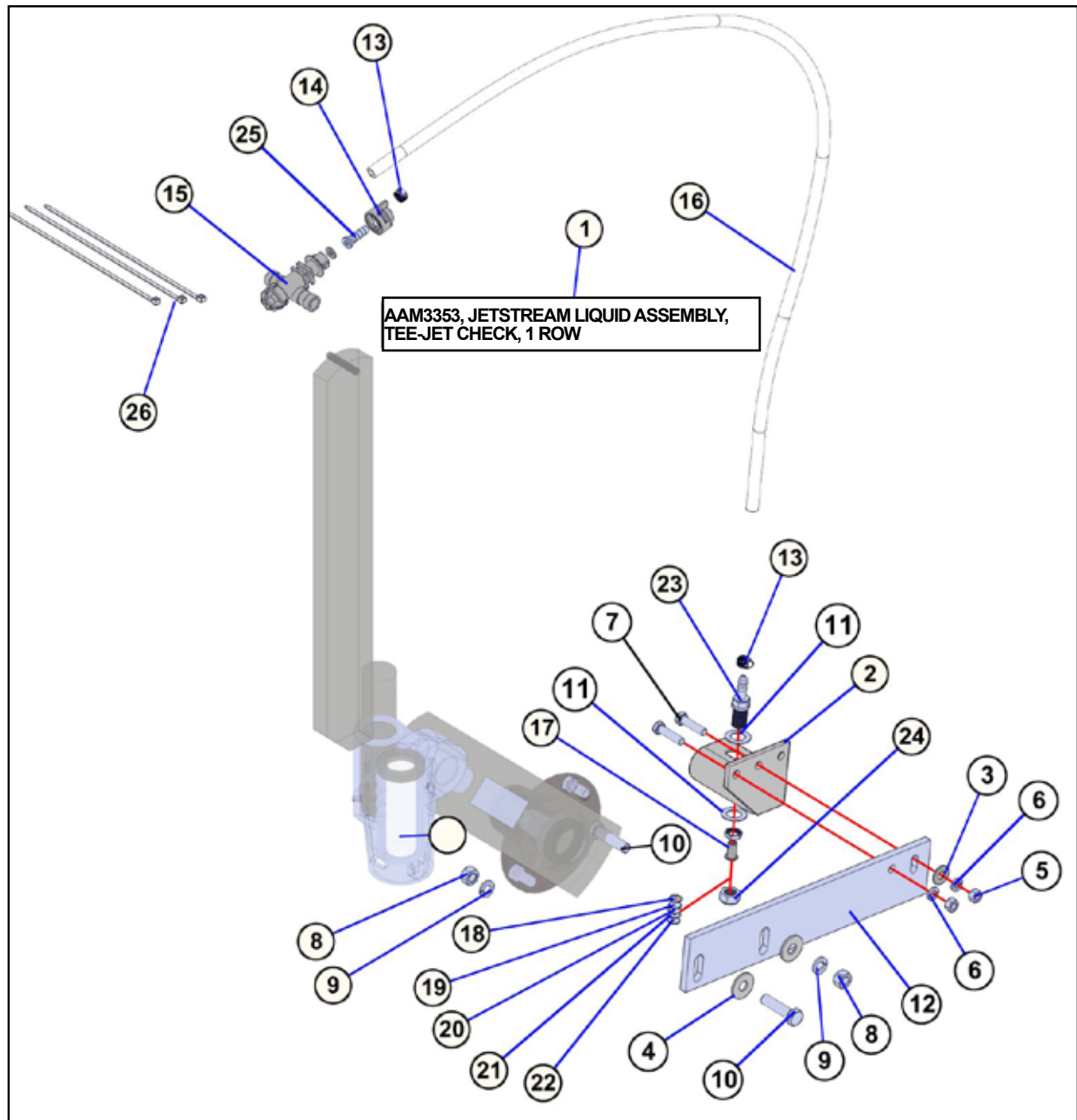
BOM ID	Qty	Item No	Description
1	1	33000117	MANIFOLD ASSEMBLY, AT3015, 3/4" EPDM, 17 ROWS
2	17	AM3628	BRACKET, MOUNTING, LIQUID TRUNK LINE
3	21	AP3809	1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
4	17	BP3450	NUT, HEX, 3/8"-16, F594 GR 1 CW
5	17	BP3451	WASHER, LOCK, 3/8", 18-8 SS
6	17	BP3453	HEX CAP SCREW, 3/8"-16 X 1", F593 GR 1 CW
7	1	CM2221	NH3 GAUGE HOLDER, TONGUE MOUNT
8	1	CP1999	GAUGE PROTECTOR, PIGTAIL
9	1	CP2190	ELBOW, 90°, 1"MP X 1"HB, POLY
10	1	CP2249	NIPPLE, CLOSE, 1" POLY
11	1	CP2252	TEE, 1" FP, POLY
12	1	CP2296	PLUG, 1" PIPE, POLY
13	1	CP2308	HOSE BARB
14	2	CP2313	HOSE CLAMP, WORM GEAR, 1/4" - 5/8" TUBING, SS
15	38	CP2314	HOSE CLAMP, WORM GEAR, 1/2" - 1" TUBING, SS
16	1	CP2468	TEE, 3/4FP-3/4HB-3/4HB, POLY
17	1	CP2469	HOSE BARB, 3/4"MP X 1HB, POLY, TA101216PP
18	1	CP2470	TEE, 3/8HB-3/4HB-3/4HB, NYLON, TT961212
19	18	CP2472	HOSE, EPDM RUBBER, 3/4", 200#
20	2	CP2487	DIAPHRAM CHECK VALVE, SINGLE SHANK, 3/4 HOSE
21	1	CP2489	REDUCER BUSHING 1-1/2"MP X 1"FP, POLY
22	1	CP2519	HOSE, EPDM RUBBER, 1", 200
23	1	CP2534	HOSE, EVA,N 3/8" BRAID JET STREAM
24	1	CP2575	GAUGE, 0-160 PSI, 4" CASE, 1/4"MPT, LIQUID FILLED, SS

Manifold Liquid Injection Assembly (Gull Wing Toolbar)



BLU-JET AT4615	Jet Stream Liquid Assembly (AAM3353)		
Task	Procedures	Illustrations	

► **AAM3353 JETSTREAM LIQUID ASSEMBLY, TEE-JET CHECK, 1 ROW**

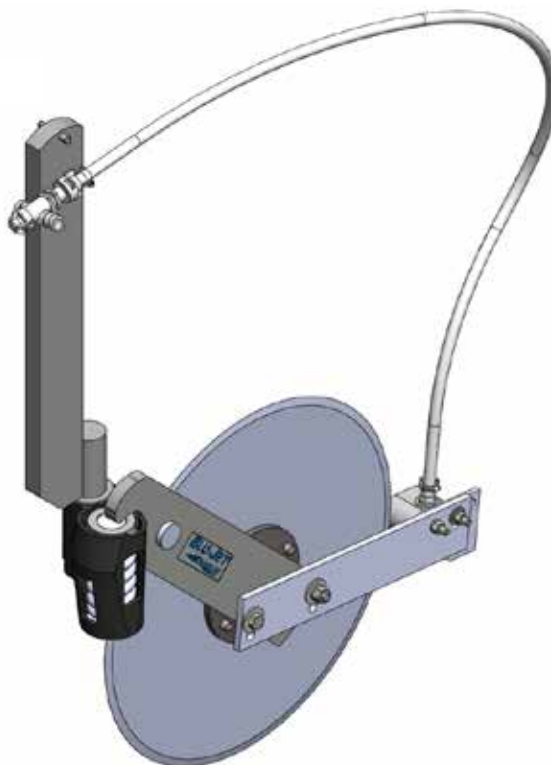


Jet Stream Liquid Assembly (AAM3353)

Task	Procedures	Illustrations
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► **AAM3353 JETSTREAM LIQUID ASSEMBLY, TEE-JET CHECK, 1 ROW**

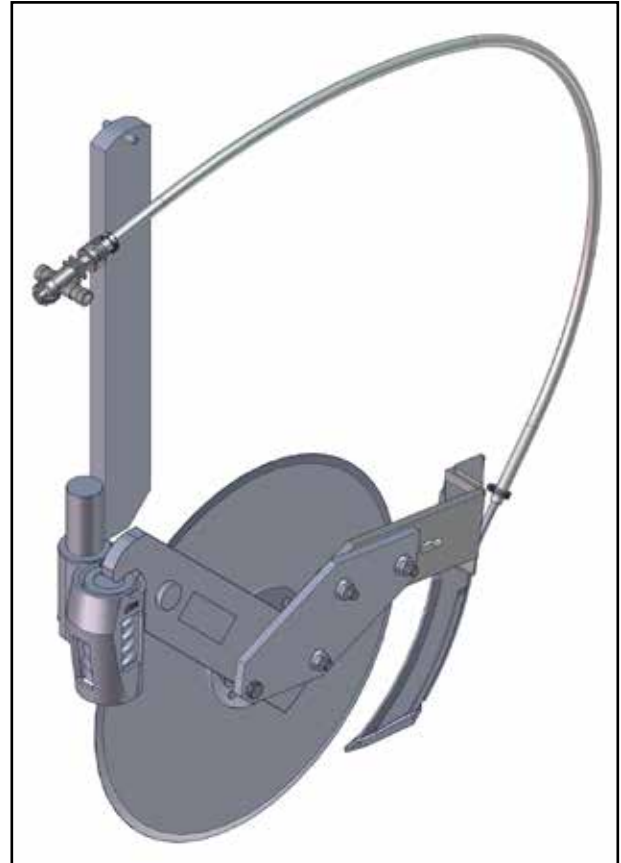
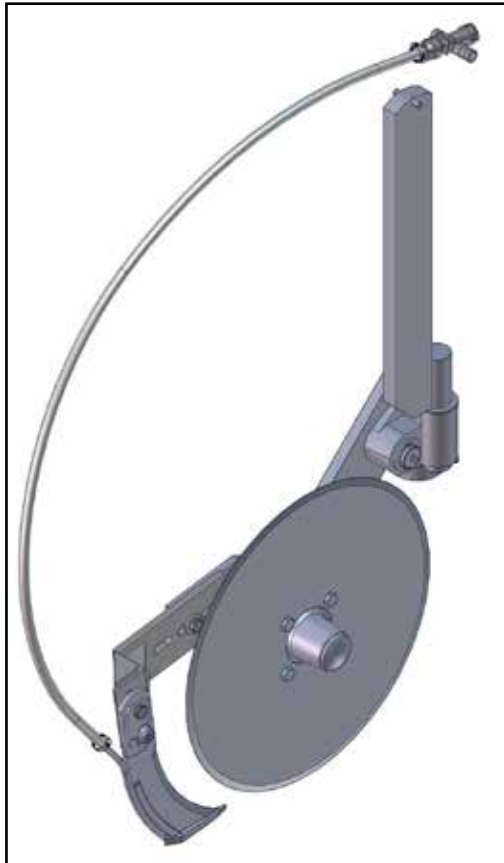
BOM ID	Qty	Item No	Description
1	1	AAM3353	JETSTREAM LIQUID ASSEMBLY TEE-JET CHECK, 1 ROW
2	1	AM3627	NOZZLE MOUNT, JETSTREAM, AT3000/ AT4000/ AT4600
3	1	BP3015	WASHER, FLAT, 3/8", PLATED
4	2	BP3050	WASHER, FLAT, 1/2", PLATED
5	2	BP3450	NUT, HEX, 3/8"-16, F594 GRADE 1
6	2	BP3451	WASHER, LOCK, 3/8", 18-8 STAINLESS STEEL
7	2	BP3454	HEX CAP SCREW, 3/8"-16 X 1-1/2", F593 GRADE 1
8	2	BP3455	NUT, HEX, 1/2"-13, F594 GRADE 1
9	2	BP3456	WASHER, LOCK, 1/2", 18-8 STAINLESS STEEL
10	2	BP3459	HEX CAP SCREW, 1/2"-13 X 2", F593 GRADE 1
11	2	BP3461	WASHER, FLAT, 5/8", 1-1/2" OD, 0.078", 18-8 STAINLESS STEEL
12	1	CM2305	JET STREAM MOUNTING ARM
13	2	CP2313	HOSE CLAMP, WORM GEAR, 1/4" - 5/8" TUBING, STAINLESS STEEL
14	1	CP2467	NOZZLE CAP, 25608-1-NYR
15	1	CP2488	DIAPHRAGM CHECK VALVE, DOUBLE SHANK, 3/4 HOSE
16	1	CP2534	HOSE, EVA, N 3/8" BRAID JET STREAM
17	1	CP2537	STREAM STABILIZER-STAINLESS STEEL JET STREAM
18	1	CP2541	ORIFICE PLATE #4916-63 JET STREAM
19	1	CP2542	ORIFICE PLATE #4916-70 JET STREAM
20	1	CP2543	ORIFICE PLATE #4916-78 JET STREAM
21	1	CP2544	ORIFICE PLATE #4916-86 JET STREAM
22	1	CP2545	ORIFICE PLATE #4916-95 JET STREAM
23	1	CP2578	NOZZLE BODY, STRAIGHT WITH NUT, 3/8" HOSE, STAINLESS STEEL
24	1	CP2589	NOZZLE CAP, STAINLESS STEEL
25	1	CP5046	HOSE BARB INSERT, 3/8", STAINLESS STEEL
26	3	DP4086	CABLE TIE 11-3/8" STANDARD





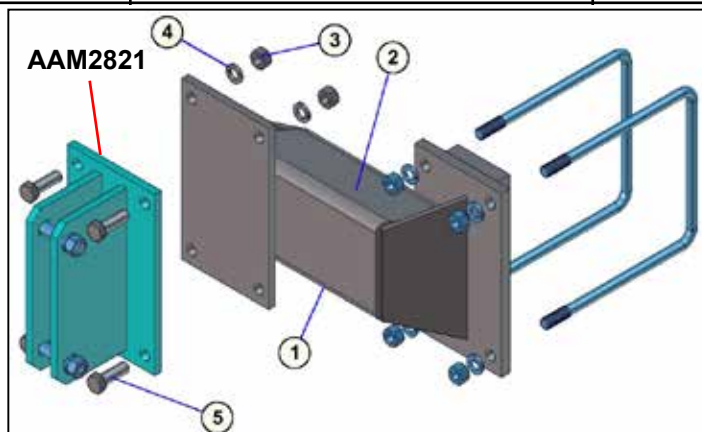
JetStream Coulter Knife Assembly (AAM3356)

BOM ID	Qty	Item No	Description
1	1	AAM3356	COULTER KNIFE ASSY, W/KNIFE, TEE-JET CHK
2	1	AAM3357	COULTER KNIFE ADAPTER, W/CO-50 KNIFE, 1 ROW
3	1	AM3313	KNIFE HOLDER/ MOUNTING ARM
4	1	AM3324	ADAPTER PLATE, COULTER KNIFE
5	1	AM3591	WASHER, COULTER KNIFE
6	4	AP2422	MACHINERY BUSHING, 1.25 OD X 9/16 ID X .135
7	4	BP3041	HEX CAP SCREW, 1/2"-13 X 2", GRD 5, PLTD
8	2	BP3126	HEX CAP SCREW, 1/2"-13 X 1-1/2", GRD 5, PLTD
9	6	BP3471	NUT, HEX FLANGE, 1/2", PLTD
10	1	CP5038	CO-50 3/8" LIQUID KNIFE EXTRA THIN
11	2	CP2313	HOSE CLAMP, WORM GEAR, 1/4" - 5/8" TUBING, SS
12	1	CP2325	ORIFICE PLATE #4916-110 JET STREAM
13	1	CP2467	NOZZLE CAP, 25608-1-NYR
14	1	CP2488	DIAPHRAM CHECK VALVE, DOUBLE SHANK, 3/4 HOSE
15	1	CP2534	HOSE, EVA,N 3/8" BRAID JET STREAM
16	1	CP2544	ORIFICE PLATE #4916-86 JET STREAM
17	1	CP2545	ORIFICE PLATE #4916-95 JET STREAM
18	1	CP2570	ORIFICE PLATE #4916-120 JET STREAM
19	1	CP2571	ORIFICE PLATE #4916-136 JET STREAM
20	1	CP5046	HOSE BARB INSERT, 3/8, STAINLESS STEEL
21	3	DP4086	CABLE TIE 11-3/8" STD



Coulter Mounting Brackets

Task	Procedures	Illustrations
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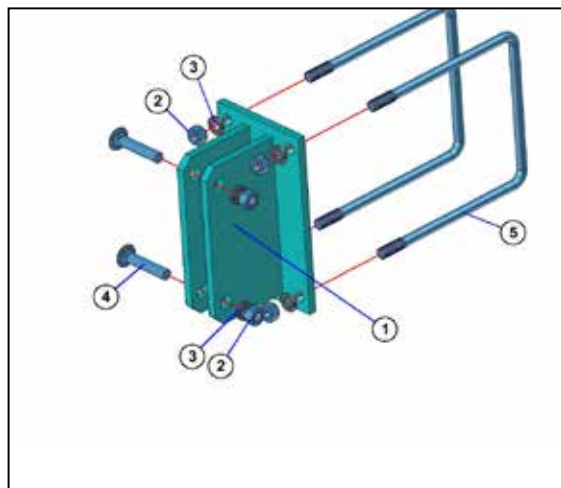


► AAM2180 Bracket, Offset, 10" X 4", WITH MOUNT HARDWARE, 7" X 7" Flatback

BOM ID	Qty	Item No	Description
1	1	AAM2180	BRACKET, OFFSET, 10" X 4", WITH HARDWARE, 7" X 7" FLATBACK
2	1	AM3574	BRACKET, OFFSET, 10" X 4", FOR 7" X 7" FLATBACK
3	4	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
4	4	BP3043	WASHER, LOCK, 1/2", PLATED
5	4	BP3126	HEX CAP SCREW, 1/2"-13 X 1-1/2", GRADE 5, PLATED



► AM4435, Bracket, Flatback 7" x 7" Offset




► AAM2822 Coulter, Flatback Offset Assembly, 7" X 7"

BOM ID	Qty	Item No	Description
1	1	AM4435	BRACKET, FLATBACK, 7" X 7", OFFSET
2	6	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
3	6	BP3043	WASHER, LOCK, 1/2", PLATED
4	2	BP3229	BOLT, CARRIAGE, 1/2"-13 X 2-1/2", GRADE 5, PLATED
5	2	BP3356	U-BOLT, 1/2"-13 X 7"W X 8-1/4"L, GLOSS BLACK

► AAM2821 Coulter, Flatback Centered Assembly, 7" x 7"

BOM ID	Qty	Item No	Description
1	1	AM4425	BRACKET, FLATBACK, 7" X 7", CENTERED
2	6	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
3	6	BP3043	WASHER, LOCK, 1/2", PLATED
4	2	BP3229	BOLT, CARRIAGE, 1/2"-13 X 2-1/2", GRADE 5, PLATED
5	2	BP3356	U-BOLT, 1/2"-13 X 7"W X 8-1/4"L, GLOSS BLACK

	<h2 style="text-align: center;">Specifications</h2>		
Task	Procedures	Illustrations	

Row spacings.....	15 Row 30", 17 Row 30"	
Outer wings fold up for.....	11 Row 30" (With outer wings folded)	
Main Frame/A-frame Hitch.....	Heavy Duty Integrated Welded Design	
Category III Pintle Hitch.....	Standard	
Heavy Duty 5 Section Toolbar.....	5 Sections Single 7" x 7"	
Automatic Hydraulic Gull Wing During Turns-Standard		
<u>Wheels and Tires</u>		
Wheels and Tires 120" Tread	Radial 380/90R46	
Wheel Bolt Torque.....	250 to 265 ft/lbs.	
Tire Pressure.....	58 P.S.I. Maximum	
Gauge Wheels.....	20.5 8.0-10	
	32 P.S.I. Maximum	
Cone Bottom Tank.....	1775 Gallons with 3" Bottom Fill	
John Blue Double Piston Pump.....	LM 4955 or NGP 9055	
Plumbing.....	Full Length 3/4" Parallel Manifold	
Coulters.....	Super 1200 Coulters with 20" Smooth Blades	
Overall Length.....	15'8"	
Transport Width.....	17' (17 Row 30") 17' (27 Row 18") 18' (33 Row 15")	
Transport Height.....	12'0"	
Empty Weight.....	10,065 lbs. Standard 17 Row 30"	
	11,600 lbs. 27 Row 18"	
	11,750 lbs. 33 Row 15"	
Water Tank/Toolbox		
Transport Chain (30,400 lbs.),		
<u>Pump Drive Tire</u>		
Pump Tire.....	155/80R12	
Tire Pressure.....	44 P.S.I. Maximum.	
<u>Jack</u>		
Top Wind Jack.....	9,000 lbs. Capacity	
<u>Tractor Requirements</u>		
Two Hydraulic Remotes.....	1,800 PSI	
Electrical System.....	12 volt, with 7 Pin Connector	
Blade Size.....	20 inch Smooth	
Lighting Kit		



12,000 lb Square Jack

Read, Understand, Follow and Save These Instructions

- Read, understand and follow all instructions before installing and using this product. Never allow anyone unfamiliar with the operating instructions to use this product.
- Read, understand and follow all instructions provided by the manufacturer of the product(s) that this product will be installed on.
- Installation of this product must conform to the following mounting instructions only.
- Save these instructions for use as a reference in the future.



WARNING

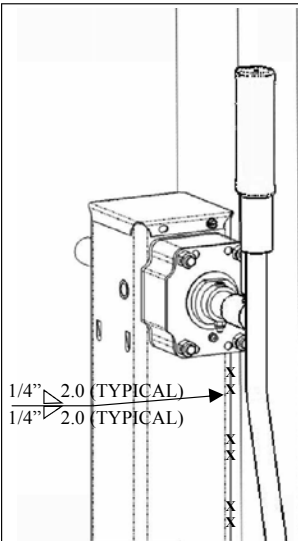
Failure to follow these warnings and instructions may result in property damage, serious bodily injury, and/or death.

- Purchaser/owner must ensure that product is installed according to these instructions. Purchaser/owner must not alter or modify product.
- Operator and bystanders should never position any part of body under any portion of this product or the load being supported.
- Fully retract and/or rotate jack before towing.
- When using the drop leg, make certain the drop leg pin is fully inserted before using the jack.
- Do not allow children to play on or around this product or the load being supported.
- Secure the load, vehicle and trailer from rolling (by blocking wheels) when operating jack or coupling trailer.
- Jack capacity is limited to the lesser of the jack, footplate, or caster wheel capacity.
- Never exceed maximum rated capacity. Refer to stamped markings or decals on product to obtain rated capacity. If uncertain, contact Cequent Performance Products at 1-800-521-0510 or www.cequentgroup.com
- These jacks are designed for vertical loading. Excessive side forces may cause jack failure and must be avoided.
- If this product has a pivot tube mount, make certain the pivot pin is fully inserted through both sides on the pivot tube and the pivot mount.
- If this product has a drop leg, never attempt to adjust the drop leg when the jack is under load.
- These jacks are designed for mounting to flat surfaces only.
- Keep clear of pinch point at drop leg pin. The drop leg will naturally drop or retract very quickly depending on model.
- Keep clear of holes in drop leg.
- All welding must be performed by an AWS certified welder.
- Always replace bent, broken, or worn parts before using this product.

Installation Instructions

Warning: Failure to follow these warnings and instructions may result in property damage, serious bodily injury, and/or death.

Before mounting the jack confirm that there will be no interference from the tow vehicle, tongue, ground, and any other mounted accessories while stationary or in motion. Before installing, check for interference in all positions including handle swing (in both gears, if applicable) and swivel positions if applicable. Check for interference again after installation is complete.



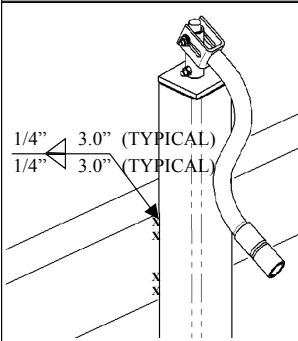
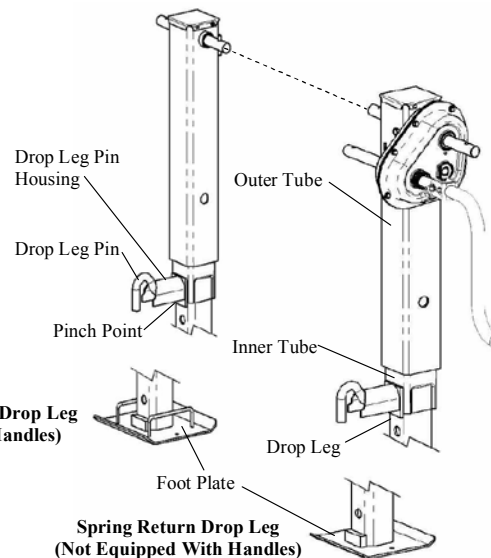
Direct Mount to Load-Bearing Member:

- 1) All welding must be performed by an AWS certified welder.
- 2) Three 2" long 1/4" fillet welds must be placed on both sides of the jack along the contacting surface. The welds should be as far apart as possible to maximize strength under load.
- 3) If mounting in a tandem application, align the jacks carefully so they raise and lower together and share the load equally.

2-Speed Shift Pattern:

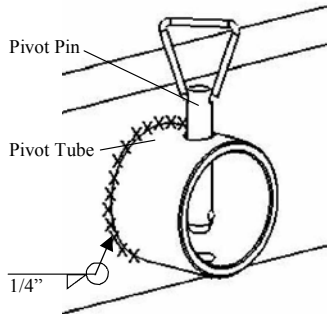
The jack handle moves 5/8"-3/4" while shifting. This clearance must be accounted for during installation.

- High gear is engaged when the shaft is pushed in.
- Low gear is engaged when the shaft is pulled out.



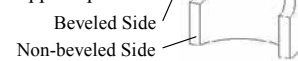
Direct-Mount:

- 1) All welding must be performed by an AWS certified welder.
- 2) Place the jack at the desired location. Weld 3" in 2 locations on both sides of the jack using a 1/4" fillet



Weld-on Pivot Tube Mounting Instructions:

- 1) All welding must be performed by an AWS certified welder.
- 2) The non-beveled side of the pivot tube is welded to the tongue.
- 3) Place the weld-on pivot tube against the tongue and weld all around with a 1/4" fillet weld. Align one set of pivot mount holes vertically.
- 4) Mate the jack to the pivot tube and secure with the supplied pin.



Drop Leg Operation

Spring Return Drop Leg Operation:

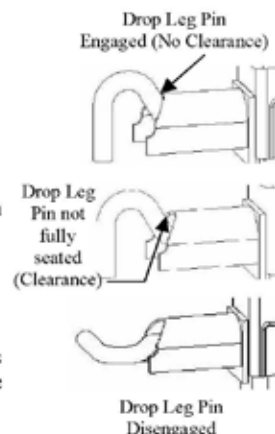
WARNING: Drop leg will naturally retract very quickly.

- 1) Verify that the jack is not supporting any load.
- 2) If extended, place your foot on foot plate to control the return of the drop leg.
- 3) Disengage drop leg pin by rotating to the disengaged position.
- 4) Carefully move the drop leg to the desired position using your foot.
- 5) Engage the drop leg pin by rotating it to the engaged position and into the desired adjustment hole.
- 6) Verify that the drop leg pin is fully inserted into the jack by checking for no clearance between the drop leg pin and housing. If you see clearance, you must adjust the drop leg to fully seat the pin into the hole location. You may need to lubricate the drop leg pin assembly as described in the maintenance section. If you are unable to fully seat the pin DO NOT USE.

Non-Spring Return Drop Leg Operation:

WARNING: Drop leg will naturally fall.

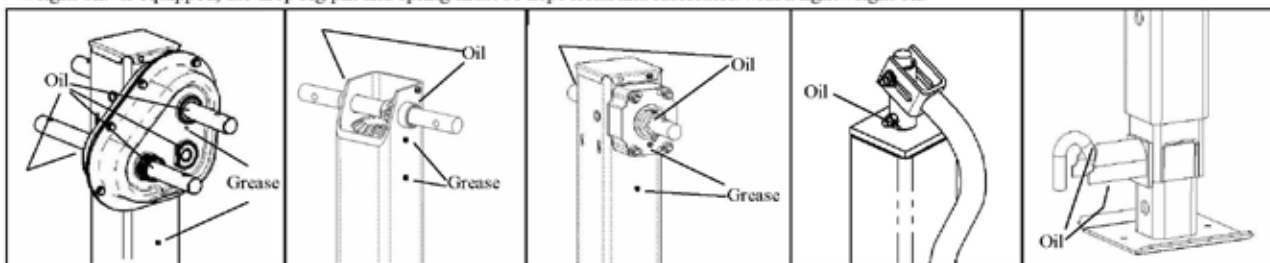
- 1) Verify that the jack is not supporting any load.
- 2) If Retracted, grasp the handle of foot plate to control the fall of the drop leg.
- 3) Disengage drop leg pin by rotating to the disengaged position.
- 4) Carefully move the drop leg to the desired position.
- 5) Engage drop leg pin by rotating to the engaged position and into the desired adjustment hole.
- 6) Verify that the drop leg pin is fully inserted into the jack by checking for no clearance between the drop leg pin and housing. If you see clearance, you must adjust the drop leg to fully seat the pin into the hole location. You may need to lubricate the drop leg pin assembly as described in the maintenance section. If you are unable to fully seat the pin DO NOT USE.



Maintenance

The following procedures should be performed at least annually:

The gears, bushings, and screw of the jack must be kept lubricated. For side-wind models, apply a small amount of automotive grease with a grease gun at the lubrication points found on the side of the jack near the input shaft. Rotate the jack handle to distribute the grease evenly. A lightweight oil must be applied to the input shaft bushings at both sides of the jack or gearbox. For top-wind models, the screw-stem should be lubricated with a light-weight oil. If equipped, the drop leg pin and spring must be kept clean and lubricated with a lightweight oil.



How to Order

Use only Cequent Performance Products' parts or parts of equal quality for repair. Replacement parts are available through Cequent Performance Products' Customer Service Department, 1-800-521-0510. Please specify product model number.

Limited Five Year Warranty

Limited Warranty. Cequent Performance Products, Inc. ("We" or "Us") warrants to the original consumer purchaser only ("You") that the product will be free from material defects in both material and workmanship for a period of five years, ordinary wear and tear excepted; provided that installation and use of the product is in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited 5 year warranty, Your sole and exclusive remedy is that We will replace the product without charge to You and within a reasonable time or, at our option, refund the purchase price. This warranty is not transferable.

Limitations on the Warranty. This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation, including welds; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser. To make a warranty claim, contact Us, at our principal address of 47774 Anchor Ct. W., Plymouth, MI 48170, 1-800-521-0510, identify the product by model number, and follow the claim instructions that will be provided. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs. Please retain your purchase receipt to verify date of purchase and that You are the original consumer purchaser. The product and the purchase receipt must be provided to Us in order to process Your warranty claim.

Remedy Limits. Repair or replacement is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for service or labor charges incurred in removing or replacing a product or any incidental or consequential damages of any kind.

Assumption of Risk. You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law. This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. This limited warranty is governed by the laws of the State of Michigan, without regard to rules pertaining to conflicts of law. The state courts located in Oakland County, Michigan shall have exclusive jurisdiction for any disputes relating to this warranty.

Hydraulic Cylinders And Parts

MFG # TMC #	Bore/ Stroke	Repair Kit	Clevis	Butt	Gland	Piston
SAE-34008SP DP 4490	4" X 8"	PMCK-SAE-34000 DP4310	100000326 DP4115	141900037 DP4270	081900354 DP4326	071900260 DP4328
SAE-34020 DP4762-1	4" X 20"	PMCK-SAE-34000 DP4310	100000328 DP4548	1419007SF- BU-0675 DP4766	0819BBNSF DP4326	071900260 DP4328
SAE-33008SP DP4656 Side	3" X 8"	PMCK-SAE-33000 DP4308	100000423 DP4116	141500043 DP4250	081500323 DP4324	071500244 DP4330
SAE-33020SP DP4492	3" X 20"	PMCK-SAE-33000 DP4308	100000423 DP4116	141500043 DP4250	081500323 DP4324	071500244 DP4330

MFG # TMC#	Piston Rod	Barrel	4 Req Tie Rod	2 Req Clevis Pin	4 Req Cotter Pin
SAE-34008SP DP 4490	011000323 DP4357	051900014 DP4353	170301252 DP4354	190400024 BP3498	220001504 BP3511
SAE-34020 DP4762-1	011025438A DP4357	051922563A DP4353	170301254 DP4354	190400024 BP3498	220001504 BP3511
SAE-33008SP DP4656	010700431 DP4429	051500007 DP4430	170201121 DP4431	190400001 BP3403	220001504 BP3511
SAE-33020SP DP4492	010700437 DP4441	051500013 DP4442	170201241 DP4443	190400001 BP3403	220001504 BP3511

Tie-rod Cylinder Disassembly - Assembly Procedure

With cylinder removed from machine, clean, drained of oil and fully retracted, proceed as follows:

Disassembly:

1. Secure cylinder in vice or other method to prevent rotation. With the immediate area clean of dirt so parts can be laid out.
2. Remove tie-rod nuts, item (1).
3. Pull rod assembly from cylinder. Remove tube item (3).
4. Loosen nut, item (4), and remove clevis, item (5), from rod assembly.
5. Place rod assembly in vice with copper or brass jaws so as not to damage.
6. Remove all seals from items (6), (8), and (9) for replacement. Clean and inspect all parts, for damage (nicks, scratches, cracks and etc.) replace as necessary. If you have any question please contact Prince Hydraulics (712) 235-1220.

Reassembly:

1. Replace all seals in items (6), (8), and (9). Do not replace small O-ring on ID of piston item, (8) until ready to attach rod, item (2).
2. Place small ID O-ring seal for piston over rod turndown and apply light coat of grease to seal. Slip piston, item (8) onto turndown with ID counter bore towards rod shoulder. Take care not to pinch O-ring between piston and rod shoulder. Replace nut, item (7), and secure.
3. Apply light coat of grease to seals in gland, item (6), and slip gland over rod end, carefully so as not to damage seals. Slip entire assembly into lightly oiled tube, item (3), piston first. Insure tube slips up over OD seals of gland.
4. Take total assembly in step 3 and slip tube over OD seal on butt, item (9). Align ports in butt and gland and apply nuts, item (1), to tie-rods and torque uniformly.

Tierod

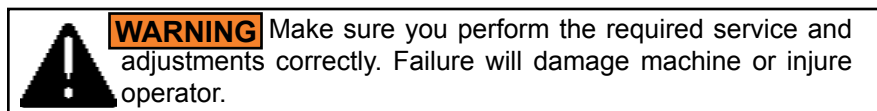
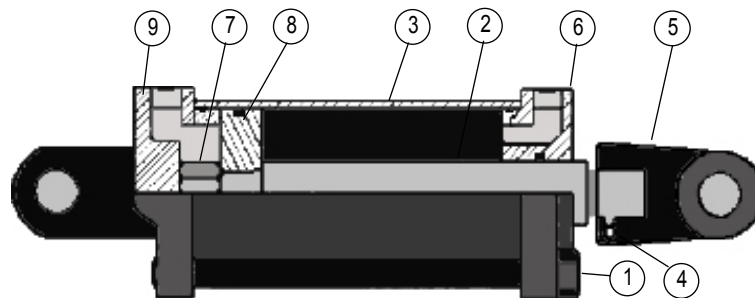
3/8" tierods 20-23 ft./lbs. (27-31 Nm)

1/2" tierods 45-52 ft./lbs. (61-70 Nm)

5/8" tierods 95-105 ft./lbs. (129-142 Nm)

3/4" tierods 150-165 ft./lbs (203-224 Nm)

5. Test for leaks and reinstall in machine. If you have any problems contact Prince Hydraulics (712) 235-1220.










6. The hydraulic system **MUST** have the air removed from the system after initial machine set-up or following the repair or replacement of any part of the system.
7. Connect implement to the tractor drawbar correctly before operating or making any adjustments.

Torque Specifications

Task	Procedures	Illustrations
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NOTE: Use these torque's unless special torque's are specified. Values are for UNC and UNF thread fasteners, plated or un-plated, as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.

SAE Grade No.	2				5				*8			
Bolt head identification (see Note 1)					  				  			
Bolt Size	LB FT		Nm		LB FT		Nm		LB FT		Nm	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	5	6	7	8	9	11	12	15	12	15	16	20
5/16	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	20	23	27	31	35	42	48	57	45	54	61	73
7/16	30	35	41	47	54	64	73	87	70	84	95	114
1/2	45	52	61	70	80	96	109	130	110	132	149	179
9/16	65	75	88	102	110	132	149	179	160	192	217	260
5/8	95	105	129	142	150	180	203	244	220	264	298	358
3/4	150	185	203	251	270	324	366	439	380	456	515	618
7/8	160	200	217	271	400	480	542	651	600	720	814	976
1	250	300	339	406	580	696	787	944	900	1080	1220	1464
1 1/8					800	880	1085	1193	1280	1440	1736	1953
1 1/4					1120	1240	1519	1681	1820	2000	2468	2712
1 3/8					1460	1680	1980	2278	2380	2720	3227	3688
1 1/2					1940	2200	2631	2983	3160	3560	4285	4827




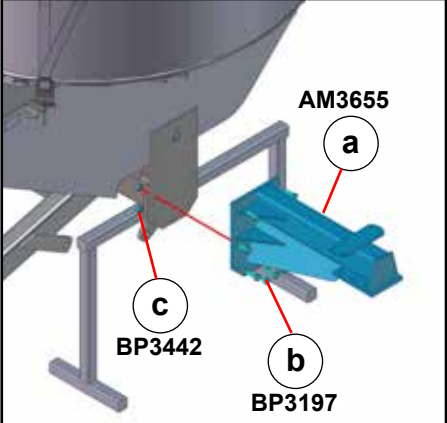
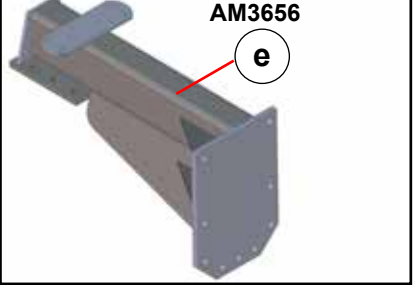
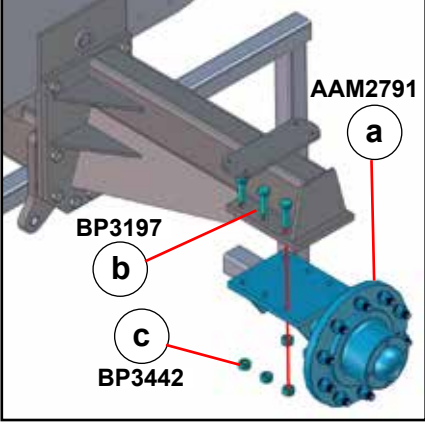
NOTE 1: Bolt head identification mark as per grade. Manufacturing marks will vary.

STANDARD TORQUE DATA HYDRAULIC TUBES AND FITTINGS

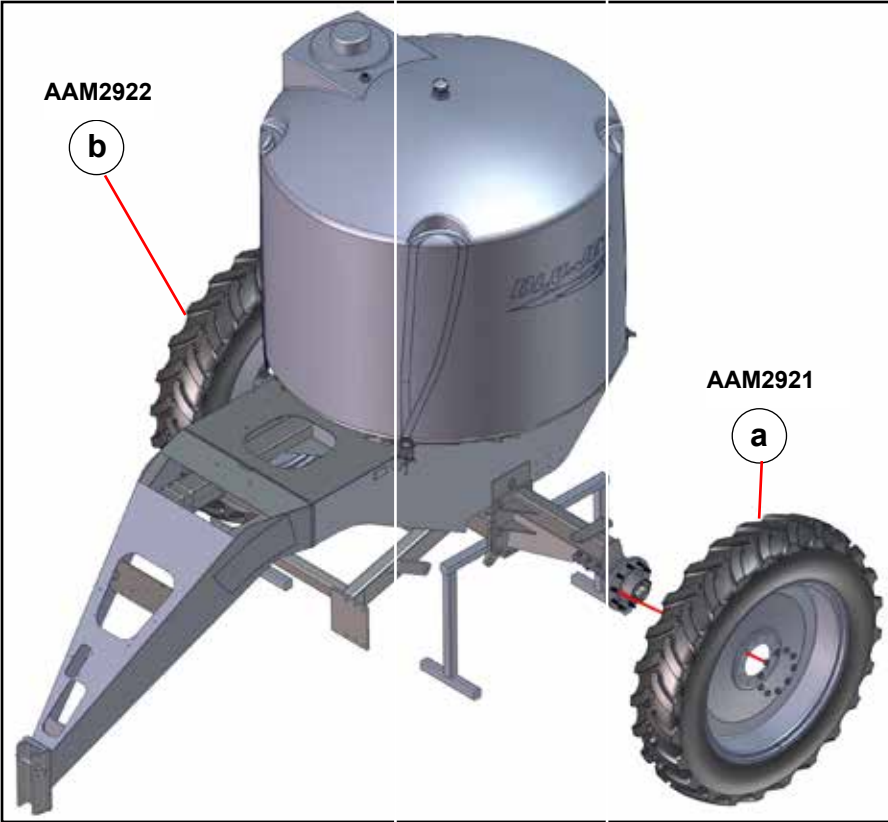
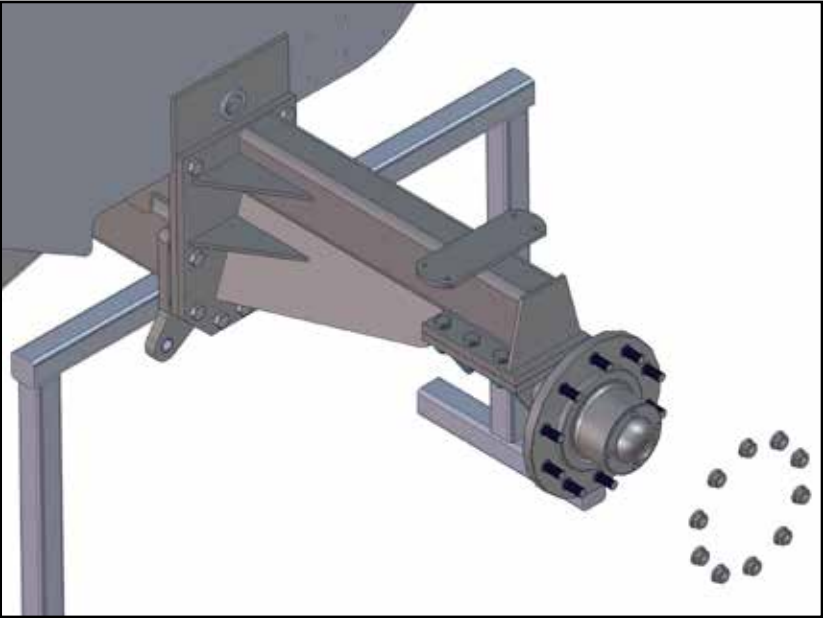
O-ring boss Plugs, Adjustable Fitting
Lock nuts, Swivel JIC-37 degree Seats


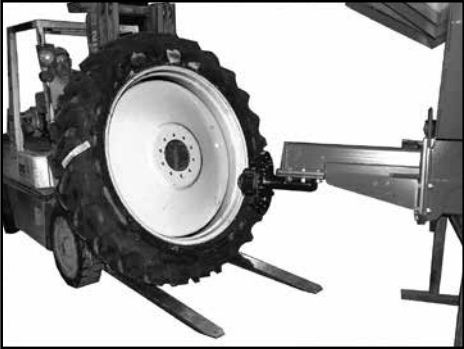



SIZE	LB FT		Nm	
	Min.	Max.	Min.	Max.
4	6	10	8	14
5	10	15	14	20
6	15	20	20	27
8	25	30	34	41
10	35	40	47	54
12	60	70	81	95
14	70	80	95	109
16	80	90	108	122
20	95	115	129	156
24	120	140	163	190
32	250	300	339	407

Above torque figures are recommended for plain, cadmium or zinc plated fittings, dry or wet installation and swivel nuts either swaged or brazed.

 AT4615	<h2 style="text-align: center;">Assembly</h2>		
	Task	Procedures	Illustrations
<div style="display: flex; flex-direction: column; align-items: center; gap: 20px;"> <div>▶</div> <div>  </div> <div>▶</div> <div>▶</div> </div>	<p>Mounting axle to main frame assembly</p> <p>WARNING Keep bystanders away during assembly</p> <p>NOTE: <i>Right-hand and left-hand as viewed from the rear</i></p>	<ol style="list-style-type: none"> Place AT4615 assembly on concrete surface. Position left-hand (a) (AM3655) left-hand 120" spacing axle for 380/90R46 tire on AT4615 assembly and secure with nine (b) (BP3197) 3/4"-10 x 2-1/2", grade 8, hex cap screws and (c) (BP3442) 3/4" top lock, grade C, hex lock nuts. Position right-hand (e) (AM3656) right-hand 120" spacing axle for 380/90R46 tire on AT4615 assembly and secure with nine (b) (BP3197) 3/4"-10 x 2-1/2", grade 8, hex cap screws and (c) (BP3442) 3/4" top lock, grade C, hex lock nuts. 	  
	<p>Mounting hub and spindle</p>	<ol style="list-style-type: none"> Attach (a) (AAM2791) hub and spindle assembly to axle with (b) (BP3197) 3/4"-10 x 2-1/2", grade 8, hex cap screws and (c) (BP3442) 3/4" top lock, grade C, hex lock nuts. 	

Assembly

Task	Procedures	Illustrations
<p>► Mounting single tires to main frame</p> <p>WARNING Keep bystanders away during assembly</p>	<p>1. Place main frame assembly on sturdy stands high enough to mount tires.</p> <p>AAM2922</p> <p>b</p> <p>AAM2921</p> <p>a</p> <p>2. Remove hub lugs.</p>	 

BLU-JET AT4615	Assembly		
	Task	Procedures	Illustrations
<div data-bbox="344 275 380 306">▶</div> <div data-bbox="287 443 380 527">  </div>	<p>Mounting single tires to main frame</p> <p>WARNING Keep bystanders away during assembly</p>	<ol style="list-style-type: none"> 1. Move tires into position with forklift near hub. <p><i>NOTE: Wheel, 380/90R46, 168A8 left-hand and right-hand assembly.</i></p> <p><i>Valve Stems to the outside.</i></p> <ol style="list-style-type: none"> 2. Main frame can be raise from the rear with a forklift. Slowly raise frame until the rim can be inserted on hub if more height is required. 3. Tighten lug nuts evenly and torque to 250-265 ft. lbs. (Tire pressure should be 58 P.S.I.) <p>Raise assembly and remove stands.</p>	<div data-bbox="1078 275 1539 621">  </div> <div data-bbox="1078 642 1500 957">  </div> <div data-bbox="1078 978 1505 1377">  </div> <div data-bbox="639 1394 1505 2039">  </div>

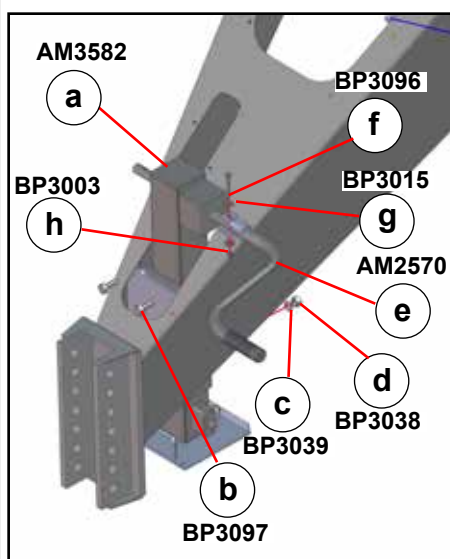
Generic Photo

Assembly (Jack and Toolbar Mounting)



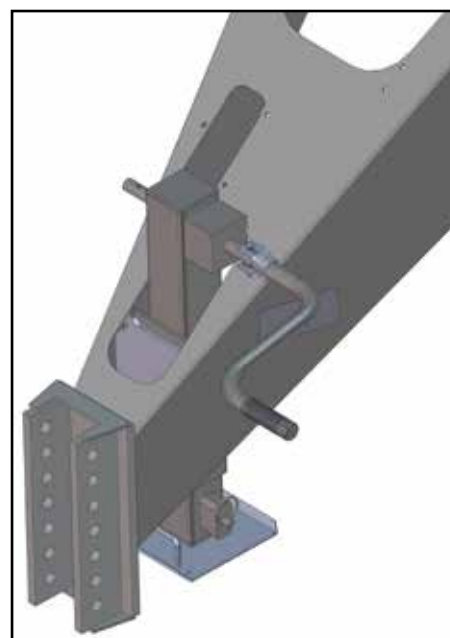
Installing jack with crank

1. Raise the tongue and place a 4" x 6" block under hitch. Insert (a) (AM3582) 12SWDL 2 speed jack inside tongue weldment and secure jack with four (b) (BP3097) 5/8" x 1-1/2" hex cap screws, (c) (BP3039) 5/8" lock washers and (d) (BP3038) 5/8" hex nuts.
2. Install (e) (AM2570) crank with grip with one (f) (BP3096) 3/8" x 2-1/2" hex cap screw. Place one (g) (BP3015) 3/8" flat washer on each side of the 3/8" hex cap screw and secure with (h) (BP3003) 3/8" hex lock nut. Do not over tighten, crank must move freely.

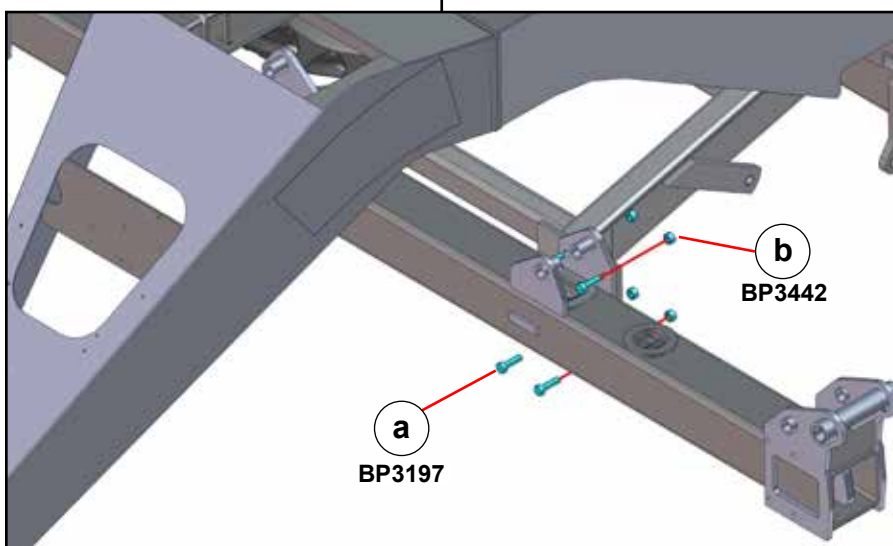




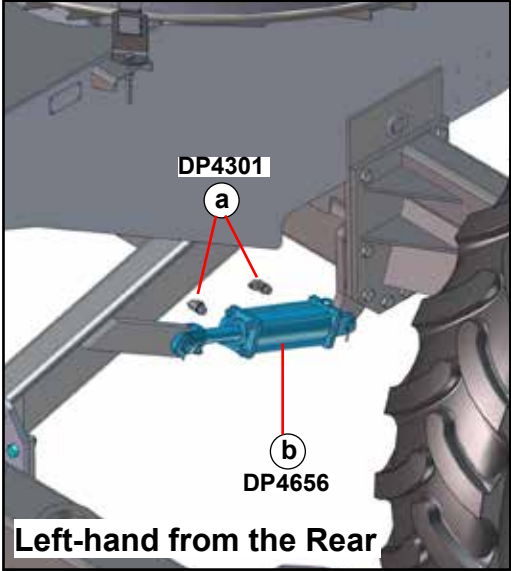
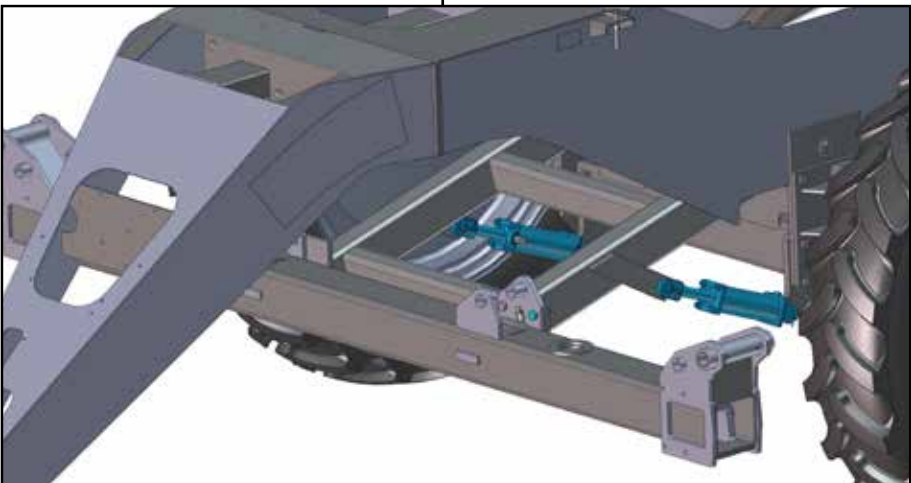
Mounting center section assembly to main frame

3. Position the center section assembly in front of the tongue. Raise the tongue assembly over the center section and roll machine forward to position the center section for attachment to the lift arms.



4. Raise the center section with two forklifts and secure with (a) (BP3197) 3/4" x 2-1/2" grade 8, hex cap screws, and (b) (BP3442) 3/4" top lock grade C hex lock nuts.



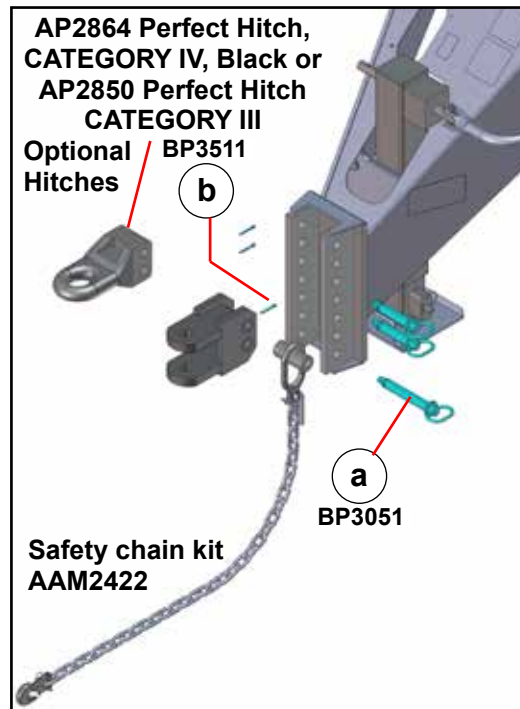
BLU-JET AT4615	Assembly (Lift Cylinders)		
	Task	Procedures	Illustrations
<p>► Preparing hydraulic lift cylinders before installation</p>		<ol style="list-style-type: none"> 1. Remove cylinder plugs from cylinder (fig a). 2. Place cylinder, plug side down, over oil pan and pull cylinder rod in and out until the oil is removed (fig. b). In extended position, replace cylinder plugs loosely to prevent foreign matter from entering cylinder until fittings can be installed. 	<p>Generic Examples</p> <p>a.</p>  <p>b.</p> 
<p>► Attaching lift cylinder</p> <p>► NOTE: Cylinders are oriented with fittings toward the center of the applicator</p> <p>► NOTE: Right-hand and left-hand as viewed from the rear</p>		<ol style="list-style-type: none"> 3. Install two (a) (DP4301) 90 degree adapter, 6MJ-8MSAE in each (b) (DP4656) 3" x 8" hydraulic cylinder SAE-33008SP. 4. Raise the toolbar and arm assembly with the forklift. Attach butt end to main frame weldment with cylinder pins and cotter keys provided with cylinders. 5. Extend rod end of the cylinder and attached to the lift arm. Secure with cylinder pins and cotter keys provided with cylinders. 	 <p>DP4301</p> <p>a</p> <p>b</p> <p>DP4656</p> <p>Left-hand from the Rear</p>
			

Assembly (Hitch and Safety Chain)

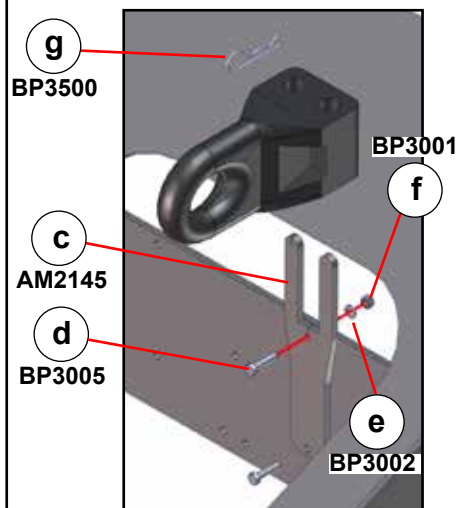



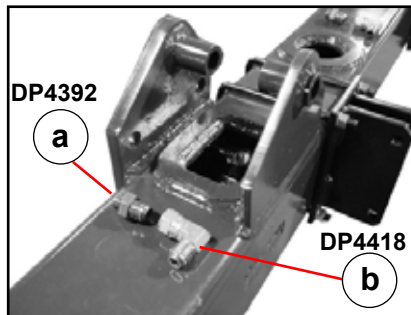
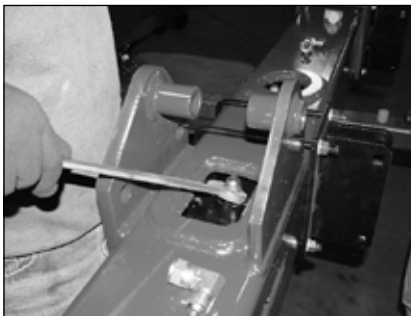

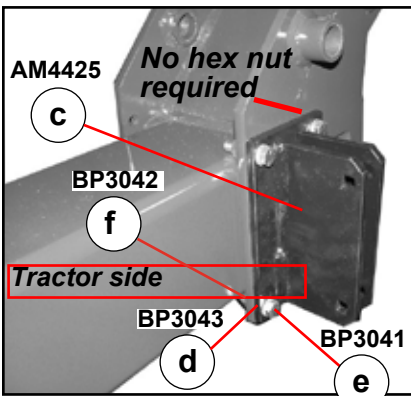
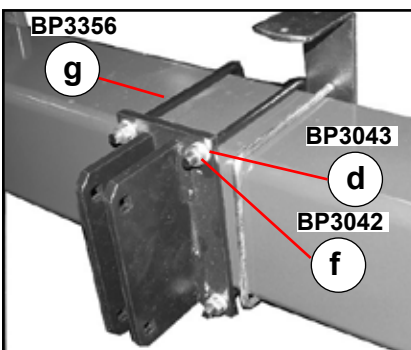
Attaching hitch and safety chain

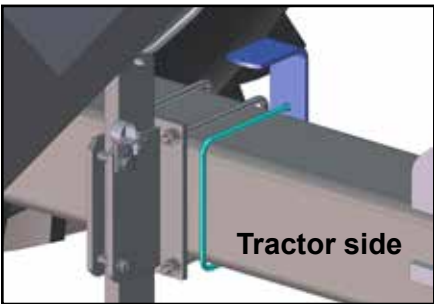
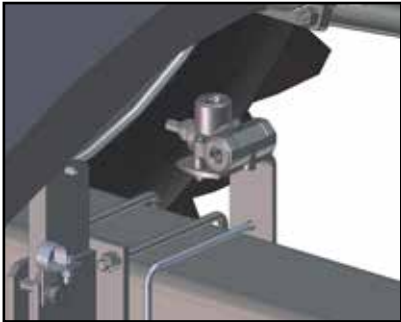
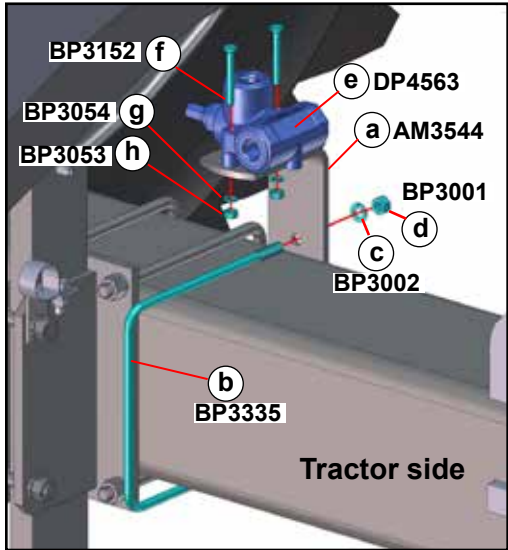
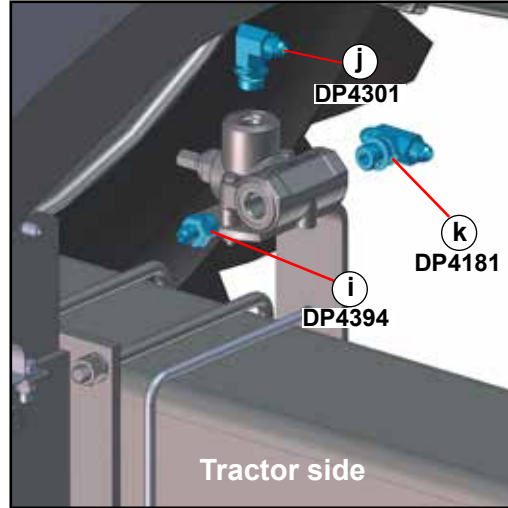
1. Install hitch and safety chain to tongue connector with (a) (BP3051) 1" x 6" hitch pins. Secure with (b) (BP3511) cotter pins 3/16" X 1-3/4".



2. Mount (c) (AM2145) 6" mounting hitch storage bracket to tongue frame with (d) (BP3005) 3/8" x 1-1/2" hex cap screws, (e) (BP3002) 3/8" lock washers, and (f) (BP3001) 3/8" hex nuts.
3. Place extra hitch on mount and secure with (g) (BP3500) 3/16" hair pin clip.

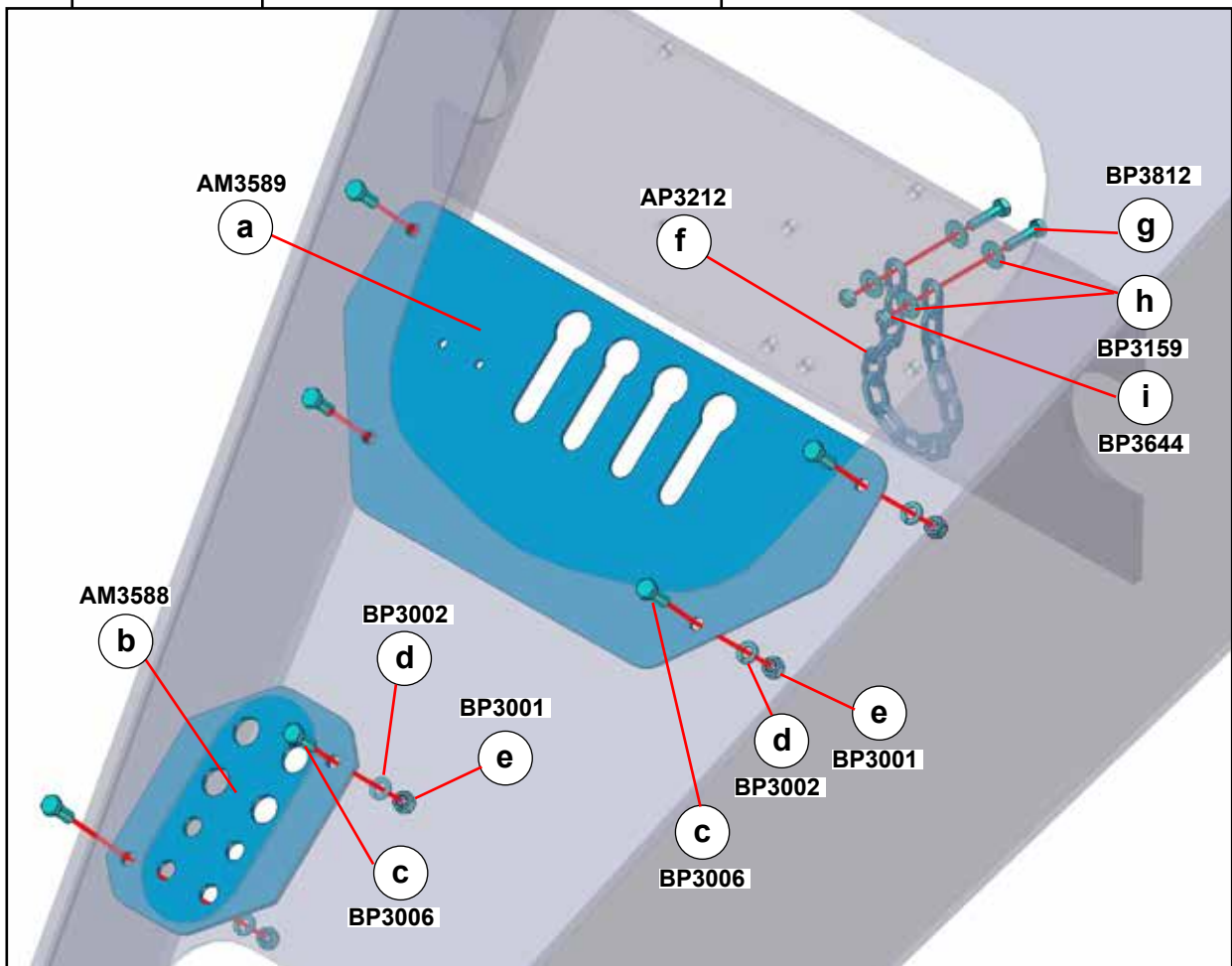


BLU-JET AT4615		Gull Wing Toolbar Assembly (Center Section)	
	Task	Procedures	Illustrations
▶	Installation of center section fittings	<div><div>1. Place center section on sturdy stands and remove cylinder plugs.</div><div></div><div>2. Install (a) (DP4392) 8MSAE-10MJIC straight adapter in all four cylinder ports.</div><div>3. Install (b) (DP4418) 10MJIC-10MJIC 90 degree elbow on each straight adapter with all ports facing the center of the center section.</div></div>	<div></div> <div></div> <div></div>
▶	Attaching centered flatback to center section hinge area	<div><div>4. Attach (c) (AM4425) 7" x 7" centered flatback bracket to center section hinge area. (Tractor side) Place (d) (BP3043) 1/2" lock washers on each (e) (BP3041) 1/2" x 2" hex cap screws and insert into flatback into center section weldment. Secure three hex cap screws with (f) (BP3042) 1/2" hex nuts. The top right-hand from the front does not require a hex nut.</div></div>	<div></div>
▶	Mounting centered flatbacks to center section	<div><div>5. Consult row spacing page and mark out row spacings on center section. Install flatback brackets to the tractor side of the center section with (g) (BP3356) 1/2" x 7"W x 8-1/4"L u-bolts, (d) (BP3043) 1/2" lock washers and (f) (BP3042) 1/2" hex nuts.</div></div>	<div></div>

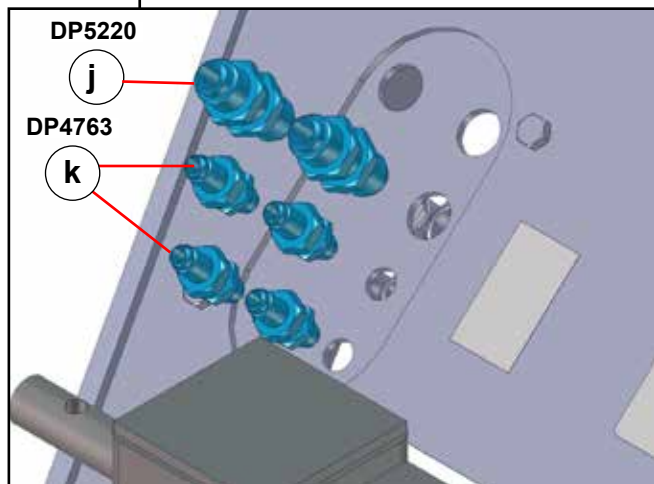
BLU-JET AT4615	Gull Wing Toolbar Assembly (Relief Valve)		
	Task	Procedures	Illustrations
<p>►</p> <p>►</p>	<p>Installation relief valve bracket</p> <p>NOTE: <i>Right-hand and left-hand as viewed from the rear</i></p>	<p>1. Position (a) (AM3544) relief valve mounting bracket to the left of the center section centered flatback mount. Secure with (b) (BP3335) 3/8" x 7"W x 8"L u-bolt, (c) (BP3002) 3/8" lock washers and (d) (BP3001) 3/8" hex nuts.</p>	
<p>►</p>	<p>Mounting relief valve</p>	<p>2. Attach (e) (DP4563) relief valve, RV-5H, Prince 1500-3000 psi to mounting bracket with two (f) (BP3152) 1/4" x 2" hex cap screws, (g) (BP3054) 1/4" lock washers and (h) (BP3053) 1/4" hex nuts.</p> 	
<p>►</p>	<p>Installation of relief valve fittings</p>	<p>3. Install (i) (DP4394) 8MSAE-6MJIC adapter to tractor side relief valve port. Install (j) (DP4301) 6MJ-8MSAE 90 degree adapter to top port facing to the rear.</p> <p>4. Install (k) (DP4181) 8MSAE x 6MJ-6MJ branch tee on rear port of relief valve.</p>	

Gull Wing Toolbar Assembly (Hydraulic Hoses)

Task	Procedures	Illustrations
------	------------	---------------



1. Attach (a) (AM3589) Utility plate and (b) (AM3588) Bulkhead plate with (c) (BP3006) 3/8" x 1" hex cap screws, (d) (BP3002) 3/8" lock washers and (e) (BP3001) 3/8" hex nuts.
2. Attach hose chain (f) (AP3212) (g) (BP3812) 5/16" x 1-1/4" hex cap screws, (h) (BP3159) 5/16" flat washers, and (i) (BP3644) 5/16" hex lock nuts.
3. Install (j) (DP5220) 10MJ-10MJ bulkhead union and (k) (DP4763) 6MJ-6MJ bulkhead union in bulkhead plate.



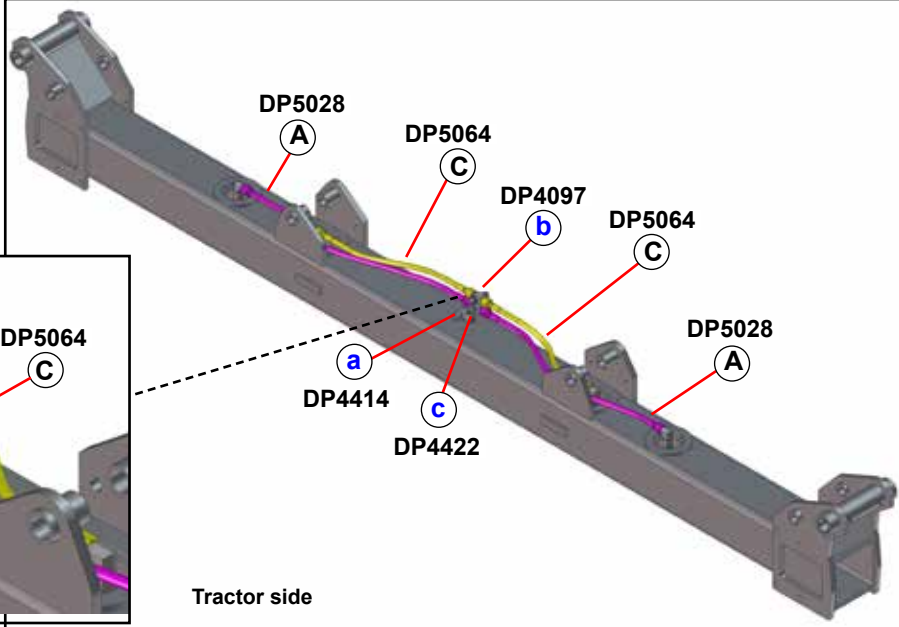
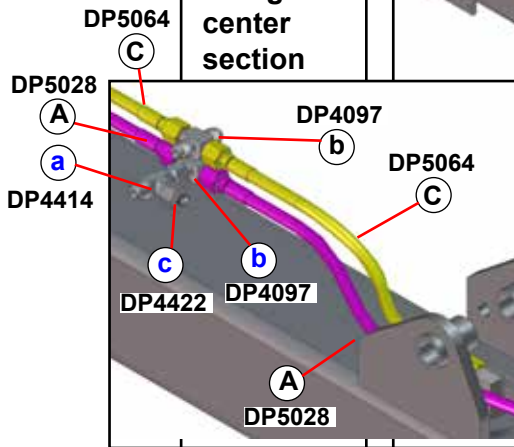
Gull Wing Toolbar Assembly (Center Section Gull Wing)

Task

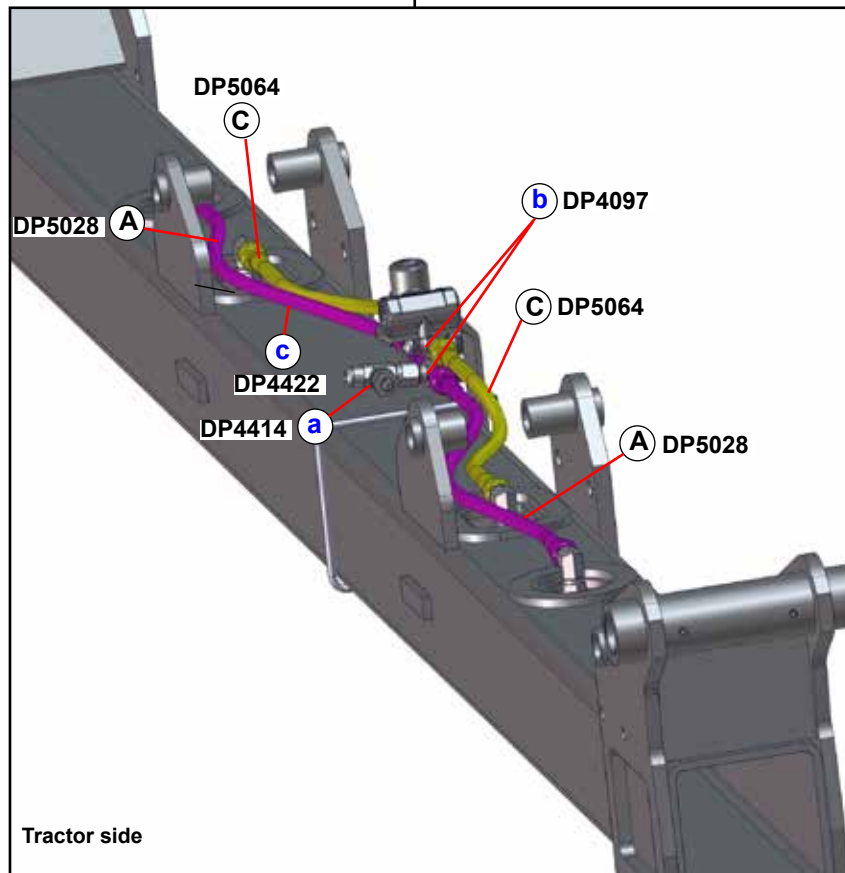
▶ Attaching gull wing hoses and cross fittings center section

Procedures


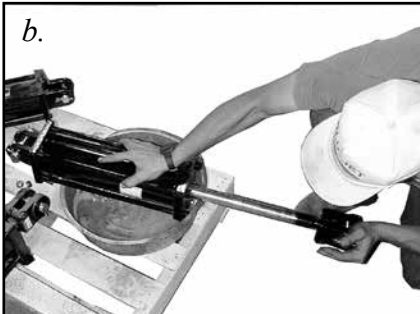
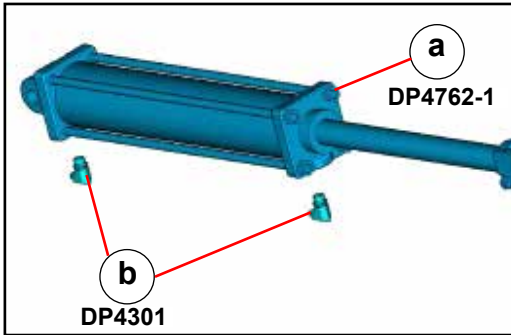
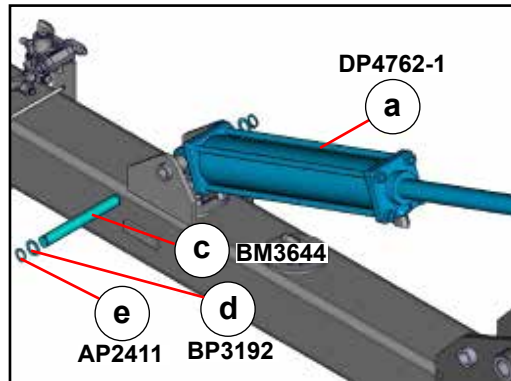

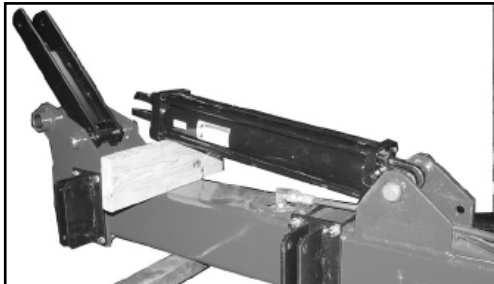
Illustrations



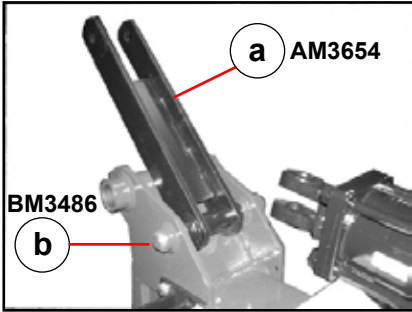
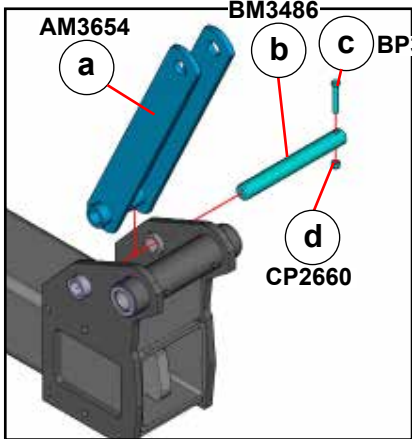
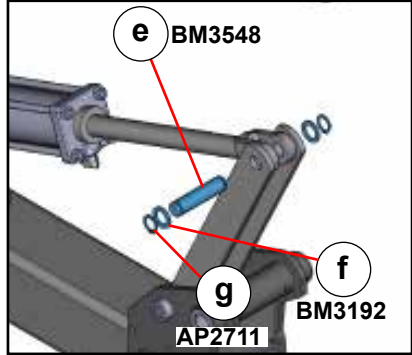
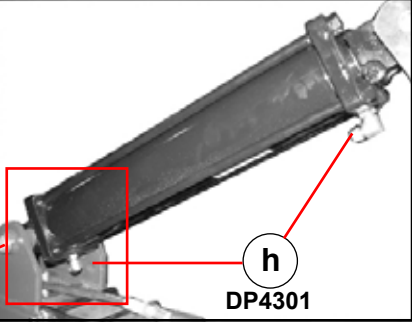
1. Assemble (a) (DP4414) 10FJC-10FJC-10MJIC tee on (b) (DP4097) 10MJ-10MJ-10MJ-10MJ cross. Install (c) (DP4422) 10FJ-6MJ adapter on (a).
2. Attach (A) (DP5028) 3/8" x 36" 10FJX-10FJX hydraulic hoses on each side of the assembly.
3. Attach opposite end of (A) to rod end of gull wing cylinders.
4. Install (C) (DP5064) 3/8" x 24" 10FJX-10FJX to (b) and extend hose to butt end of gull wing cylinders.

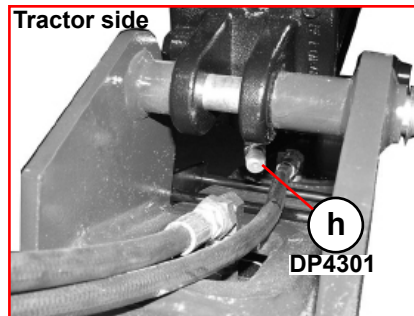


Gull Wing Toolbar Assembly (Wing Cylinders)

	Task	Procedures	Illustrations
►	Preparing hydraulic cylinders before installation	<ol style="list-style-type: none"> 1. Remove cylinder plugs from cylinder (fig a). 2. Place cylinder, plug side down, over oil pan and pull cylinder rod in and out until the oil is removed (fig. b). In extended position, replace cylinder plugs loosely to prevent foreign matter from entering cylinder until fittings can be installed. 	<p>Generic Examples</p> <p>a.</p>  <p>b.</p> 
►	Installing primary wing cylinders	<ol style="list-style-type: none"> 3. Before mounting (a) DP4762-1 4" x 20" primary wing cylinders install (b) (DP4301) 6MJ-8MSAE, 90 degree adapter with 6MJ end pointing to the butt end of the cylinders. 	
►	NOTE: <i>Right-hand and left-hand as viewed from the rear</i>		
►	Installing primary wing cylinders	<ol style="list-style-type: none"> 4. Mount (a) (DP4762-1) 4" x 20" primary wing hydraulic cylinder in center section weldments with (c) (BM3544) 1-1/4" x 9" pin, (d) (BP3192) 1-7/8" OD x 1-1/4" ID 10 GA. machinery bushing and (e) (AP2411) 1-1/4" external snap rings. 5. Repeat assembly for right-hand linkage assembly. 	
			

Gull Wing Toolbar Assembly (Primary Wing Fold Linkage)

Task	Procedures	Illustrations
<p>► Mounting of primary wing fold linkage</p>	<ol style="list-style-type: none"> 1. Insert (a) (AM3654) 19" double wing fold linkage with the grease zerks facing the center of the tool bar in the center section weldment. Insert (b) (BM3486) 1-1/4" x 10-7/16" OAL, W/13/32" hole pin. 2. Secure pin with (c) (BP3096) 3/8" x 2-1/2" hex cap screw and (d) (CP2660) 3/8" Nylock hex lock nut. 3. Raise cylinder and rotate clevis. Attach to linkage with (e) (BM3548) 1-1/4" x 4-3/4" double groove pin. Place (f) (BP3192) 1-7/8" OD x 1-1/4" ID x 10 GA. machinery bushings and (g) (AP2711) 1-1/4" heavy duty snap rings on each end. 	  
<p>► Primary wing cylinder fittings</p>	<ol style="list-style-type: none"> 4. Offset fitting (h) to miss gull wing cylinder fitting. 	



Tractor side

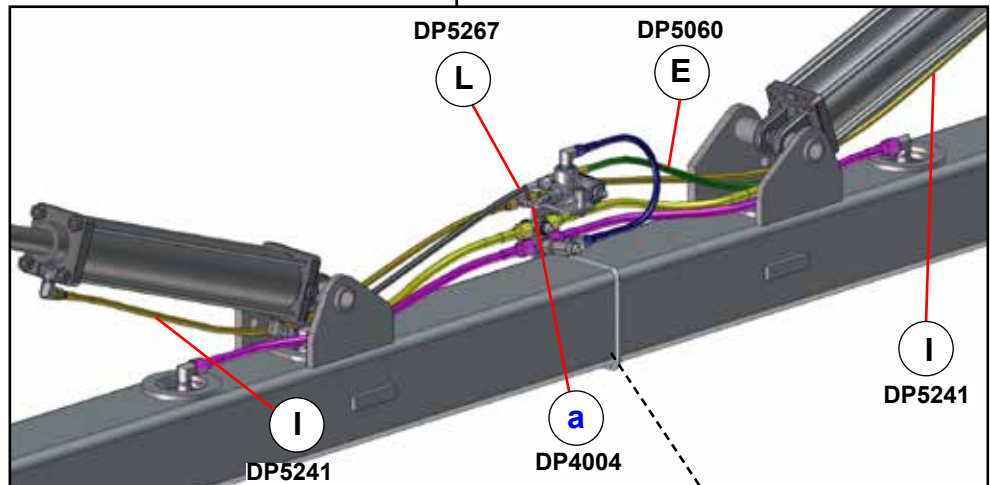
Gull Wing Toolbar Assembly (Primary Wing Cylinders)

Task

Procedures

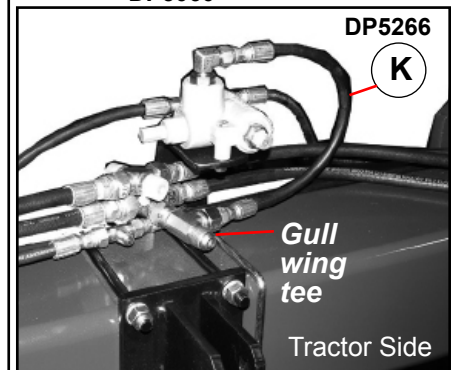
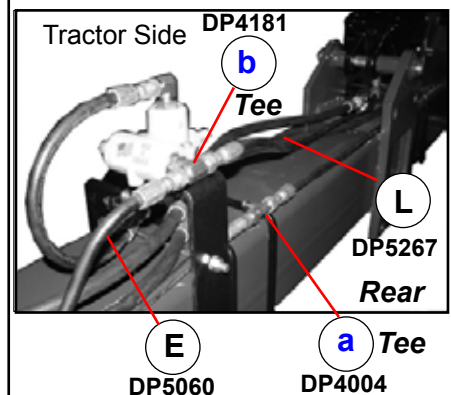
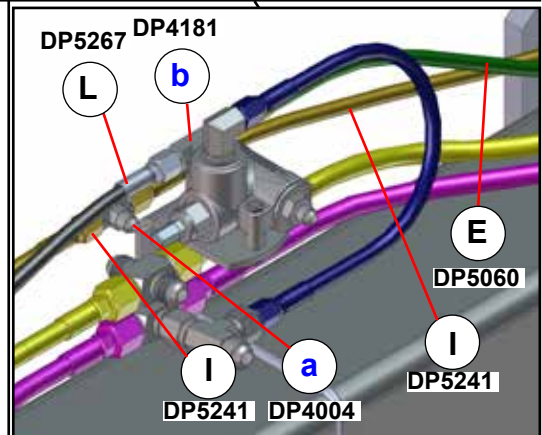
Illustrations

▶ Attaching primary wing cylinders


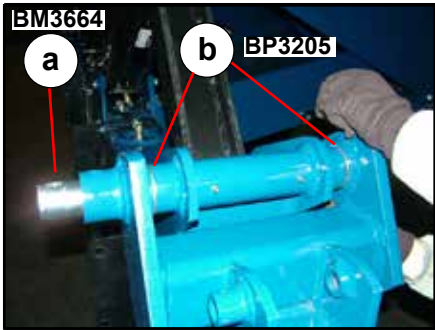
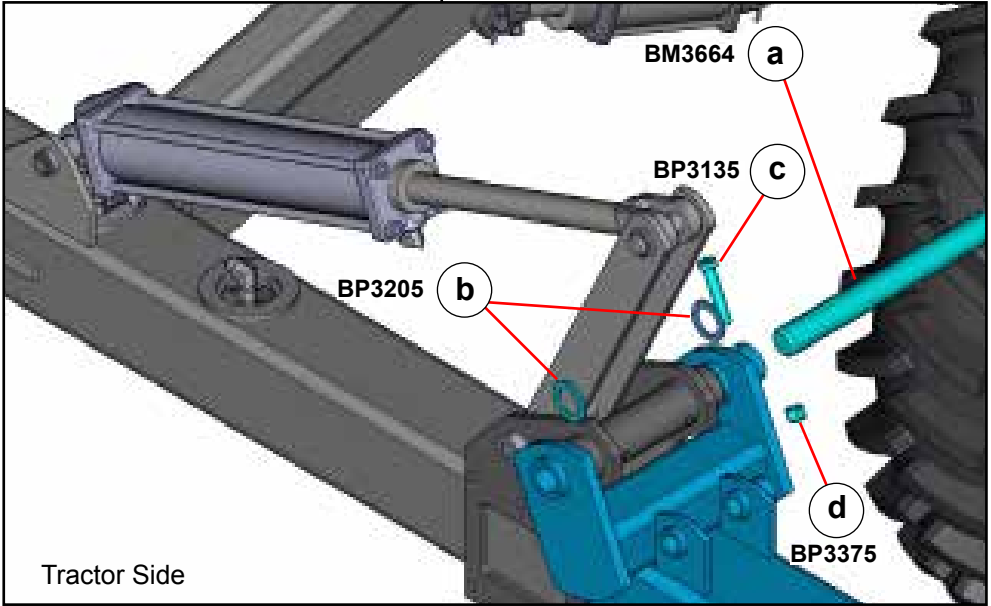



NOTE:
Right-hand and left-hand as viewed from the rear

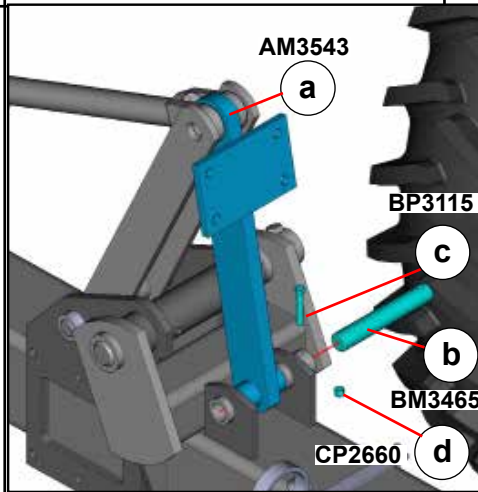
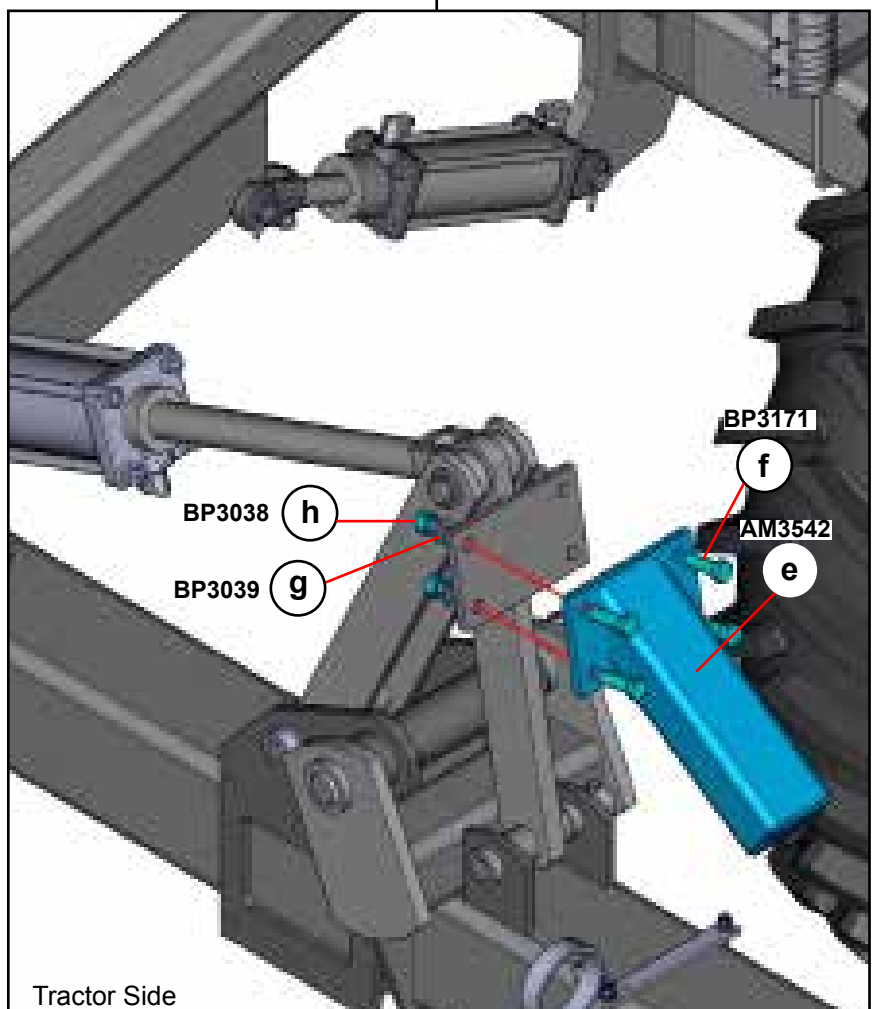
1. Attach (I) (DP5241) 1/4" x 52" 6FJX-6FJX hydraulic hose to rod end of 4" x 20" cylinders. Attach hoses to (a) (DP4004) 6MJ-6MJ-6MJ tee.
2. Install (L) (DP5267) 1/4" x 32" 6FJX-6FJX hydraulic hose to butt end of right-hand 4" x 20" cylinder. Extend to relief valve (b) (DP4181) 8MSAE x 6MJ-6MJ tee. Attach (E) (DP5060) 1/4" x 24" 6FJX-6FJX hydraulic hose to butt end of left-hand 4" x 20" cylinder. Extend to relief valve (b) (DP4181) 8MSAE x 6MJ-6MJ tee.
3. Install (K) (DP5266) 1/4" x 18" 6FJX-6FJX hydraulic hose to top port relief valve 90 degree fitting. Extend to gull wing tee.




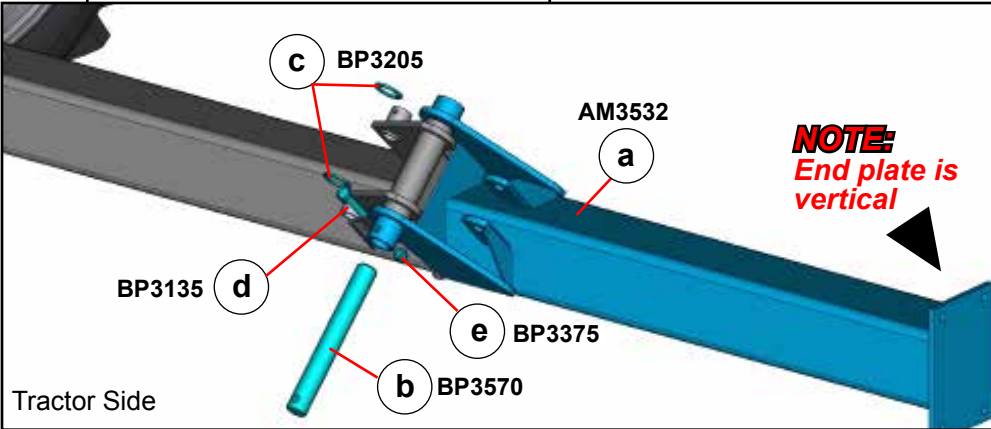
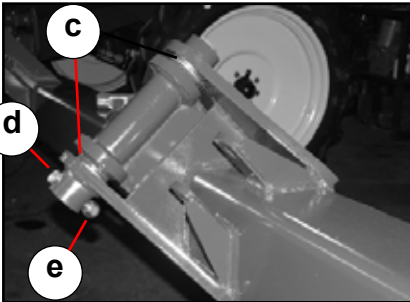
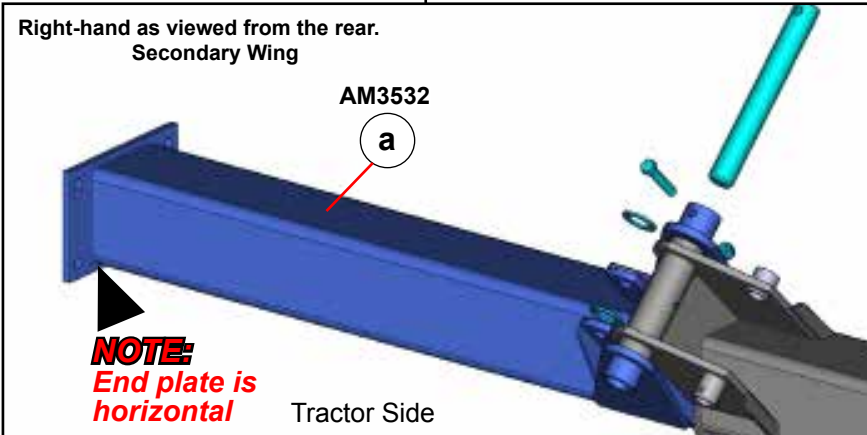
Gull Wing Toolbar Assembly (Mounting Primary Wings)

Task	Procedures	Illustrations
<p>► Mounting primary wings</p> <p>► NOTE: <i>Right-hand and left-hand as viewed from the rear</i></p>	<ol style="list-style-type: none"> 1. Position (AM3535) left-hand primary wing over center section hinge weldment. 2. Insert (a) (BM3664) 1-3/4" x 16-9/16" OAL W/21/32" hole into primary wing weldment, placing (b) (BP3205) 2-1/2" OD x 1-3/4" ID, 10 GA. machinery bushings on each side of center section hinge weldment. 3. Secure hinge pin with (c) (BP3135) 5/8" x 3-1/2" hex cap screw and (d) (BP3375) 5/8" hex lock nut. 	  <p>Left-hand as viewed from the rear. Primary Wing</p>  <p>Tractor Side</p>  <p>Right-hand as viewed from the rear. Secondary Wing</p>
	<ol style="list-style-type: none"> 4. Place two 1 x 4 wood spacers in hinge area to keep the primary wing up before removing forklift. 5. Repeat procedures for right-hand primary wing. 	

Gull Wing Toolbar Assembly (Primary Wing Stop Linkages)

Task	Procedures	Illustrations
<p>► Installation wing stop linkage</p> <p>► NOTE: <i>Right-hand and left-hand as viewed from the rear</i></p>	<ol style="list-style-type: none"> 1. Mount (a) (AM3543) 19" single wing linkage with wing stop mount in primary wing hinge weldment. <i><u>Grease zerks face outward.</u></i> 2. Insert (b) (BM3465) 1-1/4" x 7-3/4" OAL, W/13/32" pin. 3. Secure pin with (c) (BP3115) 3/8" x 2" hex cap screw and (d) (CP2660) 3/8" Nylock hex lock nut. 4. Attach (e) (AM3542) wing stop to linkage with four (f) (BP3171) 5/8" x 2" hex cap screws and (g) (BP3039) 5/8" lock washers and (h) (BP3038) 5/8" hex nuts. 5. Repeat assembly for right-hand linkage. 	  <p>Tractor Side</p>

Gull Wing Toolbar Assembly (Mounting Secondary Wings)

Task	Procedures	Illustrations
<p>▶ Mounting secondary wing gull wing</p> <p>▶ NOTE: <i>Right-hand and left-hand as viewed from the rear</i></p>	<p>1. Position (a) (AM3532) secondary wing on outer primary wing weldment. Secure secondary wing with (b) (BM3570) 1-3/4" x 14" with 21/32" hole pin. Place (c) (BP3205) 2-1/2" OD x 1-3/4" ID, 10 GA. machinery bushing as needed next to hinge weldments.</p>	
	<p>2. Secure pin with (d) (BP3135) 5/8" x 3-1/2" hex cap screw and (e) (BP3375) 5/8" Nylock hex lock nut.</p> <p>3. Repeat steps 1 and 2 for (a) (AM3532) Right-hand secondary wing.</p>	 <p>Tractor Side</p>  <p>Right-hand as viewed from the rear. Secondary Wing</p>  <p>Tractor Side</p>

Gull Wing Toolbar Assembly (Secondary Wing Linkages)

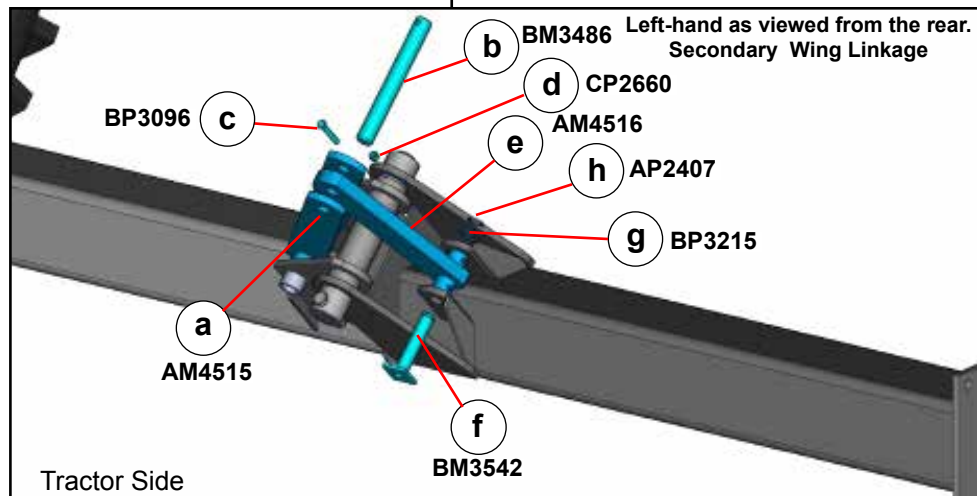
Task

Procedures

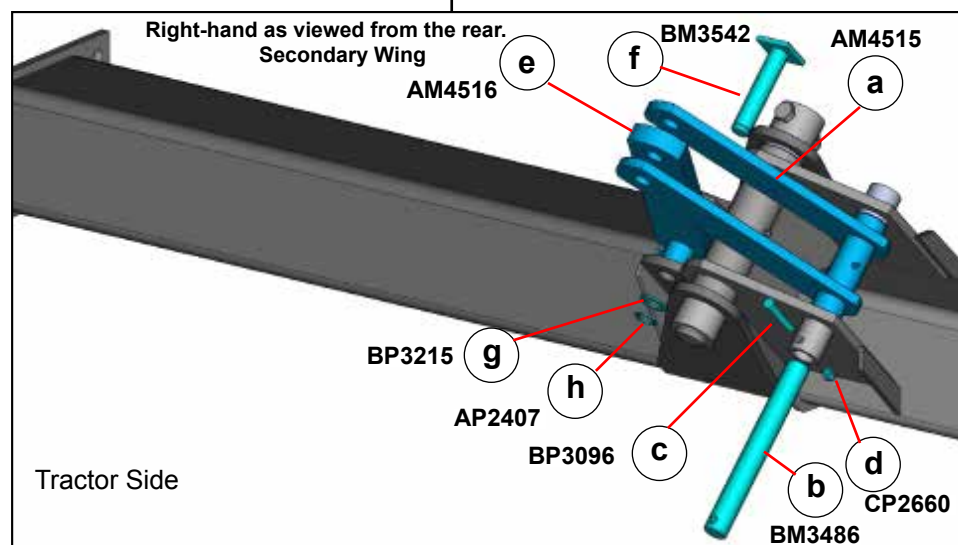
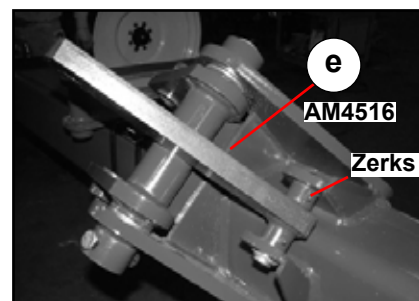
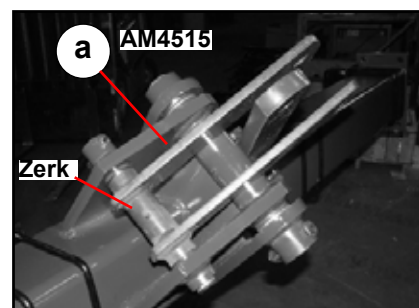
Illustrations

Installing secondary wing linkages

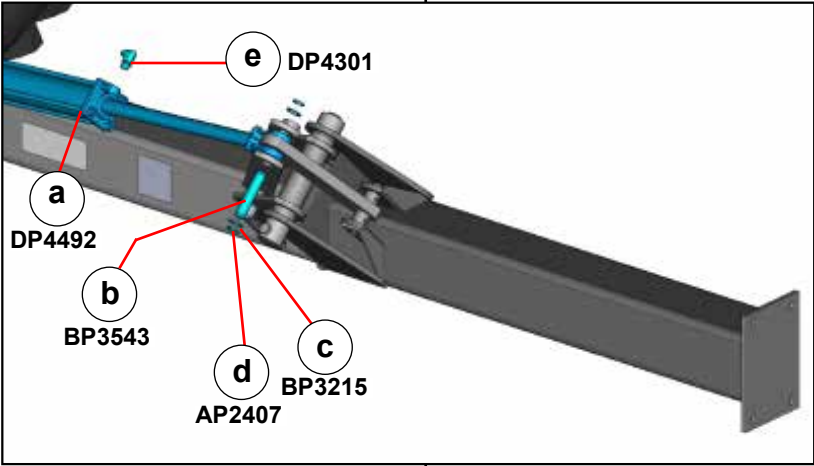
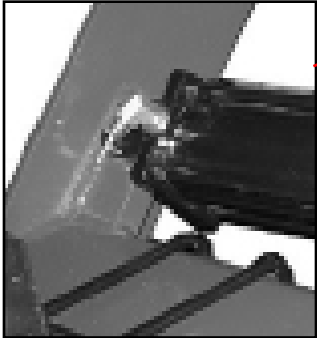
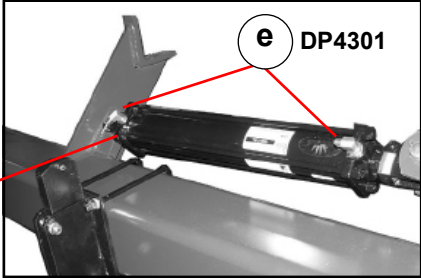

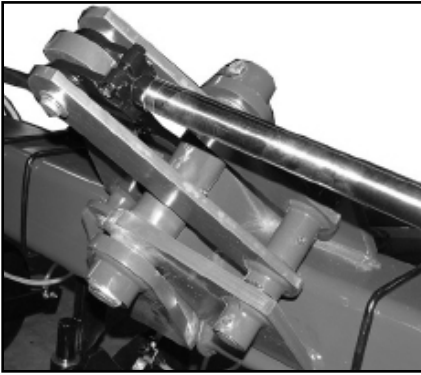
NOTE:
Right-hand and left-hand as viewed from the rear



1. Insert (a) (AM4515) secondary linkage #1 with the grease zerks facing the center of the tool bar in the primary wing weldment. Secure with (b) (BM3486) 1-1/4" x 10-7/16" OAL, W/ 13/32" hole pin, (c) (BP3096) 3/8" x 2-1/2" hex cap screw and (d) (CP2660) 3/8" hex lock nut, Nylock.
2. Mount (e) (AM4516) secondary linkage #2 to secondary wing weldment (Grease zerks face outward.) with (f) (BM3542) 1" x 4-5/8" w/groove pin, (g) (BP3215) 1-1/2" OD x 1" ID 14 GA. machinery bushing and (h) (AP2407) 1" heavy duty external snap ring.



Gull Wing Toolbar Assembly (Secondary Wing Cylinders)

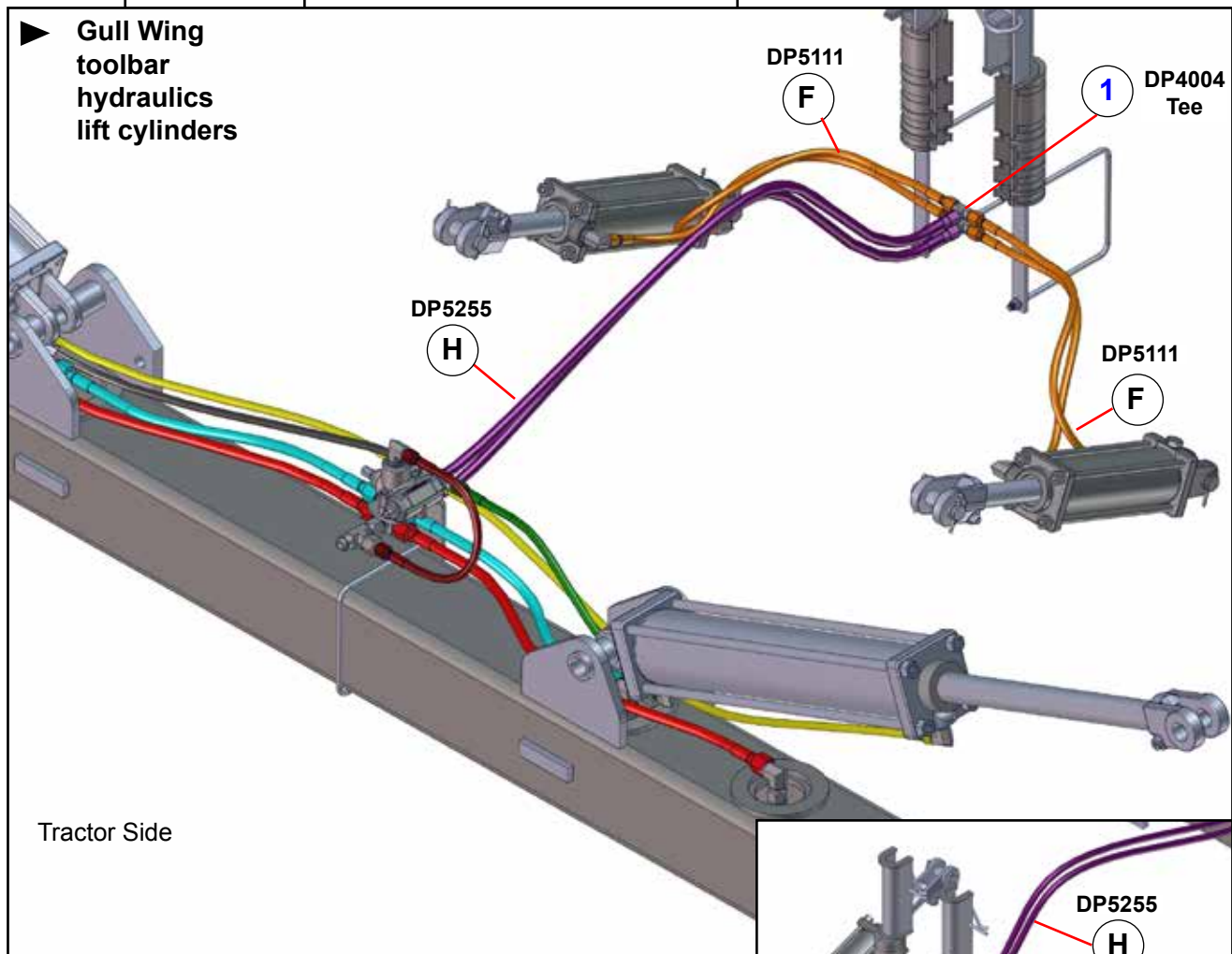
Task	Procedures	Illustrations
<p>▶ Installing secondary wing cylinders</p> <p>▶ NOTE: Adjust cylinder clevis if pin and linkage holes are out of alignment</p>	<ol style="list-style-type: none"> 1. Mount (a) (DP4492) 3" x 20" side ported hydraulic cylinder to primary wing cylinder lug with pin provided with cylinder. Remove plugs and extend cylinder rod manually towards wing linkages. or extend cylinder hydraulically later in the assembly. 2. Secure to linkages with (b) (BP3543) 1" x 4-5/16" double grooved pin, (c) (BP3215) 1-1/2" OD x 1" ID 14 GA. machinery bushings and (d) (AP2407) 1" external snap rings.  <p>The diagram shows a side view of the secondary wing cylinder assembly. Component (a) is the DP4492 cylinder. Component (b) is the BP3543 pin. Component (c) is the BP3215 bushing. Component (d) is the AP2407 snap ring. Component (e) is the DP4301 adapter. The diagram shows the cylinder being mounted to the primary wing cylinder lug and secured to the linkages with the pin, bushings, and snap rings.</p> <ol style="list-style-type: none"> 3. Install (e) (DP4301) 6MJ-8MSAE 90 degree adapters pointing to the center in the side ports of 3" x 20" cylinder.  	 

Gull Wing Toolbar Assembly (Hydraulic Hoses)

Task

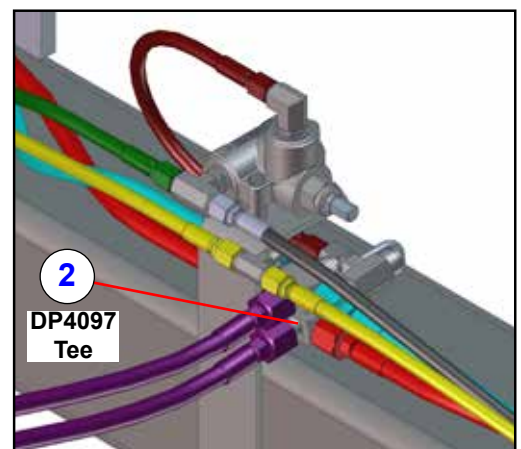
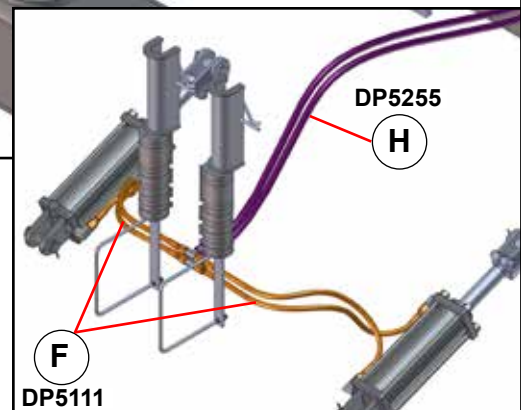
Procedures

Illustrations

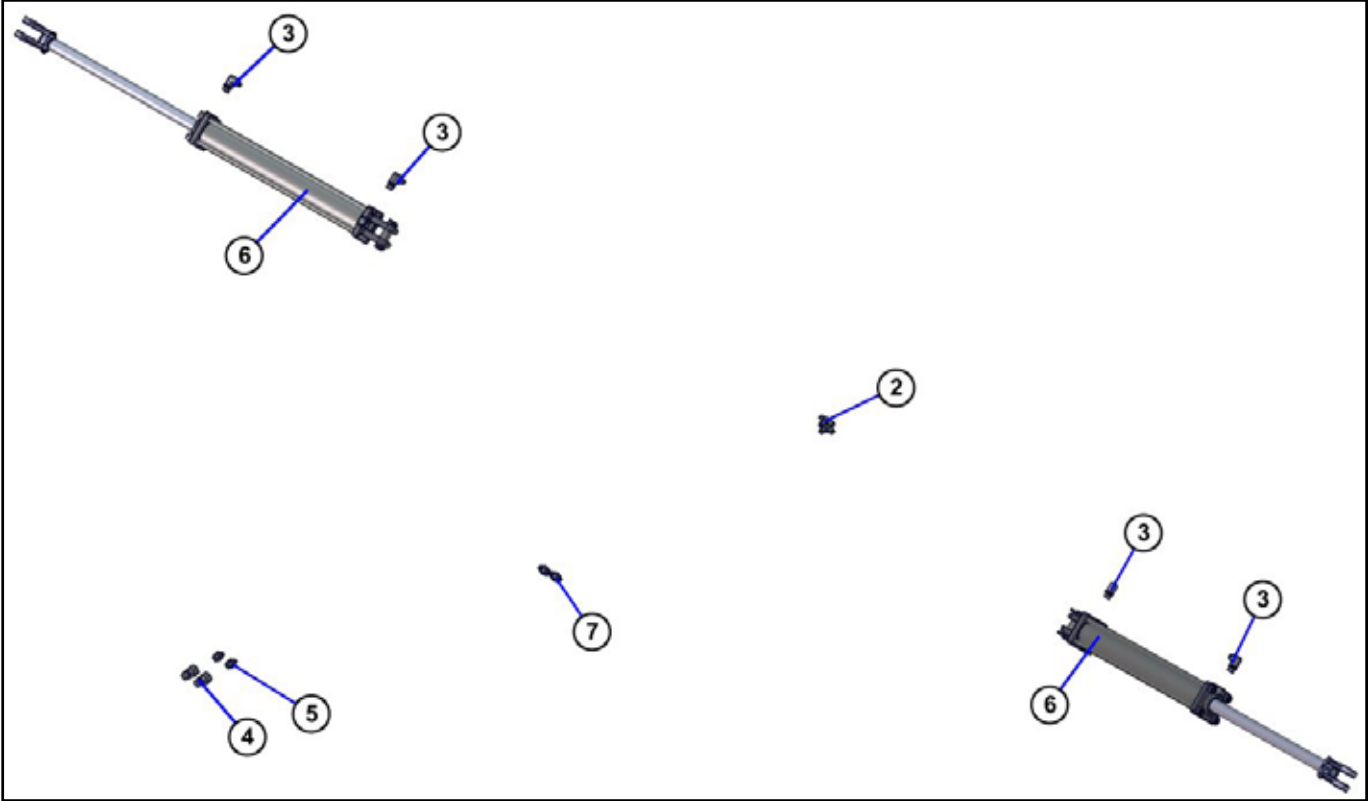


1. Attach four (F) (DP5111) 1/4" x 30", 6FJX-6FJX hydraulic hoses to lift cylinder fittings and extend rod hoses to center. Install (1) (DP4004) 6MJ-6MJ-6MJ tee. Extend butt hoses to center. Install (1) (DP4004) 6MJ-6MJ-6MJ tee.

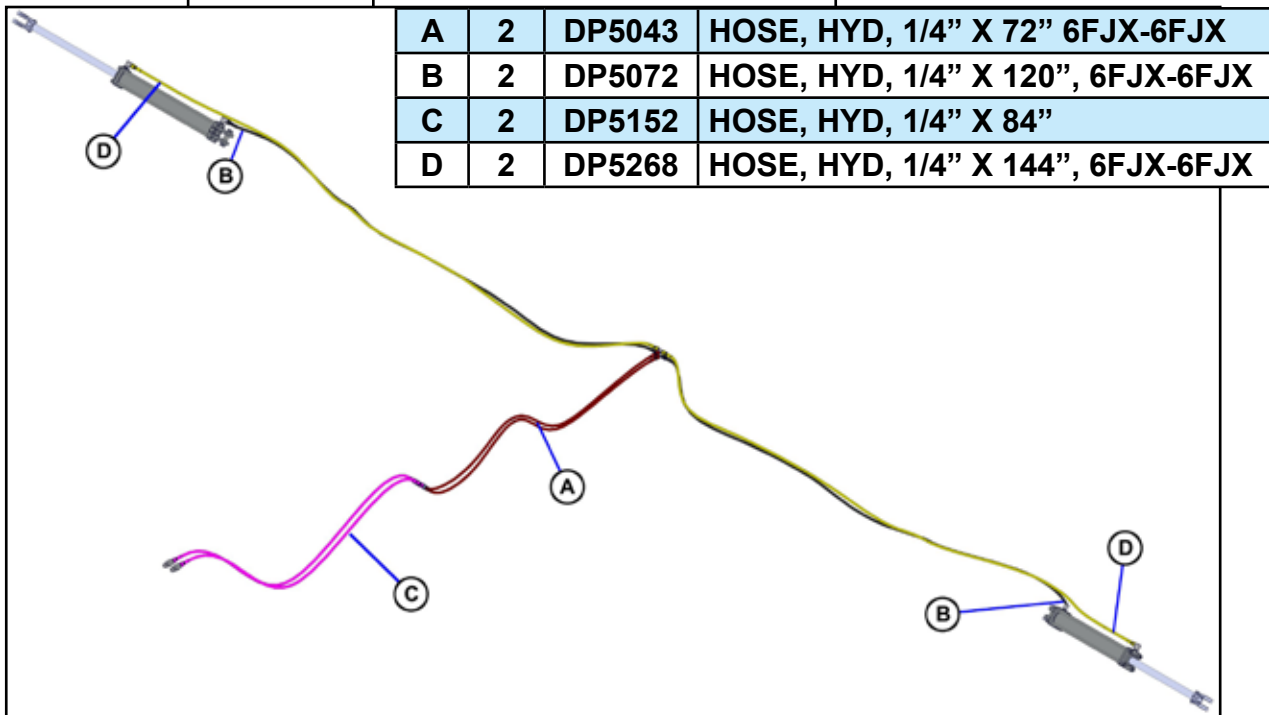
2. Attach (H) (DP5255) 3/8" x 56", 10FJX-6FJX hydraulic hoses to (1) (DP4004) 6MJ-6MJ-6MJ tees. Extend hose to center section tees. Rod hose attaches to the rod (Red Hoses) center section tee. Butt hose attaches to the butt (Cyan Hoses) center section tee.



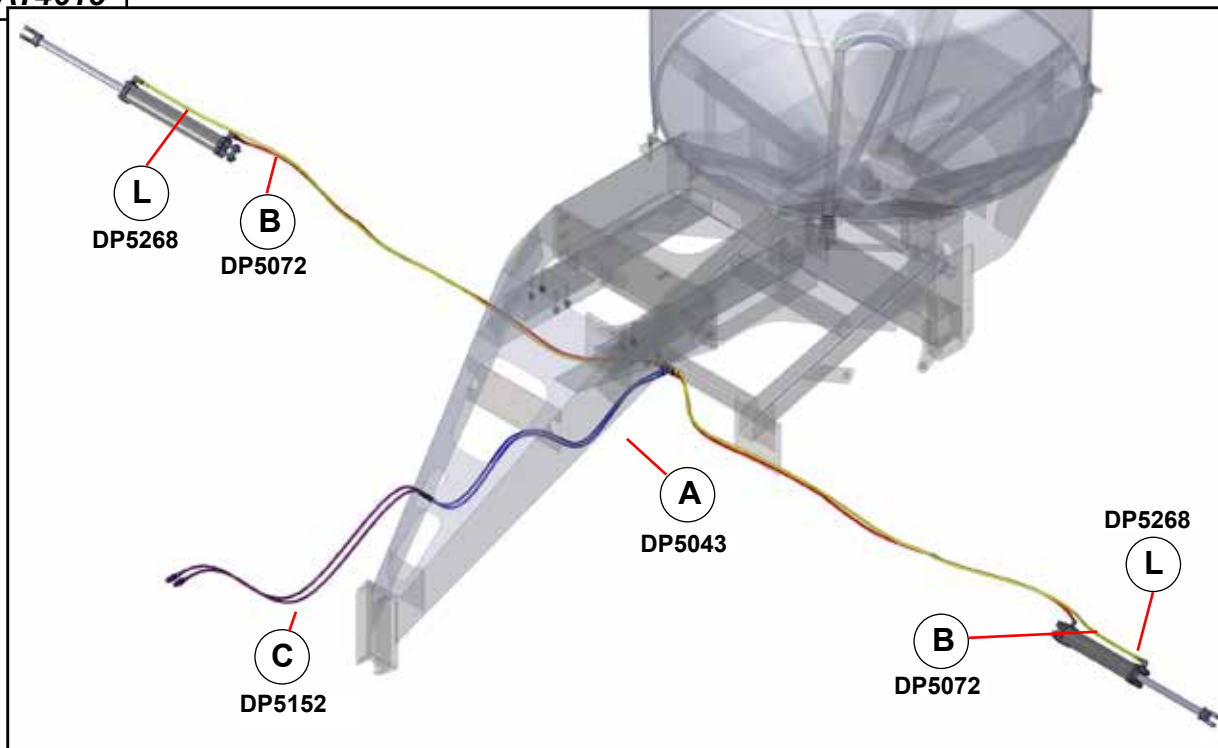
Secondary Gull Wing Hydraulics (PKG00178)



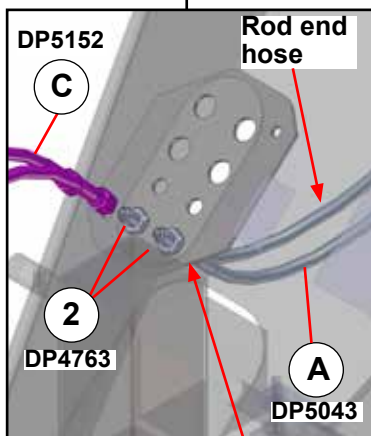
BOM ID	Qty	Item No	Description
1	1	PKG00178	PACKAGE, HYDRAULICS KIT, AT LIQUID SECONDARY WING KIT
2	2	DP4004	TEE, 6MJ-6MJ-6MJ
3	4	DP4301	ADAPTER, 6MJ-8MSAE, 90°
4	2	DP4383	COUPLER, PIONEER, 8MQBA-8FSAE
5	2	DP4394	ADAPTER, 8MSAE-6MJIC, 6400-6-8
6	2	DP4492	CYLINDER, HYD, 3 X 20, SIDE PORTED, B300200ABAAA03B
7	2	DP4763	BULKHEAD UNION, 6MJ-6MJ



Gull Wing Toolbar Assembly (Secondary Wing Cylinders Hoses)

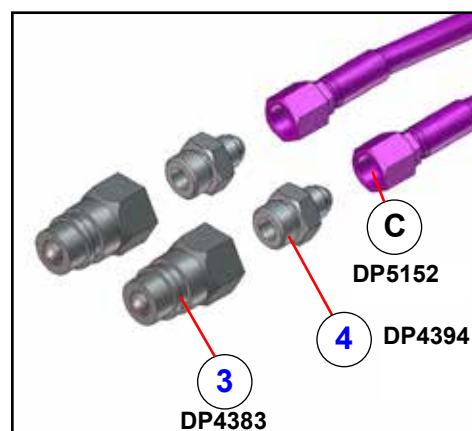
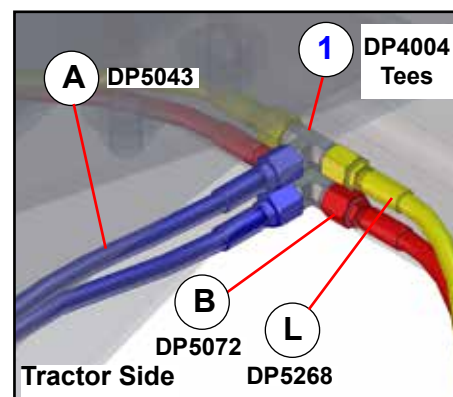


Installing secondary wing cylinder hoses



Butt end hose

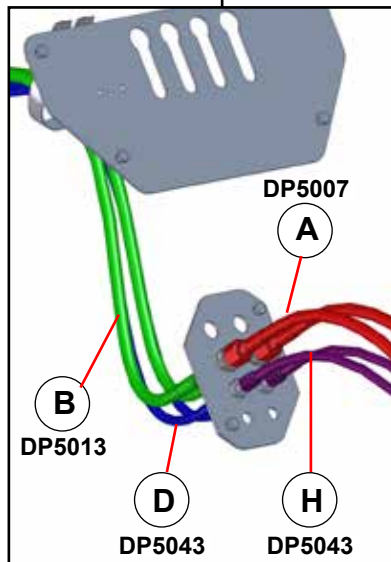
1. Attach (L) (DP5268) 1/4" x 144", 6FJX-6FJX hoses to the rod end of each 3" x 20" secondary wing cylinders. Extend to center of center section and install on (1) (DP4004) 10MJ-10MJ-10MJ tee.
2. Attach (B) (DP5072) 1/4" x 120", 6FJX-6FJX hoses to the butt end of each 3" x 20" secondary wing cylinders. Extend to center of center section and install on (1) (DP4004) 10MJ-10MJ-10MJ tee.
3. Install (A) (DP5043) 1/4" x 72", 6FJX-6FJX hoses to tees and extend to (2) (DP4763) bulkhead unions.
4. Install (C) (DP5152) 1/4" x 72", 6FJX-6FJX hoses to tees and extend to (2) (DP4763) bulkhead unions.
5. Install (4) (DP4394) 8MSAE-6MJIC adapters and (3) (DP4383) 8MQBA-8FSAE Pioneer couplers.



Gull Wing Toolbar Assembly (Hydraulic Hoses)

Task

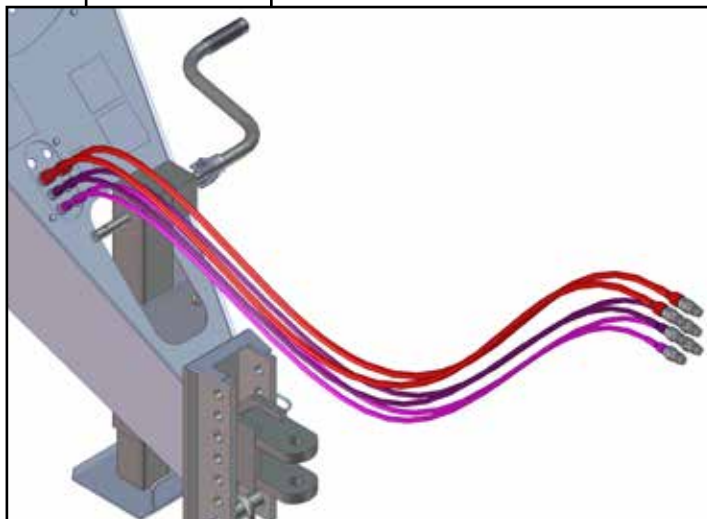
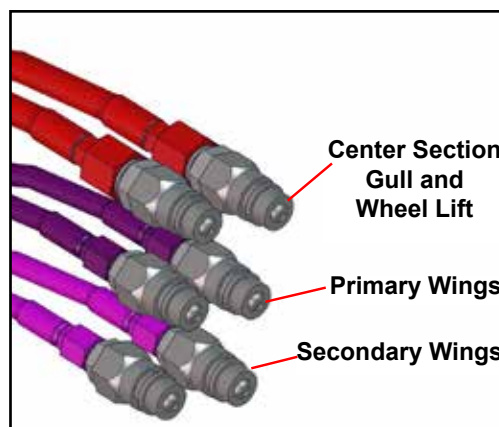
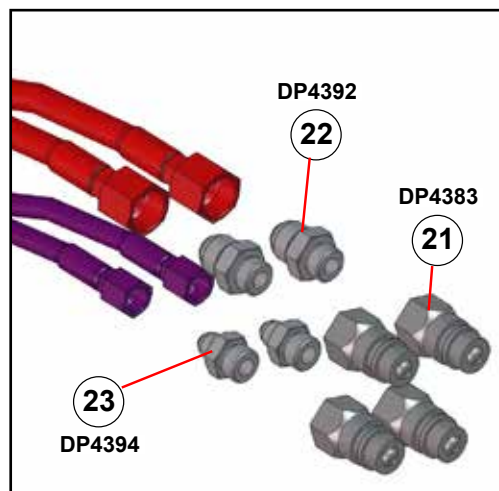
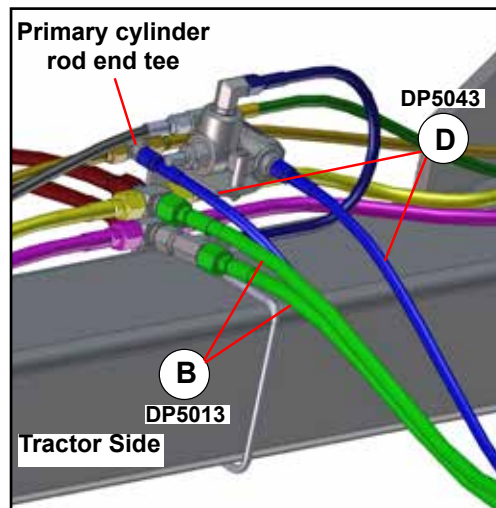
► Gull Wing tool bar hydraulics tractor hoses


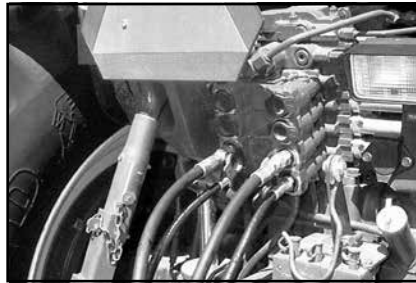


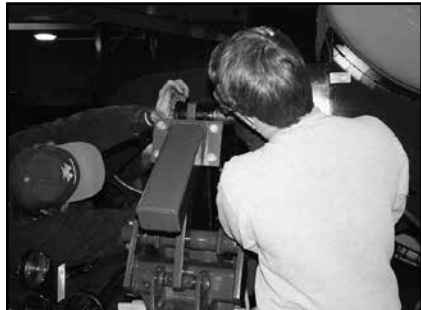





Procedures

1. Install **(B) (DP5013)** 3/8" x 72", 10FJX-10FJX hydraulic hoses to center section gull wing and lift cylinder tees.
2. Extend to bulkhead plate and attach to **(DP5220)** 10MJ-10MJ bulkhead unions.
3. Attach **(A) (DP5007)** 3/8" x 84" hydraulic hoses to bulk head fittings.
4. Attach **(D) (DP5043)** 1/4" x 72" hydraulic hose to straight adapter on the tractor side of the relief valve.
5. Install second **(D) (DP5043)** 1/4" x 72" hydraulic hose to tee connecting the rod ends of the primary cylinders.
6. Extend to bulkhead plate and attach to **(DP4763)** 6MJ-6MJ bulkhead unions.
7. Attach **(A) (DP5007)** 3/8" x 84" hydraulic hoses to bulk head fittings.
8. Extend **(A)** hoses to tractor and install **(22) (DP4392)** 8MSAE-10MJIC straight adapters and **(21) (DP4383)** Pioneer couplers.
9. Extend **(H)** hoses to tractor and install **(23) (DP4394)** 8MSAE-6MJIC straight adapters and **(21) (DP4383)** Pioneer couplers.

Illustrations

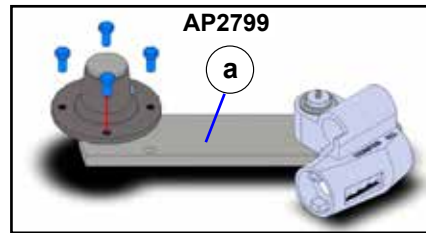


BLU-JET AT4615		Toolbar Assembly (Charging Gull Wing Cylinders)	
	Task	Procedures	Illustrations
<div>▶</div> <div></div>	Connecting hydraulic hoses	<div>1. Connect the hydraulic hoses to the tractor remote couplers. The 3/8" hoses supply oil to the wheel lift cylinders and gull wing cylinders. The 1/4" hoses supply oil to the wing cylinders. Mark 1/4" hose pairs with paint or tape. Mark hoses so that they are plugged in correctly each time.</div>	<div></div> <div>Generic example</div>
		<div><div></div><div>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.</div></div>	
<div>▶</div> <div></div>	Charging the wing cylinders	<div>2. Before charging the wing cylinders block rod ends up.</div> <div>3. Attach AT4615 to tractor. Connect the hydraulic lines to tractor ports.</div> <div>4. Begin by holding the tractor remote lever in one direction until the cylinders are fully extended or retracted. Hold 1 minute to purge air from lines. Reverse the direction of the remote lever to charge the other side of the system. Hold 1 minute to purge air from lines. Continue process until cylinders are extending and retracting completely.</div>	<div></div>
	<div></div>	<div>NOTE: <i>Cylinder should be blocked high enough to avoid damage to wings when rods are extend hydraulically</i></div> <div><div></div><div>Always hook tool bar to tractor before filling oil lines.</div></div> <div><div></div><div>NOTE: <i>Charging a hydraulic system will remove oil from a tractors hydraulic reservoir. Be sure to check tractor oil level after charging a new system</i></div></div>	<div>5. Extend cylinder rod slowly until centered over wing linkage. Remove (a) (BM3548) 1-1/4" x 4-3/4" double grooved pin from both primary wing linkages and attach each linkage to cylinder clevis. Secure (b) (BP3192) 1-7/8" OD x 1-1/4" ID x 10 GA. machinery bushings and (c) (AP2711) 1-1/4" heavy duty snap rings.</div> <div>6. Extend cylinder rod slowly until centered over wing linkage. Insert (d) (BM3543) 1" x 4-5/16" double groove pin into wing linkage. Place (e) (BP3215) 1-1/2" x 1" 14 GA. machine bushings over pin ends and secure with (f) (AP2407) 1" external heavy duty snap rings.</div>

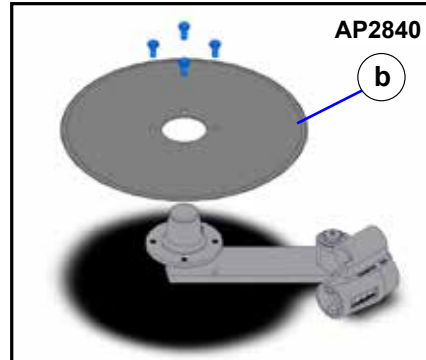
Coulter Assembly

Preparing Coulters for Mounting

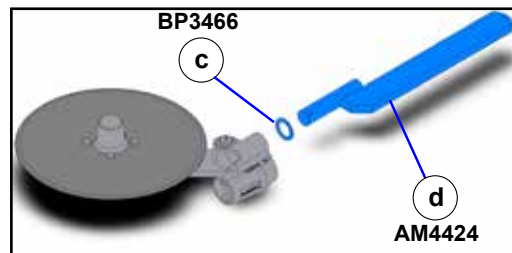
1. Remove hex cap screws from hub (a) (AM2799) coulters arm with hub and knee casting assembly.



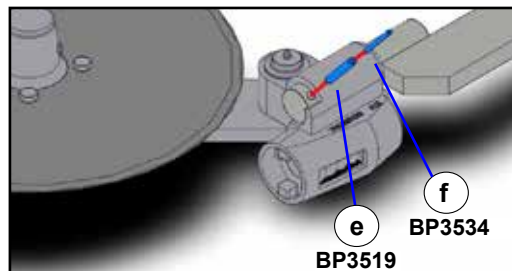
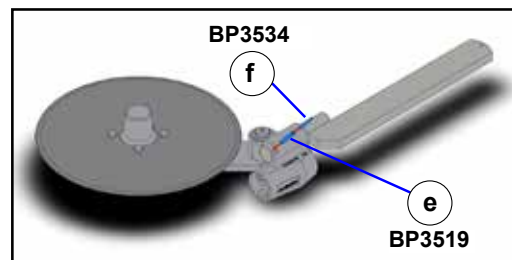
2. Place (AP2840) 20" smooth coulters blade on coulters assembly and replace hex cap screws.



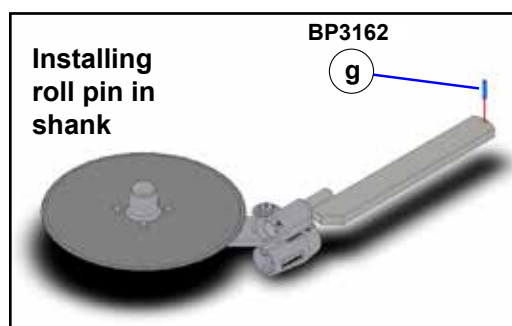
3. Install (c) (BP3466) 2-1/2" OD x 1-3/4" ID, 10 GA, 18-8 SS machinery bushing over (d) (AM4424) 23" coulters shank weldment.



4. Insert the 23" coulters shank into coulters assembly. Start (e) (BP3519) 3/8" x 2-1/2" roll pin in base of coulters shank. Insert the (f) (BP3534) 7/32" x 2-1/2" roll pin in the end of the 3/8" roll pin and drive both pins together. Leave an equal amount of pin on each sides of the shank.

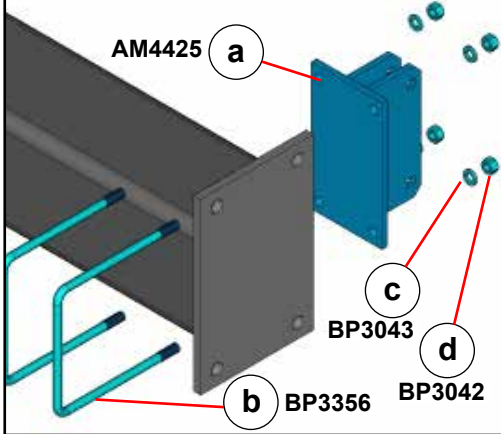
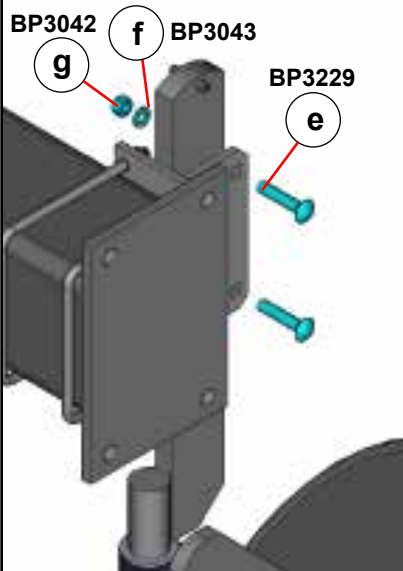
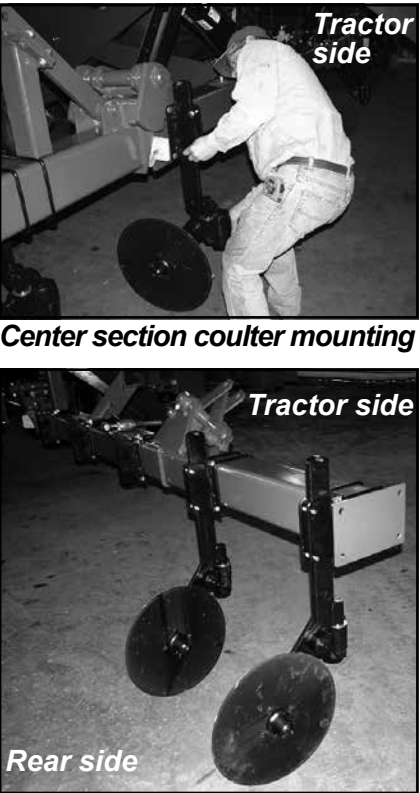
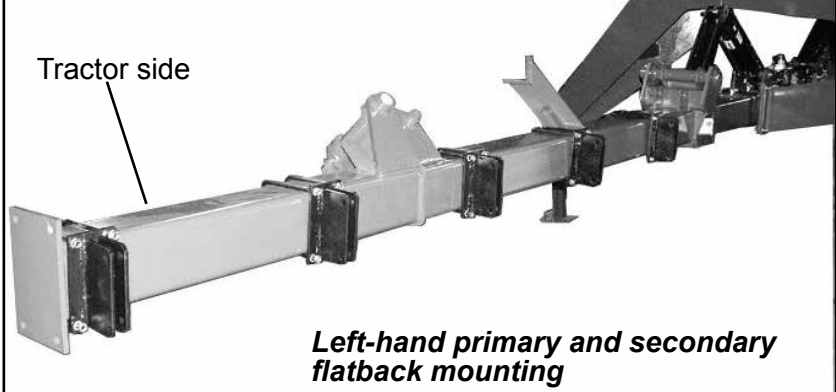
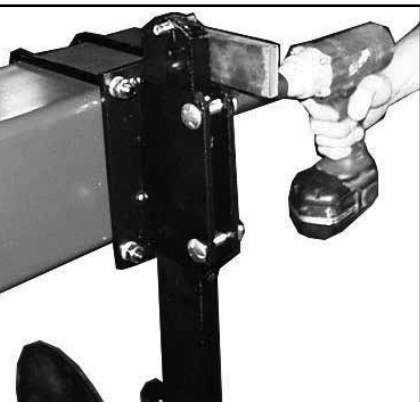


5. Install the (g) (BP3162) 3/8" x 2" roll pin through the shank weldment top hole.



6. **AAM2728**
Super 1200 coulters 1 row
(Blade not part of bundle.)

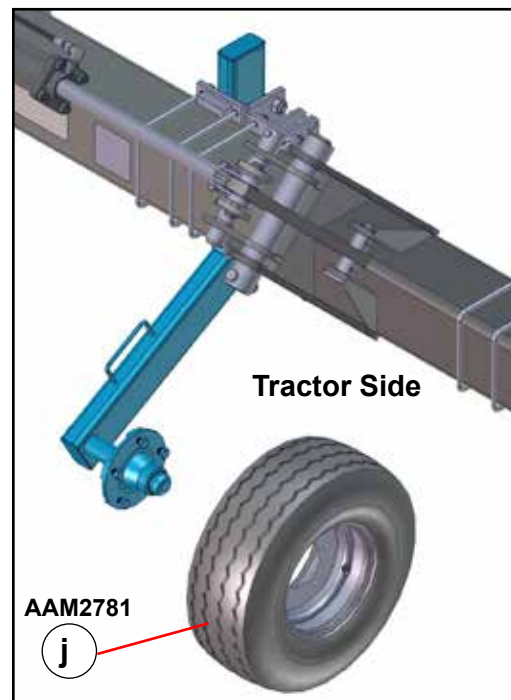
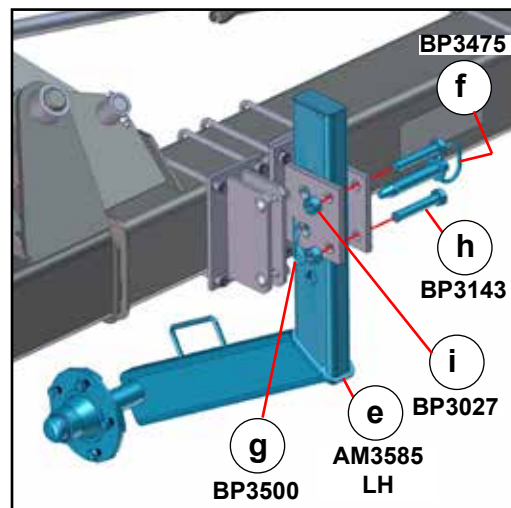
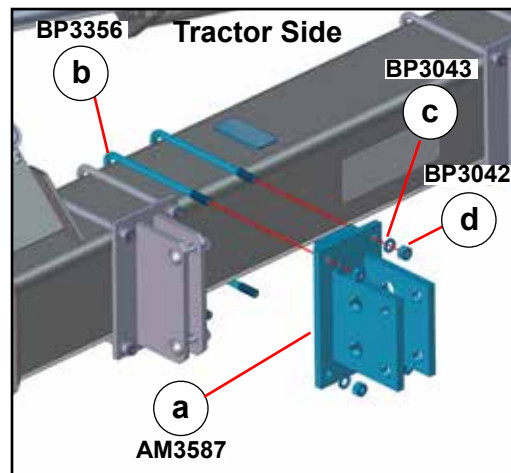
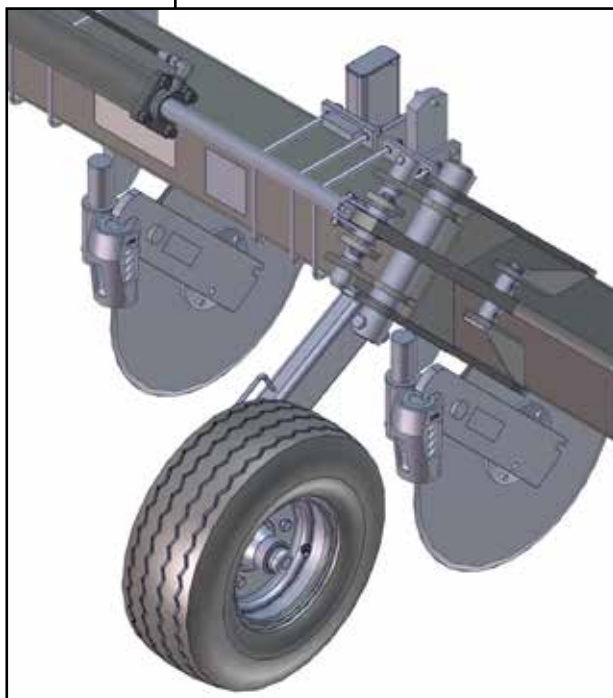
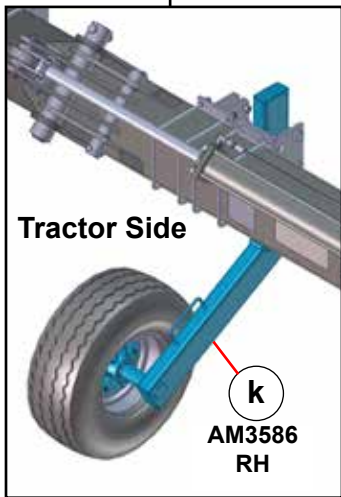
Gull Wing Toolbar Assembly (Mounting Flatbacks and Coulters)

	Task	Procedures	Illustrations
<p>► Mounting Flatbacks</p> <p>► NOTE: Consult row spacing pages for measurements and placement of offset brackets if required.</p> <p>► NOTE: Flatbacks are placed on the rear side of the primary and secondary wings.</p> <p>► Installation of coulters assembly</p>		<ol style="list-style-type: none"> 1. Install (a) (AM4425) 7" x 7" flatbacks on rear side of the primary and secondary wings and tractor side of the center section. 2. Install (b) (BP3356) 1/2" x 7" x 8-1/4" u-bolts. 3. Secure with (c) (BP3043) 1/2" lock washers and (d) (BP3042) 1/2" hex nuts. 	
		<ol style="list-style-type: none"> 3. Insert the (e) (BP3229) 1/2"-13 x 2-1/2" carriage bolt into top hole of bracket. Push coulters shank assembly back into the bracket and insert the bottom carriage bolt. Place (f) (BP3043) 1/2" lock washer and (g) (BP3042) 1/2"-13 hex nut on each carriage bolt. Do not tighten at this point. 4. Raise coulters shank assembly in bracket and place a 3" spacer between the roll pin and the top of the bracket. Tighten the 1/2" hex nuts. This height is a starting point. 	 <p>Tractor side</p> <p>Center section coulters mounting</p> <p>Tractor side</p> <p>Rear side</p>
 <p>Tractor side</p>		<p>Left-hand primary and secondary flatback mounting</p>	 <p>Primary and secondary wings coulters mounting</p>

BLU-JET AT4615	<h1> Toolbar Assembly (Mounting Gauge Wheels) (33000144) </h1>		
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Task	Procedures	Illustrations
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- ▶ Mounting gauge wheels
- ▶ Gauge Wheel set 33000144
- ▶ **NOTE:** Consult row spacings pages for gauge wheel placement



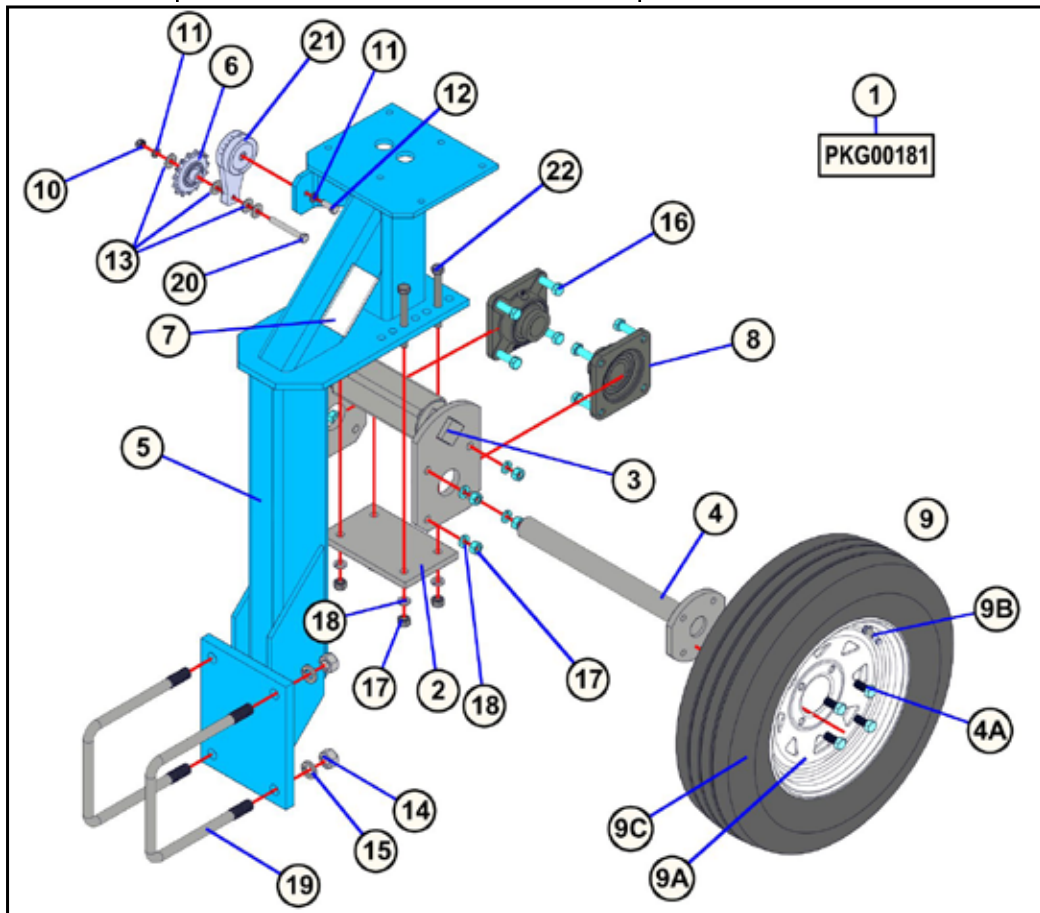
(Tire pressure **32 P.S.I. Maximum.**)

Combo Pump Package (PKG00181)

Task

Procedures

Illustrations



BOM ID	Qty	Item No	Description
1	1	PKG00181	PACKAGE, COMBO PUMP DRIVE
2	1	AM3513	BACKING PLATE, PUMP DRIVE
3	1	AM3515	AXLE MOUNT
4	1	AM3516	PUMP DRIVE WHEEL MOUNT
5	1	AM3639	FRAME, PUMP DRIVE
6	1	AP2382	SPROCKET, IDLER, 15T #50 CHAIN, WITH CLEVIS ADAPTER
7	1	AP2472	DECAL, CAUTION, AVOID PUMP DAMAGE
8	2	AP2697	BEARING, 1-1/2" WITH SQUARE 4 BOLT FLANGE & LOCK COLLAR
9	1	AP4240	WHEEL, 155/80R12, 12 X 4 X 4, 4" BOLT CIRCLE
9A	1	AP2374	RIM, 12" X 4" X 4", WHITE, 12440
9B	1	AP2790	VALVE STEM, METAL
9C	1	AP4241	TIRE, P155/80R12
10	1	BP3001	NUT, HEX, 3/8"-16, GRADE 2, PLATED
11	2	BP3002	WASHER, LOCK, 3/8", PLATED
12	1	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
13	4	BP3015	WASHER, FLAT, 3/8", PLATED
14	4	BP3034	NUT, HEX, 3/4"-10, GRADE 2, PLATED
15	4	BP3035	WASHER, LOCK, 3/4", PLATED
16	8	BP3041	HEX CAP SCREW, 1/2"-13 X 2", GRADE 5, PLATED
17	12	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
18	12	BP3043	WASHER, LOCK, 1/2", PLATED
19	2	BP3058	U-BOLT, 3/4"-10 X 7"W X 9"L
20	1	BP3116	HEX CAP SCREW, 3/8"-16 X 3", GRADE 5, PLATED
21	1	BP3239	TENSIONER, RT1002
22	4	BP3693	HEX CAP SCREW, 1/2"-13 X 4-1/2", GRADE 5, PLATED

Pump Drive Assembly

► Mounting pump assembly

► **NOTE:**
AT4010
Axle pump drive mount is bolted to combo pump mount using the second and fifth holes from the rear as a starting point

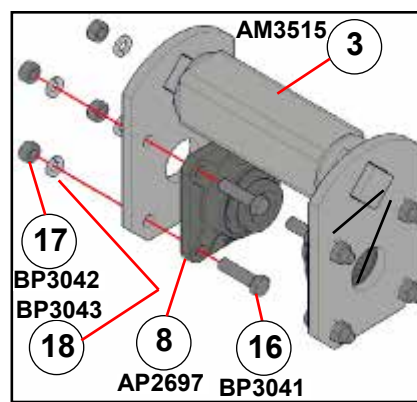
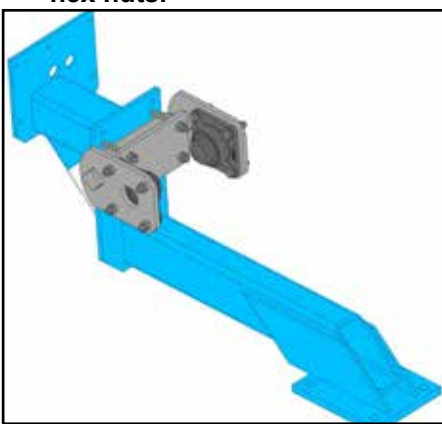
► **NOTE:**
Consult row spacing page for drive wheel placement, inside or outside

Task

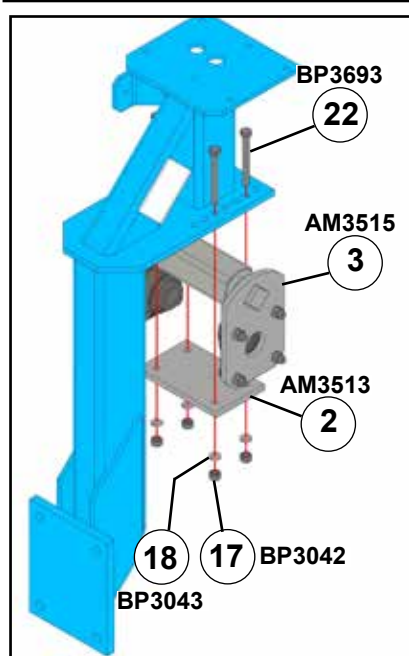
Procedures

Illustrations

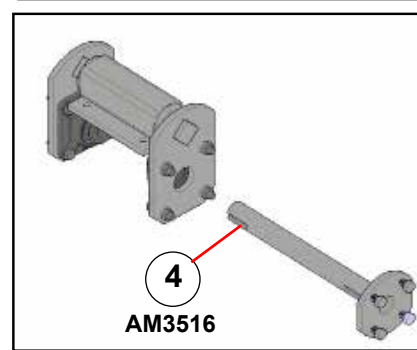
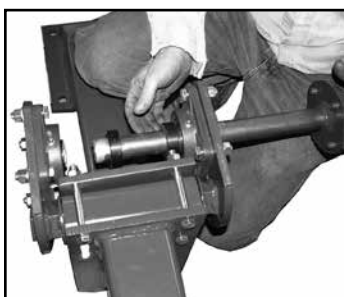
1. Attach (8) (AP2697) 1-1/2" w. Sq. 4 bolt flange & lock collar bearings to (3) (AM3515) axle pump drive mount with (16) (BP3041) 1/2" x 2" hex cap screws, (18) (BP3043) 1/2" lock washers and (17) (BP3042) 1/2" hex nuts.



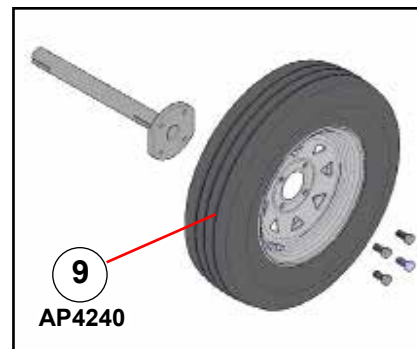
2. Pre-assembly the pump drive on the floor or bench. Attach (3) (AM3515) axle pump drive mount to pump mount with (2) (AM3513) pump backing plate, (22) (BP3693) 1/2" x 4-1/2" hex cap screws, (18) (BP3043) 1/2" lock washers and (17) (BP3042) 1/2" hex nuts.



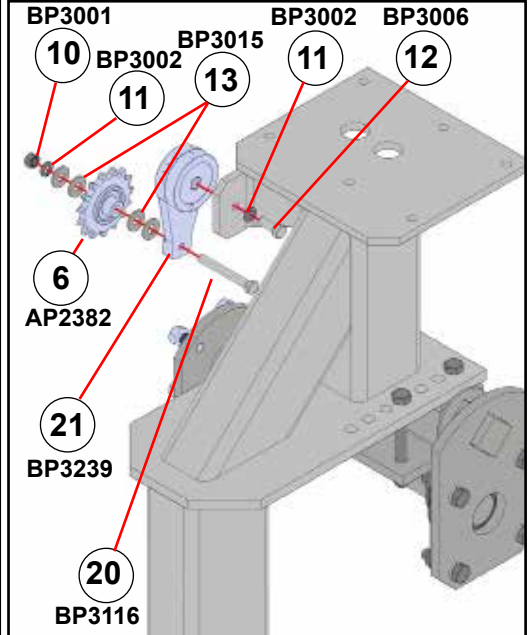

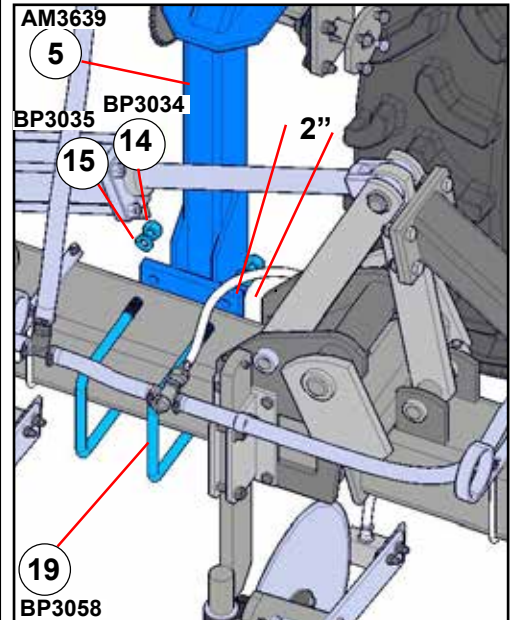
3. Apply anti-seize inside bearings and on end of wheel mount shaft. Insert (4) (AM3516) pump drive wheel mount into pillow bearings. Place lock collars on shaft while inserting. Do not secure lock collars until wheel is centered on drive tire.




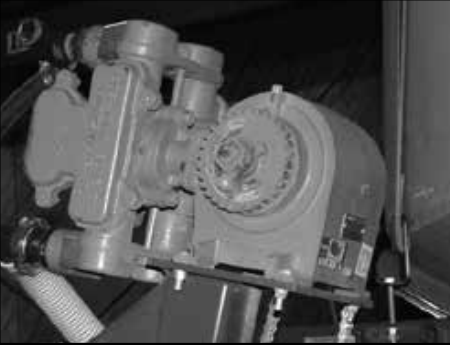
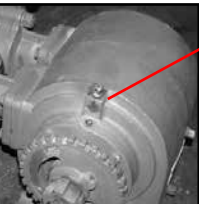
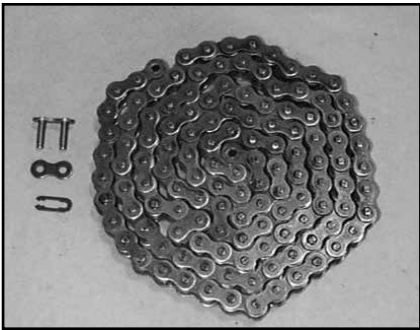
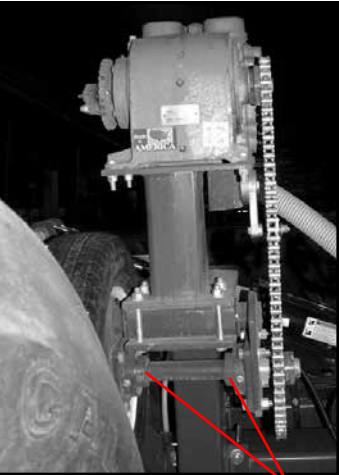

4. Remove lug bolts and mount (9) (AP4240) wheel, 155/80R12.




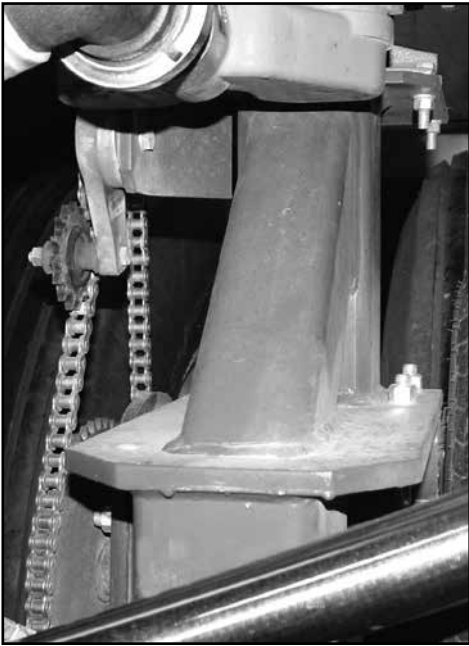


Pump Drive Assembly

	Task	Procedures	Illustrations
►	Tension arm and sprocket parts:	<ol style="list-style-type: none"> 6. AP2382 1 Idler sprocket, 15T #50 chain w/clevis adapter 10. BP3001 1 Nut, hex, 3/8"-16, grade 2 plated 11. BP3002 1 Washer, lock, 3/8", plated 12. BP3006 1 Hex cap screw 3/8"-16 x 1" 13. BP3015 5 Washer, flat, 3/8", plated 20. BP3116 1 Hex cap screw, 3/8"-16 x 3" 21. BP3239 1 Tensioner, RT 1002 	
►	Installing tensioner arm	<ol style="list-style-type: none"> Place (11) (BP3002) 3/8" lock washer (12) (BP 3006) 3/8-16 x 1" hex cap screw into tension arm mounting bracket. Install (21) (BP3239) tensioner RT1002 on 3/8" hex cap screw and tighten. Insert (20) (BP3116) 3/8-16 x 3" hex cap screw through (6) (AP2382) sprocket, idler 15T # 50 chain, w/clevis adapter, (13) (BP3015) 3/8" flat washers and tensioner. Secure with (11) (BP3002) 3/8" lock washer and (10) (BP3001) 3/8" hex nut. 	
►	Installation pump mount	<ol style="list-style-type: none"> Attach chain or lifting strap to pump assembly. Mount (5) (AM 3639) combo pump mounting 52" from the center of the center section to the center of mounting plate or 2" from edge of hinge weldment to pump mount plate. Secure with (19) (BP3058) 3/4"-10 x 7"W x 9"L u-bolts, (15) (BP3035) 3/4" lock washers and (14) (BP3034) 3/4" hex nuts. 	

Pump Drive Assembly

Task	Procedures	Illustrations
<p>► Mounting pump assembly</p>	<p>1. Install (AP2369 or AP2392) sprocket on pump assembly wheel shaft. The sprocket hub should point away from the assembly. The hub should be flush with the end of the shaft. Insert (BM3536) key 3/8" x 3/8" x 1". Do not tighten allen screws until the sprocket is lined up with the pump sprocket.</p>	
<p>► Installing pump on pump mounting stand</p>	<p>2. Place the pump on the pump mounting and secure with bolts included with pump. (3/8" x 1-1/2" hex cap screws, 3/8" lock washers and 3/8" hex nuts.</p> <p>3. Remove plug and replace with vented plug included with pump.</p>	  Vent Plug
<p>► Installation of roller chain</p>		  Lock collars <p>Generic Photo</p>

BLU-JET AT4615	Pump Drive Assembly		
	Task	Procedures	Illustrations
<div data-bbox="347 268 380 300">▶</div> <div data-bbox="404 268 542 338">Adjusting tensioner</div> <div data-bbox="347 688 380 720">▶</div> <div data-bbox="407 688 558 898"> NOTE: <i>Tensioner must be placed on the slack side of the chain</i> </div>		<div data-bbox="591 268 1040 663"> <ol style="list-style-type: none"> 1. Loosen 3/8" hex cap screw at the rear of the tensioner. Place a 15/16" wrench on the hex nut on the tensioner. Adjust the arm down until the center mark aligns with center mark on the arm. This is a starting point further adjustment may be need later. 2. Tighten 3/8" hex nut at the rear of the tensioner bracket to lock adjustment in position. </div> <div data-bbox="610 674 1024 1241">  </div> <div data-bbox="618 1262 1536 1934">  </div>	<div data-bbox="1057 285 1292 317">Center mark arm</div> <div data-bbox="1057 411 1227 443">Center Mark</div> <div data-bbox="1248 333 1468 575">  </div> <div data-bbox="1070 600 1536 1241">  </div>

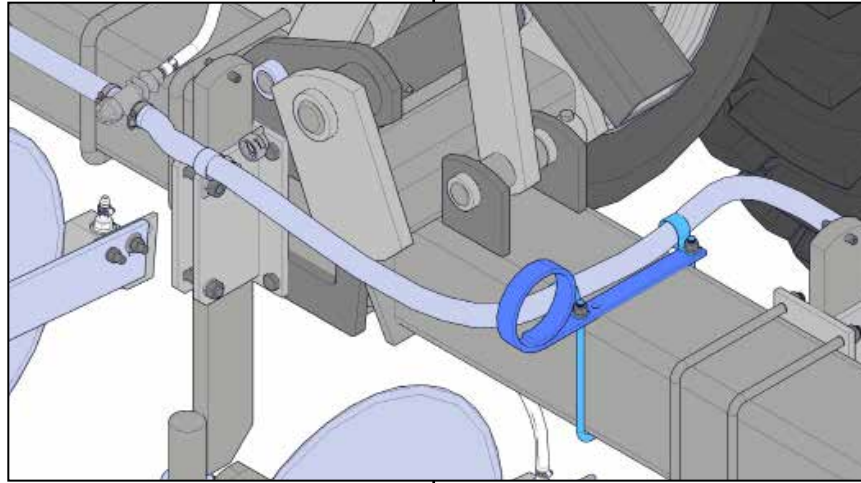
Toolbar Assembly (Installing Hose Retainers Gull Wing)

Task

Procedures

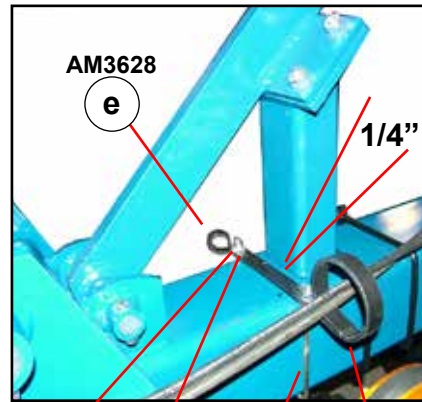
Illustrations

► Mounting hose retainers



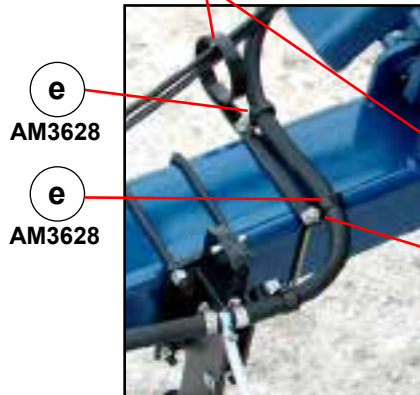
NOTE:
Suction hoses around the primary wing hinges are 54" from row to row

1. Install (a) (AM4015) closed loop hose retainer at least 1/4" from the wing stop. Secure with (b) (BP3335) 3/8" x 7"W x 8"L u-bolt.
2. Place two (e) (AM3628) liquid trunk line mounting bracket over u-bolt before securing u-bolt with (c) (BP3002) 3/8" lock washers and (d) (BP3001) 3/8" hex nuts.



AM3628
e
1/4"
d c b a
BP3001 BP3002 BP3335 AM4015

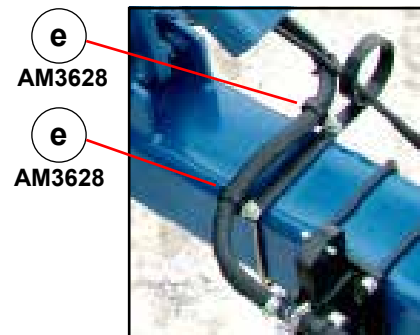
Tractor side



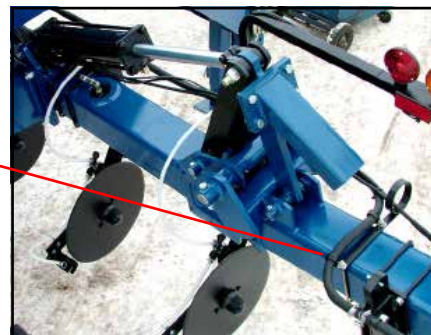
e
AM3628
e
AM3628



Left-hand side from the rear



e
AM3628
e
AM3628



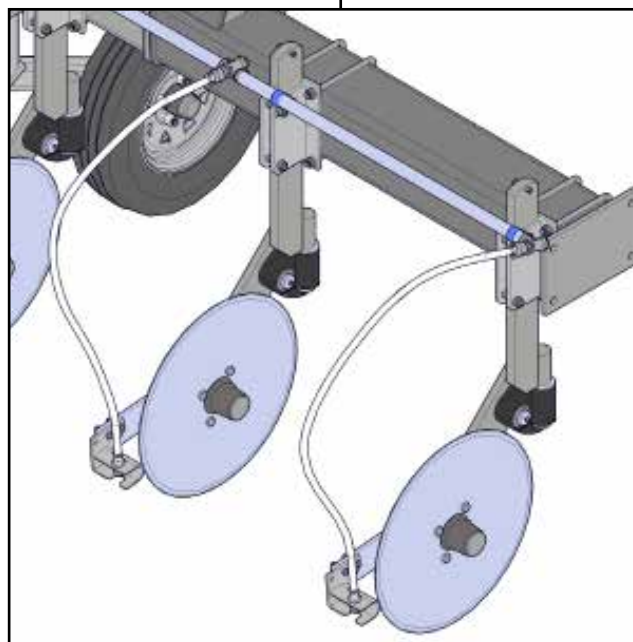
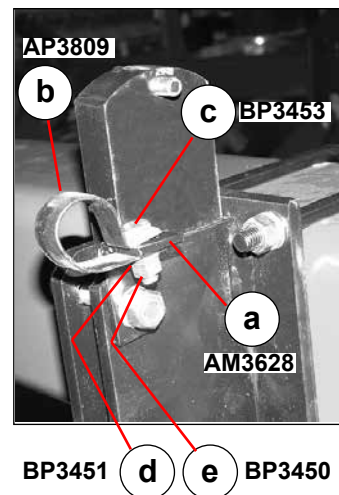
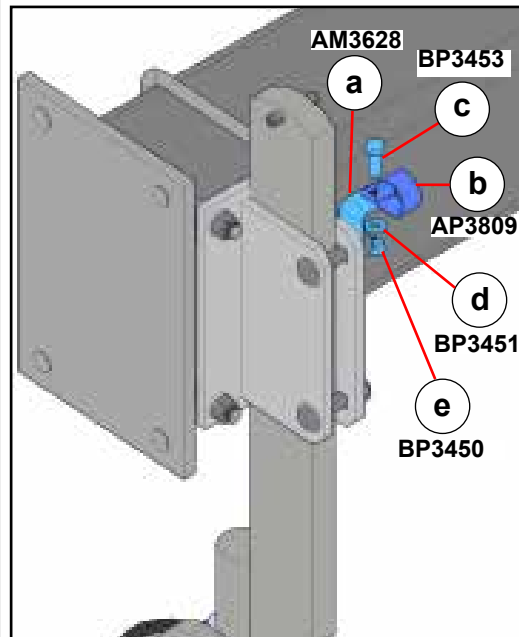
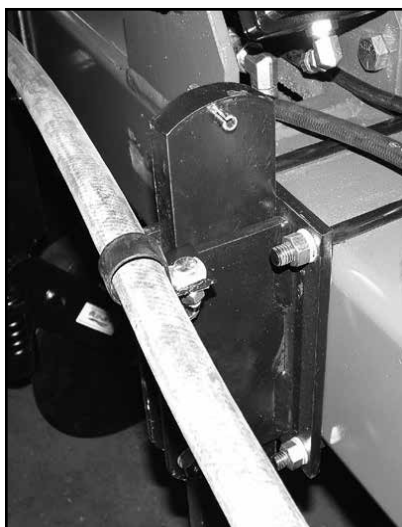
Right-hand side from the rear

Assembly (Hose Support Clamps)

- ▶ Attaching hose support clamps
- ▶ **NOTE:**
Do not tighten hose support clamps until suction hoses are inserted and adjusted

Procedures

1. Remove 1/2" hex nut and lock from top carriage bolt of each flatback.
Install (a) (AM3628) liquid trunk line mounting bracket over carriage bolt.
Replace 1/2" lock and hex nut.
2. Attach (b) (AP3809) 1-1/4" hose support clamp to (a) with (c) (BP3453) 3/8" x 1" hex cap screw, (d) (BP3451) 3/8" lock washer, 18-8 SS and (e) (BP3450) 3/8" hex nut, F594 GR 1 CW.

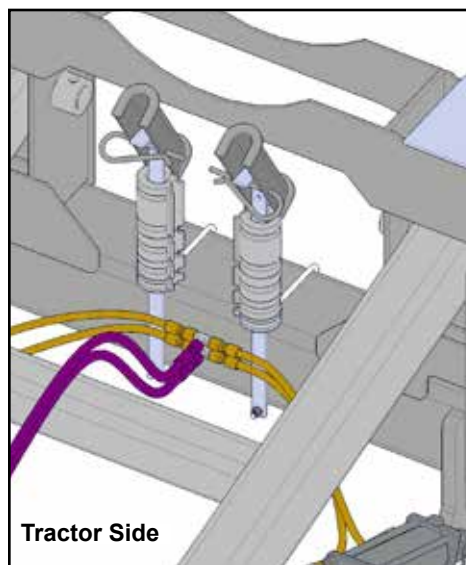
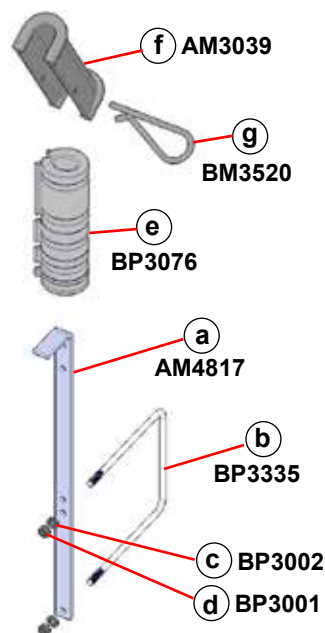
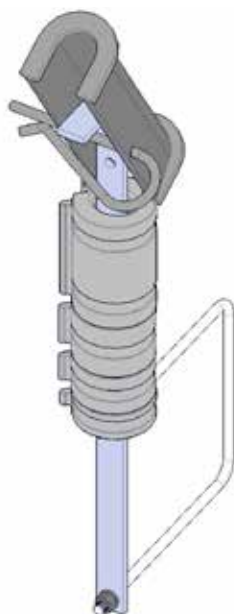


Assembly (Depth Collar Storage Brackets)



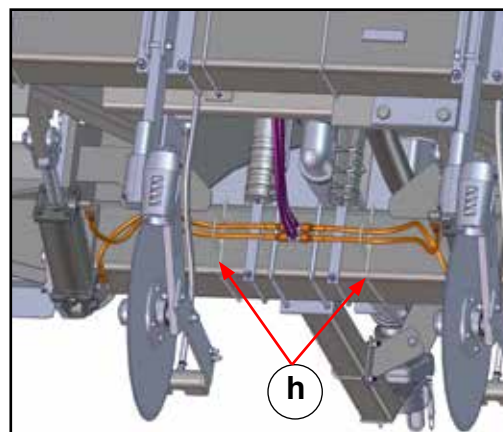
Mounting depth collar storage brackets

1. Mount (a) (AM4817) depth collar storage brackets near center of mainframe axle with brackets mount on tractor side. Secure with (b) (BP3335) 3/8" x 7"W x 8"L u-bolts, (c) (BP3002) 3/8" lock washers and (d) (BP3001) 3/8" hex nuts.
2. Place (e) (BP3076) depth collar sets, 1-1/4" to 1-1/2", on brackets.
3. Place (f) (AM3039) transport cylinder lock on brackets and secure with (g) (BM3520) clip pins, transport lock.



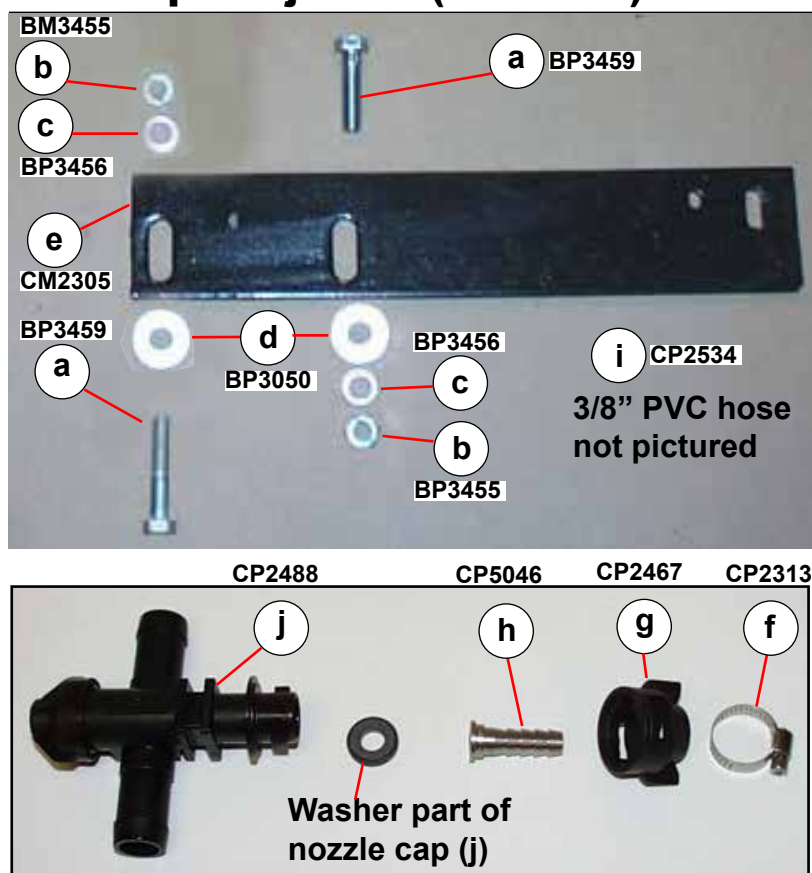
Attaching hose retainers

4. Install two (h) (AP2284-1) 7" x 7" hose retainer with the loop to the tractor side on main frame axle.



Assembly (Liquid Injection)

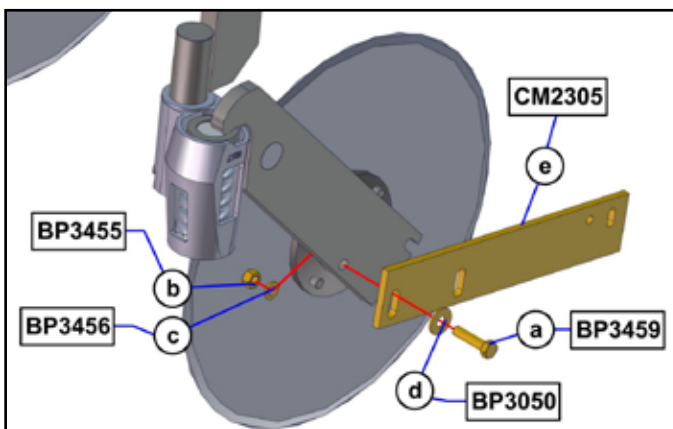
JetStream Liquid Injection (AAM3353)



BOM ID	Qty	Item No	Description
a	2	BP3459	HEX CAP SCREW, 1/2"-13, X 2", F593 GR 1 CW
b	2	BP3455	NUT, HEX, 1/2"-13, F594 GR 1 CW
c	2	BP3456	WASHER, LOCK, 1/2", 18-8 STAINLESS STEEL
d	2	BP3050	WASHER, FLAT, 1/2", PLATED
e	1	CM2305	JET STREAM MOUNTING ARM
f	2	CP2313	STAINLESS STEEL HOSE CLAMP 5/8"-1"
g	1	CP2467	NOZZLE CAP, 25608-1-NYR
h	1	CP5046	HOSE BARB INSERT, 3/8" HOSE STAINLESS STEEL
i	5	CP2534	3/8" PVC 250# PSI HOSE JET STREAM
j	1	CP2488	DIAPHRAGM CHECK VALVE, DOUBLE SHANK 3/4" HOSE
k	3	DP4086	CABLE TIE 11-3/8" STANDARD (NOT PICTURED)

Attaching Injection Mounting Brackets

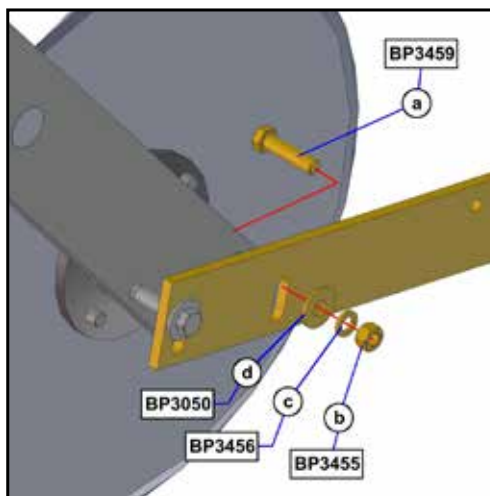
- Place (e) (CM2305) Jet Stream mounting arm on coultter arm. Place (d) (BP3050) 1/2" flat washer on (a) (BP3459) 1/2" x 2" hex cap screw into coultter arm slotted hole through mounting arm. Place (c) (BP3456) 1/2" lock washer and (b) (BP3455) 1/2" hex nut on hex cap screw next to blade.



Assembly (Liquid Injection)

Injection Mounting Brackets

1. Raise mounting arm and insert (a) (BP3459) 1/2" x 2" hex cap screw blade side into coultter arm slotted hole through mounting arm. Place (d) (BP3050) 1/2" flat washer, (c) (BP3456) 1/2" lock washer on hex cap screw. Raise mounting arm and secure with (b) (BP3455) 1/2" hex nut.



Nozzle Assembly

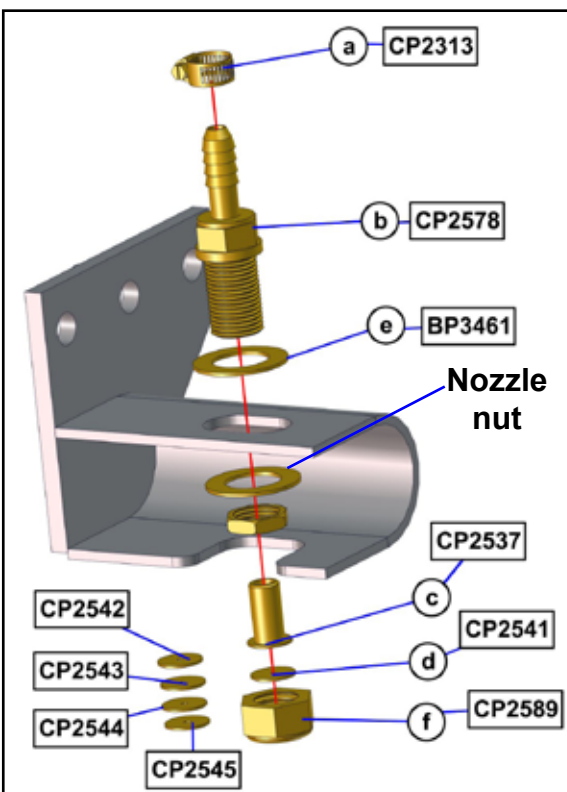
2. a. CP2313 1 Stainless steel hose clamp 5/8"-1"
b. CP2578 1 Straight nozzle body with/nut, 3/8" hose, Stainless steel
c. CP2537 1 Stream stabilizer Stainless steel
d. Orifice plate:
CP2541 1 #4916-63
CP2542 1 #4916-70
CP2543 1 #4916-78
CP2544 1 #4916-86
CP2545 1 #4916-95
f. CP2589 1 Nozzle cap, SS



3. Place JetStream nozzle mount in vise. Insert (b) (CP2578) straight nozzle body into (e) (BP3461) 5/8", 1-1/2" OD, 0.78, 18-8 SS, flat washer. Insert into nozzle mount. Place second (e) (BP3461) 5/8", 1-1/2" OD, 0.78, 18-8 SS, flat-washer over threads of nozzle assembly, center assembly on slotted hole and secure with nozzle nut.

Nozzle assembly should be aligned with blade after coultter assembly is complete.

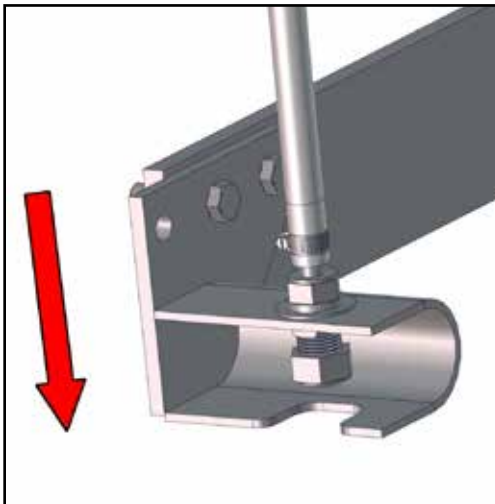
4. Place orifice plate (d) into (f) (CP2589) nozzle cap. Insert (c) (CP2537) stream stabilizer SS into nozzle cap. Install assembly into nozzle body.



NOTE:

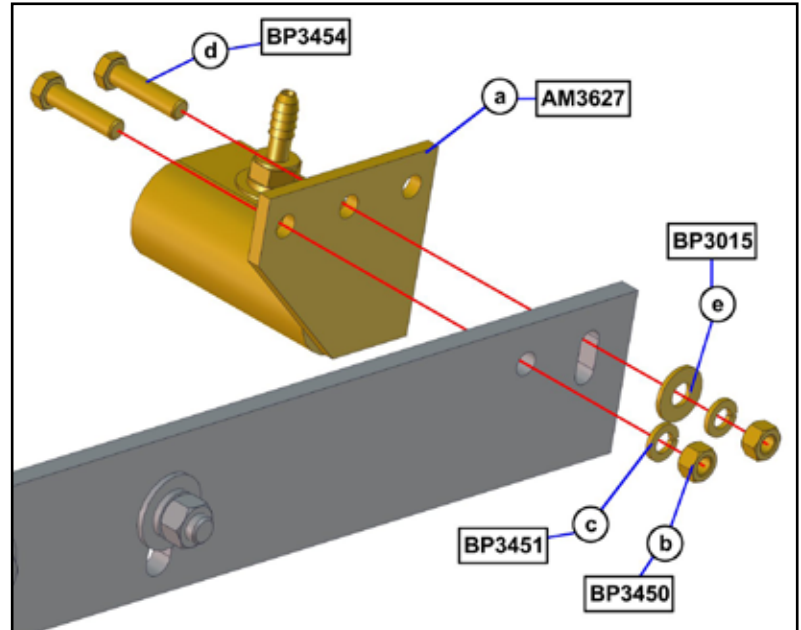
Consult rate chart for orifice size.

Assembly (Liquid Injection)



NOTE:

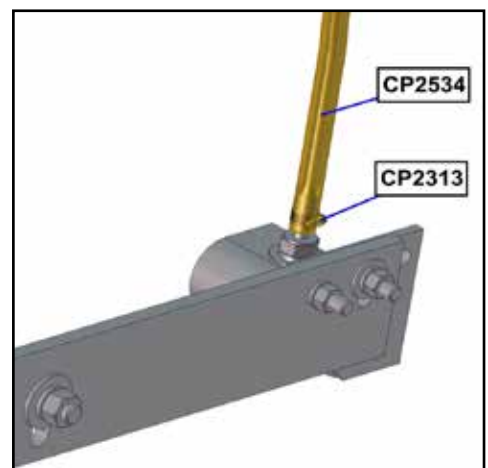
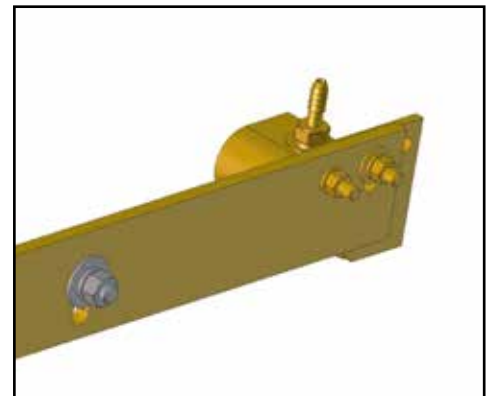
Rotate rear of nozzle mount down before securing.



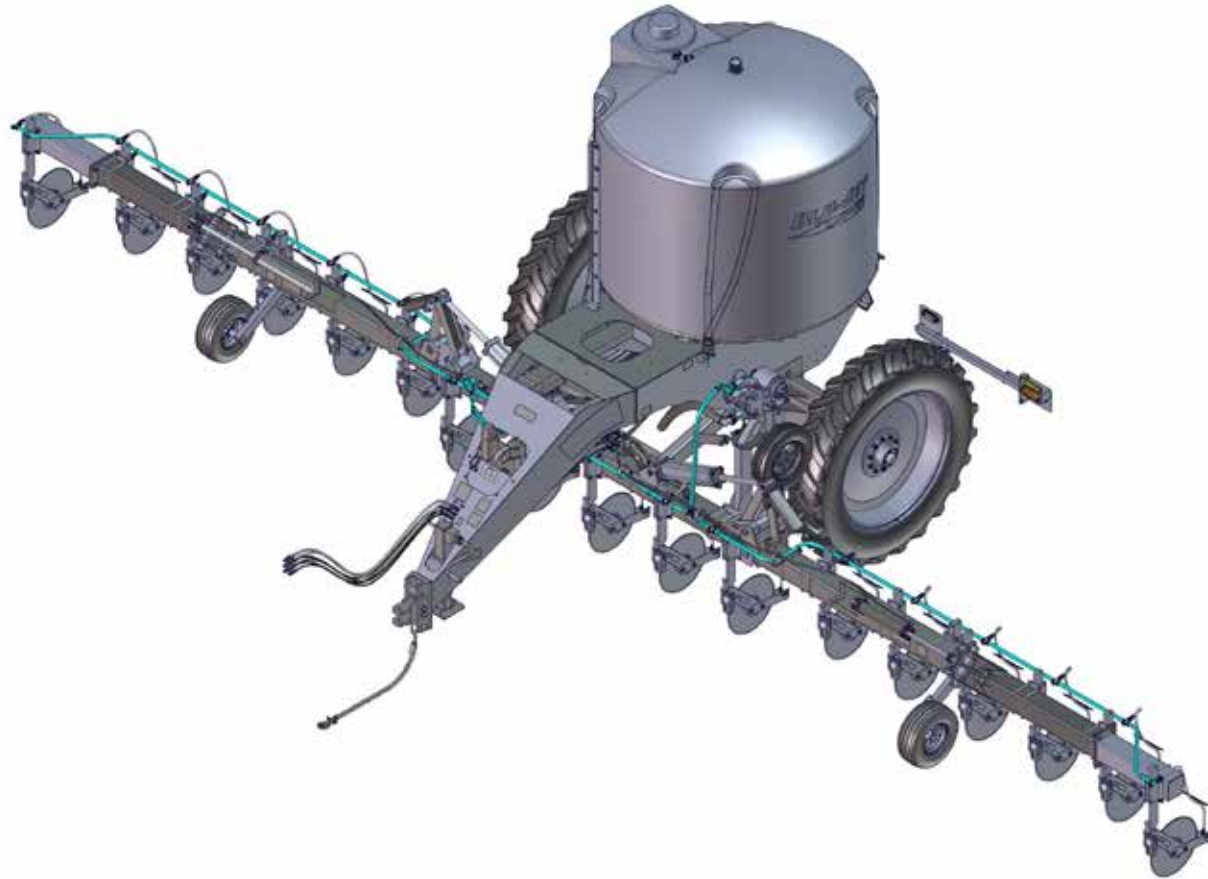
BOM ID	Qty	Item No	Description
a	1	AM3627	NOZZLE MOUNT, JETSTREAM
b	2	BP3450	NUT, HEX, 3/8"-16, F594 GR 1 CW
c	2	BP3451	WASHER, LOCK, 3/8", 18-8 STAINLESS STEEL
d	2	BP3454	3/8"-16 X 1-1/2" HEX CAP SCREW, F593 GR 1 CW
e	1	BP3015	WASHER, FLAT, 3/8", PLATED

Jet Stream Mounting Bracket

- Mount (a) (AM3627) JetStream nozzle mount to JetStream mounting arm with two (d) (BP3454) 3/8" x 1-1/2" hex cap screws, F594 GR 1 CW. Secure each hex cap screws with (e) (BP3015) 3/8" flat washers, (c) (BP3451) 3/8" lock washers, 18-8 SS and (b) (BP3450) 3/8" hex nuts, F594 GR 1 CW.
- Push assembly down. Secure with (e) (BP3015) 3/8" flat washers, 7/8" OD, 18-8, (c) (BP3451) 3/8" lock washers 18-8 SS and (b) (BP3450) 3/8"-16 hex nuts F594 GR 1 CW.
- Cut lengths from bulk (CP2534) 3/8" PVC 250# psi hose as needed. Push hose over hose barb and secure with (CP2313).

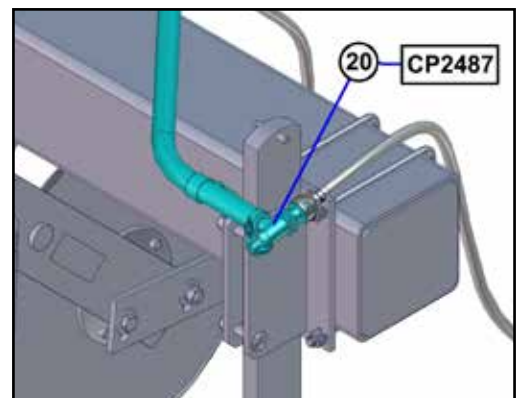
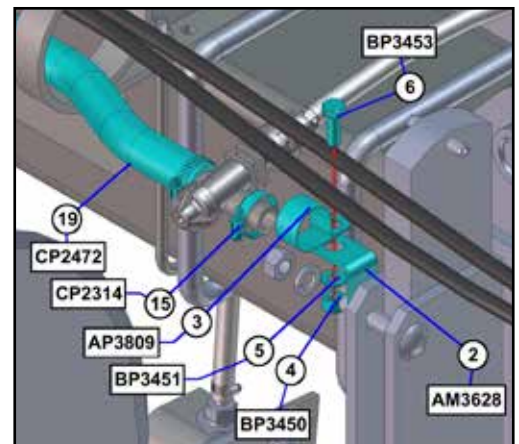
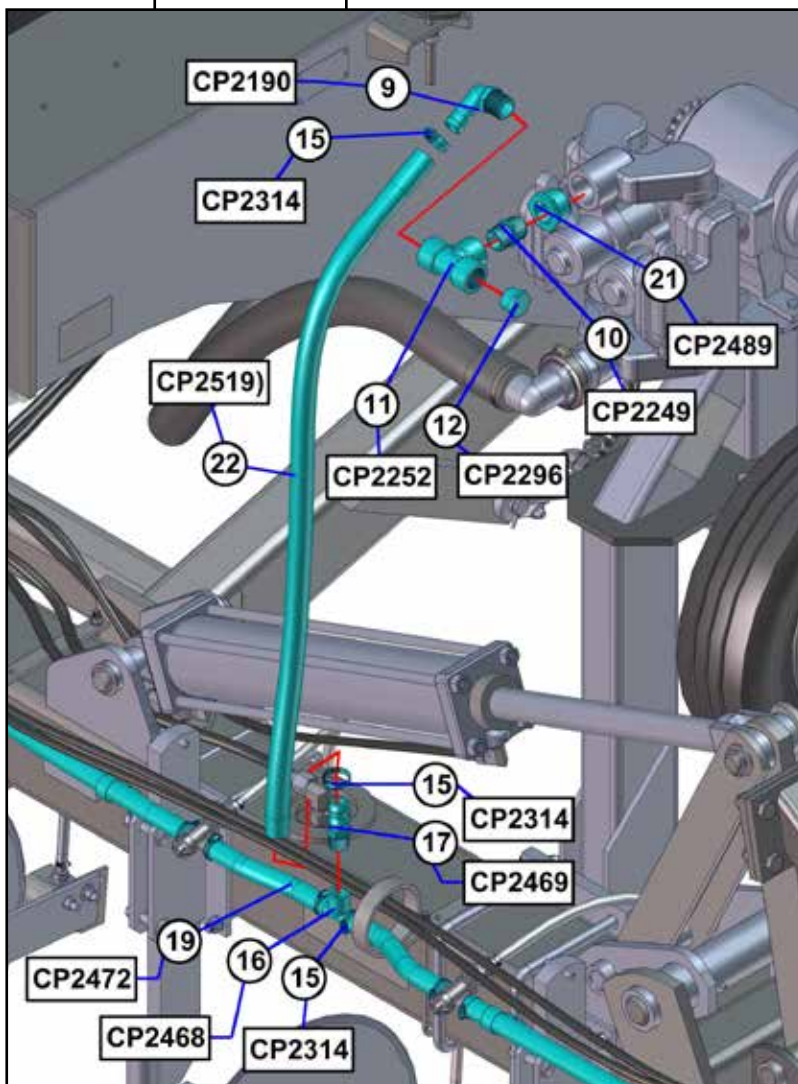
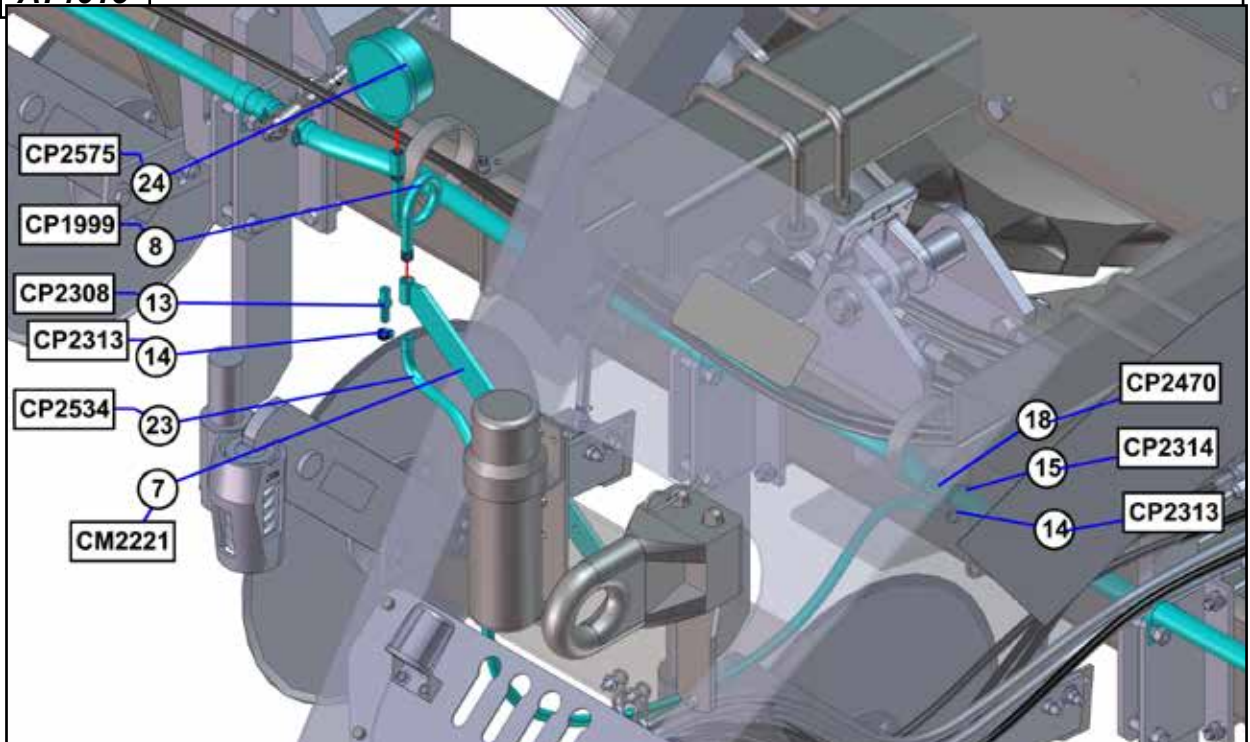


Manifold Liquid Injection Assembly (Gull Wing Toolbar)

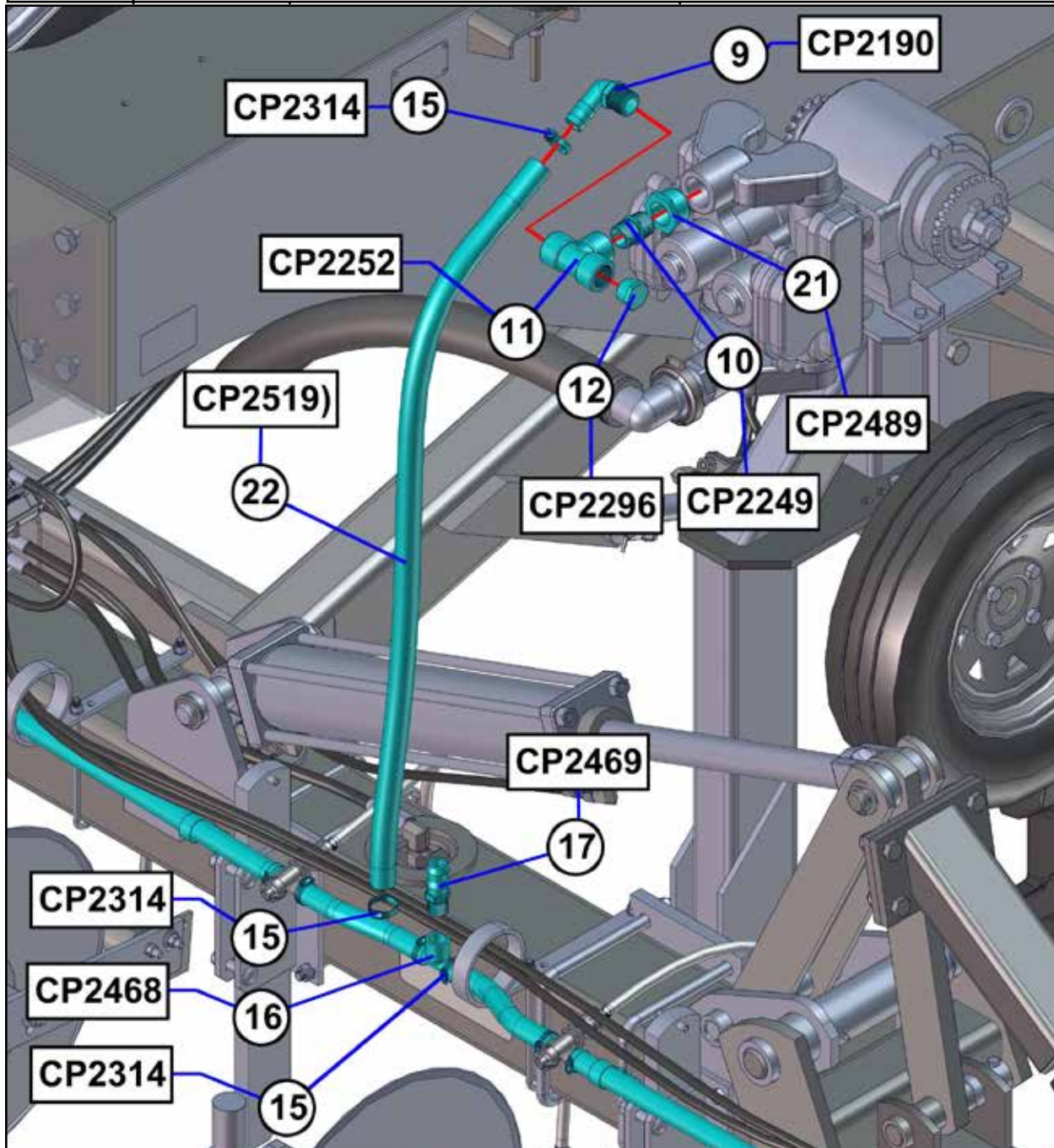


BOM ID	Qty	Item No	Description
1	1	33000117	MANIFOLD ASSY, AT3015, 3/4" EPDM, 17 ROWS
2	17	AM3628	BRACKET, MOUNTING, LIQUID TRUNK LINE
3	21	AP3809	1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
4	17	BP3450	NUT, HEX, 3/8"-16, F594 GR 1 CW
5	17	BP3451	WASHER, LOCK, 3/8", 18-8 SS
6	17	BP3453	HEX CAP SCREW, 3/8"-16 X 1", F593 GR 1 CW
7	1	CM2221	NH3 GAUGE HOLDER, TONGUE MOUNT
8	1	CP1999	GAUGE PROTECTOR, PIGTAIL
9	1	CP2190	ELBOW, 90°, 1"MP X 1"HB, POLY
10	1	CP2249	NIPPLE, CLOSE, 1" POLY
11	1	CP2252	TEE, 1" FP, POLY
12	1	CP2296	PLUG, 1" PIPE, POLY
13	1	CP2308	HOSE BARB
14	2	CP2313	HOSE CLAMP, WORM GEAR, 1/4" - 5/8" TUBING, SS
15	38	CP2314	HOSE CLAMP, WORM GEAR, 1/2" - 1" TUBING, SS
16	1	CP2468	TEE, 3/4FP-3/4HB-3/4HB, POLY
17	1	CP2469	HOSE BARB, 3/4"MP X 1HB, POLY, TA101216PP
18	1	CP2470	TEE, 3/8HB-3/4HB-3/4HB, NYLON, TT961212
19	18	CP2472	HOSE, EPDM RUBBER, 3/4", 200#
20	2	CP2487	DIAPHRAM CHECK VALVE, SINGLE SHANK, 3/4 HOSE
21	1	CP2489	REDUCER BUSHING 1-1/2"MP X 1"FP, POLY
22	1	CP2519	HOSE, EPDM RUBBER, 1", 200
23	1	CP2534	HOSE, EVA,N 3/8" BRAID JET STREAM
24	1	CP2575	GAUGE, 0-160 PSI, 4" CASE, 1/4"MPT, LIQUID FILLED, SS

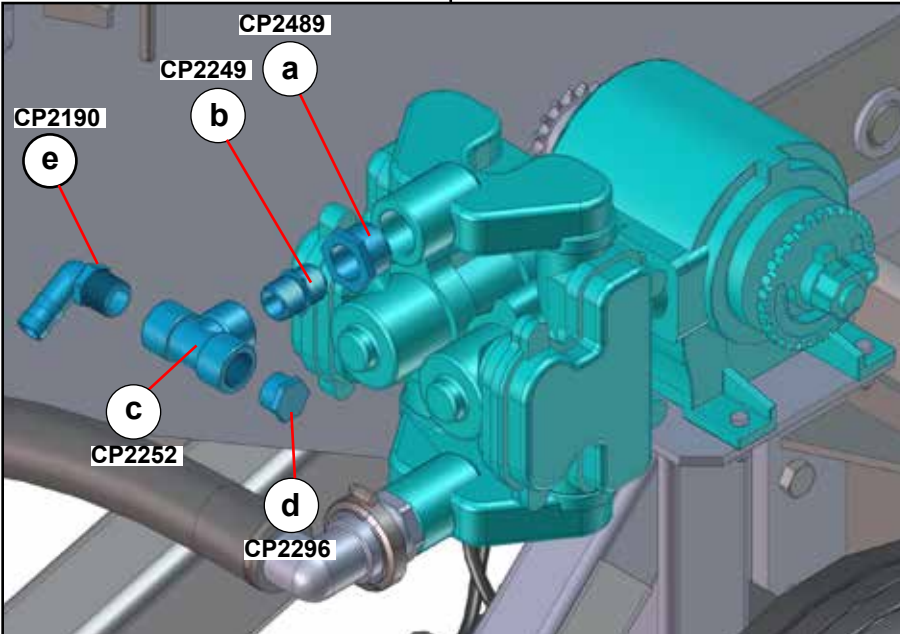
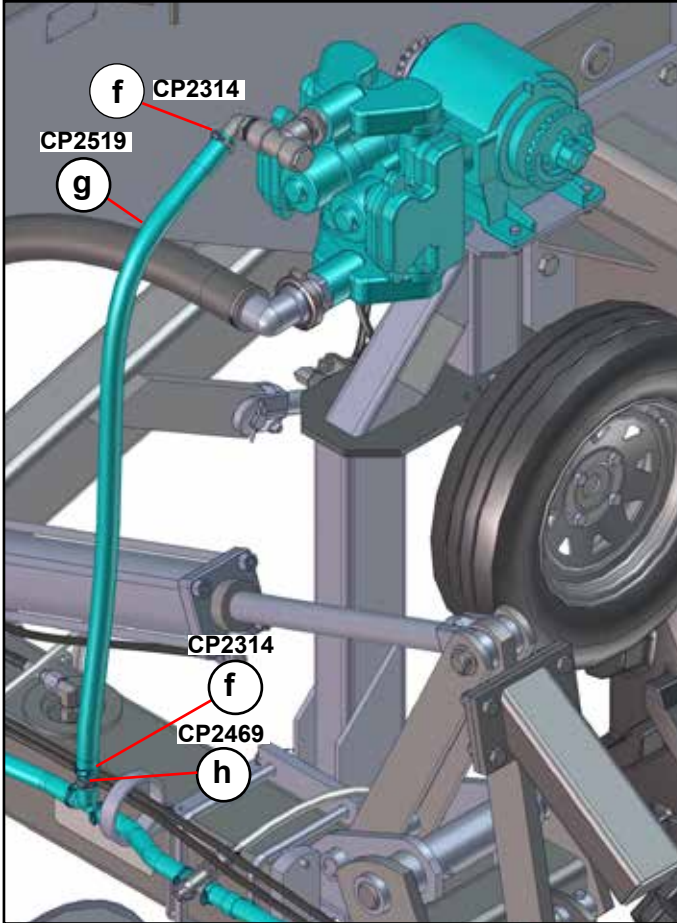
Manifold Liquid Injection Assembly (Gull Wing Toolbar)



Manifold Liquid Injection Assembly (Gull Wing Toolbar)



Top Port Pump Fittings Assembly (Gull Wing Toolbar)

Task	Procedures	Illustrations
<p>► Installation of top port pump fitting CP2569 Twin Piston Pump</p>		
<p>1. Apply sealant to (a) (CP2489) threads, 1-1/2" MP x 1" FP poly reducer bushing. Install into pump top port. Apply sealant to (b) (CP2249) 1" poly close nipple install in (a). Apply sealant to (c) (CP2252) 1" poly FP tee install on (b). Apply sealant to (d) (CP2296) 1" poly pipe plug, install in end of (c). Apply sealant to (e) (CP2190) 1" MPTx 1" HB 90 degree fitting, install in (c). Place (f) (CP2314) 3/4" -1-1/2" worm gear hose clamp over (g) (CP2519) 1" suction hose and install on (e). Tighten worm gear clamp.</p> <p>2. Extend (g) suction hose to (h) (CP2469) 3/4" MP-1" HP, poly coupler and place (f) (CP2314) 3/4" -1-1/2" worm gear hose clamp over hose. Push hose on (h) and secure with worm gear clamp.</p>		

Assembly (Trunk Line)

Check Valve Installation

1. Work hose down toolbar frame through hose retainers and hose support clamps.

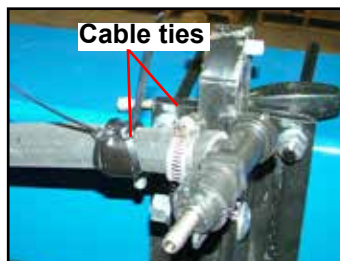
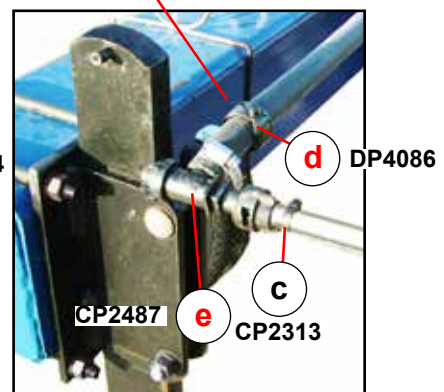
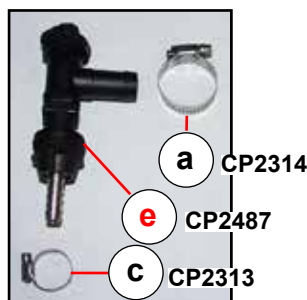
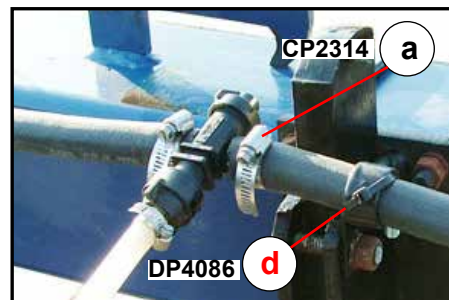
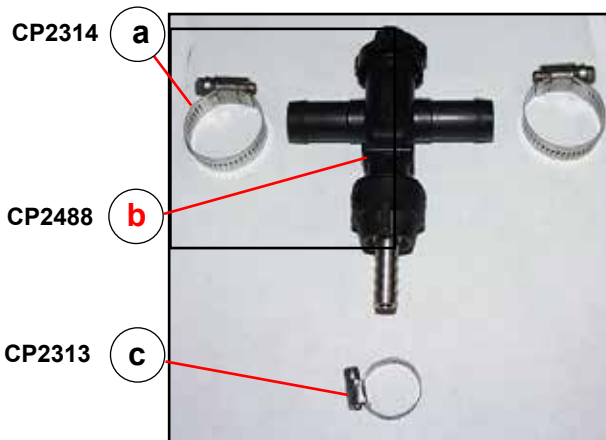
NOTE:


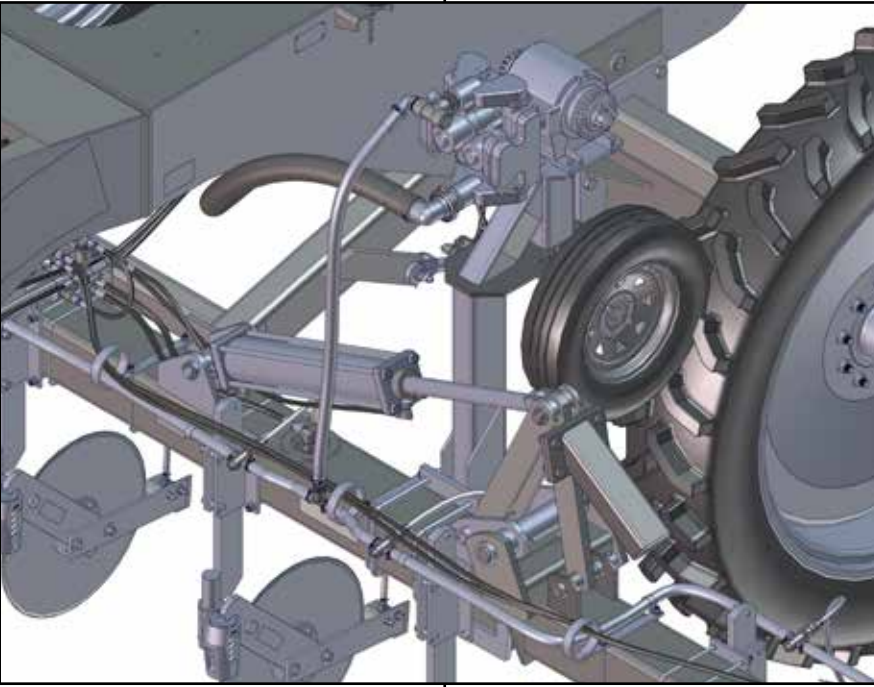
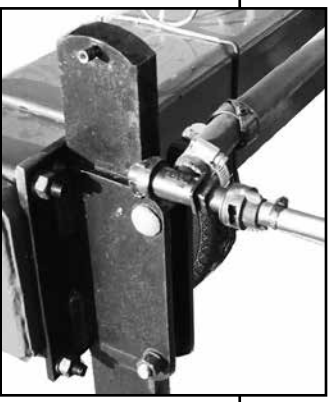

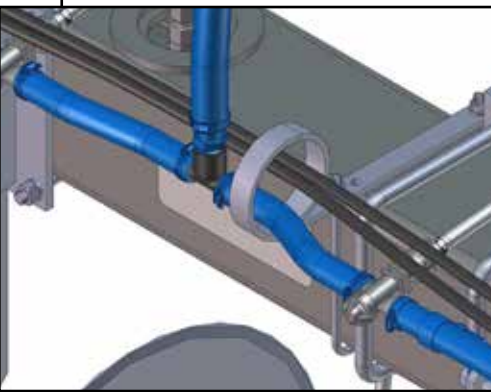
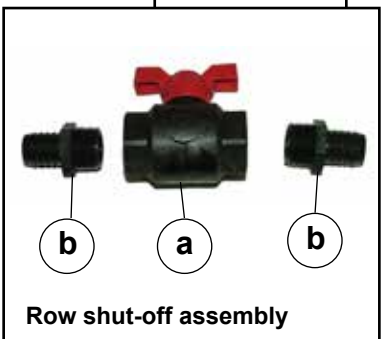
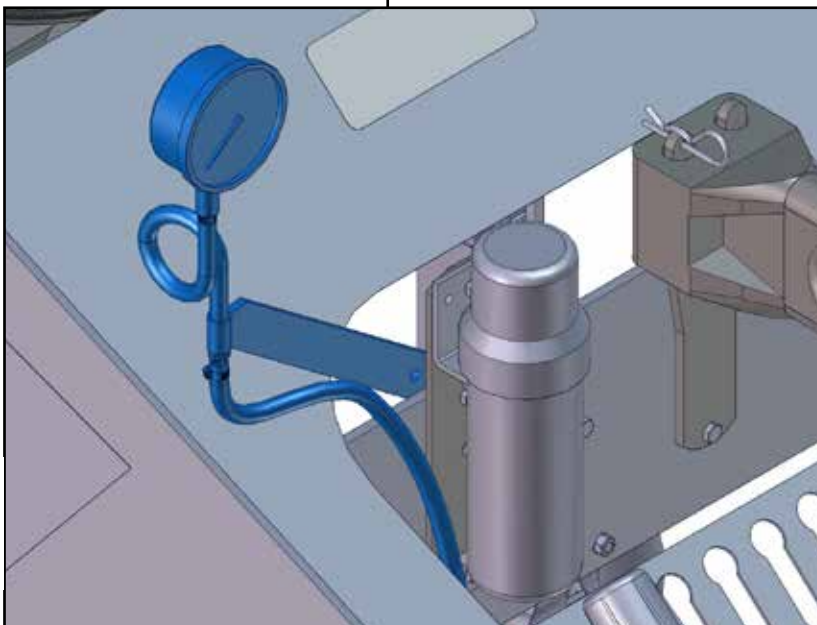
Allow extra hose in hinge areas to avoid kinking of hoses.

NOTE:

Start with the end row. Complete end row assembly. Secure row with cable ties. Pull hose to next row and cut hose.

2. Cut 3/4" hose at **each row**. Place (a) (CP2314) 1/2" - 1" worm gear hose clamp over each end of the 3/4" hose. Insert (b) (CP2488) diaphragm check valve, double shank 3/4" hose into each end of the 3/4" hose. Secure with worm gear hose clamps.
3. Secure 3/4" hose to row (AP3809) 1-1/4" hose support clamp with (d) (DP4086) 11-3/8" cable ties.
4. Trim hose on **last row** and place (a) (CP2314) 1/2" - 1" worm gear hose clamp over end of the 3/4" hose. Install (e) (CP2487) diaphragm check valve single shank, 3/4" hose. Secure with worm gear clamp and (d) (DP4086) 11-3/8" cable ties.
5. Attach (CP2534) 3/8" PVC 250# psi hose to check valve assembly with (c) (CP2313) stainless steel hose clamp 1/4"-5/8".



	Manifold Liquid Injection Assembly (Gull Wing)		
	Task	Procedures	Illustrations
<div data-bbox="349 262 381 304">▶</div> <div data-bbox="349 399 381 451">▶</div>	Manifold assembly		
	<p>NOTE: Allow extra hose in hinge areas to avoid kinking</p>		
		 <p>CP2488 diaphragm check valve double shank</p>	
<p>CP2487 diaphragm check valve single shank</p> <div data-bbox="246 1480 625 1816">  <p>Row shut-off assembly</p> <p>a. CP2576 2 Valve, ball, 3/4" FP 125 PSI min.</p> <p>b. CP2577 4 Hose barb, 3/4" MP x 3/4" HP, Poly</p> </div>			

Manifold Liquid Injection Assembly (Gull Wing Toolbar)

Task	Procedures	Illustrations
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► Manifold
assembly
hinge hose
lengths

► **NOTE:**
*Allow
extra hose
in hinge
areas
to avoid
kinking of
hose*



(Gull Wing hose 54") Primary wing hinge (30" row spacing)



(Gull Wing hose 41-1/4") Secondary wing hinge
(30" row spacing)

Manifold Liquid Injection Assembly (Tongue Gauge)

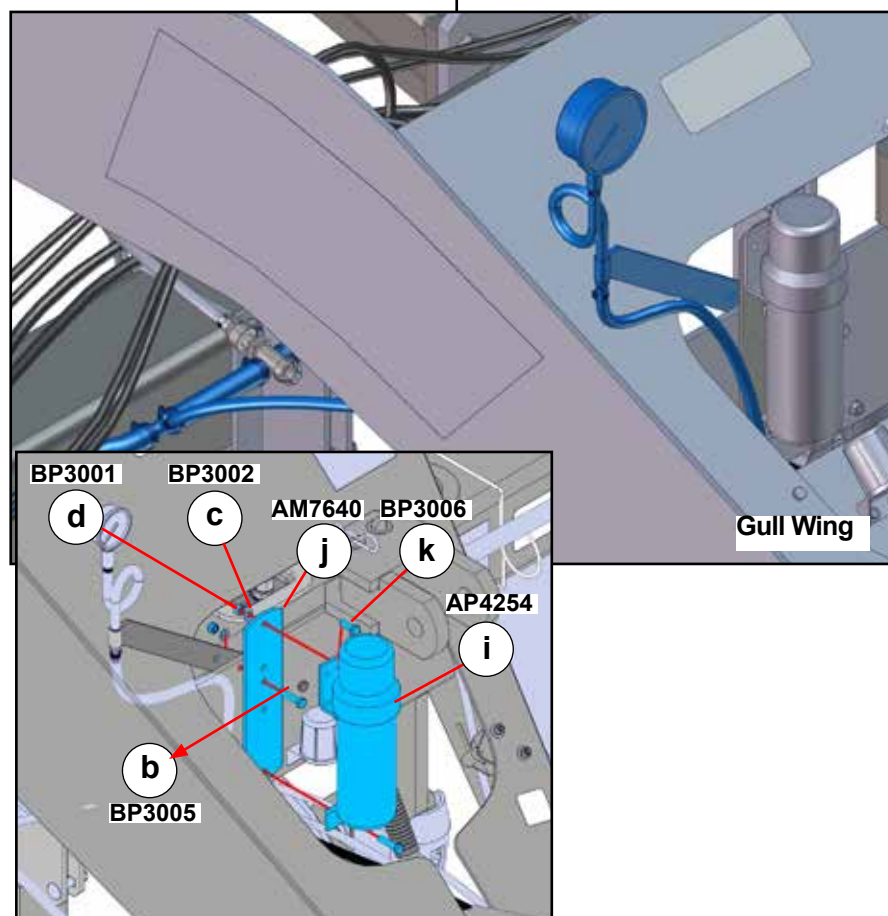
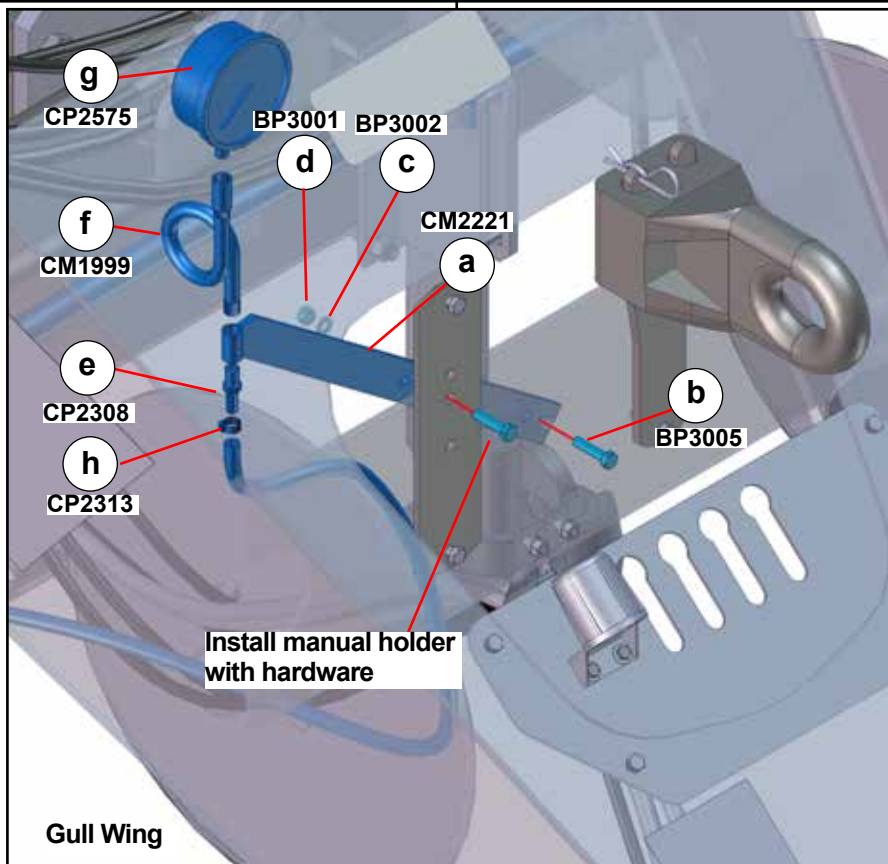
Task

Procedures

Illustrations

Mounting gauge

1. Mount (a) (CM2221) NH3 gauge holder tongue mount to tongue frame with (b) (BP3005) 3/8"-16 x 1-1/2" hex cap screw. Secure with (c) (BP3002) 3/8" lock washers and (d) (BP3001) 3/8" hex nuts. Use the hex cap screw and hardware in the Manual Holder assembly to mount the top part of the bracket.
2. Tape and install (e) (CP2308) hose barb 1/4" x 3/8" hose A1132 in bottom port of holder.
3. Tape threads of (f) (CM1999) gauge protector and install in top port of holder.
4. Pour oil into pigtail and tape threads of (g) (CP2575) 160# Glycerin filled gauge. Install in top port of pigtail.
5. Extend 3/8" hose from center section tee through large hole in the tongue.
6. Place (h) (CP2313) stainless steel hose clamp 5/8"-1" over 3/8" PVC hose. Push hose over hose barb on gauge holder. Secure with hose clamp.
7. Mount (i) (AP4254) manual holder to (j) (AM7640) manual holder bracket with (k) (BP3006) 3/8" x 1" hex cap screw. Secure with (c) (BP3002) 3/8" lock washer and (d) (BP3001) 3/8" hex nuts.
8. Attach manual assembly and gauge holder with (b) (BP3005) 3/8"-16 x 1-1/2" hex cap screws. Secure with (c) (BP3002) 3/8" lock washers and (d) (BP3001) 3/8" hex nuts.



Assembly (Sight Gauge)

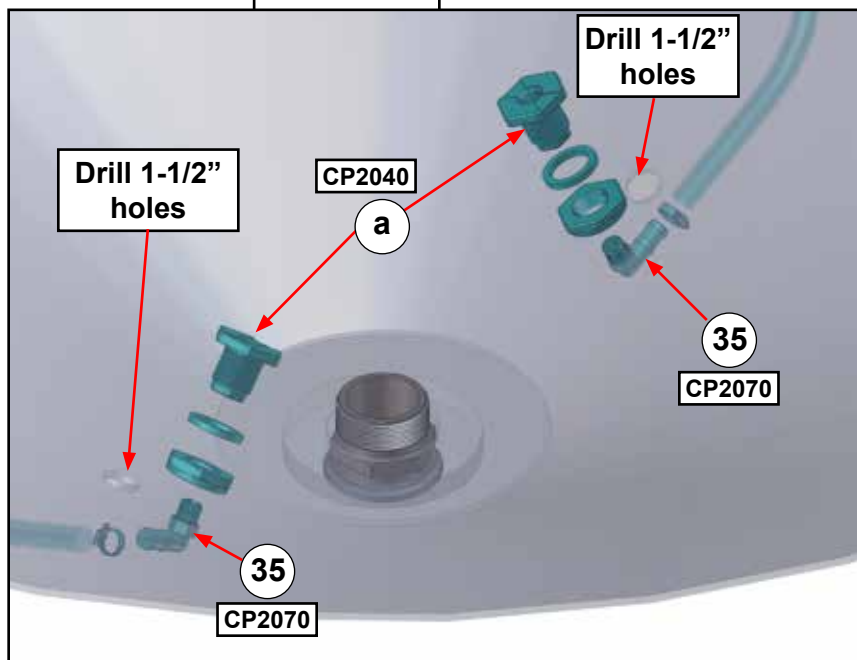
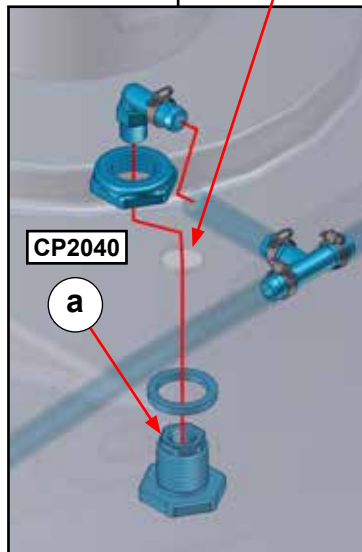
Task

Sight gauge assembly

Drill 1-1/2" holes

Procedures

Illustrations

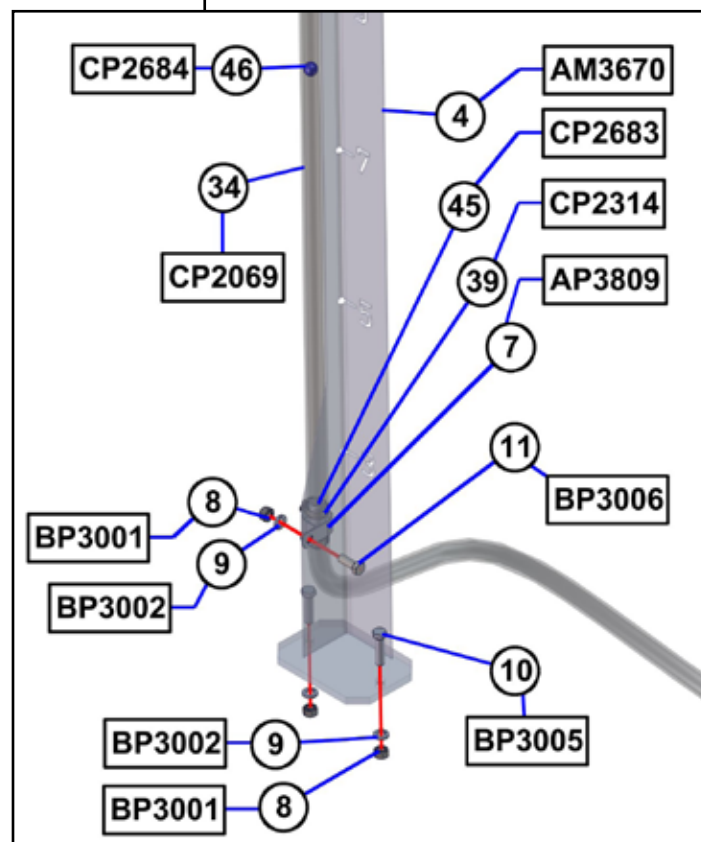
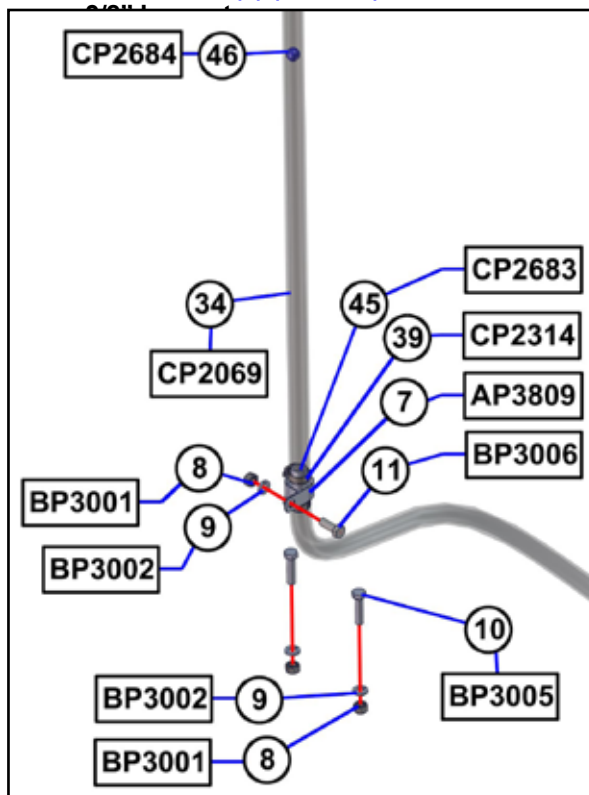
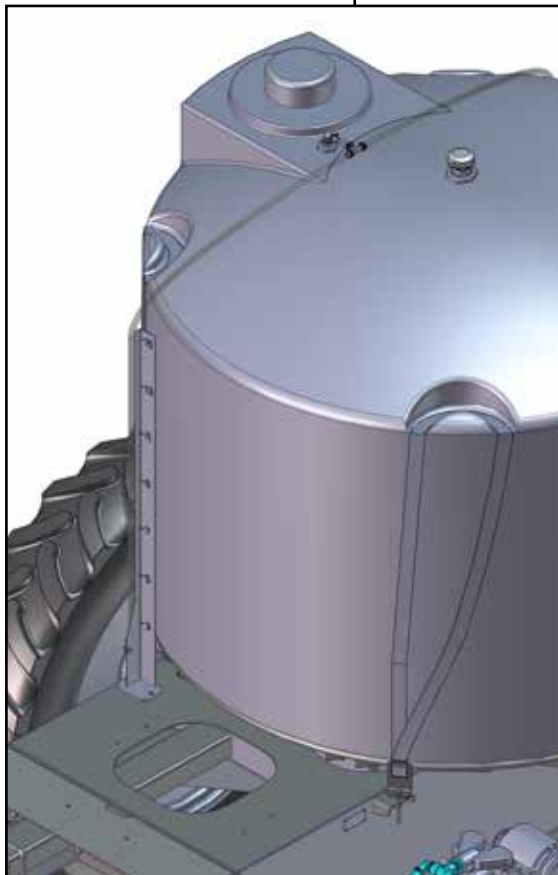



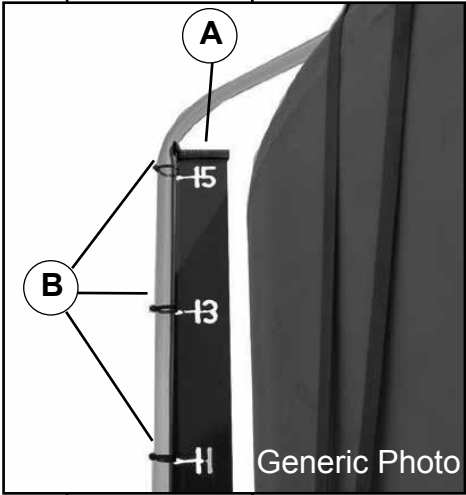
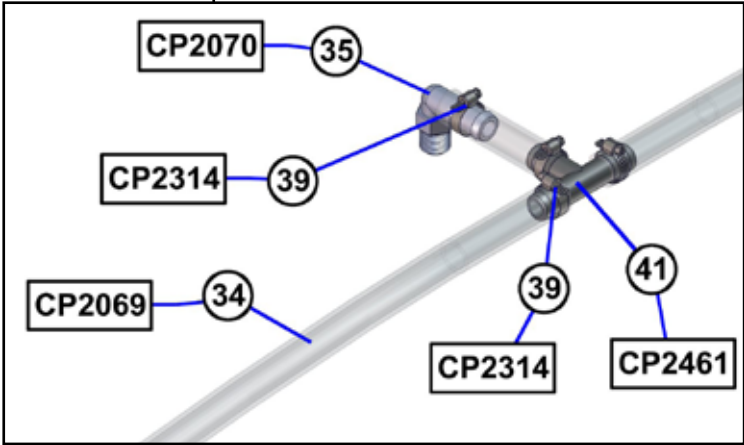
1. Drill 1-1/2" hole at the top of tank near end of sight gauge groove.
2. Insert (a) (CP2040) tank outlet fitting 1/2" FPT fits 1-3/8" hole. Install (35) (CP2070) 90 degree elbow with 3/4" hose barb.
3. Drill 1-1/2" holes at the bottom of tank.
4. Insert (a) (CP2040) tank outlet fitting 1/2" FPT fits 1-3/8" hole. Install (35) (CP2070) 1/2" MP x 3/4" 90 degree elbow hose barbs.

Assembly (Sight Gauge)

Task	Procedures	Illustrations
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1. Attach (4) (AM3670) tank marking bracket to frame with (10) (BP3005) 3/8" x 1-1/2" hex cap screws, (9) (BP3002) 3/8" lock washers and (8) (BP3001) 3/8" hex nuts.
2. Attach 3/4" sight gauge hose to bottom hose barb and extend to tank marker bracket.
3. Cut hose and place (39) (CP2314) 1/2" worm gear hose clamp over hose. Insert (45) (CP2683) 3/4" hose mender HB into bottom hose. Place (7) (AP3809) 1-1/4" hose support clamp over (45).
4. Place (46) (CP2684) BLUE sight gauge ball in top hose and secure hose to (45).
5. Attach hose mender assembly to marking bracket with (11) (BP3006) 3/8" x 1" hex cap screw, (9) (BP3002) 3/8" lock washer and (8) (BP3001) 3/8" hex nuts.



BLU-JET AT4615	Assembly (Sight Gauge)		
	Task	Procedures	Illustrations
1. Extend (34) sight gauge hose to top of tank. Cut hose and place (39) (CP2314) 1/2" worm gear clamp over hose. Insert (41) (CP2461) 3/4HB x 3/4HB x 3/4HB tee in hose. Cut short section of hose. Place two (39) (CP2314) 1/2" worm gear clamp over hose. 2. Attach one end to the tee the other to (35) CP2070 90 degree elbow. 3. Place (39) (CP2314) 1/2" worm gear clamp over next section of hose. Attach to tee and secure. 4. Extend hose to bottom of tank. Place (39) (CP2314) 1/2" worm gear clamp over hose. Secure to bottom hose barb.			
			
	A. .375 ft. B. 7	AP2741 DP4086 Trim, 1/8" Cable tie 11-3/8", standard	5. Secure hose to mounting bracket with (B) (DP4086) 11-3/8" standard cable ties. Place ties through each number and secure.

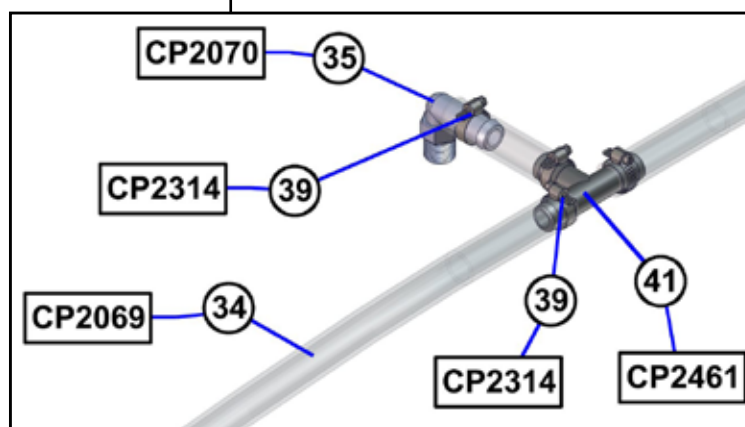
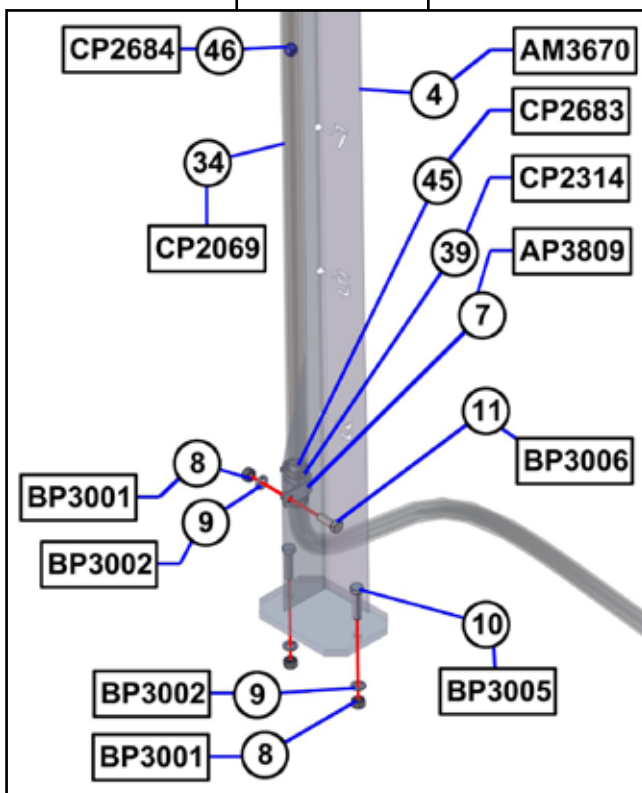
Bottom Fill Plumbing Kit AT4015 (44100123)

Task	Procedures	Illustrations
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Bottom Fill Plumbing Kit AT4015 (44100123)

BOM ID	Qty	Item No	Description
1	1	44100123	BOTTOM FILL PLUMBING KIT, AT4615, 1 PUMP, 3" FILL
2	1	AM3659	BRACKET, BOTTOM FILL VALVE MTG, AT4610
3	1	AM3660	BRACKET, VALVE SUPPORT
4	1	AM3670	BRACKET, TANK MARKING, AT4615
5	1	AM4445	VALVE MOUNTING PLATE
6	1	AM4827	BRACKET, FILL VALVE SUPPORT PLATE
7	1	AP3809	1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
8	7	BP3001	NUT, HEX, 3/8"-16, GRADE 2. PLATED
9	7	BP3002	WASHER, LOCK, 3/8", PLATED
10	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5. PLATED
11	1	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5. PLATED
12	4	BP3015	WASHER, FLAT, 3/8", PLATED
13	4	BP3042	NUT, HEX, 1/2"-13, GRADE 2, PLATED
14	4	BP3043	WASHER, LOCK, 1/2", PLATED
15	2	BP3356	U-BOLT, 1/2"-13 X 7W X 8-1/4L, GLOSS BLACK
16	1	BP3362	U-BOLT, 3/8"-16 X 3W X 4L
17	5	CP2044	CLAMP, 2" WORM SCREW, FLANGE
18	5	CP2045	GASKET, EPDM, 2 FLANGE, 3/4 BLKHD, 150G
19	1	CP2049	VALVE, BALL, 2" - 1-1/2" PORT
20	1	CP2050	STRAINER, 2" FLANGE, LINE
21	1	CP2053	ELBOW, 90°, 2" FLANGE
22	1	CP2054	ADAPTER, 1-1/2" MPT X 2" FLANGE
23	1	CP2055	STRAINER SCREEN, 30 MESH, LS230
24	1	CP2056	HOSE BARB, 2" FLANGE X 2" HOSE
25	1	CP2057	ELBOW, 90°, 2" FLANGE X 2" HOSE BARB
26	1	CP2058	TEE, 3" FLANGE
27	1	CP2059	REDUCER, 3" FLANGE X 2" FLANGE, STD PORT
28	1	CP2060	HOSE BARB, 3" FLANGE X 3" HOSE
29	1	CP2061	ELBOW, 90°, 3" FLANGE X 3" HOSE BARB
30	5	CP2062	CLAMP, 3" WORM SCREW, FLANGE
31	6	CP2063	GASKET, EPDM, 3 FLANGE, 300G
32	1	CP2064	VALVE, BALL, 3 FLANGE X 3 MALE ADAPTER
33	1	CP2068	CAP, 3" 300 CAP
34	1	CP2069	HOSE, SITE GAUGE, 3/4"
35	3	CP2070	ELBOW, 90°, 1/2"MP X 3/4" HOSE BARB, POLY
36	1	CP2062	CLAMP, 3" WORM SCREW, FLANGE
37	1	CP2074	ELBOW, 45°, 3" FLANGE X 3" FLANGE, POLY
38	1	CP2076	VALVE BALL, 3" FLANGE POLY
39	8	CP2314	HOSE CLAMP, WORM GEAR, 1/2" - 1" TUBING, SS
40	2	CP2408	HOSE CLAMP, WORM GEAR, 2" - 2-1/2" TUBING, SS
41	1	CP2461	TEE, 3/4HB-3/4HB-3/4HB, POLY TT9121212PP
42	1	CP2574	HOSE, EPDM RUBBER, REINFORCED, 85#
43	1	CP2590	HOSE, EPDM RUBBER, 2", REINFORCED, 100#
44	2	CP2591	HOSE CLAMP, WORM GEAR, 3" TUBING, SS
45	1	CP2683	HOSE MENDER, 3/4" HB
46	1	CP2684	SIGHT GAUGE BALL, BLUE
47	7	DP4086	CABLE TIE 11-3/8" STD



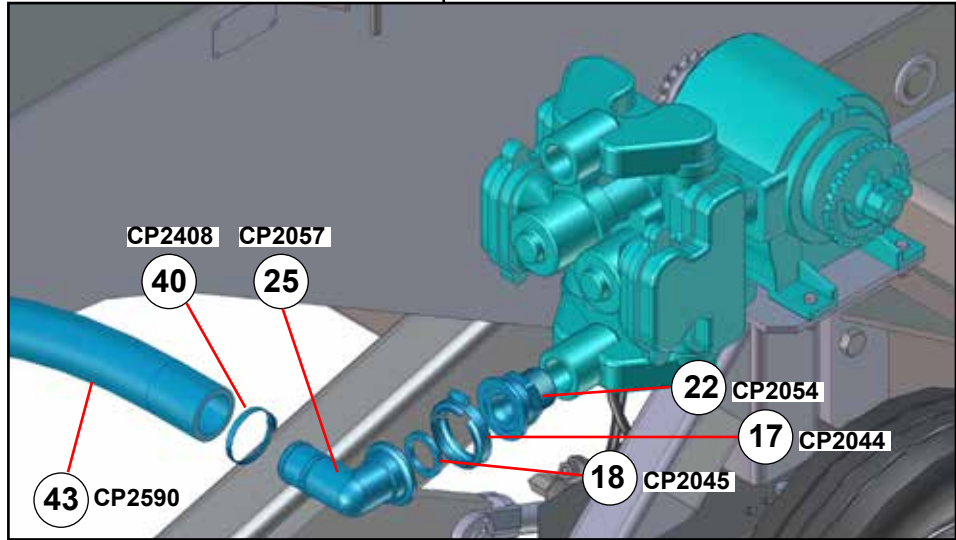
Bottom Fill Plumbing

Task

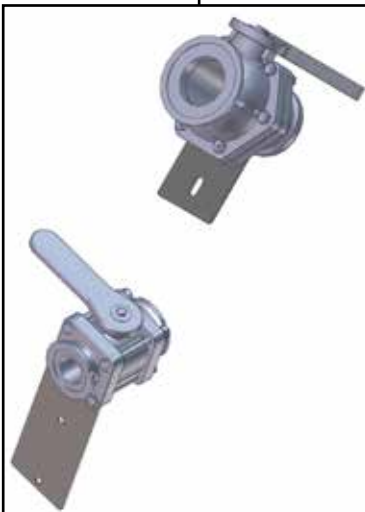
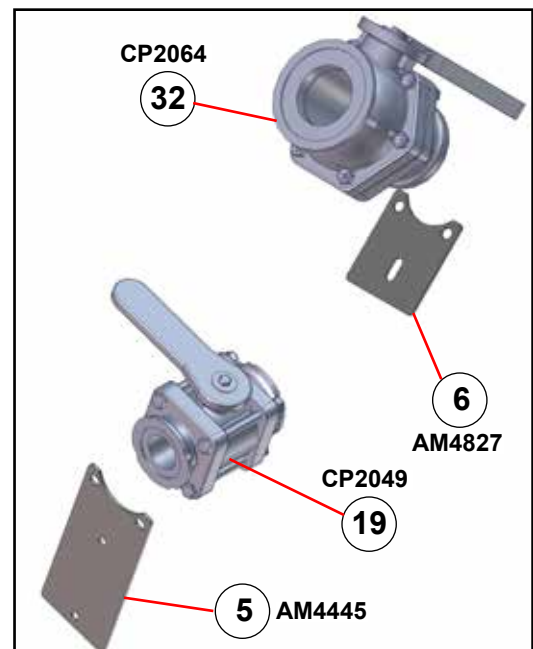
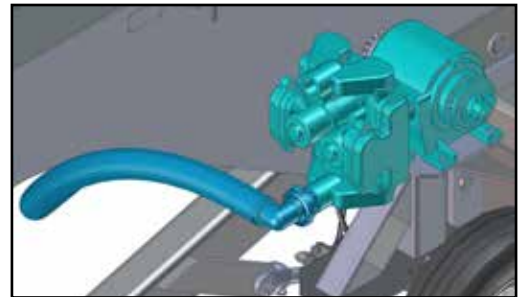
Procedures

Illustrations

► Assembly of pump plumbing



1. Place sealant on (22) (CP2054) 1-1/2" MPT x 2" flange adapter. Install in bottom port of pump.
2. Insert (18) (CP2045) 2" EPDM flange gasket into (25) (CP2057) 2" flange 90 degree elbow. Place (17) (CP2044) 2" worm screw flange clamp over end of elbow. Align the two fittings and position flange clamp around flanges. Tighten flange clamp.
3. Place (40) (CP2408) 2" - 2-1/2" worm gear hose clamp over (43) (CP2590) 2" EPDM rubber hose. Push rubber suction hose over hose barb and secure with (40) (CP2408) 1-1/2" - 2" worm gear hose clamp.
4. Remove the two hex cap screws from (32) (CP2064) valve, ball, 3" - 2" male adapter. Install (6) (AM4827) fill valve support plate and replace hex cap screws.
5. Remove the two hex cap screws from (19) (CP2049) ball valve 2-1/2" port. Install (5) (AM4445) fill valve mounting plate and replace hex cap screws.



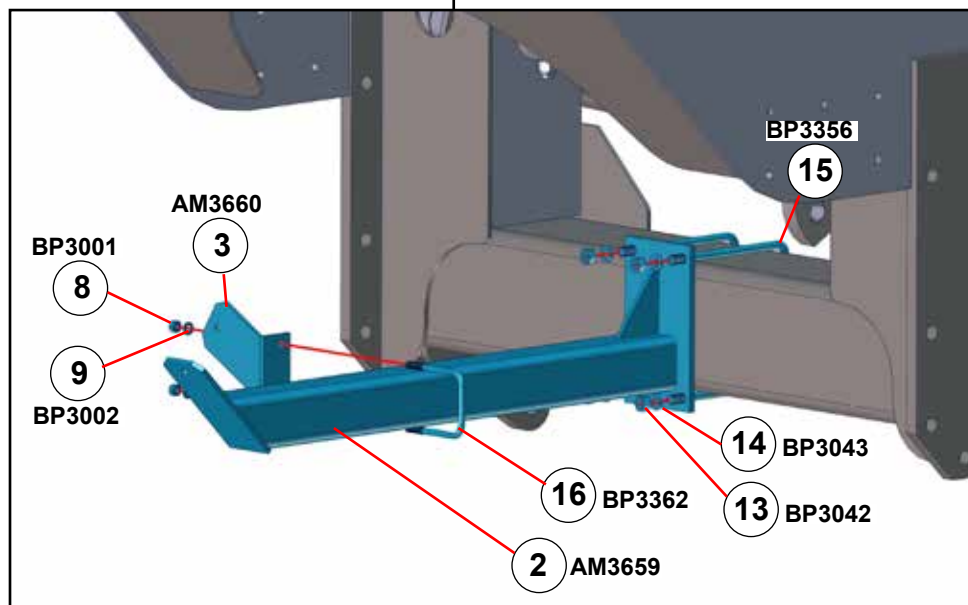
Bottom Fill Plumbing

Task

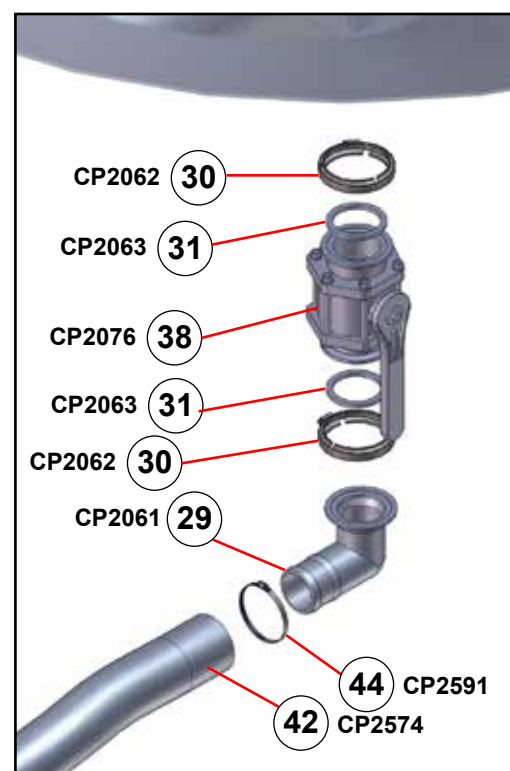
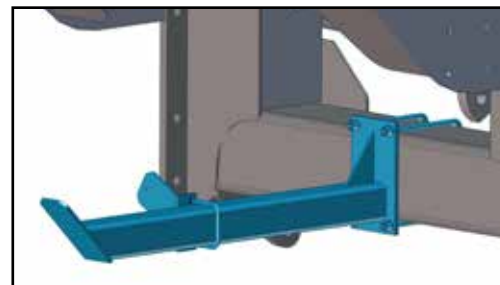
Procedures

Illustrations

► Mounting bottom fill plumbing to tank



1. Center and attach (2) (AM3659) bottom fill valve mounting to main frame with (15) (BP3356) 1/2" x 7"W x 8/1/4"L u-bolts. Secure with (14) (BP3043) 1/2" lock washers and (13) (BP3042) 1/2" hex nuts.
2. Attach (3) (AM3660) valve support bracket to (2) valve mounting with (16) (BP3362) 3/8" 3"W x 4"L u-bolt, (9) (BP3002) 3/8" lock washers and (8) (BP3001) 3/8" hex nuts. **Do not tighten until plumbing assembly is installed.**
3. Attach (38) (CP2076) ball valve 3" flange with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" gasket.
4. Attach (29) (CP2061) 90 degree 3" flange x 3" hose barb to ball valve with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" gasket.
5. **Do not install (42) (CP2574) reinforced rubber hose 85# until fill assembly is completed.**



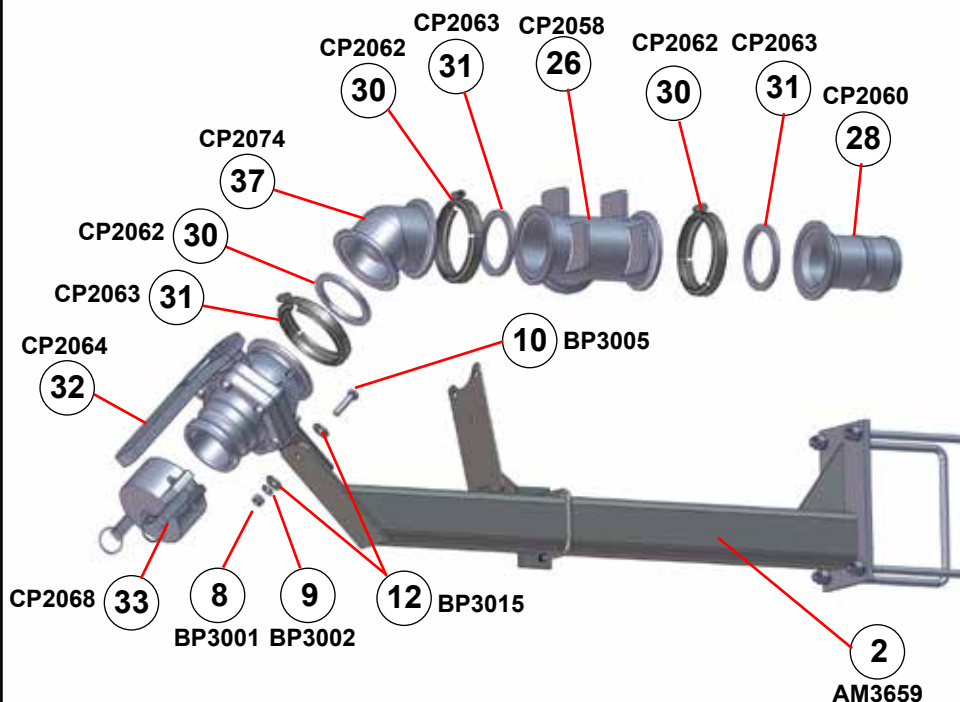
Bottom Fill Plumbing

Task

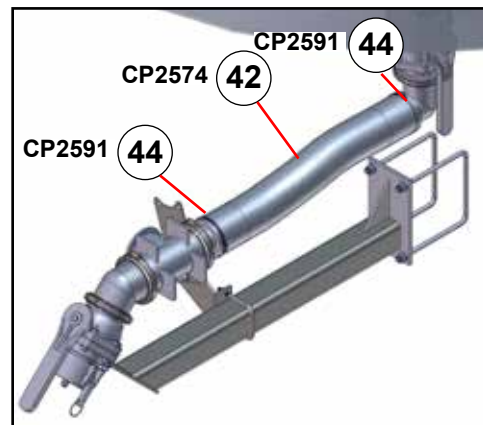
Procedures

Illustrations

► Mounting bottom fill plumbing

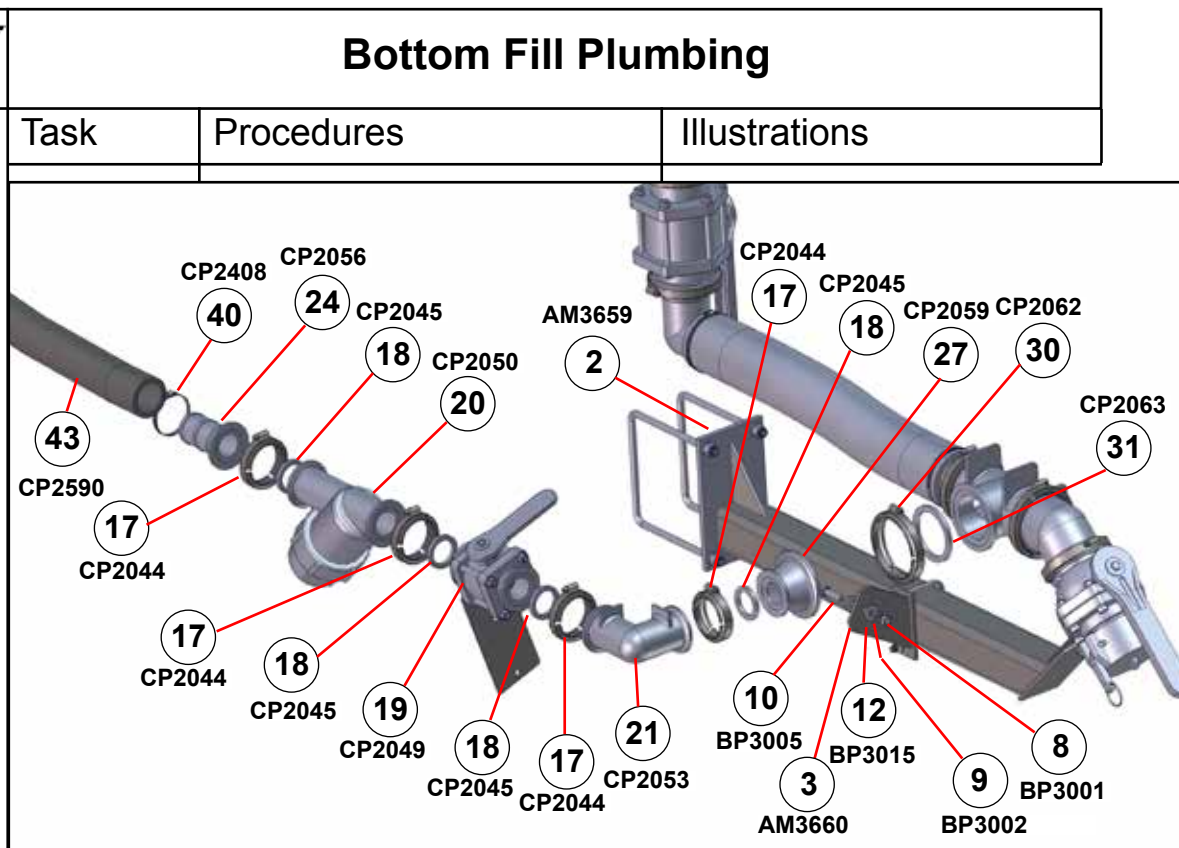


1. Mount (32) (CP2064) 3" flange x 3" male adapter ball valve with bracket to (2) valve mounting bracket with (10) (BP3005) 3/8" x 1-1/2" hex cap screw, (12) (BP3015) 3/8" flat washers, (9) (BP3002) 3/8" lock washers and (8) (BP3001) 3/8" hex nut.
2. Attach (37) (CP2074) 45 degree elbow with 3" flange x 3" flange to (32) with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" flange gasket.
3. Mount (26) (CP2058) 3" flange tee to (37) with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" flange gasket. Rotate downward as pictured.
4. Attach (28) (CP2060) 3" flange x 3" hose barb to tee with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" flange gasket. Rotate downward as pictured.
5. Measure distance between hose barbs and cut (42) (CP2574) reinforced rubber hose, #85 to fit.
6. Place (44) (CP2591) 2-1/2"-3" worm gear hose clamp over 3" reinforced hose and install on both hose barbs.
7. Place (33) (CP2068) 3" cap on (32) and secure.



Bottom Fill Plumbing

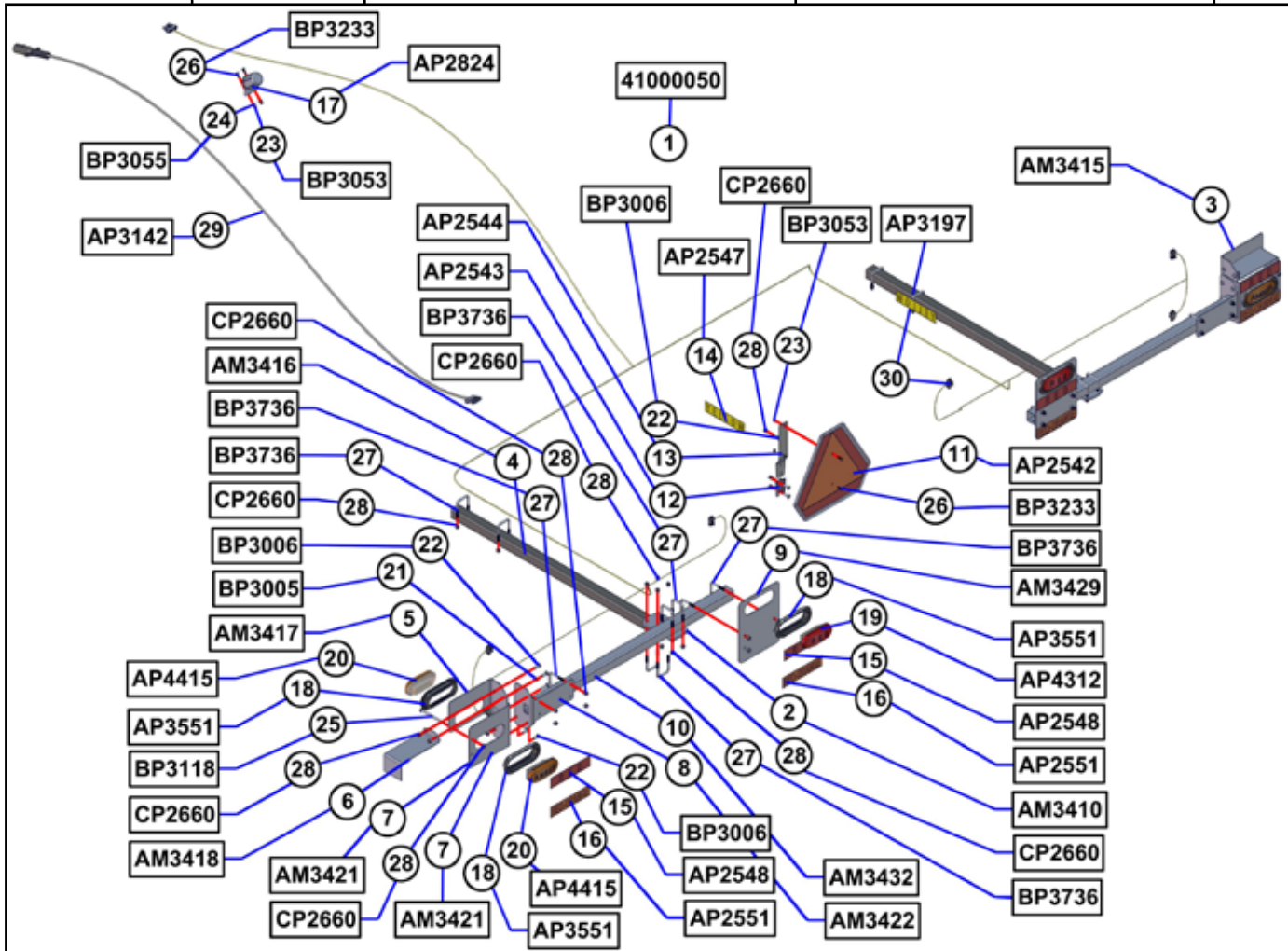
► Mounting bottom fill plumbing



- Attach (27) (CP2059) 3" flange 2" flange reducer to tee with (30) (CP2062) 3" worm screw flange clamp and (31) (CP2063) 3" flange gasket.
- Install (21) (CP2053) 90 degree 2" flange elbow to reducer with (17) (CP2044) 2" worm screw flange clamp and (18) (CP2045) 2" flange gasket.
- Attach (19) (CP2049) ball valve assembly to (3) (AM 3660) valve support bracket with (10) (BP3005) 3/8" x 1-1/2" hex cap screw, (12) (BP3015) 3/8" flat washers, (9) (BP3002) 3/8" lock washers and (8) (BP3001) 3/8" hex nuts.
- Mount (20) (CP2050) 2" line strainer to ball valve with (17) (CP2044) 2" worm screw flange clamp and (18) (CP2045) 2" flange gasket.
- Attach (24) (CP2056) 2" flange x 2" hose barb (17) (CP2044) 2" worm screw flange clamp and (18) (CP2045) 2" flange gasket.
- Place (40) (CP2408) 2" - 2-1/2" worm gear hose clamp over (43) (CP2590) 2" reinforced hose 100#.
- Extend (43) (CP2590) 2" reinforced hose 100# from pump.
- Push (43) over hose barb and secure with (40) (CP2408) 2" - 2-1/2" worm gear clamp.
- Adjust (3) valve support bracket on (2) and tighten u-bolt.



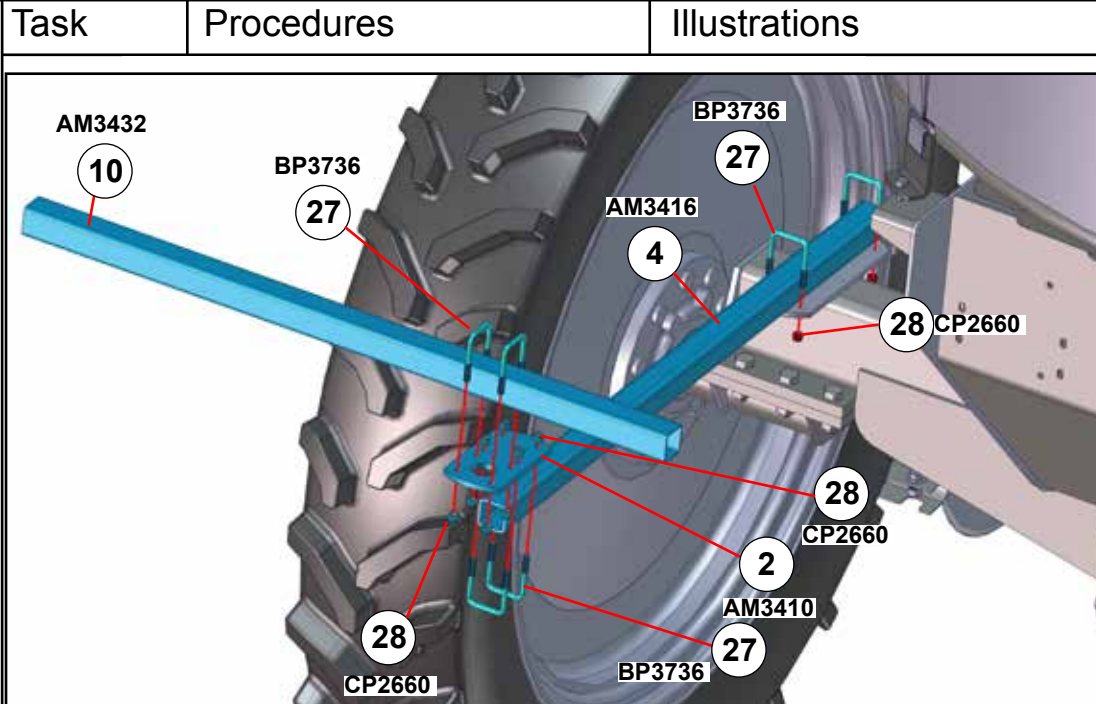
Light Kit Parts (41000050)



 AT4615		Light Kit Parts (41000050)	
BOM ID	Qty	Item No	Description
1	1	41000050	LIGHTING KIT, AT4015/AT4615
2	2	AM3410	MOUNTING PLATE, LIGHT POST
3	1	AM3415	LIGHT BRACKET, FRONT, LEFT-HAND
4	2	AM3416	TUBE, LIGHT BRACKET, (4'0")
5	1	AM3417	LIGHT BRACKET, FRONT, RIGHT-HAND
6	2	AM3418	SHIELD, LIGHT BRACKET
7	2	AM3421	LIGHT BRACKET, SIDE MOUNT
8	2	AM3422	LIGHT BRACKET, SIDE MOUNT BAR
9	2	AM3429	LIGHT MOUNT
10	2	AM3432	TUBE, LIGHT BRACKET, (3'10")
11	1	AP2542	SMV SIGN
12	1	AP2543	SMV MOUNTING SOCKET
13	1	AP2544	SMV MOUNTING SPADE
14	4	AP2547	DECAL, REFLECTOR, YELLOW, 2 X 9
15	4	AP2548	DECAL, REFLECTOR, RED, 2 X 9
16	4	AP2551	DECAL, FLUORESCENT, RED-ORANGE, 2 X 9, NON-REFLECTIVE
17	1	AP2824	ELECTRICAL HARNESS, 10' MAIN, 7 PIN & DUST CAP
18	6	AP3551	GROMMET, OVAL, MODEL 60
19	2	AP4312	LAMP, LED, OVAL, STOP TURN & TAIL, RED
20	4	AP4415	LAMP, LED, OVAL, TURN SIGNAL, AMBER, LED
21	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
22	9	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
23	4	BP3053	NUT, HEX, 1/4"-20, GRADE 2
24	2	BP3055	WASHER, FLAT, 1/4", PLATED
25	2	BP3118	HEX CAP SCREW, 3/8"-16 X 5, GRADE 5, PLATED
26	4	BP3233	HEX CAP SCREW, 1/4"-20 X 3/4, GRADE 2, PLATED
27	20	BP3736	U-BOLT, 3/8"-16 X 2W X 3L, PLATED
28	55	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK
29	1	AP3142	ELECTRICAL HARNESS, 10' MAIN 5-WIRE, 7 PIN & DUST CAP
30	1	AP3197	ELECTRICAL HARNESS, 17' 2 POST, 5 WIRE

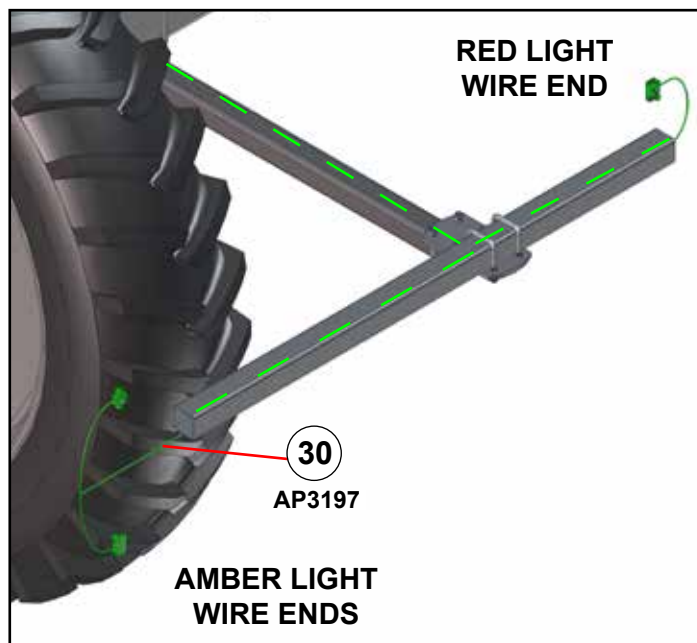
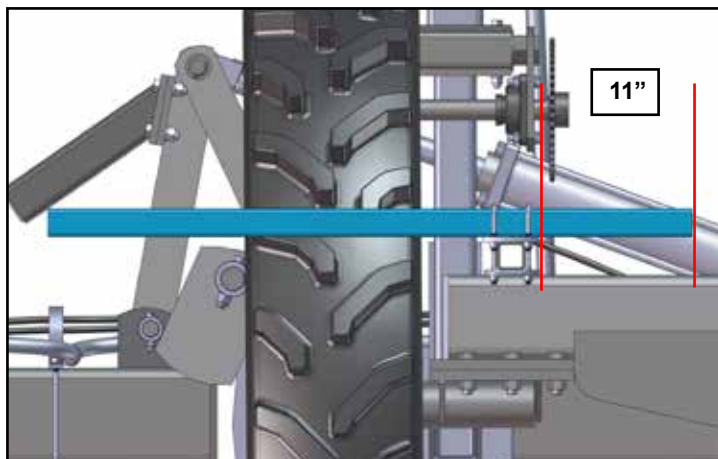
Light Kit Assembly and Mounting

Light Kit Assembly



- Place (4) (AM3416) light bracket 4' tube on mounting plate flush with tractor side of the plate. Secure with two (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts.
- Place (2) (AM3410) light post mounting plate on top of tube so hole is not covered. Secure with two (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts.
- Attach (10) (AM3432) 3'-10" light tube bracket to mounting plate with the **hole down** over plate hole 14-1/2" from end of tube to edge of plate. Secure with two (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts.
- Extend a wire from the end of the light tube to the center of frame. Tape the Amber light ends (30) AP3197 17' electrical harness to the wire and pull through the tube.
- Pull the Red wire end through the hole in the center of tube.
- Repeat on the opposite side.

Extend to ends of center section.



Light Kit Assembly and Mounting

Task

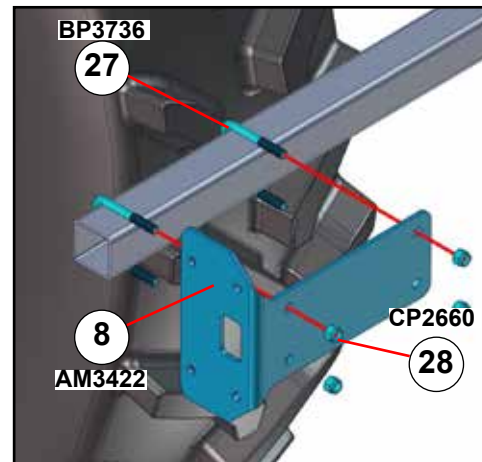
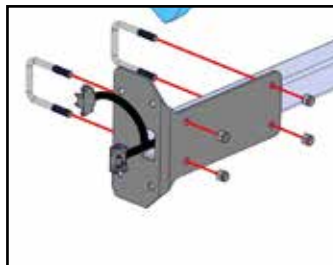
Procedures

Illustrations

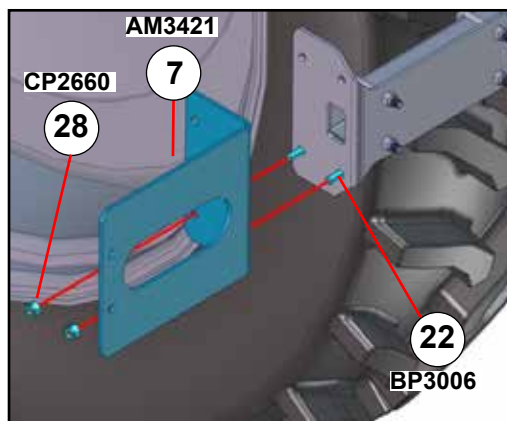
Light Kit Assembly

NOTE:
Left-hand
and right-hand
as viewed
from the
rear

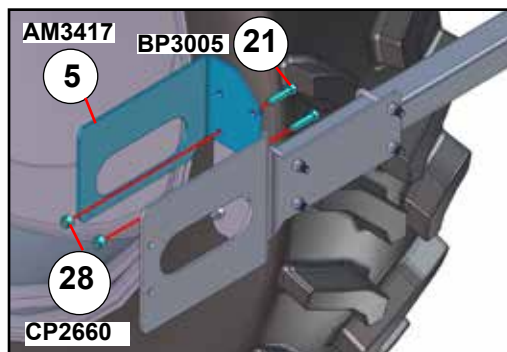
1. Install (8) (AM3422) side mount bar light bracket to end of tube with (27) (BP3736) 3/8" x 2" W x 3" L, u-bolts and (28) (CP2660) 3/8" hex lock nuts, Nylock.



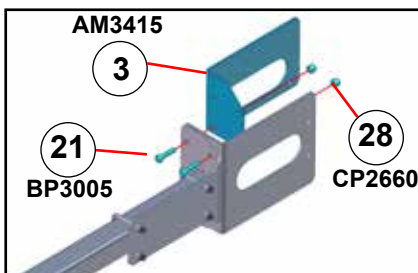
2. Attach (7) (AM3421) side mount light bracket to (8) with (22) (BP3006) 3/8" x 1" hex cap screws in the bottom holes of (8). Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock.



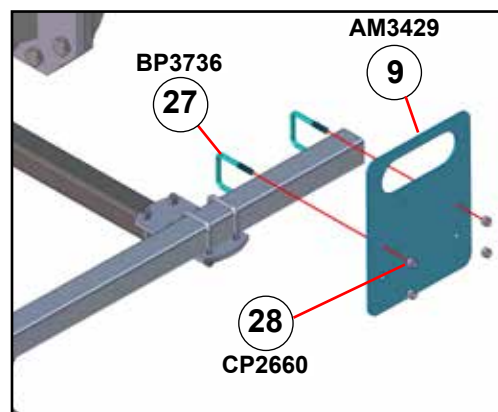
3. Insert (21) (BP3005) 3/8" x 1-1/2", grade 5 hex cap screws in top two holes of (8). Place (5) (AM3417) front right-hand light bracket over hex nuts. Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock.



4. Insert (21) (BP3005) 3/8" x 1-1/2", grade 5 hex cap screws in top two holes of (8). Place (3) (AM3415) front left-hand light bracket over hex nuts. Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock.



5. Attach (9) (AM3429) light mount to tube with (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts, Nylock. Position light mount 8" from the side of the frame to light mount.



Light Kit Assembly and Mounting

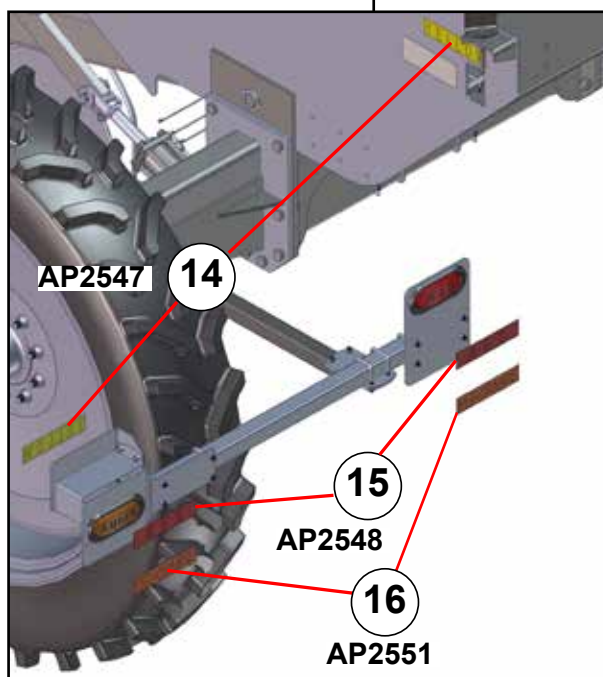
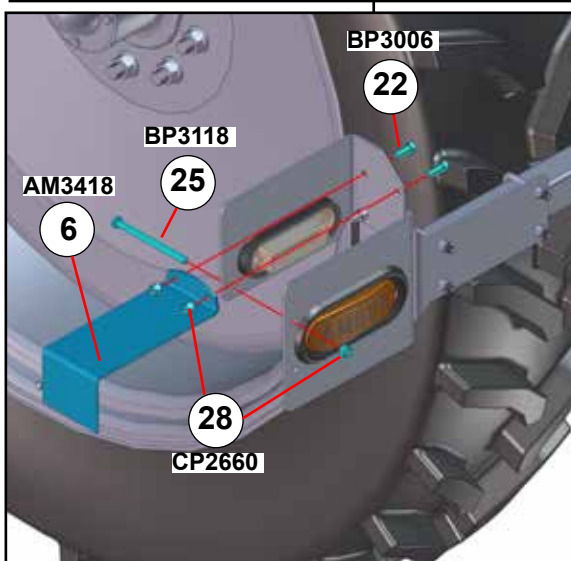
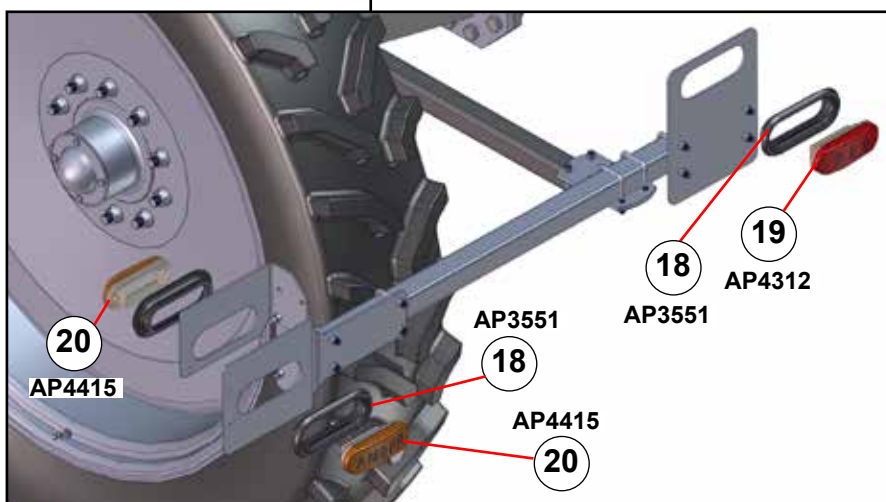
Task

Procedures

Illustrations

► Light Kit Assembly

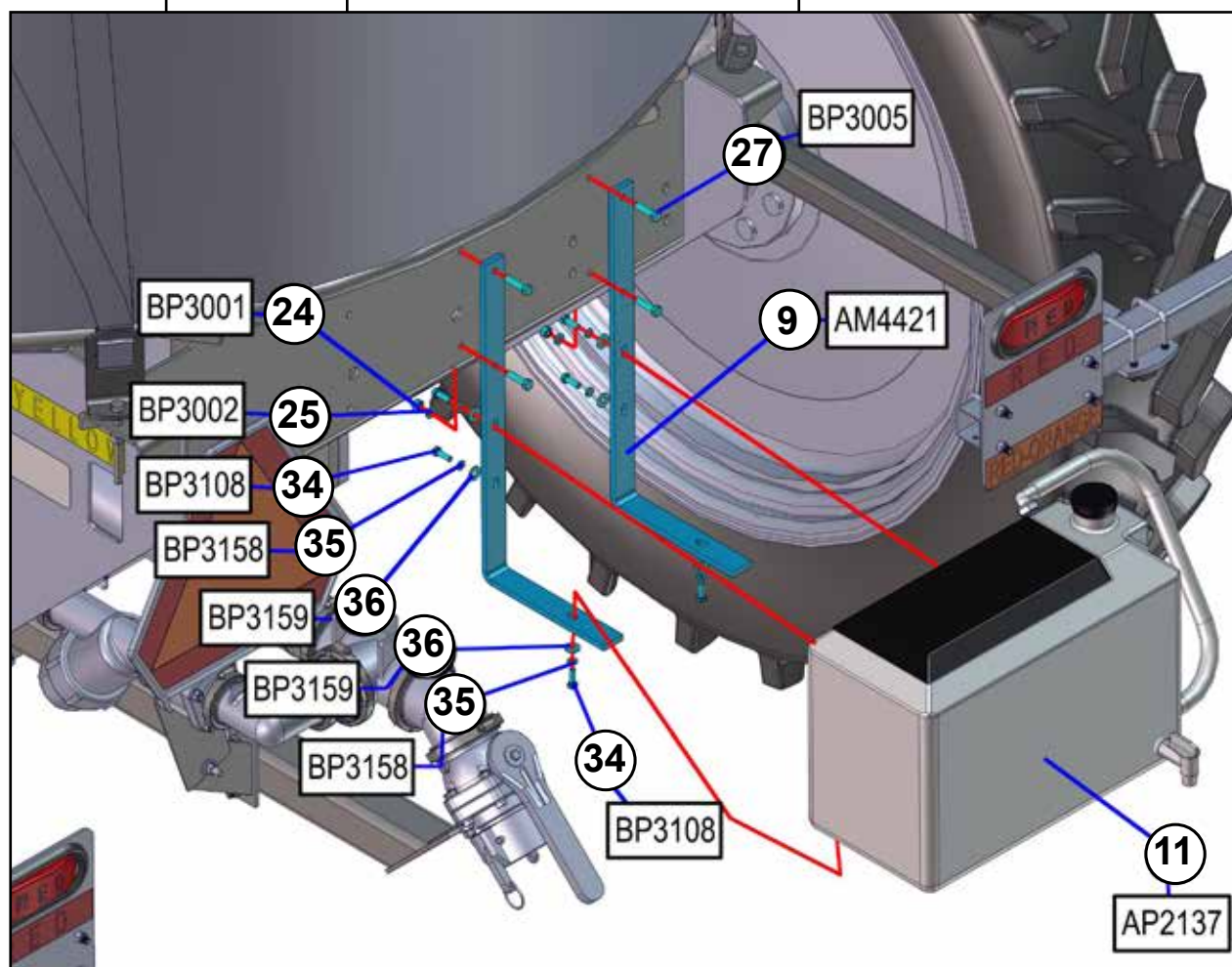
1. Insert (18) (AP3551) oval grommets into mountings.
2. Insert (19) (AP4312) Red lamp into inside grommets. Attach wiring harness connector.
3. Insert (20) (AP4415) Amber lamps into outside brackets. Attach wiring harness connectors.
4. Attach (6) (AM3418) light shield bracket to light assembly with (22) (BP3006) 3/8" x 1" hex cap screws and (28) (CP2660) 3/8" hex lock nuts, Nylock.
5. Insert (25) (BP3118) 3/8" x 5" hex cap screw through tractor side hole and secure with (28) (CP2660) 3/8" hex lock nuts, Nylock.
6. Attach (15) (AP2548) 2 x 9 Red reflector below the Red lamp and above the Amber lamp.
7. Attach (16) (AP2551) 2 x 9 Red-Orange reflector below the Red reflector and below the Amber lamp.
8. Install (14) (AP2547) 2 x 9 Yellow reflector above the tractor side Amber lamps and on the side of the main frame.




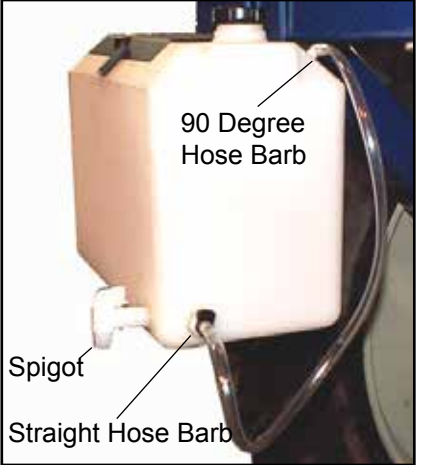
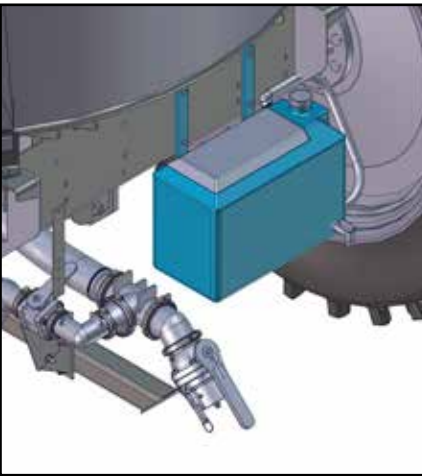
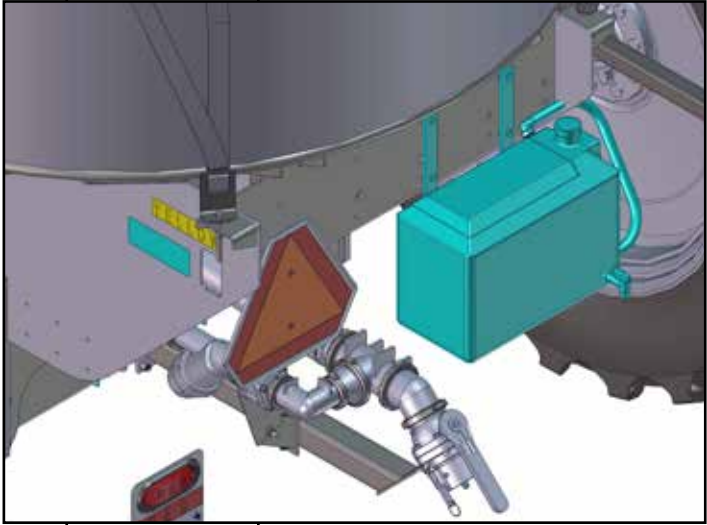
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BLU-JET AT4615	<h2>Safety Tank, 9 Gallon</h2>		
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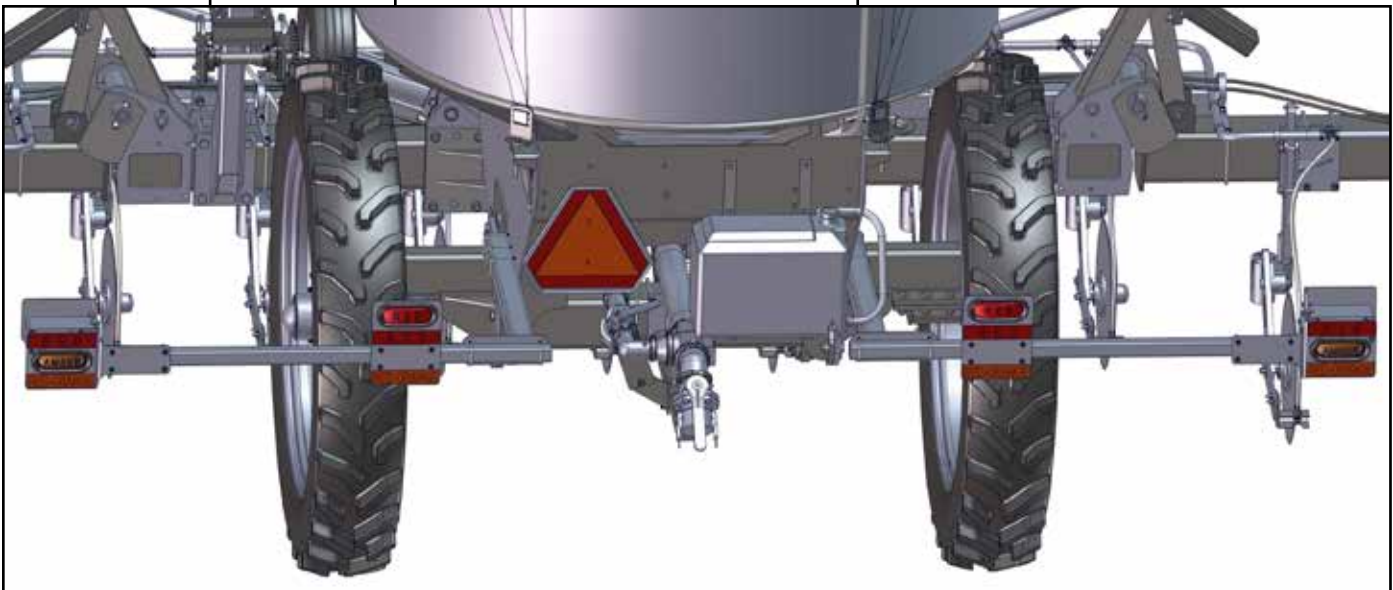
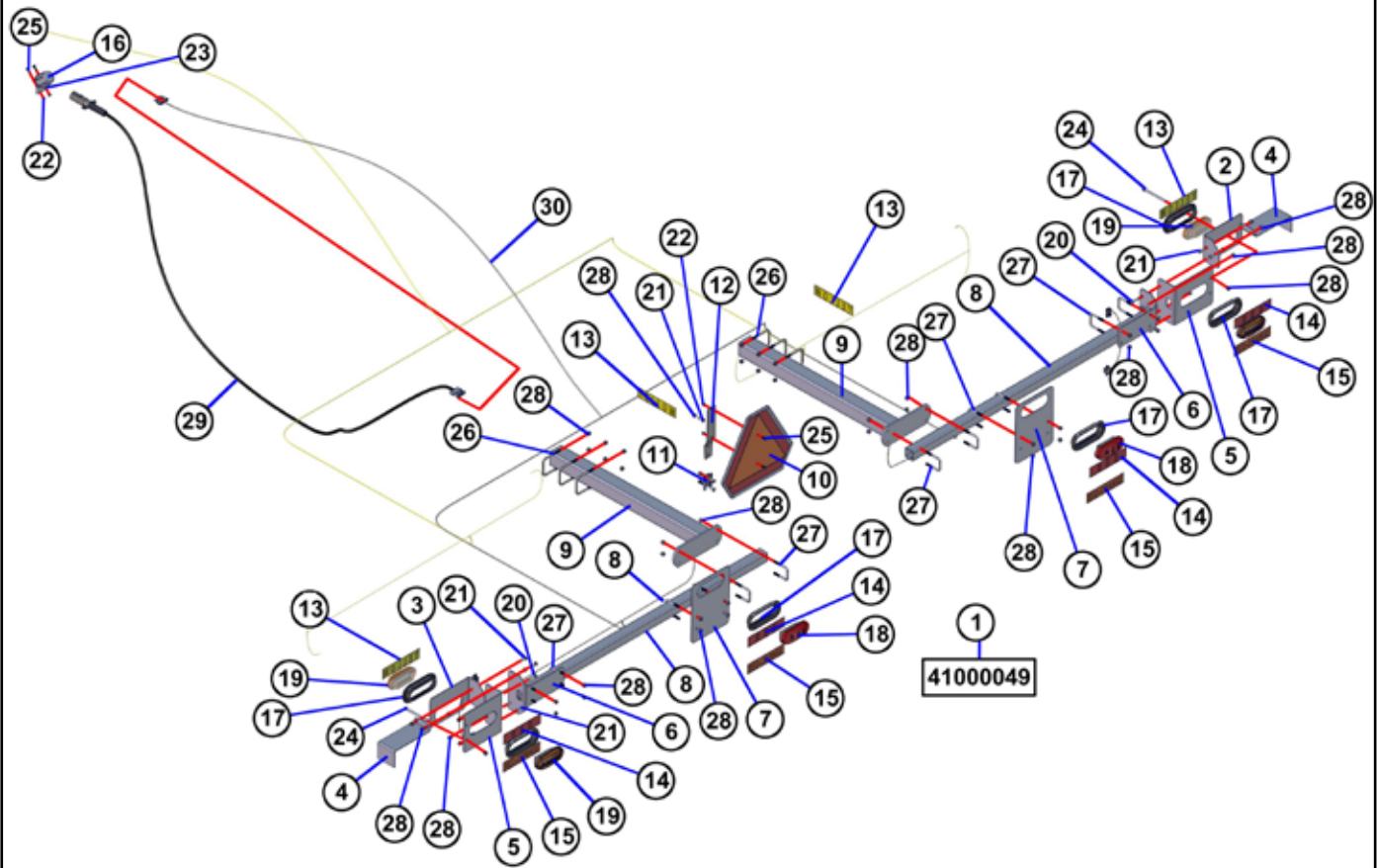
Task	Procedures	Illustrations
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BOM ID	Qty	Item No	Description
9	2	AM4421	BRACKET, TANK MTG, 9 GAL, AT4000
11	1	AP2137	SAFETY TANK, 9 GALLON
24	22	BP3001	NUT, HEX, 3/8\"-16, GRADE 2, PLATED
25	22	BP3002	WASHER, LOCK, 3/8\", PLATED
27	9	BP3005	HEX CAP SCREW, 3/8\"-16 X 1-1/2\", GRADE 5, PLATED
34	6	BP3108	HEX CAP SCREW, 5/16\"-18 X 1, GRADE 5, PLATED
35	6	BP3158	WASHER, LOCK, 5/16, PLATED
36	6	BP3159	WASHER, FLAT, 5/16, PLATED

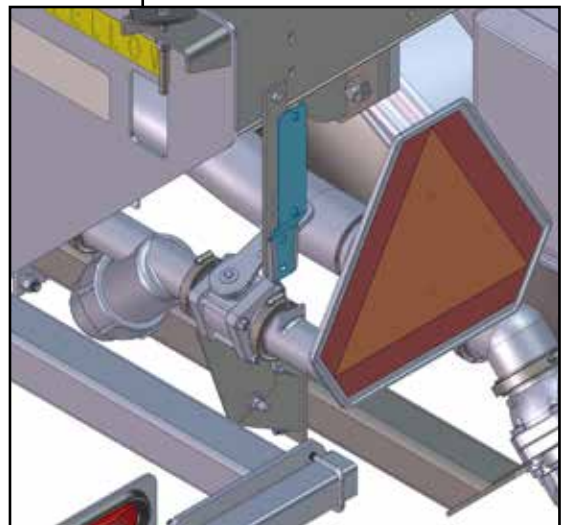
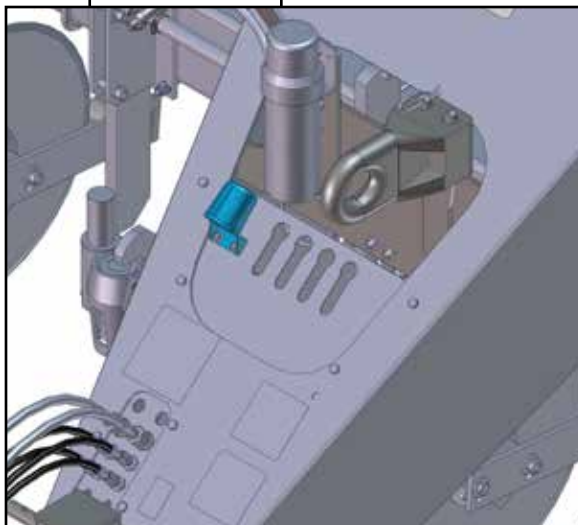
BLU-JET AT4615	<h1>Safety Tank Mounting</h1>		
	Task	Procedures	Illustrations
<div data-bbox="354 275 386 306">▶</div> <div data-bbox="415 275 573 338"> Mounting safety tank </div>		<ol style="list-style-type: none"> 1. Attach two (9) (AM4421) 9 gallon tank mounting brackets to (11) (AP2137) 9 gallon fresh water safety tank with six (36) (BP3159) 5/16" flat washers, (35) (BP3158) 5/16" lock washers and (34) (BP3108) 5/16" x 1" hex cap screws. 2. Place sealant on tank spigot and install in the front of the tank. Place sealant on hose barbs and install top and bottom. Place hose clamp on clear hose and attach to bottom tank hose barb. <u>The top hose barb does not require a clamp.</u> 3. Attach tank on the right-hand side with four (27) (BP3005) 3/8" x 1-1/2" hex cap screws, inserted from the outside. Secure with (25) (BP3002) 3/8" lock washers and (24) (BP3001) 3/8" hex nuts. 	<div data-bbox="1081 275 1500 688">  </div> <div data-bbox="1081 709 1500 1171">  </div> <div data-bbox="1081 1199 1500 1671">  </div>
<div data-bbox="354 1192 386 1224">▶</div> <div data-bbox="415 1199 589 1377"> NOTE: Right-hand and left-hand as viewed from the rear </div>			<div data-bbox="334 1423 1036 1944">  </div>

Light Kit Parts (41000049) Narrow Wheel Spacing



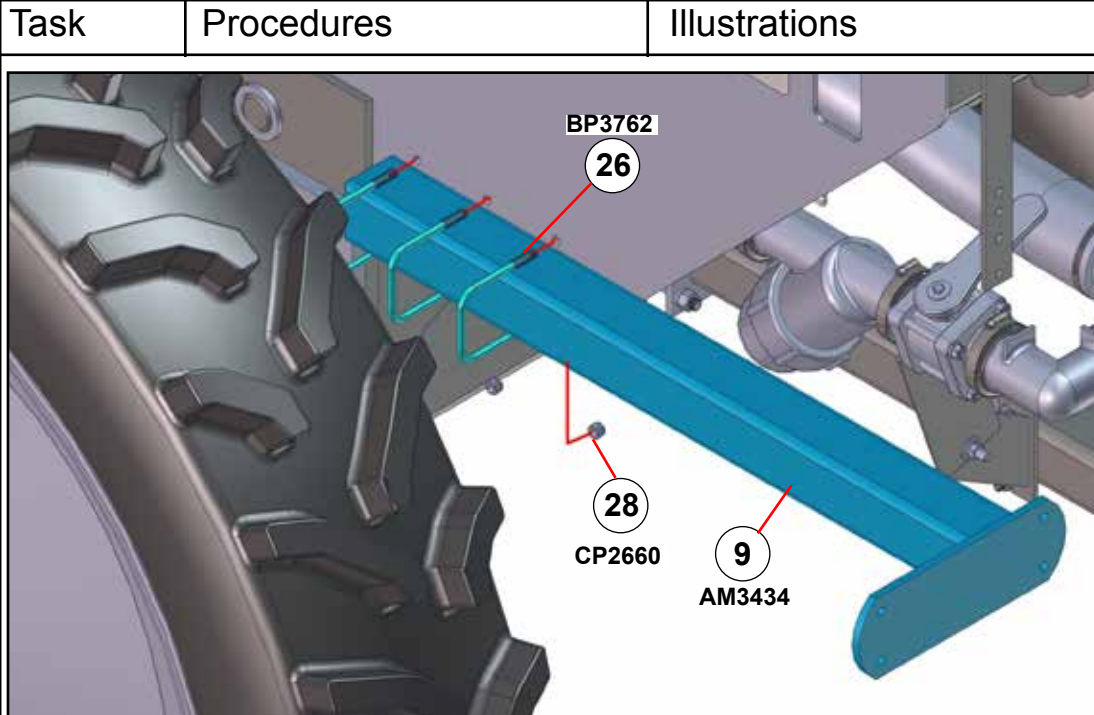
Light Kit Parts (41000049) Narrow Wheel Spacing

BOM ID	Qty	Item No	Description
1	1	41000049	LIGHTING KIT, AT LIQUID, NARROW WHEELS
2	1	AM3415	LIGHT BRACKET, FRONT, LH
3	1	AM3417	LIGHT BRACKET, FRONT, RH
4	2	AM3418	SHIELD, LIGHT BRACKET
5	2	AM3421	LIGHT BRACKET, SIDE MOUNT
6	2	AM3422	LIGHT BRACKET, SIDE MOUNT BAR
7	2	AM3429	LIGHT MOUNT
8	2	AM3433	TUBE, LIGHT BRACKET, (4'11-3/4")
9	2	AM3434	LIGHT BRACKET
10	1	AP2542	SMV SIGN
11	1	AP2543	SMV MOUNTING SOCKET
12	1	AP2544	SMV MOUNTING SPADE
13	4	AP2547	DECAL, REFLECTOR, YELLOW, 2 X 9
14	4	AP2548	DECAL, REFLECTOR, RED, 2 X 9
15	4	AP2551	DECAL, FLUORESCENT, RED-ORANGE, 2 X 9, NON-REFLECTIVE
16	1	AP2824	ELECTRICAL HARNESS, 10' MAIN, 7 PIN & DUST CAP
17	6	AP3551	GROMMET, OVAL, MODEL 60
18	2	AP4312	LAMP, LED, OVAL, STOP TURN & TAIL, RED
19	4	AP4415	LAMP, LED, OVAL, TURN SIGNAL, AMBER, LED
20	4	BP3005	HEX CAP SCREW, 3/8"-16 X 1-1/2", GRADE 5, PLATED
21	9	BP3006	HEX CAP SCREW, 3/8"-16 X 1", GRADE 5, PLATED
22	4	BP3053	NUT, HEX, 1/4"-20, GRADE 2
23	2	BP3055	WASHER, FLAT, 1/4", PLATED
24	2	BP3118	HEX CAP SCREW, 3/8"-16 X 5, GRADE 5, PLATED
25	4	BP3233	HEX CAP SCREW, 1/4"-20 X 3/4, GRADE 2, PLATED
26	6	BP3362	U-BOLT, 3/8"-16 X 3W X 4L
27	12	BP3736	U-BOLT, 3/8"-16 X 2W X 3L, PLATED
28	51	CP2660	NUT, HEX LOCK, 3/8"-16, NYLOCK
29	1	AP3142	ELECTRICAL HARNESS, 10' MAIN 5-WIRE, 7 PIN & DUST CAP
30	1	AP3197	ELECTRICAL HARNESS, 17' 2 POST, 5 WIRE



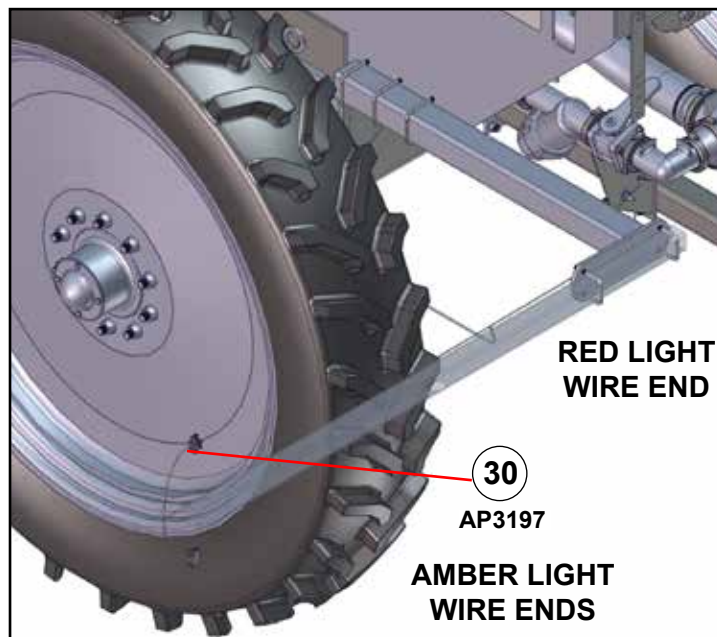
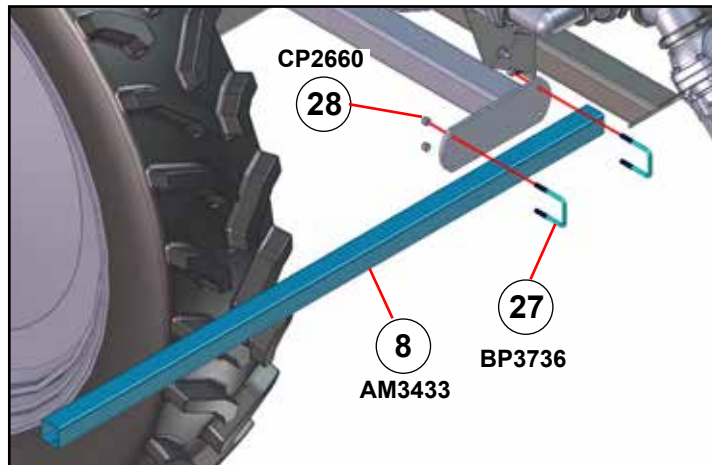
Light Kit Parts (41000049) Narrow Wheel Spacing

Light Kit Assembly

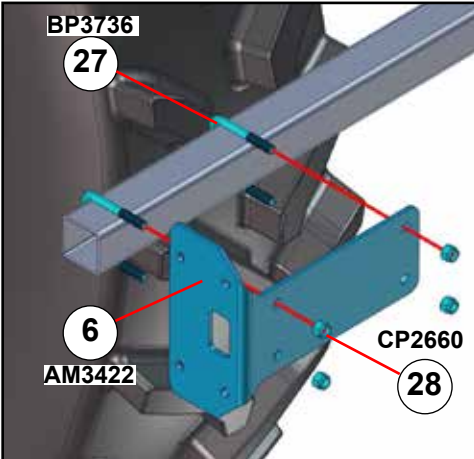
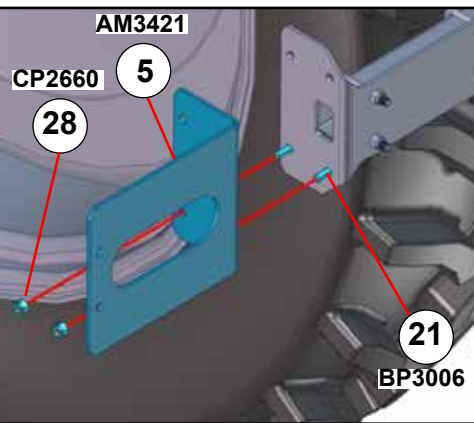
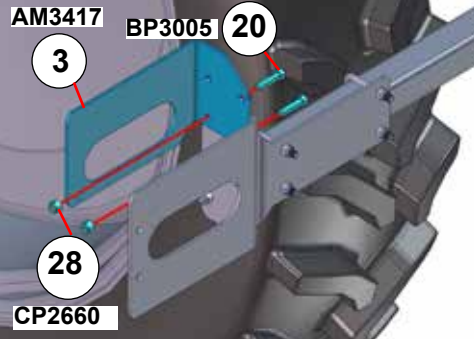
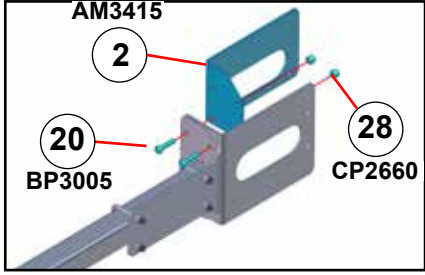
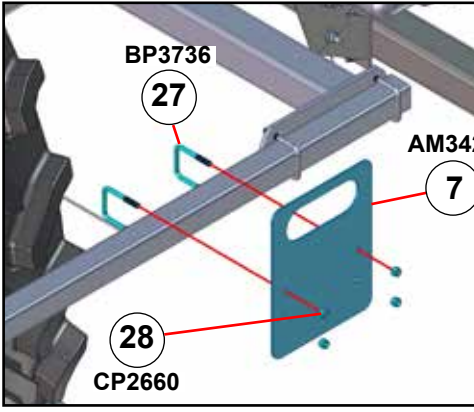


1. Align (9) (AM3434) light bracket with the hole on the frame. Secure with three (26) (BP3736) 3/8" x 3"W x 4"L u-bolts and (28) (CP2660) 3/8" hex lock nuts.
2. Place (8) (AM3433) light tube bracket (9) with the end of tube flush with the end of plate. Secure with two (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts.
3. Extend a wire from the end of the light tube to the center of frame. Tape the Amber light ends (30) AP3197 17' electrical harness to the wire and pull through the tube.
4. Pull the Red wire end through the hole in the center of tube.
5. Repeat on the opposite side.

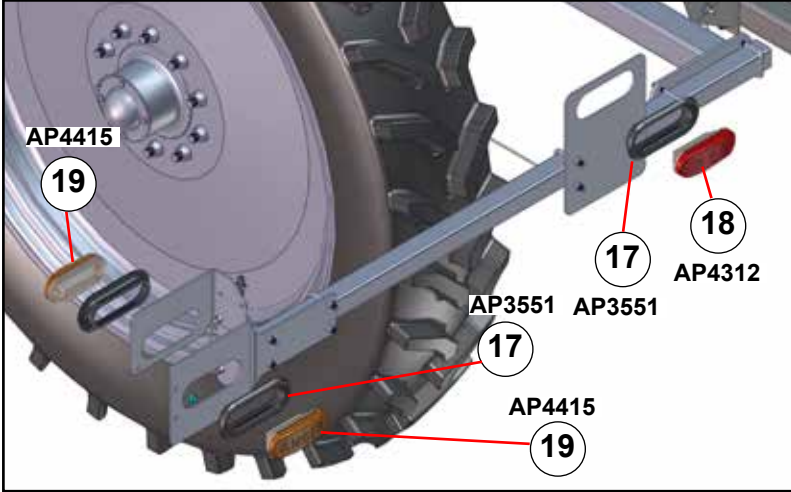
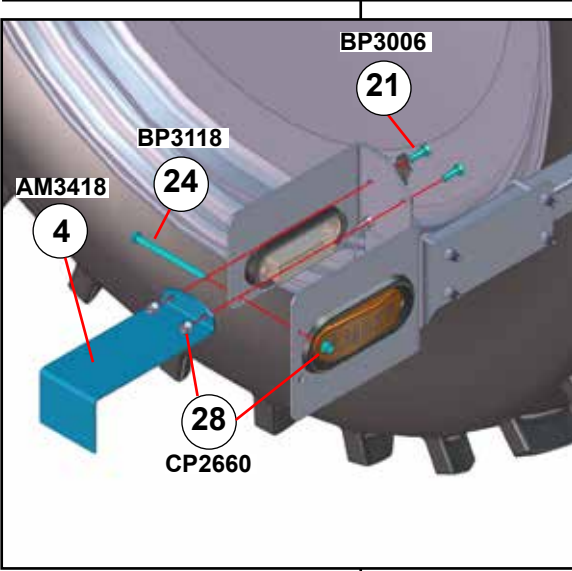
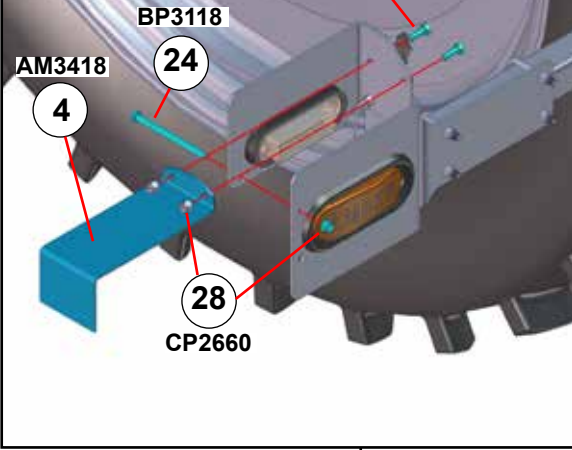
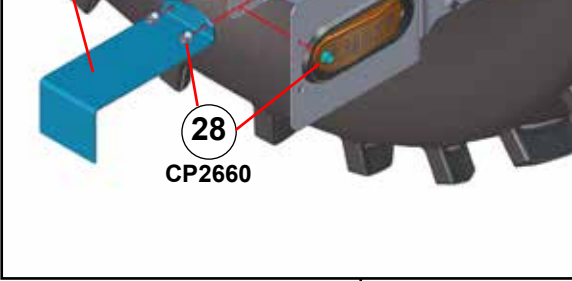

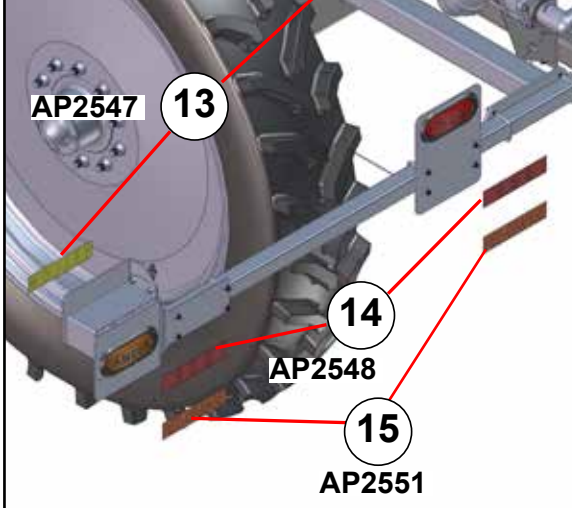
Extend to ends of center section.



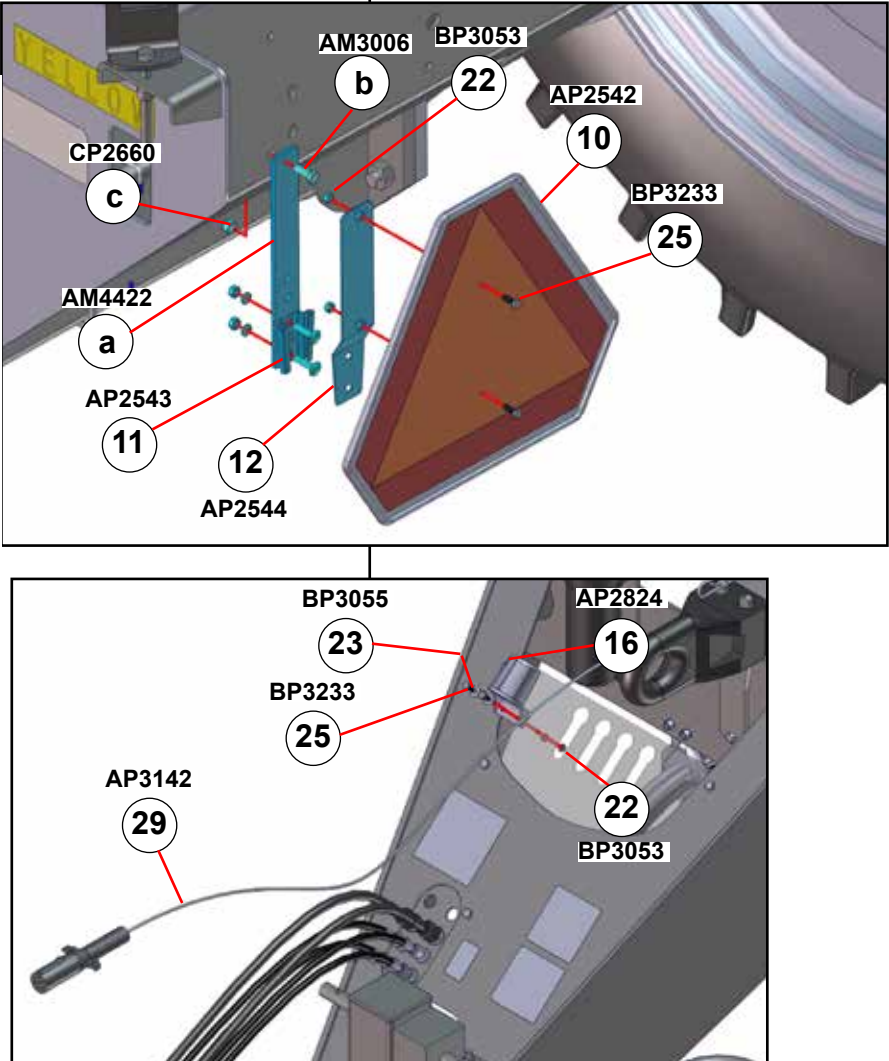
Light Kit Parts (41000049) Narrow Wheel Spacing

Task	Procedures	Illustrations
<p>▶ Light Kit Assembly</p> <p>▶ NOTE: <i>Left-hand and right-hand as viewed from the rear</i></p>	<ol style="list-style-type: none"> 1. Install (6) (AM3422) side mount bar light bracket to end of tube with (27) (BP3736) 3/8" x 2" W x 3" L, u-bolts and (28) (CP2660) 3/8" hex lock nuts, Nylock. 2. Attach (5) (AM3421) side mount light bracket to (6) with (21) (BP3006) 3/8" x 1" hex cap screws in the bottom holes of (6). Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock. 3. Insert (20) (BP3005) 3/8" x 1-1/2", grade 5 hex cap screws in top two holes of (6). Place (3) (AM3417) front right-hand light bracket over hex nuts. Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock. 4. Insert (20) (BP3005) 3/8" x 1-1/2", grade 5 hex cap screws in top two holes of (6). Place (2) (AM3415) front left-hand light bracket over hex nuts. Secure with (28) (CP2660) 3/8" hex lock nuts, Nylock. 5. Attach (7) (AM3429) light mount to tube with (27) (BP3736) 3/8" x 2"W x 3"L u-bolts and (28) (CP2660) 3/8" hex lock nuts, Nylock. Position light mount 14.75" from the side of the frame to light mount. 	    

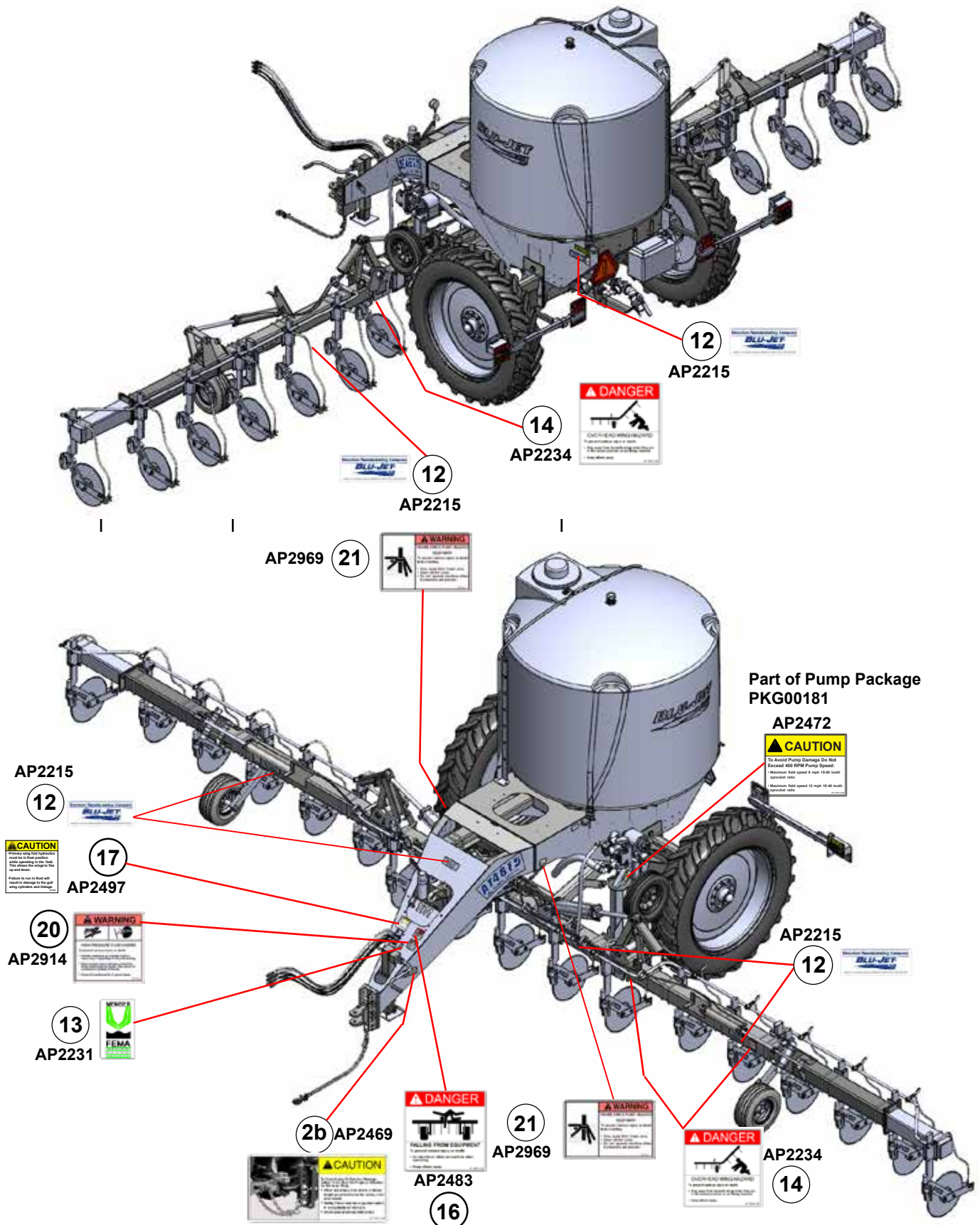
Light Kit Parts (41000049) Narrow Wheel Spacing

Task	Procedures	Illustrations
<p>► Light Kit Assembly</p>		
<p>1. Insert (17) (AP3551) oval grommets into mountings.</p>		
<p>2. Insert (18) (AP4312) Red lamp into inside grommets. Attach wiring harness connector.</p>		
<p>3. Insert (19) (AP4415) Amber lamps into outside brackets. Attach wiring harness connectors.</p>		
<p>4. Attach (4) (AM3418) light shield bracket to light assembly with (21) (BP3006) 3/8" x 1" hex cap screws and (28) (CP2660) 3/8" hex lock nuts, Nylock.</p>		
<p>5. Insert (24) (BP3118) 3/8" x 5" hex cap screw through tractor side hole and secure with (28) (CP2660) 3/8" hex lock nuts, Nylock.</p>		
<p>6. Attach (14) (AP2548) 2 x 9 Red reflector below the Red lamp and above the Amber lamp.</p>		
<p>7. Attach (15) (AP2551) 2 x 9 Red-Orange reflector below the Red reflector and below the Amber lamp.</p>		
<p>8. Install (13) (AP2547) 2 x 9 Yellow reflector above the tractor side Amber lamps and on the side of the main frame.</p>		

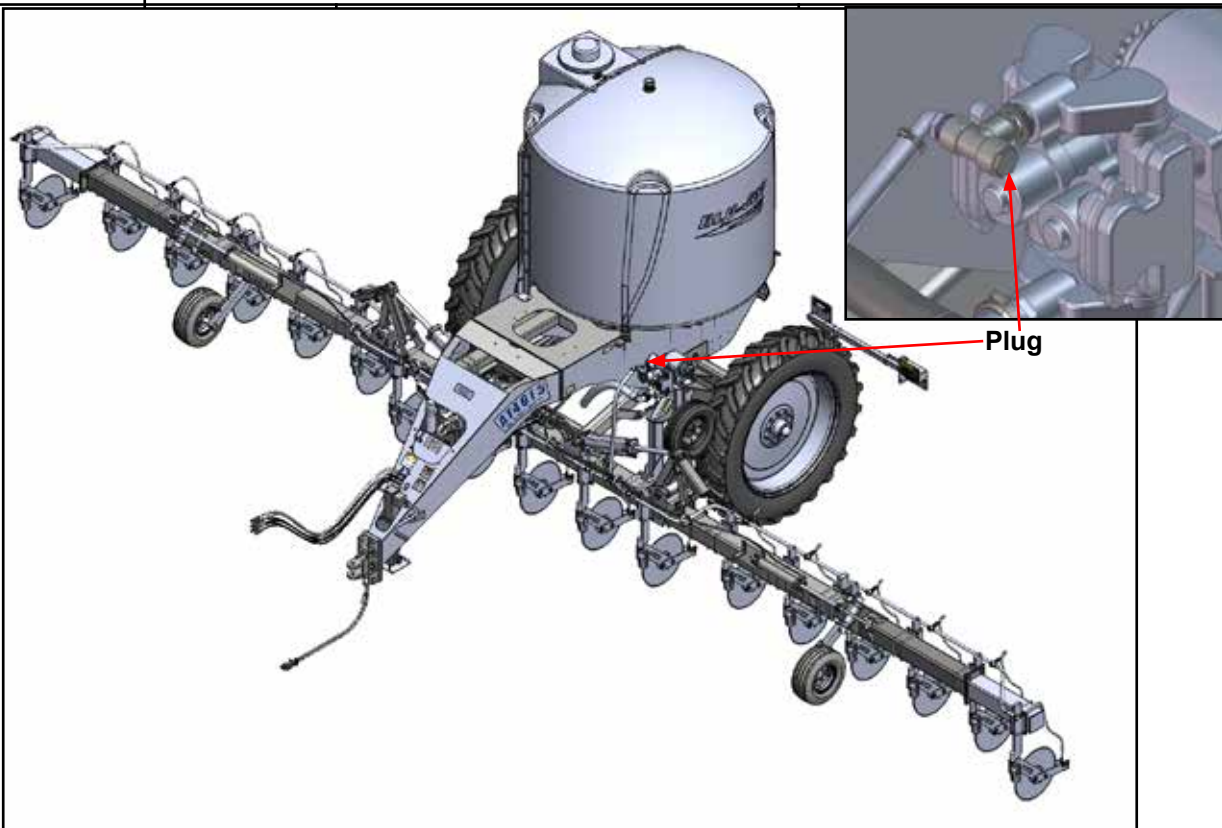
BLU-JET AT4615	Light Kit Parts (41000049) Narrow Wheel Spacing		
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	Task	Procedures	Illustrations
<p>► Light Kit Assembly</p> <ol style="list-style-type: none"> 1. Attach (10) (AP2542) SMV sign to (12) (AP2544) SMV mounting spade with hardware provided with spade. Note: If spade hardware is missing use (25) (BP3233) 1/4" x 3/4" hex cap screws and (22) (BP3053) 1/4" hex nuts to mount SMV sign. 2. Part of PKG00202 Mount (a) (AM4422) SMV mounting bracket to main frame with (b) (BP3006) 3/8" x 1", grade 5 hex cap screw, Secure with (c) (CP2660) 3/8" hex lock nuts, Nylock,. 3. Mount (11) (AP2543) SMV mounting socket with hardware provided with spade. 4. Insert SMV Assembly in spade. 5. Attach (16) (AP2824) dust cap part of harness with (25) (BP3233) 1/4"x 3/4" hex cap screws, (23) (BP3055) 1/4" flat washers and (22) (BP3053) 1/4" hex nuts. 6. Connect (29) (AP3142) 10' main 5 wire, 7 pin and dust cap electrical harness to (30) (AP3197) 17" 2 post, 5 wire electrical harness. 			 <p>The top illustration shows the mounting of the SMV sign (10) and bracket (a) to the main frame. The bottom illustration shows the connection of the electrical harness (29) to the dust cap (16) and the mounting of the dust cap part of the harness (16) to the main frame.</p>

Assembly (Decals Placement)



Storage



Preparing for storage

- A. Drain and rinse tank of all fertilizer.
- B. Remove plug from pump tee. Install a watering hose fitting in tee. Attach hose and turn on water. Turn pump wheel to rinse the components of fertilizer.
- C. Remove hose fitting. Insert a flexible hose fill container into tee. Pour Recreational Vehicle Anti-freeze into pump while turning pump wheel to fill components with anti-freeze. Replace plug.
- D. Consult pump manual for storage procedures.
- E. Power wash machine to remove dirt and fertilizer residue.
- F. Store the machine in a dry place. If the storage building has a dirt floor, place a board under the jack pad to prevent the pad from entering the ground.
- G. Relieve pressure from hydraulic circuits. Heat from the sun can cause hydraulic systems to become over pressurized and cause hoses or components to burst.
- H. Before storing, apply grease to all hydraulic cylinder rods to prevent rust or store with cylinders retracted if possible.
- I. Place hydraulic hose ends in tongue hose holders.
- J. Paint any surface that can rust.
- K. Lubricate all grease fittings.
- L. Inspect the machine for worn or broken parts and replace the parts as needed.



Removing from storage

- A. Remove the protective grease from the hydraulic cylinder rods.
- B. Assemble any parts taken off for storage or reconditioning.
- C. Check the complete machine for loose bolts and cotter pins. Check for parts out of adjustment which could result in rapid wear, possible breaking and poor operation.
- D. Lubricate the complete machine.
- E. Check tires for correct air pressure.
- F. Check wheel bolt torque.
- G. Remove plug from pump tee. Install a watering hose fitting in tee. Attach hose and turn on water. Turn pump wheel to rinse the components of anti-freeze.

Coulter Mounting

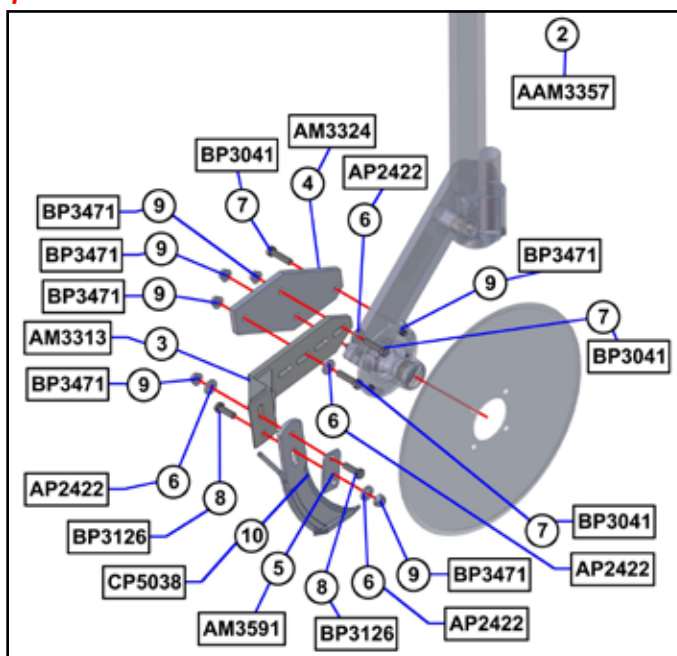
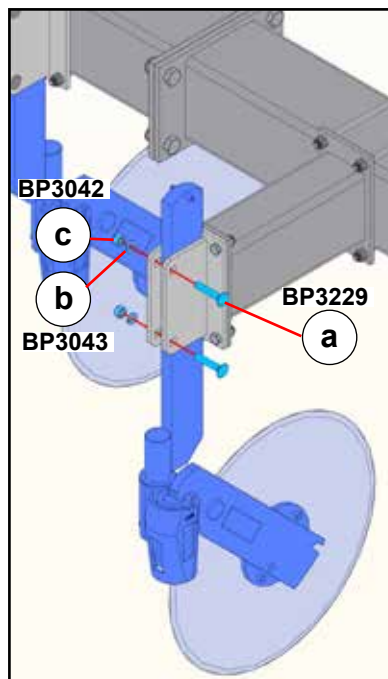
Task

Procedures

Illustrations



1. Insert coulter shank into the mounting and allow assembly to rest on shank roll pin.
2. Insert (a) (BP3229) 1/2"-13 x 2-1/2" (12,7 mm x 6,4 cm) carriage bolt into top hole of bracket. Push coulter shank assembly back into the bracket and insert the bottom carriage bolt. Place (b) (BP3043) 1/2" (12,7 mm) lock washer and (c) (BP3042) 1/2"-13 (12,7 mm) hex nut on each carriage bolt. *Do not tighten at this point.*
3. Raise coulter shank assembly in bracket and place a 3" (8,9 cm) spacer between the roll pin and the top of the bracket. Tighten the 1/2" (12,7 mm) hex nuts.
This height is a starting point.



BOM ID	Qty	Item No	Description
2	1	AAM3357	COULTER KNIFE ADAPTER, W/CO-50 KNIFE, 1 ROW
3	1	AM3313	KNIFE HOLDER/ MOUNTING ARM
4	1	AM3324	ADAPTER PLATE, COULTER KNIFE
5	1	AM3591	WASHER, COULTER KNIFE
6	4	AP2422	MACHINERY BUSHING, 1.25 OD X 9/16 ID X .135
7	4	BP3041	HEX CAP SCREW, 1/2"-13 X 2", GRD 5, PLTD
8	2	BP3126	HEX CAP SCREW, 1/2"-13 X 1-1/2", GRD 5, PLTD
9	6	BP3471	NUT, HEX FLANGE, 1/2", PLTD
10	1	CP5038	CO-50 3/8" LIQUID KNIFE EXTRA THIN

Assembly (Knife Injection)

Task	Procedures	Illustrations
<p>► Assemble knife holder and adapter plate</p>	<ol style="list-style-type: none"> 1. Pre-assemble (3) (AM3313) mounting arm knife holder and (4) (AM3324) coultter knife adapter plate. 2. Secure assembly with (7) (BP3041) 1/2" x 2", grade 5, hex cap screws, (6) (AP2422) 1.5" OD x 9/16" ID x .135 machinery bushings and (9) (BP3471) 1/2", flanged hex nuts. 	
<p>► Mounting to coultter arm</p>	<ol style="list-style-type: none"> 3. Mount assembly to coultter arm by inserting (7) (BP3041) 1/2"x 2", grade 5, hex cap screw into notched hole at the base of coultter arm. Insert (7) (BP3041) 1/2" x 2", grade 5, hex cap screw into adapter plated through hole in coultter arm. Secure with (9) (BP3471) 1/2", flanged hex nuts. 4. Tighten each 1/2" flanged hex nuts. 	
<p>► Attaching knife</p>		
	<ol style="list-style-type: none"> 5. Attach (10) (CP5038) liquid knife to mounting arm with (8) (BP3126) 1/2" x 1-1/2", grade 5, hex cap screws, (5) (AM3591) coultter knife washer, (6) (AP2422) 1.5" OD x 9/16" ID x .135 machinery bushings and (9) (BP3471) 1/2", flanged hex nuts. 6. Adjust the knife and knife holder arm until the knife is 1/2" from blade. This is a starting point. 7. Center of knife must align with blade edge to avoid trash plugging. 	

AAM2908 Bolt-on Coulter Bar Gull Center

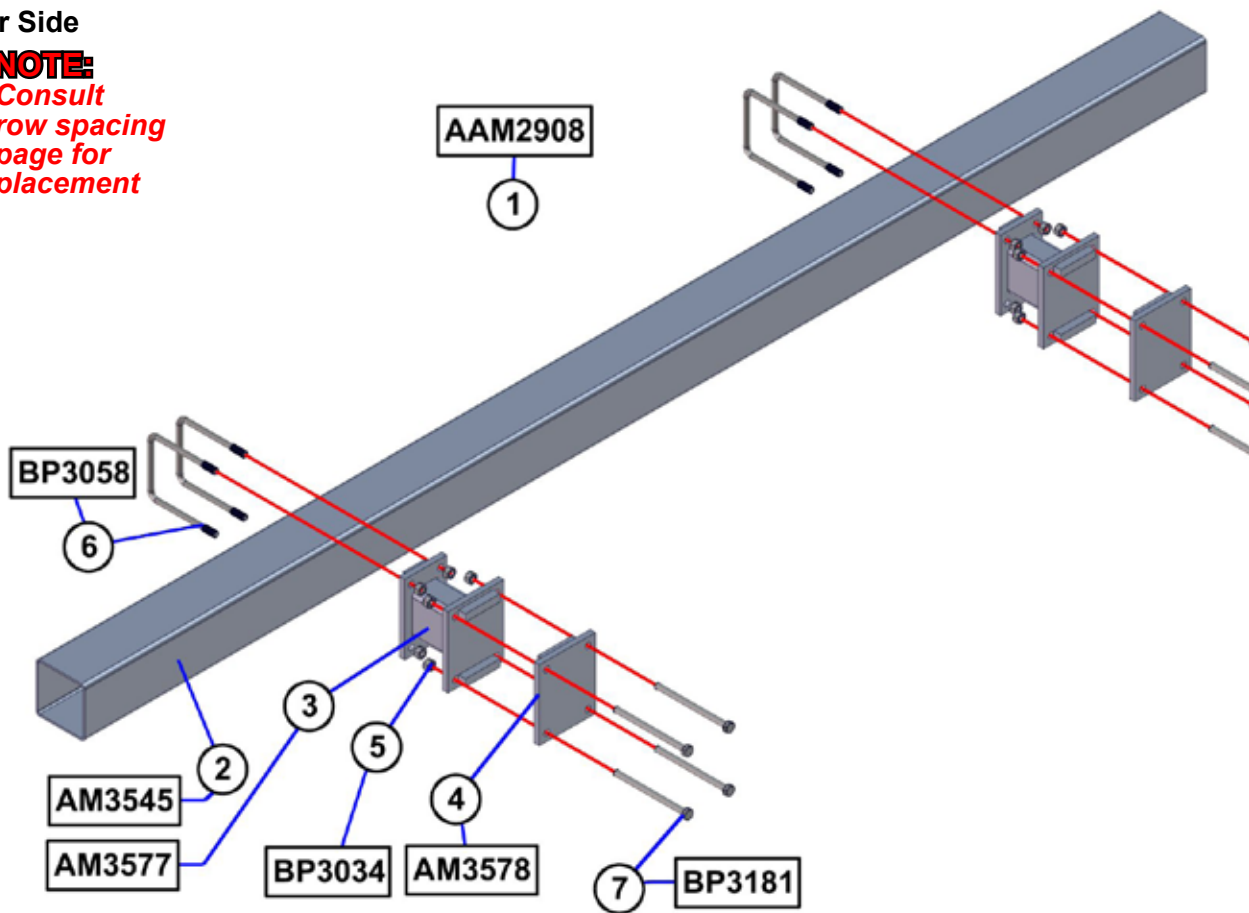
Task

Procedures

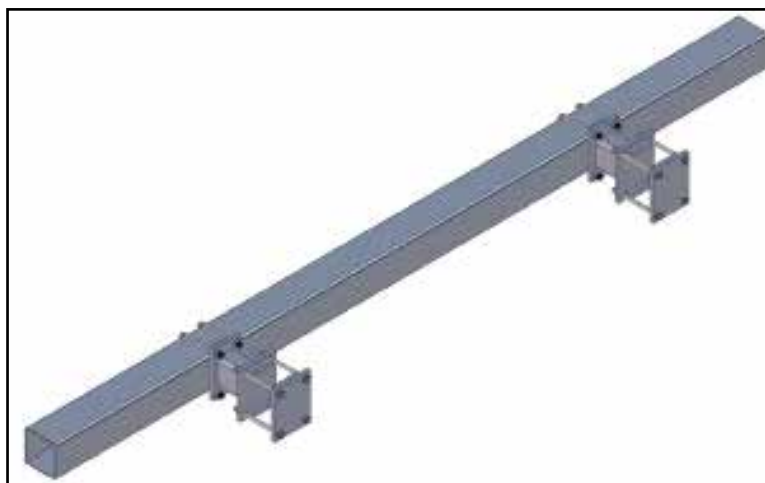
Illustrations

Tractor Side

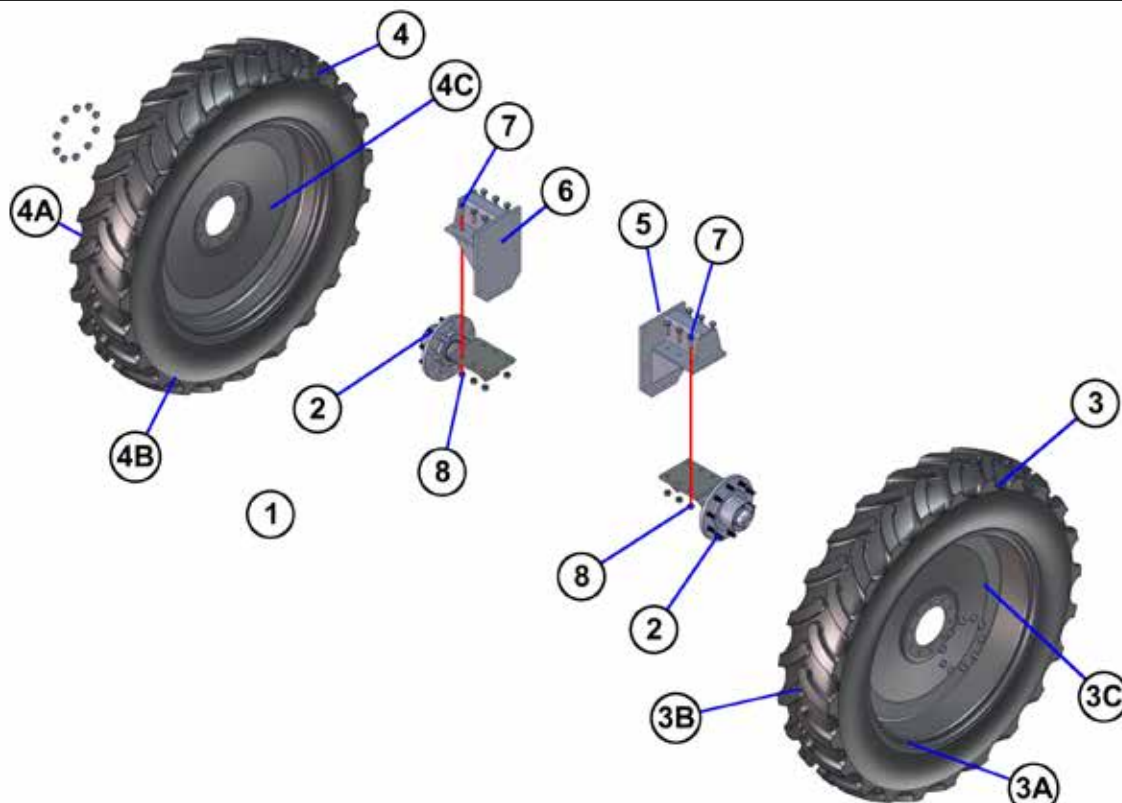
NOTE:
Consult
row spacing
page for
placement



BOM ID	Qty	Item No	Description
1	1	AAM2908	COULTER BAR, BOLT-ON, AT3/AT4010 GULL CENTER
2	1	AM3545	TUBE (13'4")
3	2	AM3577	MOUNTING BRACKET, BOLT-ON COULTER BAR
4	2	AM3578	BACKING PLATE
5	16	BP3034	NUT, HEX, 3/4"-10, GRADE 2, PLATED
6	4	BP3058	U-BOLT, 3/4"-10 X 7"W X 9"L
7	8	BP3181	HEX CAP SCREW, 3/4"-10 X 10", GRADE 5, PLATED



Wheel/Axle, AT4610 76" (44100147)



TIRE PRESSURE:
58 P.S.I. MAXIMUM

NOTE:
*Valve Stem
to the
outside*

BOM ID	Qty	Item No	Description
1	1	44100147	WHEEL/AXLE, AT4610 76" SINGLE, 380/90R46
2	2	AAM2791	HUB & SPINDLE ASSEMBLY, 873 W/ BOLT ON SPINDLE ASSEMBLY
3	1	AAM2888	WHEEL, 380/90R46, 168A8, LH ASSEMBLY
3A	1	AP2790	VALVE STEM, METAL
3B	1	AP3154	TIRE, 380/90R46, 168A8, ULTRA SPRAY TL
3C	1	AP4223	RIM, 46 X 13 X 10, WHITE, 0" OFFSET, 11.25" BC
4	1	AAM2889	WHEEL, 380/90R46, 168A8, RH ASSEMBLY
4A	1	AP2790	VALVE STEM, METAL
4B	1	AP3154	TIRE, 380/90R46, 168A8, ULTRA SPRAY TL
4C	1	AP4223	RIM, 46 X 13 X 10, WHITE, 0" OFFSET, 11.25" BC
5	1	AM3684	AXLE, 76" SPACING, AT4610, LH, 380/90R46 TIRES
6	1	AM3685	AXLE, 76" SPACING, AT4610, RH, 380/90R46 TIRES
7	12	BP3197	HEX CAP SCREW, 3/4"-10 X 2-1/2", GRADE 8, PLATED
8	12	BP3442	NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED

Task	Procedures	Illustrations
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