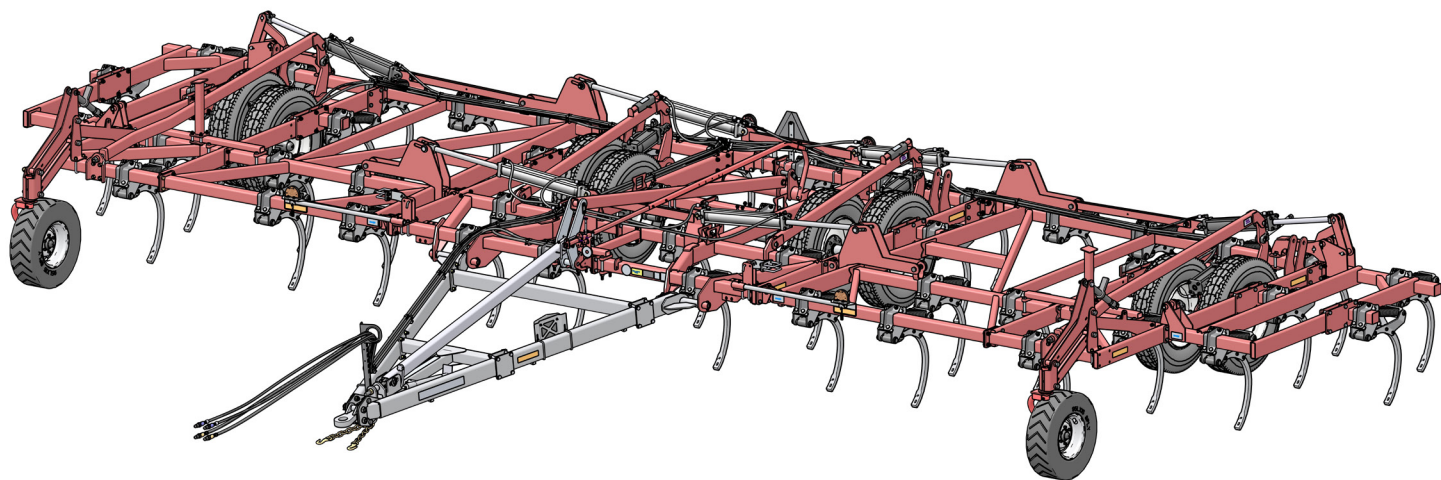


Model 2530



VADERSTAD INC. LIMITED WARRANTY TERMS AND CONDITIONS – UNITED STATES AND CANADA

EFFECTIVE FOR EQUIPMENT RETAILED AND DELIVERED AFTER MAY 21ST, 2021

WHAT IS WARRANTED Vaderstad Inc. warrants its new equipment to be free of defects in material and workmanship at time of delivery to the first retail purchaser, renter, or lessee. These terms apply to all 10K, Amity, Concord, Wil-Rich and Wishek brands of new equipment originally marketed in the United States and Canada.

WARRANTY PERIOD

- 12 Months from the date of delivery to the first retail purchaser, renter or lessee.
- 483 Disk Chisel, Field Cultivator and Disk Cultivators: 3 years on main frames, wing frames, and shank assemblies
- Precision Shank Drill: 3 years on main frame, wing frame, and rockshafts.

EXCEPTIONS FROM THIS WARRANTY

- **Freight Charges** - This warranty does not cover freight charges.
- **Improvements, Changes, or Discontinuance** Vaderstad Inc. reserves the right to make changes and improvements in design or changes in specifications at any time to any product without incurring any obligations to owners of products previously sold.
- **Repairs and Maintenance Not Covered Under Warranty** - This warranty does not cover conditions resulting from misuse, natural calamities, use of non-Vaderstad Inc. parts, negligence, alteration, accident, use of unapproved attachments, usage which is contrary to the intended purposes, or conditions caused by failure to perform required maintenance. Replacement of Wear or Maintenance items (unless defective) such as but not limited to, filters, hoses, belts, lubricants, light bulbs, wheel alignment, tightening of nuts, belts, bolts, and fittings, service tune-up, computer parameter adjustments and general adjustments which may from time to time be required are not covered.
- **Rubber Tire Warranty** - Rubber tires are warranted directly by the respective manufacturer only and not by Vaderstad Inc.
- **Satellite Outages** - Interruptions in satellite interfaces and satellite communications are outside the control of this product and are not covered by this warranty. The company is not responsible for issues or degradation of system performance resulting from such interruptions in satellite interfaces and satellite communications where the issues are not related to defects in this product.

OWNER'S OBLIGATION

It is the responsibility of the Owner to transport the equipment or parts to the service shop of an authorized Vaderstad Inc. Dealer or alternatively to reimburse the Dealer for any travel or transportation expense involved in fulfilling this warranty. This Warranty does NOT cover rental of replacement equipment during the repair period, damage to products which have been declared a total loss and subsequently salvaged, overtime labor charges, freight charges for replacement parts, or special handling requirements (such as, but not limited to, the use of cranes).

EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PURPOSE OR OTHER REPRESENTATIONS, WARRANTIES OR CONDITIONS, EXPRESSED OR IMPLIED. The remedies of the Owner set forth herein are exclusive. The Company neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale of covered machines. Correction of defects, in the manner and for applicable period of time provided above, shall constitute fulfillment of all responsibilities of Vaderstad Inc. to the Owner, and Vaderstad Inc. shall not be liable for negligence under contract or in any manner with respect to such machines. IN NO EVENT SHALL THE OWNER BE ENTITLED TO RECOVER FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS BUT NOT LIMITED TO, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE OR COST OF RENTAL OR REPLACEMENT EQUIPMENT.

Some States or Provinces do not permit limitations or exclusions of implied warranties or incidental or consequential damages, so the limitations or exclusions in this warranty may not apply.

“VADERSTAD INC.” AS REFERRED TO HEREIN WITH RESPECT TO SALES IN: UNITED STATES and CANADA: Vaderstad Inc.
PO Box 1030
Wahpeton, ND 58074

Additional Warranty Information

New Equipment Warranty - Equipment is eligible for warranty service only if it qualifies under the provisions of the New Equipment Warranty. The selling dealer will deliver this Warranty to the original retail purchaser at the time of sale, and the dealer will register the sale and Warranty with Vaderstad Inc.

Subsequent Owners - This Warranty covers the first retail purchaser and all subsequent owners of the equipment during the specified warranty period. Should the Vaderstad Inc. Dealer sell this equipment to a subsequent owner, the Dealer must deliver the warranty document to the subsequent owner so the subsequent owner can register ownership with Vaderstad Inc. and obtain the remaining warranty benefits, if available, with no intermission in the Warranty Period. Subsequent Owner Procedure will apply. It is the responsibility of the subsequent owner to transport the equipment to the service shop of an authorized Vaderstad Inc. Dealer or alternatively to reimburse the Dealer for any travel or transportation expense involved in fulfilling this warranty. This Warranty does NOT cover charges for rental or replacement equipment during the repair period, products which have been declared a total loss and subsequently salvaged, overtime labor charges, freight charges for replacement parts, or units sold at auction.

Warranty Service - To be covered by Warranty, service must be performed by an authorized Vaderstad Inc. It is recommended that you obtain warranty service from the Dealer who sold you the equipment because of that Dealer's continued interest in you as a valued customer. In the event this is not possible, warranty service may be performed by any other authorized Vaderstad Inc. Dealers in the United States or Canada. It is the responsibility of the Owner to transport the equipment to the service shop of an authorized Vaderstad Inc. Dealer or alternatively to reimburse the Dealer for any travel or transportation expense involved in fulfilling this warranty.

Maintenance Service - The Owner's Manual furnished to you with the equipment at the time of delivery contains important maintenance and service information. You must read the manual carefully and follow all the maintenance and service recommendations. Doing so will result in greater satisfaction with your equipment and help avoid service and warranty problems. Please remember that failures due to improper maintenance of your equipment are not covered by warranty.

Maintenance Inspections - To insure the continued best performance from your agricultural equipment, we recommend that you arrange to make your equipment available to your selling Dealer for a maintenance inspection 30 days prior to warranty expiration.

Introduction

Safety Alert Symbol



This is the safety alert symbol. The safety alert symbol will direct the operator's attention to information that involves personal safety and the safety of others.

Safety Messages

The words DANGER, WARNING, or CAUTION are used with the safety alert symbol. Learn to recognize these safety alerts and follow the recommended precautions and safety practices.



Indicates an imminently hazardous situation that, if not avoided, will result in DEATH OR VERY SERIOUS INJURY.



Indicates an potentially hazardous situation that, if not avoided, could result in DEATH OR SERIOUS INJURY.



Indicates a potentially hazardous situation that, if not avoided, will result in MINOR INJURY.

Informational Messages

The word important or note are not related to personal safety but are used to give additional information and tips for operating or servicing this equipment.

IMPORTANT: Identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of the machine, process, or its surroundings.

NOTE: identifies points of particular interest for more efficient and convenient repair or operation.

Safety Signs



Do not remove or obscure Danger, Warning, or Caution signs. Replace any Danger, Warning or Caution signs that are not readable or are missing. Replacement signs are available from the dealer in the event of loss or damage. The actual location of the safety signs is illustrated at the end of this section.

Keep signs clean by wiping off regularly. Use a cleaning solution if necessary.

If parts have been replaced or a used machine has been purchased, make sure all safety signs are in the correct location and can be read. Illustrations of safety sign locations are located at the rear of this section.

Replace any safety signs that cannot be read or are missing. Clean the machine surface thoroughly with a cleaning solution before replacing signs. Replacement safety signs are available from a dealer.

Introduction (Cont'd)

A Word to The Operator

It is the operator's responsibility to read and understand the safety section in this manual and the manual for all attachments before operating this machine.

Study the features in this manual and make them a working part of a safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary safe working precautions. The operator can prevent serious injury and death.

This safety section is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of this machine. This section also suggests possible ways of dealing with these situations. This section is not a replacement for other safety practices featured in other sections of this manual.

Personal injury or death may result if these precautions are not followed.

Learn how to operate the machine and how to use the controls properly.

Do not let anyone operate the machine without instruction and training.

For personal safety and the safety of others, follow all safety precautions and instructions found in the manual and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

Make sure the machine has the correct equipment needed by the local regulations.



An operator should not use alcohol or drugs which can affect their alertness or coordination. An operator on prescription or 'over the counter' drugs need medical advice on whether they can properly operate machines.

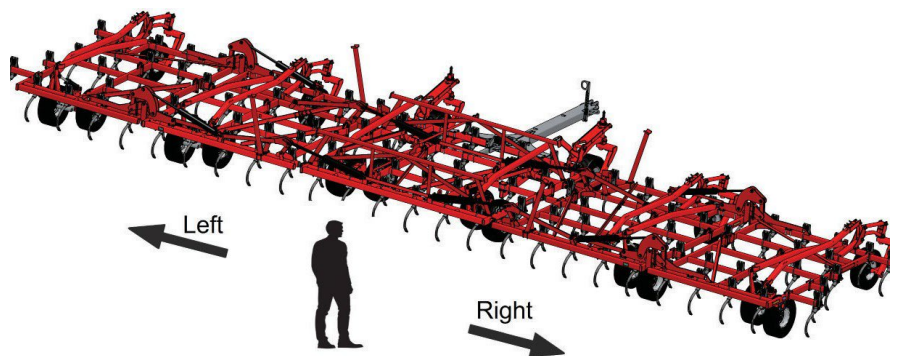


If any attachments used on this equipment have a separate Operator Manual, see that manual for other important safety information.

This Manual

Right-hand and left-hand, are used in this manual. This is determined by facing the direction of travel of the machine from rear.

The photos, illustrations, and data used in this manual were current at the time of printing, but due to the possible in-line production changes, your machine can vary slightly in detail. The manufacturer reserves the right to redesign and change the machine as necessary without notification.



In some illustrations and photos used in this manual, shields or guards may have been removed for clarity. Never operate the machine with any shields or guards removed. If the removal of shields or guards is necessary to make a repair, they must be replaced before operation.

Operation

Prepare For Operation

Read and understand all operating instructions and precautions in this manual before operating or servicing the machine.

Know and understand the positions and operations of all controls. Make certain all controls are in neutral and the parking brake is applied before starting the machine. Make sure the steering wheel is centered and locked.



Any time the engine is running and the parking brake is disengaged, the machine will turn if the steering wheel is moved even though the travel control lever is in neutral.

Make certain all people are well away from the area of work before starting and operating the machine. Check and learn all controls in an area clear of people and obstacles before starting work. Be aware of the machine size and have enough space available to allow for operation. Never operate the machine at high speeds in crowded places.

Emphasize the importance of using correct procedures when working around and operating the machine. Do not let children or unqualified people operate the machine. Keep others, especially children, away from the area of work. Do not permit others to ride on the machine.

Make sure the machine is in the proper operating condition as stated in the Operator's Manual. Make sure the machine has the correct equipment required by local regulations.

All equipment has a limit. Understand the speed, brakes, steering, stability, and load characteristics of the equipment before starting.

Operation (Cont'd)

Personal Protective Equipment

Wear all personal protective equipment (PPE) and protective clothing issued or called for by job conditions and county local regulations. PPE includes, but is not limited to, equipment to protect eyes, lungs, ears, head, hands, and feet when operating, servicing, or repairing equipment.

Agricultural Chemicals

Agricultural chemicals can be very hazardous.

Improper use of fertilizer, fungicides, herbicides, insecticides and pesticides can injure people, plants, animals, soil and other people's property.

Always read and follow all manufacturers' instructions before opening any chemical container.

Read and follow instructions each time a chemical is used.

Use the same precautions when adjusting, servicing, cleaning or storing the machine as used when installing chemicals into the hoppers or tanks.

Inform anyone who comes in contact with chemicals of the potential hazards involved and the safety precautions required.

Stand upwind and away from smoke from a chemical fire.

Store or dispose of all unused chemicals only in a manner as specified by the chemical manufacturer.



Operation (Cont'd)

Traveling On Public Roads



Machine was designed for apply chemicals and fertilizers in off-road use. Do not use the machine for transporting product on public roads. Chemical spills result in environmental damage. A loaded machine driven on public roads also runs a high risk of tire failure. Personal injury could result.

Always walk around and visually inspect the machine before traveling on public roads. As a warning, honk the horn twice before starting the engine. Check for damage and / or faulty components that can fail and create a hazardous condition. Make sure all the machine systems operate properly. The following, including, but not limited to: front road lights, tail and brake lights, hazard warning lights, parking brake, horn, windshield wiper and washer and rear view mirrors. Repair or replace any component not in proper working order.

Never drive at a speed causing the machine to bounce or lose control.

Obey all traffic rules. Operate the machine with hazard warning lights on, unless prohibited by law. Use of road lights while traveling on public roads is operator's responsibility.

Maintenance (Cont'd)

Fire Prevention And First Aid

Be prepared for emergencies.

Keep a first aid kit handy for treatment of minor cuts and scratches.

Always carry one or more fire extinguishers of the correct type. Check fire extinguishers regularly as instructed by the manufacturer. Make sure the fire extinguishers are properly charged and in operating condition.

Due to the nature of the crops this machine will operate in, the risk of fire is of concern. Use a water type fire extinguisher or other water source for a fire in crops.

For fires involving anything other than crops, such as oil or electrical components, use a dry chemical fire extinguisher with a ABC rating. Mount fire extinguishers within easy reach of where fires can occur. Frequently remove accumulated crop material from the machine and check for overheated components. Check the machine daily for any noises that are not normal. Such noises could indicate a failed component that can cause excess heat.

If any flame cutting, welding, or arc welding is to be done on the machine or attachments, make sure to clear any crop material or debris from around the area. Make sure the area below the work area is clear of any flammable material as falling molten metal or sparks can ignite the material.

If fire occurs stand upwind and away from the smoke from the fire.



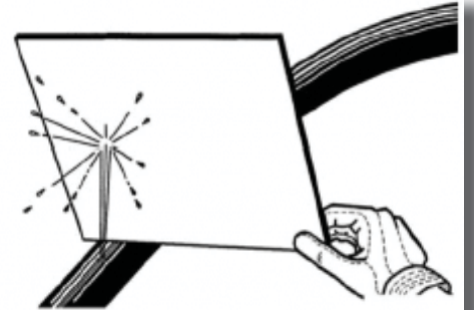
High Pressure Leaks

Fluid leaking from the hydraulic system or the fuel injection system under high pressure can be very hard to see. The fluid can go into the skin causing serious injury.

Fluid injected into the skin must be surgically removed within a few hours. If not removed immediately, serious infection or reaction can develop. Go immediately to a doctor who knows about this type of injury.

Use a piece of cardboard or wood to search for possible leaks. Do not use your bare hand. Wear leather gloves for hand protection and safety goggles for eye protection.

Relieve all pressure before loosening any hydraulic lines. Relieve the pressure by lowering raised equipment, shutting off accumulator valve, if equipped, and shutting off the engine. Tighten all connections securely before apply pressure.



Maintenance (Cont'd)

Tire Safety

Check the tires for cuts, bulges and the correct pressure. Replace worn or damaged tires. When tire service is needed, have a qualified tire mechanic service the tire. Changing the tire can be very hazardous and must be done by a qualified tire mechanic using the proper tools and equipment. See the Specifications Sections for the correct tire size.



Tire explosion and / or serious injury can result from over inflation. Do not exceed the tire inflation pressures. See the Specifications Section for the correct tire pressure.

Do not inflate a tire that is seriously under inflated or has been run flat. Have the tire checked by a qualified tire mechanic.

Do not weld on the rim when a tire is installed. Welding can make an air / gas mixture that can cause an explosion and burn with high temperatures. This danger applies to all tires, inflated or deflated. Removing air or breaking the bead is not enough. The tire must be completely removed from the rim prior to welding.

When preparing a calcium chloride solution for fluid ballasting the tractor tires, never pour water onto the calcium chloride. A chlorine gas can be generated which is poisonous and explosive. This can be avoided by slowly adding calcium chloride flakes to water and stirring until they are dissolved.

When seating tire beads onto the rims, never exceed 2.4 bars (35 psi) or the maximum inflation pressure specified on the tire. Inflation beyond this maximum pressure may break the bead, or even the rim, with explosive force.

Replacement Parts

Where replacement parts are necessary for periodic maintenance and servicing, genuine replacement parts must be used to restore your equipment to original specifications.

The manufacturer will not accept responsibility for installation of unapproved parts and / or accessories and damages as a result of their usage.



Torque Specifications

	Grade 2			Grade 5			Grade 8					
Bolt Diameter	3/8"	1/2"	5/8"	3/4"	7/8"	1"	(9.53 mm)	(12.7 mm)	(15.88 mm)	(19.05 mm)	(22.23 mm)	(25.4 mm)
Hex Head	9/16"	3/4"	15/16"	1-1/8"	1-5/16"	1-1/2"	(14.3 mm)	(19.05 mm)	(23.83 mm)	(28.58 mm)	(33.34 mm)	(38.1 mm)
Torque ft/lbs (N.m)												
UNC GR2	18 (24.40)	45 (61.01)	89 (120.67)	160 (216.93)	252 (341.67)	320 (433.86)						
UNC GR5	30 (40.67)	68 (92.19)	140 (189.81)	240 (325.39)	360 (488.09)	544 (737.56)						
UNC GR8	40 (54.23)	100 (135.58)	196 (165.74)	340 (460.98)	528 (715.87)	792 (1073.81)						
UNF GR2	21 (28.47)	51 (69.15)	102 (138.29)	178 (241.34)	272 (368.78)	368 (498.94)						
UNF GR5	32 (43.39)	70 (94.91)	168 (227.78)	264 (357.94)	392 (531.48)	572 (775.53)						
UNF GR8	48 (65.08)	112 (151.85)	216 (292.86)	368 (498.94)	792 (1073.81)	840 (1138.89)						

Wheel Nut & Bolt Torque			
Nut Size	Grade	Torque ft/lbs (N.m)	
1/2" - 20UNF x 60"	5	93 (126.1)	
1/2" - 20UNF x 60"	5	93 (126.1)	
1/2" - 20UNF x 90"	5	93 (126.1)	
9/16" - 18UNF x 90"	5	133 (180.3)	
5/8" - 18UNF x 90"	5	187 (253.5)	
5/8" - 18UNF x 90" (Heavy Hex)	5	187 (253.5)	
3/4" - 16UNF (Bud Nut)	8	462 (626.4)	
3/4" - 16UNF (Flange Nut)	8	462 (626.4)	
7/8" - 14UNF (Flange Nut)	8	735 (996.5)	
Nut Size	Grade	Torque ft/lbs (N.m)	
1/2" - 20UNF x 1-7/16"	5	72 (97.6)	
1/2" - 20UNF x 1-1/4"	5	72 (97.6)	
1/2" - 20UNF x 1-1/2"	5	72 (97.6)	
1/2" - 20UNF x 1-3/4"	5	72 (97.6)	
1/2" - 20UNF x 1"	5	72 (97.6)	
9/16" - 18UNF x 1-3/4"	5	103 (139.6)	
9/16" - 18UNF x 2-1/4"	5	103 (139.6)	

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1. Preparing for assembly

Read this section carefully before assembly. Refer to the Parts Catalog for additional component illustrations while assembling the machine.

Carefully remove all the parts and hardware included. Make sure nothing was damaged or missing.

Tighten all hardware according to standard torque values unless specified in these instructions. Always replace hardware with the same grade or class.

Use all the nuts and bolts in the correct locations. This will prevent damage to the machine.

IMPORTANT: *When two or more bolts are being used on a part, always insert the bolts and loosely tighten the nuts. Once the correct location has been reached, tighten the nuts evenly to prevent misalignment or distortion of the parts. Tighten all U-bolt nuts evenly and to the same torque to prevent misalignment or distortion.*

Select a large, flat, and hard surface for assembly of machine.

IMPORTANT: *Keep all parts in the assigned containers until the parts are to be used.*

NOTE: *Some items will be assembled at the factory.*

Right-hand and left-hand, as used in this manual, are determined by facing the direction the machine will travel when in use.

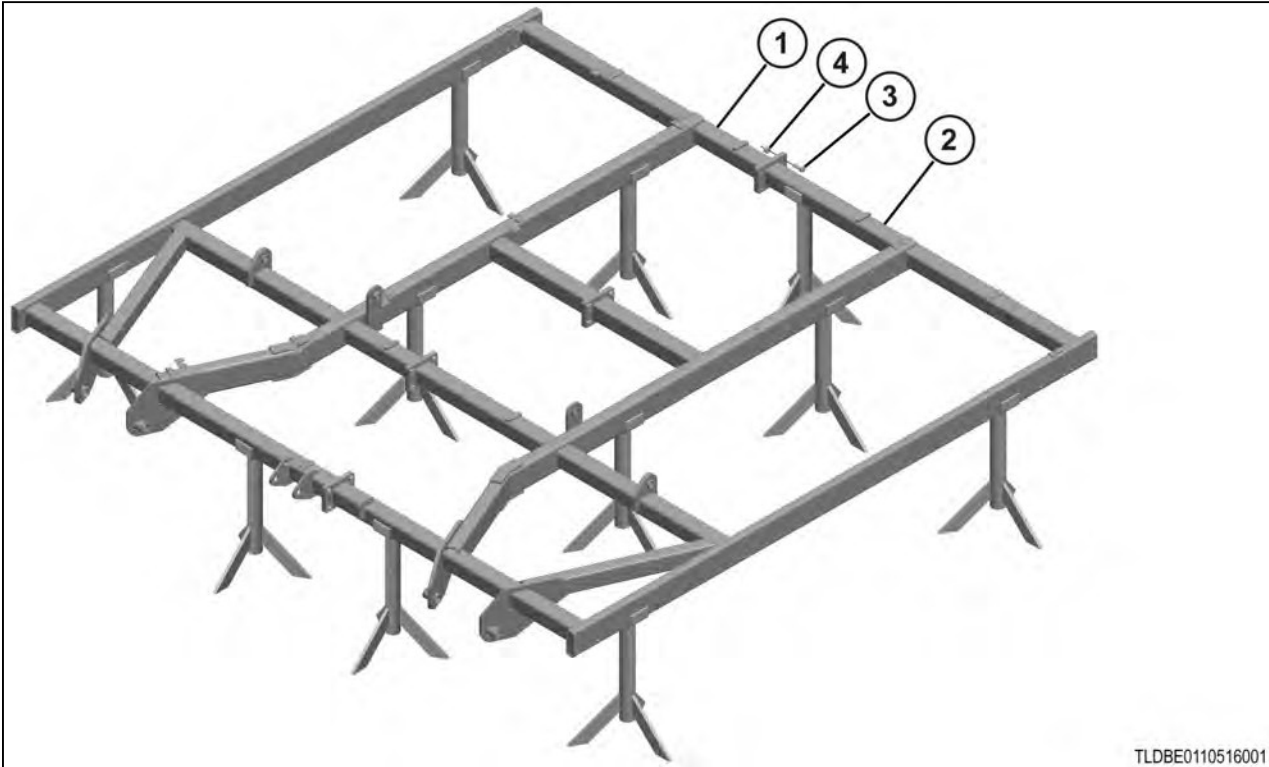
1.1 Service parts

The illustrations and part numbers in this publication are supplied for component identification only when assembling the machine. When ordering replacement parts, always use the part numbers from the parts catalog.

2. Assembling the center frame

Procedure

- Put the center frame assemblies on stands rated for more than the weight of the machine.



TLDBE0110516001

Fig. 1

- Connect the center frame assemblies.

(1)	4000360718	Right-hand center frame
(2)	4000360717	Left-hand center frame
(3)	88290	3/4 x 2 hex bolt
(4)	88356	3/4 lock nut

2.1 Installing the center lift

Procedure

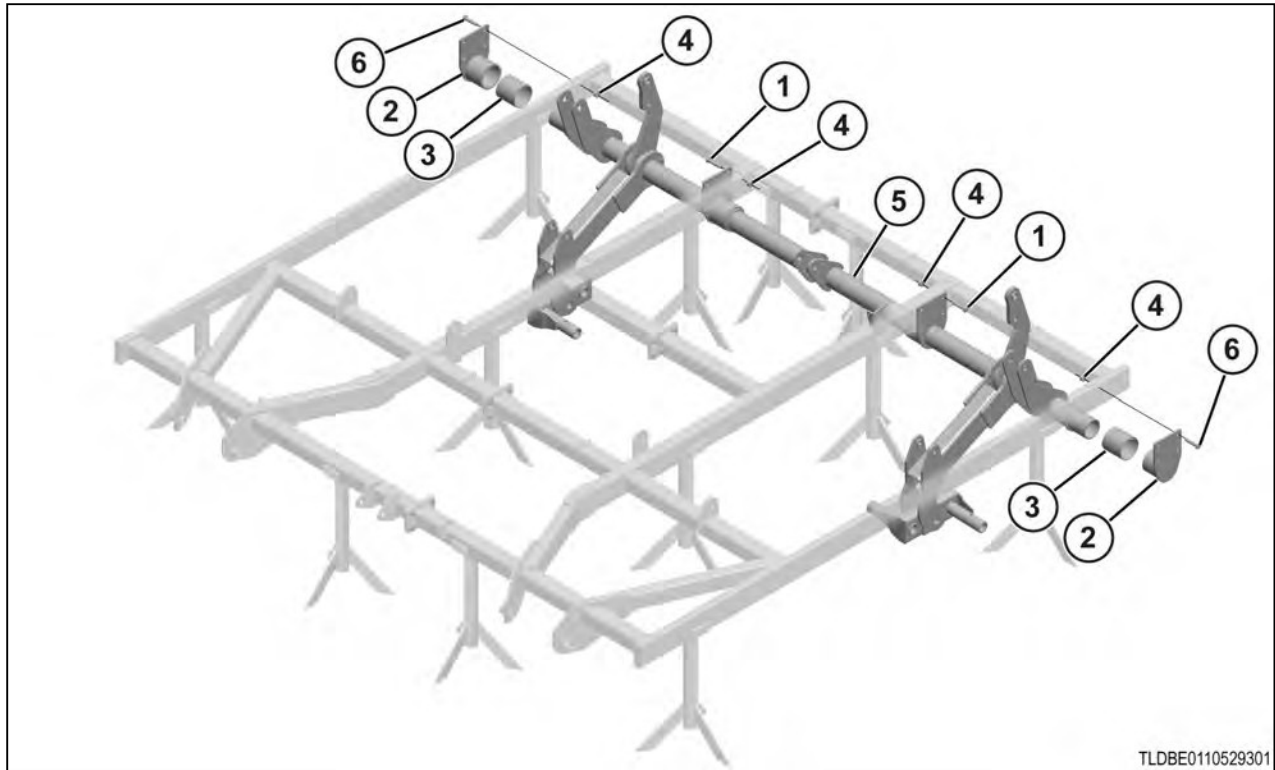


Fig. 2

Install the center lift as shown.

(1)	88953	3/4 x 4 1/2 hex bolt
(2)	248409	Bearing cap
(3)	351762	Plastic bearing
(4)	88356	3/4 lock nut
(5)	351758	Center lift
(6)	89495	3/4 x 3 1/2 hex bolt

2.2 Installing the center lift hubs and wheels

Procedure

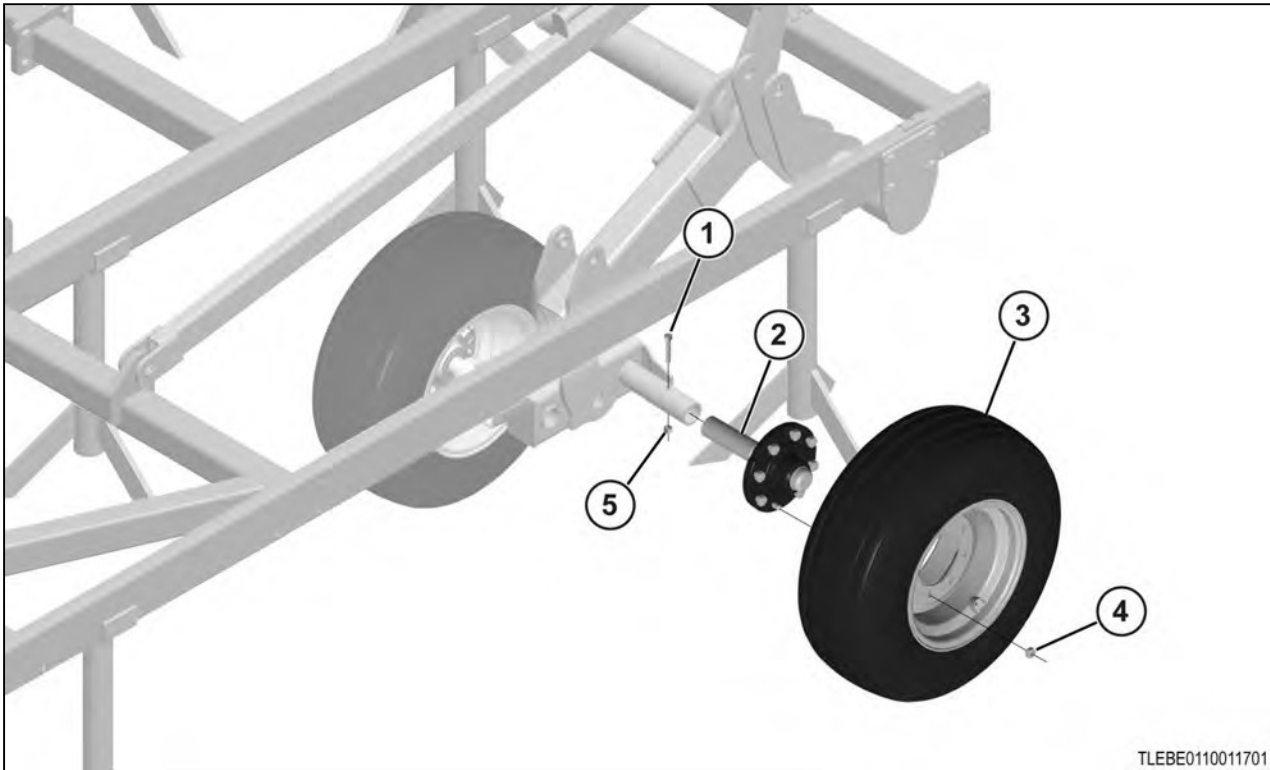


Fig. 3

Install the hub and wheels as shown.

(1)	88298	5/8 x 4 hex bolt
(2)	247987	Hub and spindle
(3)	236612 (used) 353366 (new)	Wheel assembly
(4)	W103636	Stud nut
(5)	88369	5/8 lock nuts

2.3 Installing the center frame mast tubes

Procedure

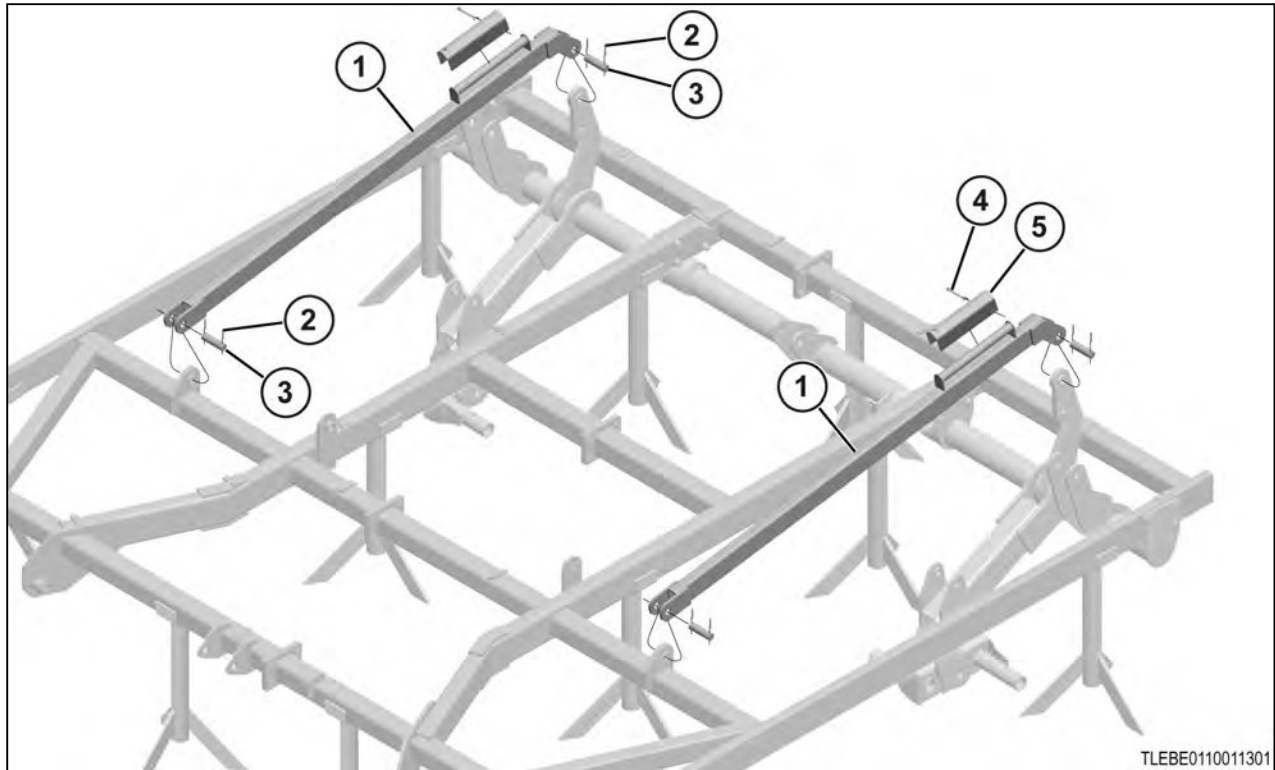


Fig. 4

Install the center frame mast tubes as shown.

(1)	248393	Center frame mast tube
(2)	42484	1/4 x 2 pin
(3)	67854	1 1/4 x 4 1/2 pin
(4)	42721	Spring lock pin
(5)	353940	Transport lock

2.4 Installing the 19 to 29 ft fold anchors

Procedure

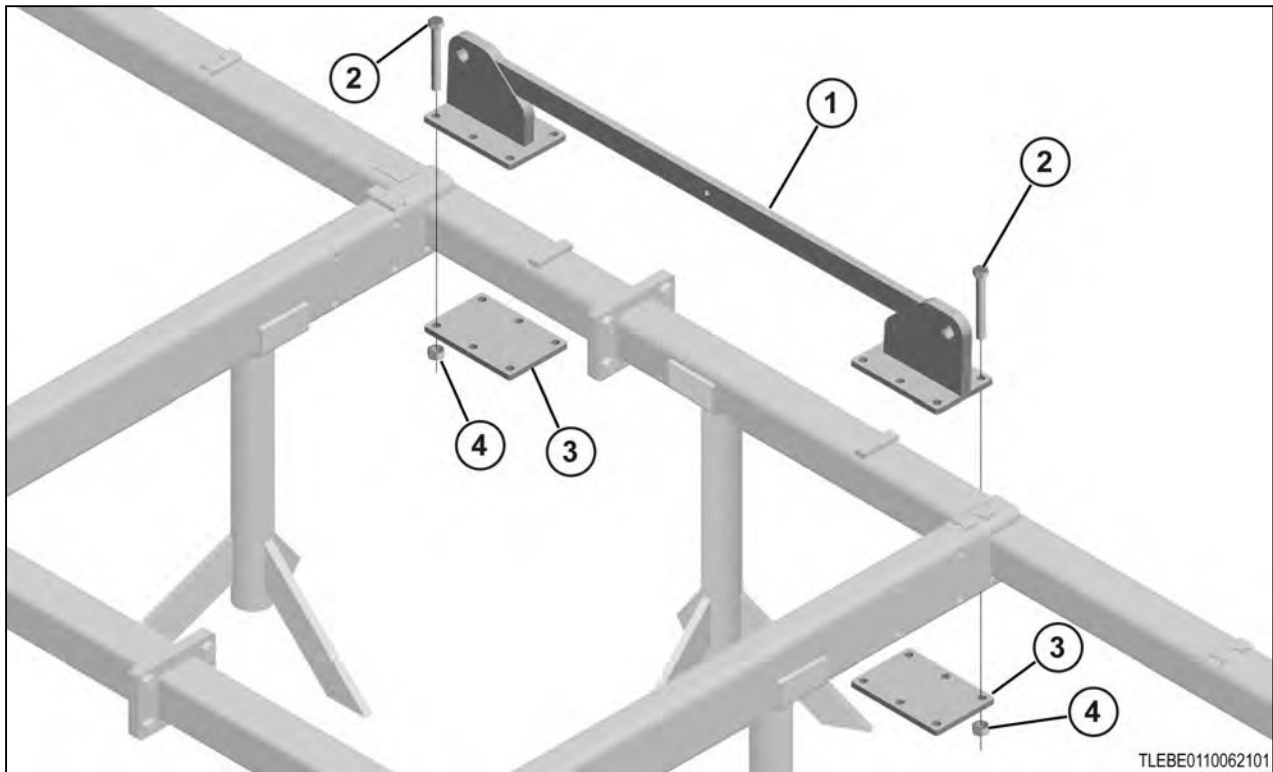


Fig. 5

Install the fold anchor as shown.

(1)	352344	Small wing fold anchor
	359543	Small wing fold anchor (25 to 29 ft)
(2)	88295	5/8 x 6 hex bolt
(3)	353422	Fold anchor plate
(4)	88369	5/8 lock nut

2.5 Installing the 31 to 47 ft fold anchors

Procedure

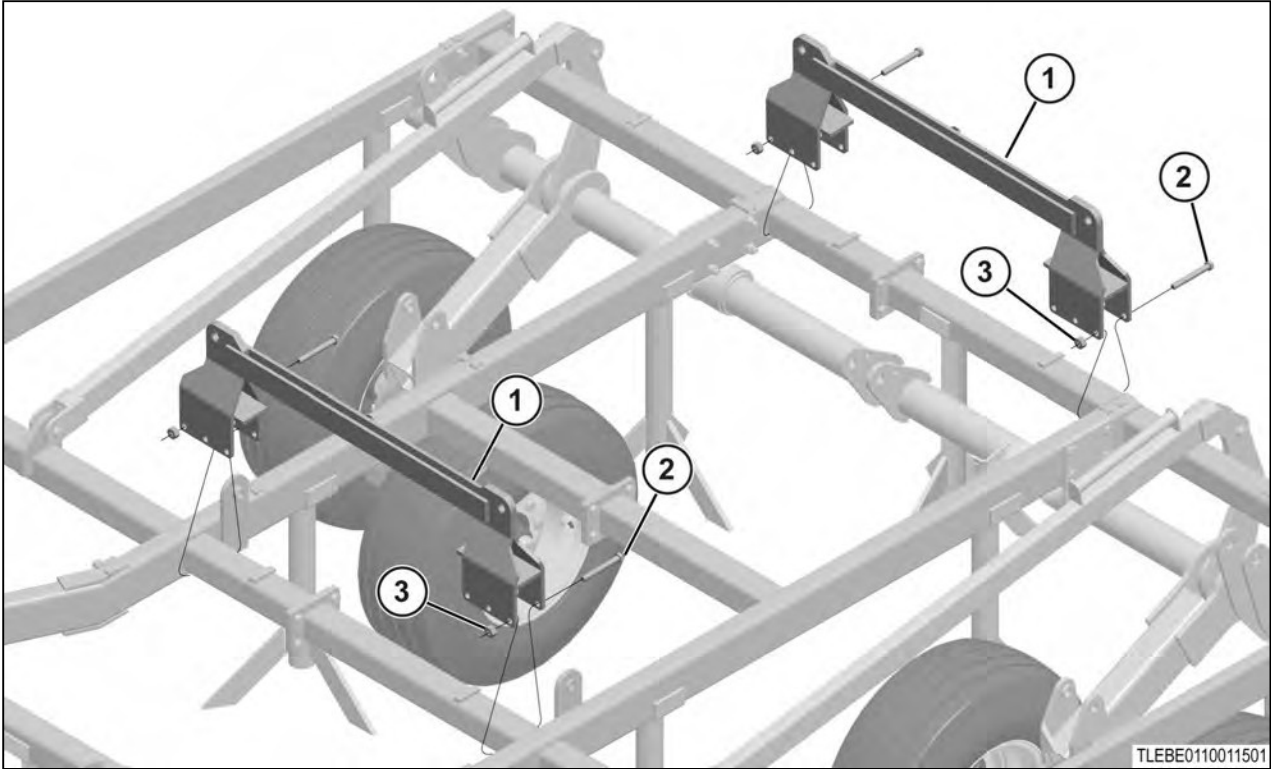


Fig. 6

Install the fold anchors as shown.

(1)	350544	Fold anchor
(2)	88947	3/4 x 6 hex bolt
(3)	88356	3/4 lock nut

2.6 Installing the 19 to 29 ft wing rests

Procedure

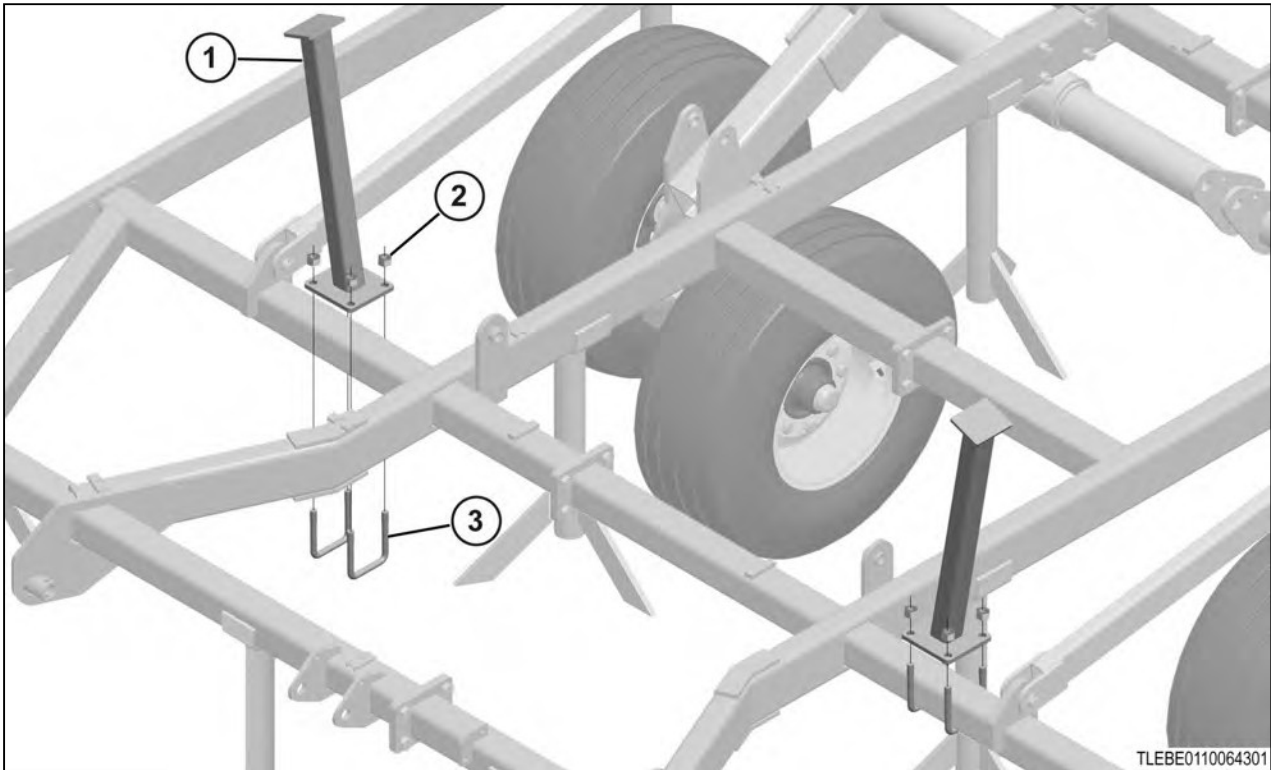


Fig. 7

Install the wing rests as shown.

(1)	353451	Wing rest - for the 19 ft, 21 ft, and 23 ft models
	359524	Wing rest - 6 ft - for the 25 ft, 27 ft, and 29 ft models
(2)	88369	5/8 lock nut
(3)	45633	5/8 x 4 x 5-1/2 U-bolt
(4)	233234	Mount Plate - for the 19 ft, 21 ft, and 23 ft models
(5)	88293	3/4 x 6 hex bolt - for the 19 ft, 21 ft, and 23 ft models
(6)	88356	3/4 lock nut - for the 19 ft, 21 ft, and 23 ft models

2.7 Installing the 31 to 47 ft wing rest

Procedure

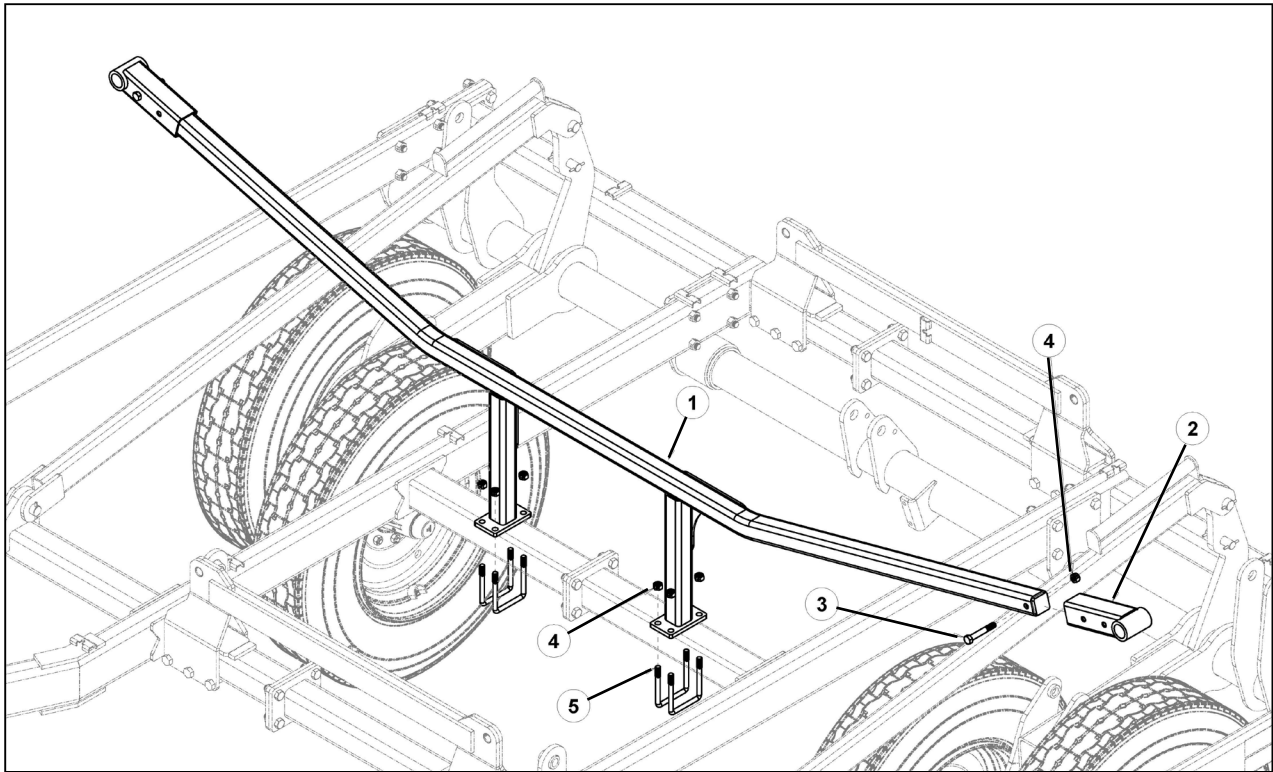


Fig. 8

Install the wing rest as shown.

(1)	360615	Wing Rest
(2)	4000360626	Wing Rest Extension - for the 43 ft to 47 ft models
(3)	88298	5/8 x 4 hex bolt
(4)	88369	5/8 lock nut
(5)	88145	5/8 x 4 x 5-1/4 U-Bolt

3. Assembling the tongue

3.1 Installing the 13 to 23 ft tongue

Procedure

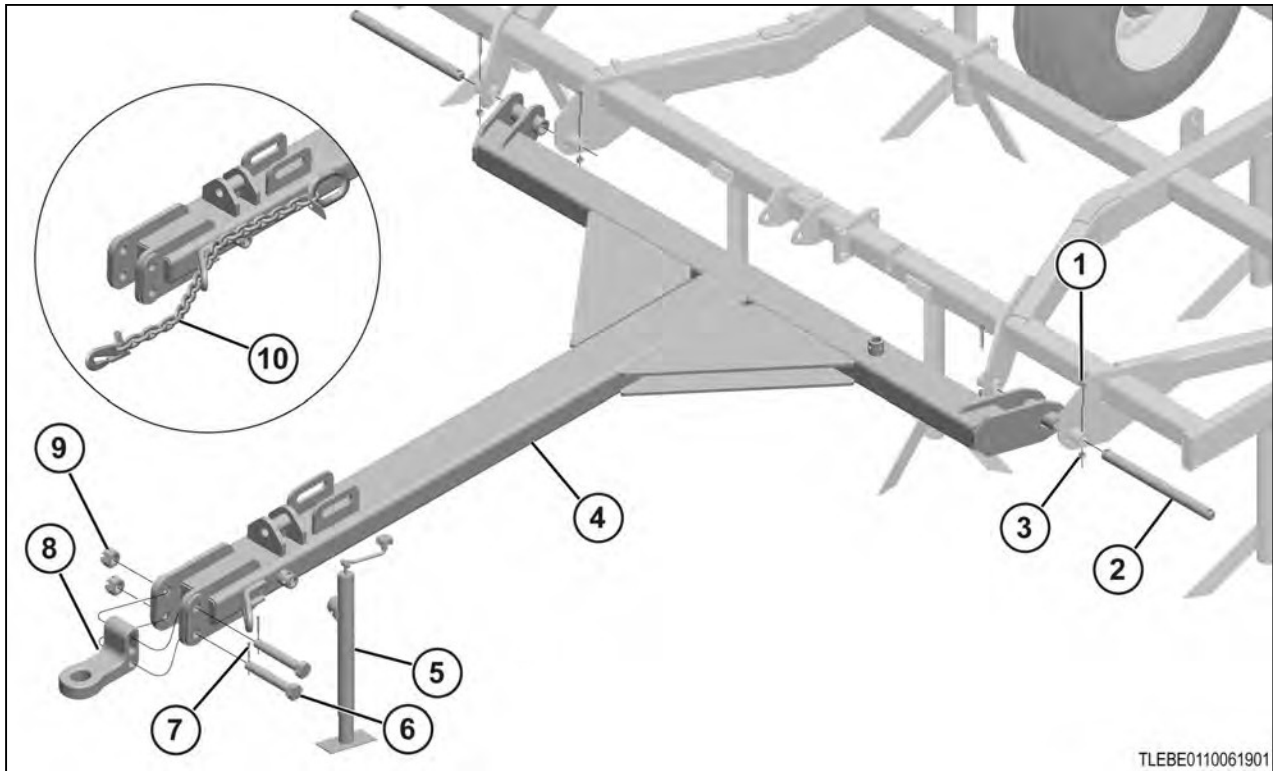


Fig. 9

Install the parts as shown.

(1)	88541	1/2 x 3 hex bolt
(2)	350569	19 in pin
(3)	88363	1/2 lock nut
(4)	352315D	Tongue
(5)	24415	Jack
(6)	246372	1 1/4 x 8 hex bolt
(7)	88133	Cotter pin
(8)	246795	Category 5 hitch
(9)	88350	1 1/4 slotted nut
(10)	24459	Safety chain

3.2 Installing the 25 to 47 ft tongue

Procedure

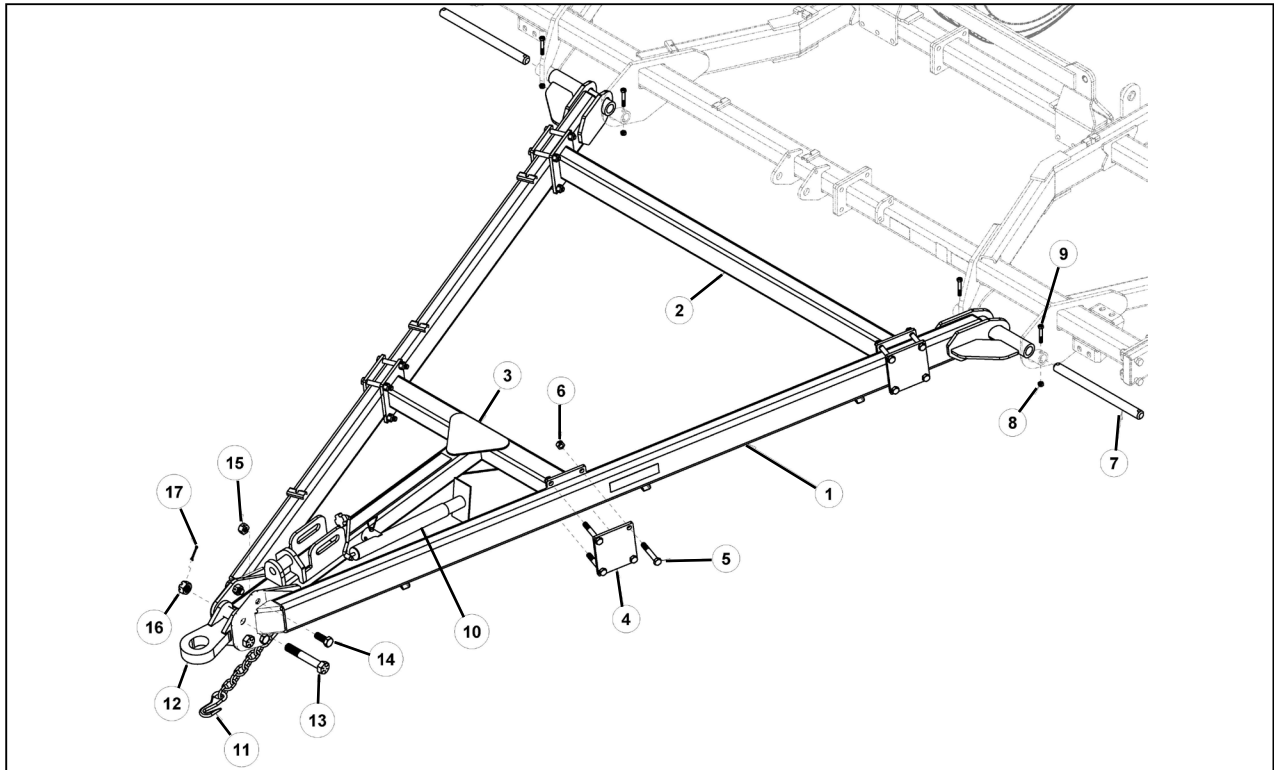


Fig. 10

Install the tongue as shown.

(1)	353997D	3 Sec Pole Brace
(2)	354501	3 Sec Rear Hitch Tube
(3)	353999	3 Sec Hitch T Front Brace
(4)	233232	Stub Plate
(5)	88305	3/4 x 5 hex bolt
(6)	88356	3/4 lock nut
(7)	350569	19" Pin
(8)	88363	1/2 lock nut
(9)	88541	1/2 x 3 hex bolt
(10)	24415	Jack
(11)	24459	Safety chain
(12)	246795	Category 5 hitch
(13)	246372	1-1/4 x 8 hex bolt
(14)	88393	1 x 2-1/2 hex bolt
(15)	88348	1 lock nut
(16)	88350	1-1/4 slotted nut
(17)	88133	Cotter pin

3.3 Installing the utility pole and manual holder - T-Hitch

Procedure

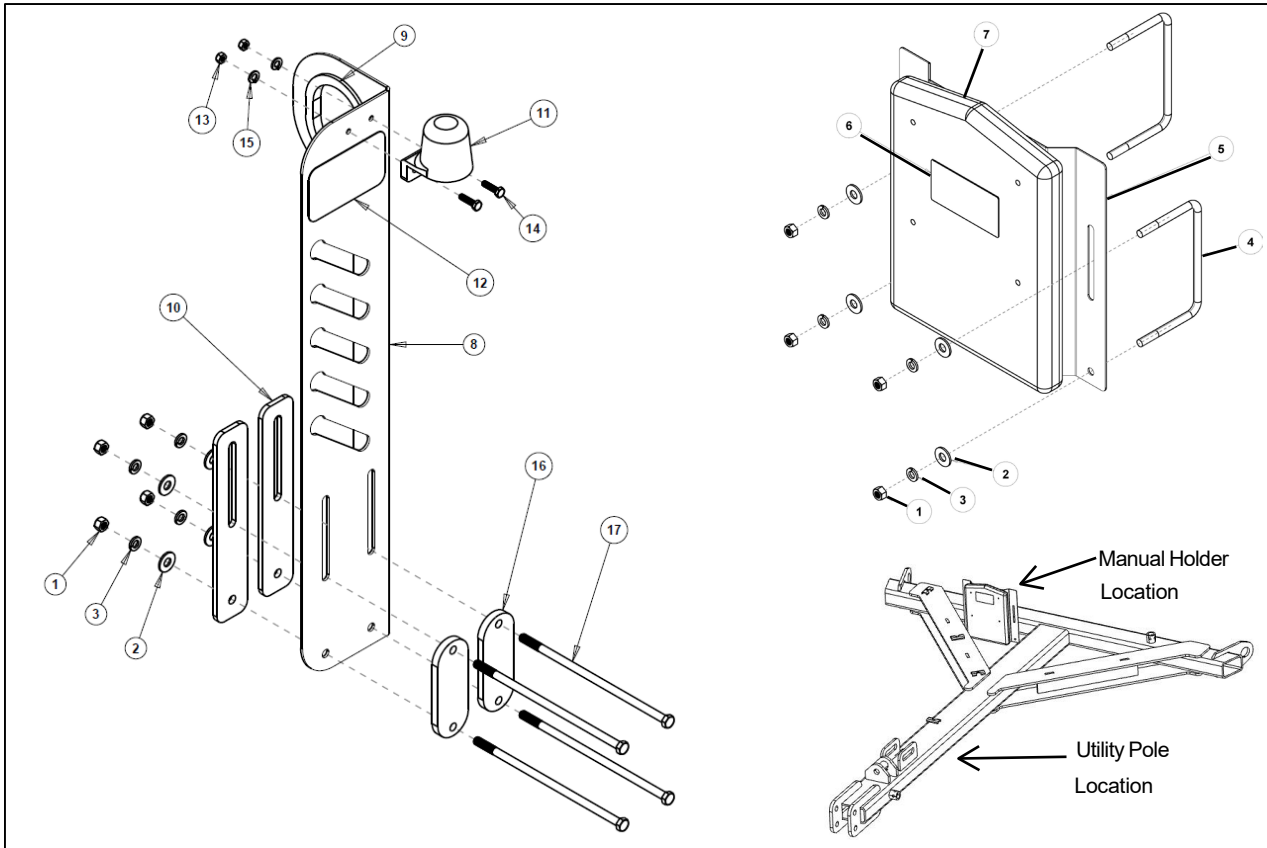


Fig. 11

Install the utility pole and manual holder as shown.

(1)	88103	3/8 hex nut
(2)	88282	3/8 flat washer
(3)	88362	3/8 lock washer
(4)	89358	3/8 x 6 x 3-3/4 U-Bolt
(5)	322801	Manual holder mount
(6)	997861	Decal - read manual
(7)	A64635	Manual case
(8)	30001821	Hydraulic hose bracket
(9)	98231	Weather stripping
(10)	241777	Backing plate
(11)	223329	Plug holder
(12)	334266	Decal - Hose color
(13)	88172	1/4 hex nut
(14)	88203	1/4 x 1 hex bolt
(15)	88262	1/4 lock washer
(16)	353437	2 hole plate
(17)	89418	3/8 x 9-1/2 hex bolt

3.4 Installing the utility pole and manual holder

Procedure

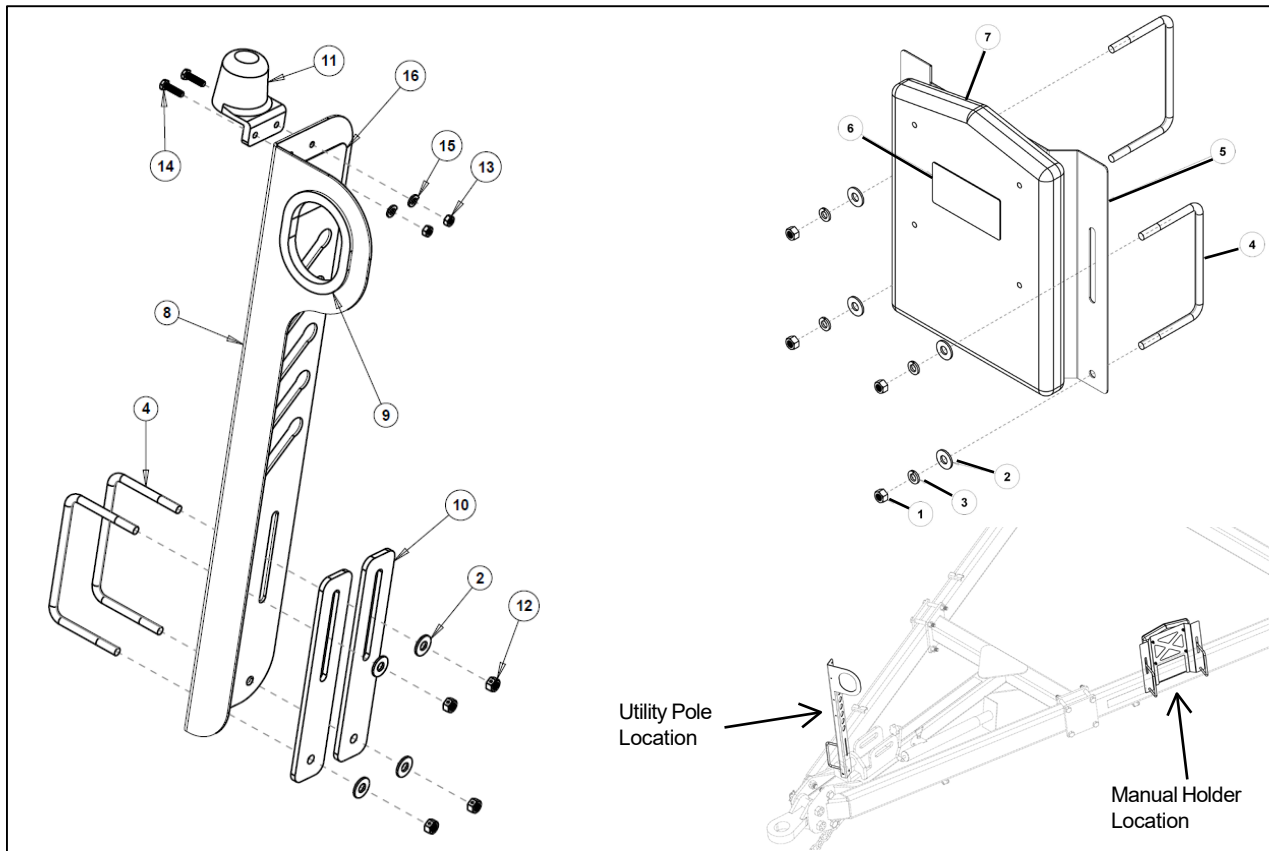


Fig. 12

Install the utility pole and manual holder as shown.

(1)	88103	3/8 hex nut
(2)	88282	3/8 flat washer
(3)	88362	3/8 lock washer
(4)	89358	3/8 x 6 x 3-3/4 U-Bolt
(5)	322801	Manual holder mount
(6)	997861	Decal - read manual
(7)	A64635	Manual case
(8)	30001821	Hydraulic hose bracket
(9)	98231	Weather stripping
(10)	241777	Backing plate
(11)	223329	Plug holder
(12)	88162	3/8 lock nut
(13)	88172	1/4 hex nut
(14)	88203	1/4 x 1 hex bolt
(15)	88262	1/4 lock washer
(16)	334266	Decal - Hose color

4. Installing the shank extension

Procedure

1. See the shank location information for the correct shank locations.

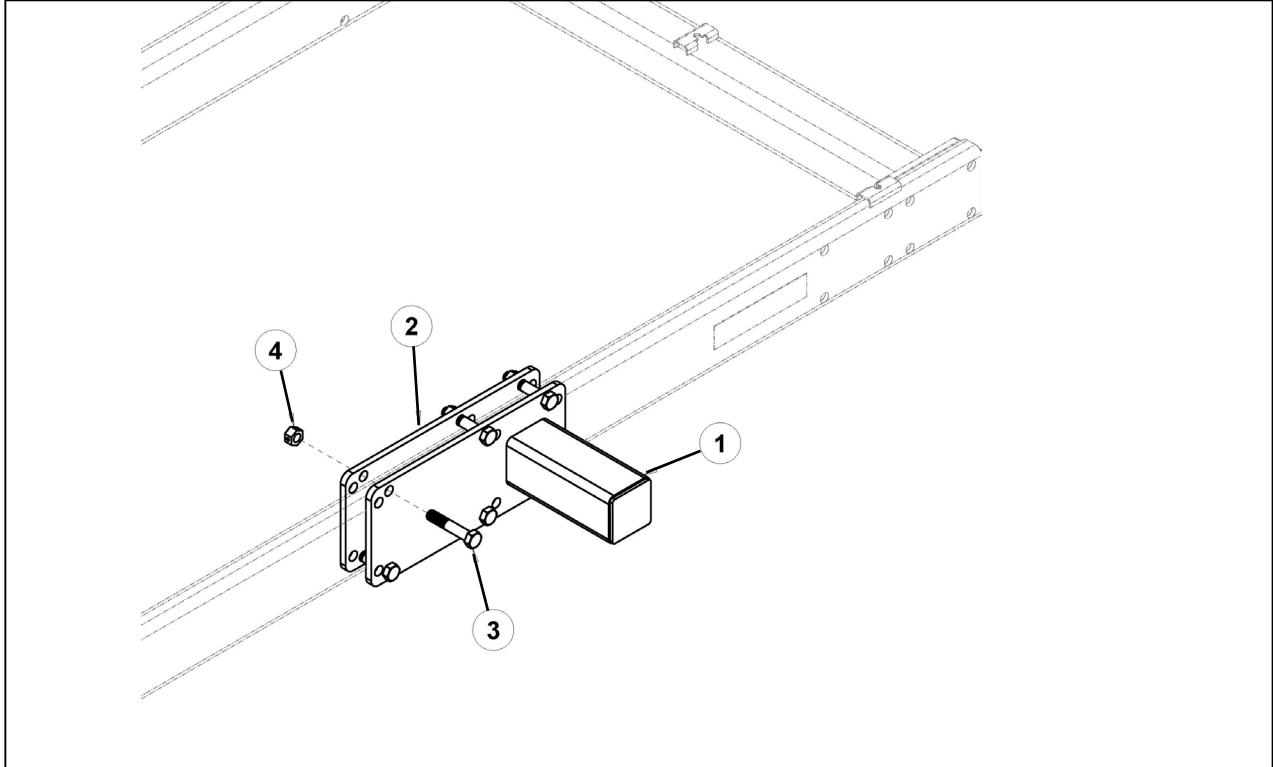


Fig. 13

2. Install the shank extension as shown.

(1)	4000360708	Shank Stub (2x6 frame tube)
	30022717	Shank Stub (2x4 frame tube)
(2)	233264	Shank Stub Plate (2x6 frame tube)
	30022719	Shank Stub Plate (2x4 frame tube)
(3)	88272	3/4 x 4 hex bolt
(4)	88356	3/4 lock nut

5. Installing the wings

5.1 Mounting the 19 to 23 ft wing frame hinges

Procedure

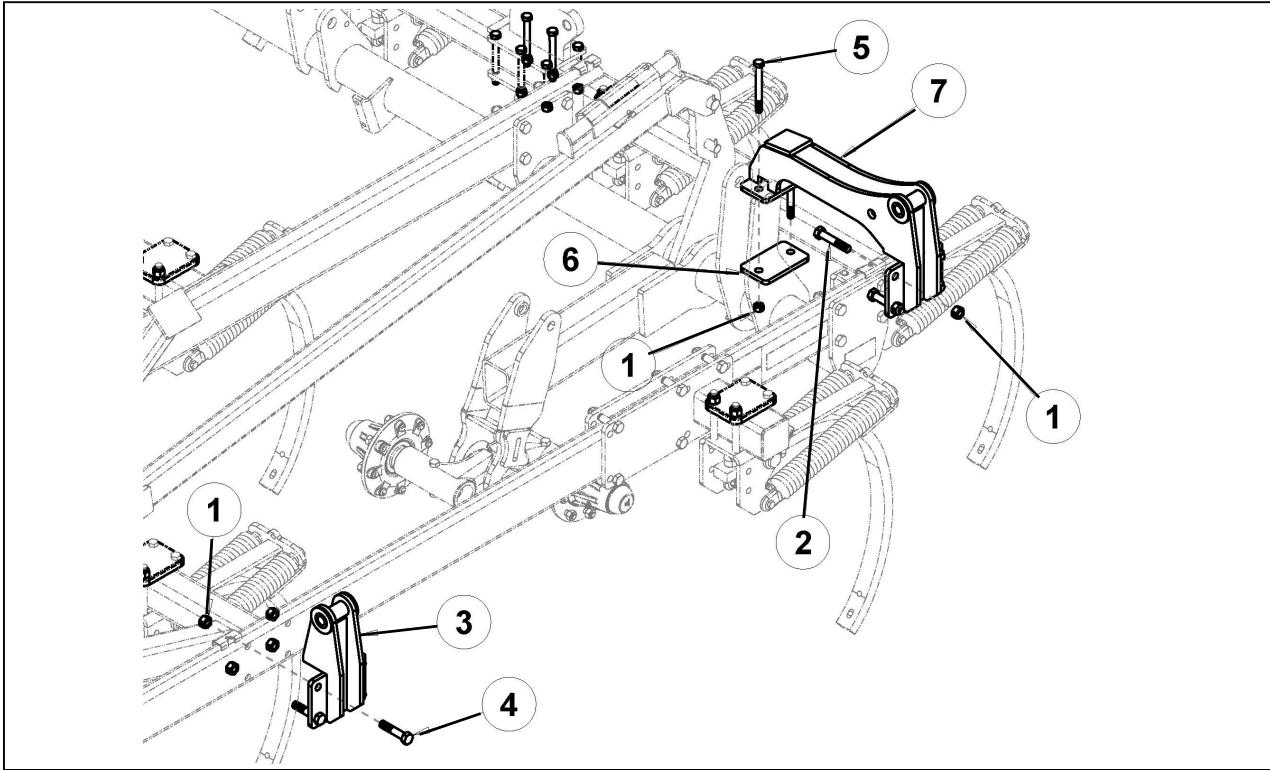


Fig. 14

Install the wing frame hinges as shown.

(1)	88356	3/4 lock nut
(2)	88275	3/4 x 4 hex bolt
(3)	248451	Front hinge mount
(4)	89495	3/4 x 3 1/2 hex bolt
(5)	88947	3/4 x 6 hex bolt
(6)	354809	Rear hinge plate
(7)	354807	Rear hinge mount

5.2 Installing the 19 to 23 ft wing frames - 3 ft wing

Procedure

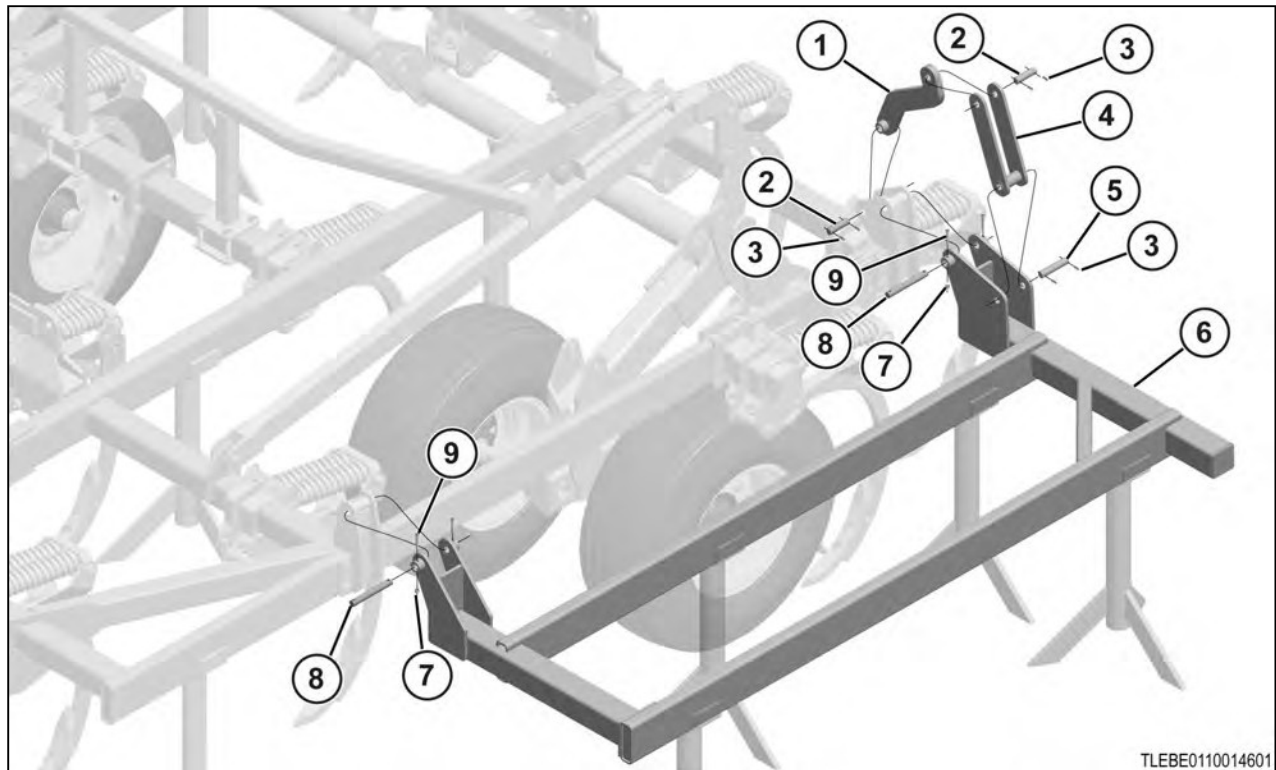


Fig. 15

Install the wing frame as shown.

(1)	350554	Outer wing fold link
(2)	222338	1 x 4 1/8 pin
(3)	42484	1/4 x 2 pin
(4)	350562	Wing fold link
(5)	68033	1 x 6.38 pin
(6)	350549 (right)	Right-hand wing frame - 3 ft
	350564 (left)	Left-hand wing frame - 3 ft
(7)	88162	3/8 lock nut
(8)	69826	1 x 7 1/4 pin
(9)	89012	3/8 x 2 1/2 pin

5.3 Mounting the 25 to 29 ft wing frame hinges

Procedure

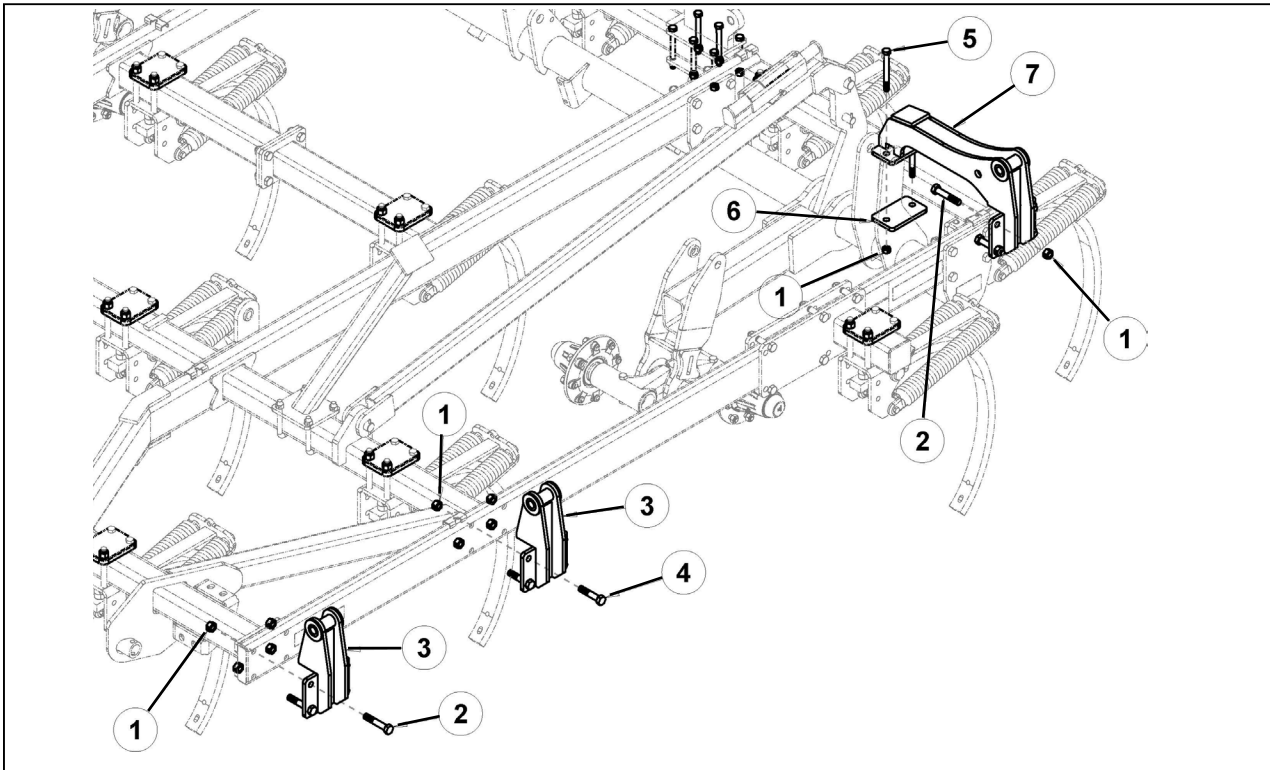


Fig. 16

Install the wing frame hinges as shown.

(1)	88356	3/4 lock nut
(2)	88275	3/4 x 4 hex bolt
(3)	248451	Front hinge mount
(4)	89495	3/4 x 3 1/2 hex bolt
(5)	88947	3/4 x 6 hex bolt
(6)	354809	Rear hinge plate
(7)	354807	Rear hinge mount

5.4 Installing the 25 to 29 ft wing frames - 6 ft wing

Procedure

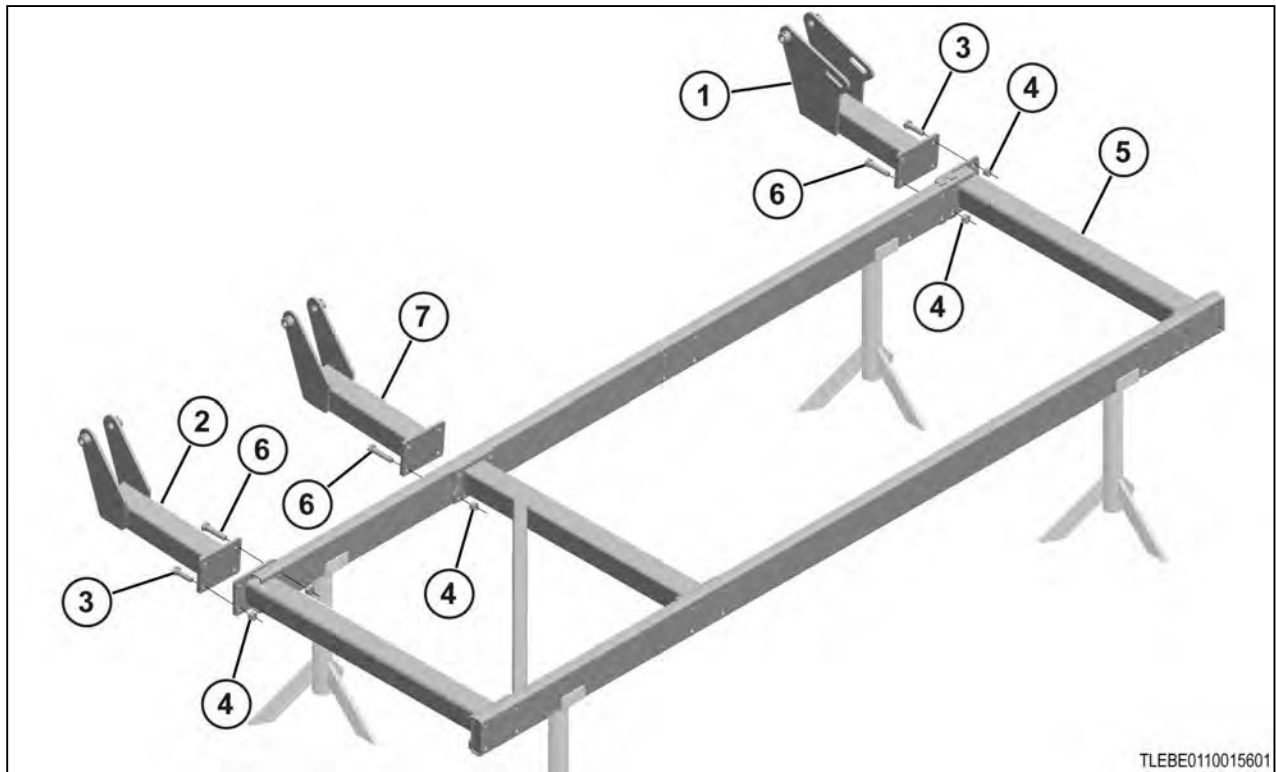


Fig. 17

1. Install the hinges as shown.

(1)	359547	Rear wing hinge - 6 ft
(2)	352333	Front wing hinge - 6ft
(3)	88290	3/4 x 2 hex bolt
(4)	88356	3/4 lock nut
(5)	248443	Wheel well
(6)	88275	3/4 x 4 hex bolt
(7)	352350	Middle wing hinge - 6 ft

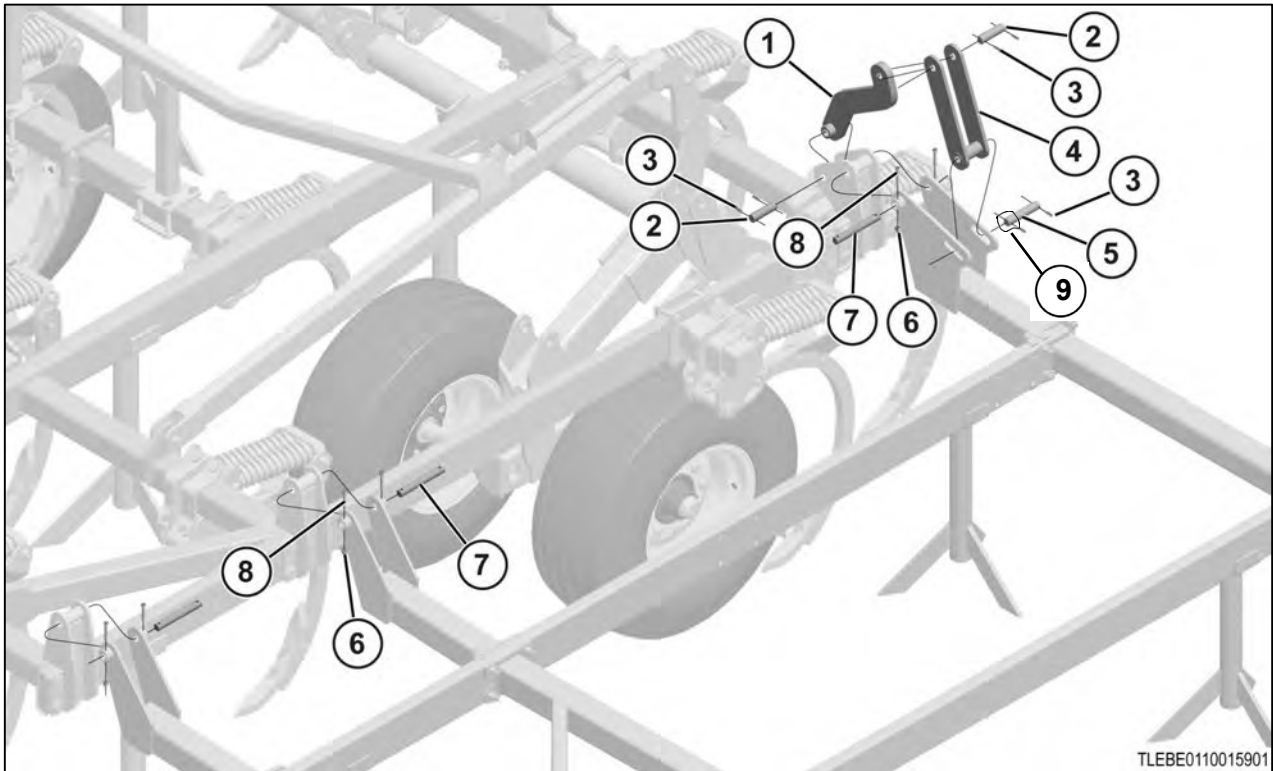


Fig. 18

2. Install the wing frames as shown.

(1)	359546	Outer wing fold link
(2)	222338	1 x 4 1/8 pin
(3)	42484	1/4 x 2 1/4 pin
(4)	350562	Wing fold link
(5)	68033	1 x 6.38 pin
(6)	88162	3/8 lock nut
(7)	354828	1 x 7.44 pin
(8)	89012	3/8 x 2 1/2 pin
(9)	88196	1" flat washer

5.5 Mounting the 31 to 47 ft wing frame hinges

Procedure

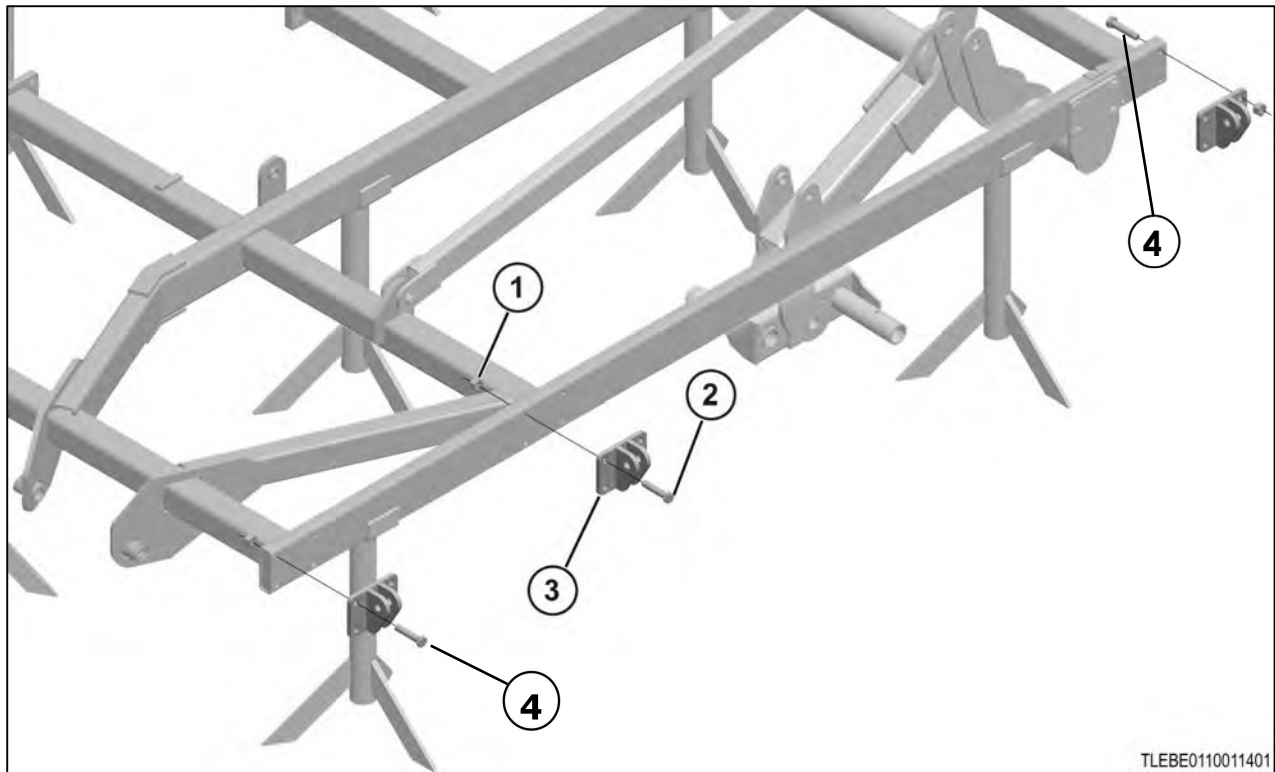


Fig. 19

Install the wing frame hinges as shown.

(1)	88356	3/4 lock nut
(2)	89495	3/4 x 3 1/2 hex bolt
(3)	248425	Outer wing hinge
(4)	88275	3/4 x 4 hex bolt

5.6 Installing the 31 to 41 ft wing frames - 9 ft wing

Procedure

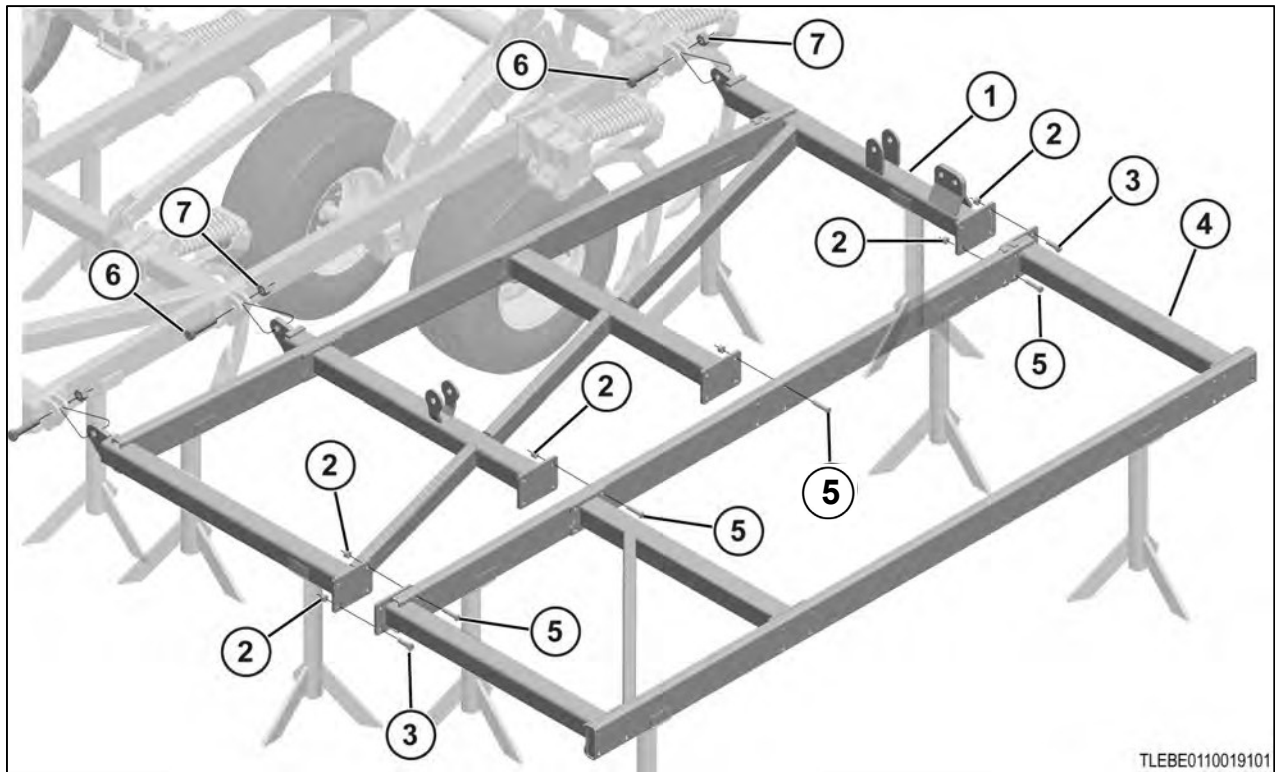


Fig. 20

Install the wing frames as shown.

(1)	248380	Right-hand inner wing - 9 ft
	248446	Left-hand inner wing - 9 ft
(2)	88356	3/4 lock nut
(3)	88290	3/4 x 2 hex bolt
(4)	248443	Wheel well
(5)	88275	3/4 x 4 hex bolt
(6)	88580	1 x 4 1/2 hex bolt
(7)	88348	1 lock nut

5.7 Installing the 37 to 47 ft wing frames - 12 ft wing

Procedure

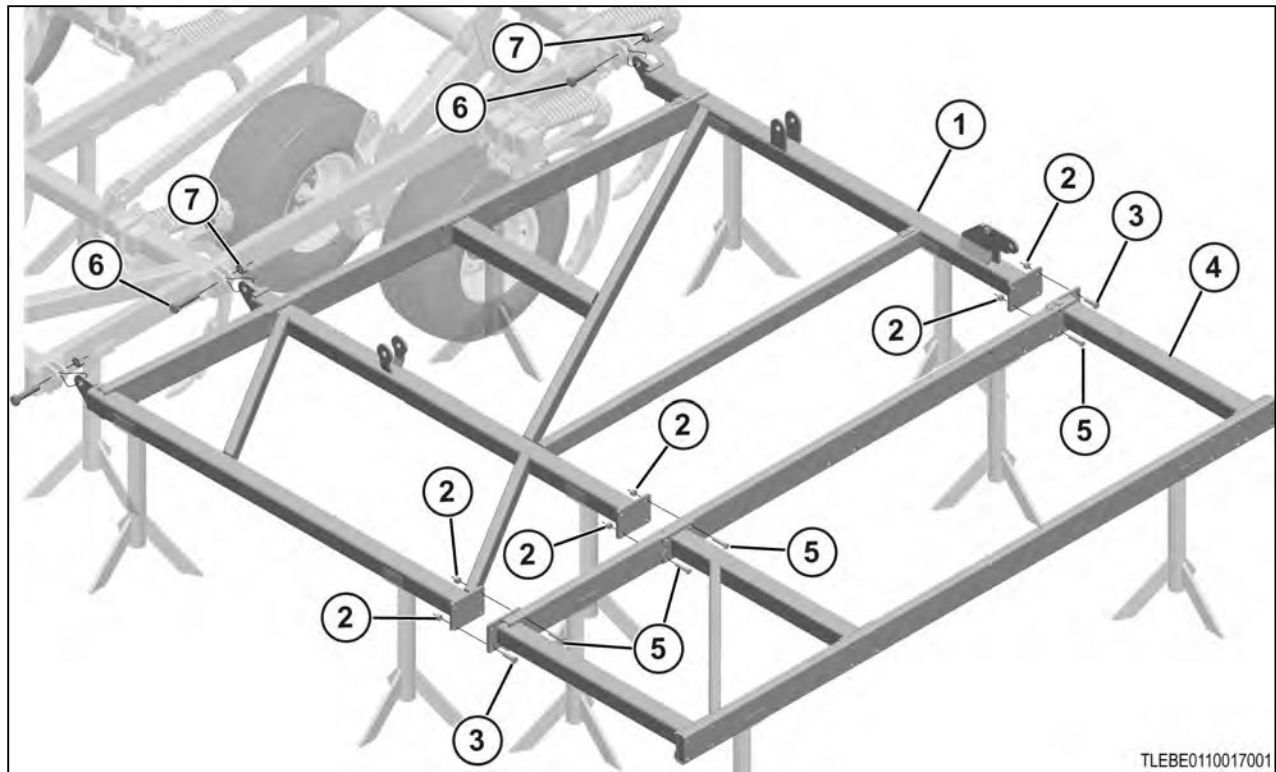


Fig. 21

Install the wing frames as shown.

(1)	248438	Right-hand inner wing - 12 ft
	248430	Left-hand inner wing - 12 ft
(2)	88356	3/4 lock nut
(3)	88290	3/4 x 2 hex bolt
(4)	248443	Wheel well
(5)	88275	3/4 x 4 hex bolt
(6)	88580	1 x 4 1/2 hex bolt
(7)	88348	1 lock nut

5.8 Mounting the 31 to 47 ft outer wing frame hinges

Procedure

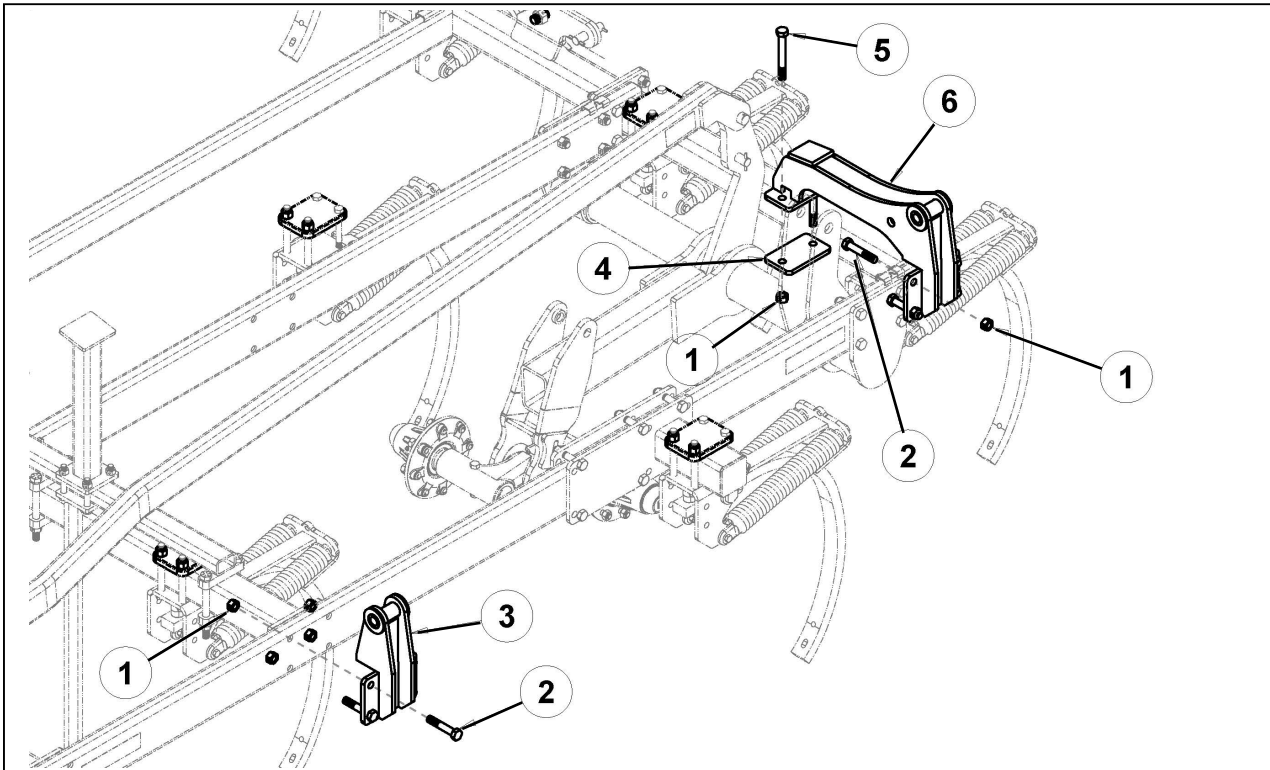


Fig. 22

Install the wing frame hinges as shown.

(1)	88356	3/4 lock nut
(2)	88275	3/4 x 4 hex bolt
(3)	248451	Front hinge mount
(4)	354809	Rear hinge plate
(5)	88947	3/4 x 6 hex bolt
(6)	354807	Rear hinge mount

5.9 Installing the 31 to 47 ft outer wing frames - 3 ft wing

Procedure

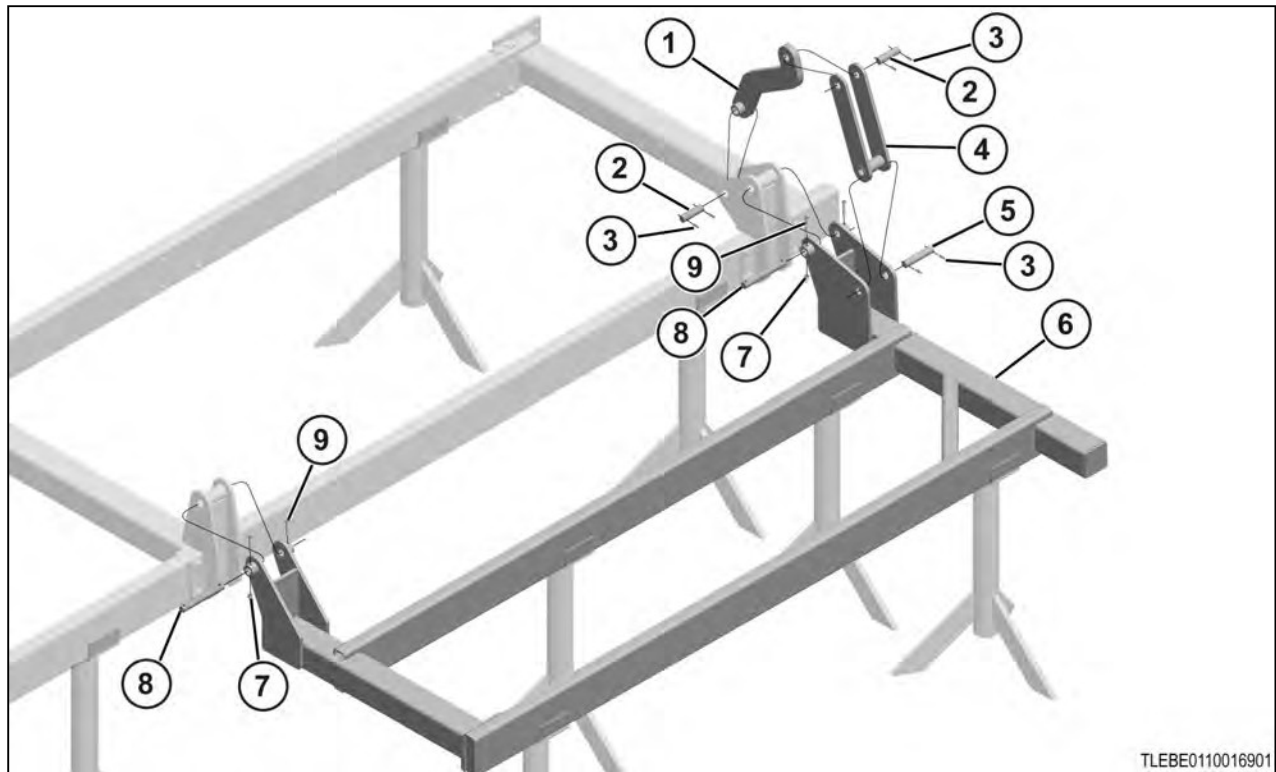


Fig. 23

Install the wing frames as shown.

(1)	350554	Outer wing fold link
(2)	222338	1 x 4 1/8 pin
(3)	42484	1/4 x 2 pin
(4)	350562	Wing fold link
(5)	68033	1 x 6.38 pin
(6)	350549	Right-hand wing frame - 3 ft
	350564	Left-hand wing frame - 3 ft
(7)	88162	3/8 lock nut
(8)	354828	1 x 7.44 pin
(9)	89012	3/8 x 2 1/2 pin

6. Installing shanks

6.1 Installing the 650 lb shanks

Procedure

1. See the shank location information for the correct shank locations.

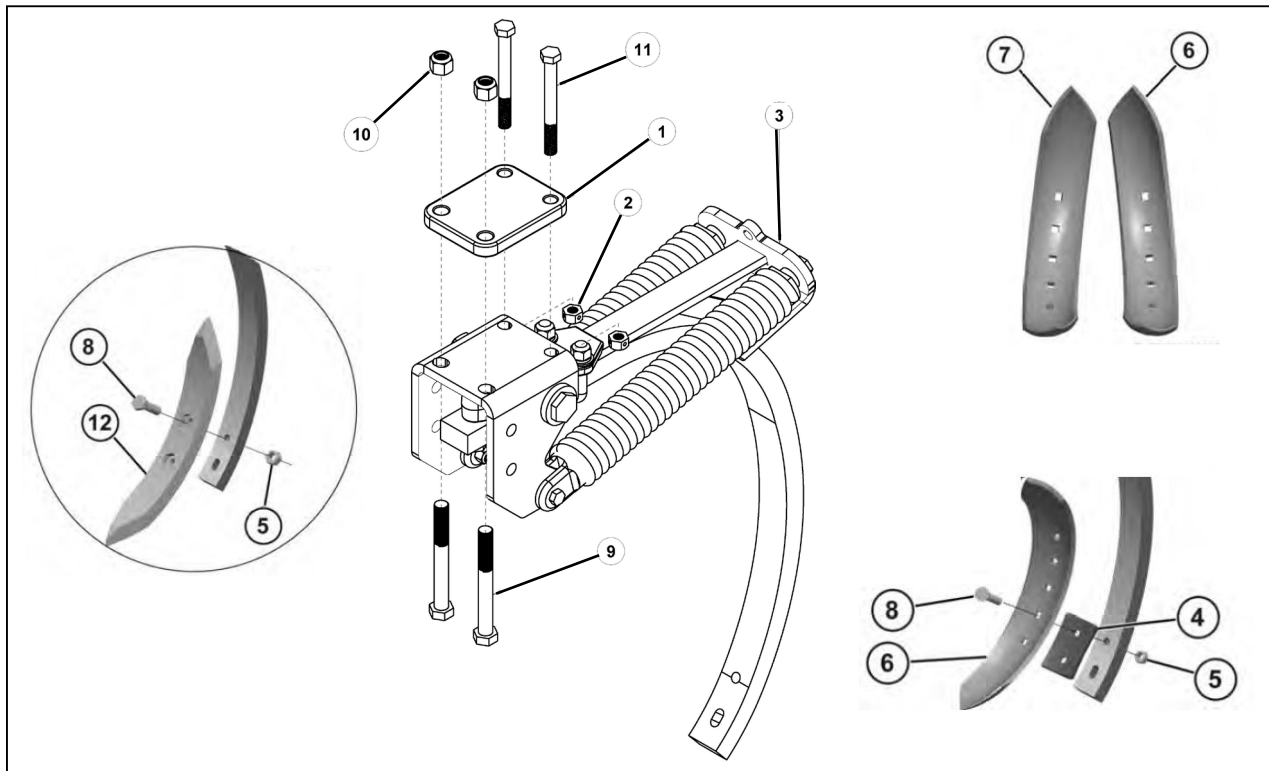


Fig. 24

2. Install the shanks as shown.

(1)	234084	Top plate
(2)	88369	5/8 lock nut
(3)	351664	Shank assembly
(4)	598CA-R	Twist adapter - right-hand side
	598CA-L	Twist adapter - left-hand side
(5)	88346	1/2 nut
(6)	598C-R	3 in twist - right-hand side
(7)	598C-L	3 in twist - left-hand side
(8)	89468	1/2 x 2 1/2 bolt
(9)	89385	3/4 x 6 1/2 hex bolt
(10)	89386	3/4 nut
(11)	88933	5/8 x 6 hex bolt
(12)	247912	7/8 x 2 x 19 1/2 spike

6.2 Installing the 1000 lb shanks

Procedure

1. See the shank location information for the correct shank locations.

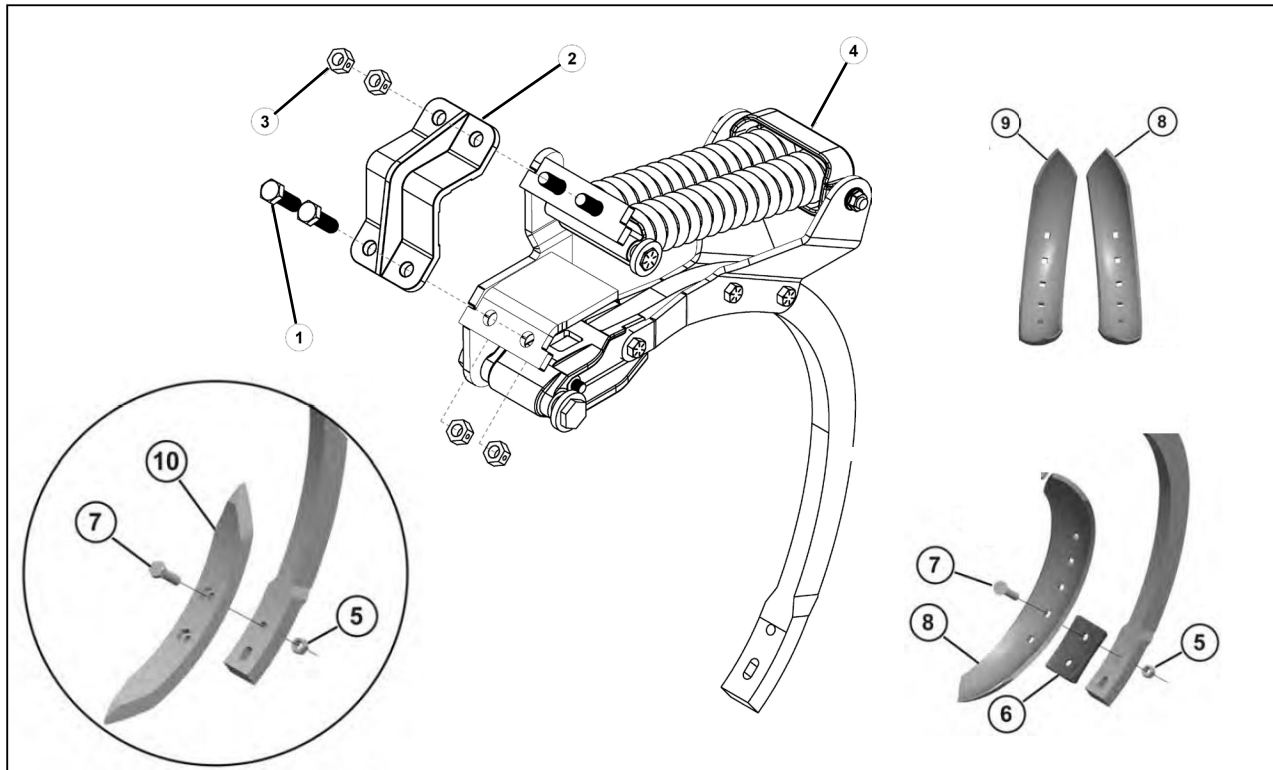


Fig. 25

2. Install the shanks as shown.

(1)	89433	3/4 x 2 1/4 hex bolt
(2)	235768	Bracket
(3)	88356	3/4 lock nut
(4)	351511	Shank assembly
(5)	88346	1/2 nut
(6)	598CA-R	Twist adapter - right-hand side
	598CA-L	Twist adapter - left-hand side
(7)	89468	1/2 x 2 1/2 bolt
(8)	598C-R	3 in twist - right-hand side
(9)	598C-L	3 in twist - left-hand side
(10)	247912	7/8 x 2 x 19 1/2 spike

7. Installing the wing lifts

Procedure

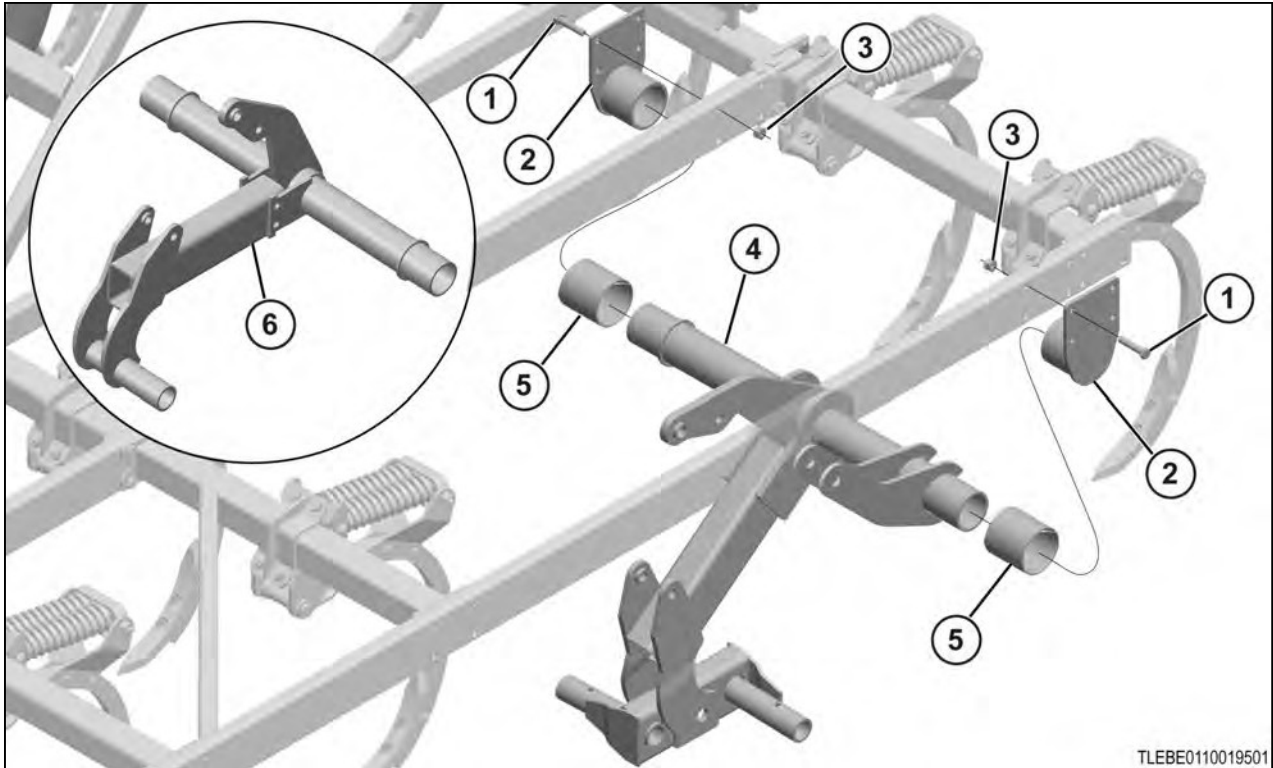


Fig. 26

Install the wing lifts as shown.

(1)	89495	3/4 x 3 1/2 hex bolt
(2)	248409	Bearing cap
(3)	88356	3/4 lock nut
(4)	351759	Right-hand lift assembly
	351760	Left-hand lift assembly
(5)	351762	Plastic bearing
(6)	352336	Right-hand single lift assembly
	325341	Left-hand single lift assembly

7.1 Installing the wing lift hubs and wheels

Procedure

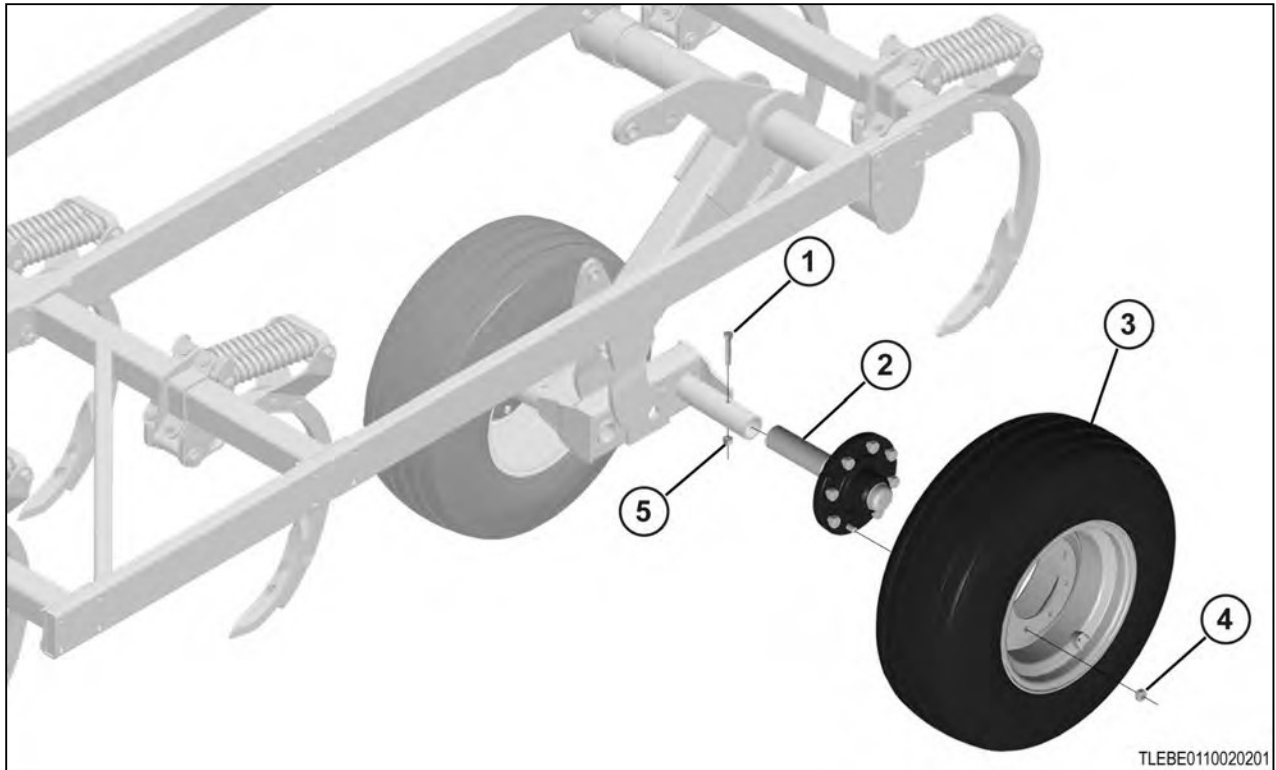


Fig. 27

Install the parts as shown.

(1)	88298	5/8 x 4 hex bolt
(2)	247987	Hub and spindle
(3)	236612 (used) 353366 (new)	Wheel assembly
(4)	W103636	Stud nut
(5)	88369	5/8 lock nuts

8. Mounting the front lift tube

Procedure

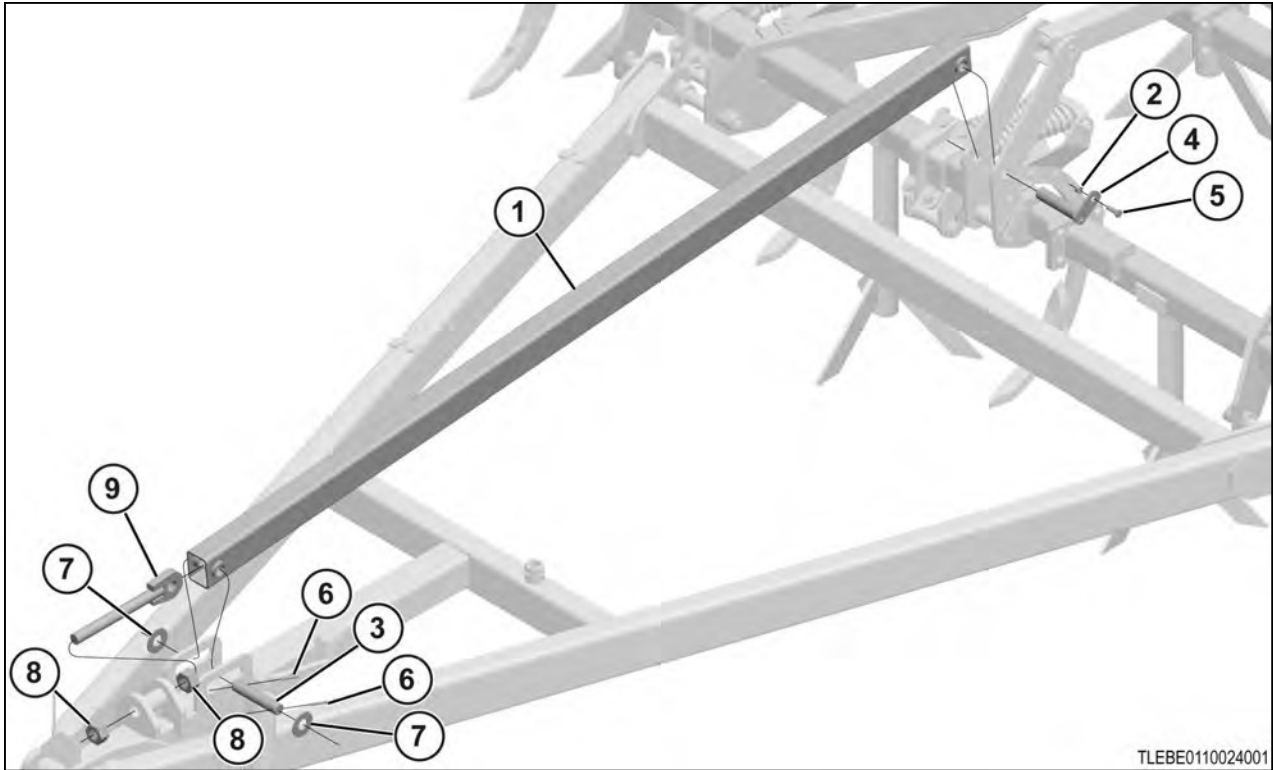


Fig. 28

Install the front lift tube as shown.

(1)	350511	Front lift tube
(2)	88363	1/2 lock nut
(3)	68030	1-1/4 x 6.13 pin
(4)	233357	1 1/4 x 5 3/16 Pivot pin
(5)	88679	1/2 x 2 hex bolt
(6)	42484	1/4 x 2 1/4 pin
(7)	88602	1 1/4 washer
(8)	88613	1 1/4 hex nut
(9)	350515	Front adjust rod

9. Mounting the rear lift tube

Procedure

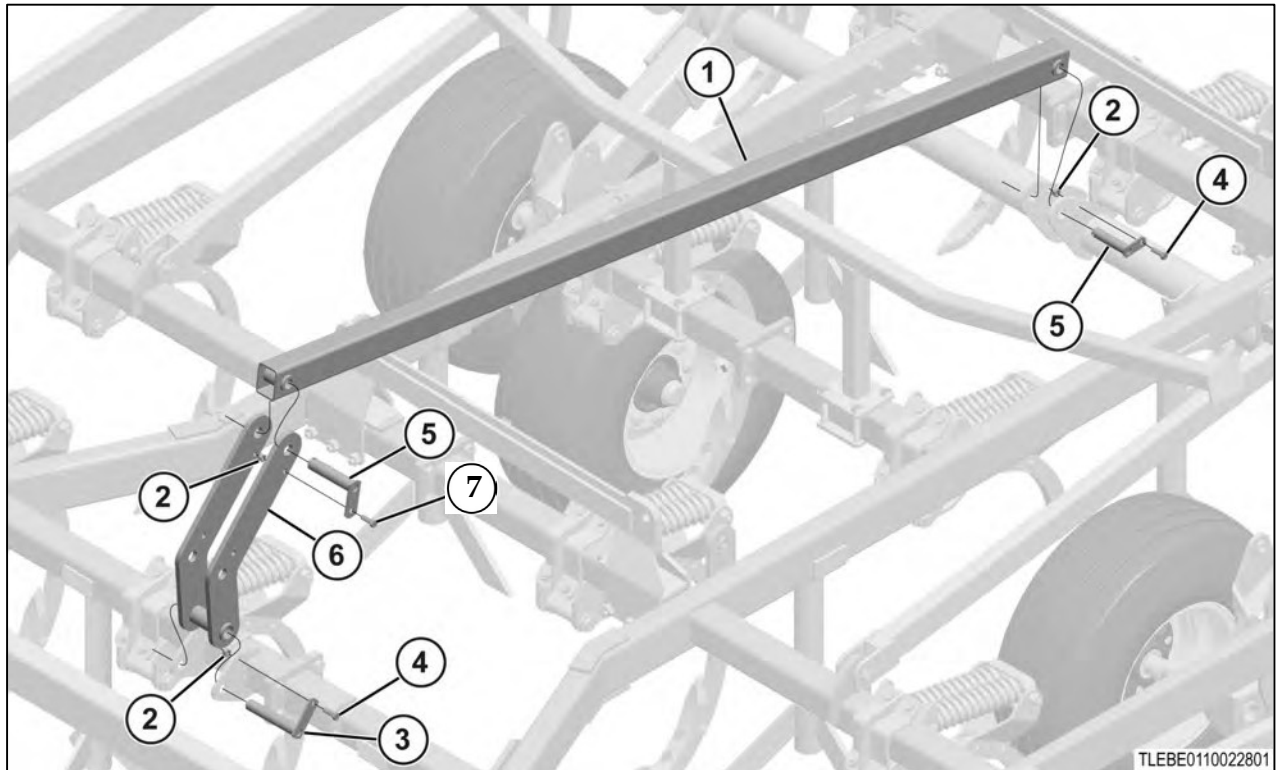


Fig. 29

Install the rear lift tube as shown.

(1)	350506	Rear lift tube
(2)	88363	1/2 lock nut
(3)	334070	Pivot pin
(4)	88475	1/2 x 1 1/2 hex bolt
(5)	233357	1 1/4 x 5 3/16 linkage pin
(6)	333377	Level lift link
(7)	88679	1/2 x 2 hex bolt

10. Installing the frame tie straps

12.1 Installing the 31 to 47 ft center frame strap - level lift hitch

Procedure

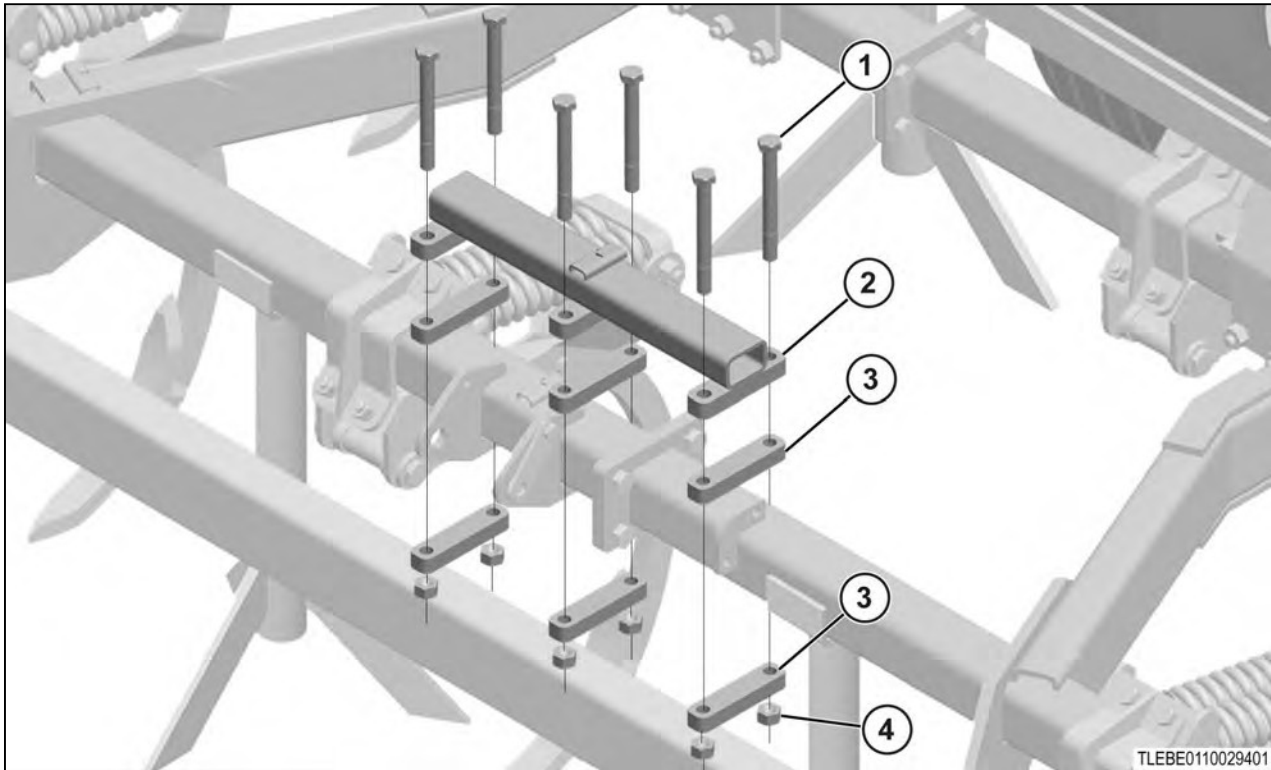


Fig. 30

Install the parts as shown.

(1)	89408	3/4 x 8 hex bolt
(2)	353447	Frame strap
(3)	352367	Mount plate
(4)	88356	3/4 lock nut

10.2 Installing the 37 to 47 ft inner wing frame strap

Procedure

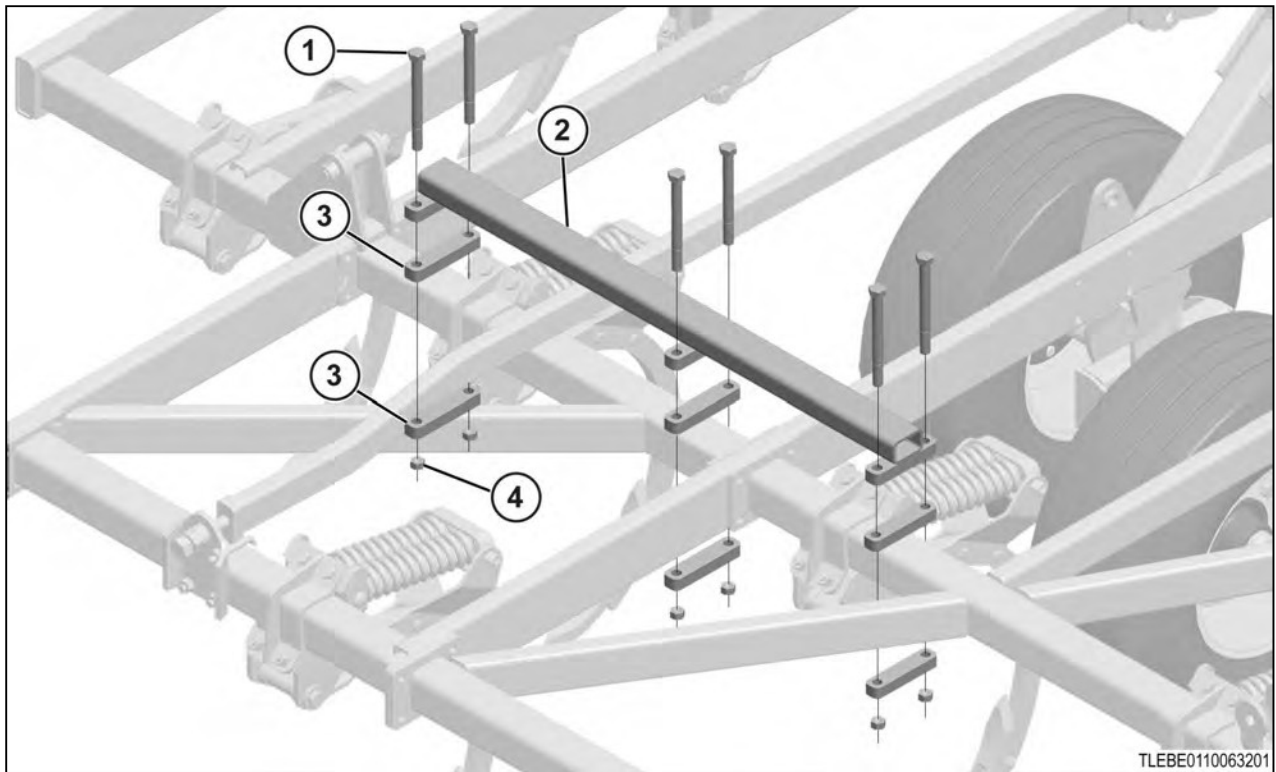


Fig. 31

Install the inner wing frame strap as shown.

(1)	89408	3/4 x 8 hex bolt
(2)	352366	Frame brace tube
(3)	352367	Mount plate
(4)	88356	3/4 lock nut

11. Installing the 37 to 47 ft outer wing rest

Procedure

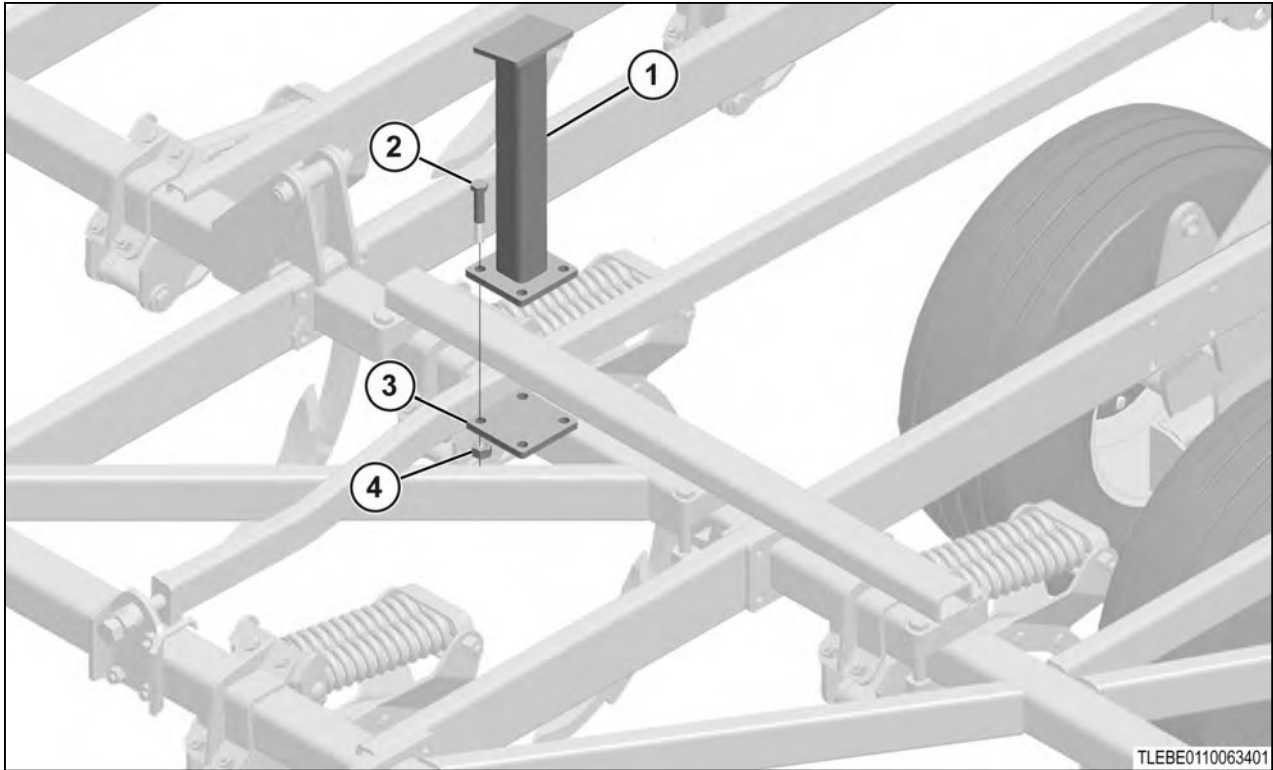


Fig. 32

Install the outer wing rest as shown.

(1)	353449	Wing rest - outer wing
(2)	88298	5/8 x 4 hex bolt
(3)	353965	Plate
(4)	88369	5/8 lock nut

12. Installing the fold brackets

12.1 Mounting the 31 to 41 ft wing fold brackets - 9 ft wing

Procedure

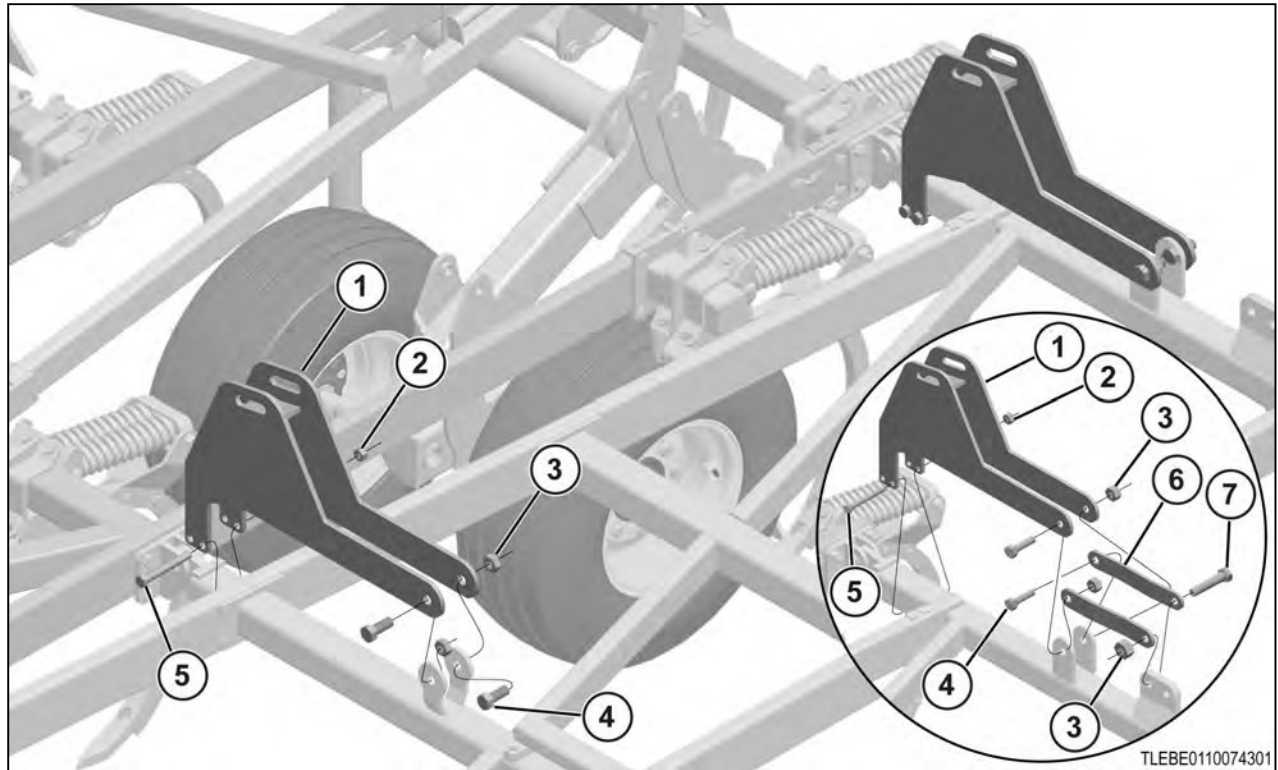


Fig. 33

Install the wing fold brackets as shown.

(1)	350540	Wing fold bracket
(2)	88356	3/4 lock nut
(3)	88348	1 lock nut
(4)	88393	1 x 2 1/2 hex bolt
(5)	88947	3/4 x 6 hex bolt
(6)	351765	Wing link
		NOTE: The wing link is only used when a 3 ft outer wing is installed.
(7)	88447	1 x 3 1/2 hex bolt

12.2 Mounting the 37 to 47 ft wing fold brackets - 12 ft wing

Procedure

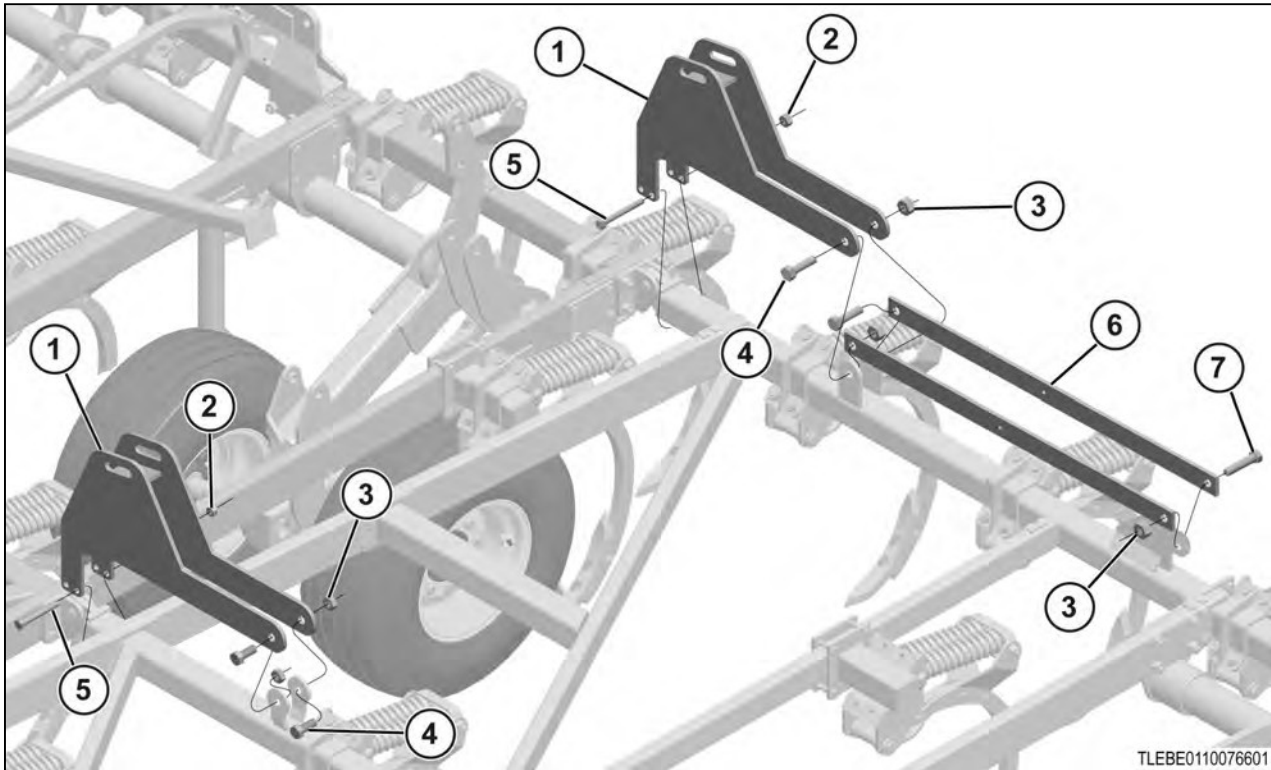


Fig. 34

Install the wing fold brackets as shown.

(1)	350540	Wing fold bracket
(2)	88356	3/4 lock nut
(3)	88348	1 lock nut
(4)	88393	1 x 2 1/2 hex bolt
(5)	88947	3/4 x 6 hex bolt
(6)	350576	Wing tie strap NOTE: The wing tie strap is only used when a 3 ft outer wing is installed.
(7)	88447	1 x 3 1/2 hex bolt

13. Installing the wing mast tubes

Procedure

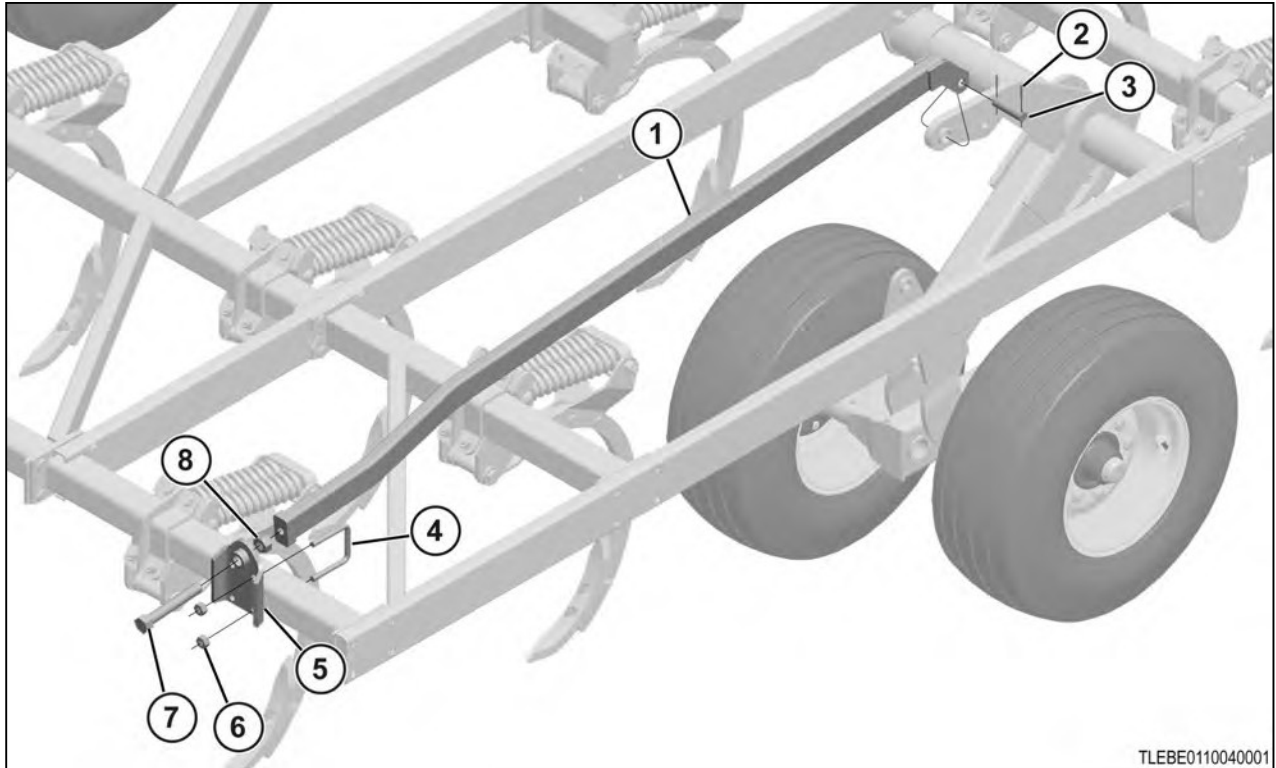
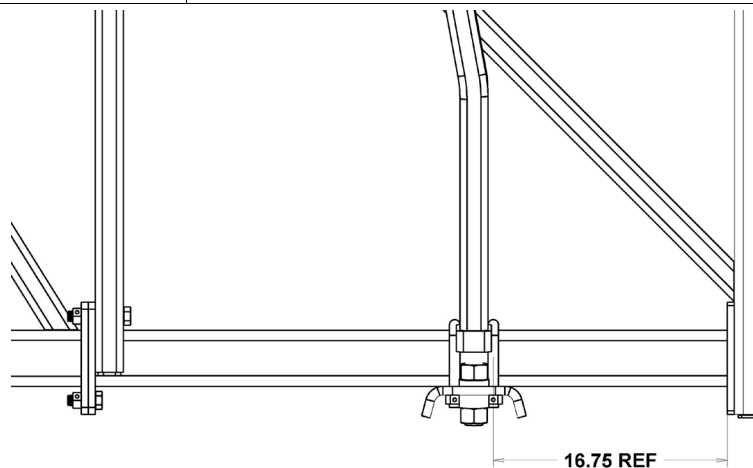


Fig. 35

Install the wing mast tube as shown.

(1)	248426	Right-hand wing mast tube
	352358	Left-hand wing mast tube
(2)	42484	1/4 x 2 1/4 pin
(3)	67854	1 1/4 x 4 1/2 pin
(4)	A65274	3/4 x 5-1/2 x 4-1/16 U-bolt
(5)	350500	Wing mast anchor
(6)	88356	3/4 lock nut
(7)	69799	Adjuster rod
(8)	88622	1 1/4 hex nut



14. Installing the single point depth control assembly

14.1 Mounting the single point depth control valve

Procedure

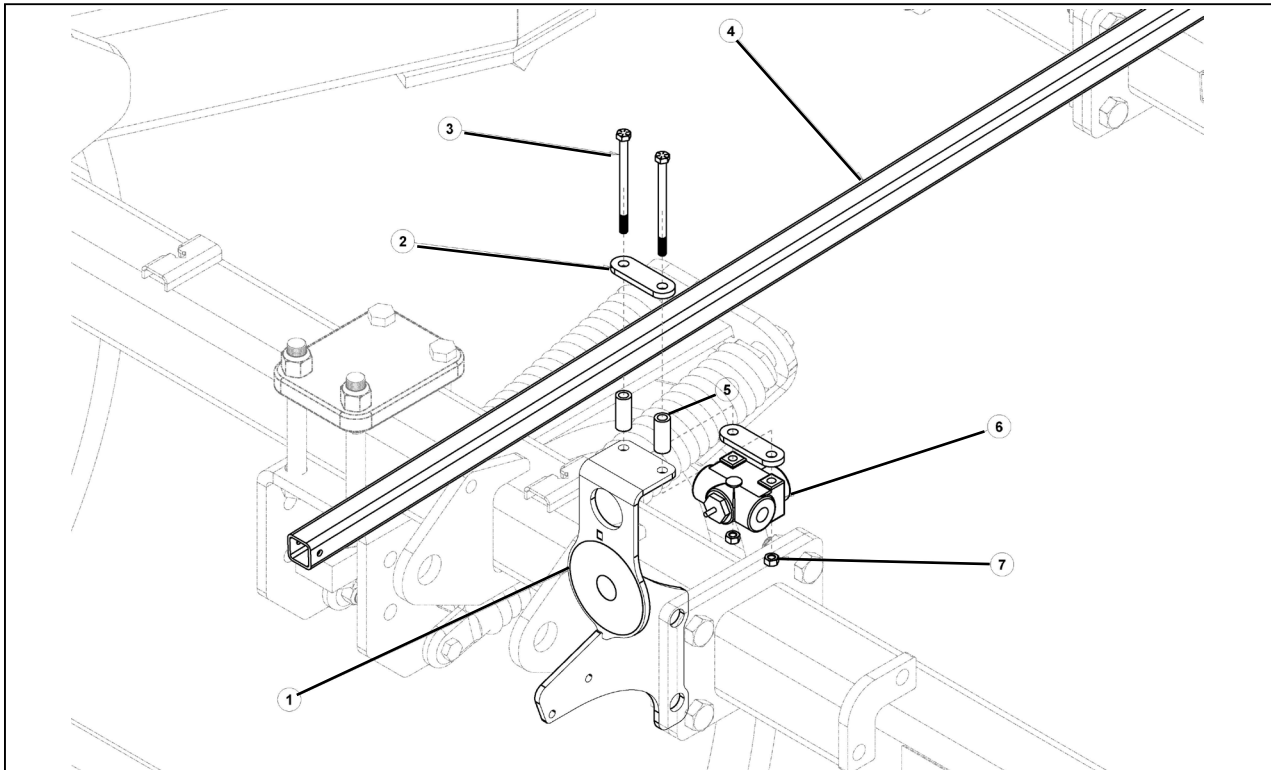


Fig. 36

Install the single point depth control valve as shown.

(1)	4000360661	Single point bracket (decaled)
(2)	238636	Valve spacer
(3)	88812	5/16 x 4-1/2 hex bolt
(4)	241488	Single point inner tube
(5)	238637	Spacer tube
(6)	247429	DCV valve
(7)	88540	5/16 lock nut

14.2 Mounting the front of the single point depth control

Procedure

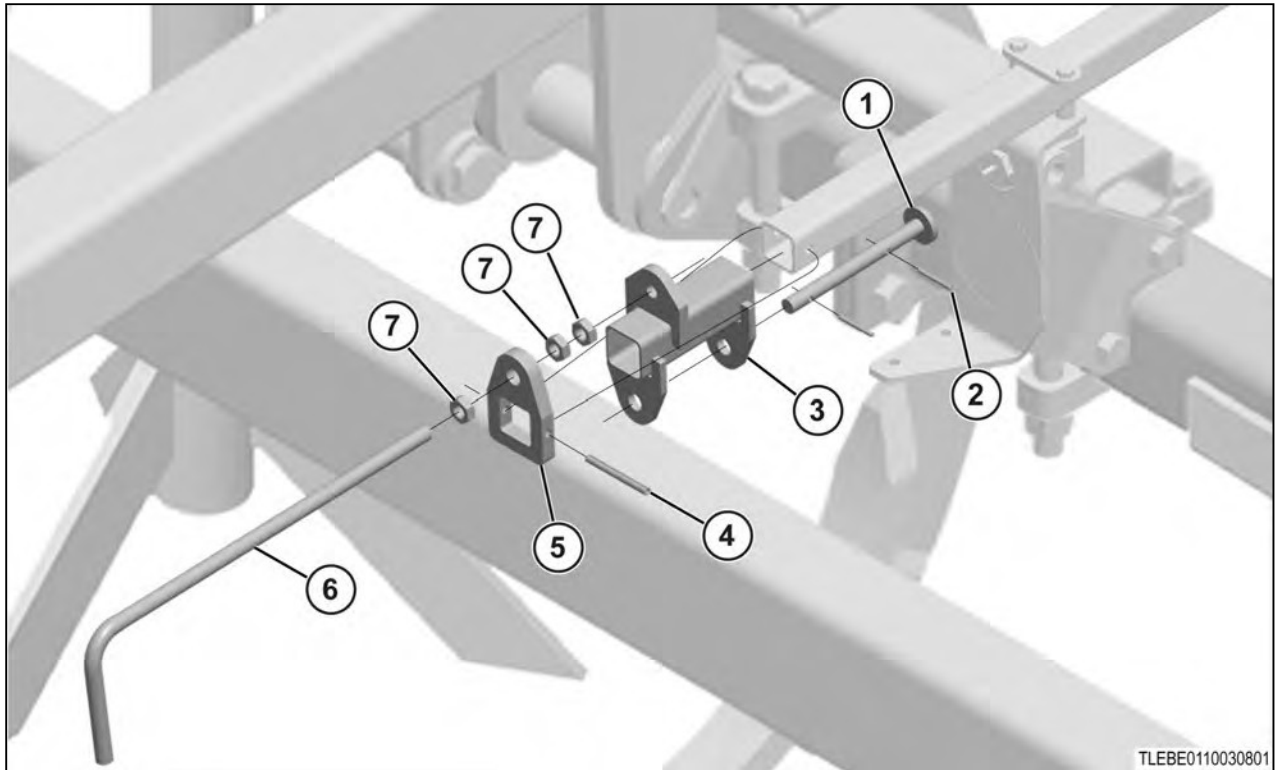


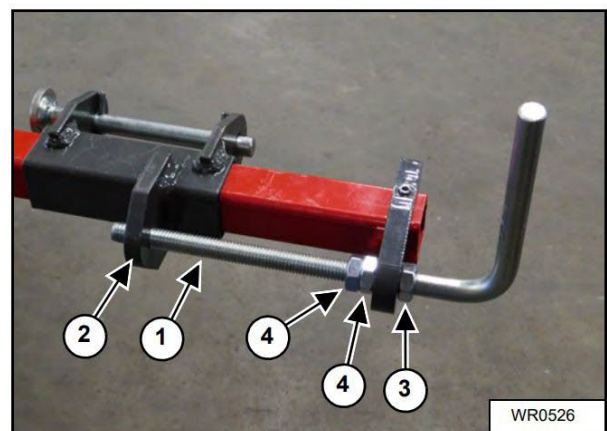
Fig. 37

Install the parts as shown.

(1)	222180	Spring pin
(2)	89078	3/16 x 1 3/4 pin
(3)	222111	Slide adjust
(4)	88767	1/4 x 2 1/2 pin
(5)	222107	Adjust ear
(6)	222182	Adjust crank
(7)	88561	1/2 jam nut

Screw the 222182 adjust crank (1) into the slide bracket (2) using three 88561 nuts (3) as shown.

NOTE: Bottom the nut (3) out on the threads. The two inner nuts (4) are positioned forward as shown. The handle must rotate freely when the inner nuts (4) are tightened against each other.



14.3 Mounting the rear of the single point depth control

Procedure

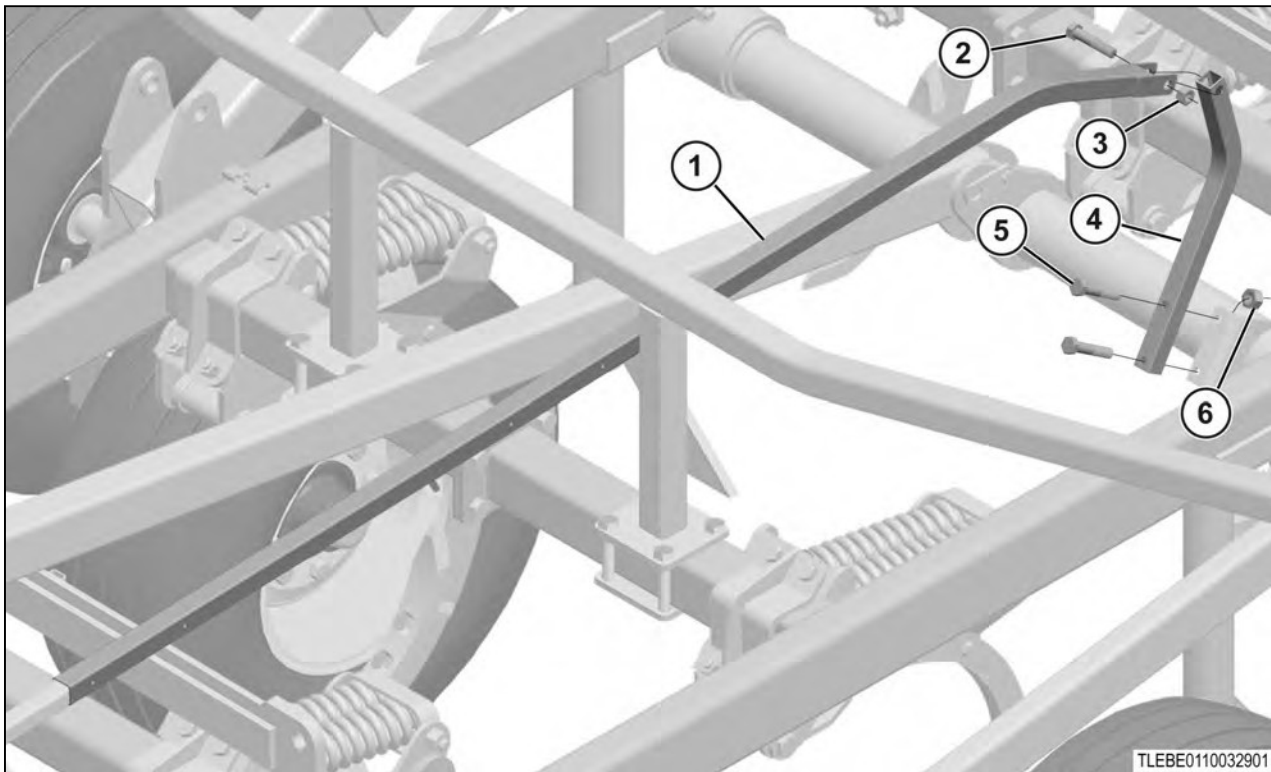


Fig. 38

Install the parts as shown.

(1)	241487	Single point bent tube
(2)	88408	5/8 x 3 hex bolt
(3)	88369	5/8 lock nut
(4)	238652	Single point short tube
(5)	88825	1/2 x 2 1/4 hex bolt
(6)	88363	1/2 lock nut

15. Installing the ratchet adjust gauge wheels

15.1 Installing the gauge wheel mount - ratchet adjust

Procedure

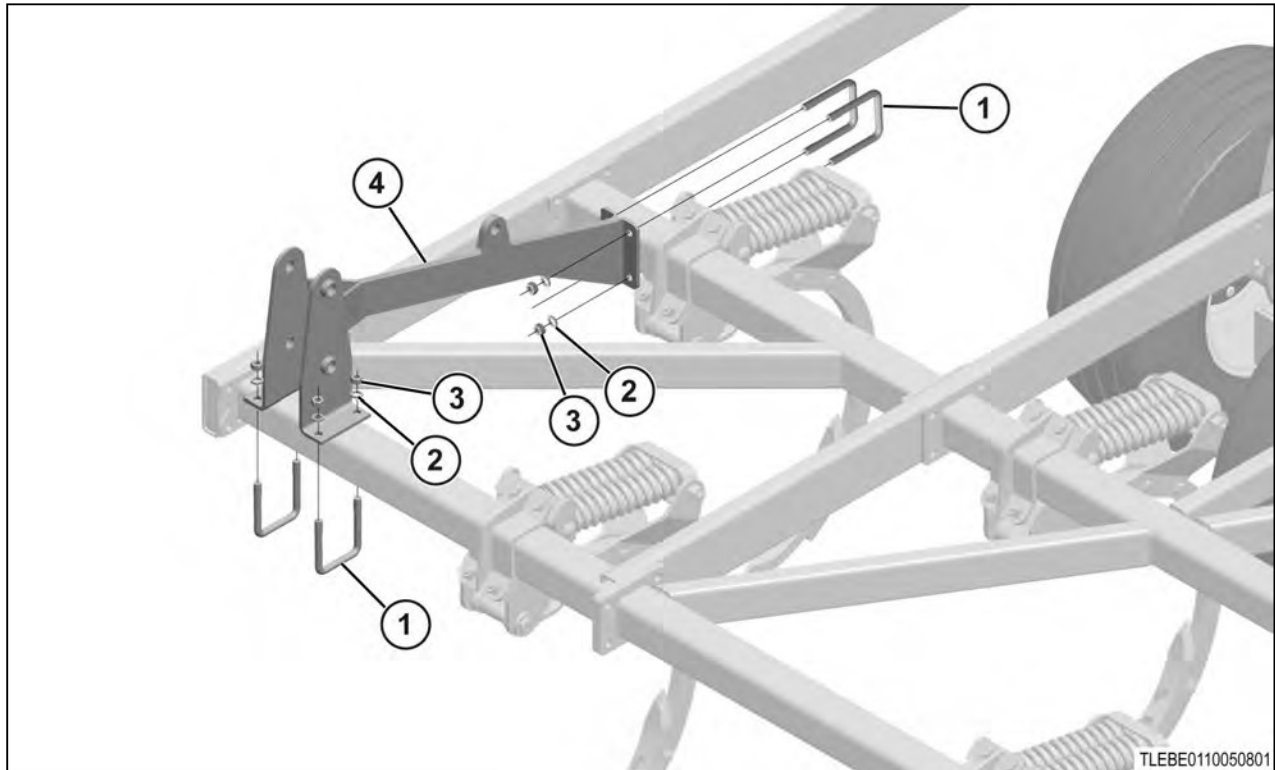


Fig. 39

Install the pivot gauge wheel mount as shown.

(1)	88145	5/8 x 5 1/4 U-bolt
(2)	88129	5/8 washer
(3)	88126	5/8 hex nut
(4)	351795	Pivot gauge wheel mount

15.2 Installing the gauge wheel jack and arms - ratchet adjust

Procedure

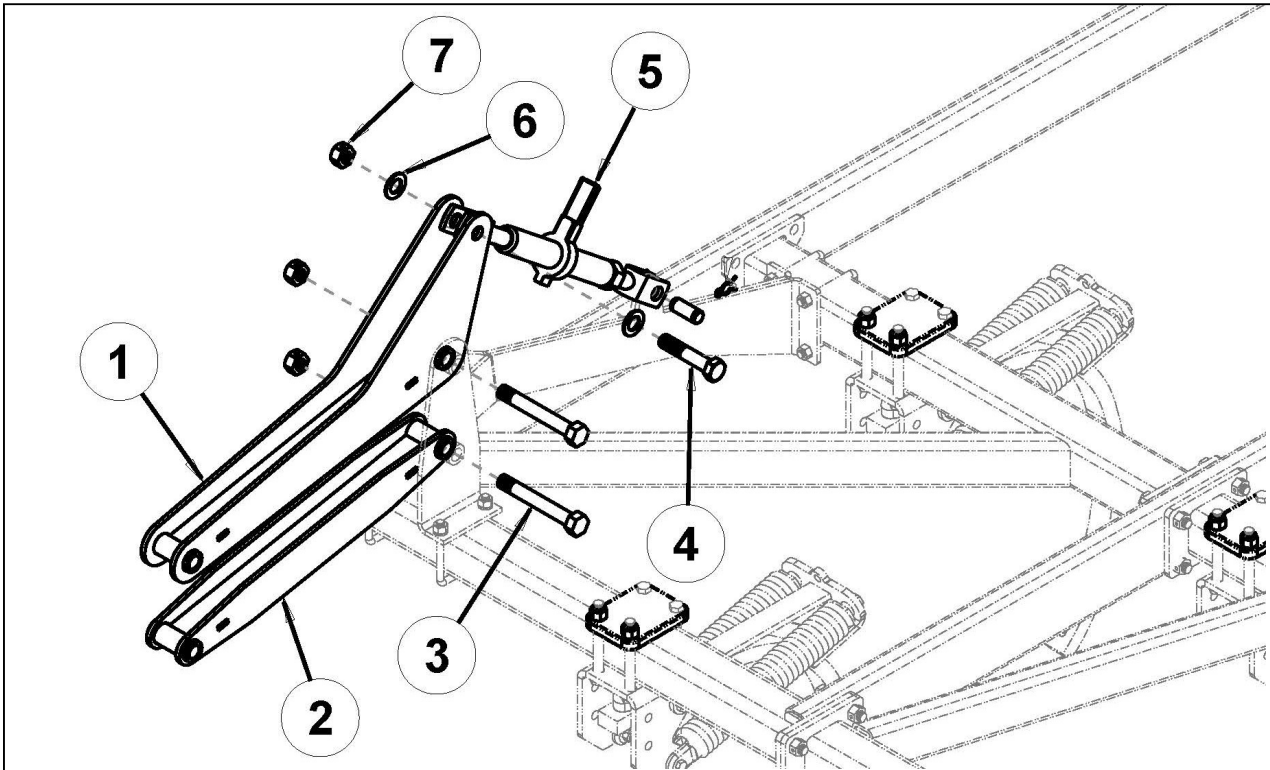


Fig. 40

Install the parts as shown.

(1)	355101	Top gauge wheel arm
(2)	354868	Lower link arm
(3)	350988	1 x 7.35 hex bolt
(4)	88312	1 x 5 hex bolt
(5)	340025	Ratchet jack
(6)	88738	1" flat washer
(7)	88348	1" lock nut

15.3 Assembling the gauge wheel pivot bracket - ratchet adjust

Procedure

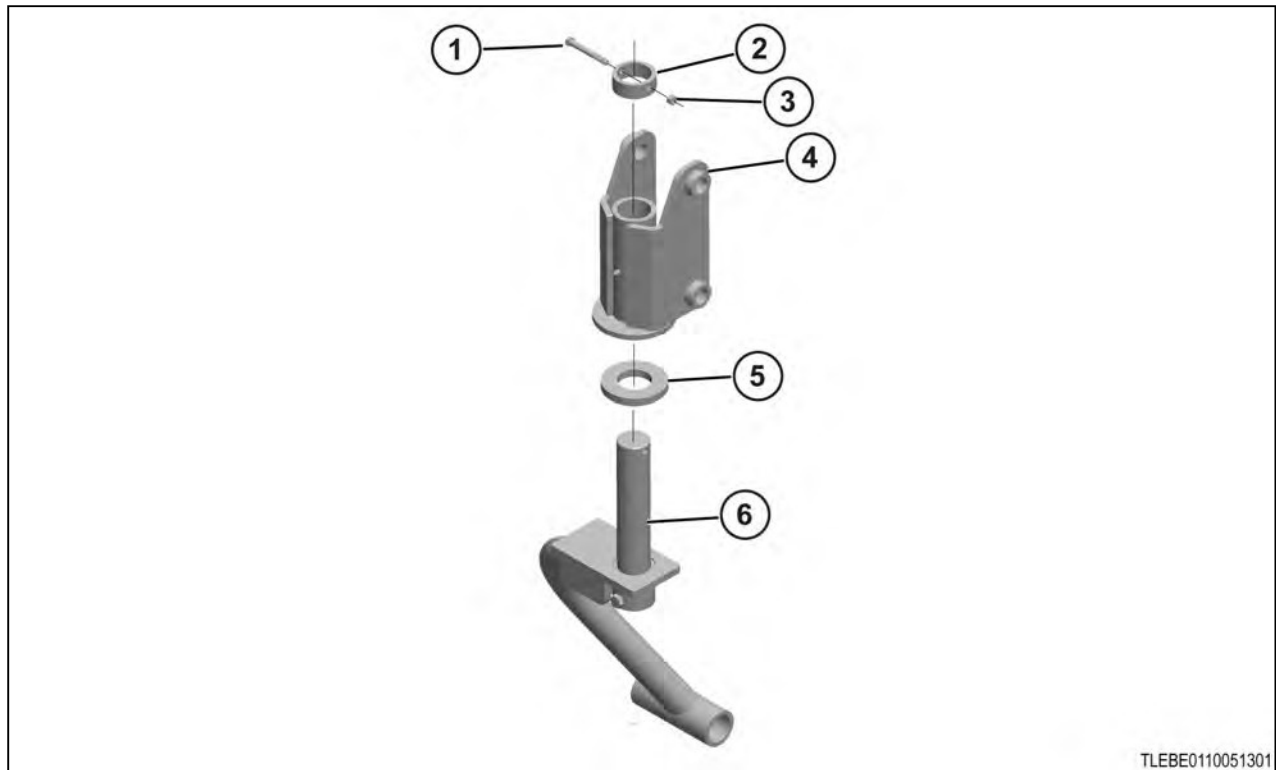


Fig. 41

Assembly the gauge wheel pivot bracket as shown.

(1)	88531	3/8 x 3 hex bolt
(2)	14189	Link arm stop collar
(3)	88162	3/8 lock nut
(4)	233230	Gauge wheel pivot bracket
(5)	19262	Shim
(6)	240360	Caster wheel leg

15.4 Fastening the gauge wheel pivot bracket to the arms - ratchet adjust

Procedure

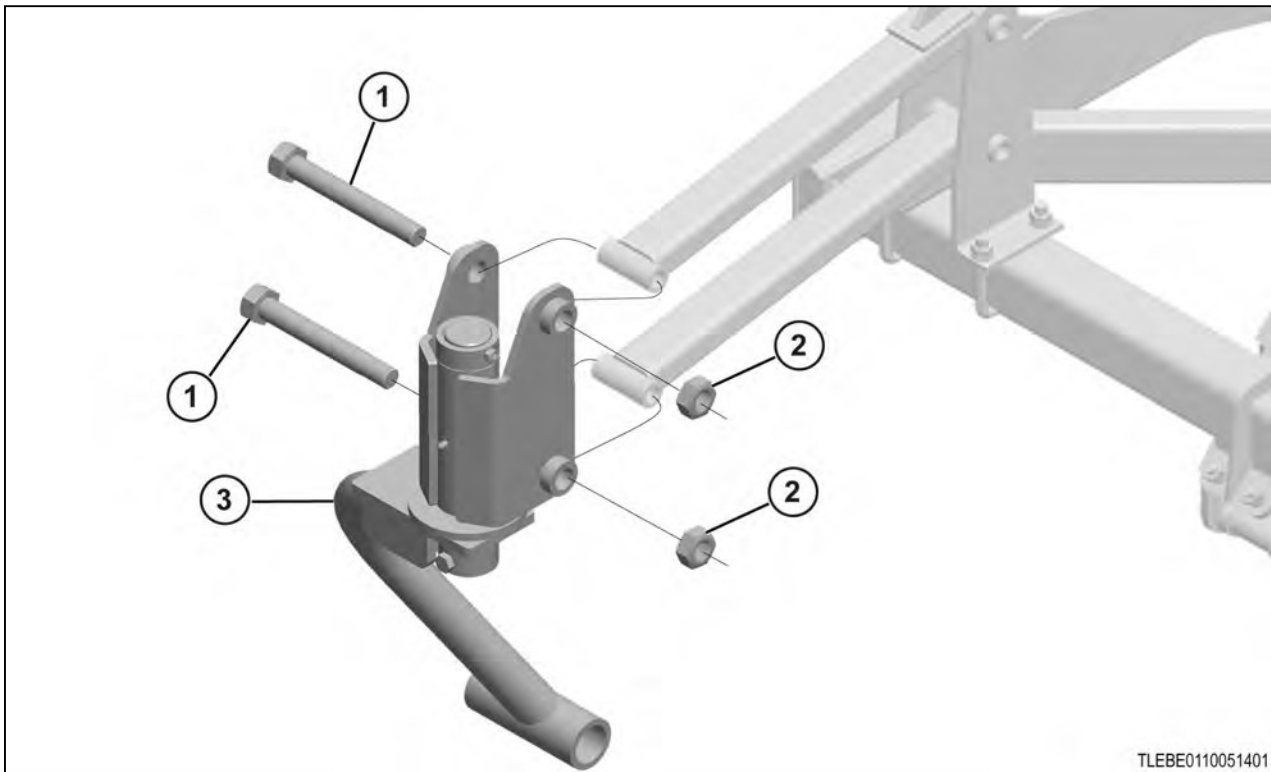


Fig. 42

Install the parts as shown.

(1)	350988	1 x 7.35 hex bolt
(2)	88348	1 lock nut
(3)	240360	Caster wheel leg

16. Installing the hydraulic gauge wheels

16.1 Installing the center frame gauge wheel mount - hydraulic

Procedure

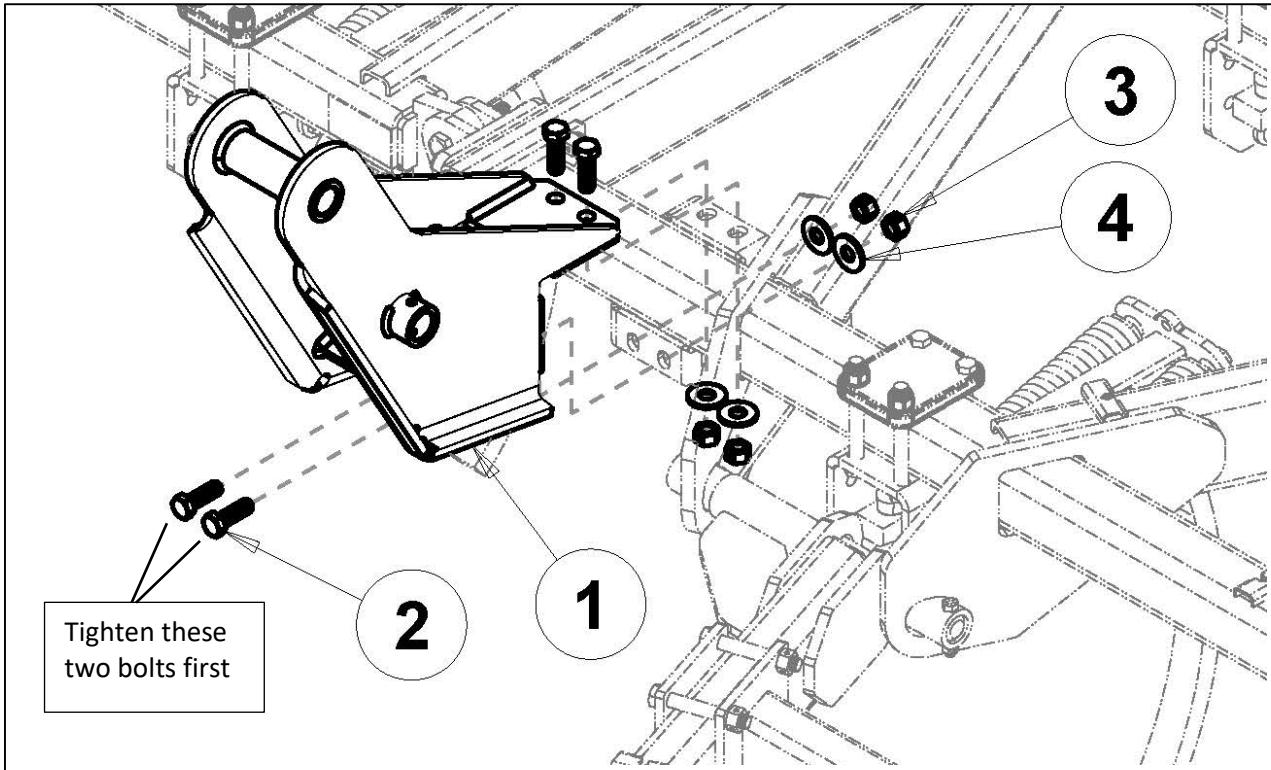


Fig. 44

Install the gauge wheel mount as shown.

(1)	4000360719	MF Front lift mast
(2)	89433	3/4 x 2-1/4 hex bolt
(3)	88356	3/4 lock nut
(4)	88139	3/4 flat washer

16.2 Installing the center frame gauge wheel axle - hydraulic

Procedure

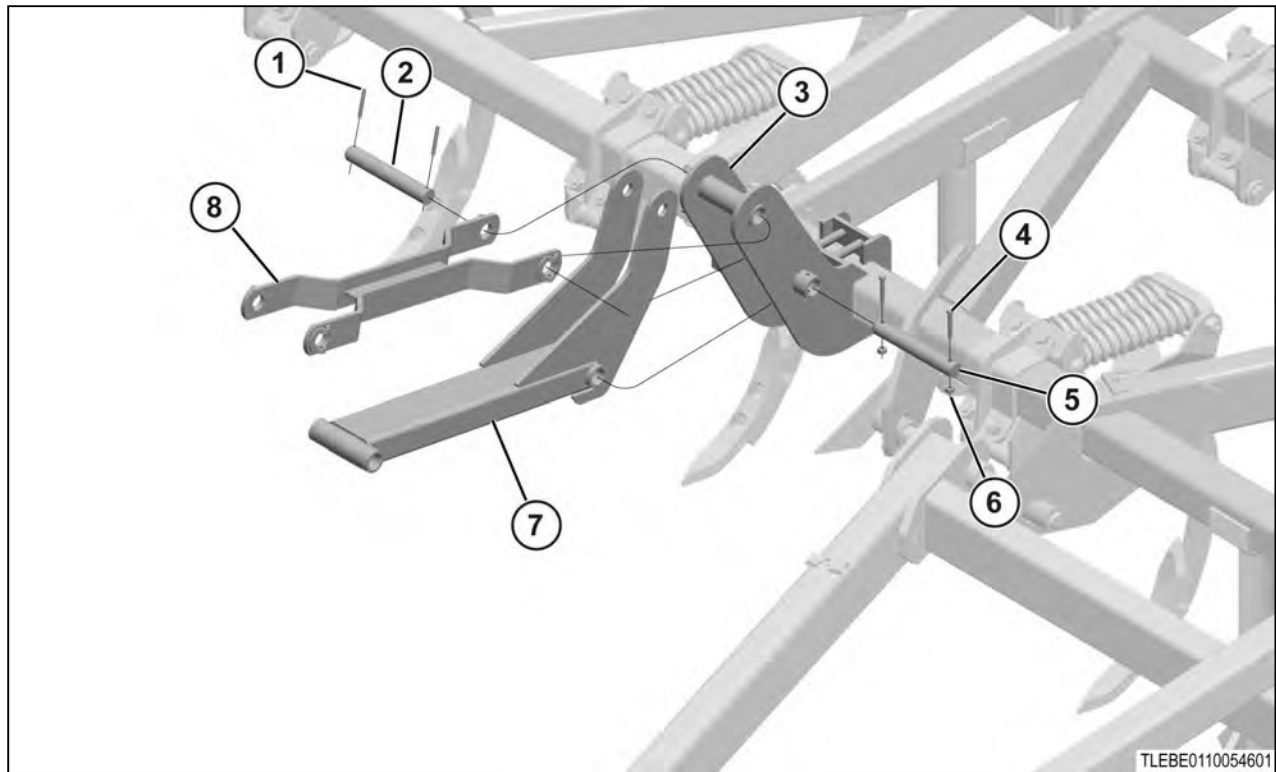


Fig. 45

Install the center frame gauge wheel axle as shown.

(1)	88771	3/8 x 3 pin
(2)	350775	Pivot pin
(3)	4000360714	MF Front lift mast
(4)	88582	3/8 x 2 3/4 hex bolt
(5)	235801	Pivot pin - 1 1/2 x 10
(6)	88659	3/8 lock nut
(7)	350529	Bottom lift arm
(8)	350527	Top link arm

16.3 Assembling the center frame gauge wheel axle - hydraulic

Procedure

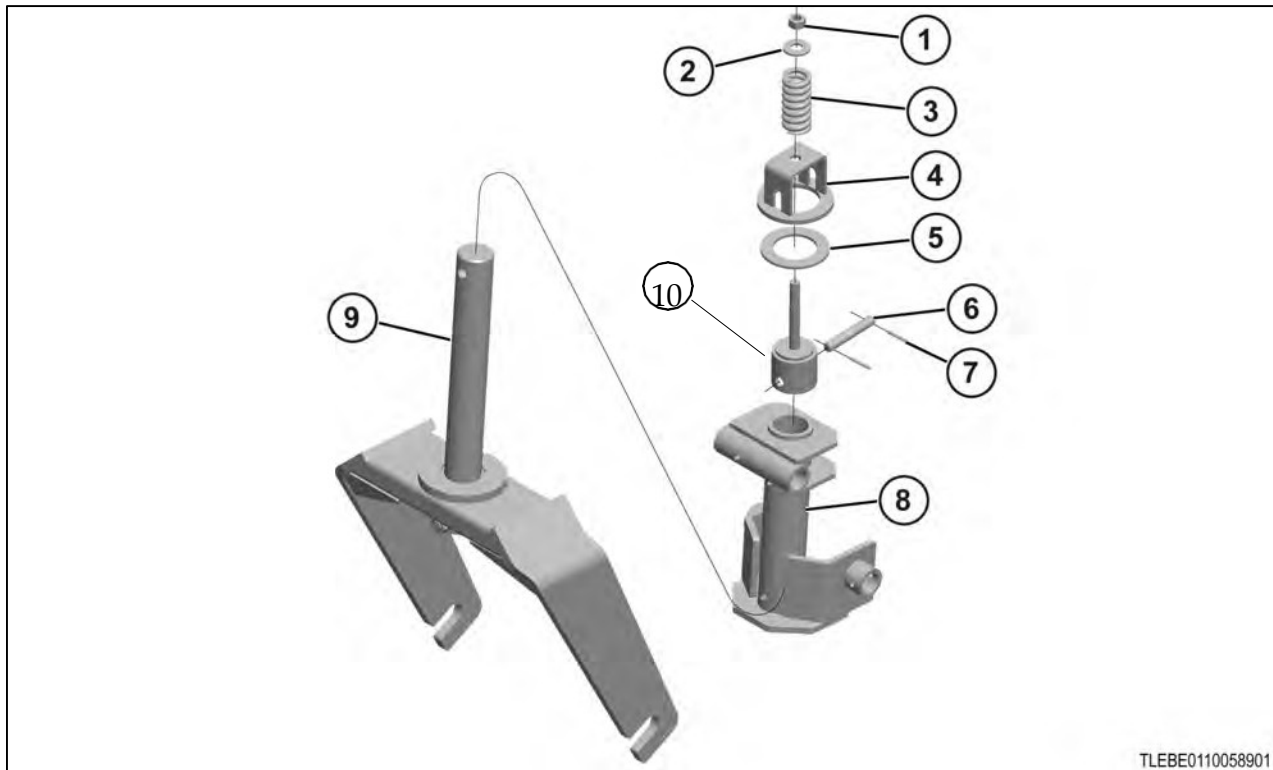


Fig. 46

Assemble the gauge wheel axle as shown.

(1)	88611	3/4 lock nut
(2)	88131	3/4 washer
(3)	54832	Compressor spring - 4 1/2
(4)	233748	Top damper bracket
(5)	233742	Damper brake pad
(6)	233749	Pin
(7)	88628	1/4 x 1 3/4 pin
(8)	54571	Gauge wheel pivot
(9)	356325	Gauge wheel yoke
(10)	233746	Damper Cap

16.4 Installing the center frame gauge wheel linkage - hydraulic

Procedure

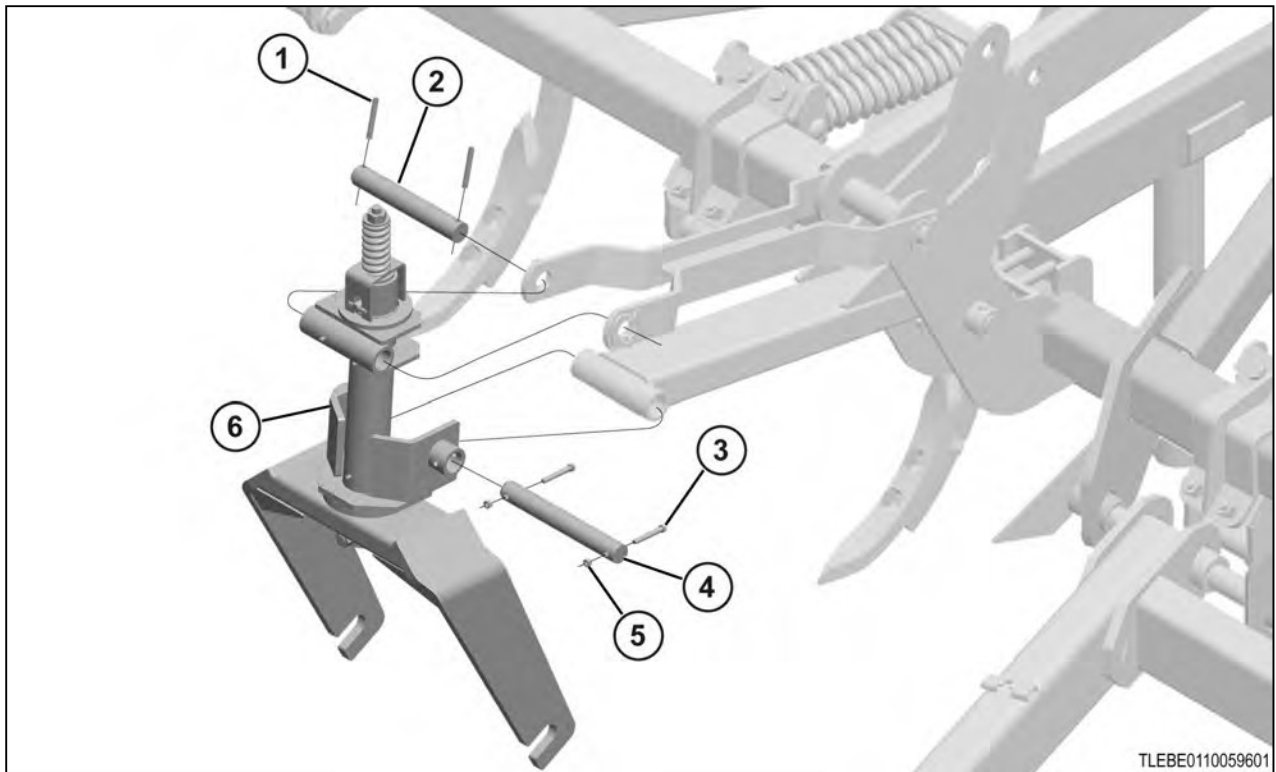


Fig. 47

install the gauge wheel linkage as shown.

(1)	88771	3/8 x 3 pin
(2)	350775	Pivot pin
(3)	88582	3/8 x 2 3/4 hex bolt
(4)	54595	1 1/2 x 9 19/32 pin
(5)	88659	3/8 lock nut
(6)	54571	Gauge wheel pivot

16.5 Installing the wing frame gauge wheel mount - hydraulic

Procedure

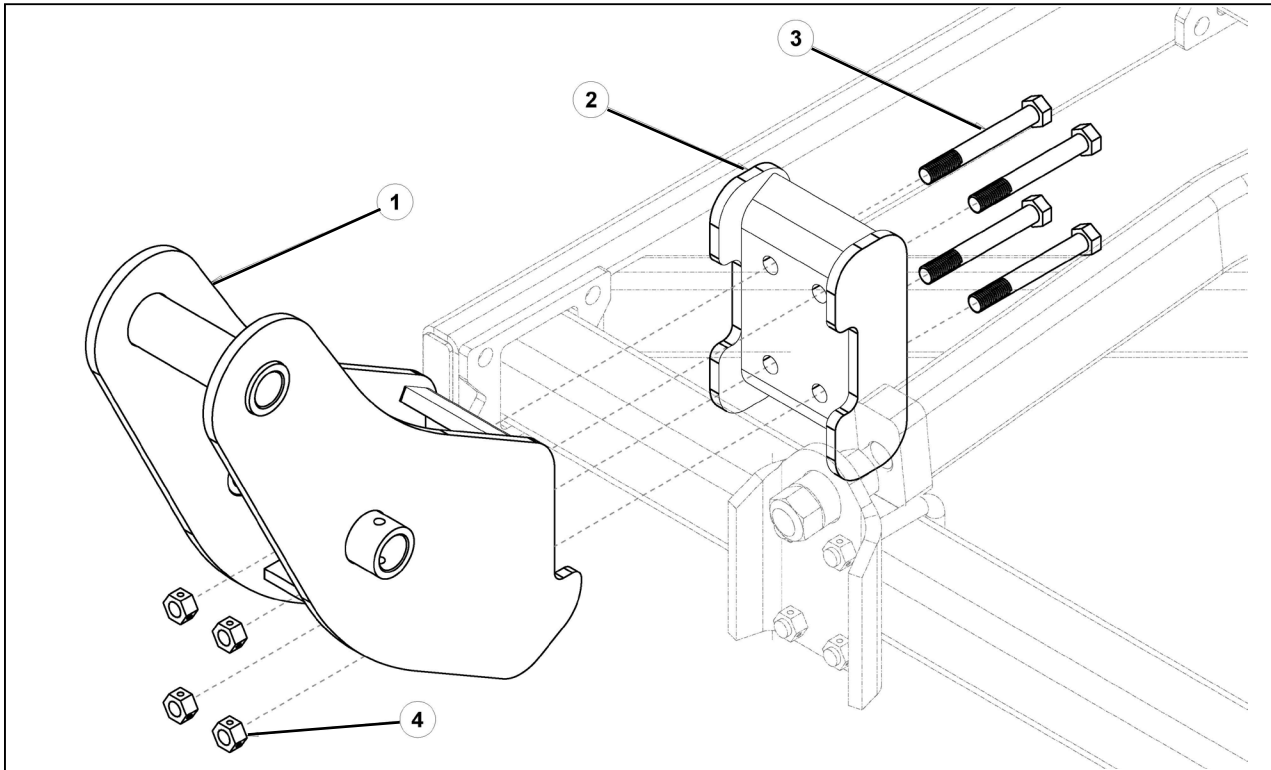


Fig. 48

Install the wing frame gauge wheel mount as shown.

(1)	4000360678	Front lift mast
(2)	4000360676	Tube clamp
(3)	88947	3/4 x 6 hex bolt
(4)	88356	3/4 lock nut

16.6 Installing the wing frame gauge wheel linkages - hydraulic

Procedure

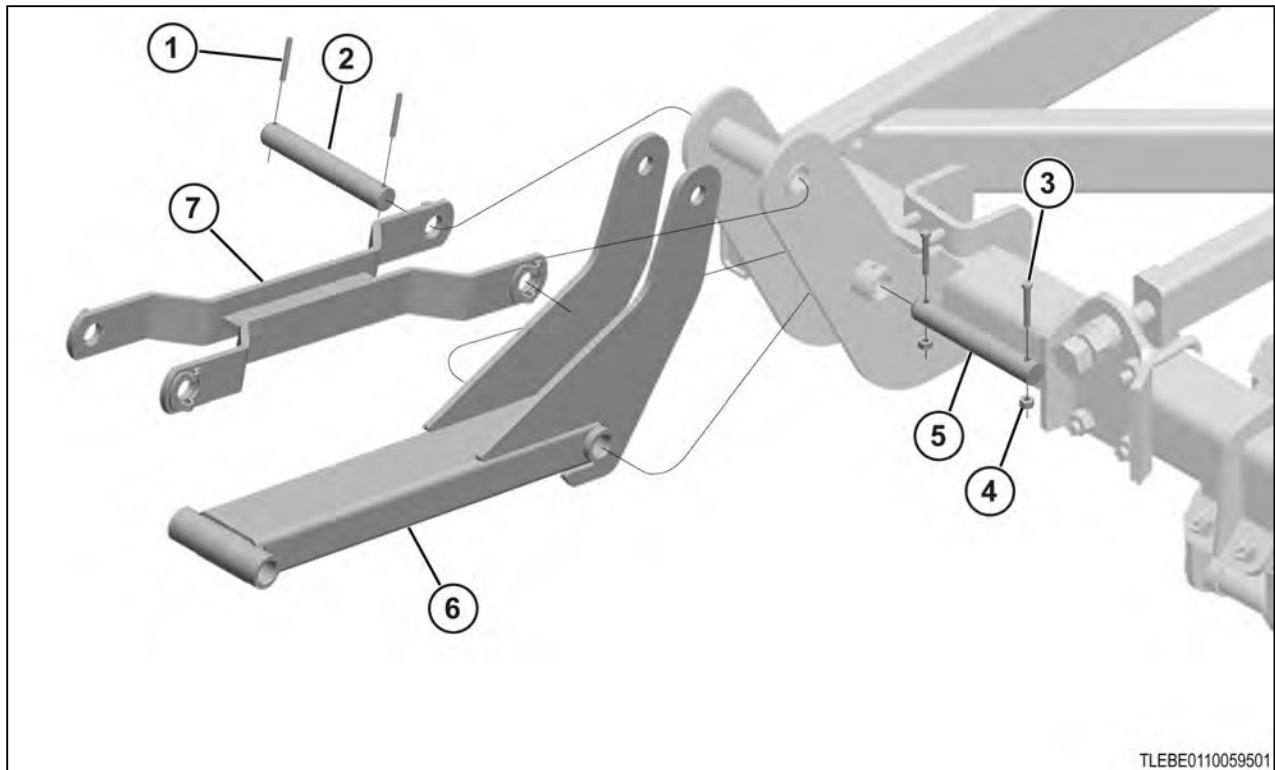


Fig. 49

Install the wing frame gauge wheel linkages as shown.

(1)	88771	3/8 x 3 pin
(2)	350775	Pivot pin
(3)	88582	3/8 x 2 3/4 hex bolt
(4)	88659	3/8 lock nut
(5)	235801	Pivot pin - 1 1/2 x 10
(6)	350529	Bottom lift arm
(7)	350527	Top link arm

16.7 Assembling the wing frame gauge wheel axle - hydraulic

Procedure

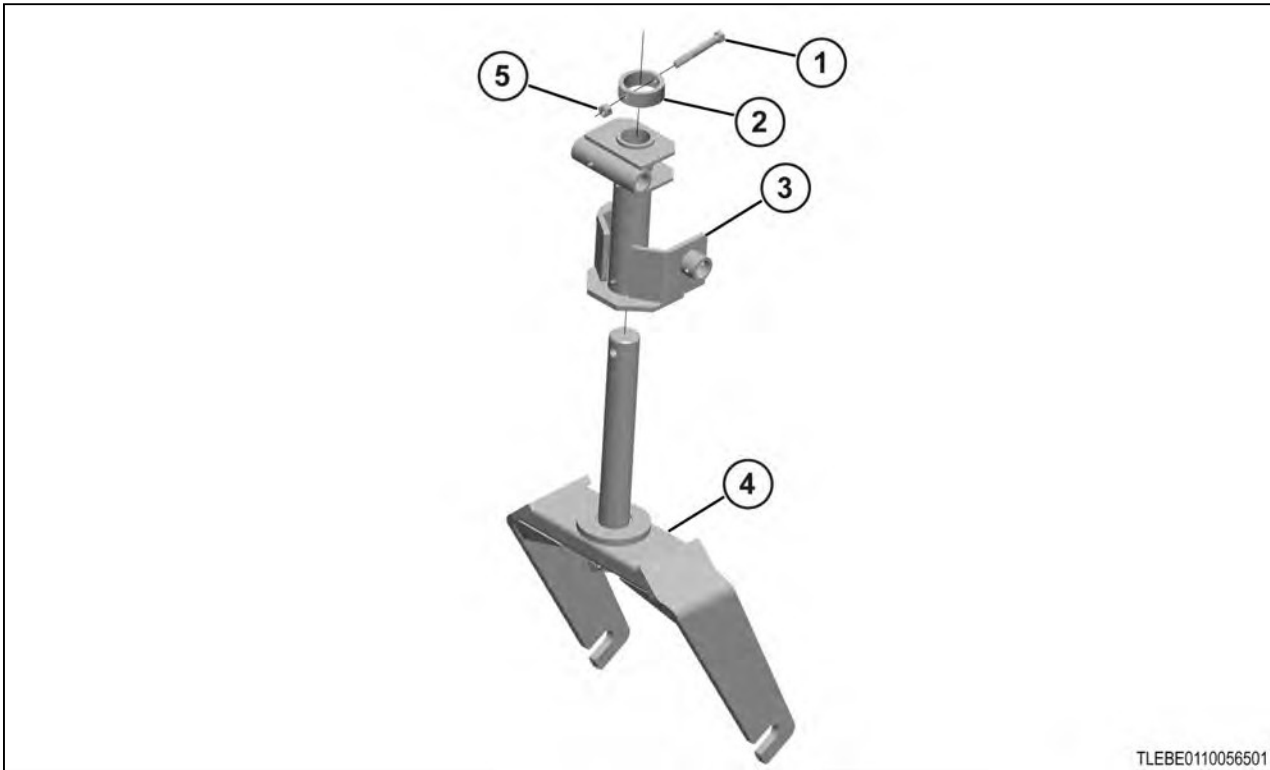


Fig. 50

Assembly to gauge wheel axle as shown.

(1)	88272	3/4 x 4 hex bolt
(2)	16009	Collar
(3)	54571	Gauge wheel pivot
(4)	356325	Gauge wheel yoke
(5)	88356	3/4 lock nut

16.8 Installing the wing frame gauge wheel axle assembly - hydraulic

Procedure

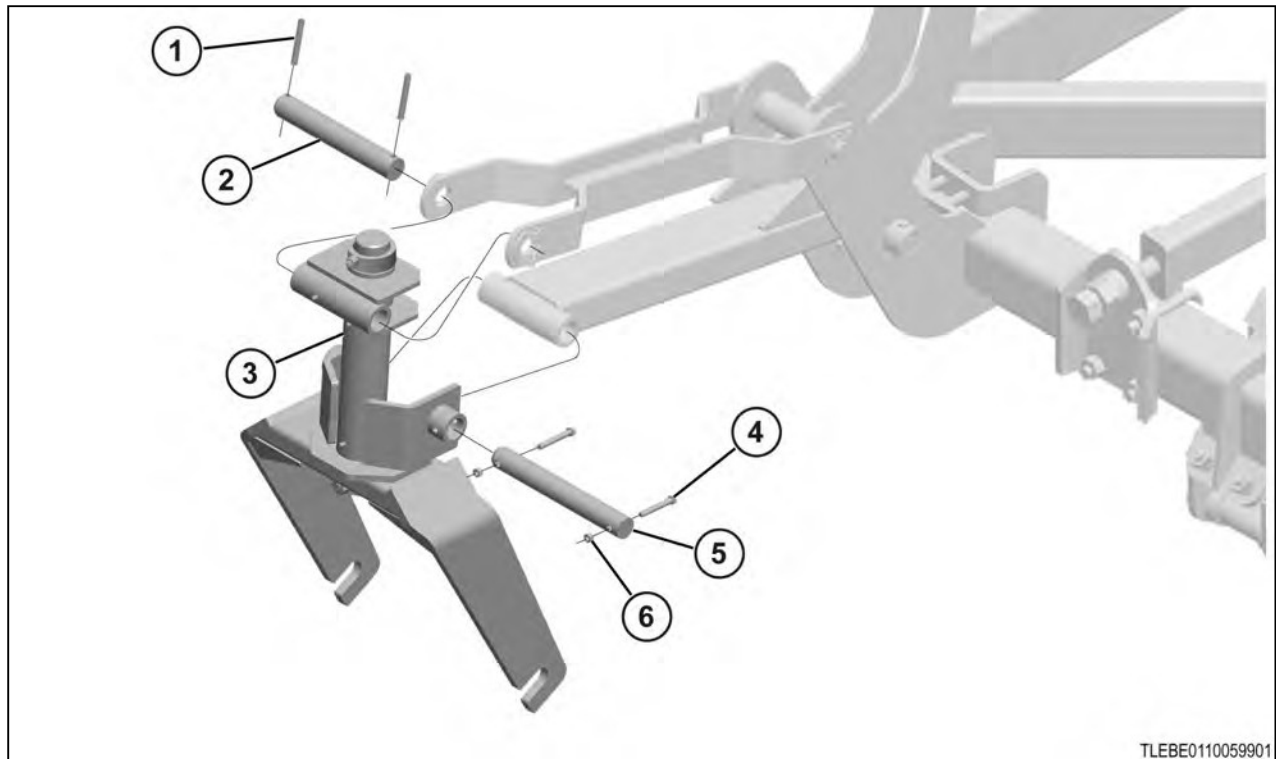


Fig. 51

Install the gauge wheel axle assembly as shown.

(1)	88771	3/8 x 3 pin
(2)	350775	Pivot pin
(3)	54571	Gauge wheel pivot
(4)	88582	3/8 x 2 3/4 hex bolt
(5)	54595	1 1/2 x 9 19/32 pin
(6)	88659	3/8 lock nut

16.9 Installing the gauge wheel hubs and wheels - hydraulic

Procedure

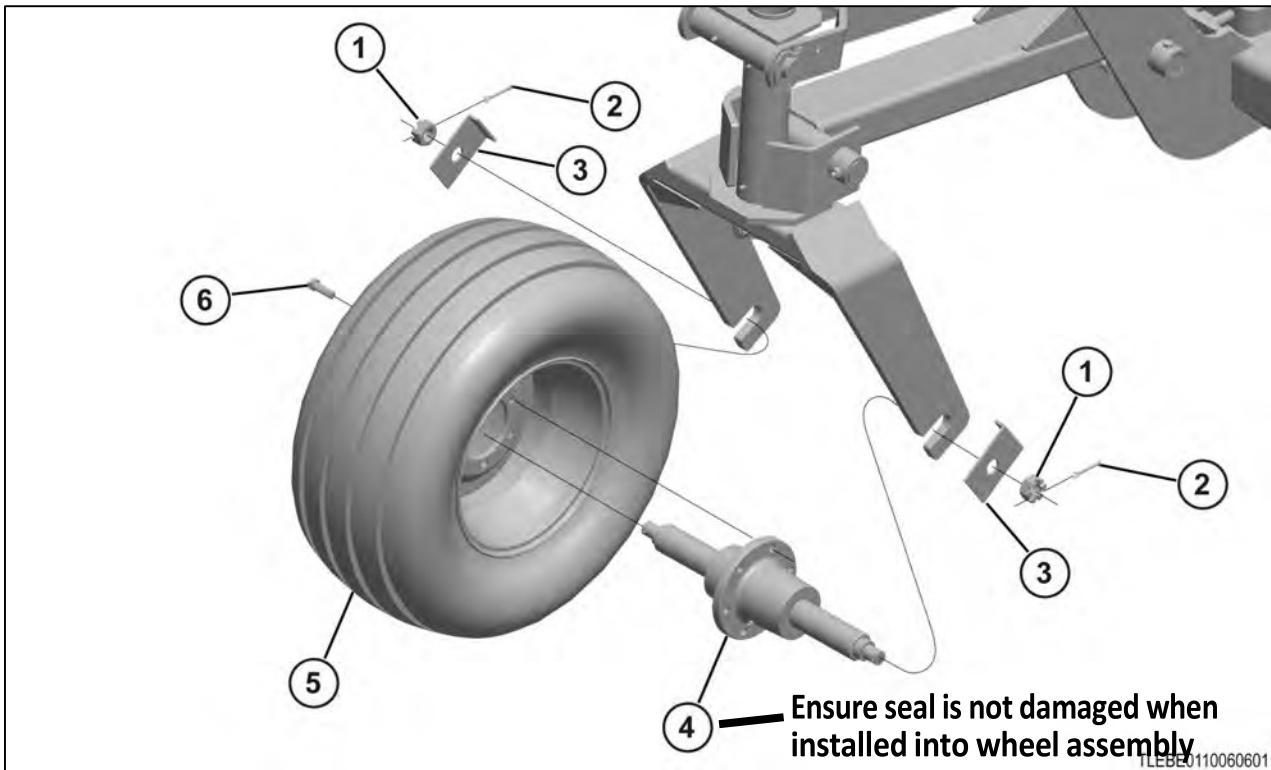


Fig. 52

Install the wheel hubs and wheels as shown.

(1)	88299	1 slotted nut
(2)	88133	Cotter pin
(3)	55150	Spindle lock
(4)	58294	Yoke hub assembly
(5)	358660	Wheel assembly
(6)	63831	9/16 x 1 1/2 wheel bolt

16.10 Installing the gauge wheel lift tubes - hydraulic

Procedure

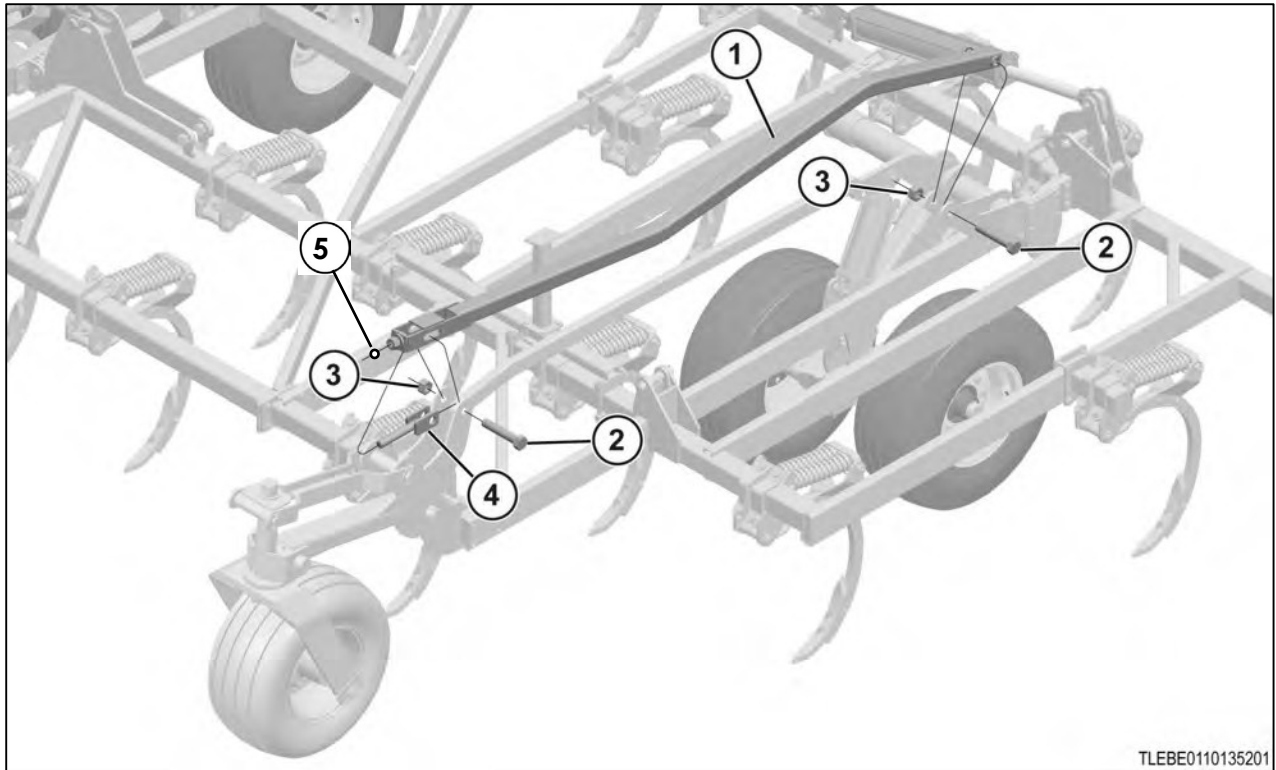


Fig. 53

Install the gauge wheel lift tubes as shown.

(1)	353613	Front lift tube - wing
	353658	Front lift tube - center
(2)	88349	1 1/4 x 6 1/2 hex bolt
(3)	88430	1 1/4 lock nut
(4)	236377	Adjustment link
(5)	88613	1 1/4 hex nut

17. Installing the wing locks

Procedure

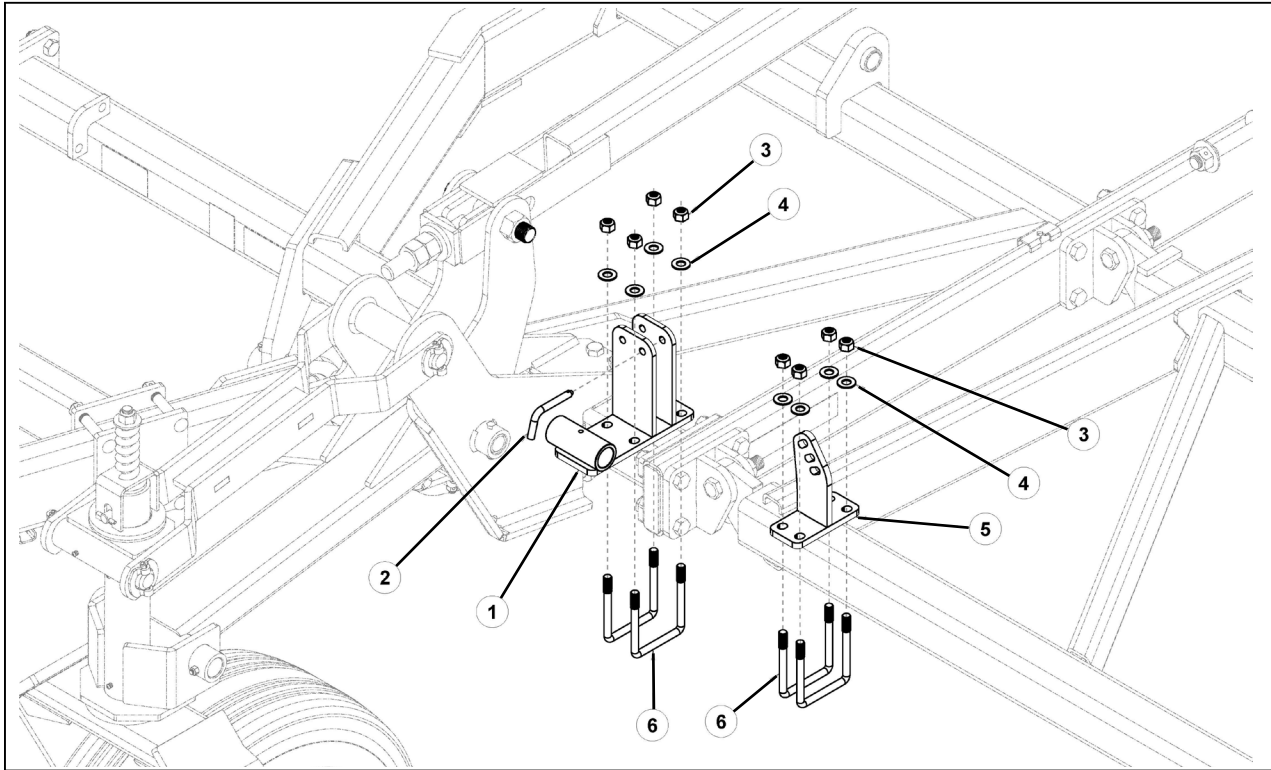
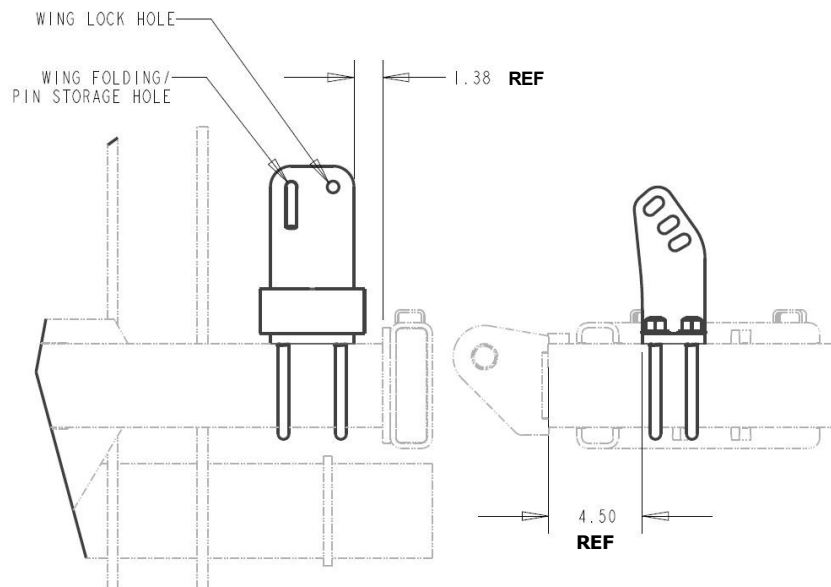


Fig. 54

Install the wing locks as shown.

(1)	360610	Wing lock & light mount
(2)	23048	Pin
(3)	88845	5/8 Toplock nut
(4)	88630	5/8 flat washer
(5)	400036063 0	Wing lock
(6)	88145	5/8 x 4 x 5-1/4 U-bolt



17.1 Installing the marker lamps

Procedure

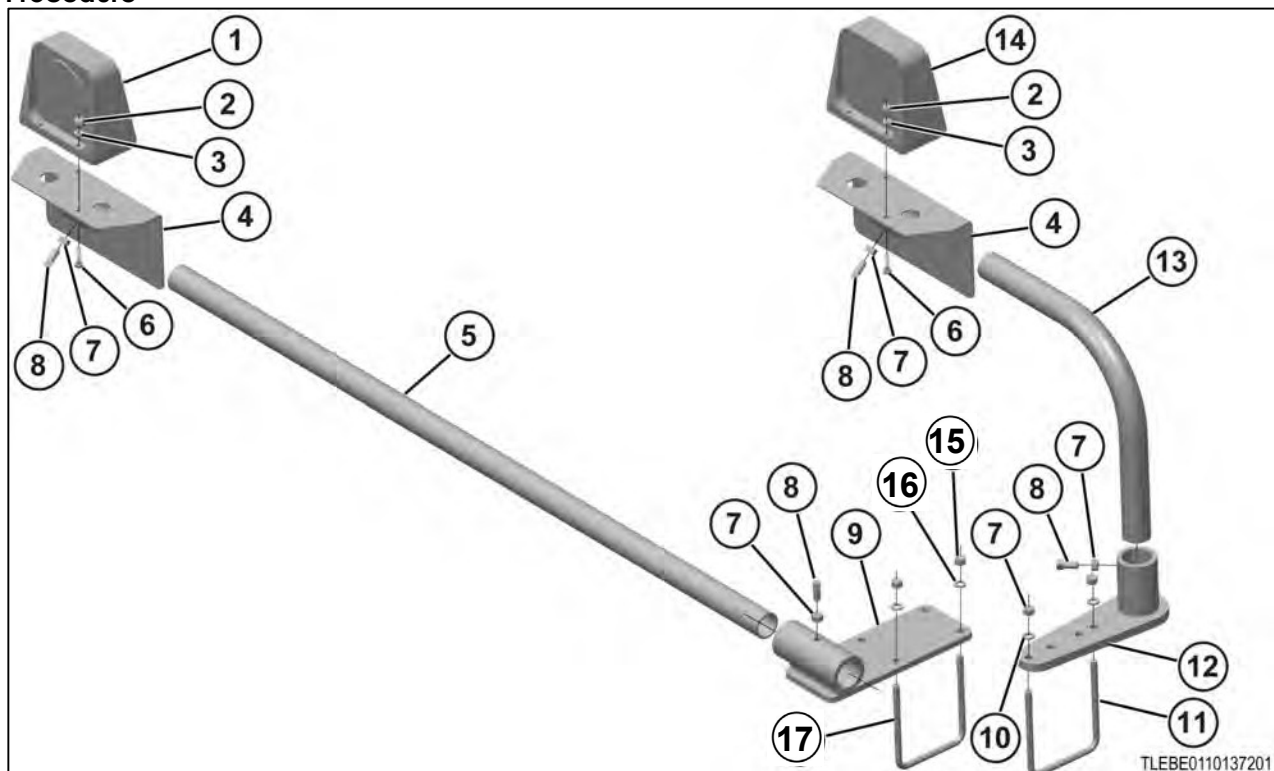


Fig. 55 Install the marker lamps as shown.

(1)	321362	Amber lamp
(2)	88172	1/4 hex nut
(3)	88262	1/4ID washer
(4)	223126	Lamp bracket
(5)	108528	Lamp arm - 48 in
(6)	89028	1/4 x 1-1/4 hex bolt
(7)	88103	3/8 hex nut
(8)	88702	3/8 x 3/4 screw
(9)	353989	Lamp tube bracket - for the 19 ft to 29 ft models
	360610	Lamp tube bracket - for the 31 ft to 47 ft models
(10)	88362	3/8 lock washer
(11)	88385	3/8 x 4 x 5 U-bolt
(12)	223130	Short base pivot
(13)	223140	Lamp arm
(14)	321363	Red lamp
(15)	88103	3/8 hex nut - for the 19 ft to 29 ft models
	88845	5/8 Toplock nut - for the 31 ft to 47 ft models
(16)	88362	3/8 lock washer - for the 19 ft to 29 ft models
	88630	5/8 flat washer - for the 31 ft to 47 ft models
(17)	88385	3/8 x 4 x 5 U-bolt - for the 19 ft to 29 ft models
	88145	5/8 x 4 x 5-1/4 U-bolt - for the 31 ft to 47 ft models

17.2 Installing the marker lamp harness

Procedure

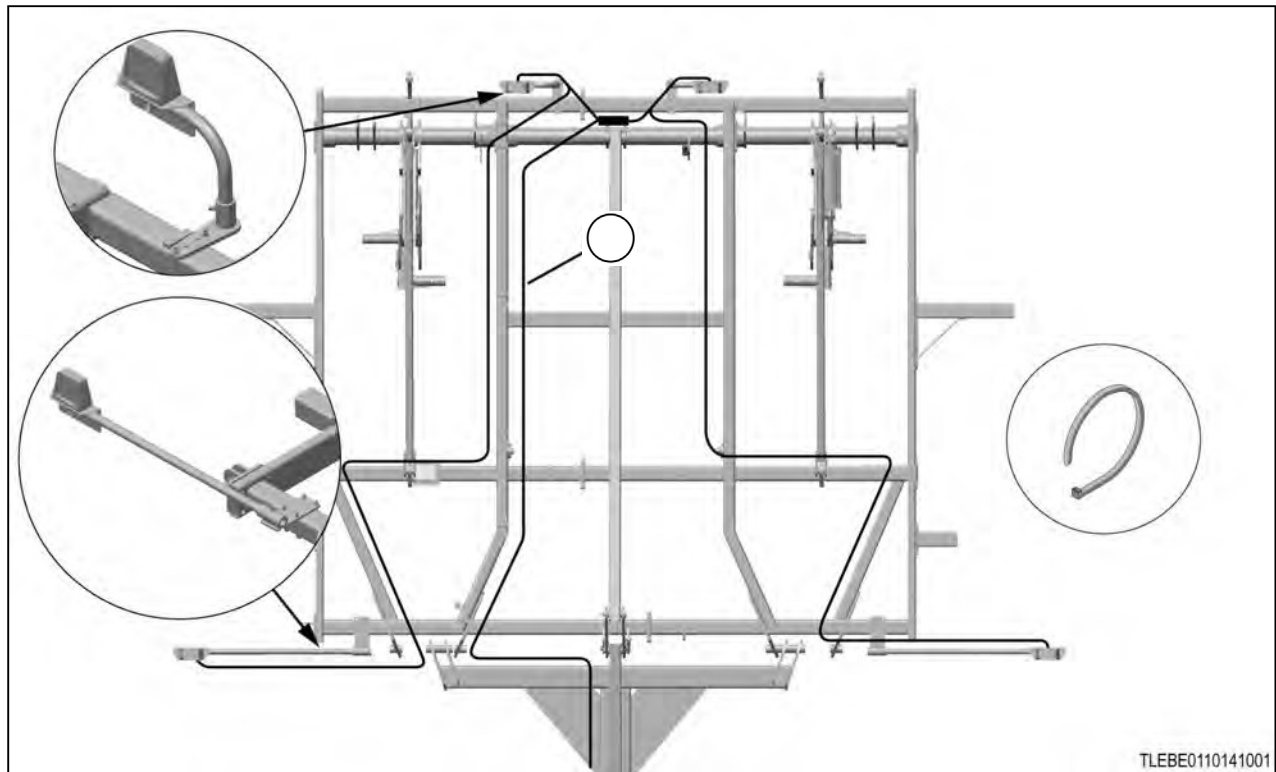


Fig. 56

Install the marker lamp harness as shown.

(1)	322867	Wishbone AG light harness
(2)	322866	Main AG light harness
(3)	359963	2PIN 8ft extension harness
(4)	322865	Module - flasher interface

18. Installing the rear tow hitch

Procedure

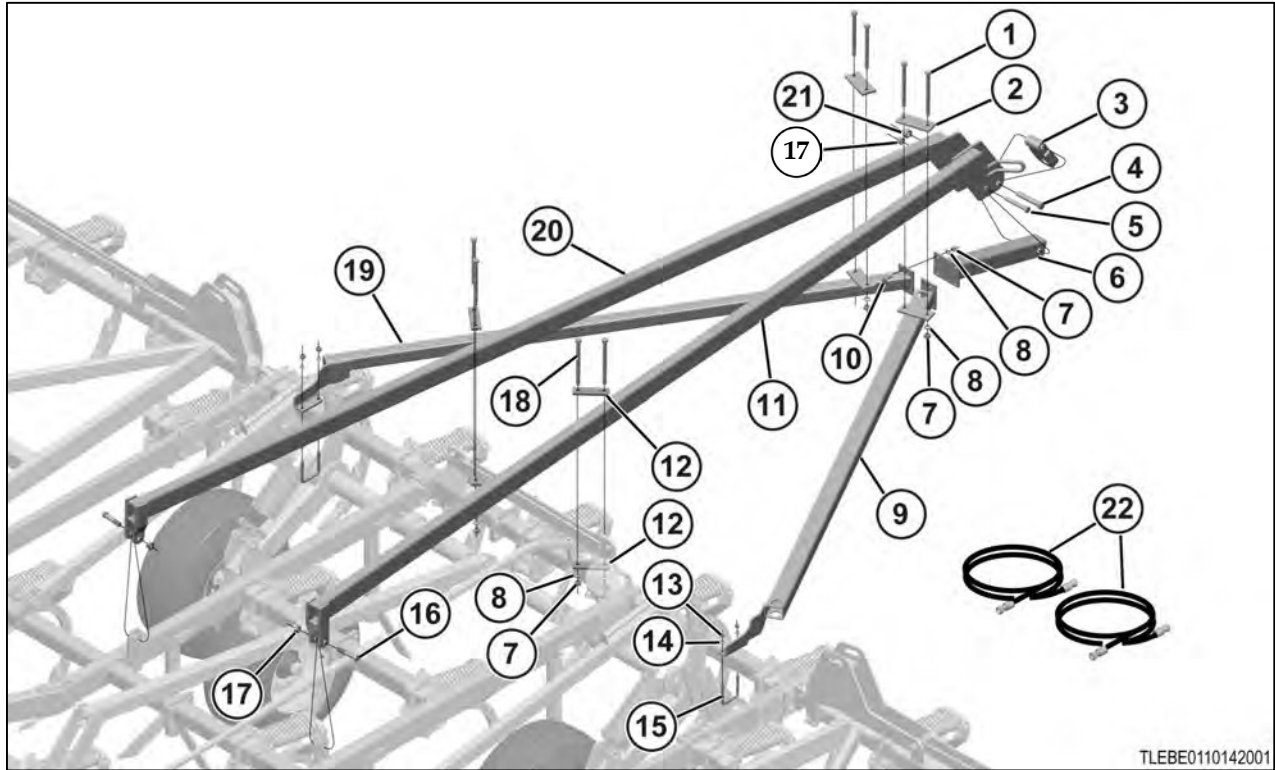


Fig. 57

Install the rear tow hitch as shown.

(1)	88335	3/4 x 7 hex bolt
(2)	353902	Tie plate
(3)	18237	Hitch
(4)	89134	1 1/4 x 7 hex bolt
(5)	88666	1 x 6 1/2 hex bolt
(6)	353498	Hitch down tube
(7)	88110	3/4 hex nut
(8)	88130	3/4ID washer
(9)	233401	Left-hand outer hitch brace
(10)	88290	3/4 x 2 hex bolt
(11)	353495	Left-hand inner hitch brace
(12)	353496	Plate
(13)	88126	5/8 hex nut
(14)	88129	5/8 washer
(15)	88145	5/8 x 4 x 5 1/4 U-bolt
(16)	88580	1 x 4 1/2 hex bolt
(17)	88658	1 lock nut
(18)	88867	3/4 x 10 hex bolt

(19)	233400	Right-hand outer hitch brace
(20)	353494	Right-hand inner hitch brace
(21)	88430	1 1/4 lock nut
(22)	238618	Hose - 3/8 x 420

19. Installing the weight balance kit

Procedure

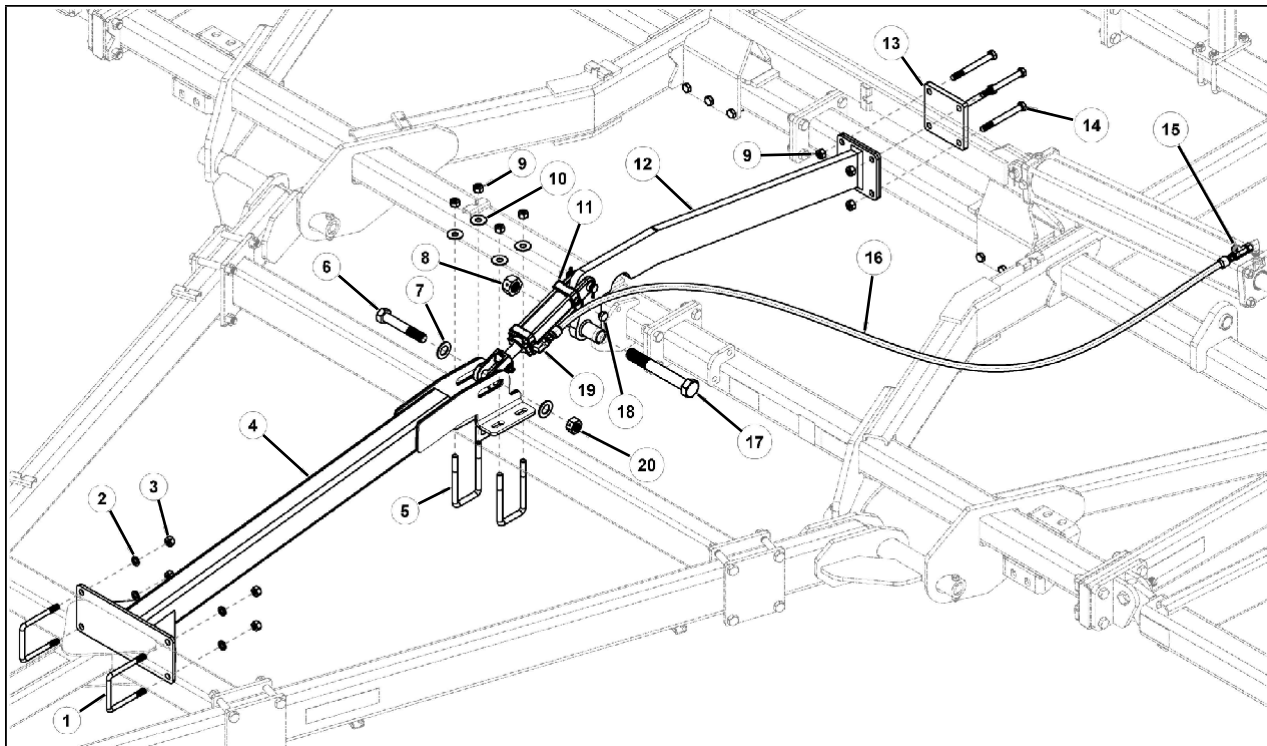
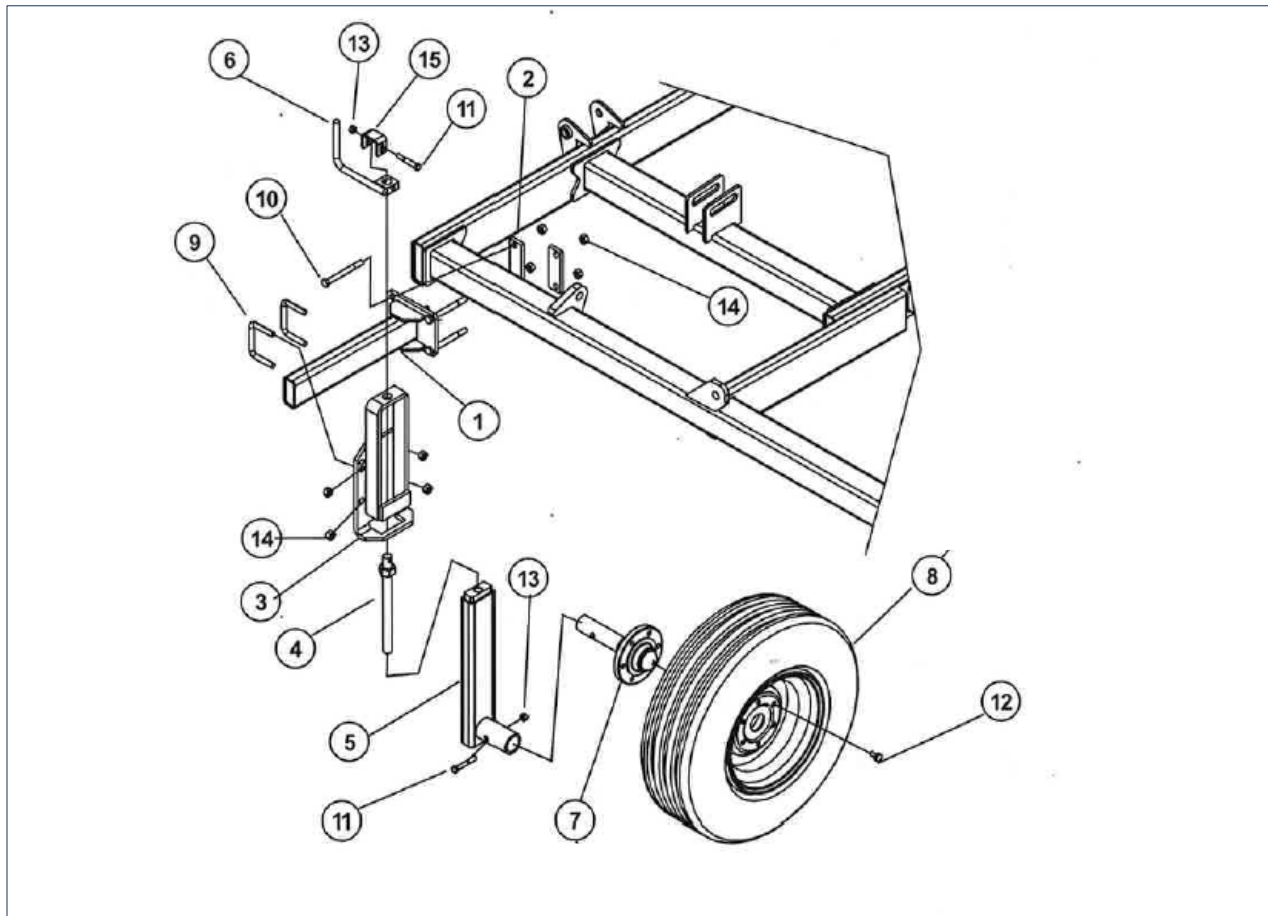


Fig. 58

Install the weight balance kit as shown.

(1)	88145	5/8 x 4 x 5-1/4 U-bolt
(2)	88129	5/8 lock washer
(3)	88126	5/8 hex nut
(4)	354849	Front weight balance
(5)	A34264	5/8 x 3 x 6-1/2 U-bolt
(6)	88264	1 x 6 hex bolt
(7)	88738	1" flat washer
(8)	88430	1-1/4 nut lock
(9)	88845	5/8 nut toplock
(10)	88277	5/8 flat washer
(11)	B112426	Hyd Cyl 2-1/2 x 4
(12)	354860	Rear weight balance
(13)	354865	Plate
(14)	88295	5/8 x 6 hex bolt
(15)	A63015	Tee fitting - 8MJ x 8FJX x 8MJ
(16)	56540	Hose - 3/8 x 89
(17)	88428	1-1/4 x 9 hex bolt
(18)	247435	Breather 8MORB
(19)	25580	Elbow fitting 8MORB x 8MJ
(20)	88348	1" lock nut

20. Installing Rigid Gauge Wheel Mount



(1)	15321	Gauge wheel mount
(2)	15627	Hinge Plate
(3)	233882	Gauge wheel mast
(4)	233887	Adjust rod sub assy-plated
(5)	233889	Gauge wheel leg
(6)	233886	Gauge wheel crank
(7)	14131	Hub & 2" spindle assy
(8)	16290	WHL assy 95L x 15 6B 6" 8P gray
(9)	88388	5/8 x 4 x 3-1/4 U-bolt
(10)	88933	5/8 x 6 bolt
(11)	88680	1/2 x 3-1/4 bolt
(12)	88142	1/2 x 1 (13/16 head)
(13)	88363	1/2 2POS lock nut
(14)	88369	1/2 2POS lock nut
(15)	244399	Gauge wheel lock

21. Installing the hydraulics

Before starting the procedure



WARNING:

The cylinders are not filled with oil and must be bled of air before field operation. Failure to do so will cause unwarrantable machine damage and/or personal injury. See the information for bleeding air from the hydraulic lift system and hydraulic fold system.



WARNING:

Leaking fluid under pressure can enter the skin causing serious injury. Release pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Wear correct hand and correct eye protection when looking for leaks. Use a piece of cardboard or paper instead of your hand. Any fluid injected into the skin can cause gangrene. The fluid must be removed by a doctor familiar with this type of injury.

To bleed the air from the hydraulic lift system the machine must be connected to a tractor that is the correct size to operate the machine.

Procedure

1. Use the illustrations and parts tables on the following pages to install the hydraulics.
2. Set the tractor hydraulic flow to less than 75.7 l/min (20 gal/min (US)).
3. Bleed the cylinders of air before initial field operation. See the information for bleeding air from the lift hydraulics and fold hydraulics.

21.1 Installing the center lift cylinders

Procedure

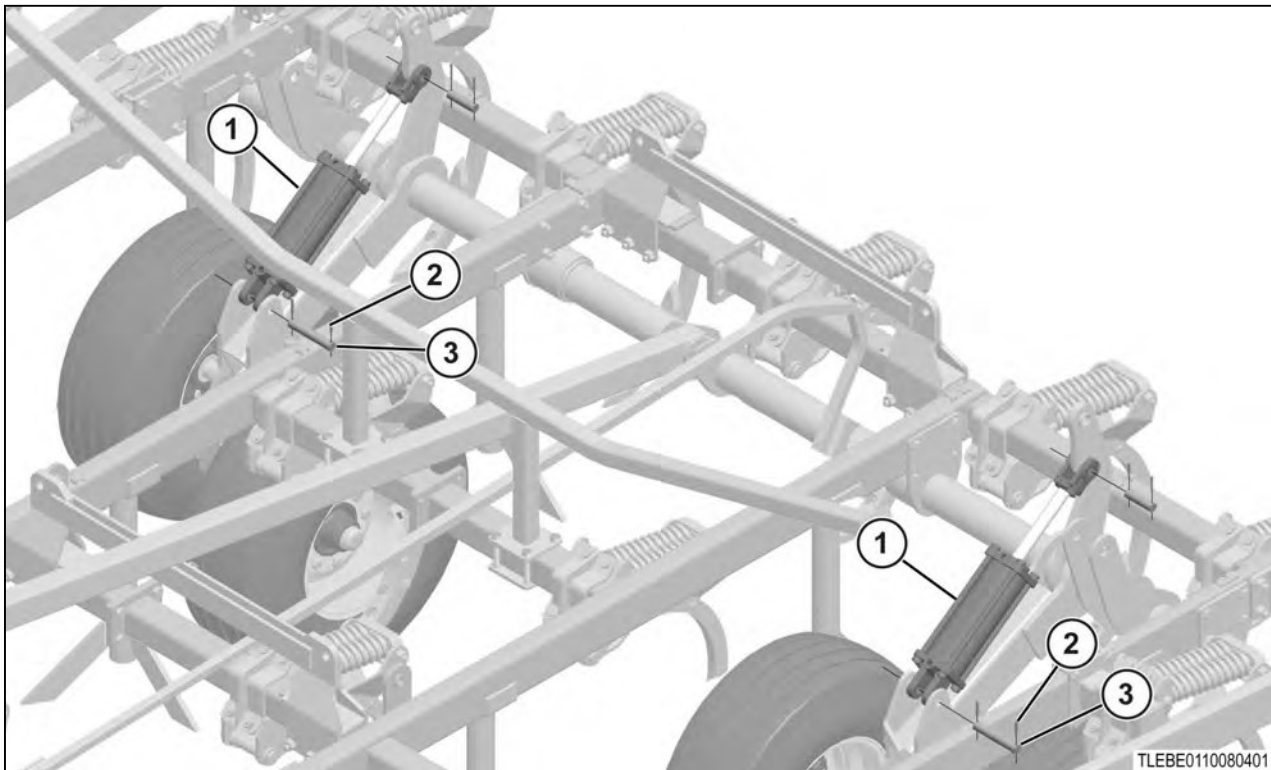


Fig. 59

Install the center lift cylinders as shown.

(1)	351601	4 1/2 x 10 cylinder
(2)	42484	1/4 x 2 1/4 pin
(3)	68033	1 x 6.38 pin

21.2 Installing the wing lift cylinders

Procedure

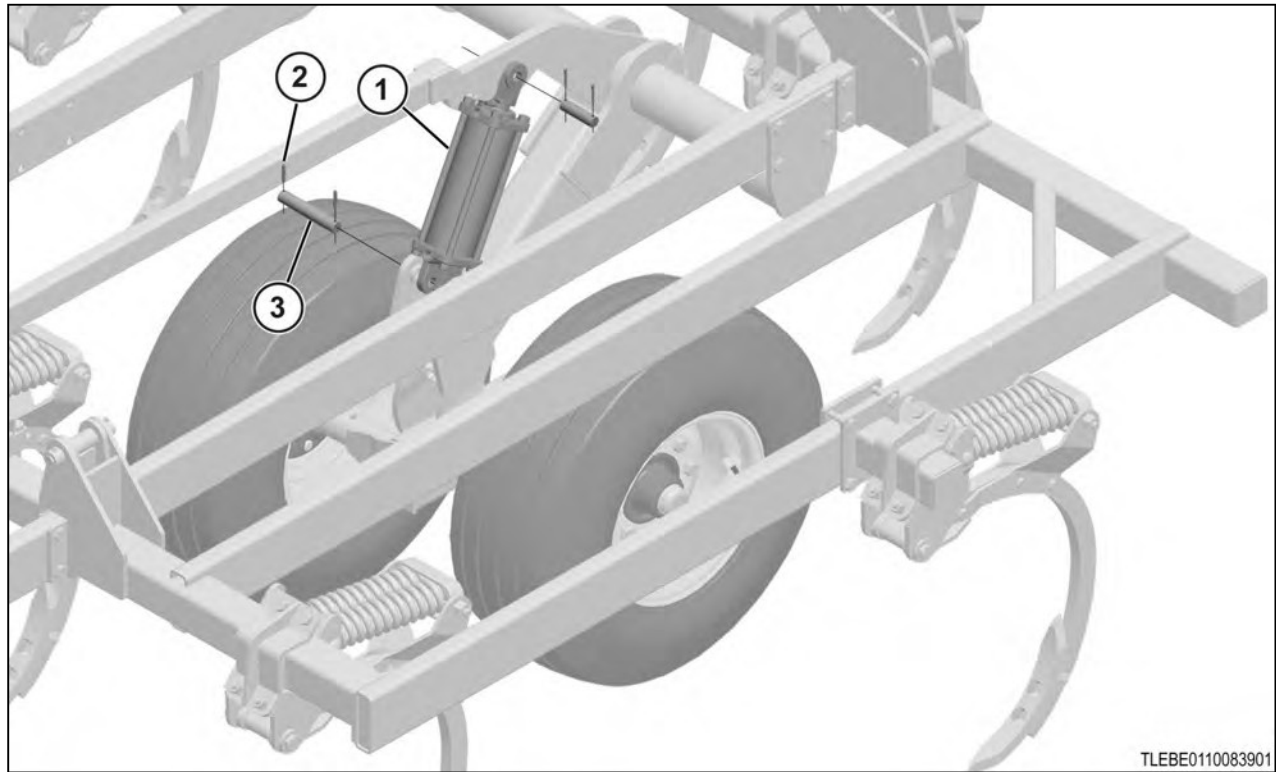


Fig. 60

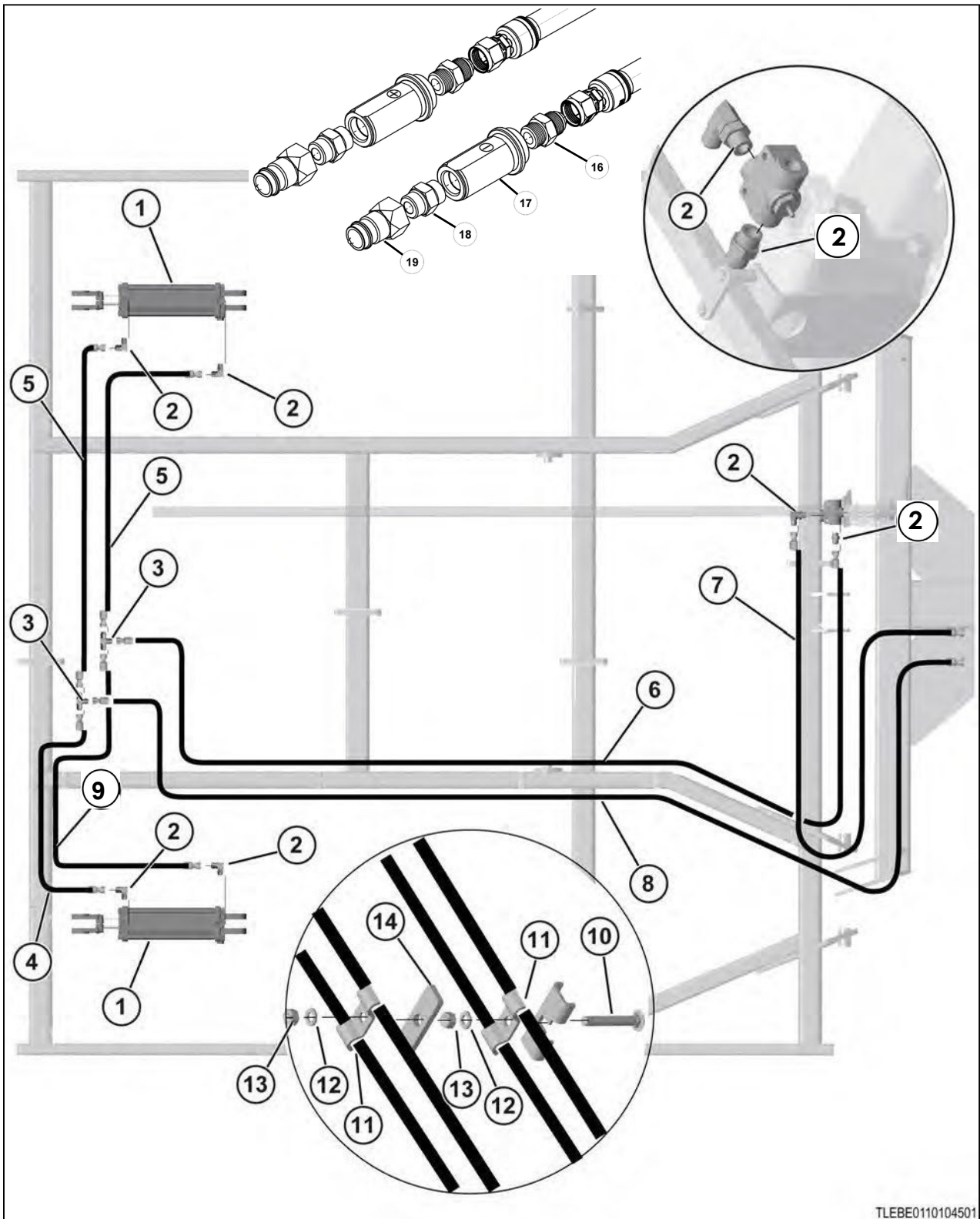
TLEBE0110083901

Install the wing lift cylinder as shown.

(1)	351602	4 x 10 cylinder
(2)	42484	1/4 x 2 1/4 pin
(3)	68033	1 x 6.38 pin

21.3 Installing the 19 to 23 ft lift hydraulics

Procedure



TLEBE0110104501

Fig. 61

Install the hydraulics as shown.

(1)	351601	4 1/2 x 10 cylinder
(2)	25580	Elbow fitting - 8MORB x 8MJ
(3)	13238	Tee fitting
(4)	13265	Hose - 3/8 x 56
(5)	13482	Hose - 3/8 x 108
(6)	208612	Hose - 1/2 x 204
(7)	241494	Hose - 1/2 x 276
(8)	209032	Hose - 1/2 x 348
(9)	25602	Hose - 3/8 x 65
(10)	89473	Carriage bolt - 3/8 x 2 1/2
(11)	13215	Clamp
(12)	88362	3/8ID washer
(13)	88103	3/8 hex nut
(14)	15543	Base plate
(15)	89375	Carriage bolt - 3/8 x 1 1/2
(16)	24024	Adapter fitting - 8MORB x 8MJ
(17)	334204	Gold grip - 8FORB
(18)	334210	Union fitting - 8MORB x 8MORB
(19)	A36290	Quick coupler - #8 ORB

21.4 Installing the 25 to 29 ft lift hydraulics

Procedure

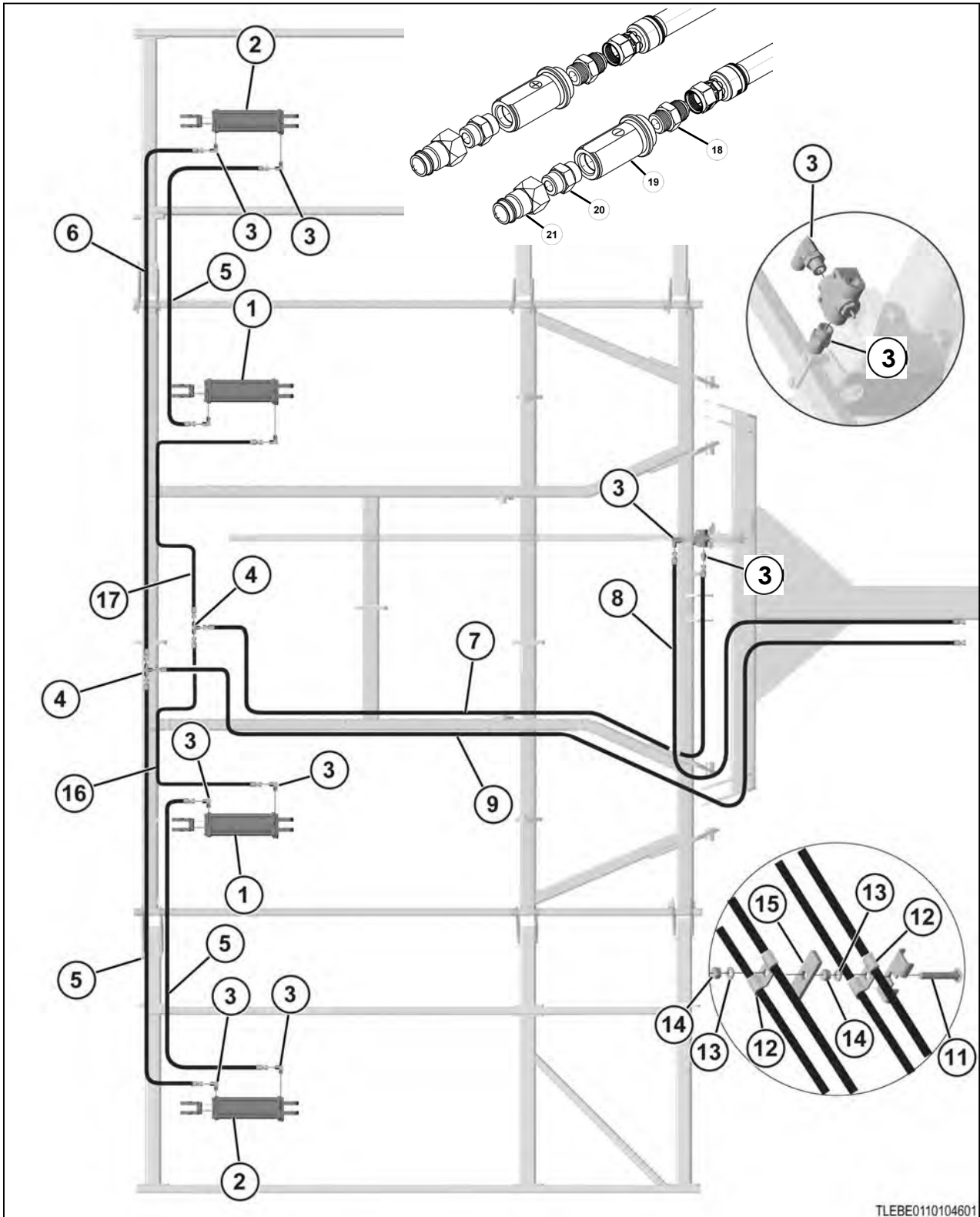


Fig. 62

Install the hydraulics as shown.

(1)	351601	4 1/2 x 10 cylinder
(2)	351602	4 x 10 cylinder
(3)	25580	Elbow fitting - 8MORB x 8MJ
(4)	13238	Tee fitting
(5)	67634	Hose - 3/8 x 132
(6)	59909	Hose - 3/8 x 168
(7)	208612	Hose - 1/2 x 204
(8)	241494	Hose - 1/2 x 276
(9)	209032	Hose - 1/2 x 348
(10)	89375	Carriage bolt - 3/8 x 1 1/2
(11)	89473	Carriage bolt - 3/8 x 2 1/2
(12)	13215	Clamp
(13)	88362	3/8ID washer
(14)	88103	3/8 hex nut
(15)	15543	Base plate
(16)	25603	Hose - 3/8 x 75
(17)	13482	Hose - 3/8 x 108
(18)	24024	Adapter fitting - 8MORB x 8MJ
(19)	334204	Gold grip - 8FORB
(20)	334210	Union fitting - 8MORB x 8MORB
(21)	A36290	Quick coupler - #8 ORB

21.5 Installing the 31 to 41 ft lift hydraulics

Procedure

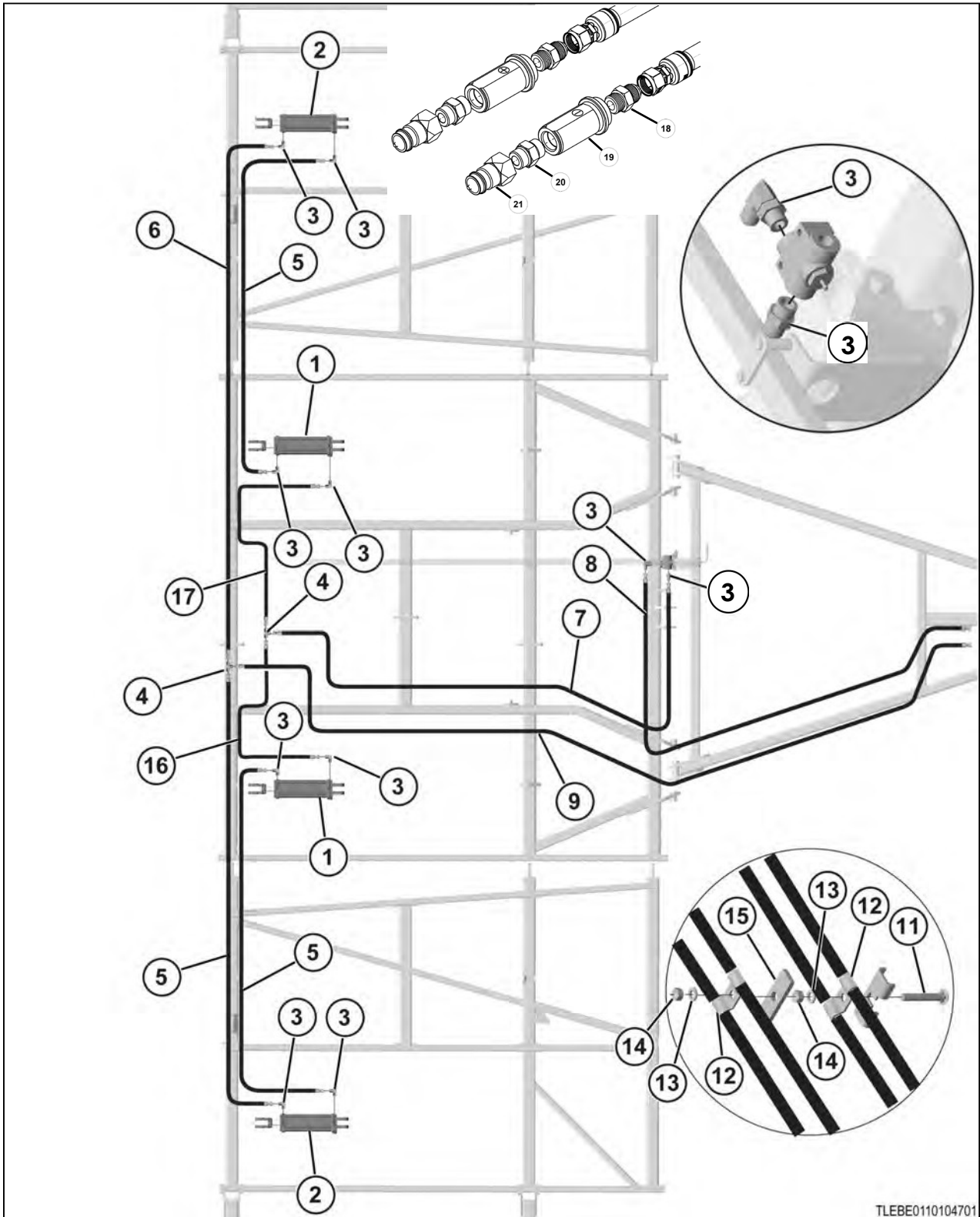


Fig. 63

Install the hydraulics as shown.

(1)	351601	4 1/2 x 10 cylinder
(2)	351602	4 x 10 cylinder
(3)	25580	Elbow fitting - 8MORB x 8MJ
(4)	13238	Tee fitting
(5)	13484	Hose - 3/8 x 156
(6)	234947	Hose - 3/8 x 194
(7)	208612	Hose - 1/2 x 204
(8)	241494	Hose - 1/2 x 276
(9)	209032	Hose - 1/2 x 348
(10)	89375	Carriage bolt - 3/8 x 1 1/2
(11)	89473	Carriage bolt - 3/8 x 2 1/2
(12)	13215	Clamp
(13)	88362	3/8ID washer
(14)	88103	3/8 hex nut
(15)	15543	Base plate
(16)	13265	Hose - 3/8 x 56
(17)	13482	Hose - 3/8 x 108
(18)	24024	Adapter fitting - 8MORB x 8MJ
(19)	334204	Gold grip - 8FORB
(20)	334210	Union fitting - 8MORB x 8MORB
(21)	A36290	Quick coupler - #8 ORB

21.6 Installing the 37 to 47 ft lift hydraulics

Procedure

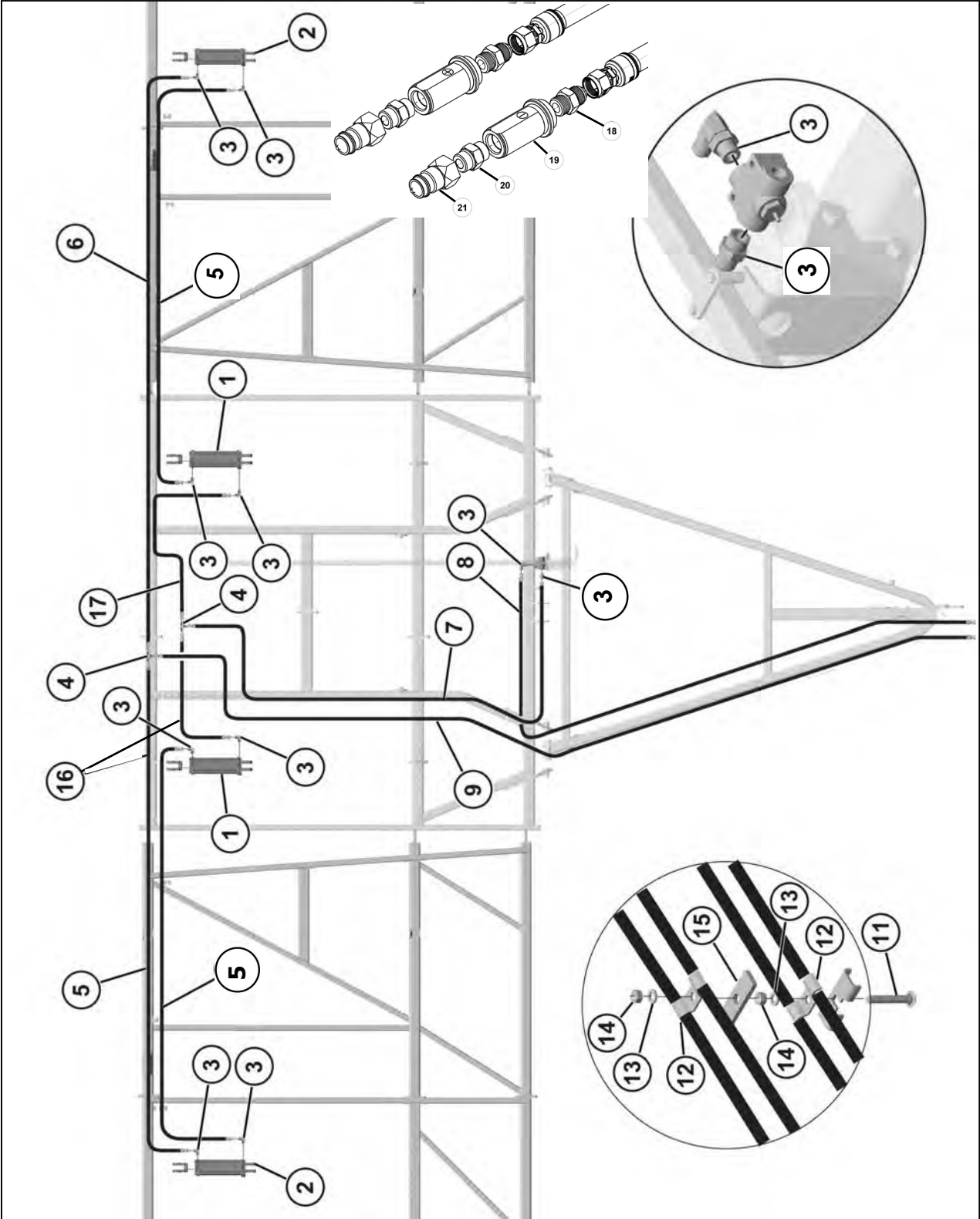


Fig. 64
Install the hydraulics as shown.

(1)	351601	4 1/2 x 10 cylinder
(2)	351602	4 x 10 cylinder
(3)	25580	Elbow fitting - 8MORB x 8MJ
(4)	13238	Tee fitting
(5)	234947	Hose - 3/8 x 194
(6)	237155	Hose - 3/8 x 244
(7)	208612	Hose - 1/2 x 204
(8)	241494	Hose - 1/2 x 276
(9)	209032	Hose - 1/2 x 348
(10)	89375	Carriage bolt - 3/8 x 1 1/2
(11)	89473	Carriage bolt - 3/8 x 2 1/2
(12)	13215	Clamp
(13)	88362	3/8ID washer
(14)	88103	3/8 hex nut
(15)	15543	Base plate
(16)	13265	Hose - 3/8 x 56
(17)	13482	Hose - 3/8 x 108
(18)	24024	Adapter fitting - 8MORB x 8MJ
(19)	334204	Gold grip - 8FORB
(20)	334210	Union fitting - 8MORB x 8MORB
(21)	A36290	Quick coupler - #8 ORB

21.7 Installing the 19 to 29 ft fold cylinders

Procedure

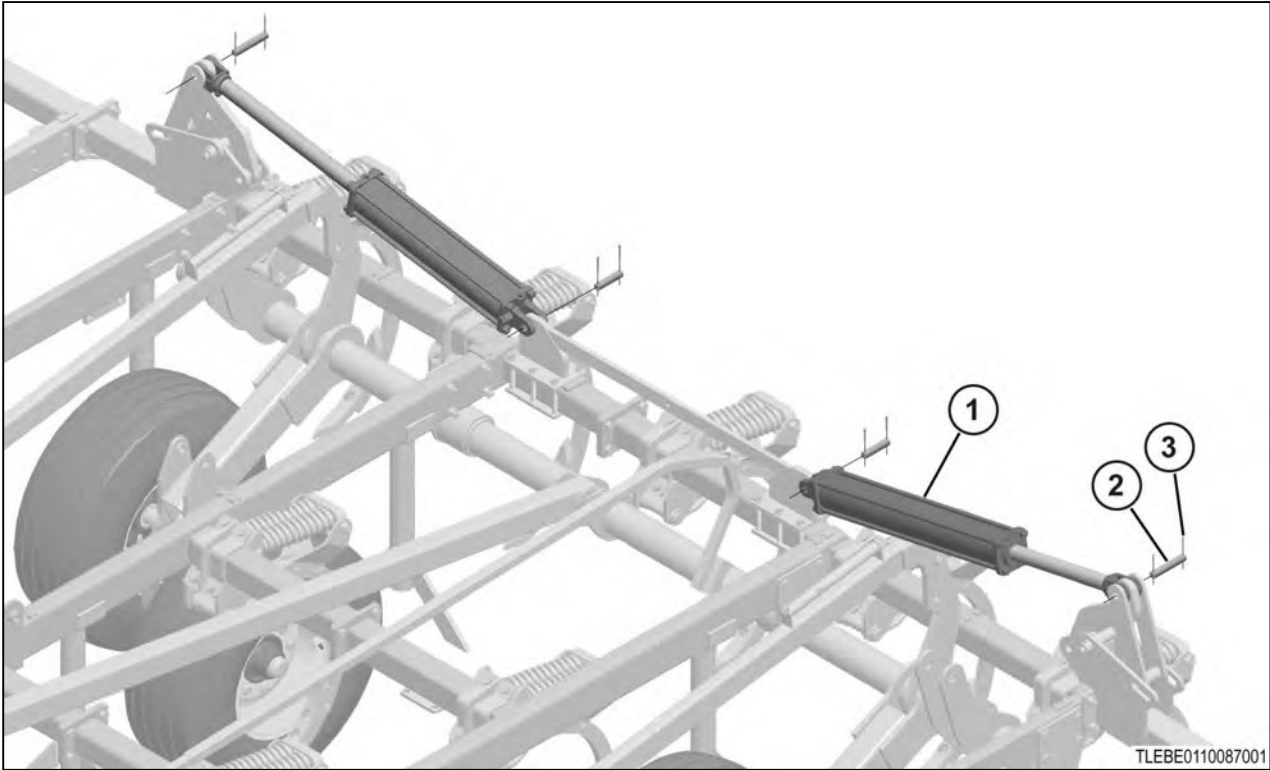


Fig. 65

Install the fold cylinders as shown.

(1)	247830	4 x 24 cylinder (with base pins)
(2)	222338	1 x 4 1/8 pin
(3)	42484	1/4 x 2 1/4 pin

21.8 Installing the 31 to 47 ft center fold cylinders

Procedure

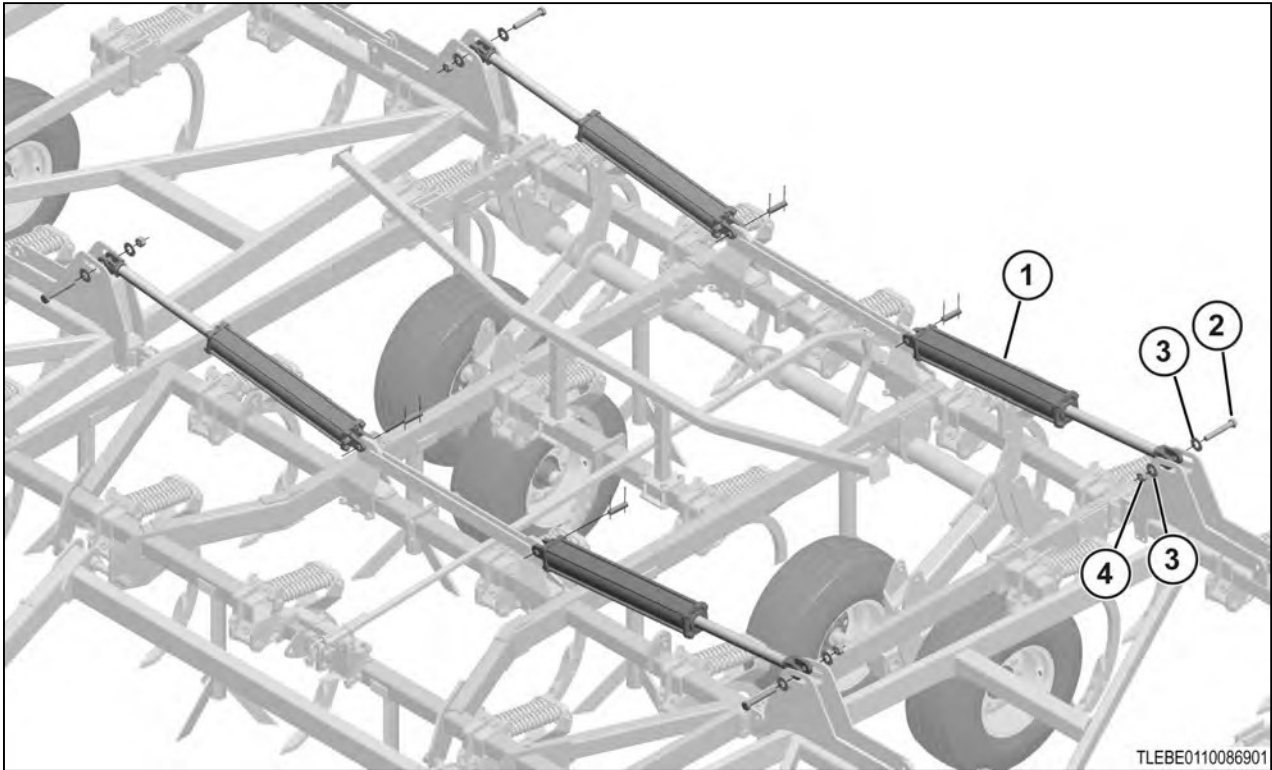


Fig. 66

Install the center fold cylinders as shown.

(1)	247831	4 x 30 cylinder (with base pins)
(2)	88666	1 x 6 1/2 hex bolt
(3)	88196	1 washer
(4)	88348	1 lock nut

21.9 Installing the 31 to 47 ft outer fold cylinders

Procedure

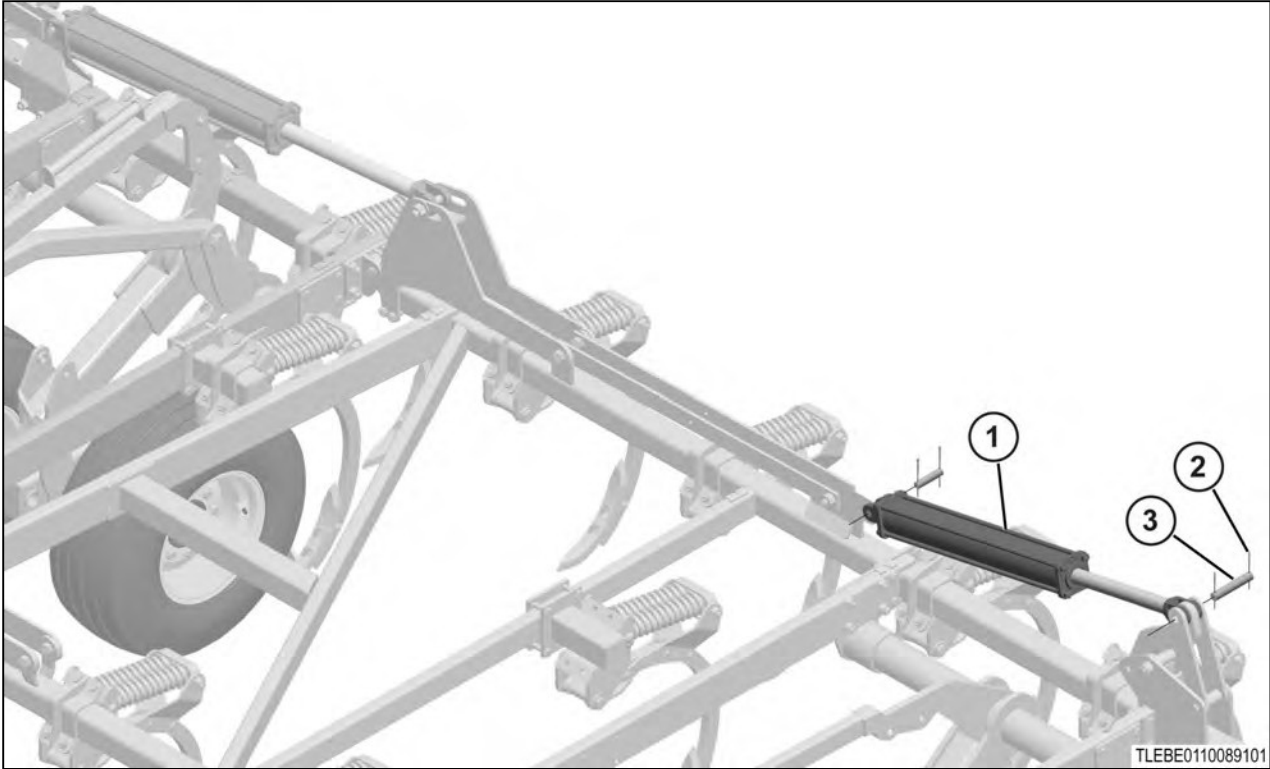


Fig. 67

Install the fold cylinders as shown.

(1)	247830	4 x 24 cylinder (with base pins)
(2)	42484	1/4 x 2 1/4 pin
(3)	222338	1 x 4 1/8 pin

21.10 Installing the 19 to 29 ft fold hydraulics

Procedure

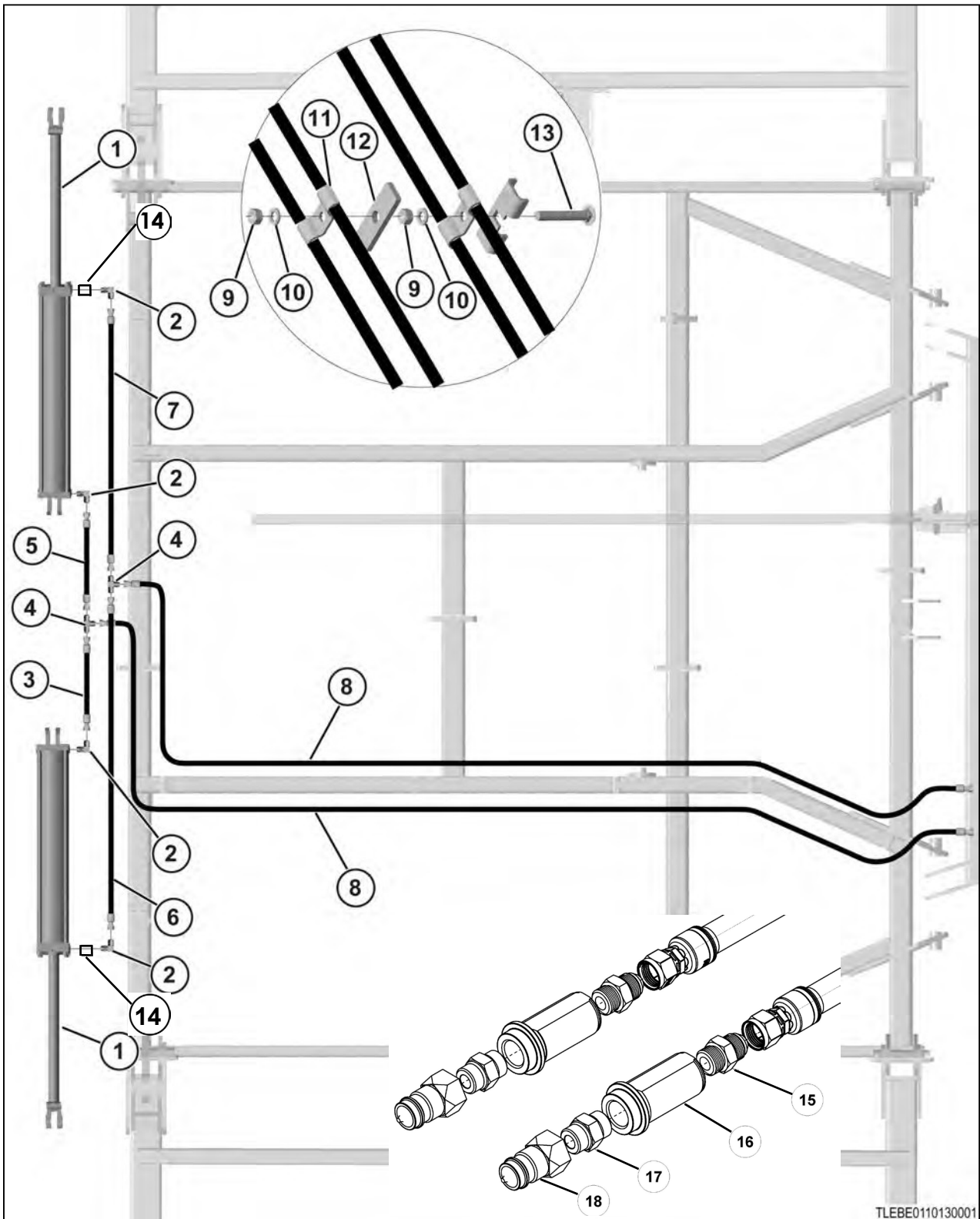


Fig. 68

Install the fold hydraulics as shown.

(1)	247830	4 x 24 cylinder (with base pins)
(2)	25580	Elbow fitting - 8MORB x 8MJ
(3)	13423	Hose - 3/8 x 24
(4)	13238	Tee fitting
(5)	13265	Hose - 3/8 x 56
(6)	25597	Hose - 3/8 x 40
(7)	56540	Hose - 3/8 x 89
(8)	240611	Hose - 3/8 x 360
(9)	88103	3/8 hex nut
(10)	88362	3/8ID washer
(11)	13215	Clamp
(12)	15543	Base plate
(13)	89473	Carriage bolt - 3/8 x 2 1/2
(14)	350600	RSTR ADP - 8MORB x 8FORB
(15)	24024	Adapter fitting - 8MORB x 8MJ
(16)	334205	Blue grip - 8FORB
(17)	334210	Union fitting - 8MORB x 8MORB
(18)	A36290	Quick coupler - #8 ORB

21.11

Installing the 31 to 39 ft fold hydraulics - no outer wing

Procedure

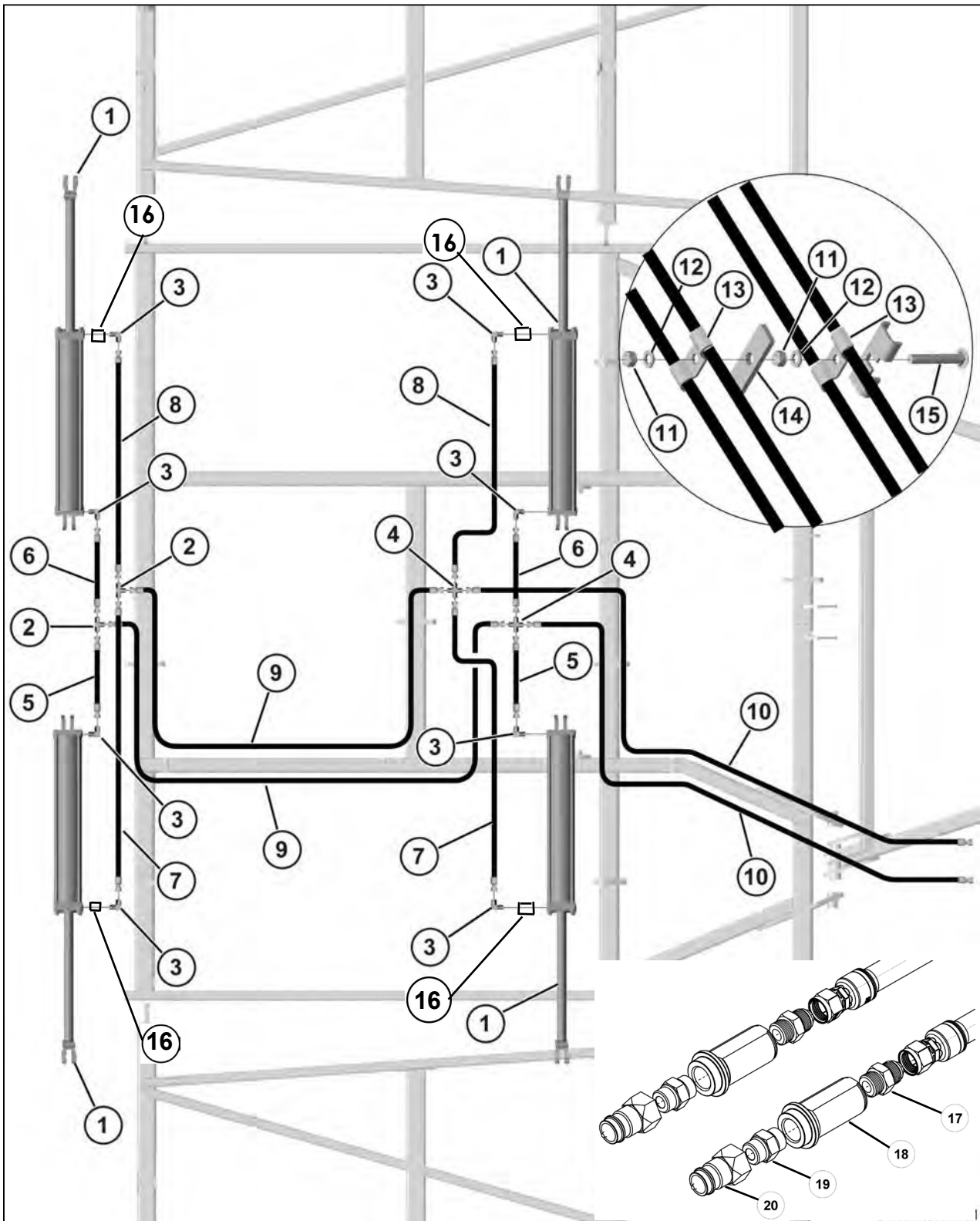


Fig. 69

Install the fold hydraulics as shown.

(1)	247831	4 x 30 cylinder (with base pins)
(2)	13238	Tee fitting
(3)	25580	Elbow fitting - 8MORB x 8MJ
(4)	15910	Cross fitting
(5)	13423	Hose - 3/8 x 24
(6)	15515	Hose - 3/8 x 62
(7)	56539	Hose - 3/8 x 50
(8)	56540	Hose - 3/8 x 89
(9)	235388	Hose - 3/8 x 102
(10)	247428	Hose - 3/8 x 264
(11)	88103	3/8 hex nut
(12)	88362	3/8ID washer
(13)	13215	Clamp
(14)	15543	Base plate
(15)	89473	Carriage bolt - 3/8 x 2 1/2
(16)	350600	RSTR ADP - 8MORB x 8FORB
(17)	24024	Adapter fitting - 8MORB x 8MJ
(18)	334205	Blue grip - 8FORB
(19)	334210	Union fitting - 8MORB x 8MORB
(20)	A36290	Quick coupler - #8 ORB

21.12 Installing the 37 to 47 ft fold hydraulics - with outer wing

Procedure

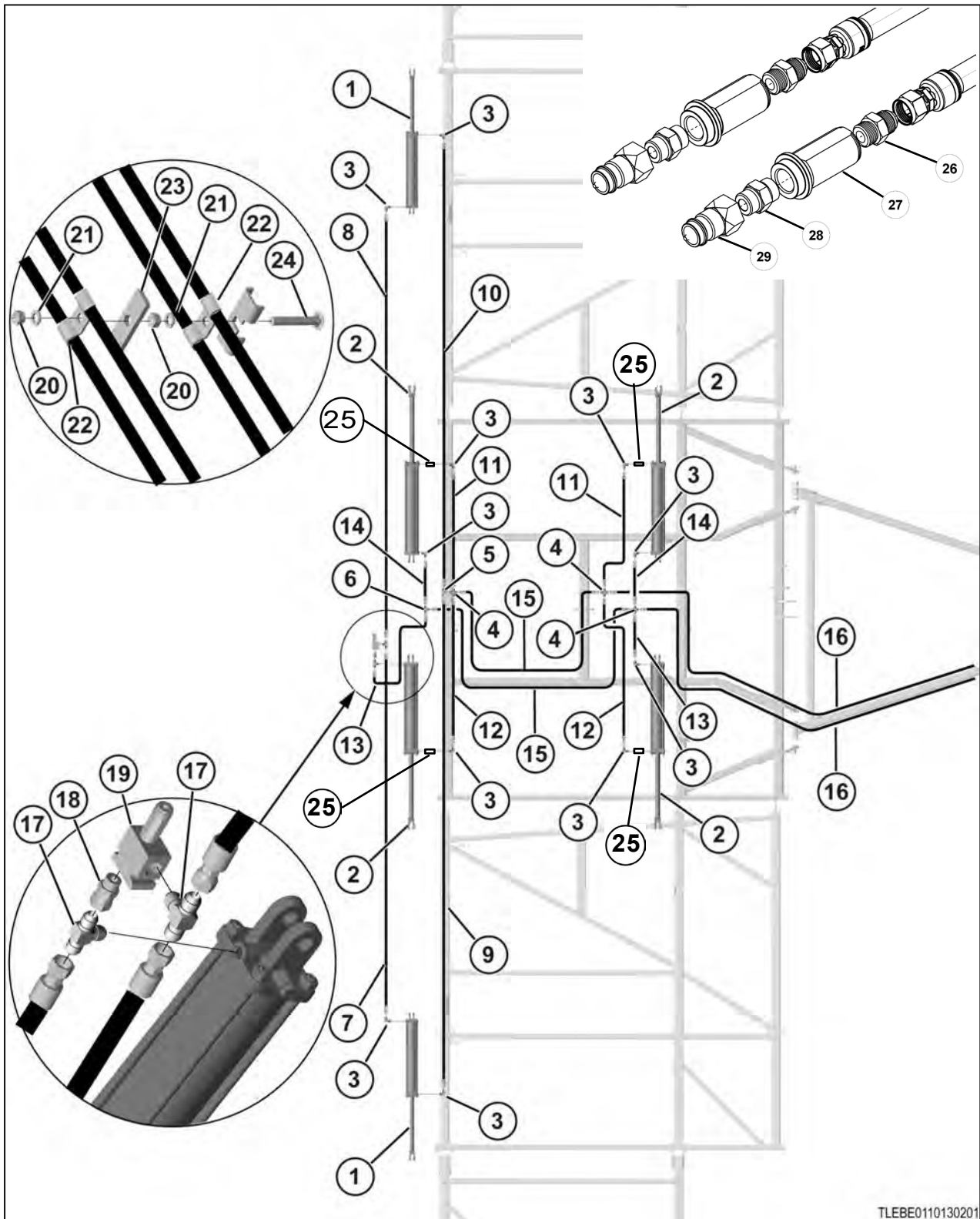


Fig. 70

Install the fold hydraulics as shown.

(1)	247830	4 x 24 cylinder (with base pins)
(2)	247831	4 x 30 cylinder (with base pins)
(3)	25580	Elbow fitting - 8MORB x 8MJ
(4)	15910	Cross fitting
(5)	69080	Tee fitting- 8MJ x 8MJ x 8FJX
(6)	13238	Tee fitting- 8MJ x 8MJ x 8MJ
(7)	13483	Hose - 3/8 x 120 - 9 ft wing
	13484	Hose - 3/8 x 156 - 12 ft wing
(8)	233689	Hose - 3/8 x 180 - 9 ft wing
	238204	Hose - 3/8 x 210 - 12 ft wing
(9)	13484	Hose - 3/8 x 156 - 9 ft wing
	233689	Hose - 3/8 x 180 - 12 ft wing
(10)	238204	Hose - 3/8 x 210 - 9 ft wing
	237155	Hose - 3/8 x 244 - 12 ft wing
(11)	56540	Hose - 3/8 x 89
(12)	56539	Hose - 3/8 x 50
(13)	13423	Hose - 3/8 x 24
(14)	15515	Hose - 3/8 x 62
(15)	235388	Hose - 3/8 x 102
(16)	247428	Hose - 3/8 x 264
(17)	56534	Tee fitting - 8MJ x 8MJ x 8MORB
(18)	24004	Adapter fitting - 8MORB x 8FJX
(19)	65870	Sequence valve
(20)	88103	3/8 hex nut
(21)	88362	3/8ID washer
(22)	13215	Clamp
(23)	15543	Base plate
(24)	89473	Carriage bolt - 3/8 x 2 1/2
(25)	350600	RSTR ADP - 8MORB x 8FORB
(26)	24024	Adapter fitting - 8MORB x 8MJ
(27)	334205	Blue grip - 8FORB
(28)	334210	Union fitting - 8MORB x 8MORB
(29)	A36290	Quick coupler - #8 ORB

22. Shank Stub locations - 12 & 15 inch spacing

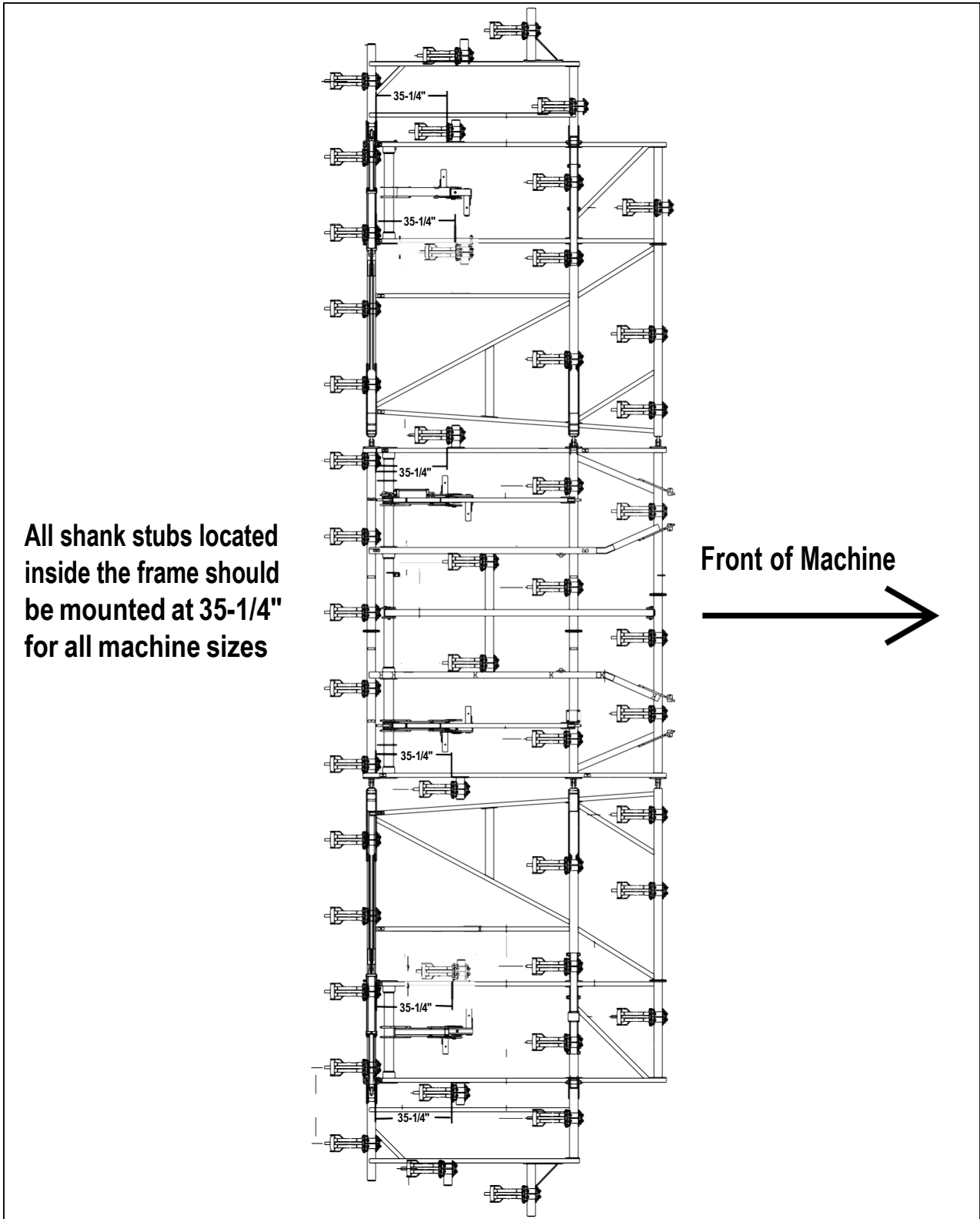
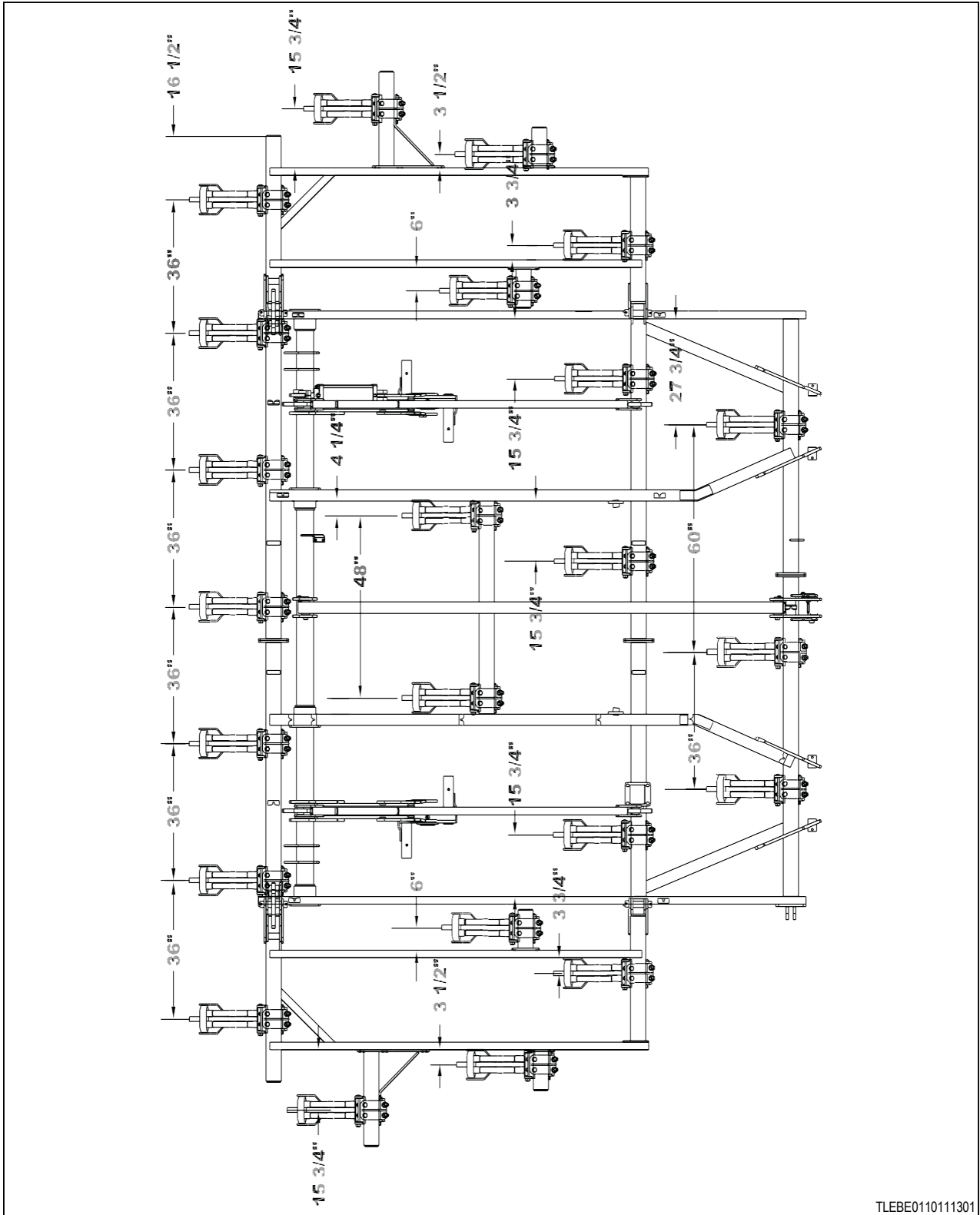


Fig. 71

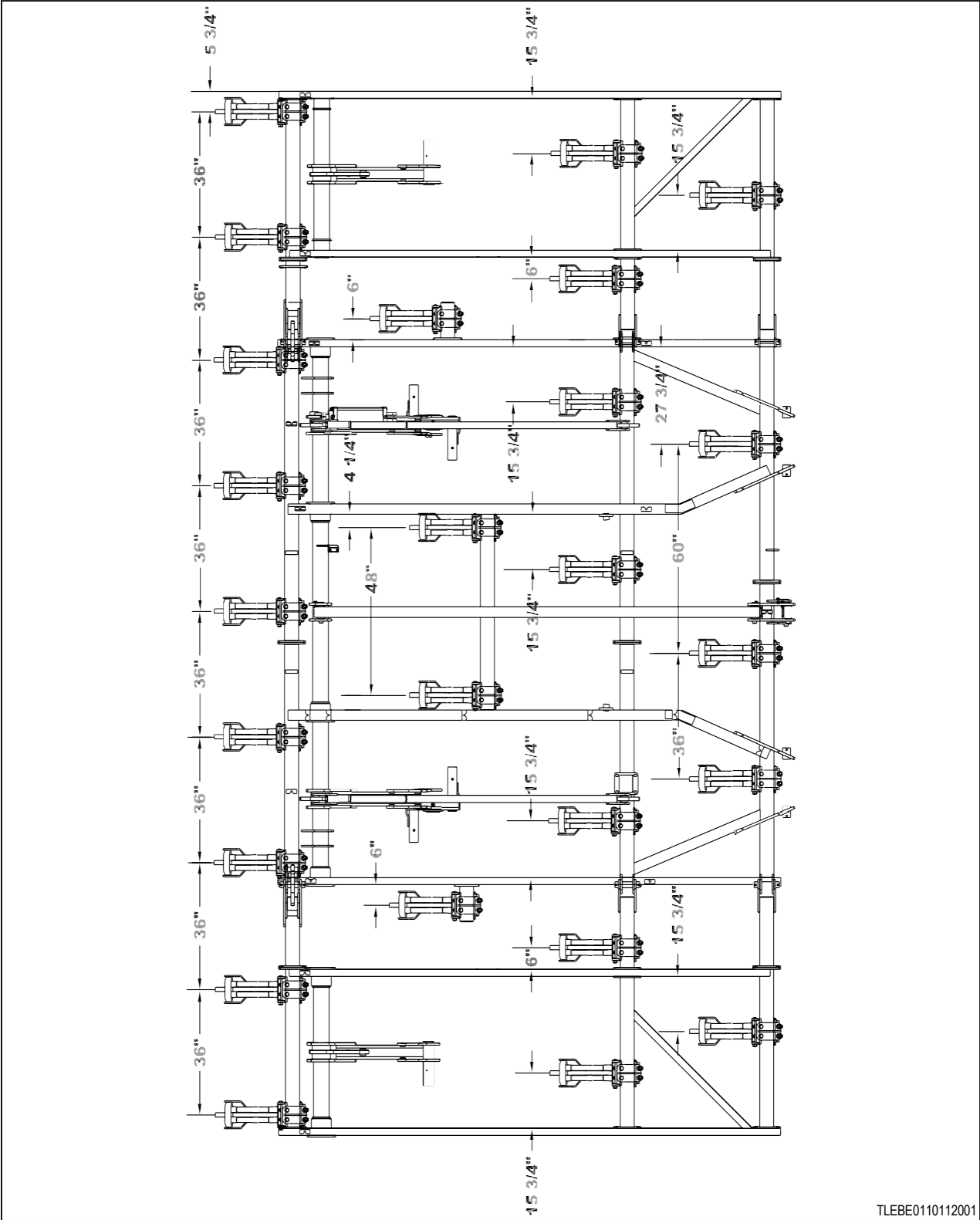
23.2 19-23 ft shank locations - 12 inch spacing



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Fig. 73

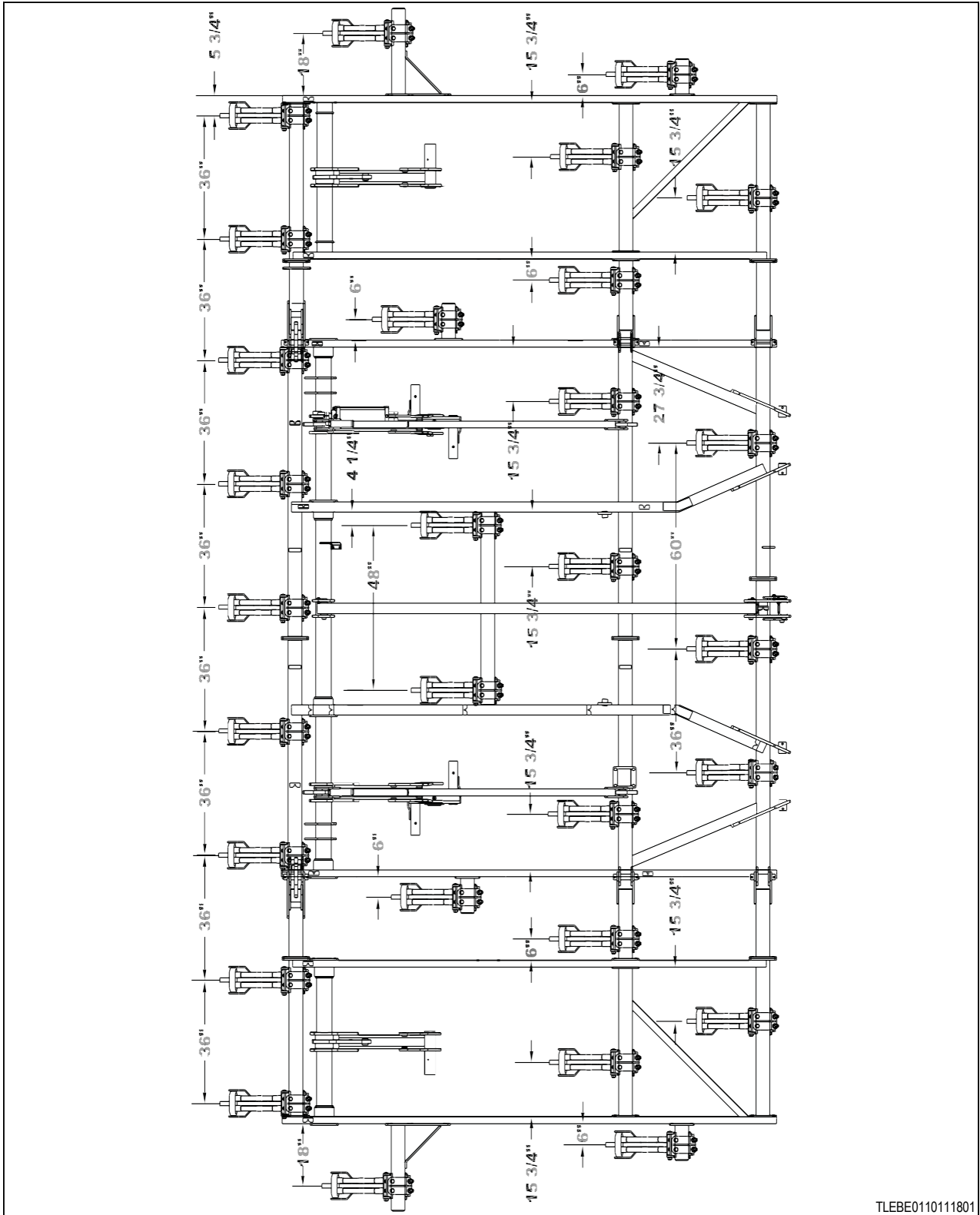
23.3 25 ft shank locations - 12 inch spacing



TLEBE0110112001

Fig. 74

23.4 25-29 ft shank locations - 12 inch spacing

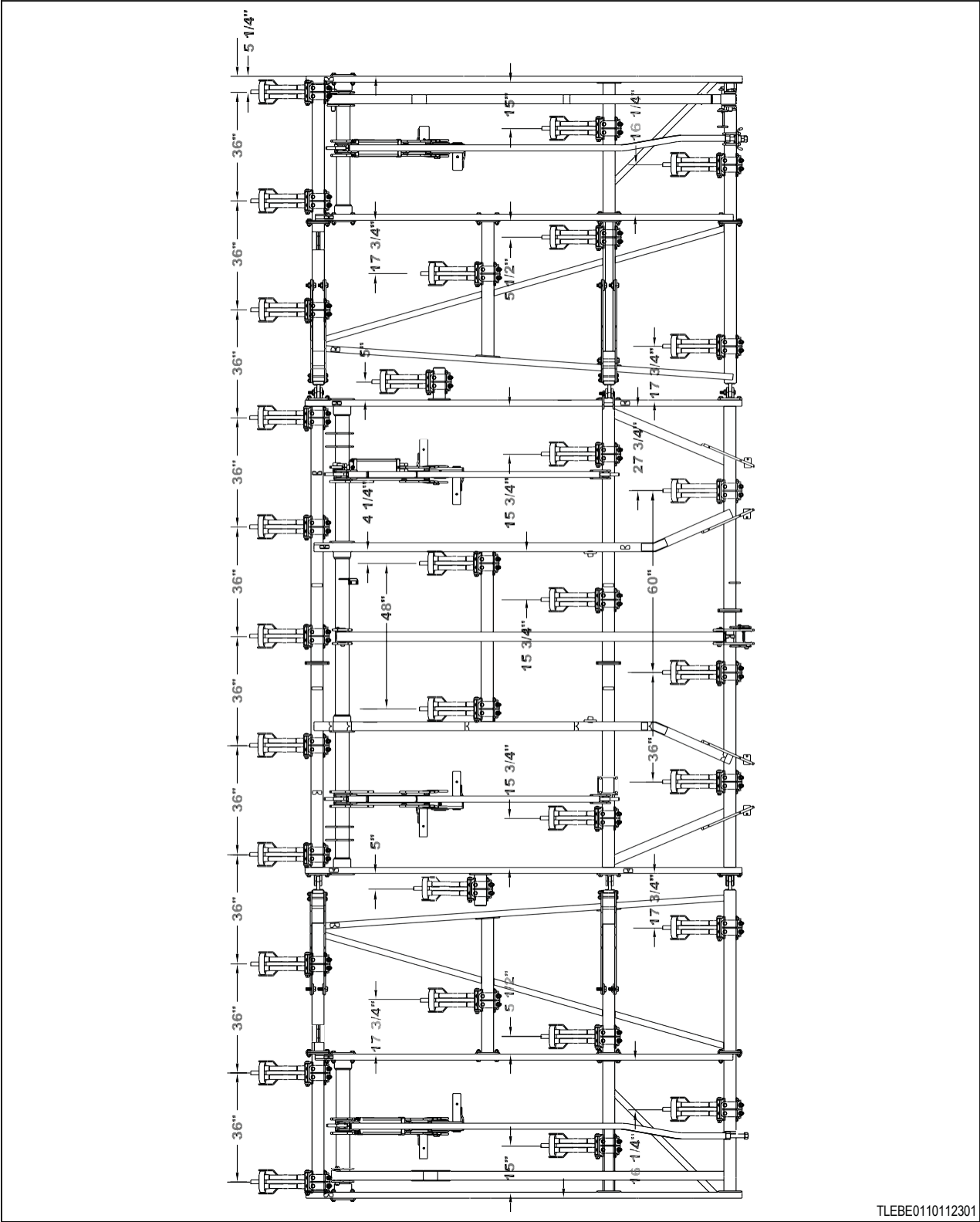


TLEBE0110111801

Fig. 75

23.5

31 ft shank locations - 12 inch spacing

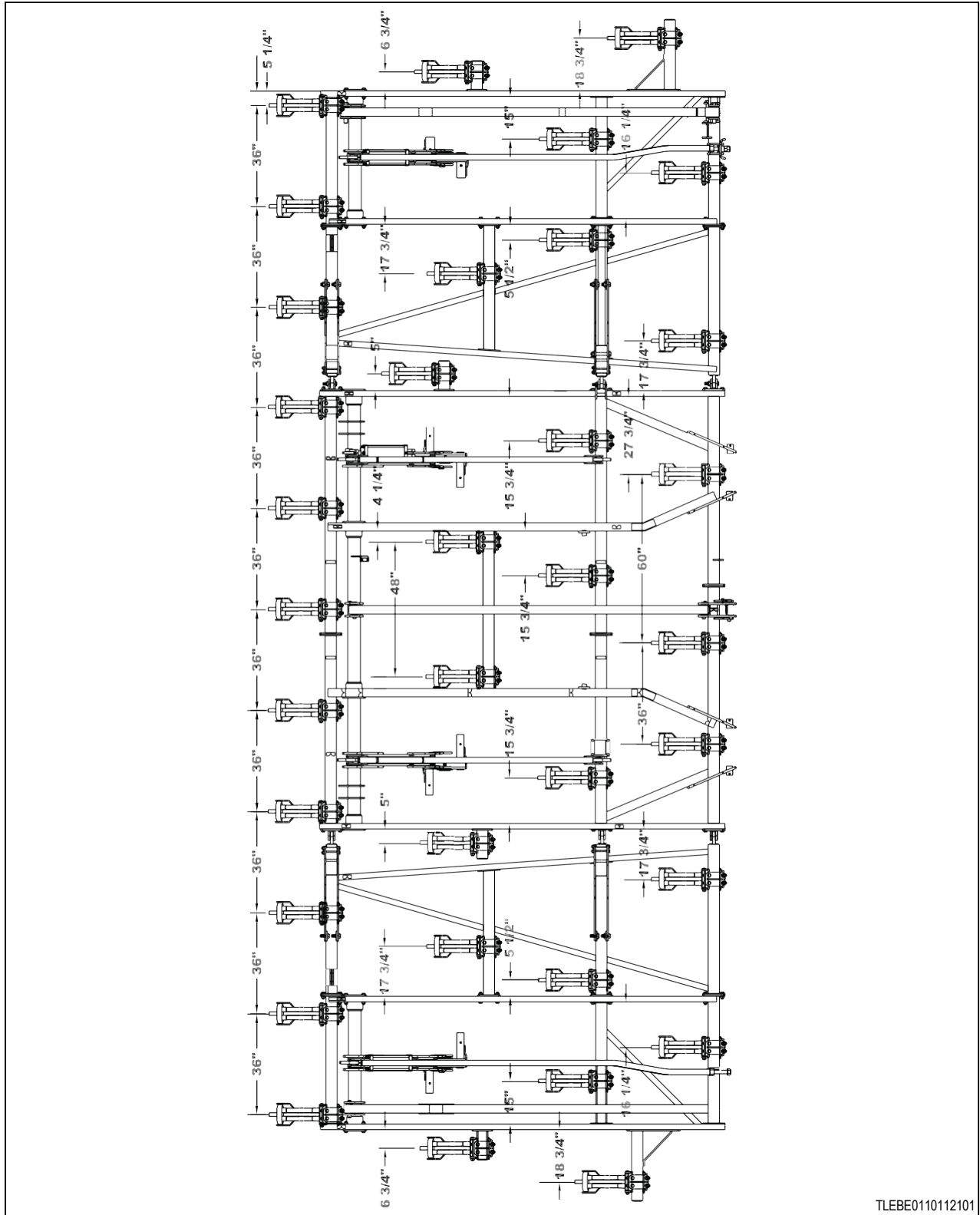


TLEBE0110112301

Fig. 76

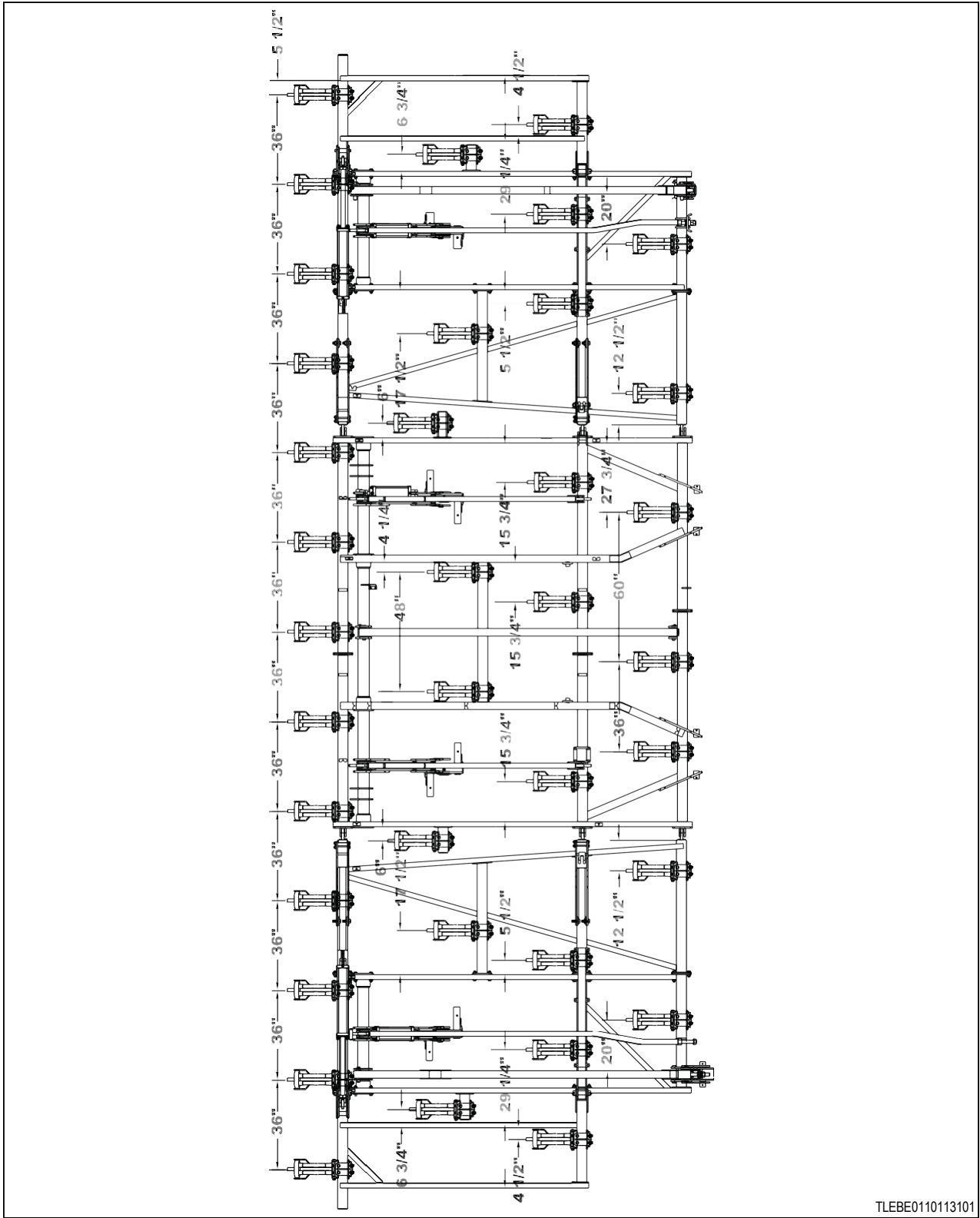
23.6

31-35 ft shank locations - 12 inch spacing



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Fig. 77



TLEBE0110113101

Fig. 78

23.8 37 ft shank locations - 12 ft wing - 12 inch spacing

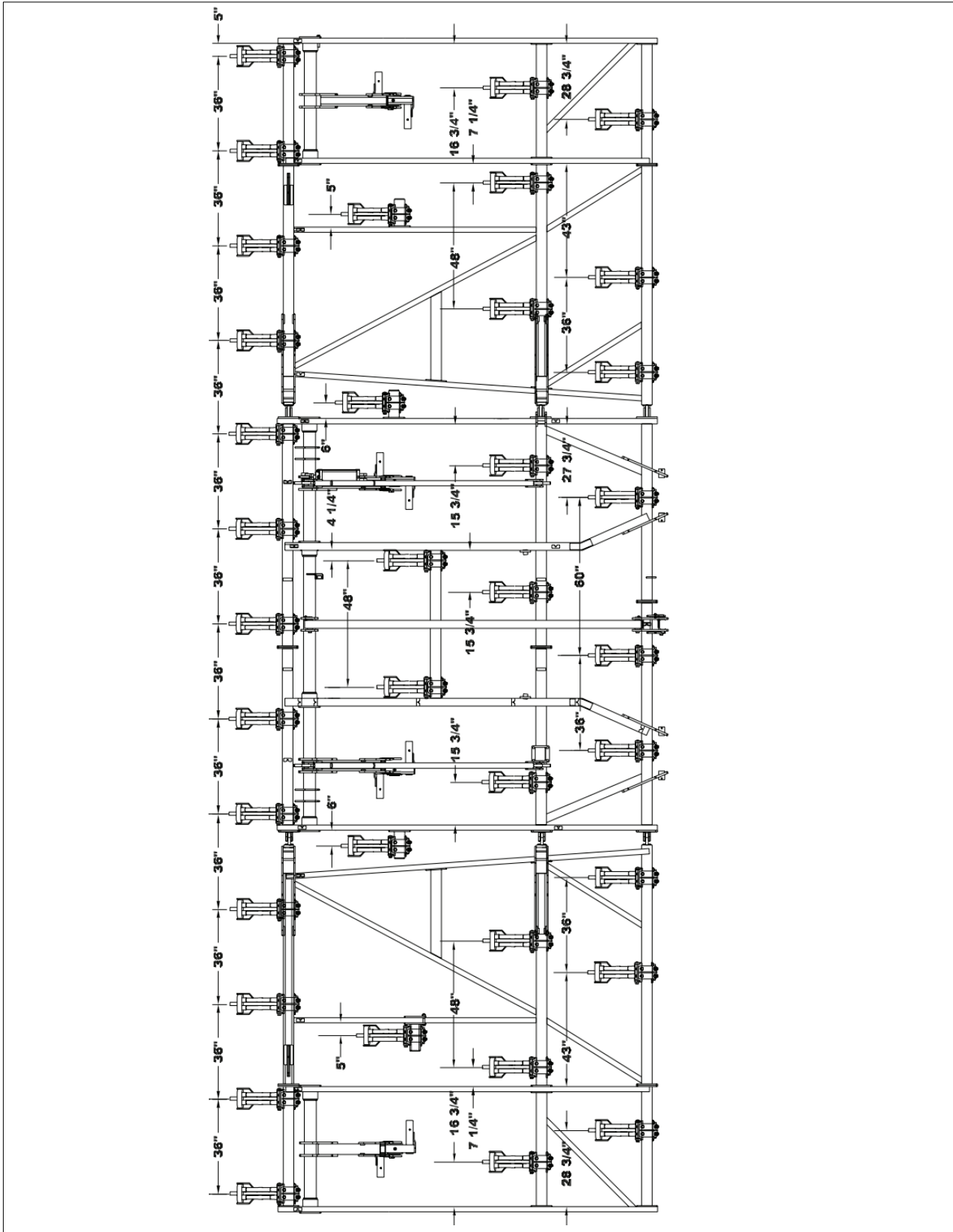
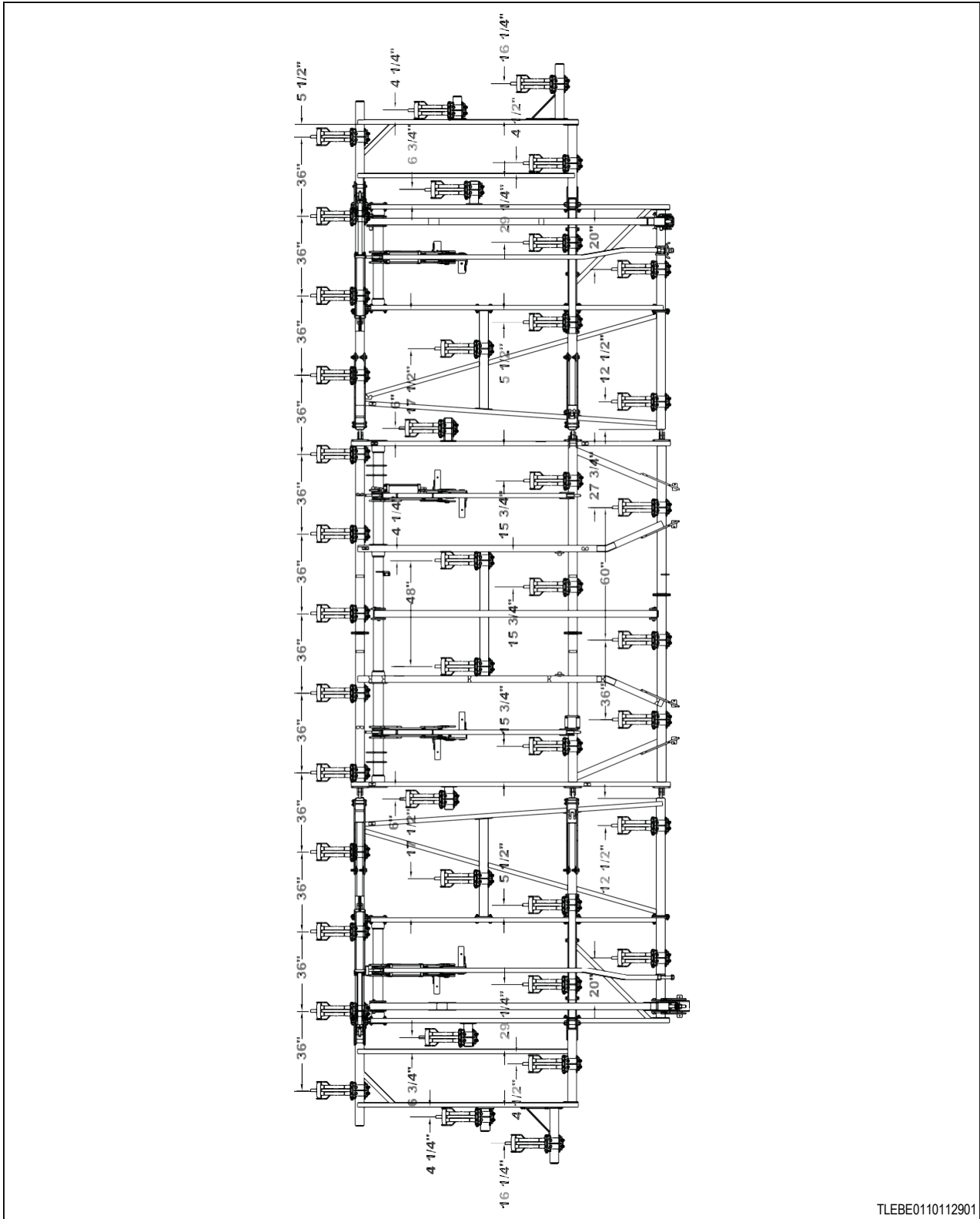


Fig. 79



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Fig. 80

23.10

37-43 ft shank locations - 12 inch spacing

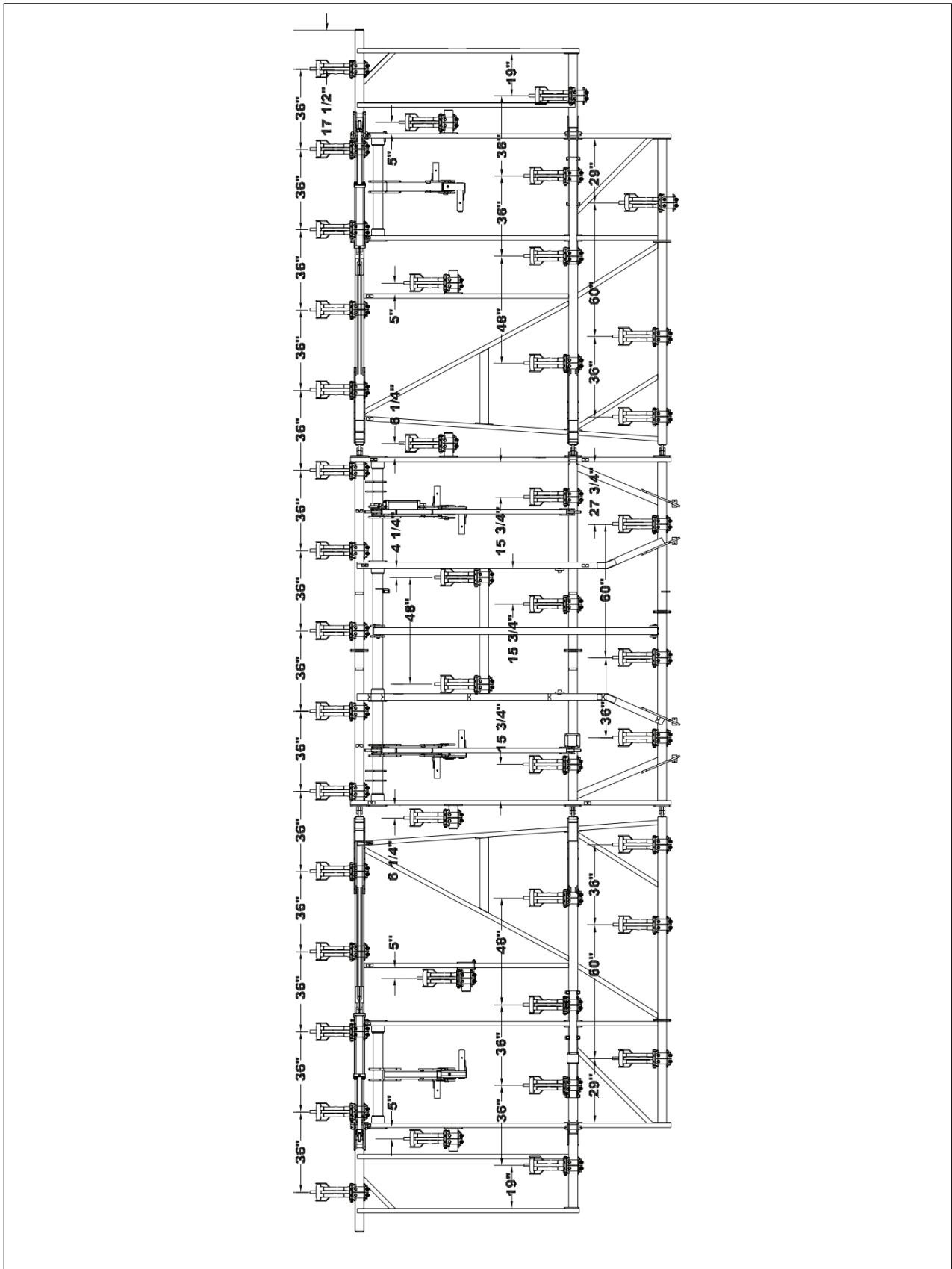


Fig. 81

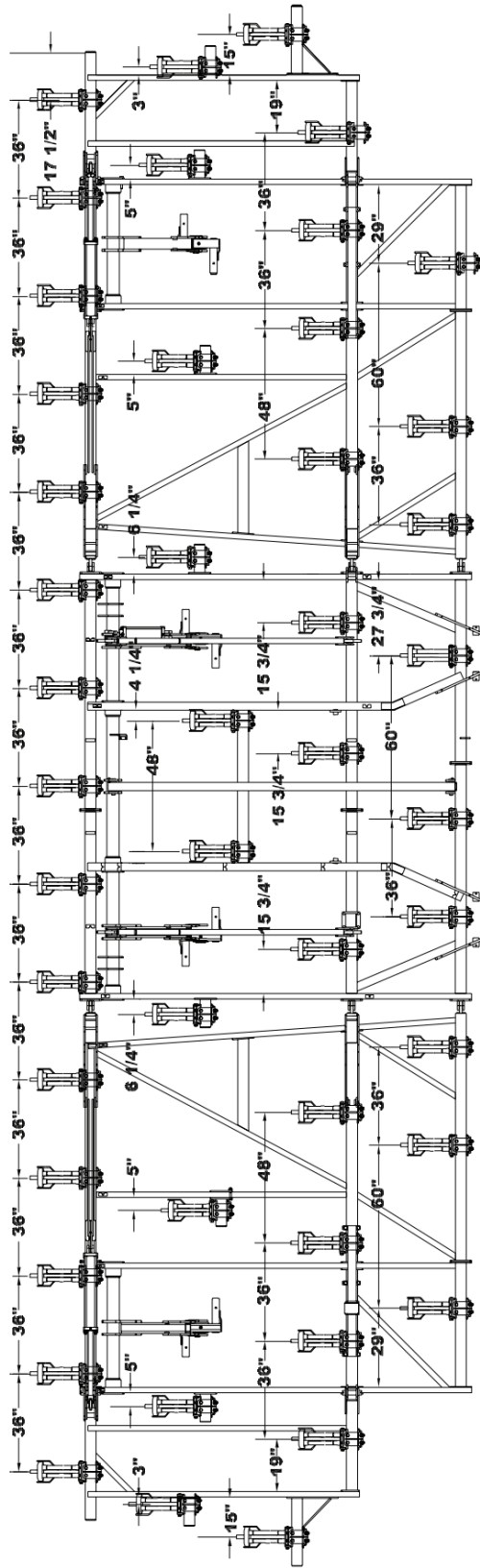


Fig. 82

24. Shank locations - 15 inch spacing

24.1 19 ft shank locations - 15 inch spacing

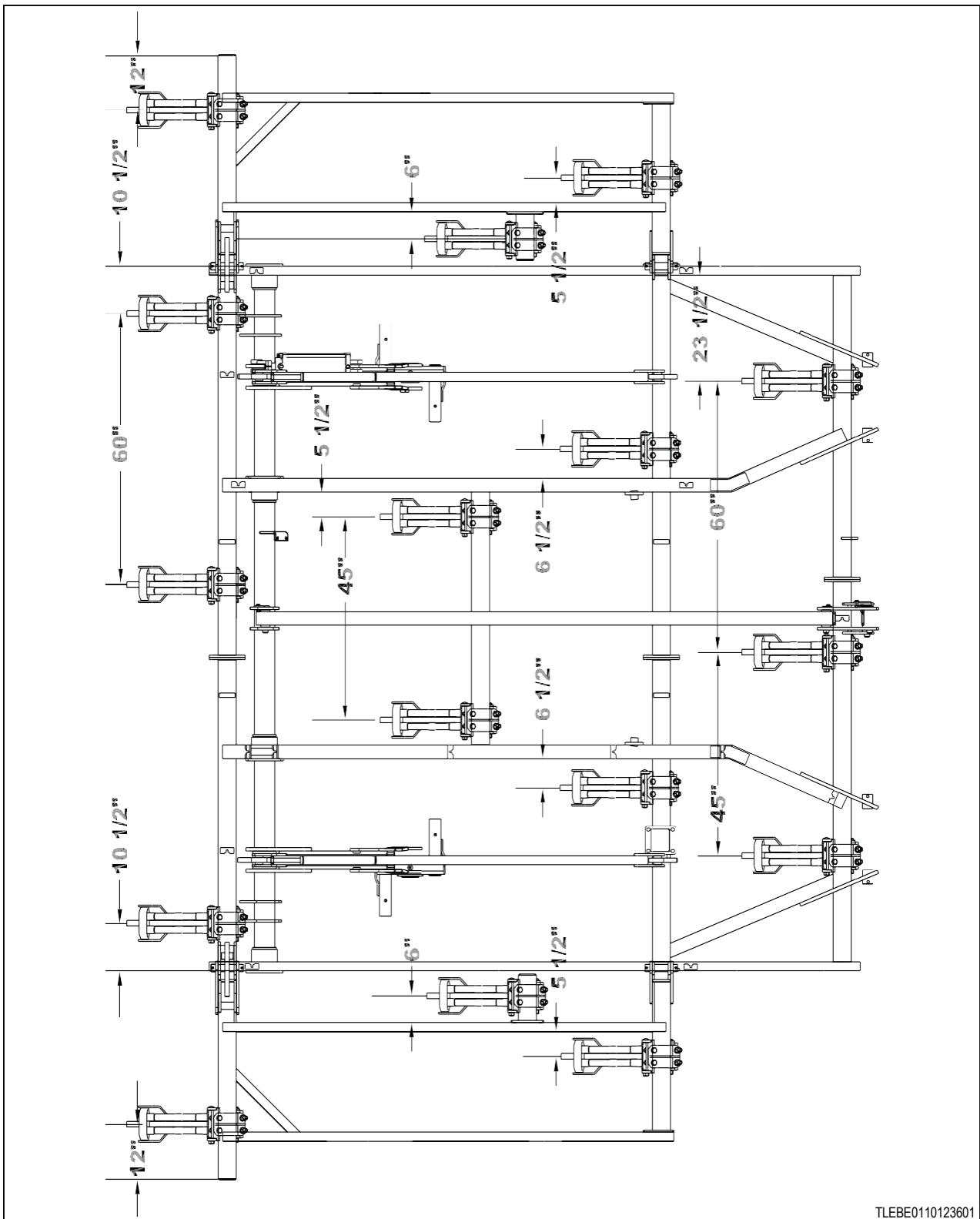
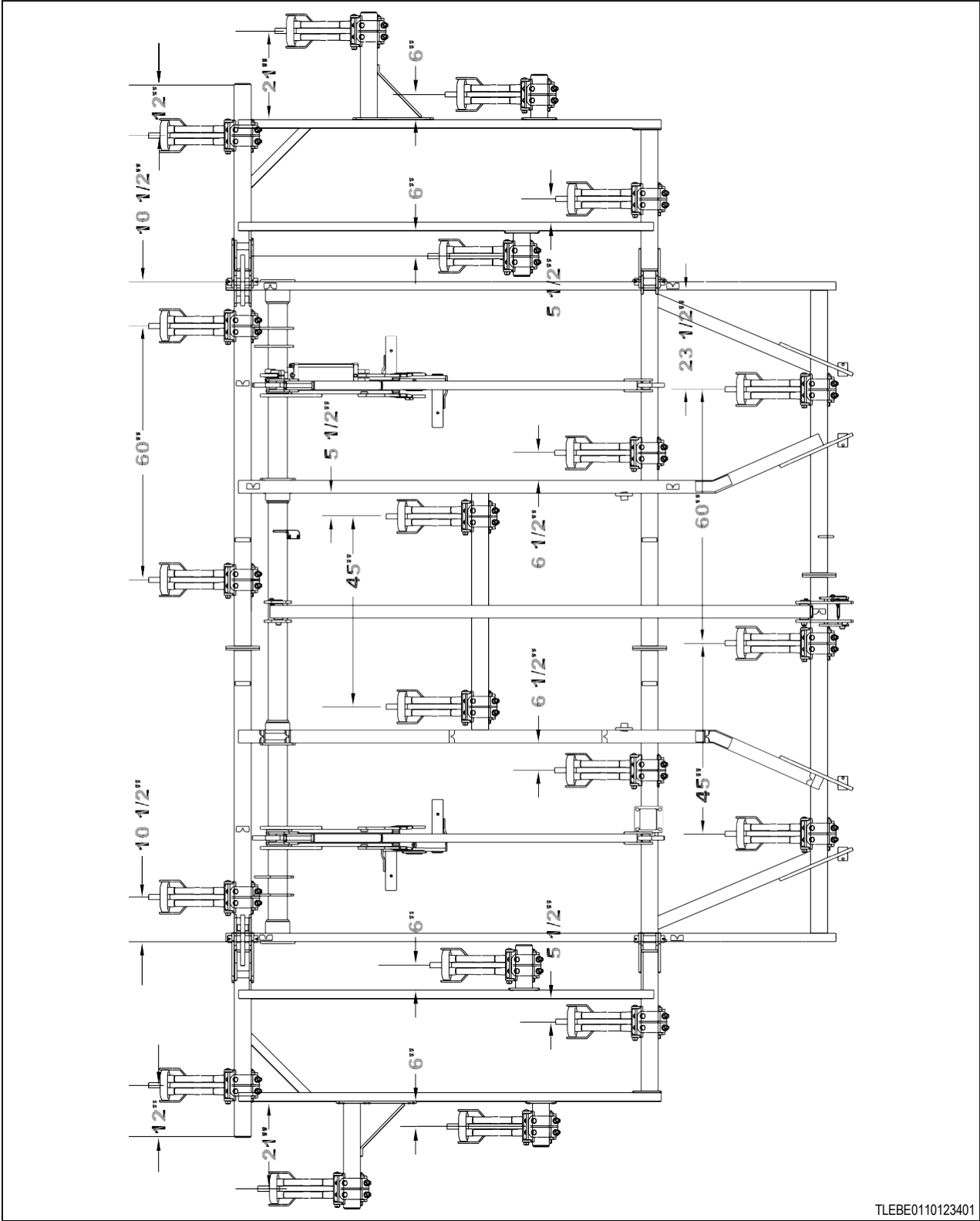


Fig. 83

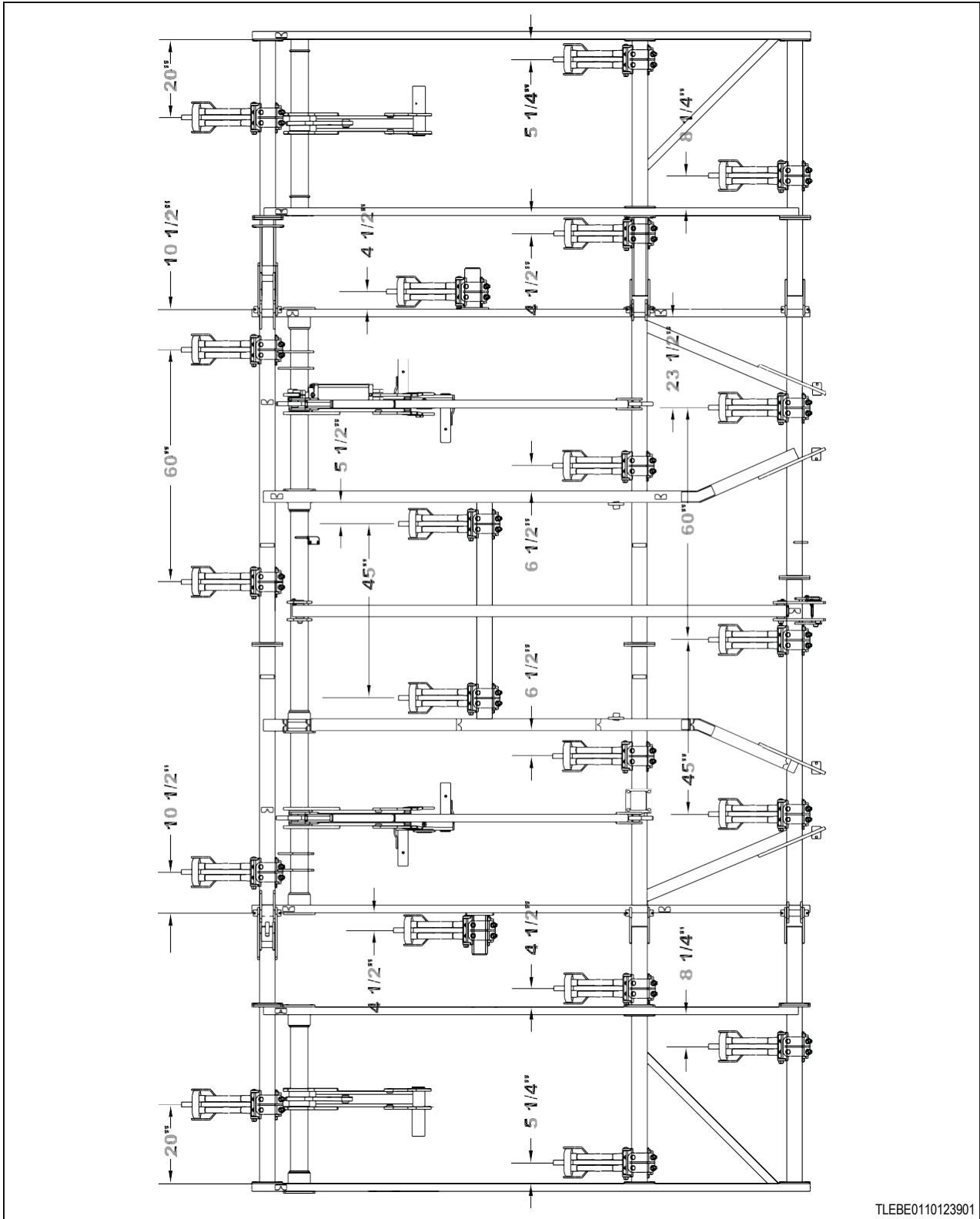
24.2 19-23 ft shank locations - 15 inch spacing



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Fig. 84

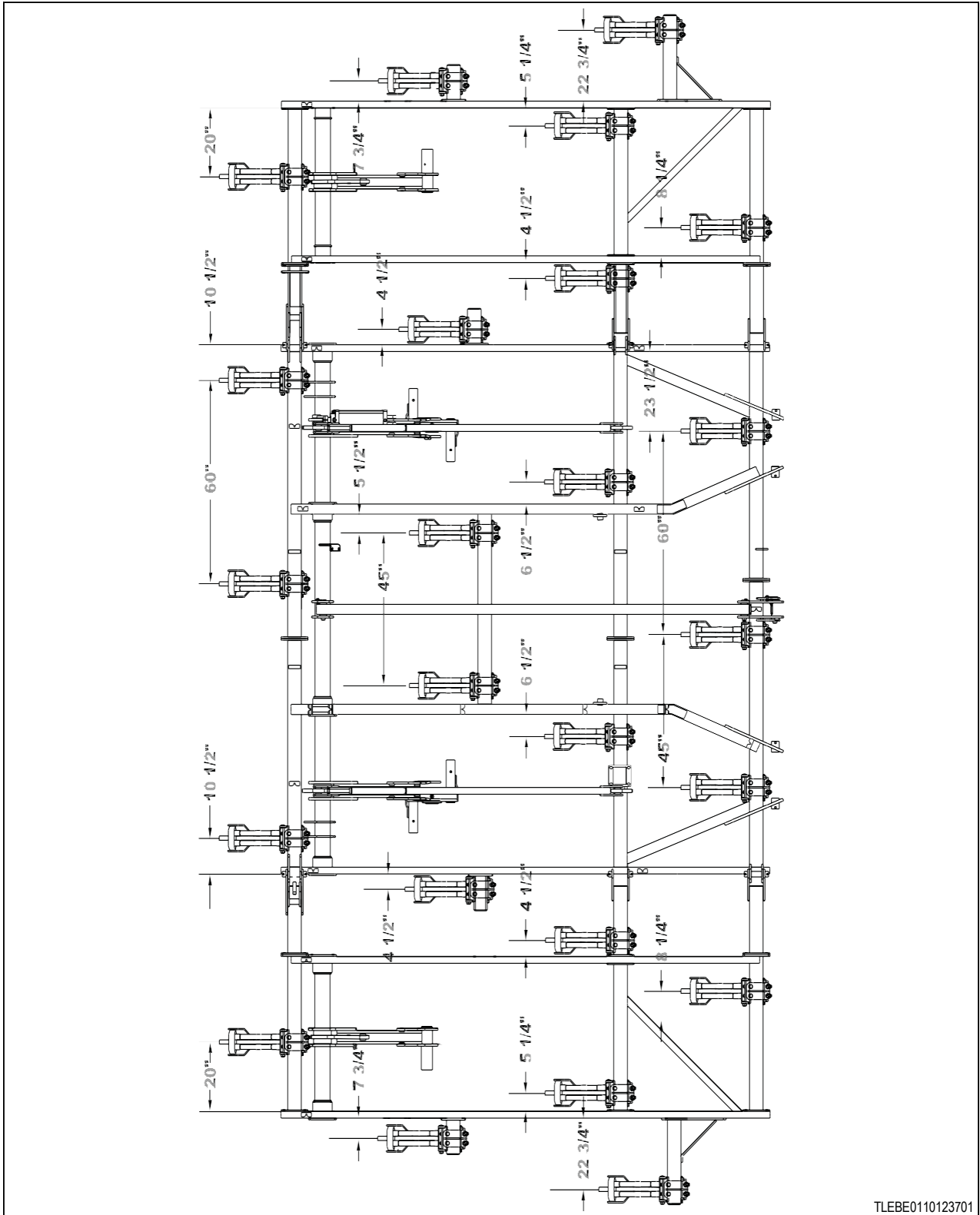
24.3 25 ft shank locations - 15 inch spacing



TLEBE0110123901

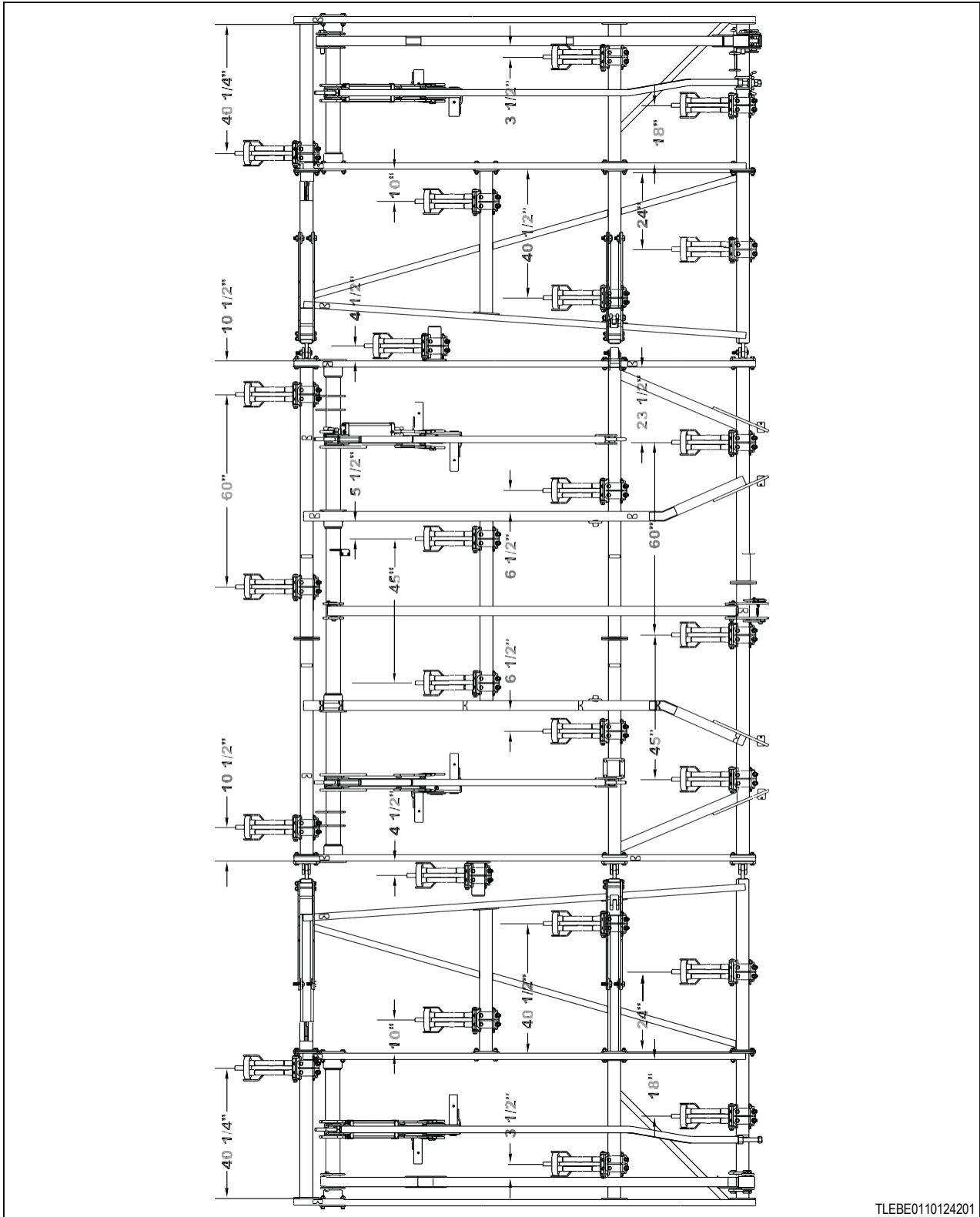
Fig. 85

24.4 25-29 ft shank locations - 15 inch spacing



TLEBE0110123701

Fig. 86

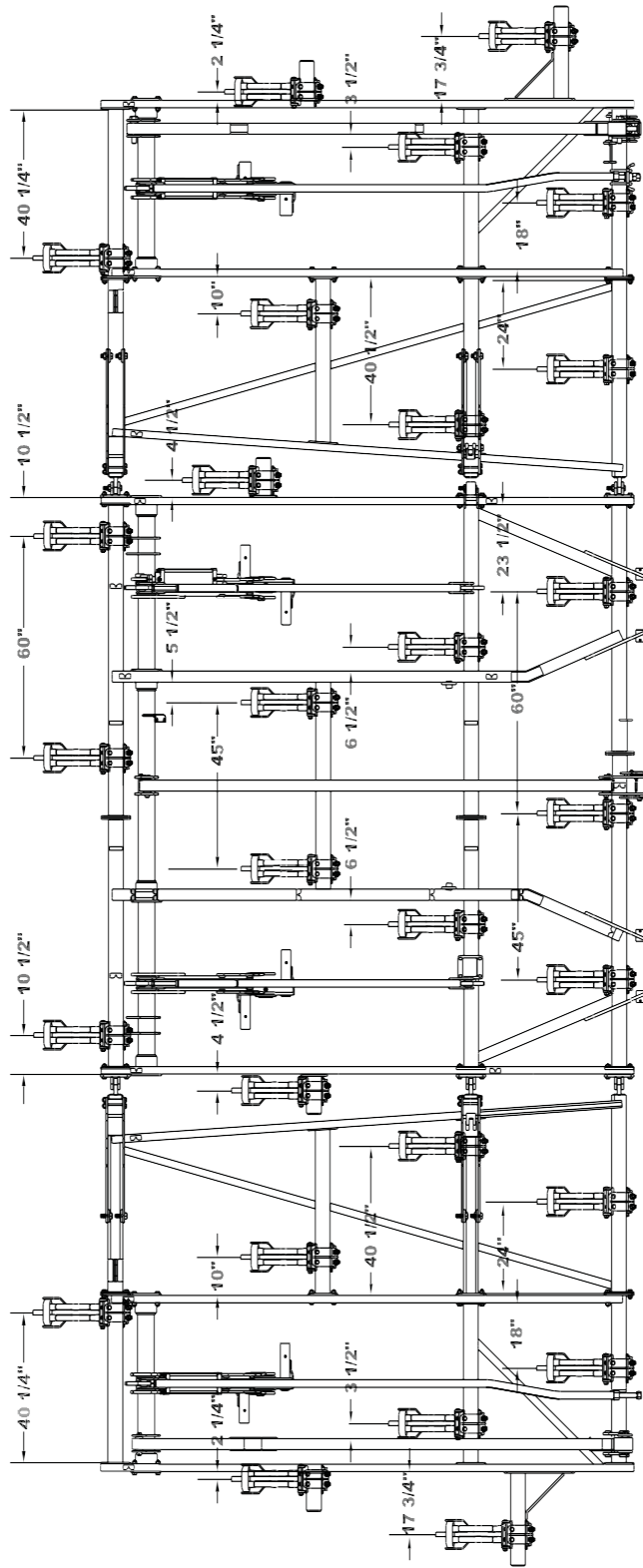


TLEBE0110124201

Fig. 87

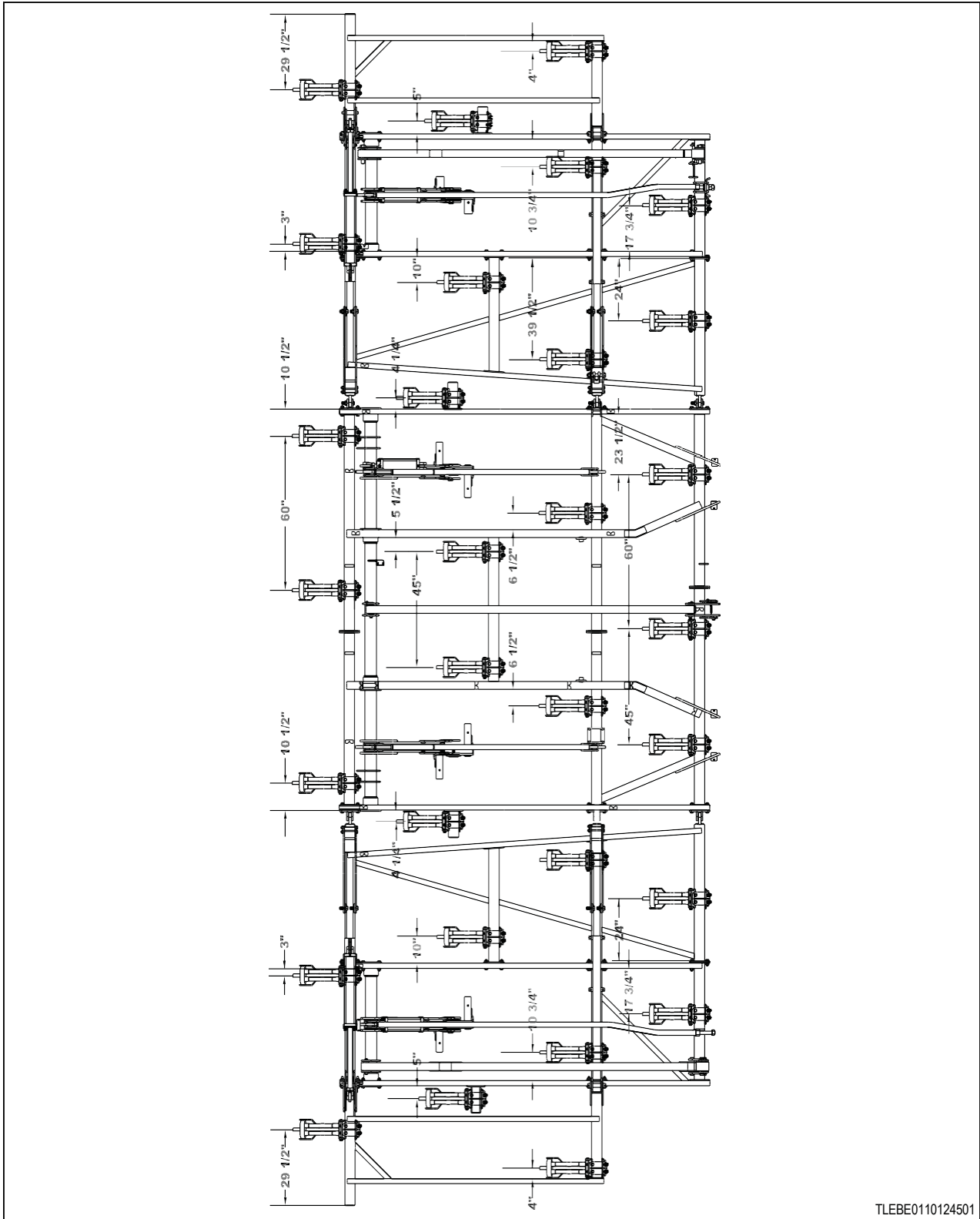
24.6

31-35 ft shank locations - 15 inch spacing



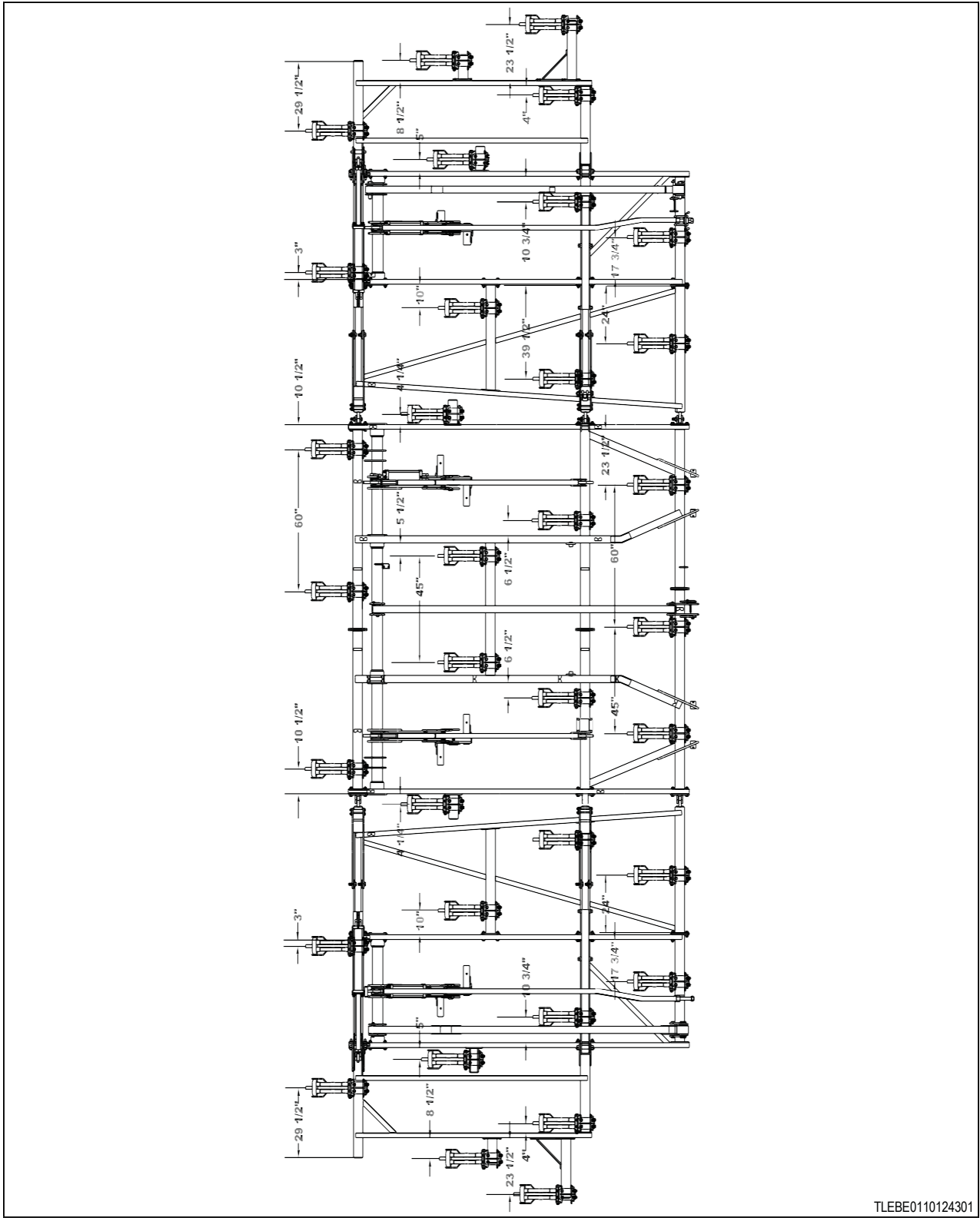
TLEBE0110124001

Fig. 88



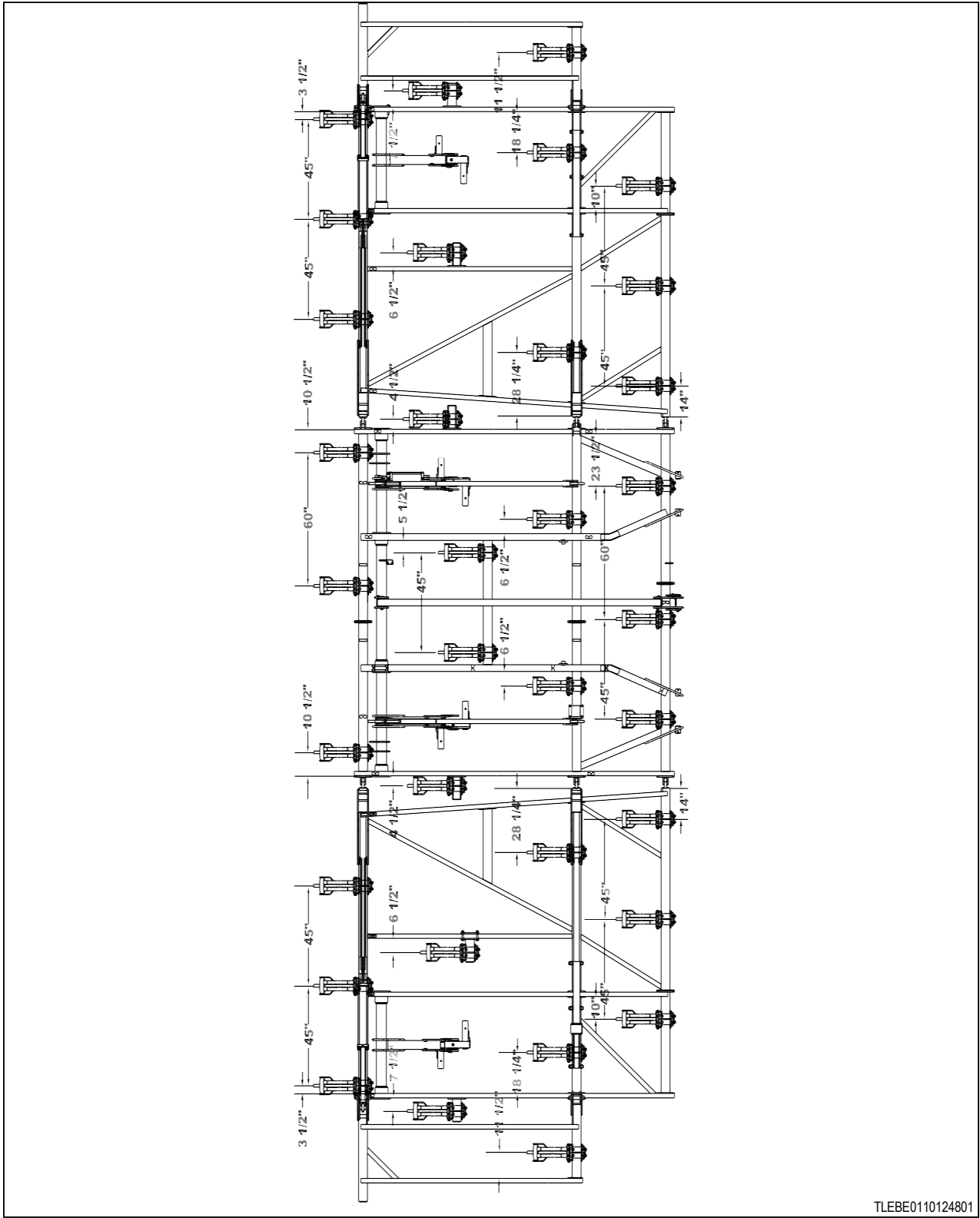
TLEBE0110124501

Fig. 90



TLEBE0110124301

Fig. 91



TLEBE0110124801

Fig. 92

