



ASSEMBLY/OPERATORS MANUAL

WIL-RICH 2550 CHISEL PLOW

WARRANTY

The only warranty Wil-Rich gives and the only warranty the dealer is authorized to give is as follows:

We warrant products sold by us to be in accordance with our published specifications or those specifications agreed to by us in writing at time of sale. Our obligation and liability under this warranty is expressly limited to repairing, or replacing, at our option, within 12 months after date of retail delivery, any product not meeting the specifications. **We make no other warranty, express or implied and make no warranty of merchantability or of fitness for any particular purpose.** Our obligation under the warranty shall not include any transportation charges or costs or installation or any liability for direct, indirect or consequential damage or delay. If requested by us, products or parts for which a warranty claim is made are to be returned transportation prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by us, or any alteration or repair by others in such manner as in our judgment affects the product materially and adversely shall void this warranty. **No employee or representative is authorized to change this warranty in any way or grant any other warranty.**

Wil-Rich reserves the right to make improvement changes on any of our products without notice.

When warranty limited or not applicable: Warranty on hoses, cylinders, hubs, spindles, engines, valves, pumps or other trade accessories are limited to the warranties made by the respective manufactures of these components. Rubber tires and tubes are warranted directly by the respective tire manufacturer only, and not by Wil-Rich.

Warranty does not apply to any machine or part which has been repaired or altered in any way so as in the our judgment to affect its reliability, or which has been subject to misuse, negligence or accident.

A Warranty Validation and Delivery Report Form must be filled out and received by Wil-Rich to initiate the warranty coverage.

WARRANTY CLAIMS PROCEDURE

1. The warranty form must be returned to Wil-Rich within fifteen (15) working days from the repair date.
2. Parts returned to Wil-Rich without authorization will be refused. The parts must be retained at the dealership for ninety (90) days after the claim has been filed. If the Service Department would like to inspect the parts, a packing slip will be mailed to the dealer. The packing slip must be returned with the parts. The parts must be returned prepaid within thirty (30) days of receiving authorization. After the parts are inspected and warranty is verified, credit for the return freight will be issued to the dealer.
3. Parts that will be scrapped at the dealership will be inspected by a Wil-Rich Sales Representative, District Sales Manager or Service Representative within the ninety (90) day retaining period.

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1.1 Introduction

1.1.1 Safety alert symbol

The safety alert symbol means Attention! Become Alert! Your Safety Is Involved!

Look for the safety alert symbol both in this manual and on safety signs on this machine. The safety alert symbol will direct your attention to information that involves your safety and the safety of others.



Fig. 1

1.1.2 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.



DANGER:

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



WARNING:

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



CAUTION:

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



Fig. 2

1.1.3 Informational messages

The words important and 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.

1.1.4 Safety signs



WARNING:

Do not remove or obscure safety signs. Replace any safety signs that are not readable or are missing. Replacement signs are available from your 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 mild soap and water solution if necessary.

1. Safety

If parts have been replaced or a used machine has been purchased, make sure all safety signs are present and 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 can not be read, are damaged, or are missing. Clean the machine surface thoroughly with a mild soap and water solution before replacing signs. Replacement safety signs are available from your dealer.

1.1.5 A word to the operator

It is your responsibility to read and understand the safety section in this manual and the manual for all attachments before operating this machine. Remember you are the key to safety. Good safety practices not only protect you, but also the people around you.

Study the content in this manual and make the content a working part of your 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, and above all remember - safety is your responsibility. You can prevent serious injury or 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 your 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 your personal safety and the personal safety of others, follow all safety precautions and instructions found in the manuals and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

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

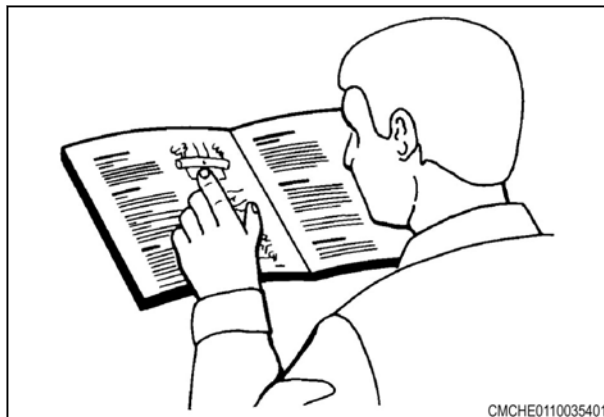


Fig. 3



WARNING:

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



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

1.1.6 This manual

This manual covers general safety practices for this machine. The operator manual must always be kept with the machine.

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

The photos, illustrations, and data used in this manual were current at the time of printing, but due to 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.



WARNING:
In some of the 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.

1.2 Operation

1.2.1 Prepare for operation

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

Make sure you know and understand the positions and operations of all controls. Make certain all controls are in neutral and the park brake is applied before starting the machine.

Make certain all people are well away from your area of work before starting and operating the machine. Check and learn all controls in an area clear of people and obstacles before starting your 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 persons operate the machine. Keep others, especially children, away from your 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 Manual. Make sure the machine has the correct equipment required by local regulations.

1.2.2 General information

When parking, park the machine and the tractor on a solid level surface. put all controls in neutral and apply the tractor park brake. Stop the tractor engine and take the key with you.

Make sure the tractor and implement are in the proper operating condition according to the operator manuals. Make sure the tractor brakes and the machine brakes are adjusted correctly.

The tractor must have enough weight and braking capacity, especially when operating on roads and terrain that is not even. Use a tractor of recommended size and weight to tow the machine. See the machine specifications for the minimum tractor size and weight.

Tractor must be equipped with rollover protective structure (ROPS) and a seat belt. use seat belt during operation.

Do not dismount from moving machinery.

Always operate the machine with the terminal turned on.

Never start the tractor with the PTO engaged or terminal turned on.

Stay off slopes too steep for operation.

Where possible avoid operating the machine near ditches, embankments, and holes. Reduce ground speed when operating on rough, slippery, or muddy surfaces and when turning or crossing slopes.

Be aware of the size of the machine and have enough space available to allow for operation.

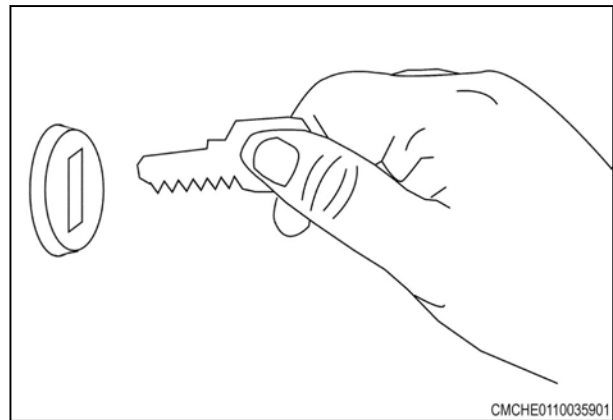


Fig. 4

Always lower the machine when not in use and relieve the pressure in the hoses and cylinders.

Do not stand between the tractor and the implement to install the hitch pin when the tractor engine is running.

Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.

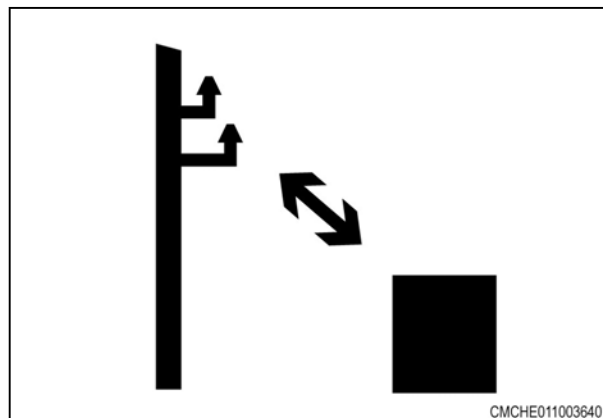


Fig. 5

1.2.3 Personal protective equipment

Wear all personal protective equipment (PPE) and protective clothing issued to you or called for by job conditions and country/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.

Always keep hands, feet, hair, and clothing away from moving parts. Do not wear loose clothing, jewelry, watches, or other items that could entangle in moving parts. Tie up long hair that can also entangle in moving parts.

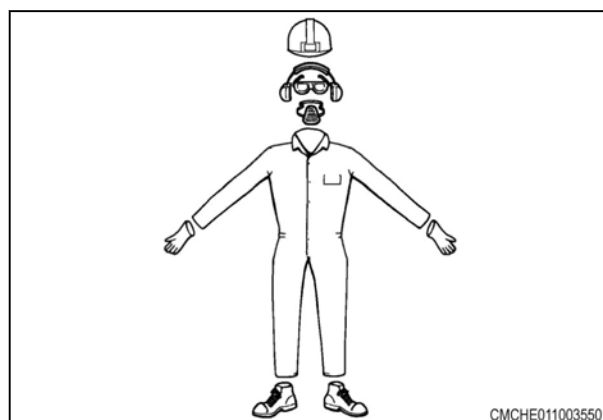


Fig. 6

1.2.4 Seat instructions

Securely fasten the seat belt before operating the machine. Always remain seated and have the seat belt fastened while operating the machine. Replace the seat belts when they become worn or broken.

Never wear a seat belt loosely or with slack in the belt system. Never wear the seat belt in a twisted condition or pinched between the seat structural members.

When using the instructional seat, if equipped, securely fasten the seat belt. The instructional seat is to be used only to train new operators or diagnose a problem. The instructional seat is only intended for short periods of use. Extra riders, especially children, are not permitted on the machine.

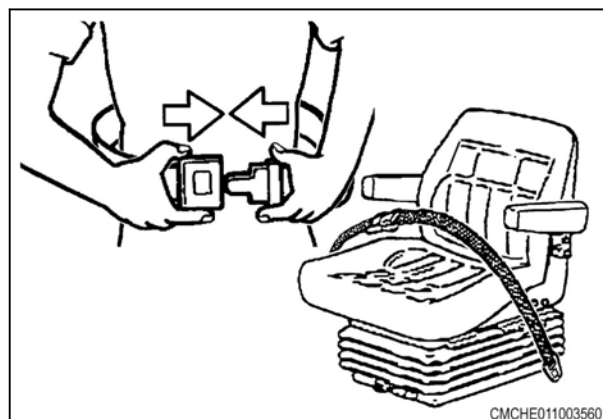


Fig. 7

1. Safety

When the instructional seat is used the machine must be driven at a slower speed and on level ground. Avoid quick starts, stops, and sharp turns. Avoid driving on highways or public roads.

1.2.5 Shield and guards

All shields and guards must be in the correct operating position and in good condition.

Do not open, remove, or reach around shields while the engine is operating. Entanglement in rotating belts and components can cause serious injury or death. Stay clear of rotating components.



Fig. 8

Do not operate the machine with the drive shaft shields open or removed. Entanglement in rotating drive shafts can cause serious injury or death. Stay clear of rotating components.

Make sure rotating guards turn freely.



Fig. 9

1.2.6 Exhaust warning

Never operate the engine in a closed building unless the exhaust is vented outside.

Do not tamper with or modify the exhaust system with unapproved extensions.

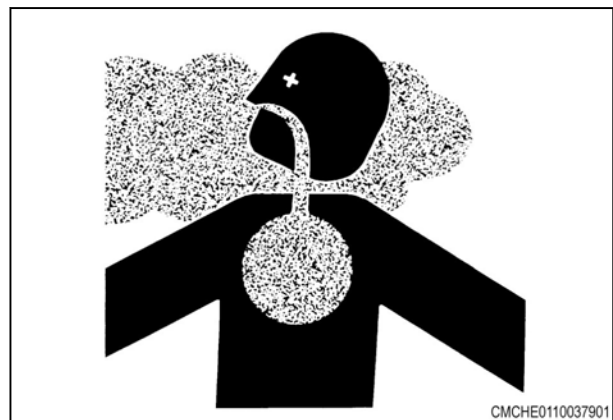


Fig. 10

1.2.7 Flying debris



WARNING:
Be careful when operating along the side of a road or building. Rocks or other debris can be thrown from the machine during operation possibly resulting in injury.

Never stand near the machine during operation. Debris can be thrown from the machine during operation possibly resulting in injury.



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Fig. 11

1.2.8 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.

Even if you think you know the instructions, read and follow instructions each time you use a chemical.

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.

1.3 Travel on public roads

Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine before you travel on public roads.

Use good judgment when traveling on public roads. Maintain complete control of the machine at all times. Never coast down hills.

The maximum speed of farm equipment is governed by local regulations. Adjust travel speed to maintain control at all times.

Familiarize yourself with and obey all road regulations that apply to your machine. Consult your local law enforcement agency for local regulations regarding movement of farm equipment on public roads. Use head lamps, flashing warning lamps, tail lamps and turn signals, day and night, unless prohibited by local law.

Make sure all the flashers are operating prior to driving on the road. Make sure reflectors are correctly installed, in good condition, and wiped clean. Make sure the Slow Moving Vehicle (SMV) emblem is clean, visible, and correctly mounted on the rear of the machine.

Lock brake pedals together (if equipped with dual brake pedals) so both wheel brakes will be applied at the same time.

Raise implements to transport position and lock in place. Place all implements into narrowest transport configuration.

Disengage the power take-off and differential lock.

With towed implements, use a proper hitch pin with a clip retainer and safety transport chain.

Be aware of other traffic on the road. Keep well over to your own side of the road and pull over, whenever possible, to let faster traffic pass.

Be aware of the overall width, length, height, and weight of the machine. Be careful when transporting the machine on narrow roads and across narrow bridges.

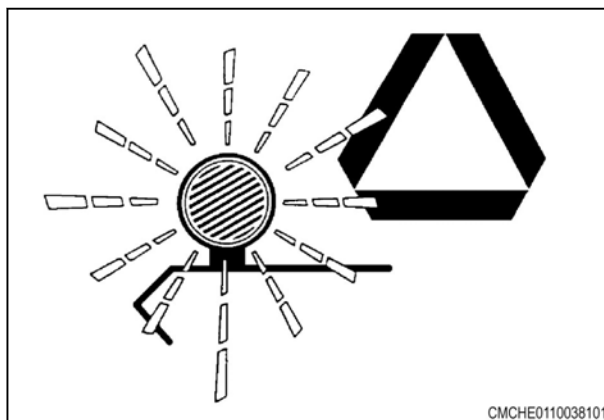


Fig. 12

Watch for overhead wires and other obstructions. Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.

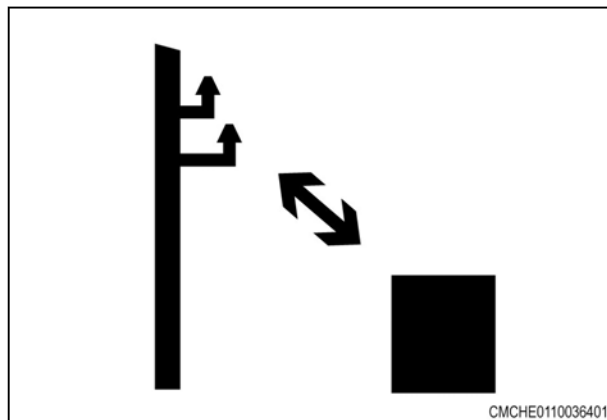


Fig. 13

1.4 Maintenance

1.4.1 General maintenance information

Before doing any unplugging, lubricating, servicing, cleaning, or adjusting:

- Park the machine on a solid level surface.
- Make sure all controls are in the neutral position and apply the park brake.
- Make sure all implements and attachments have been lowered to the ground.
- Stop the engine and take the key with you.
- Look and Listen! Make sure all moving parts have stopped.
- Put blocks in front of and behind the wheels of the machine before working on or under the machine.

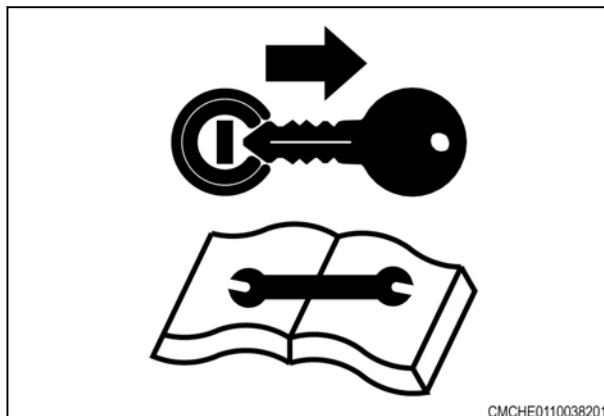


Fig. 14

Do not leave the tractor or implement unattended with the engine running.

Do not pull crop or any other object from the machine while the machine engine is running. Moving parts can pull you in faster than you can move away.

Check all nuts and bolts periodically for tightness, especially wheel mounting hardware.

Do not attempt to service or adjust the machine until all moving parts have stopped.

Check all nuts and bolts periodically for tightness, especially wheel mounting hardware.

Be aware of the size of parts when doing service work. Never stand under or near a part being moved with lifting equipment.

After unplugging, lubricating, servicing, cleaning, or adjusting the machine make sure all tools and equipment have been removed.

Make sure electrical connectors are clean and free of dirt or grease before connecting.

Check for loose, broken, missing, or damaged parts. Make sure the machine is in good repair. Make sure all guards and shields are in position.

Always raise implement, shut off tractor engine, apply the parking brake, shift to park position (or neutral) remove the key and install the cylinder stops channels before working around the machine.

Avoid working under the machine. However, if it becomes unavoidable to do so, make sure the machine is securely blocked and the cylinder lockup channels are in position.

When working around discs or shanks, be careful to not get cut on sharp edges.

Never service, check or adjust drive chains or belts while the engine is running.



Fig. 15

Do not operate the machine with the drive shaft shields open or removed. Entanglement in rotating drive shafts can cause serious injury or death.

Stay clear of rotating components.

Make sure rotating guards turn freely.

A loose yoke can slip off a shaft and result in injury to persons or damage to the machine.

When installing a quick disconnect yoke, the spring activated locking pins must slide freely and be seated in the groove on the shaft. Pull on the driveline to make sure the quick disconnect yoke can not be pulled off the shaft.

Remove spilled oil, antifreeze or fuel immediately from the steps, platform, and other access areas.

Keep all access areas clean and free of obstructions.



Fig. 16



Fig. 17

1.4.2 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 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 crop.

For fires involving anything other than crop, such as oil or electrical components, use a dry chemical fire extinguisher with an 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.



Fig. 18

1. Safety

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 smoke from the fire.

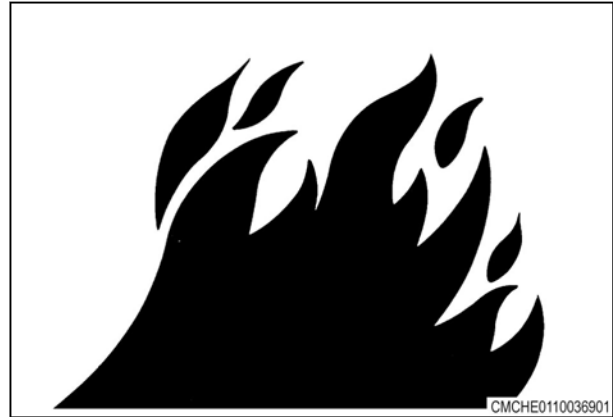


Fig. 19

1.4.3 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.



Fig. 20

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 applying pressure.

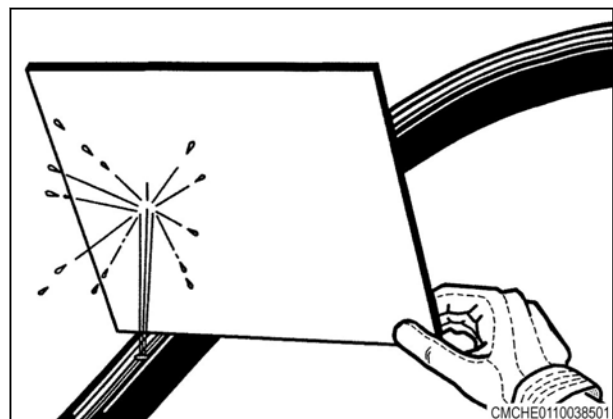


Fig. 21

1.4.4 Tire safety

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

Do not weld on the rim when a tire is installed. Welding will 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 ballast 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 rims, never exceed 2.4 bar (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.



Fig. 22

1.4.5 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.

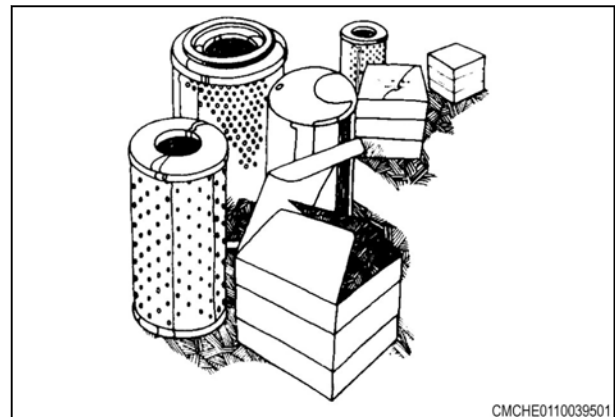


Fig. 23

1.5 Transport locks

The machine is equipped with transport locks. Use the transport locks in the operating position (1) when moving the machine on roads. When not in use, keep the transport locks in the storage position (2).

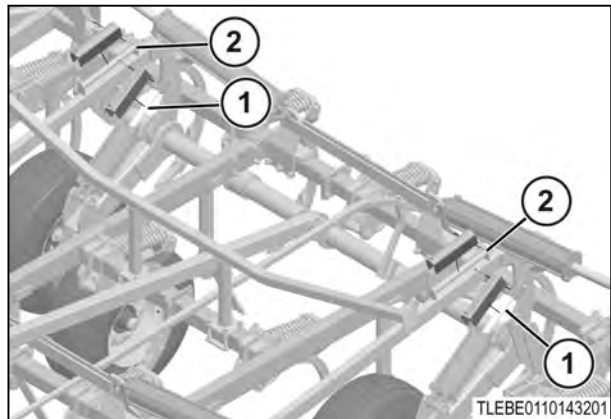


Fig. 24

1.6 Marker lamps

The machine has marker lamps that must be used when moving the machine in the folded position on roads.

The machine is equipped with two red lamps (1) located toward the rear center of the machine.

The machine is equipped with two amber lamps (1) located at the front outside edges of the folded machine.

The machine is equipped with two amber lamps (2) located at the rear outside edges of the folded machine.

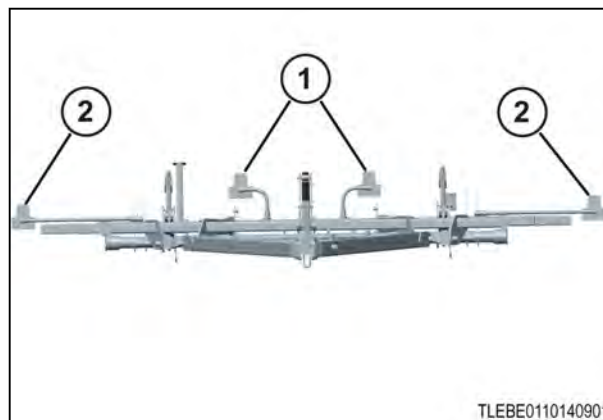


Fig. 25

1.7 Safety sign location

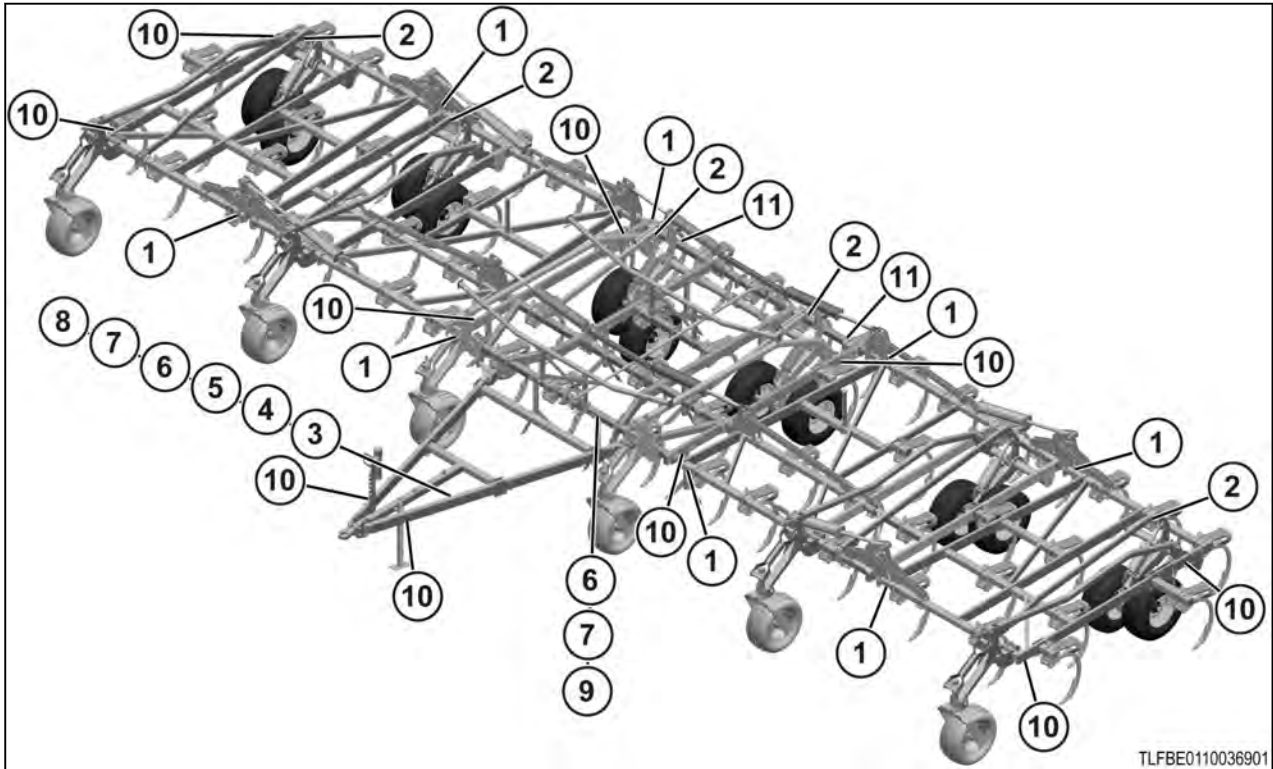


Fig. 26

- (1) Danger/folding wings
- (2) Warning/lockout
- (3) Caution/safety chains
- (4) Warning/negative tongue weight
- (5) Warning/remove key
- (6) Warning/read Operator Manual
- (7) Danger/high line
- (8) Warning/hydraulic fluid pressure
- (9) Maximum speed
- (10) Reflector/yellow
- (11) Reflector/red

(1) Danger/folding wings

Hazard (A): Overhead crushing hazard from lowering or falling wing.

Avoidance (B): Stay clear of this area while engine and machine are operating. For service work, install the wing lock pins before getting under the wing.

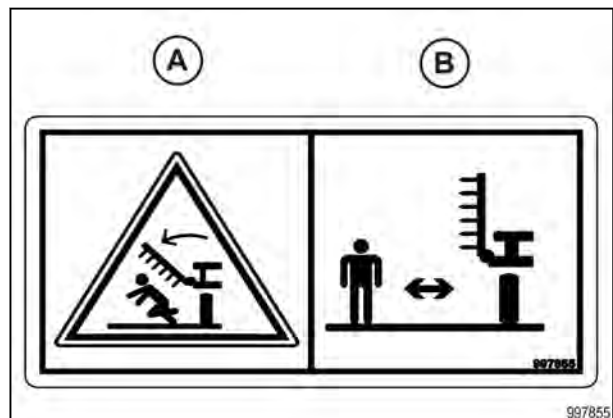


Fig. 27

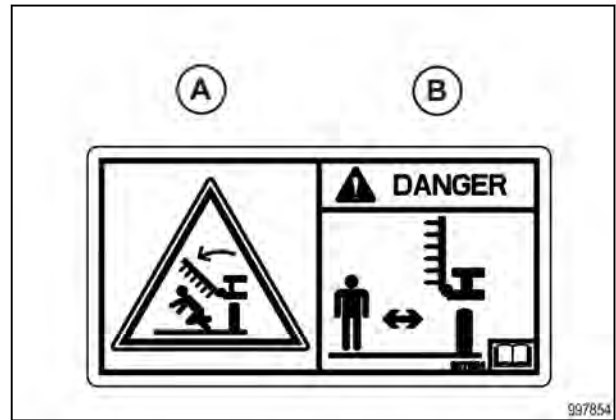


Fig. 27

(2) Warning/lockout

Hazard (A): Crushing hazard.

Avoidance (B): Stay clear of this area while engine and machine are operating. For service work, install the wing lock pins before getting under the wing.

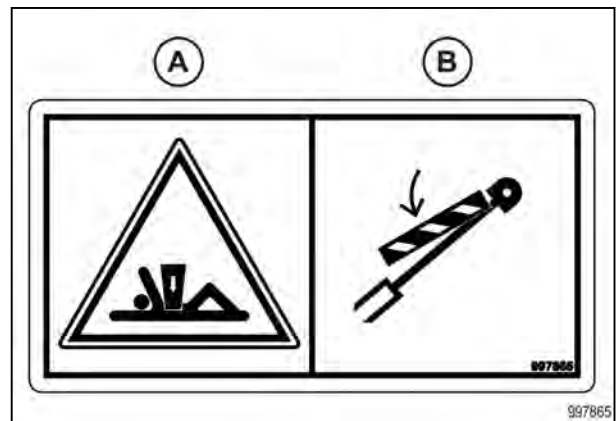


Fig. 28

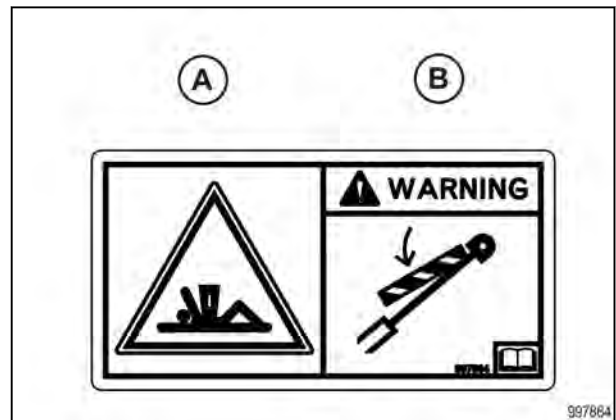


Fig. 28

(3) Caution/safety chains

Hazard (A): Loss of machine control.

Avoidance (B): Install the safety chains when connecting the machine to the tractor. Read the operators manual for safety information and the operating instruction before operating the machine.

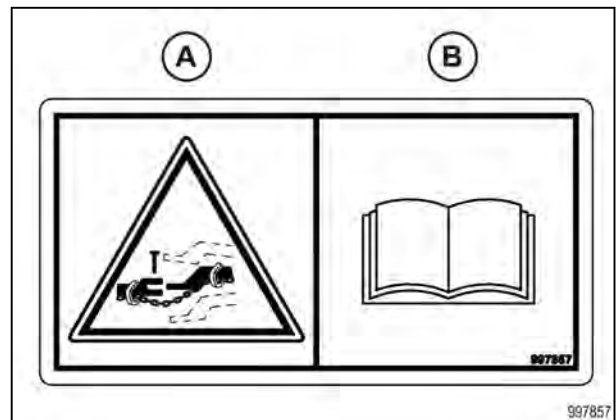


Fig. 29

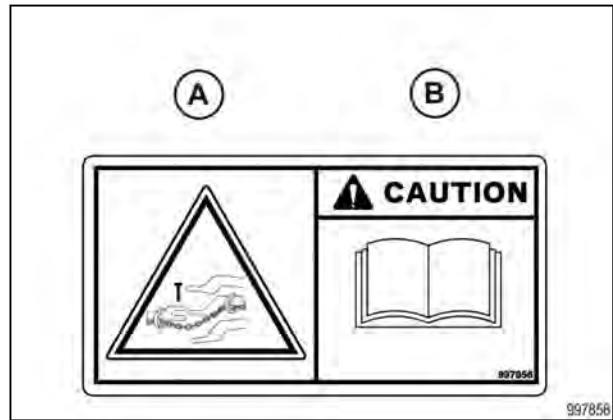


Fig. 29

(4) Warning/negative tongue weight

Hazard (A): Negative tongue weight will cause the tongue to rise immediately when disconnecting the machine.

Avoidance (B): Stay clear of the tongue when disconnecting the machine from the tractor. Read the operators manual for safety information and operating the instructions before operating the machine.

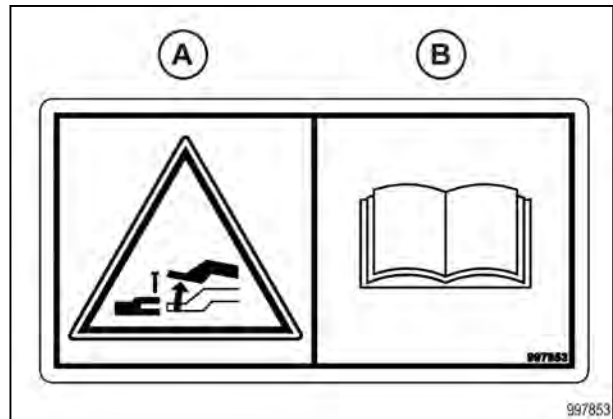


Fig. 30

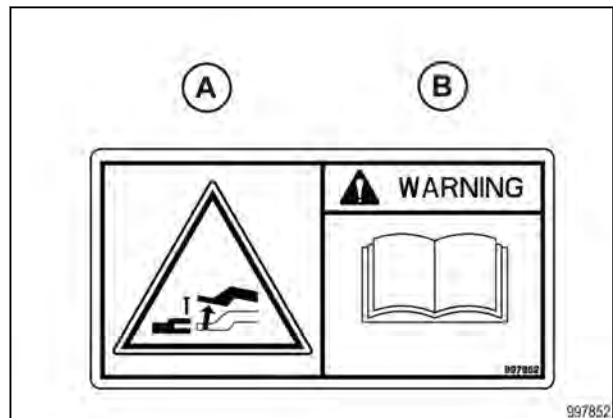


Fig. 30

(5) Warning/remove key

Hazard (A): General safety alert.

Avoidance (B): Turn off the machine and remove the key before maintenance or repair.

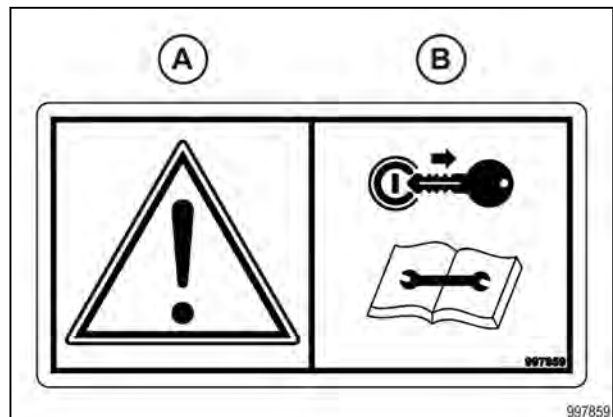


Fig. 31

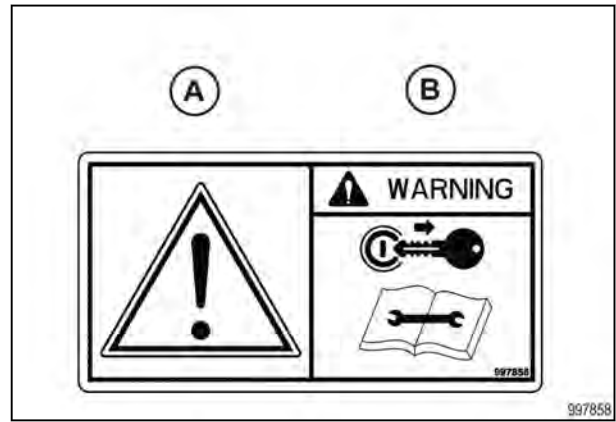


Fig. 31

(6) Warning/read operators manual

Hazard (A): General safety alert.

Avoidance (B): Read and understand the operators manual before operating the machine.

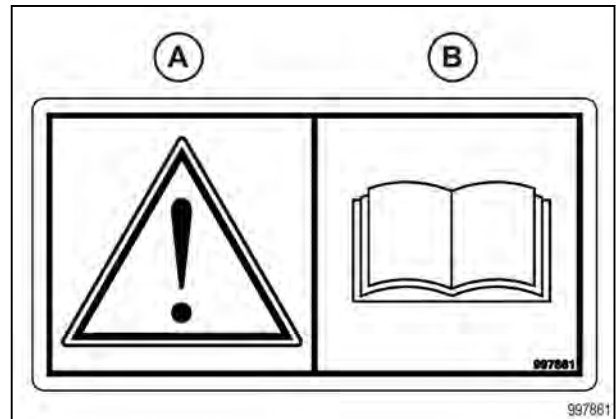


Fig. 32

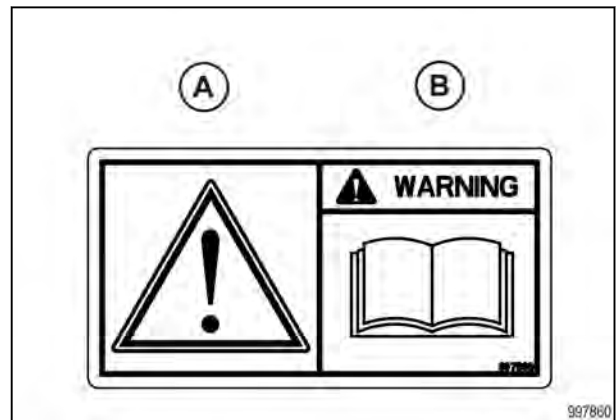


Fig. 32

(7) Danger/high line

Hazard (A): Electrical shock hazard - risk of personal injury and component damage.

Avoidance (B): Keep the correct distance away from electrical power lines.

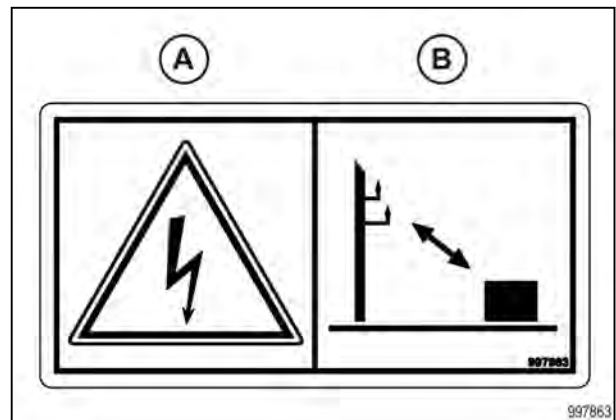


Fig. 33

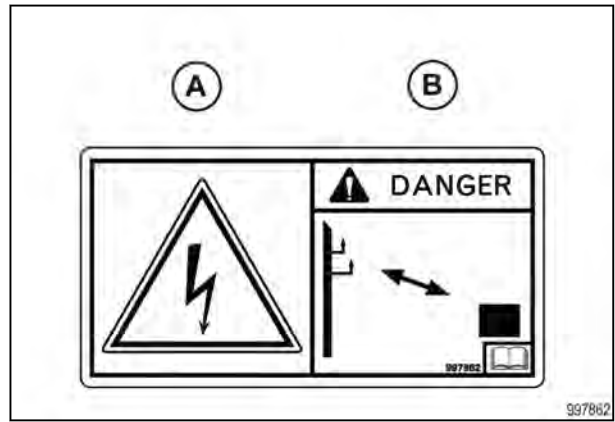


Fig. 33

(8) Warning/hydraulic fluid pressure

Hazard (A): Injection hazard into skin - escaping fluid under high pressure.

Avoidance (B): Turn off the engine, remove the key, relieve the pressure before maintenance or repair. Refer to the operator manual for the correct service procedures.

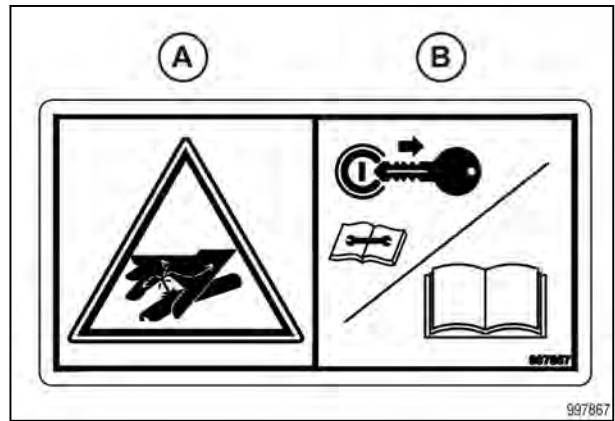


Fig. 34

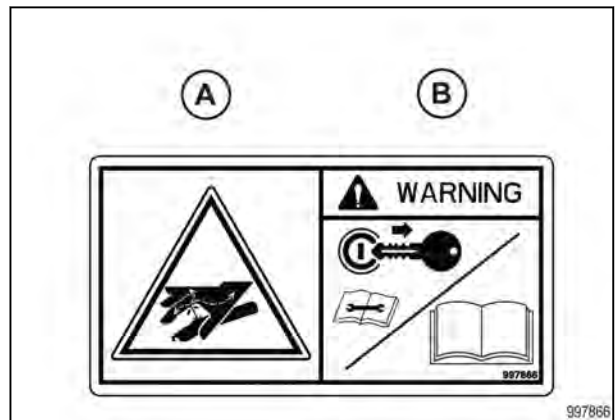


Fig. 34

(9) Maximum speed

The maximum speed safety sign displays the maximum speed to transport the machine.



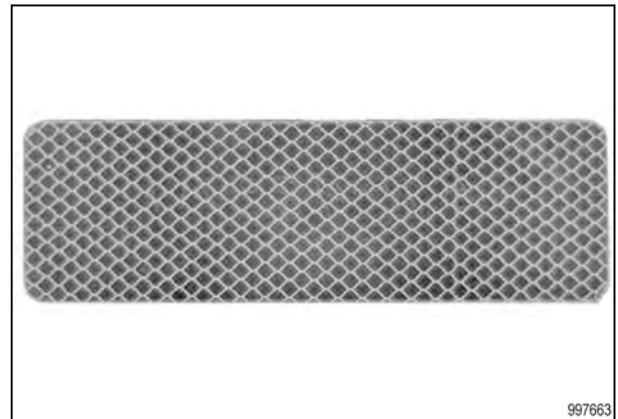
Fig. 35



997868

Fig. 35

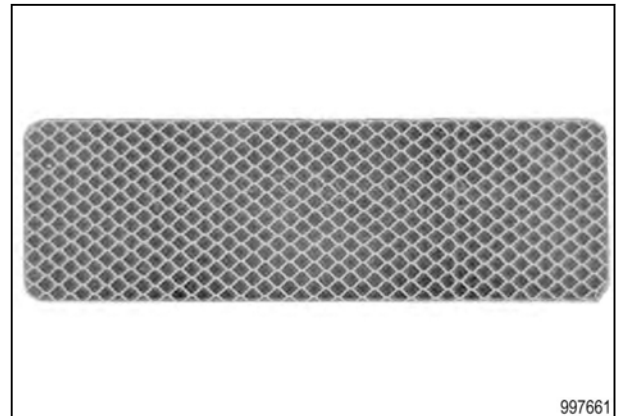
(10) Reflector/yellow



997663

Fig. 36

(11) Reflector/red



997661

Fig. 37

2. Introduction

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2.1 Introduction

**CAUTION:**

In some of the illustrations used in this Operator Manual, panels or guards may have been removed for clarity. Never operate the tractor with these panels and guards removed. If the removal of a shield is necessary to make a repair, it must be replaced before operation.

**CAUTION:**

Read this book in its entirety prior to operating machine. Use only genuine replacement parts for repairs and/or replacement.

This manual gives the operator the proper instructions needed for operation and maintenance. Read, understand, and follow these instructions for best machine performance and life. With proper maintenance and operation procedures, the machine will have better over all performance. Use normally available tools for maintenance on this machine.

All operators must read and understand this manual before operating this machine. Where possible, operators who have not operated the machine must receive instruction from an operator who has operated this machine. Your dealer can give instruction in machine operation. Keep this manual with the machine for future reference. If the original manual is damaged, order a replacement from your dealer.

See your dealer in for any service problems and adjustments. The dealer is equipped for all service work and to help with specific applications of the tractor in local conditions.

Left-hand and right-hand are determined by facing the direction the machine will travel when in use.

2.1.1 Units of measurement

Measurements are given in metric units followed by the equivalent in US units. Hardware sizes are given in millimeters for metric hardware and inches for US hardware.

2.1.2 Replacement parts

To receive prompt efficient service, remember to have the following information:

- Correct part description and part number
- Model number of the machine
- Serial number of the machine

2.1.3 Intended use

This machine is designed solely for use in customary agricultural operations.

Do not use this machine for any application or purpose other than those described in this manual. The manufacturer accepts no liability for damage or injury resulting from misuse of this machine.

Compliance with the conditions of operation, service and repair as specified by the manufacturer constitute essential elements for the intended use of this machine.

This machine should be operated, serviced and repaired only by qualified persons familiar with its characteristics and familiar with the relevant safety rules and procedures.

All generally recognized safety regulations and road traffic regulations must be obeyed at all times.

Any unauthorized modifications performed on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

2.1.4 Proper disposal of waste

Improper disposal of waste can pollute the environment and ecology. A few examples of potentially harmful equipment waste can include, but not limited to, items such as oil, fuel, coolant, brake fluid, filters, battery chemicals, tires, etc.

2. Introduction

Use leak proof containers when draining fluids. Do not use food or beverage containers to collect waste fluids, as food or beverage container(s) may mislead someone into drinking from them.

Do not pour or spill waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire with local environmental or recycling center on the proper way to recycle or dispose waste.

2.2 Machine identification

Each machine is identified by a model and a serial number.

Record these numbers in the spaces given.

Give the model number and serial number to your dealer when parts or service are required.

Machine model number: _____

Machine serial number: _____

Date of delivery: _____

Dealer name: _____

Dealer address: _____

Dealer telephone number: _____

Dealer e-mail address: _____

Dealer fax number: _____

2.2.1 Serial number plate location

The serial number plate (1) is located on the side of the main frame tube.

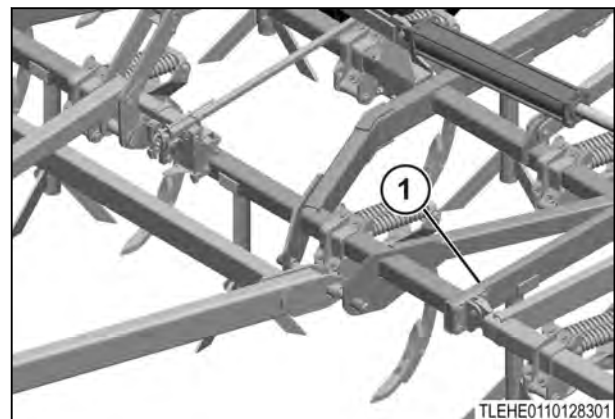


Fig. 1

2.2.2 Serial number description

Description of the serial number for model year 2010 and up.

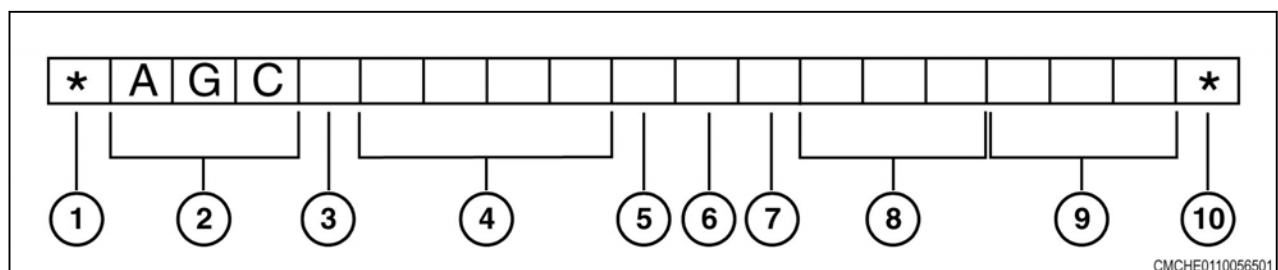


Fig. 2

- | | |
|-------------------------------------|---|
| (1) Beginning symbol | (5) Check letter (0 or used if model identifier is five digits) |
| (2) World manufacturer code | (6) Model year code (A=2010, B=2011, C=2012, and on) |
| (3) Brand code | |
| (4) Model identifier (model number) | |

2. Introduction

(7) Plant code
(8) Family code

(9) Unit number for the year
(10) Ending symbol

2.3 Chisel plough

Use the chisel plough for primary tillage operations.

The chisel plough is equipped with shanks that break up the soil and debris. The chisel plough can be used to loosen hard, dry soils prior to using regular ploughs.

2.3.1 Floating hitch

The floating hitch pivots between the tractor and the main frame. This pivot point lets the unit to follow the contour of the ground. The front castoring gauge wheels support the front of the main frame and wings. These gauge wheels are mechanically synchronized to the rear axle, keeping the unit at the same level working depth from front to rear.

2.4 Major components

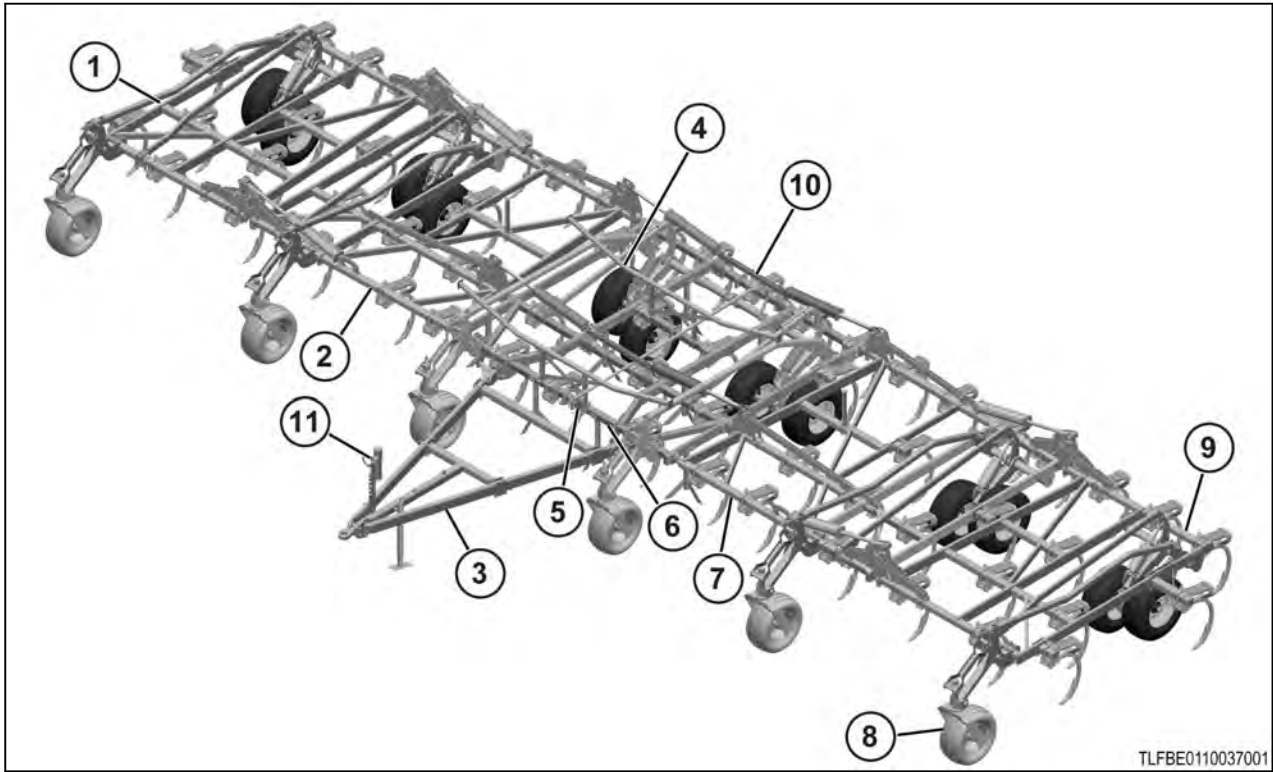


Fig. 3

- | | |
|------------------------------|------------------------------|
| (1) Right-hand outer wing | (7) Left-hand wing frame |
| (2) Right-hand wing frame | (8) Gauge wheel |
| (3) Tongue | (9) Left-hand outer wing |
| (4) Wing rest | (10) Fold anchor |
| (5) Wing point depth control | (11) Operator manual storage |
| (6) Center frame | |

2.5 Operator manual storage

The Operator Manual is located in the container (1) on the machine.

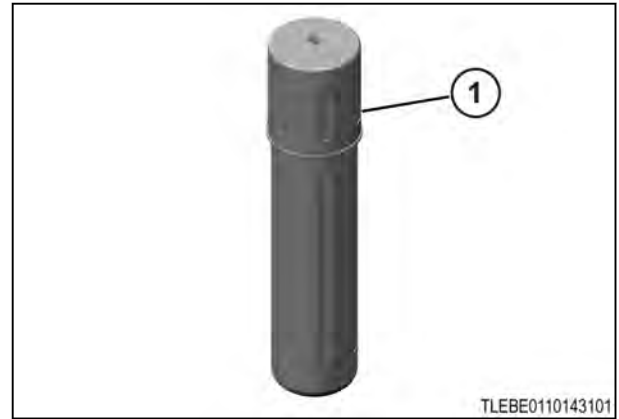


Fig. 4

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3.1 Connecting the machine to the tractor

Procedure

1. Make sure there are no persons, or obstructions between the tractor and the machine.
2. Use the hitch jack (1) on the front hitch of the machine to adjust the height of the hitch (2).

NOTE:

The location of the hitch jack can vary.

3. Slowly reverse the tractor toward the hitch of the machine. Align the hitch on the tractor with the hitch on the machine when backing.
4. Stop the tractor when the hole of the tractor drawbar aligns with the hole in the machine hitch.
5. Stop the engine, apply the park brake, and take the key with you.
6. Install the hitch pin (1) through the holes in the tractor draw bar (2) and the machine hitch. Install the keeper pin (3) in the hitch pin.
7. Connect the safety chains (4) from the front hitch of the machine to the tractor.

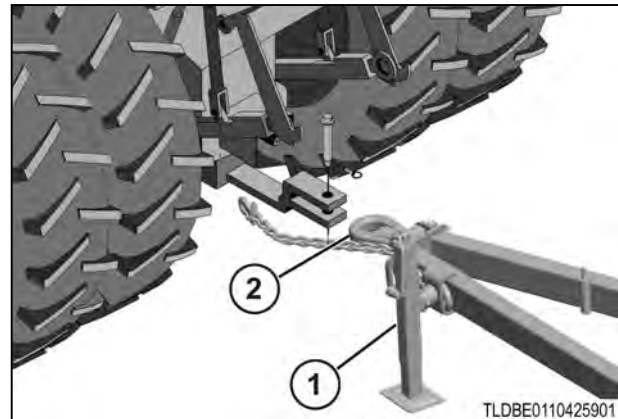


Fig. 1

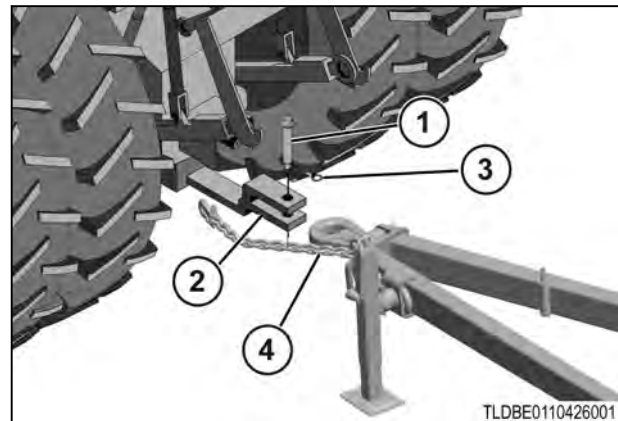


Fig. 2

8. Retract the hitch jack. Move the hitch jack to the storage position (1) and fasten with pin.

NOTE:

The location and position of the storage location of the hitch jack can vary.

9. Clean the ends of the hydraulic connections on the machine and the tractor.
10. Make the following connections between the tractor and the machine.
 - Lift cylinder hydraulic hoses
 - Wing fold cylinder hydraulic hoses
 - Marker lamp harness
11. Start the tractor. Use the tractor hydraulics to lift the machine to the highest position.
12. If the wing frames were down during storage, connect the wing cylinders to the wing frames.
13. Use the tractor hydraulics to fully lift the wing frames.
14. Stop the engine, apply the park brake, and take the key with you.

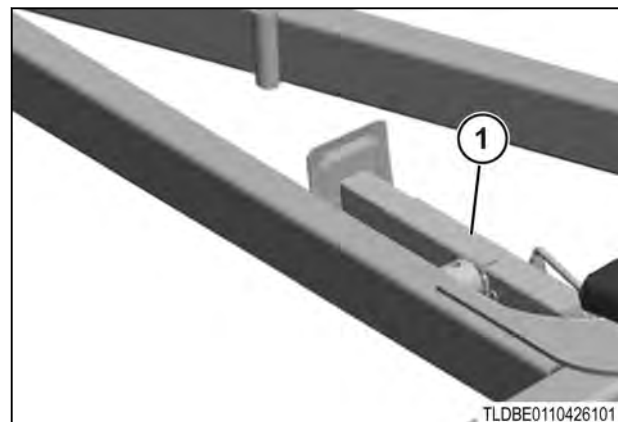


Fig. 3

3. Operation

- 15.** Remove the wheel chocks or blocks from in front of and behind the support tires.
- 16.** Make sure all persons and obstructions are clear before moving the tractor and machine.

3.2 Disconnecting the machine from the tractor

NOTE: Lower the wing frames for storage when possible.

Procedure

1. Park the tractor and the machine on a solid level surface.
2. Use the tractor hydraulics to lower the wings to the ground if possible.
3. Stop the engine, apply the park brake, and take the key with you.
4. Install wheel chocks or blocks in front of and behind the support wheels.
5. Move the hitch jack to the operating position (1) on the front hitch. Use the hitch jack to support the front hitch of the machine.

NOTE:

The location of the hitch jack can vary.

6. Disconnect the following connections from the tractor:
 - Lift cylinder hydraulic hoses
 - Wing fold cylinder hydraulic hoses
 - Marker lamp harness
7. Clean the hydraulic connections between the machine and the tractor.
8. Install each of the hydraulic hose connections in the hose holder
9. Install the connector for the marker lamp harness in the plug holder.
10. Remove the safety chains (4) from the tractor.
11. Remove the keeper pin (3) from the hitch pin (1) . Remove the hitch pin from the hitch and drawbar (2).

IMPORTANT:

Make sure there are no connections between the tractor and the machine.

12. Make sure all persons and obstructions are clear of the tractor and machine.
13. Move the tractor away from the machine.

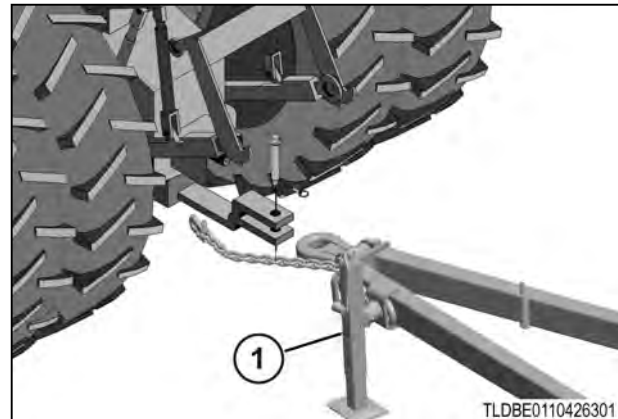


Fig. 4

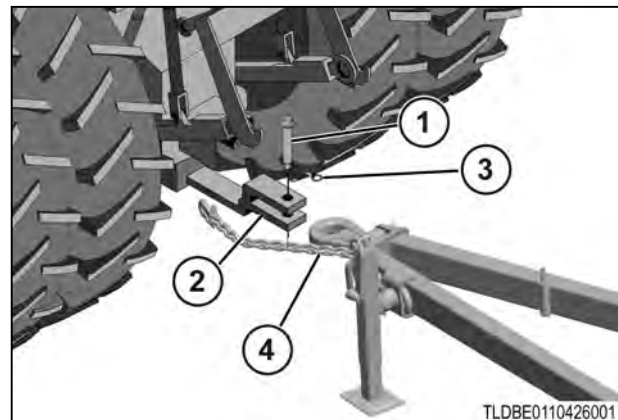


Fig. 5

3.3 Bleeding air from the hydraulic lift system

Before starting the procedure



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.



WARNING:

Be careful of sweeps or blades when folded to prevent serious injury. Never keep the machine with the wings in the folded position.

To bleed the air from the hydraulic lift system, connect the machine to a tractor that is the correct size to operate the machine. See the information for minimum tow vehicle weight.

Completely bleed the hydraulic system of air when:

The lift system is filled with hydraulic oil for the first time.

Air has entered the hydraulic system through a leak or through repair of the hydraulic system.

Procedure

1. Park the machine on a flat, level surface that is large enough for the machine when unfolded.
2. Set the tractor hydraulic flow to less than 75.7 L/min (20 gal/min).

IMPORTANT: *If the hydraulic flow is set to more than 75.7 L/min (20 gal/min) the hydraulics will not operate correctly.*

3. Connect the lift system hoses to the tractor.
4. Make sure the tractor reservoir is full of the hydraulic oil required by the manufacturer.
5. Raise the machine. Continue to hold the tractor lever to let oil bypass and fill each wing lift cylinder.
6. Engage the hydraulics to remove any hydraulic transport locks if equipped.
7. Stop the engine, apply the park brake and take the key with you.
8. Remove the transport locks when all lift cylinders are fully extended.
9. Lower the unit.

Make sure the cylinders move at the same time through the cycle.

10. Hold the hydraulic lever with the cylinders fully extended.
11. If the cylinders are not operating together, cycle the cylinders to remove the remaining air.

IMPORTANT: *Do not loosen any hydraulic fittings to bleed air from the system.*

12. Stop the engine, apply the park brake, and take the key with you.
13. Check the tractor hydraulic oil reservoir to make sure the hydraulic oil is still within operating limits.
14. Make sure all lift cylinders are operating together before starting any field operation.
15. Fully raise the machine when making turns during field operation.

This will make sure that the cylinders are operating together and keep the machine level during operation.

3.4 Bleeding air from the hydraulic fold system

Before starting the procedure



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.



WARNING:

Be careful of sweeps or blades when folded to prevent serious injury. Never keep the machine with the wings in the folded position.

IMPORTANT: Do not fold or unfold the fold system before bleeding air from the fold system.

To bleed the air from the hydraulic fold system, connect the machine to a tractor that is the correct size to operate the machine. See the information for minimum tow vehicle weight.

Completely bleed the hydraulic system of air when:

The fold system is filled with hydraulic oil for the first time.

Air has entered the hydraulic system through a leak or through repair of the hydraulic system.

Procedure

1. Set the tractor hydraulic flow to less than 75.7 L/min (20 gal/min).

IMPORTANT: If the hydraulic flow is set to more than 75.7 L/min (20 gal/min), the hydraulics will not operate correctly.

NOTE: Restrictors are installed in the fold cylinders to prevent falling of the wings. Never remove the restrictors, or the machine will not fold correctly.

2. Stop the engine, apply the park brake, and take the key with you.
3. Connect the fold system hoses to the tractor.
4. Make sure the tractor reservoir is full of the hydraulic oil required by the manufacturer.

IMPORTANT: Do not loosen any hydraulic fittings to bleed air from the system.

5. Remove the pins from the rod ends of the fold cylinders.
6. Make sure the rod ends of the fold cylinders will not come into contact with any obstructions. If a blockage is present, lift the rod ends of the fold cylinders.
7. Use the remote lever in the tractor to fully extend and retract the fold cylinders. Extend and retract multiple times.
8. If the fold cylinders are not operating together, cycle the fold cylinders to remove the remaining air.

IMPORTANT: Do not loosen any hydraulic fittings to bleed air from the system.

9. Stop the engine, apply the park brake, and take the key with you.
10. Check the tractor hydraulic oil reservoir to make sure the hydraulic oil reservoir is still within operating limits.
11. Connect the rod ends of the fold cylinders to the machine.
12. Find an area large enough for the machine when unfolded.
13. Park the machine on a solid, level surface. Stop the engine, apply the park brake, and take the key with you.
14. With the tractor at a low idle, slowly engage the hydraulics to fold and unfold the machine.
15. Fully extend the fold cylinders to let the wings flex freely.

3.5 Preparing the machine for transport

Before starting the procedure

Stop the tractor before preparing the machine for transport.

IMPORTANT:

Secure the transport locks and pins in the correct position on the center frame lift cylinders before transporting the machine in the field.

Procedure

1. Use the tractor hydraulics to lift the frame of the machine to the highest position.
2. Use the tractor hydraulics to completely fold the machine.
3. Stop the engine, apply the park brake, and take the key with you.
4. Remove the transport locks (1) and pins (2) from the storage position.

NOTE: The typical storage location is shown.

See the information for the transport locks for the correct locations.

5. Put the transport locks on the center frame lift cylinders (3) and fasten with pins.
6. Lower the machine down on the locks.
7. Make sure the SMV emblem is installed and can be seen from the rear of the machine.
8. Make sure the rear facing lamps and reflectors are free of dust and are operating correctly.

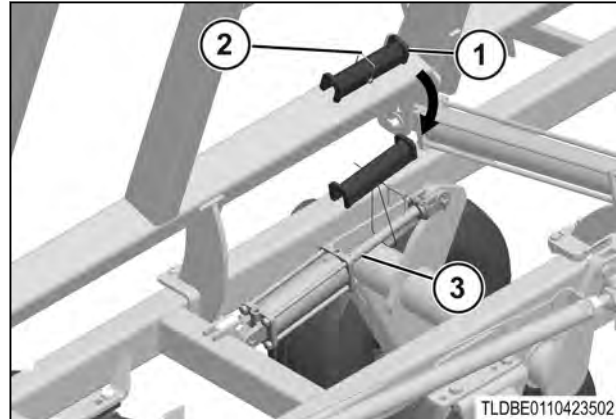


Fig. 6

3.6 Preparing the machine for field operation

Adjust the machine according to field conditions, before taking the machine to the field.

Before starting the procedure



WARNING:

Avoidance hazard. Clearance. Serious personal injury can occur. Make sure all persons are clear of the area before operating the machine.

IMPORTANT:

Remove and put the transport locks and pins in the storage position before operating the machine in the field.

The machine must be connected to a tractor that is the correct size for operation. Make sure there is enough area around the machine to completely lower the wings.

Procedure

1. Follow all safety instructions.
2. Set the tractor hydraulic flow to less than 75.7 L/min (20 gal/min).

IMPORTANT: If the hydraulic flow is set to more than 75.7 L/min (20 gal/min) the hydraulics will not operate correctly.

3. Make sure the area below the machine is clear of persons and obstructions.
4. Use the tractor hydraulics to lift the frame of the machine to the highest position.
5. Stop the engine, apply the park brake, and take the key with you.
6. Remove the transport locks (1) and pins (2) from the center frame cylinders.
7. Put the transport locks in the storage location (3) and fasten with pins.

NOTE: The typical storage location is shown.

See the information for the transport locks for the correct locations.

8. Use the tractor hydraulics to completely unfold the machine.

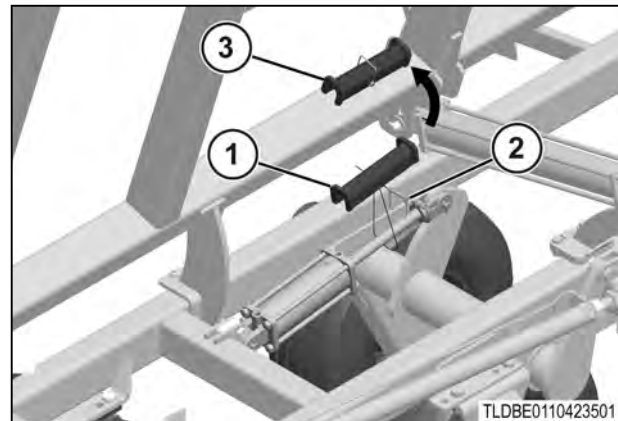


Fig. 7

9. Bleed any air from the lift and the fold cylinders.
10. Lubricate the machine at all points shown in the Maintenance Section .
11. Check tires for correct air pressure.
12. Make adjustments and service the machine according to the Operation Section of this manual.
13. Adjust the finishing attachment if necessary.
14. Level the machine from front to rear by adjusting the self-leveler.
Level at or near ground height.
15. Lower the machine to the desired operating depth.
16. Adjust the stroke control for machine depth.
17. Level the wings to the center frame.
18. Adjust the gauge wheel to correct depth.

3.7 Beginning field operation

Procedure

1. Operate at a slight angle to the crop rows.
This will let the machine operate level and give better residue clearance.
2. Raise the unit completely when making turns.
NOTE: *Failure to raise the unit when turning will cause increased side loads on the machine.*
3. Monitor the ground worked by the machine and make sure the machine is operating level.
4. Adjust the machine as required.

3.7.1 Items to check after first operation

- Check all nuts and bolts, tighten if necessary.
- Check the lug nuts, tighten if necessary.
- Make sure the nuts on the hubs and spindles have the correct torque.
- Make sure all grease fittings are lubricated.
- Make sure the tire pressure is correct.

3.8 Leveling the machine

3.8.1 Leveling a machine with the floating hitch front to rear

Before starting the procedure

The machine must be connected to a tractor that is the correct size for operation. See the information for the minimum tow vehicle weight.

Procedure

1. Find a solid, level surface large enough for the machine when unfolded.
2. Unfold the machine and fully raise the machine. Continue holding the hydraulic lever to let the oil cycle through the lift system.
3. Hold the lift cylinder hydraulic lever in the raised position for one to five minutes to make sure all cylinders are bled of air and fully extended.
4. Stop the tractor engine, apply the park brake, and take the key with you.
5. Remove the transport locks and pins from the center frame cylinders.
6. Put the transport locks in the storage location and fasten with pins.
7. Remove the stop collars from all of the main lift cylinders and turn the screw stop collars up to the clevis end of the cylinders.
8. Use the tractor hydraulics to lower the machine so the front shovels or the spikes are 25 to 51 mm (1 to 2 in) above the ground.
9. Measure and record the frame height at the front corners from the ground to the bottom of the frame tube.
10. Measure and record the frame height at the rear corners from the ground to the of the frame tube.
11. Compare the front and rear measurements.
12. Set front frame height to the same as the rear frame height.
 - a) If the front of the machine is higher than the rear, turn the adjusting screw (1) counterclockwise.
 - b) If the front of the machine is lower than the rear, turn the adjusting screw clockwise.
 - c) Make sure both front adjusting screws are set to the same length.
 - d) The gauge wheels will carry the weight of the machine.
13. Check the measurements again and adjust as necessary.
14. Tighten the jam nut.
15. Check the machine level in the operating position and adjusted as necessary.

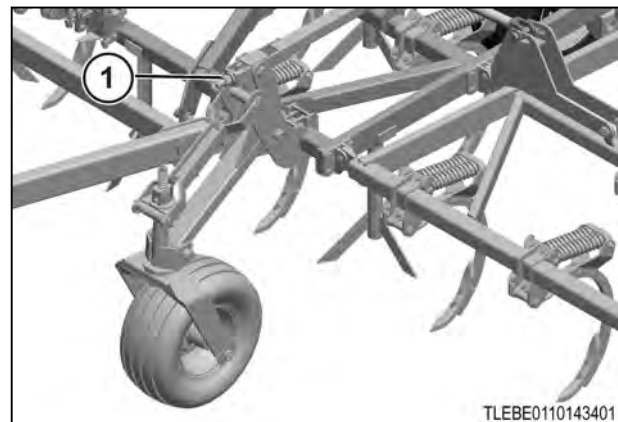


Fig. 8

3.8.2 Leveling the wings to the center frame

Before starting the procedure

The machine must be connected to a tractor that is the correct size for operation. See the information for the minimum tow vehicle weight.

The wheels of the machine must always be in contact with the ground during field operation to operate correctly.

Procedure

1. Find a solid, level surface large enough for the machine when unfolded.
2. Unfold the machine and fully raise the machine. Continue holding the hydraulic lever to let the oil cycle through the lift system.
3. Hold the lift cylinder hydraulic lever in the raised position for one to five minutes to make sure all cylinders are bled of air and fully extended.
4. Stop the tractor engine, apply the park brake, and take the key with you.
5. Remove the transport locks.
6. Measure and record the height from the ground to the bottom of the wing frame tubes on the front and rear of the wing.
7. Compare the measurements of wing to the main frame.

If the measurement for the wing is:

- more than the main frame measurement, lower the wing
- less than the main frame measurement, raise the wing.

8. Adjust the adjusting screw (1) to raise or lower the wing.
 - a) To raise the wing, loosen the jam nut (2) and turn the adjusting screw clockwise.
 - b) To lower the wing, loosen the jam nut and turn the adjusting screw counterclockwise.
9. Tighten the jam nut.
10. Follow the same procedure for the wing on the other side.

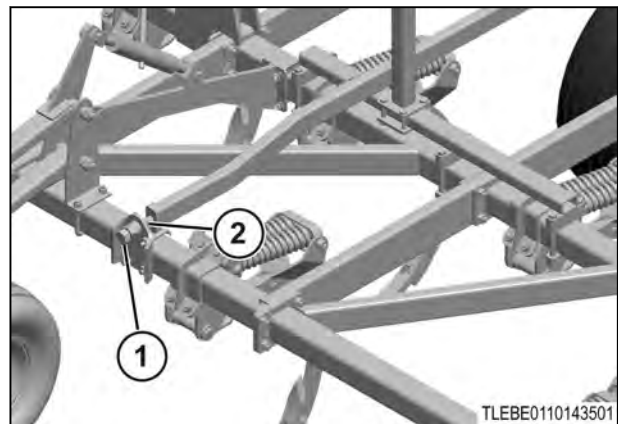


Fig. 9

3.9 Adjusting the gauge wheels

3.9.1 Adjusting the gauge wheels - hydraulic

The hydraulic gauge wheel adjustment is part of the leveling of a machine with the floating hitch.

If the hydraulic gauge wheels are not level, see the information from leveling the machine with a floating hitch front to rear.

3.10 Operating depth

Adjust the adjustment crank on the single point depth control to adjust the operating depth.

3.10.1 Single point depth control

On machines equipped with single point depth control (1), the stroke control valve (2) is used to control the depth of the unit. This stroke control valve controls the amount of oil in the main lift cylinders. The stop collars on all cylinders can be put as close as possible to the clevis end of the cylinder. To set a maximum depth of the unit, adjust the stop collars to the maximum depth setting to function as a backup for a possible single point depth control malfunction.

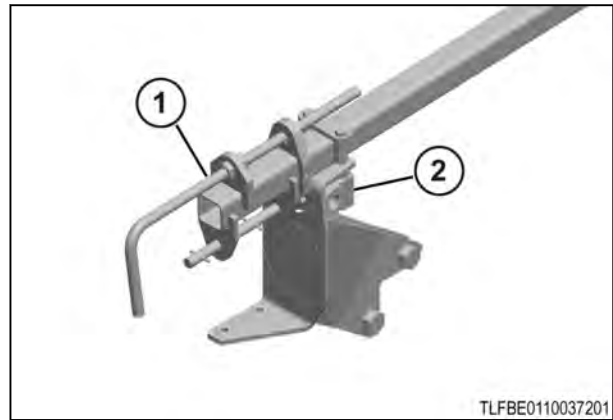


Fig. 10

3.11 Spring shanks

Two sizes of shank assemblies are available:

- 454 kg (1000 lb) compression spring edge-on shank
- 395 kg (650 lb) extension spring shank

Each shank assembly uses a spring (1) to keep forward pressure against the soil while letting the shank rotate to the rear when touching a solid object.

The mounting bolts (2) and shank bolts (3) must be kept tight.

The mounting bolts must be kept tight and still let the shank move.

For the 395 kg (650 lb) shank assemblies only, the spring adjust bolt (4) must be tightened just enough to crack the paint between the spring coils. If more pressure is required the spring adjust bolt can be tightened.

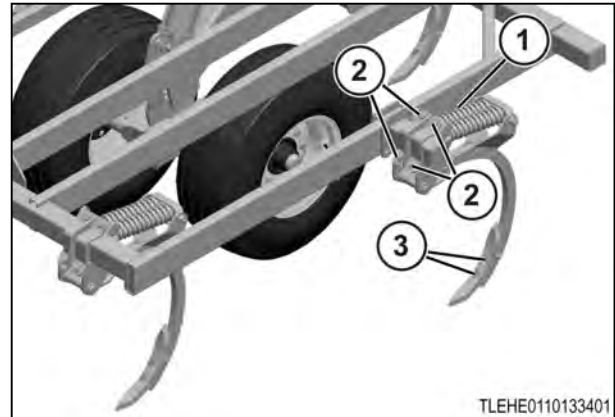


Fig. 11 454 kg (1000 lb) compression spring edge-on shank

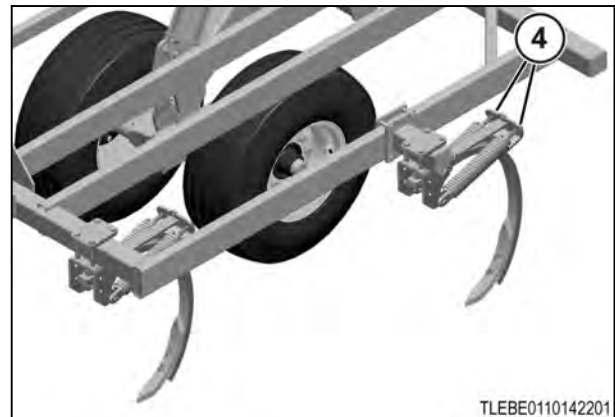


Fig. 12 395 kg (650 lb) extension spring shank

4. Maintenance

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4.1 Lubrication points

See the machine specification for the correct lubricant.

Do not let grease build up on or around parts, especially when operating in sandy soil.

Make sure to clean the lubrication fittings fully before connecting the grease gun.

Watch each lubrication point while lubricating to make sure the lubricant applies correctly.

Check for any loose, missing, or worn parts when lubricating the machine.

Check the lubrication service schedule for the correct lubrication interval.

4.1.1 Lubrication and maintenance chart

See the specifications for the correct type of lubricant.

10 hours or daily	50 hours or weekly	1000 hours or yearly	
X			Lubricate the gauge wheel hubs.
X			Lubricate the gauge wheel pivots. One lubrication fitting is standard on each ratchet gauge wheel. Five lubrication fittings are standard on the hydraulic gauge wheels.
	X		Lubricate the wheel hub bearings, one lubrication fitting per hub.
	X		Inspect all hardware installed on the machine for the correct torque.
	X		Inspect all wheel lug bolts and nuts for the correct torque.
	X		Check air pressure of all tires. Inflate tire to correct pressure.
	X		Clean any dirt or grease from moving parts.
		X	Remove and clean the bearings from each hub assembly. Fill the bearings and hubs with new grease.
		X	Remove and clean the bearings from each walking tandem. Fill the bearings with new grease.
		X	Inspect all hydraulic hoses and fittings for cracks or leaks. Replace any hoses or fittings as necessary.

4.1.2 Lubrication fitting locations

Hydraulic gauge wheel

Find the lubrication fittings (1) one each hydraulic gauge wheel.

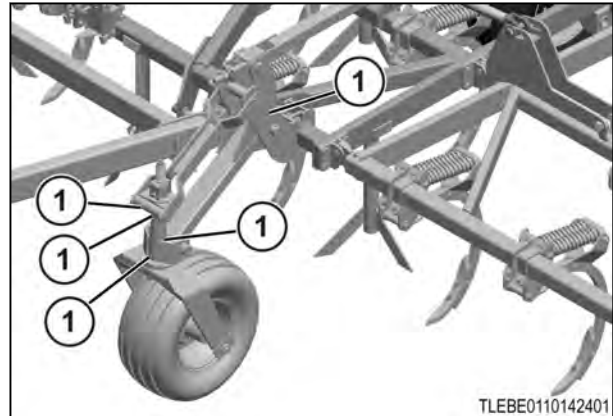


Fig. 1

Gauge wheel hub

Find the one lubrication fitting (1) for each gauge wheel hub.

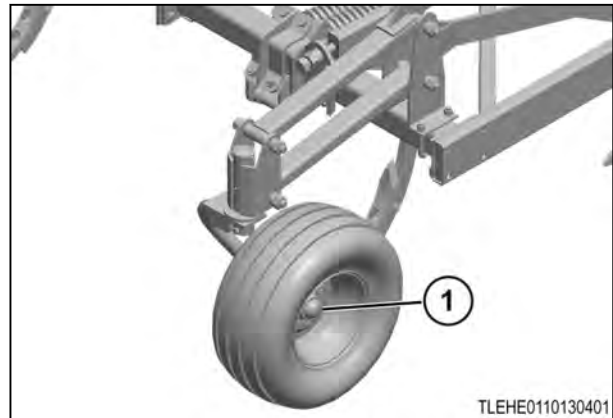


Fig. 2

Wheel hub

Find the one lubrication fitting (1) for each hub.

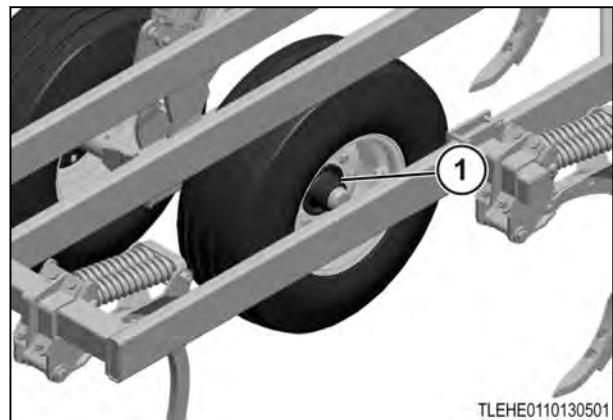


Fig. 3

4.2 Servicing the wheel bearings

Each wheel hub is equipped with a grease fitting and must be lubricated every 50 hours of use. Apply grease to the hubs until grease pushes out through the seal. The triple lip seal lets the grease through without damaging the seal.

Clean and fill the wheel hubs yearly. Cleaning and filling the hubs removes all dirt and supplies fresh grease. The following procedure is necessary to correctly install the triple lip seal. The seal lips must be showing away from the hub if dirt is to be kept out.

Procedure

1. Remove the dust cap, cotter pin, nut and washer.
2. Remove the hub and clean the bearing and bearing cavity.
3. Replace any damaged or worn parts.
4. Fill the hubs with grease.
5. Install the seal on the spindle shaft.
Do not try to put the hub on the spindle with the seal in the hub.
6. Replace the hubs with inner bearings in position.
7. Replace the outer bearing, washer and nut on the wheel spindle.
8. Adjust the bearings by tightening the nut until there is a resistance to turning.
9. Loosen the nut until the hub can turn freely by hand without end play.
10. Put the cotter pin through the spindle and nut and replace the dust cap.
11. Slide the seal (1) down the spindle. Turn the seal on the spindle so the seal lips will point away from the hub.
12. Install the seal in the hub.

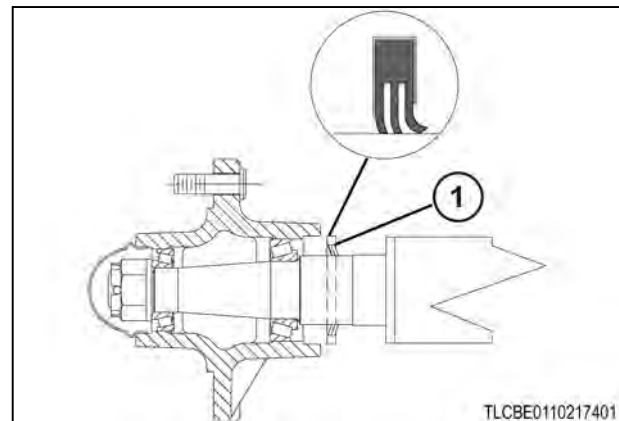


Fig. 4

4.3 Servicing the tandem pivot bearings

Clean and fill pivot bearings yearly. Cleaning and filling the bearings removes all dirt and supplies fresh grease. The following procedure is necessary to correctly fill the bearings.

Procedure

1. Remove the wheels and the tandem axle spindles.
2. Remove the seals and bearings from the pivot hub.
3. Clean the parts and hub cavity to remove all dirt.
4. Fill the bearings with a good grade wheel bearing grease.
5. Replace the bearings in the hubs in the correct sequence.
6. Apply grease around the outside of the inner bearings.
Apply enough quantity to fill the space between the inner bearings and the grease seals after assembly.
7. Install seals in the hubs.
The metal side must be on the outside of the hub.
8. Install the tandem axle spindle and replace the pivot.
9. Tighten the nuts until there is medium to heavy drag to still rotate under load. Loosen the nuts until the cotter pins can be installed.
10. Replace the wheels.

4.4 Storage

4.4.1 Preparing the machine for storage

Prepare the machine for storage at the end of each season. When possible, store the machine in a covered location with the wings lowered. Preventing rust will lengthen the life and assist in performance.

Procedure

1. Park the machine on a solid, level surface, away from other machines.
2. Use the tractor hydraulics to lower the wings of the machine.
3. Clean the machine of any dirt, grease, or other materials.
4. Put a protective layer of heavy oil or grease on all earth engaging parts to prevent rust.
5. Paint any damaged surfaces, surfaces with paint removed, or surfaces with rust.
6. Inspect the machine for any loose parts or hardware.
 - a) Replace any worn parts.
 - b) Tighten any loose hardware.
7. Lubricate all components of the machine.
8. Raise the machine and transport the machine to the area where the machine is to be kept. The area must be level and away from other machines.
9. Use the tractor hydraulics to lower the wings of the machine.
10. Stop the engine, apply the park brake, and take the key with you.
11. Remove the hardware that fastens the cylinder rod (1) of the wing lift cylinders to the wing frame. If equipped with folding wing extensions, remove the pins fastening the rod end of the wing lift cylinders to the wing extension frame.
12. Put boards under the gangs or shanks.
13. Start the tractor. Use the tractor hydraulics to retract the wing lift cylinders.
14. Stop the engine, apply the park brake, and take the ignition key with you.
15. Block up the machine to remove the weight from the tires.
16. Use the front hitch jack (1) to support the front hitch of the machine.
17. Disconnect the machine from the tractor. See the information for disconnecting the machine from the tractor.
18. Apply grease to the surfaces of the cylinder rods that are still showing.

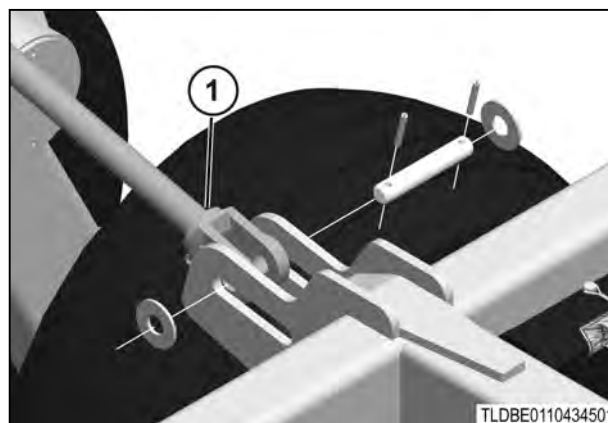


Fig. 5

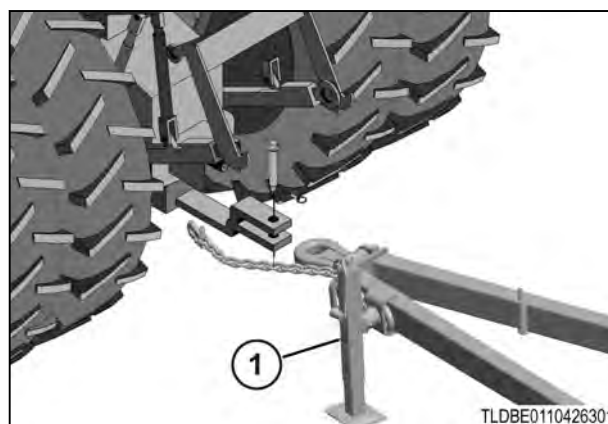


Fig. 6

4.4.2 Preventing corrosion of extended hydraulic cylinders

Store the machine with the cylinders in the retracted position. If the machine is stored with cylinders in the extended position, periodically cycle the cylinder. If a cylinder must be stored in the extended position without being cycled, the following corrosion prevention must be done.

Procedure

1. Use a dry cloth or cloth with solvent to clean any dirt from the cylinder shaft.
2. Prepare a mixture of 60 percent oil based rust inhibitor and 40 percent Kerosene.
3. Use a cloth to apply a thin layer of this mixture to the surface of the chrome plated shaft.
Number one fuel oil can be replaced with Kerosene. A good grade purpose made product can be used for this procedure.
4. Follow manufacturer instructions for applying purpose made products.
5. Inspect and apply the mixture again at three to six month intervals.

4.4.3 Removing the machine from storage

Complete the following steps to remove the machine from storage.

Procedure

1. Connect the machine to the tractor.
2. Use the tractor hydraulics to extend the wing fold cylinders. Extend the wing fold cylinders until the holes in the end of the wing fold cylinders align with the holes in the mounts.
3. Stop the engine, apply the tractor park brake, and take the key with you.
4. Install the cylinder rod (1) of the wing fold cylinders to the mount on the wing frames. Use the existing hardware to fasten the wing fold cylinders.
5. Check the air pressure in all the tires.
6. Inspect all the hydraulic hoses and the connections for leaks and repair as necessary.
7. Make sure the safety signs are visible and not damaged.

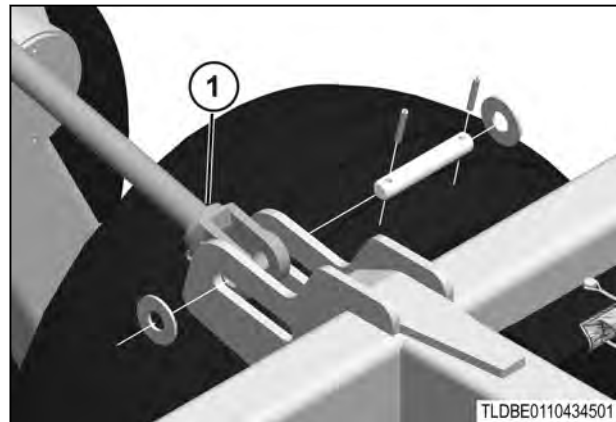


Fig. 7

5. Troubleshooting

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5.1 Troubleshooting

The lift cylinders are not in phase.	
Cause(s)	Solution(s)
The system is not bled of air	Bleed the system of air
The cylinders are not installed correctly	The wing cylinders must be smaller than the center frame cylinders. The cylinders must be connected in series. Start with the largest and reduce in diameter. The cylinders must point up so the air can release through the ports.
Hydraulic hoses are not installed correctly	Correctly install the hydraulic hoses

The wing lift cylinders are losing pressure and permitting the wings to lower.	
Cause(s)	Solution(s)
Pressure is flowing past the pistons in the cylinders	Install a new seal kit in the leaking cylinder

The lift cylinders are losing pressure and permitting the wings to lower.	
Cause(s)	Solution(s)
The depth valve is leaking	Install a cartridge assembly in the depth control valve

The wings are raising or the center is losing pressure permitting the center to lower.	
Cause(s)	Solution(s)
Pressure is flowing past the piston in the master cylinder	Install a new seal kit in the master cylinder

The machine is not pulling evenly.	
Cause(s)	Solution(s)
The depth is not even	Level the wings to the center frame
Shank location is not correct	Check the shanks for correct location

The depth is not even.	
Cause(s)	Solution(s)
The machine is not level when under power in the field	Level the machine from front to rear

5. Troubleshooting

The wing(s) are bouncing.	
Cause(s)	Solution(s)
The machine is operating too fast	Reduce speed
The outer end of the wing is operating too deep	Adjust the wing wheels to reduce depth
The gauge wheel is not supporting the wing	Lower the gauge wheel

The machine is not cutting into the soil.	
Cause(s)	Solution(s)
The machine is not level	Level the machine front to rear and side to side
The wheels are not in contact with the ground	Level the disc and/or set the depth adjustment
The gauge wheels are adjusted too deep	Adjust the gauge wheels
Shovel points are worn	Adjust stop collar of the main lift cylinder(s) for wear. Replace shovels if wear is severe
Sweep stem angle is not correct	Use 50 degree sweeps
Leveling adjustments are not correct on the main frame or the wings	See the information for leveling the implement
	Make sure the wing fold cylinders are fully extended
Hydraulic malfunction - air in the lines, cylinder or hoses leaking or not installed correctly.	Check for leaks in the cylinders, hoses, and fittings. Make sure all cylinders and hoses are correctly installed.

6. Specifications

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6.1 Specifications

		2550 - 49	2550 - 49-51	2550 - 49-53
Folding model - 2 m (6 ft) wings and tandem axle (floating hitch)				
Working width	30.5 cm (12 in) shank spacing	15 m (49 ft)	15.5 m (51 ft)	16.2 m (53 ft)
	38.1 cm (15 in) shank spacing	N/A	15.2 m (50 ft)	16 m (52.5 ft)
Number of shanks	30.5 cm (12 in) shank spacing	49	51	53
	38.1 cm (15 in) shank spacing	N/A	40	42
Inner wing		3.7 m (12 ft) and 1.8 m (6 ft)		
Weight - approximate		12 564 kg (27 699 lb)	12 714 kg (28 031 lb)	12 901 kg (28 443 lb)

		2550 - 55	2550 - 55-57	2550 - 55-59
Folding model - 3 m (9 ft) wings and tandem axle (floating hitch)				
Working width	30.5 cm (12 in) shank spacing	16.8 m (55 ft)	17.4 m (57 ft)	18 m (59 ft)
	38.1 cm (15 in) shank spacing	16.8 m (55 ft)	17.5 m (57.5 ft)	18.3 m (60 ft)
Number of shanks	30.5 cm (12 in) shank spacing	55	57	59
	38.1 cm (15 in) shank spacing	44	46	48
Inner wing		3.7 m (12 ft) and 2.7 m (9 ft)		
Weight - approximate		13 179 kg (29 055 lb)	13 321 kg (29 367 lb)	13 519 kg (29 804 lb)

6.2 Transport dimensions

	2550
Height	5.3 m (17 ft 4 inches)
Width	5.8 m (19 ft 2 inches)

6.3 Minimum tow vehicle weight

NOTE: Machine weight shown with the two-row HD coil tine and reel attachment.

Model	Machine weight	Minimum tow vehicle weight
2550 - 49 with floating hitch	14 806 kg (32 641 lb)	8 292 kg (21 761 lb)
2550 - 49-51 with floating hitch	15 002 kg (33 073 lb)	10 001 kg (22 049 lb)
2550 - 49-53 with floating hitch	15 234 kg (33 584 lb)	10 142 kg (22 359 lb)
2550 - 55 with floating hitch	15 556 kg (34 295 lb)	10 370 kg (22 863 lb)
2550 - 55-57 with floating hitch	16 007 kg (35 290 lb)	10 672 kg (23 527 lb)
2550 - 55-59 with floating hitch	16 250 kg (35 826 lb)	10 834 kg (23 884 lb)

6.4 Maximum transport speed

Maximum speed:

40 km/h (25 mph)

6.5 Lubrication specifications

Model	Lubrication fitting
All	No. 2 multi-purpose lithium grease

6.6 Tire air pressure


WARNING:

Serious injury or death can result from tire failure because of misapplication, incorrect inflation, overloading, or exceeding the maximum speed.

Tire size	Ply/load rating	Maximum air pressure
16.5 x 6.50 x 8	6 (C)	483 kPa (70 psi)
20.5 x 8.00 x 10	4 (E)	621 kPa (90 psi)
6.70 x 15	6 (C)	303 kPa (44 psi)
7.60 x 15	6 (C)	276 kPa (40 psi)
9.5L x 15	8 (D)	303 kPa (44 psi)
9.5L x 15	12 (F)	441 kPa (64 psi)
11L x 15	8 (D)	248 kPa (36 psi)
11L x 15	12 (F)	359 kPa (52 psi)
11L x 15 FI*	12 (F)	621 kPa (90 psi)
11L x 15	18	524 kPa (76 psi)
12.5L x 15	10 (E)	303 kPa (44 psi)
12.5L x 15	12 (F)	359 kPa (52 psi)
12.5L x 15 FI*	12 (F)	621 kPa (90 psi)
12.5L x 15	16	483 kPa (70 psi)
12.5L x 15*	20	621 kPa (90 psi)
380/55R x 16.5	150 A8/B	503 kPa (73 psi)
12 R22.5 x 8.25	H	621 kPa (90 psi)
VF295 x 75R22.5	145D	359 kPa (52 psi)
13.5 x 15	F	517 kPa (75 psi)
*Use with special heavy duty rim only		

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7.1 Preparing for assembly

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

Part numbers are shown on labels on the parts.

Hardware numbers are shown on labels on the hardware or on the container the hardware is in.

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.

7.1.1 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.

For a complete list of available service parts, go to www.agcopartsbooks.com or contact your dealer.

7.2 Assembling the center frame

Procedure

1. Put the frame assemblies on stands strong enough to support more than the weight of the machine.

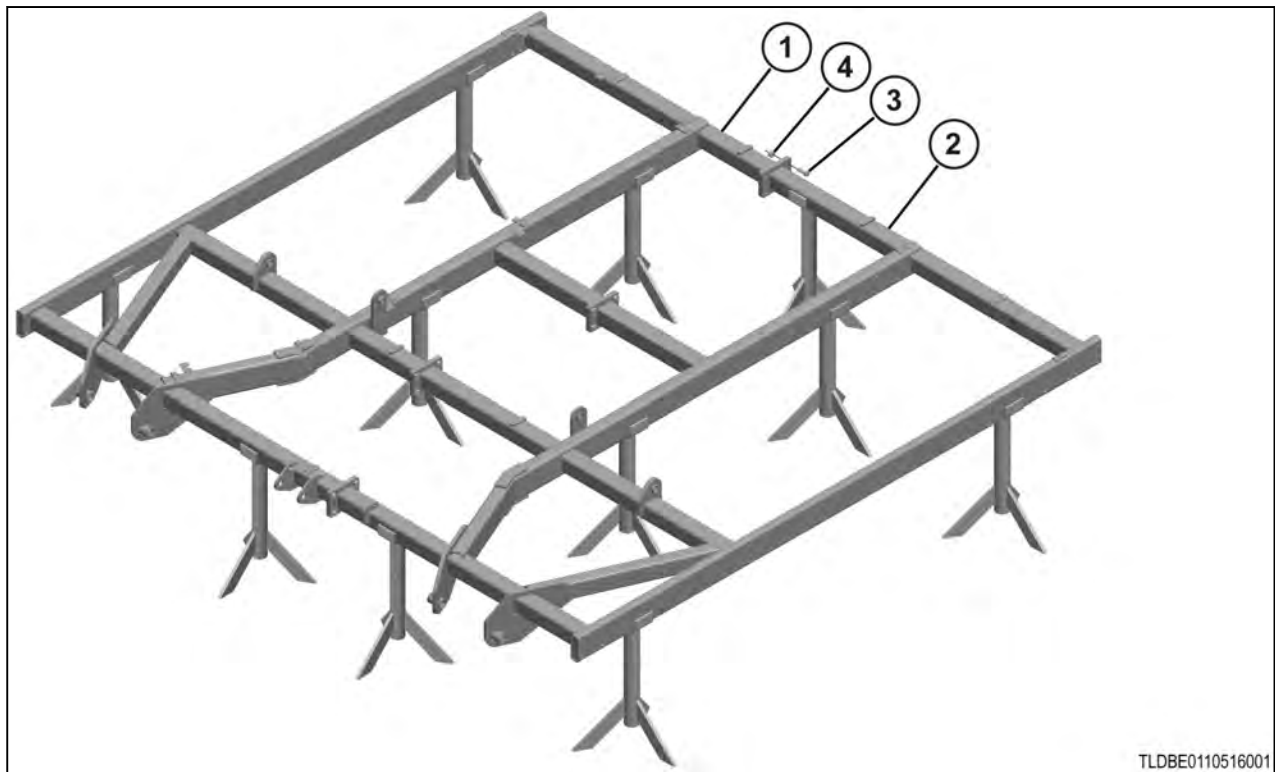


Fig. 1

2. Connect the center frame assemblies.

Item	Number	Description
1	248397	Right-hand center frame
2	248396	Left-hand center frame
3	88290	3/4 x 2 hex bolt
4	88356	3/4 lock nut

7.2.1 Installing the center lift

Procedure

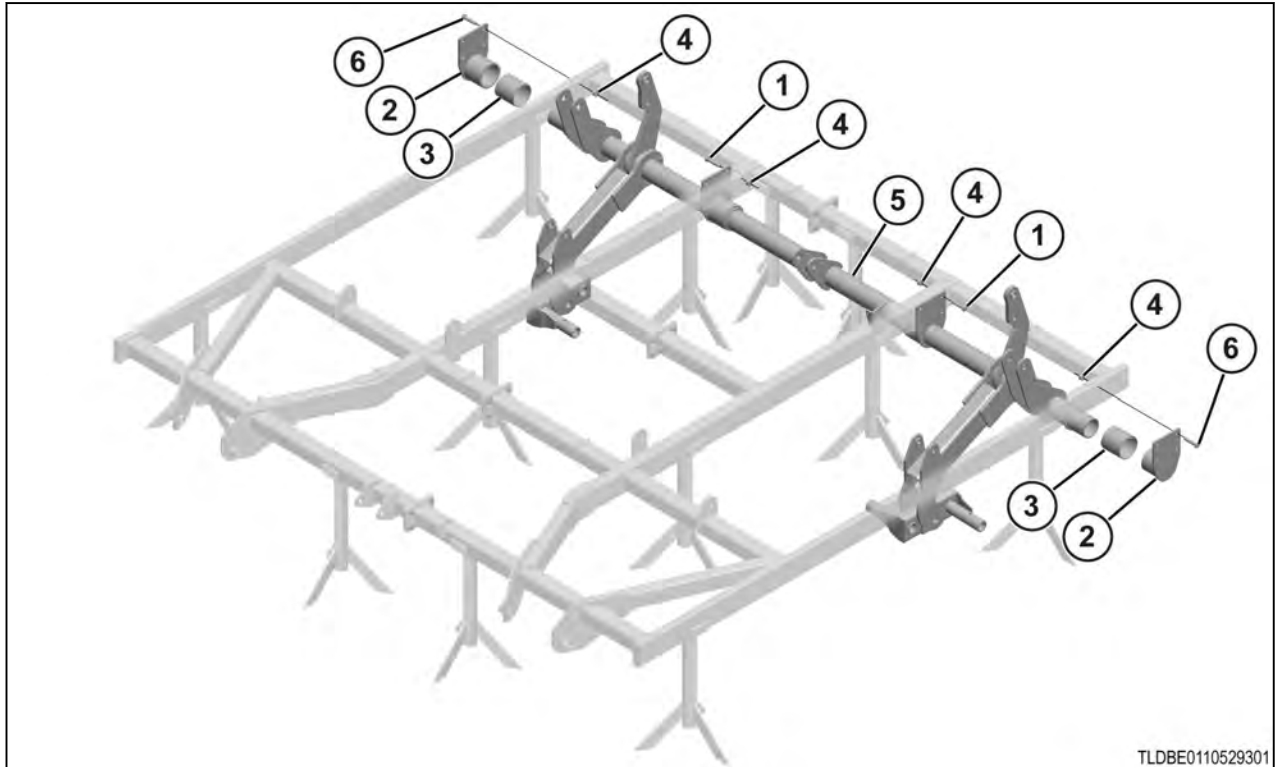


Fig. 2

1. Install the center lift as shown.

Item	Number	Description
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	351730	Center lift
6	89495	3/4 x 3 1/2 hex bolt

2. Fasten with the correct hardware.

7.2.2 Installing the center lift hubs and wheels

Procedure

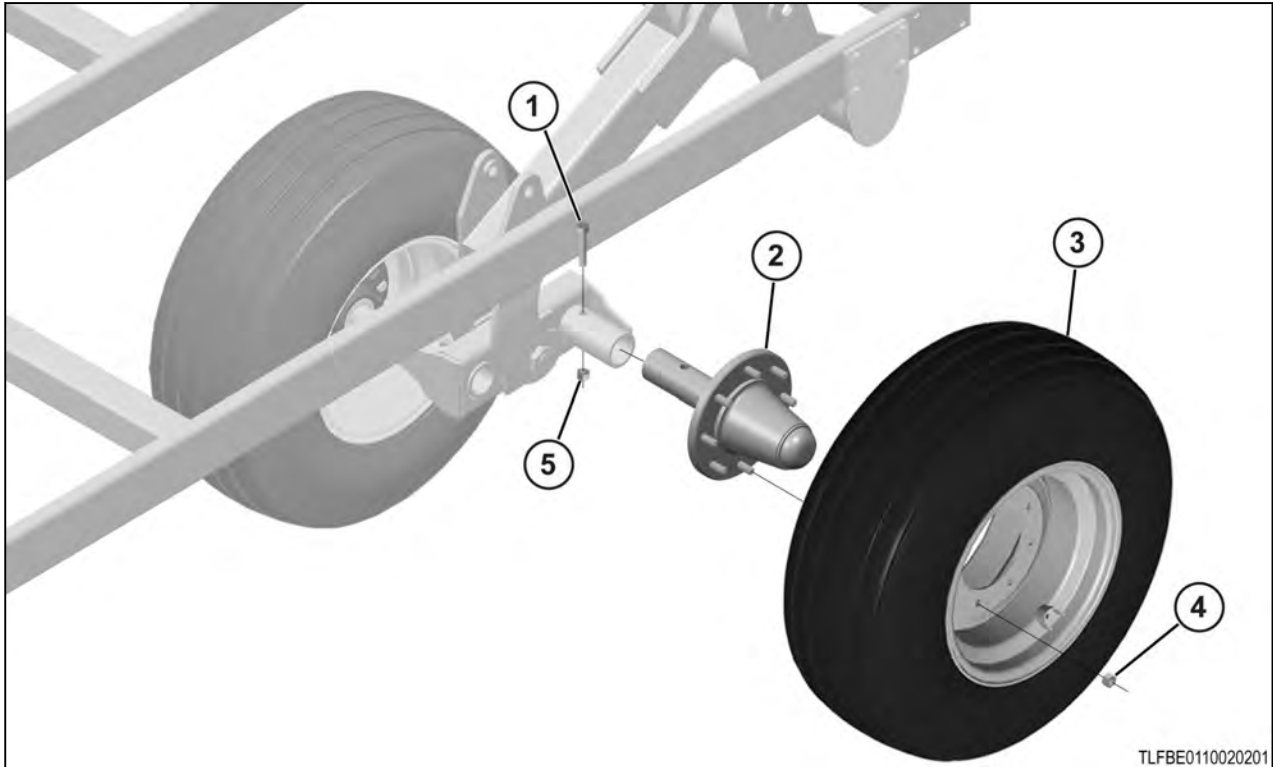


Fig. 3

1. Install the center lift hub and wheel assemblies.

Item	Number	Description
1	88298	5/8 x 4 hex bolt
2	16154	Hub
3	354507	Wheel Assembly
4	W103636	Lug nut
5	88369	5/8 locking nuts

2. Fasten with the correct hardware.

7.2.3 Installing the center frame mast tubes

Procedure

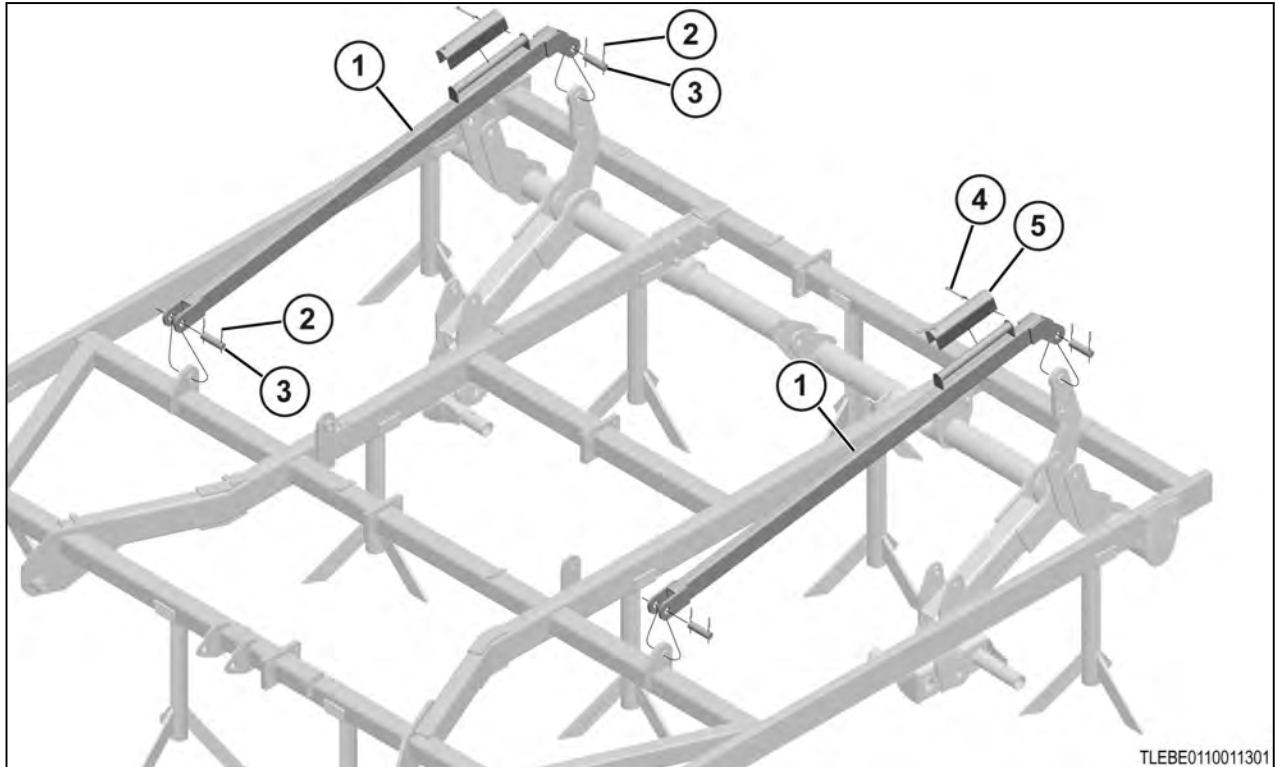


Fig. 4

1. Install the center frame mast tubes as shown.

Item	Number	Description
1	248393	Center frame mast tube
2	42484	1/4 x 2 pin
3	67854	1 1/4 x 4 1/2 pin
4	88133	Cotter pin
5	353940	Transport lock

2. Fasten with the correct hardware.

7.2.4 Installing the fold anchors

Procedure

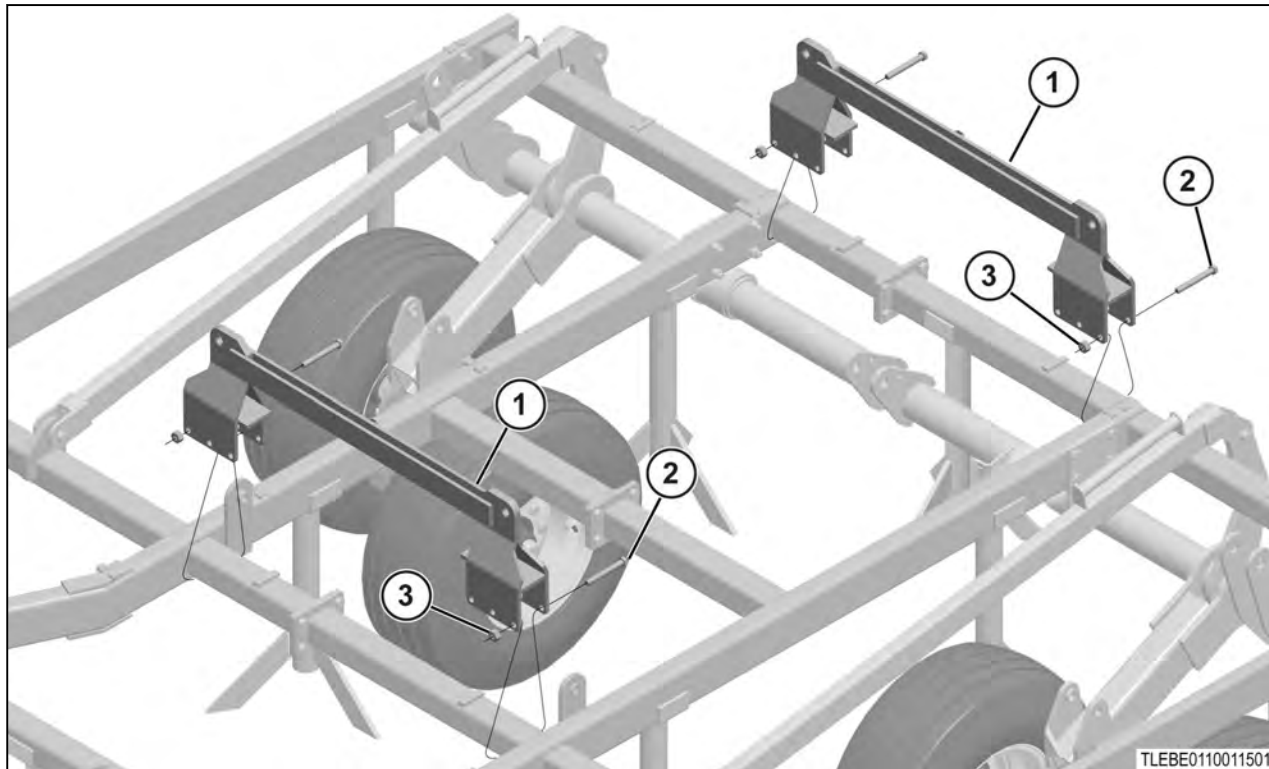


Fig. 5

1. Install the fold anchors (1) as shown.

Item	Number	Description
1	353639	Fold anchor
2	88947	3/4 x 6 hex bolt
3	88356	3/4 lock nut

2. Fasten with the correct hardware.

7.2.5 Installing the center frame wing rests

Procedure

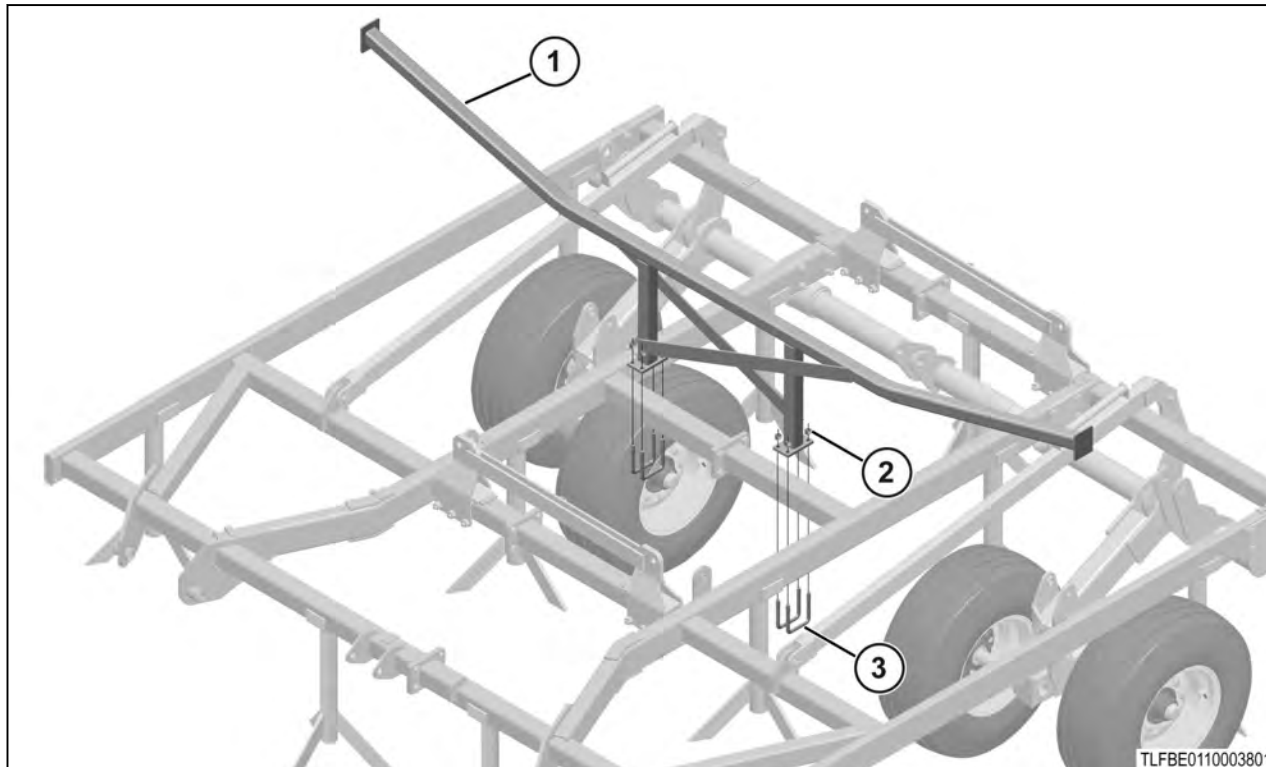


Fig. 6

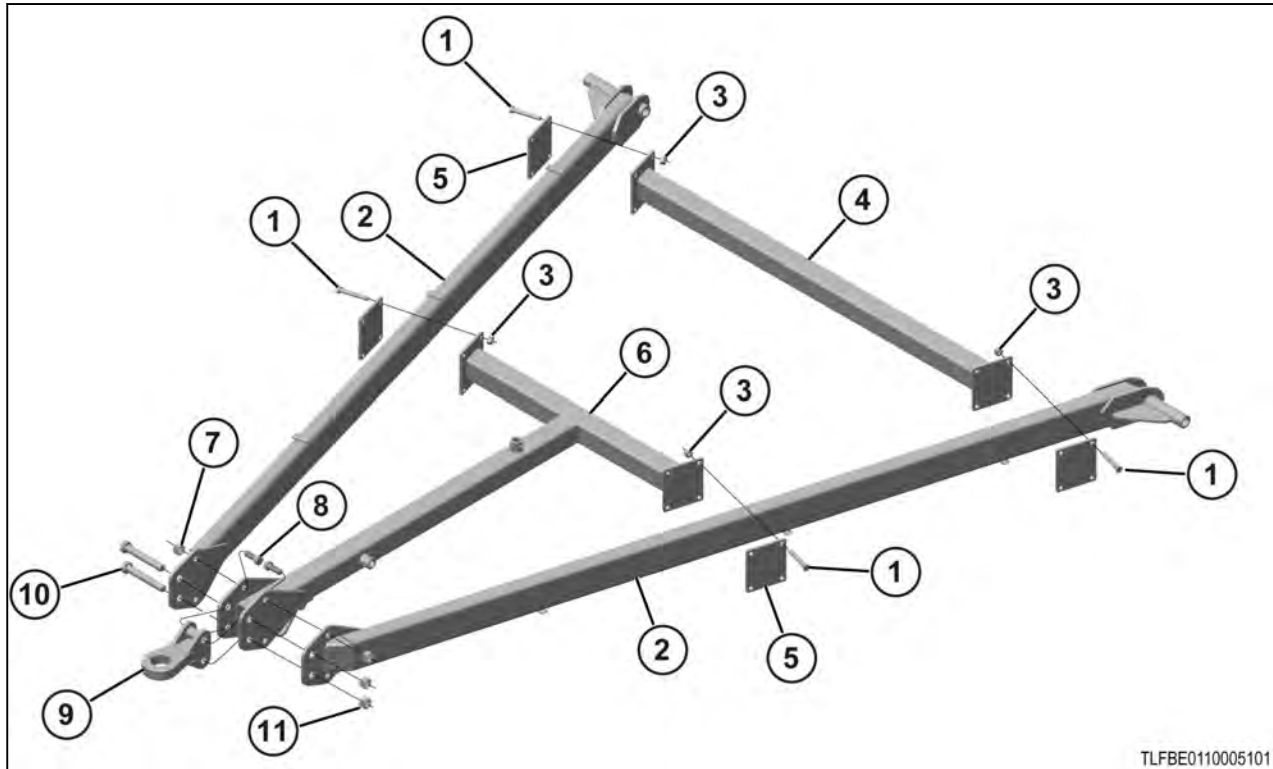
1. Install the center frame wing rests (1).

Item	Number	Description
1	353662	Wing rest
2	88369	5/8 lock nut
3	88145	5/8 x 4 x 5 1/4 U-bolt

2. Fasten with the correct hardware.

7.3 Assembling the tongue

Procedure



TLFBE0110005101

Fig. 7

1. Assemble the tongue.

Item	Number	Description
1	88305	3/4 x 5 hex bolt
2	353651	Frame
3	88356	3/4 lock nut
4	353653	Rear cross tube
5	233232	Plate
6	353648	Frame
7	88348	1 lock nut
8	88393	1 x 2 1/2 hex bolt
9	246795	Category 5 hitch
10	88427	1 1/4 x 8 hex bolt
11	88430	1 1/4 lock nut

2. Fasten with the correct hardware.

7.3.1 Installing the tongue

Procedure

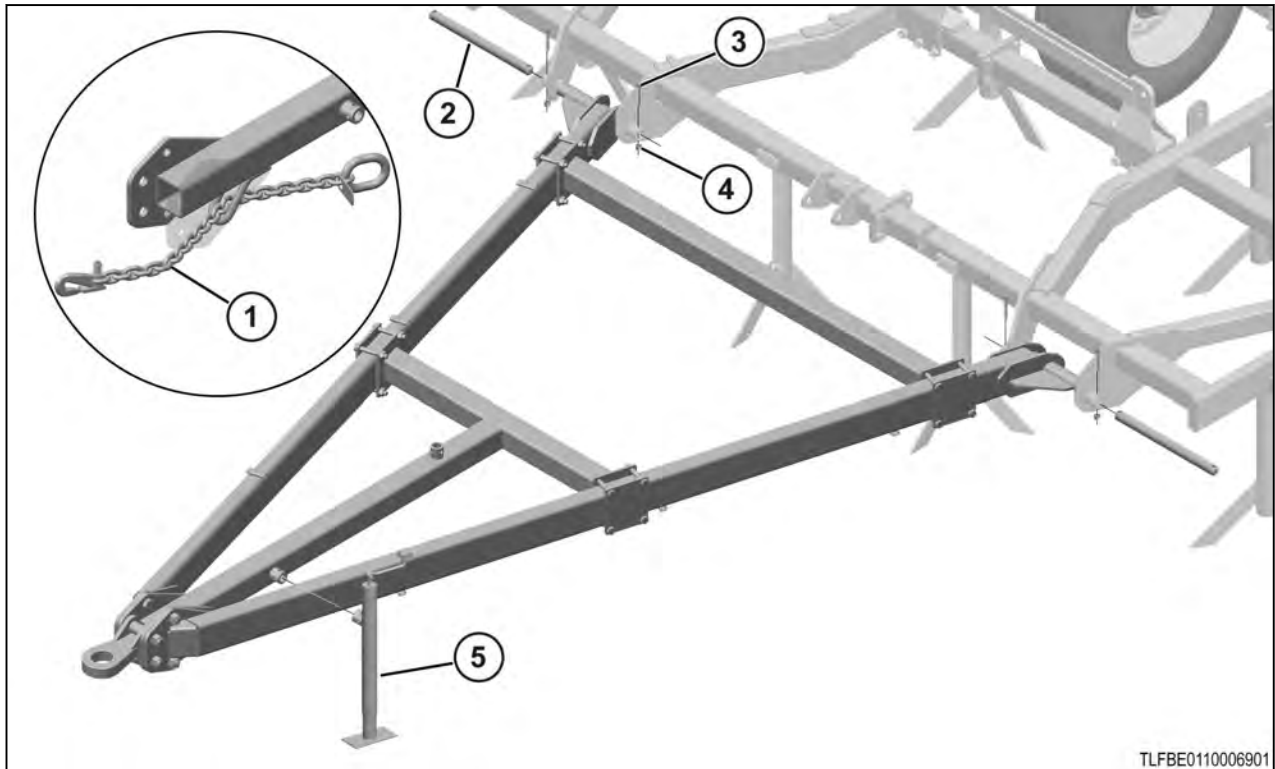


Fig. 8

1. Install the tongue.

Item	Number	Description
1	24459	Safety chain
2	350569	Pin
3	88541	1/2 x 3 hex bolt
4	88363	1/2 lock nut
5	24415	Jack

2. Fasten with the correct hardware.

7.3.2 Installing the utility pole

Procedure

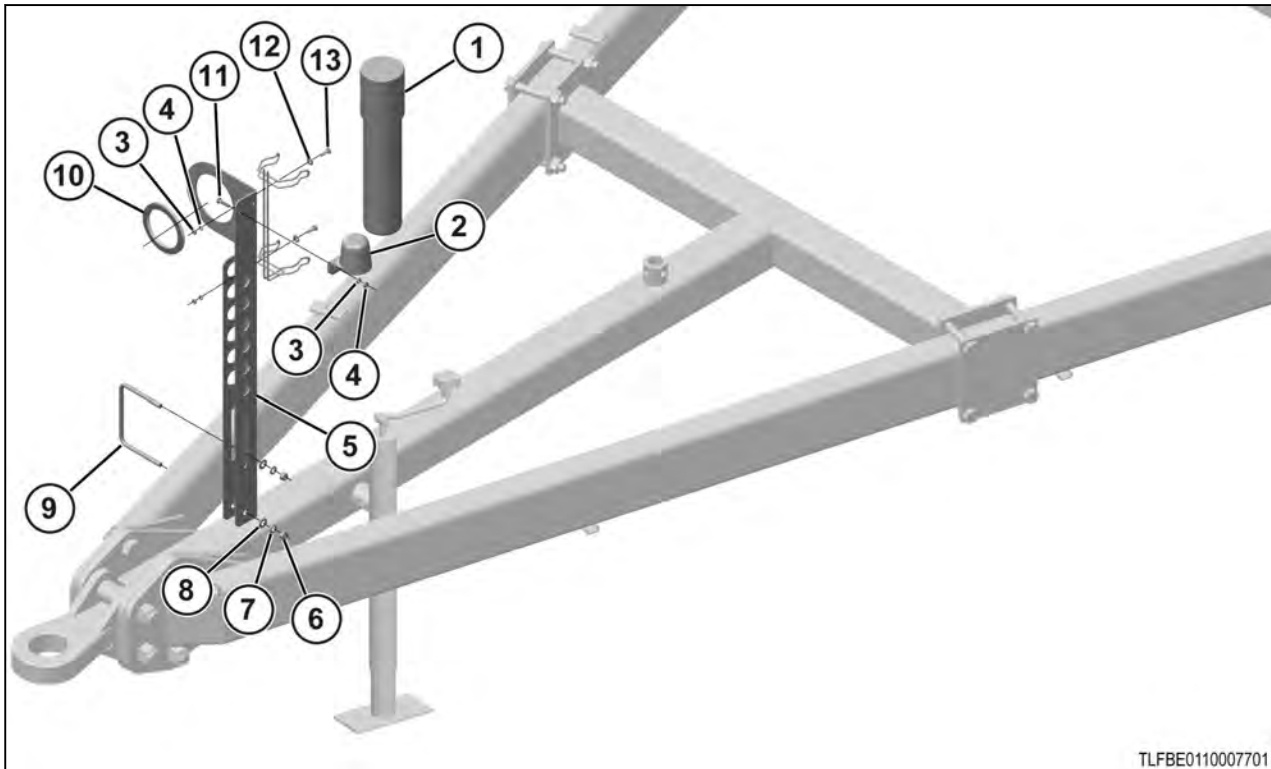


Fig. 9

1. Install the utility pole as shown.

Item	Number	Description
1	234313	Operator manual storage tube
2	223329	Plug
3	88262	1/4 lock washer
4	88172	1/4 hex nut
5	236142	Utility pole
6	88103	3/8 hex nut
7	88362	3/8 lock washer
8	88282	3/8 flat washer
9	89069	3/8 x 5 U-bolt
10	236092	Rubber edge cover
11	88203	1/4 x 1 hex bolt
12	88261	1/4 flat washer
13	88993	1/4 x 3/4 hex bolt

2. Fasten with the correct hardware.

7.4 Installing the center frame shank extension

Procedure

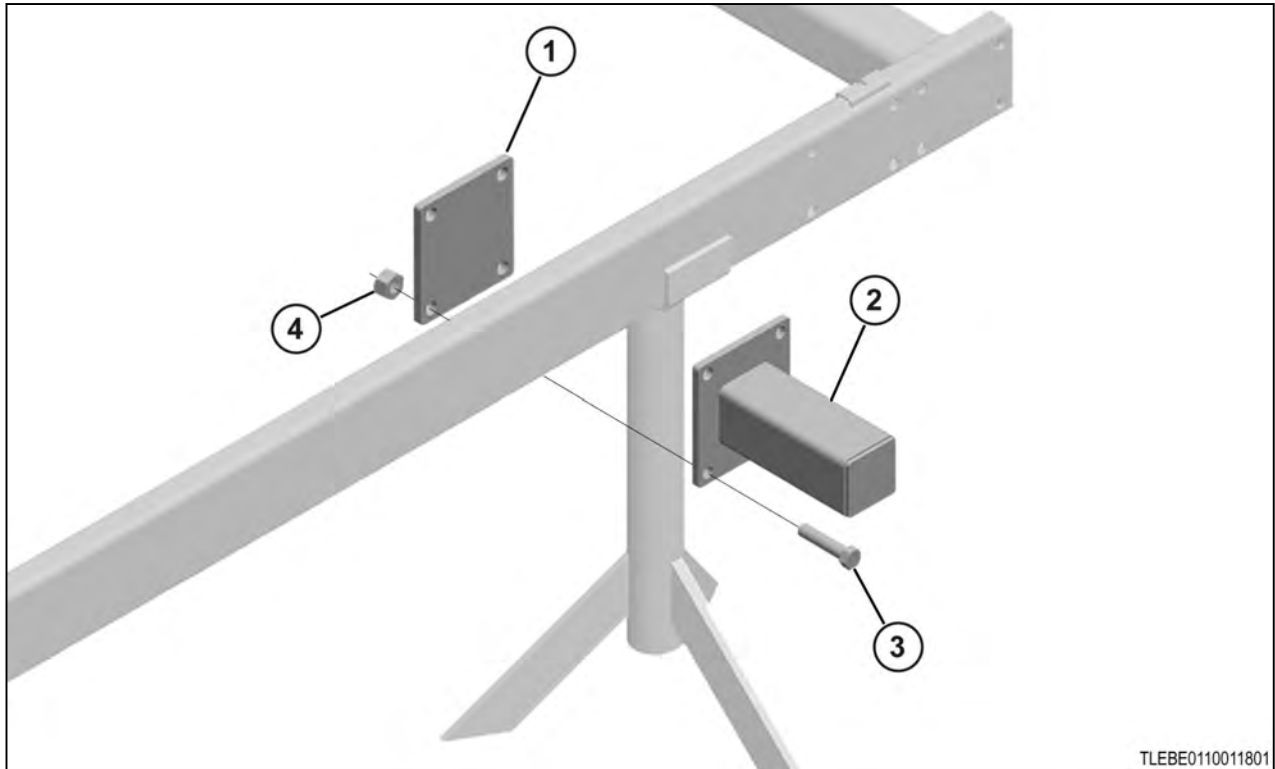


Fig. 10

1. Install the center frame shank extension (2).

Item	Number	Description
1	233232	Plate
2	222193	Shank extension
3	88272	3/4 x 4 hex bolt
4	88356	3/4 lock nut

2. Fasten with the correct hardware.

7.5 Installing the center frame shanks

7.5.1 Installing the 650 lb shanks

Procedure

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

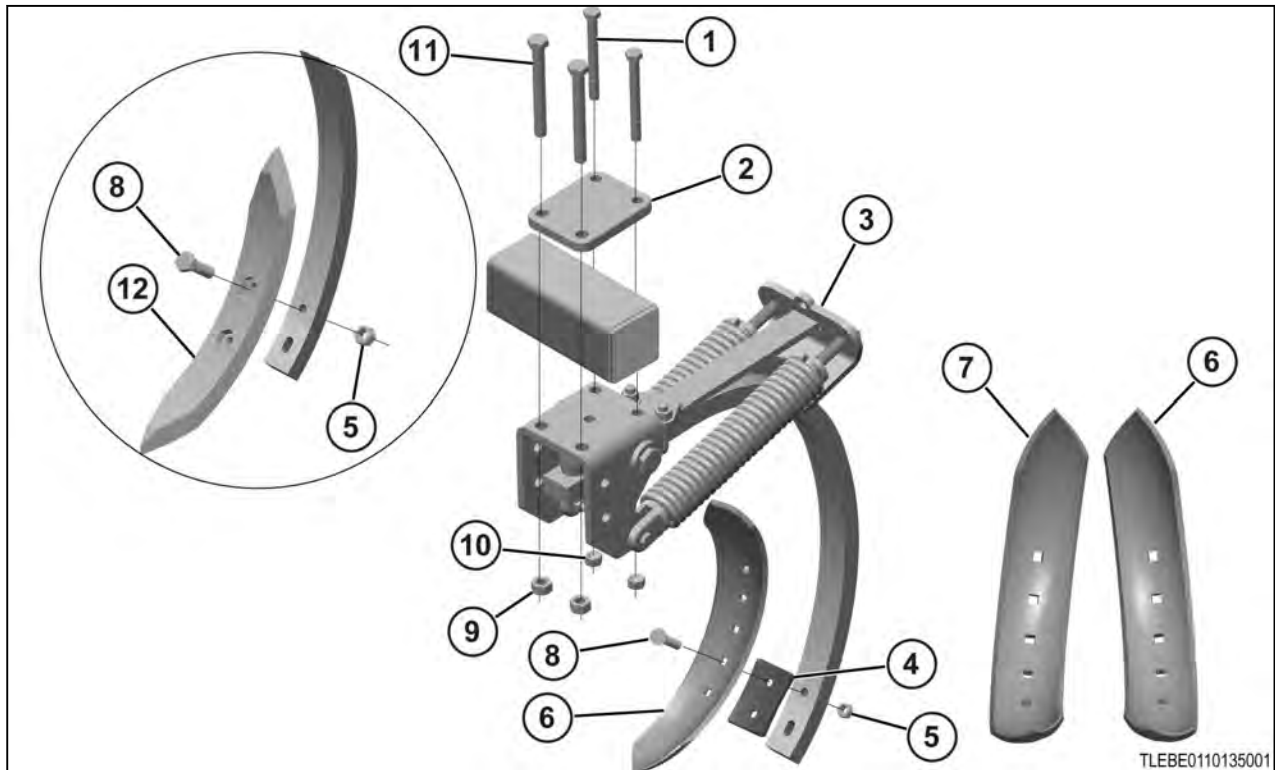


Fig. 11

2. Install the shanks as shown.

Item	Number	Description
1	88837	5/8 x 6 1/2 hex bolt
2	234084	Top plate
3	3151662	Spring retainer
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	89386	3/4 nut
10	88369	5/8 lock nut
11	89385	3/4 x 6 1/2 hex bolt
12	247912	7/8 x 2 x 19 1/2 spike

7.5.2 Installing the 1000 lb shanks

Procedure

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

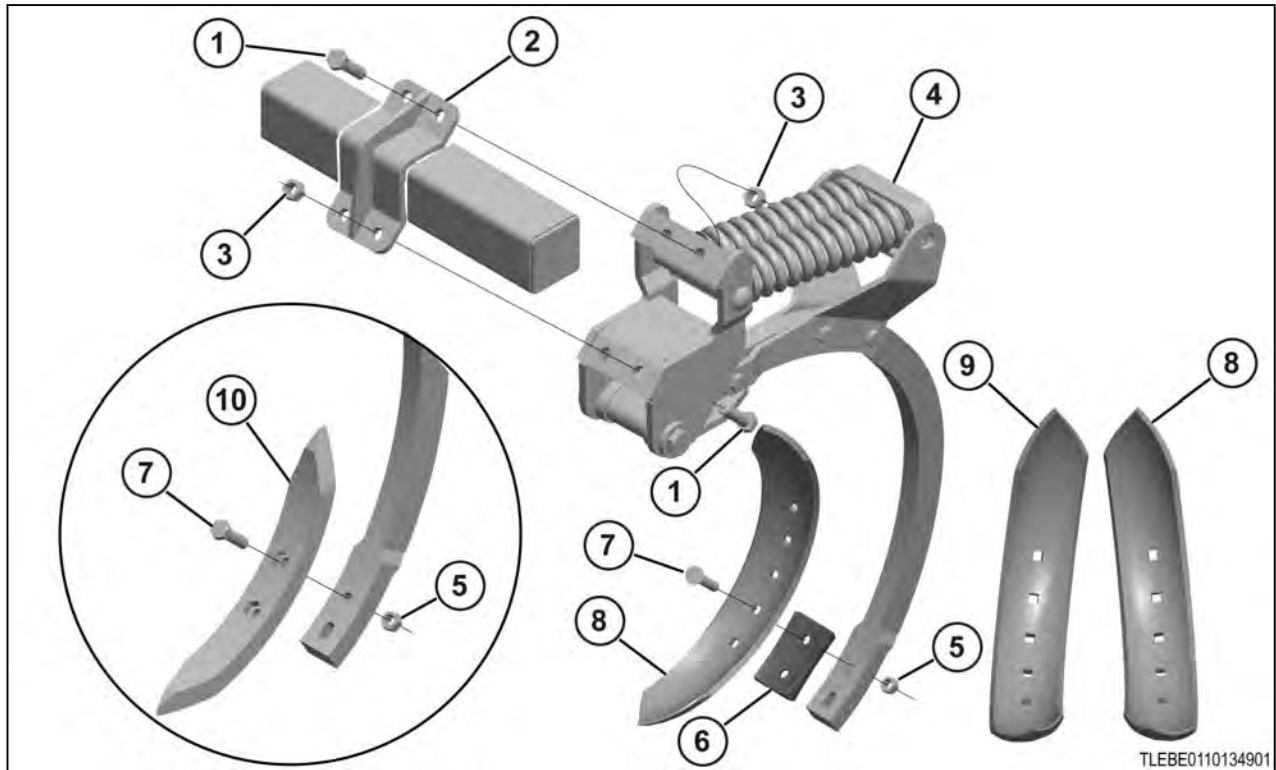


Fig. 12

2. Install the shanks as shown.

Item	Number	Description
1	89433	3/4 x 2 1/4 hex bolt
2	235768	Bracket
3	88665	3/4 lock nut
4	65373C	Spring retainer
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

7.6 Installing the slow moving vehicle (SMV) emblem

Procedure

1. Install the SMV emblem on the rear center frame in the center or as close to the left-hand side of center as possible.

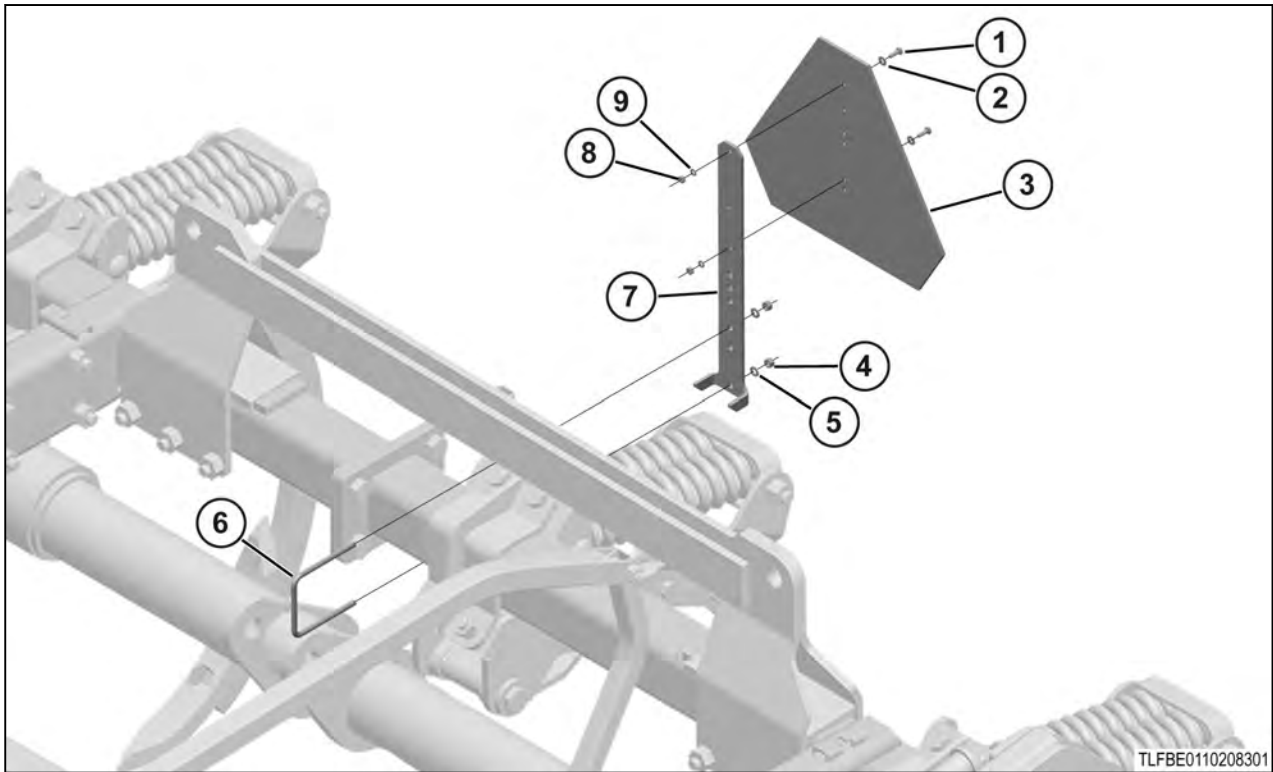


Fig. 13

2. Make sure the SMV emblem is not blocked by any rear finishing attachments.

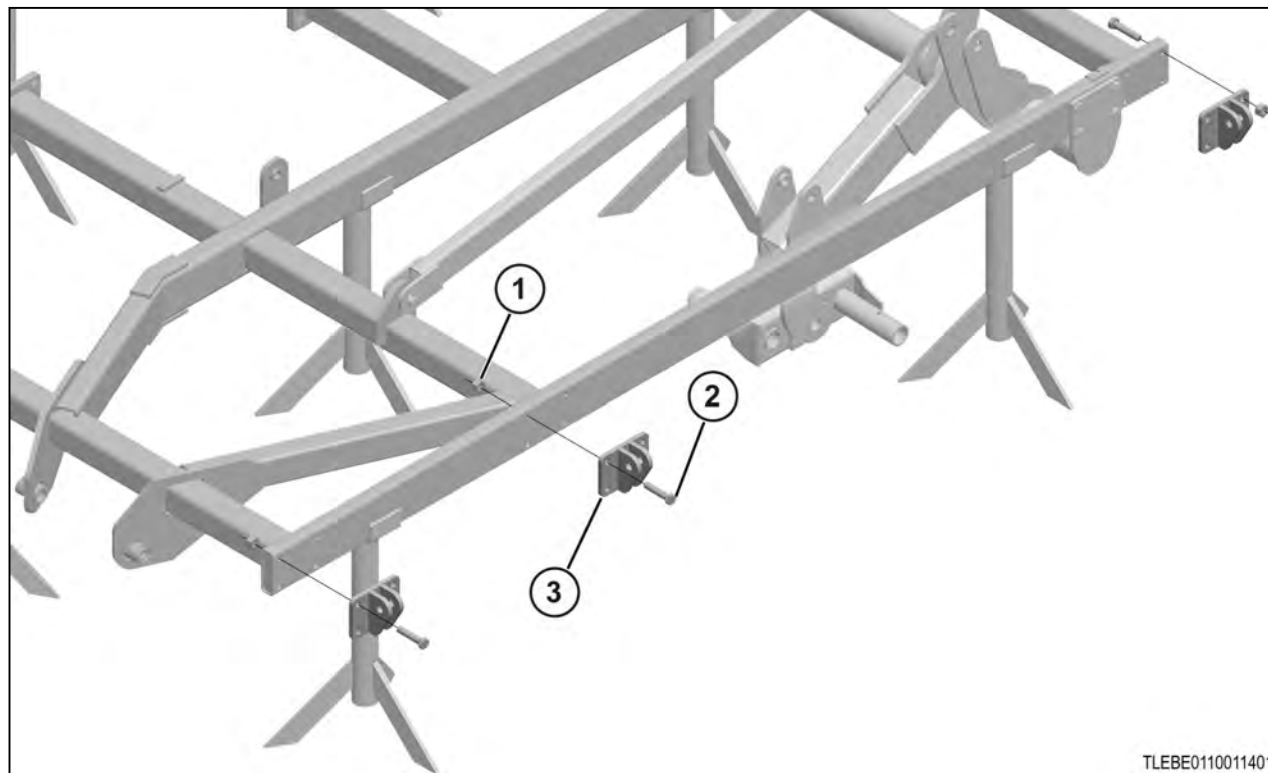
Item	Number	Description
1	88993	1/4 x 3/4 hex bolt
2	88261	1/4 flat washer
3	30651	SMV emblem
4	88103	3/8 hex nut
5	88362	3/8 lock washer
6	88385	3/8 x 4 x 5 U-bolt
7	350933	SMV bracket
8	88172	1/4 hex nut
9	88262	1/4 lock washer

3. Fasten with the correct hardware.

7.7 Installing the inner wings

7.7.1 Mounting the wing frame hinges

Procedure



TLEBE0110011401

Fig. 14

1. Install the outer wing frame hinges (3).

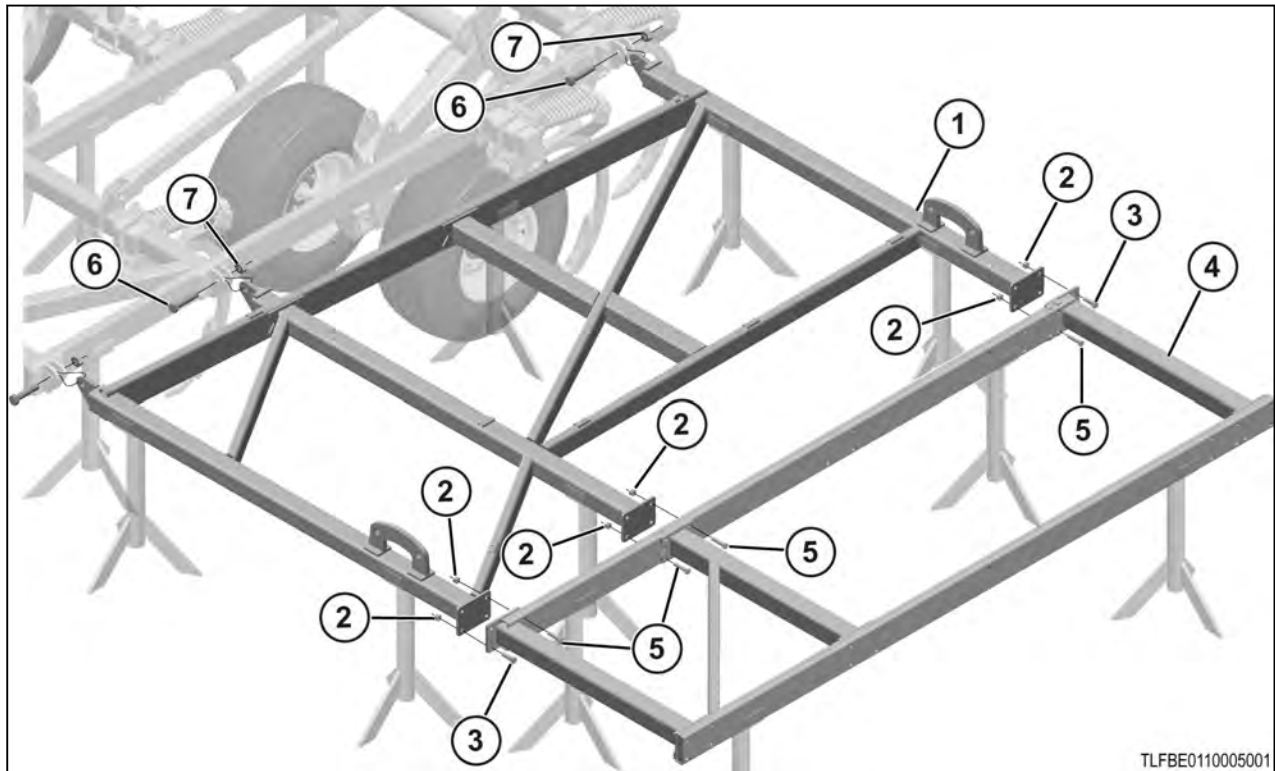
Item	Number	Description
1	88356	3/4 lock nut
2	236868	3/4 x 3 1/2 hex bolt
3	248425	Outer wing hinge

2. Fasten with the correct hardware.

7.7.2 Installing the inner wing frames

Procedure

1. Put the frame assemblies on stands strong enough to support more than the weight of the machine.



TLFBE0110005001

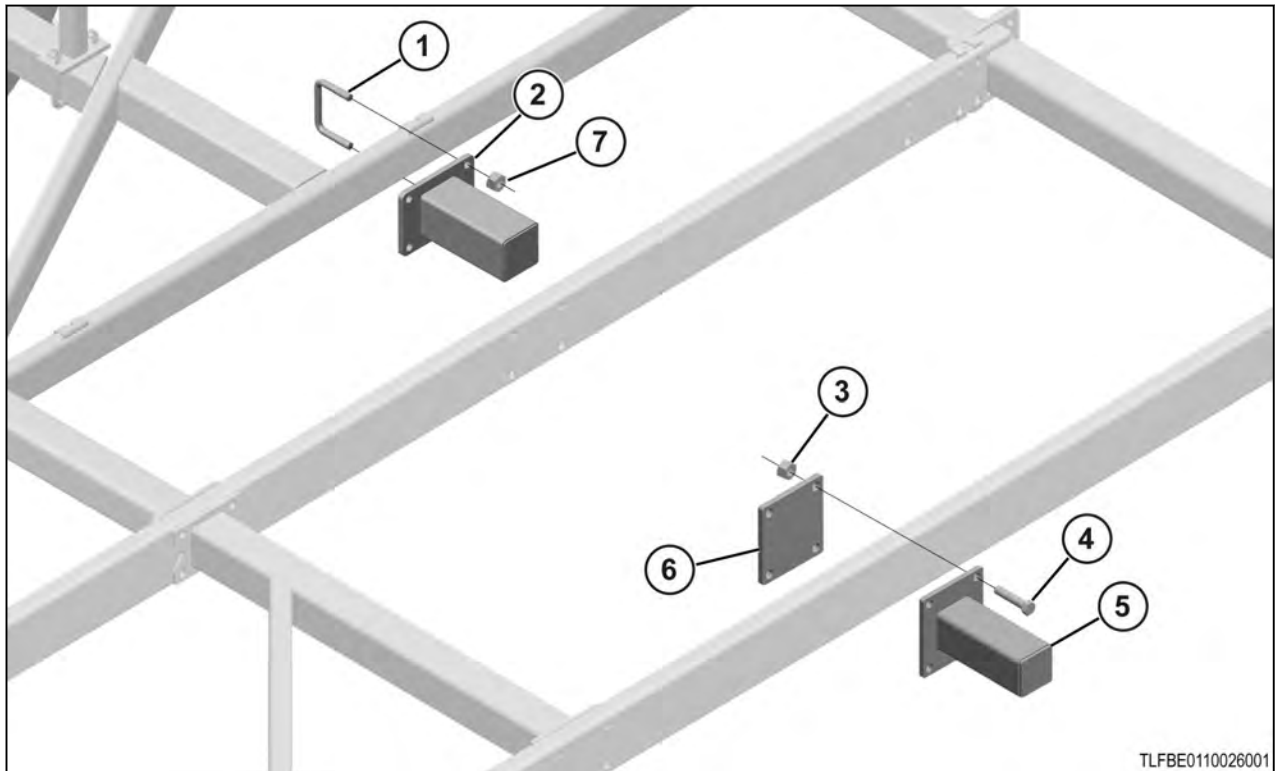
Fig. 15

2. Connect the frame assemblies.

Item	Number	Description
1	353624	Right-hand inner wing
	353641	Left-hand inner wing
2	88356	3/4 lock nut
3	88290	3/4 x 2 hex bolt
4	248443	Wheel well
5	88272	5/8 x 4 hex bolt
6	350999	1 x 4 1/2 hex bolt
7	88348	1 lock nut

3. Fasten with the correct hardware.

7.7.3 Installing the inner wing frame shank extensions

Procedure

TLFBE0110026001

Fig. 16

1. Install the inner wing frame shank extensions.

Item	Number	Description
1	88388	5/8 x 4 x 3 1/4 U-bolt
2	13963	Stub
3	88356	3/4 lock nut
4	88272	3/4 x 4 hex bolt
5	222193	Stub
6	233232	Plate
7	88369	5/8 lock nut

2. Fasten with the correct hardware.

7.7.4 Installing the front fold bracket

Procedure

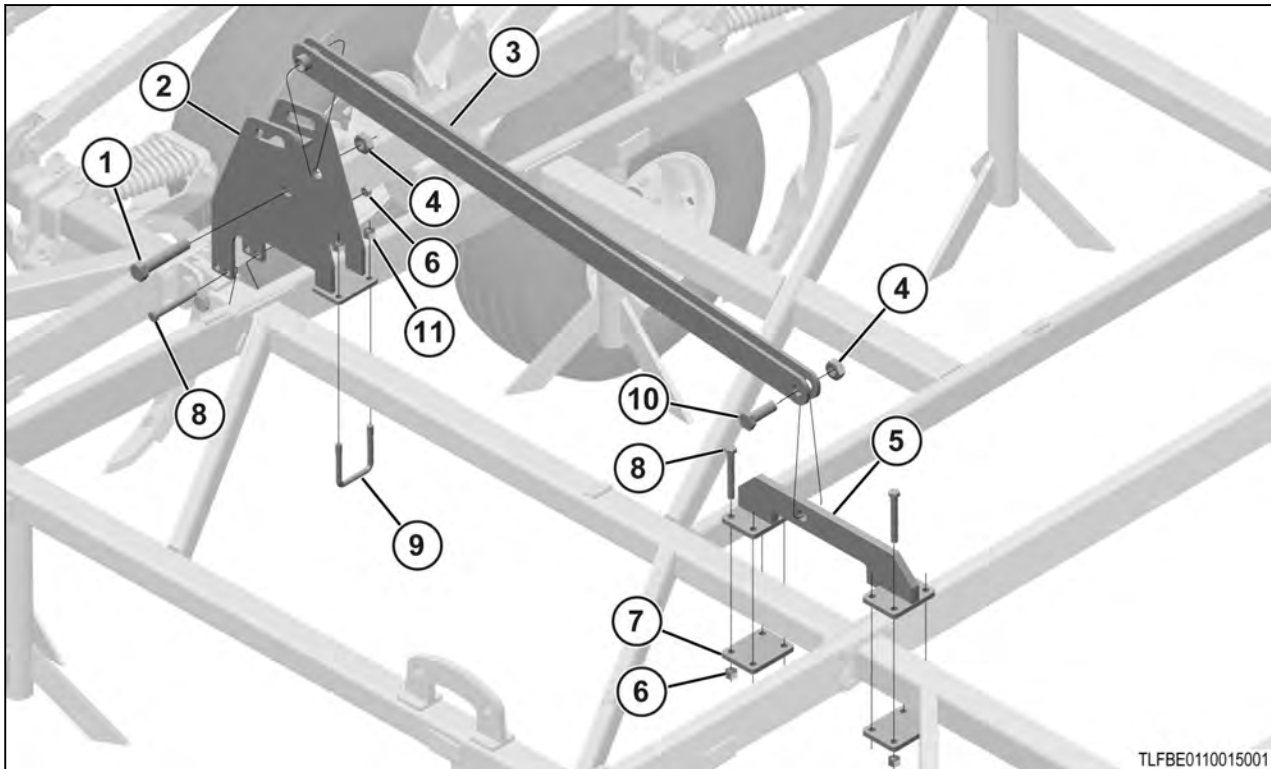


Fig. 17

1. Install the front fold bracket.

Item	Number	Description
1	88349	1 1/4 x 6 1/2 hex bolt
2	353627	Inner bracket
3	353633	Link
4	88613	1 1/4 hex nut
5	353631	Bracket
6	88356	3/4 lock nut
7	239045	Plate
8	88947	3/4 x 6 hex bolt
9	88145	5/8 x 4 x 5 1/4 U-bolt
10	89029	1 1/4 x 4 hex bolt
11	88369	5/8 lock nut

2. Fasten with the correct hardware.

7.7.5 Installing the rear fold bracket

Procedure

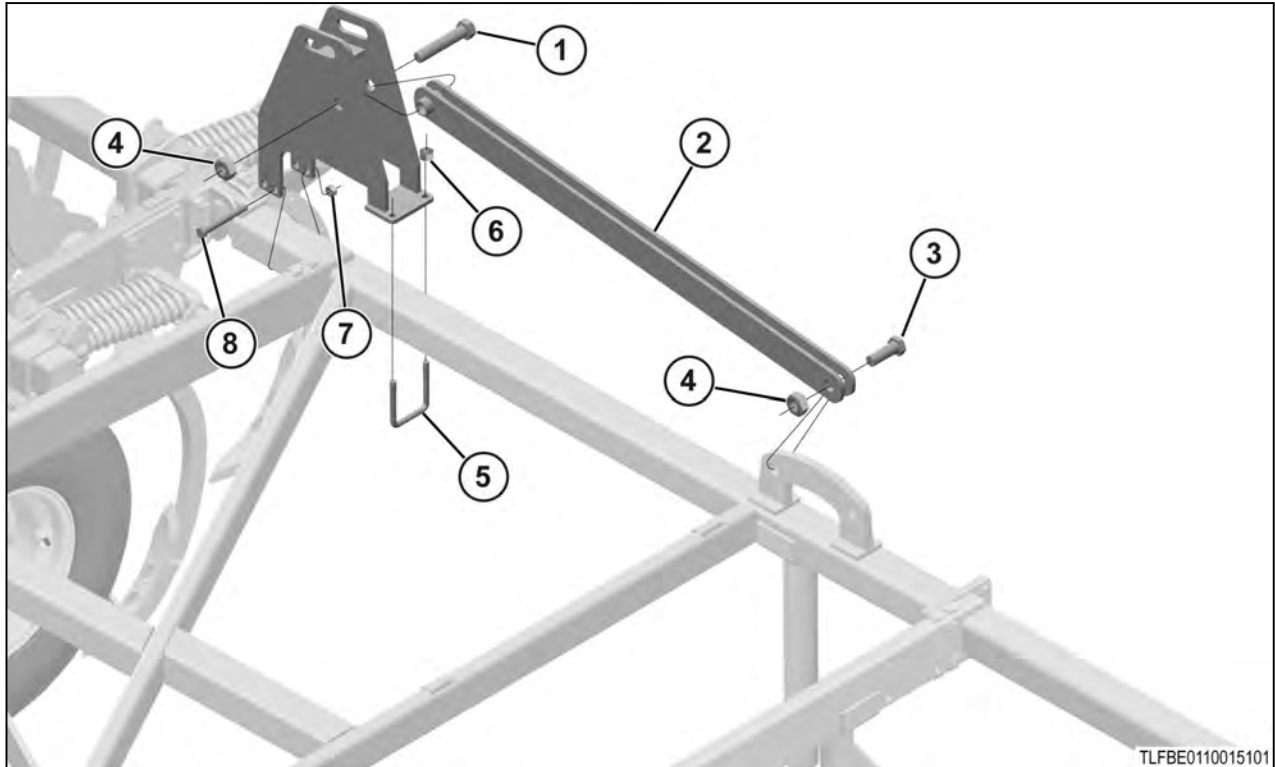


Fig. 18

1. Install the rear fold bracket.

Item	Number	Description
1	88349	1 1/4 x 6 1/2 hex bolt
2	353629	Link
3	89029	1 1/4 x 4 hex bolt
4	88613	1 1/4 hex nut
5	88145	5/8 x 4 x 5 1/4 U-bolt
6	88369	5/8 lock nut
7	88356	3/4 lock nut
8	88947	3/4 x 6 hex bolt

2. Fasten with the correct hardware.

7.7.6 Installing the inner wing frame wing rests

Procedure

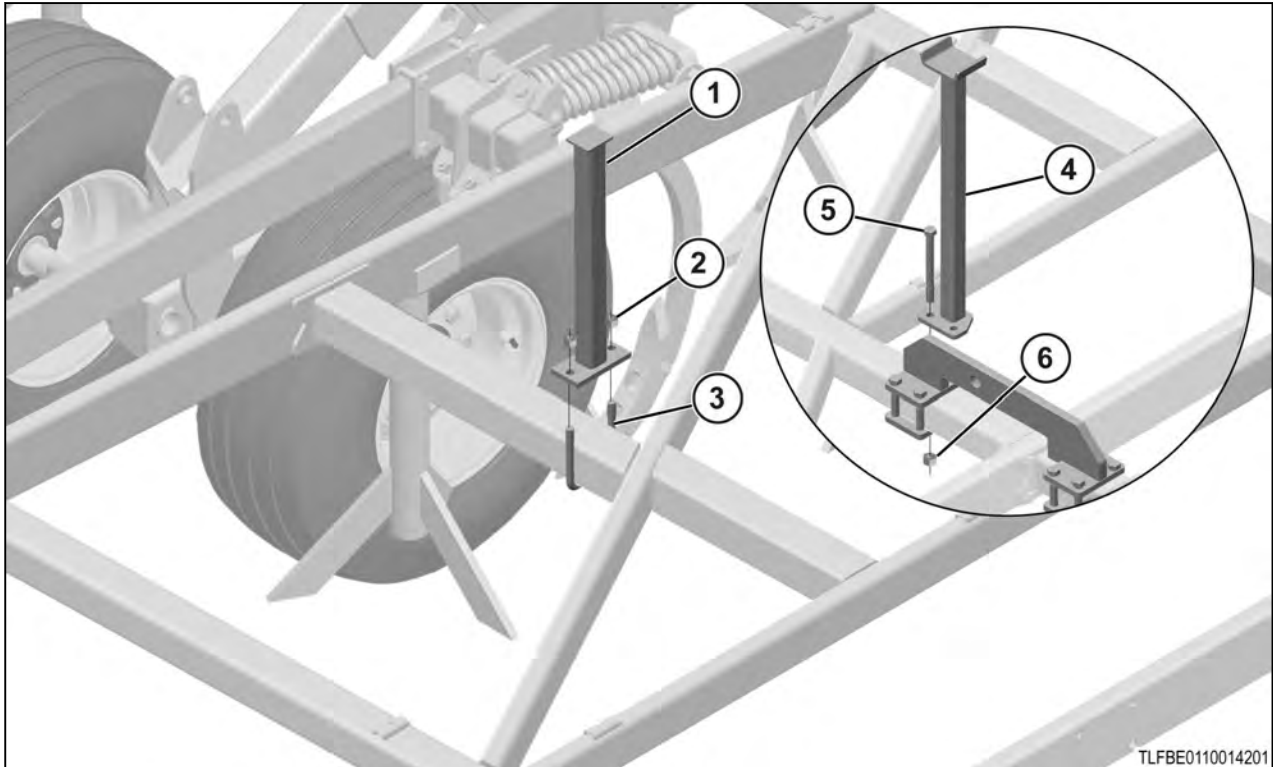


Fig. 19

1. Install the wing rests.

16.8 to 18 m (55 to 59 ft)		
Item	Number	Description
1	233591	Wing rest
2	88369	5/8 Lock nut
3	88145	5/8 x 4 x 5 1/4 U-bolt

14.9 to 16.2 m (49 to 53 ft)		
Item	Number	Description
4	355088	Wing rest
5	88600	3/4 x 6 1/2 hex bolt
6	88356	3/4 lock nut

2. Fasten with the correct hardware.

7.8 Installing the inner wing frame shanks

7.8.1 Installing the 650 lb shanks

Procedure

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

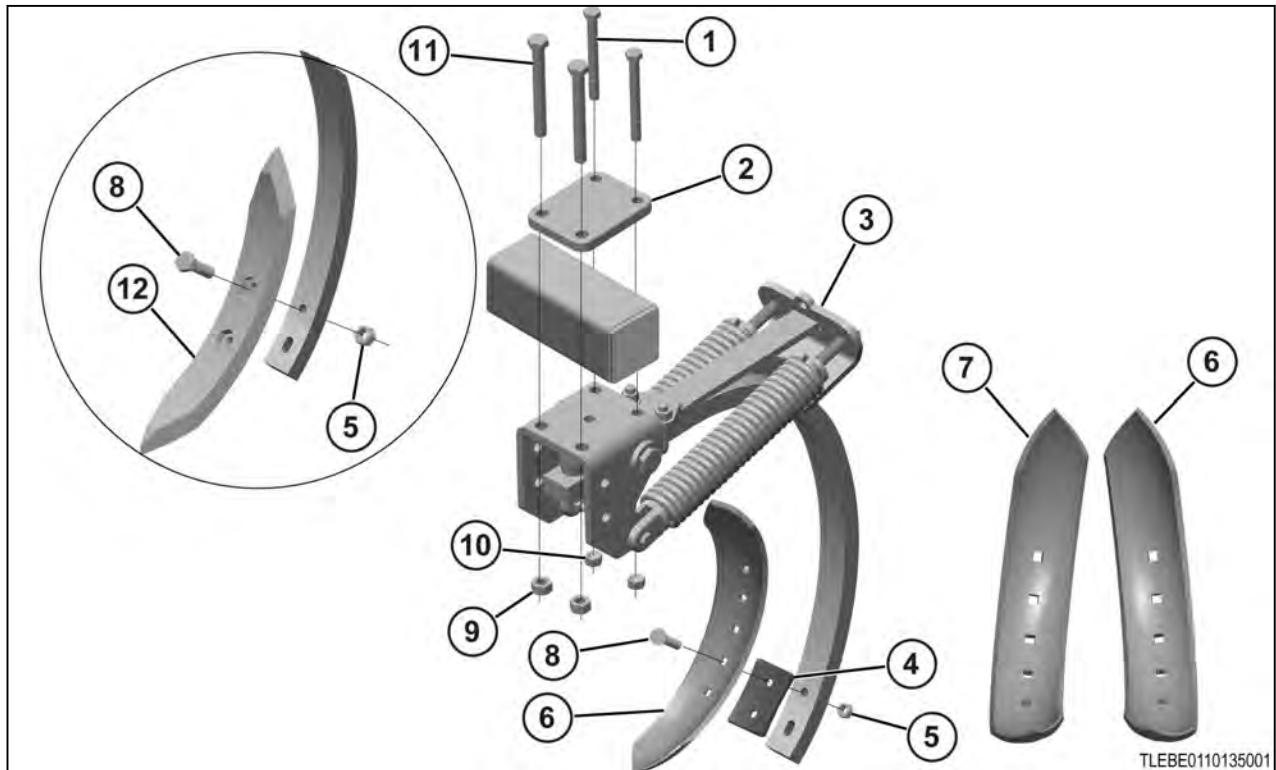


Fig. 20

2. Install the shanks as shown.

Item	Number	Description
1	88837	5/8 x 6 1/2 hex bolt
2	234084	Top plate
3	3151662	Spring retainer
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	89386	3/4 nut
10	88369	5/8 lock nut
11	89385	3/4 x 6 1/2 hex bolt
12	247912	7/8 x 2 x 19 1/2 spike

7.8.2 Installing the 1000 lb shanks

Procedure

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

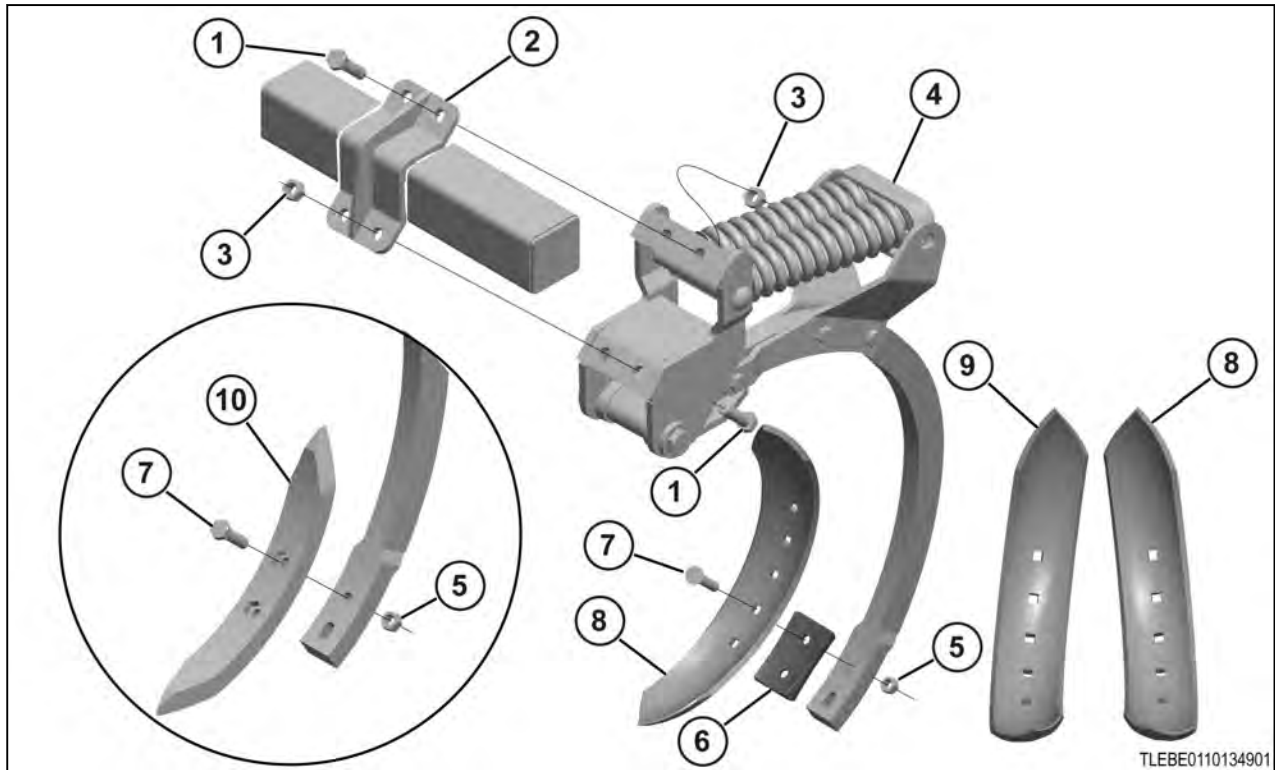


Fig. 21

2. Install the shanks as shown.

Item	Number	Description
1	89433	3/4 x 2 1/4 hex bolt
2	235768	Bracket
3	88665	3/4 lock nut
4	65373C	Spring retainer
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

7.9 Installing the inner wing lifts

Procedure

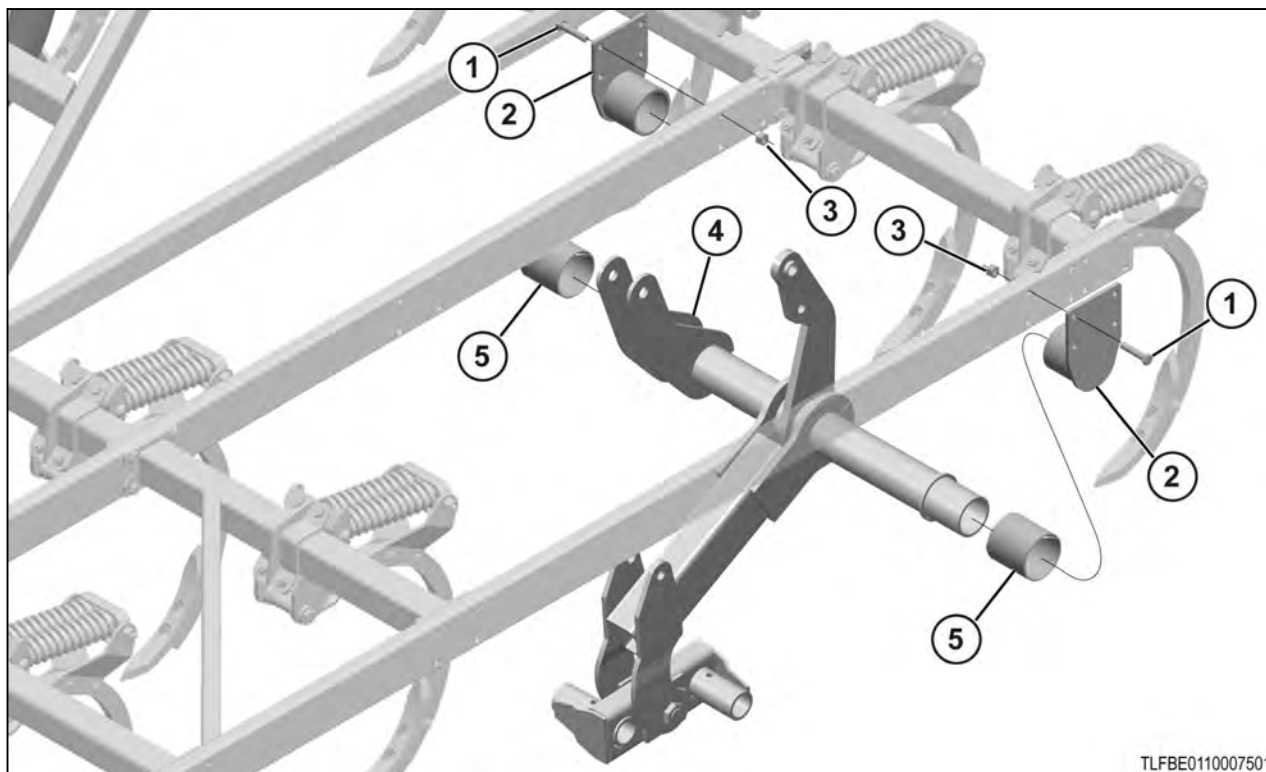


Fig. 22

1. Install the inner wing lifts.

Item	Number	Description
1	89495	3/4 x 3 1/2 hex bolt
2	248409	Wing lift bracket
3	88356	3/4 lock nut
4	351759	Wing lift
5	351762	Bushing

2. Fasten with the correct hardware.

7.9.1 Installing the inner wing lift hubs and wheels

Procedure

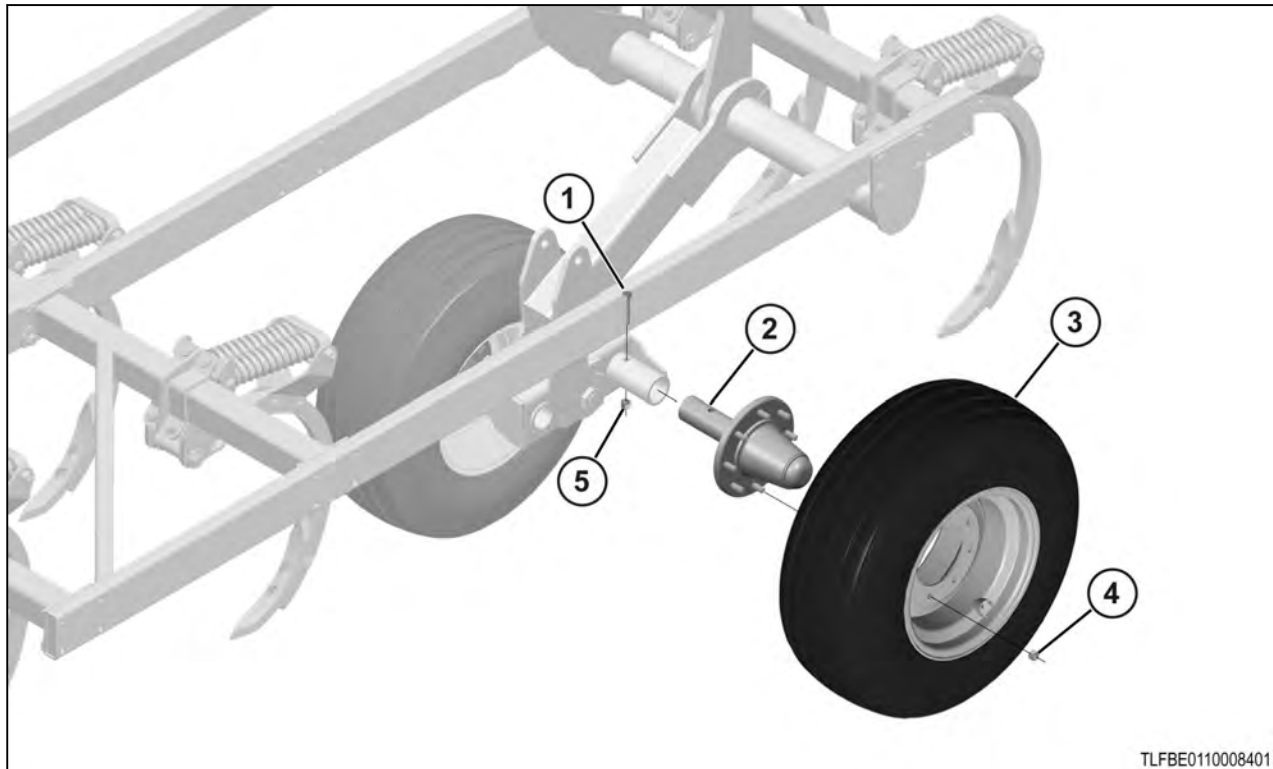


Fig. 23

1. Install the hub and wheel assemblies.

Item	Number	Description
1	88298	5/8 x 4 hex bolt
2	16154	Hub assembly
3	353477 (used)	Wheel assembly
	353507 (new)	
4	W103636	Lug nut
5	88369	5/8 lock nut

2. Fasten with the correct hardware.

7.10 Installing the inner wing frame mast tubes

Procedure

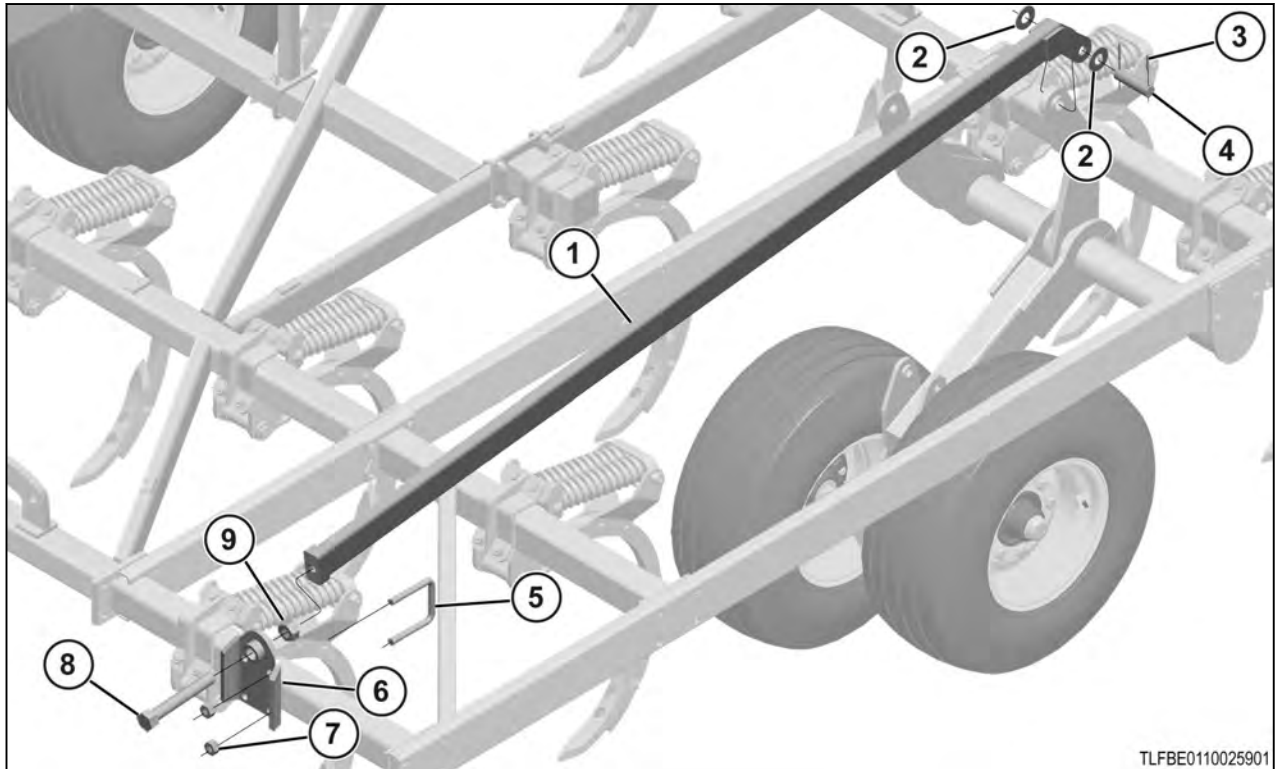


Fig. 24

1. Install the mast tube.

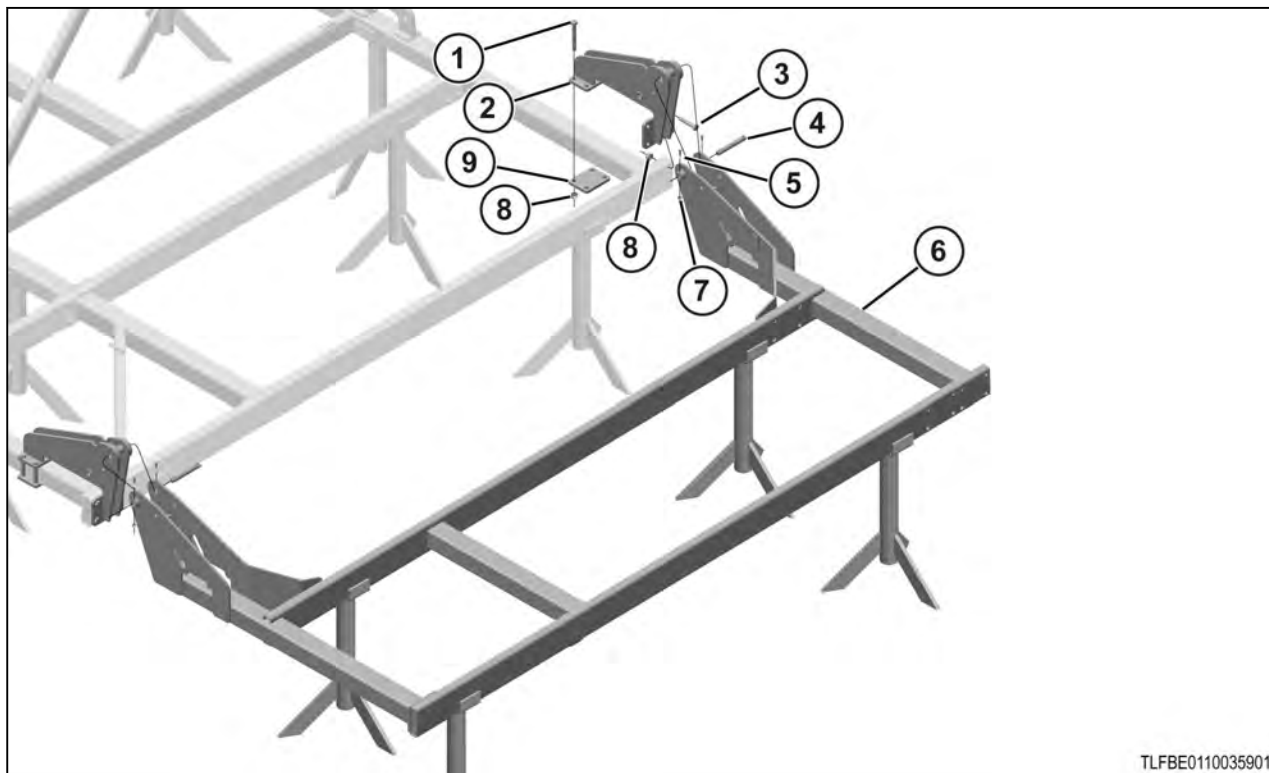
Item	Number	Description
1	353616	Mast tube
2	88602	1 1/4 flat washer
3	42484	Cotter pin
4	67854	1 1/4 x 4 1/2 pin
5	88145	5/8 x 4 x 5 1/4 U-bolt
6	350500	Bracket
7	88369	5/8 lock nut
8	69799	Adjuster rod
9	88613	1 1/4 hex nut

2. Fasten with the correct hardware.

7.11 Installing the outer wings

7.11.1 Installing the 14.9 to 16.2 m (49 to 53 ft) outer wing frames

Procedure



TLFBE0110035901

Fig. 25

1. Install the outer wing frame.

Item	Number	Description
1	88947	3/4 x 6 hex bolt
2	353620	Hinge
3	88272	3/4 x 4 hex bolt
4	69826	1 x 7 1/4 pin
5	89011	3/8 x 2 hex bolt
6	353788	Left-hand outer wing frame
	353793	Right-hand outer wing frame
7	88659	3/8 lock nut
8	88356	3/4 lock nut
9	239045	Plate

2. Fasten with the correct hardware.

7.11.2 Installing the 14.9 to 16.2 m (49 to 53 ft) outer wing frame shank extensions

Procedure

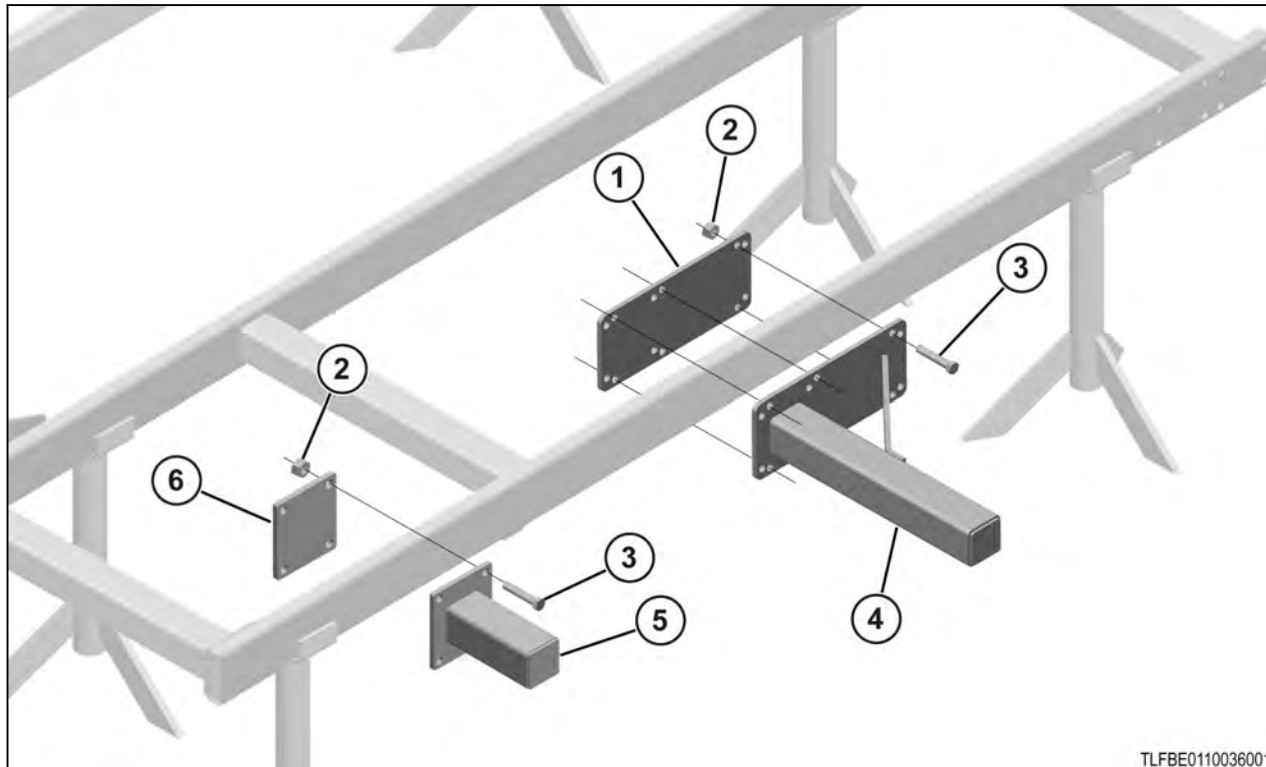


Fig. 26

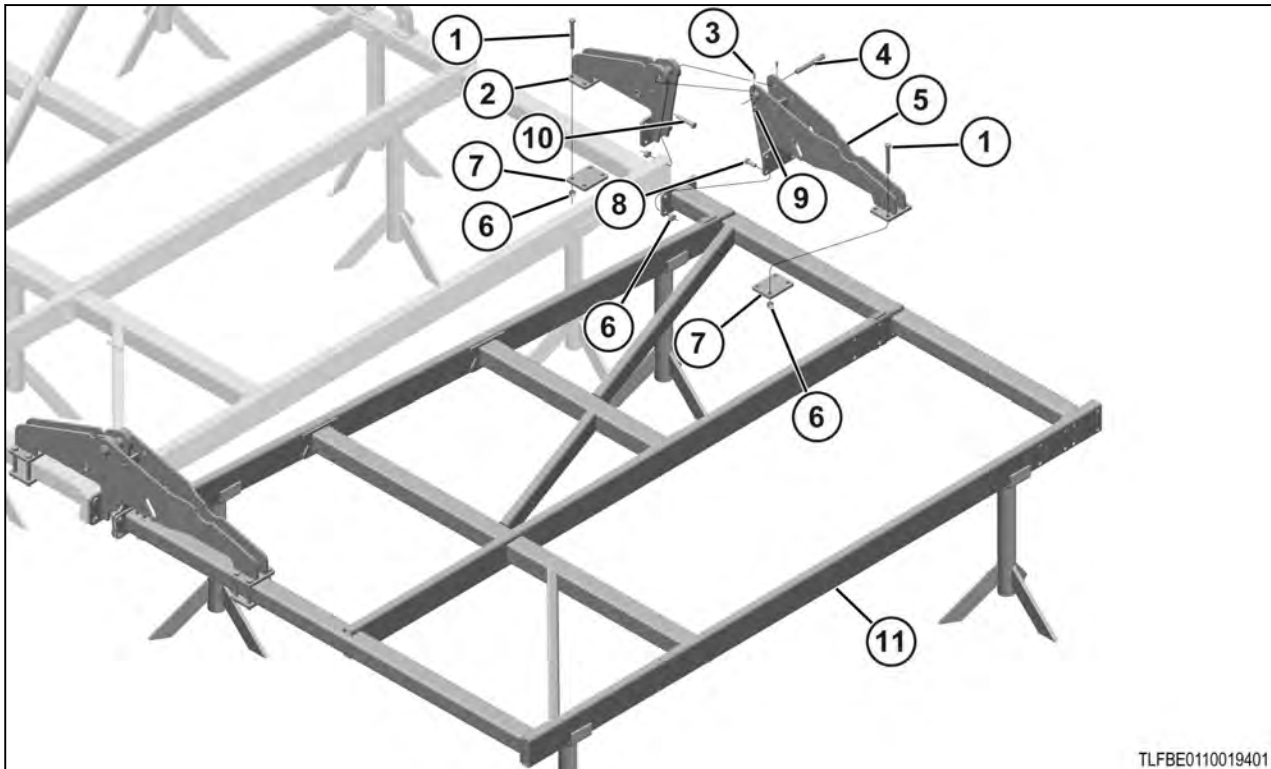
1. Install the outer wing frame shank extensions.

Item	Number	Description
1	233226	Plate
2	88356	3/4 lock nut
3	88272	3/4 x 4 hex bolt
4	233263	Long shank extension
5	222193	Short shank extension
6	233232	Plate

2. Fasten with the correct hardware.

7.11.3 Installing the 16.8 to 18 m (55 to 59 ft) outer wing frames

Procedure



TLFBE0110019401

Fig. 27

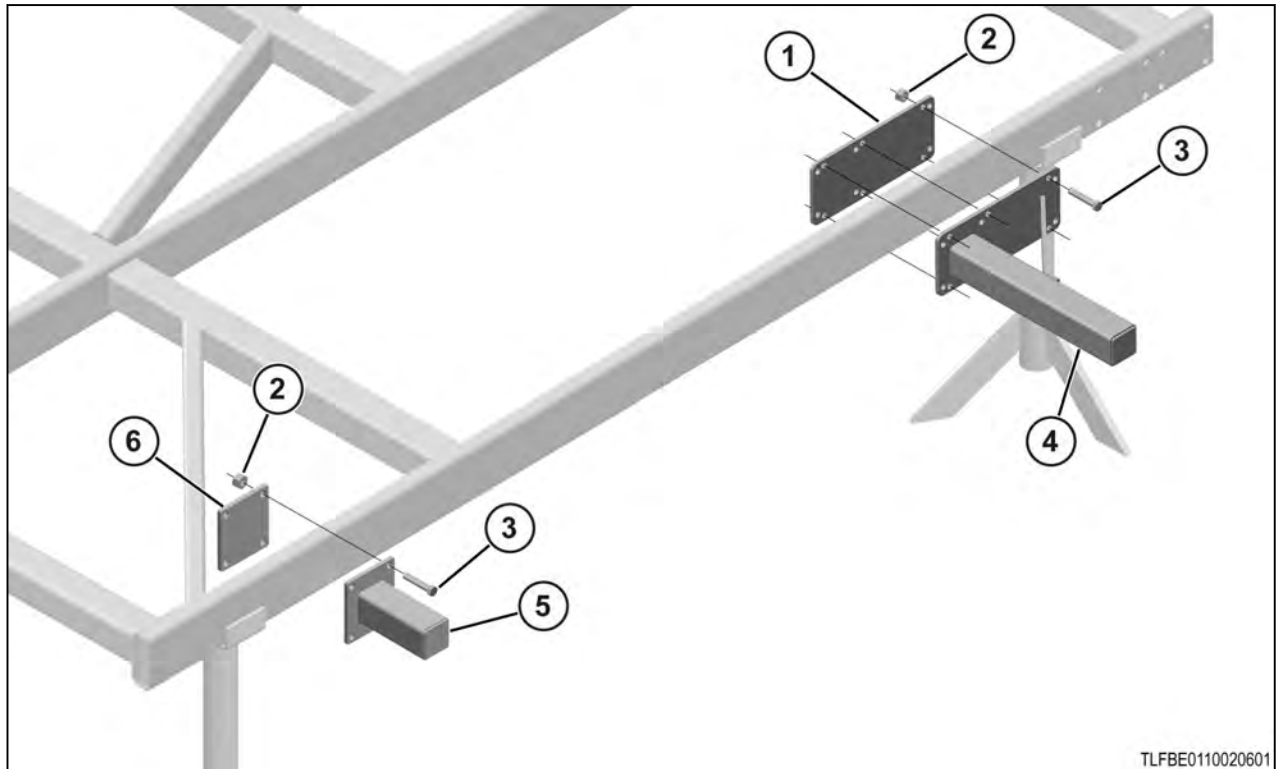
1. Install the outer wing frame.

Item	Number	Description
1	88947	3/4 x 6 hex bolt
2	353620	Hinge
3	89011	3/8 x 2 hex bolt
4	69826	1 x 7 1/4 pin
5	353619	Hinge
6	88356	3/4 lock nut
7	239045	Plate
8	88290	3/4 x 2 hex bolt
9	88659	3/8 lock nut
10	88272	3/4 x 4 hex bolt
11	353607	Wing frame

2. Fasten with the correct hardware.

7.11.4 Installing the 16.8 to 18 m (55 to 59 ft) outer wing frame shank extensions

Procedure



TLFBE0110020601

Fig. 28

1. Install the outer wing frame shank extensions.

Item	Number	Description
1	23326	Plate (18 m (59 ft) only)
2	88356	3/4 lock nut
3	88272	3/4 x 4 hex bolt
4	233263	Long frame shank extension (18 m (59 ft) only)
5	222193	Short frame shank extension
6	233232	Plate

2. Fasten with the correct hardware.

7.11.5 Assembling the outer wing latch components

Procedure

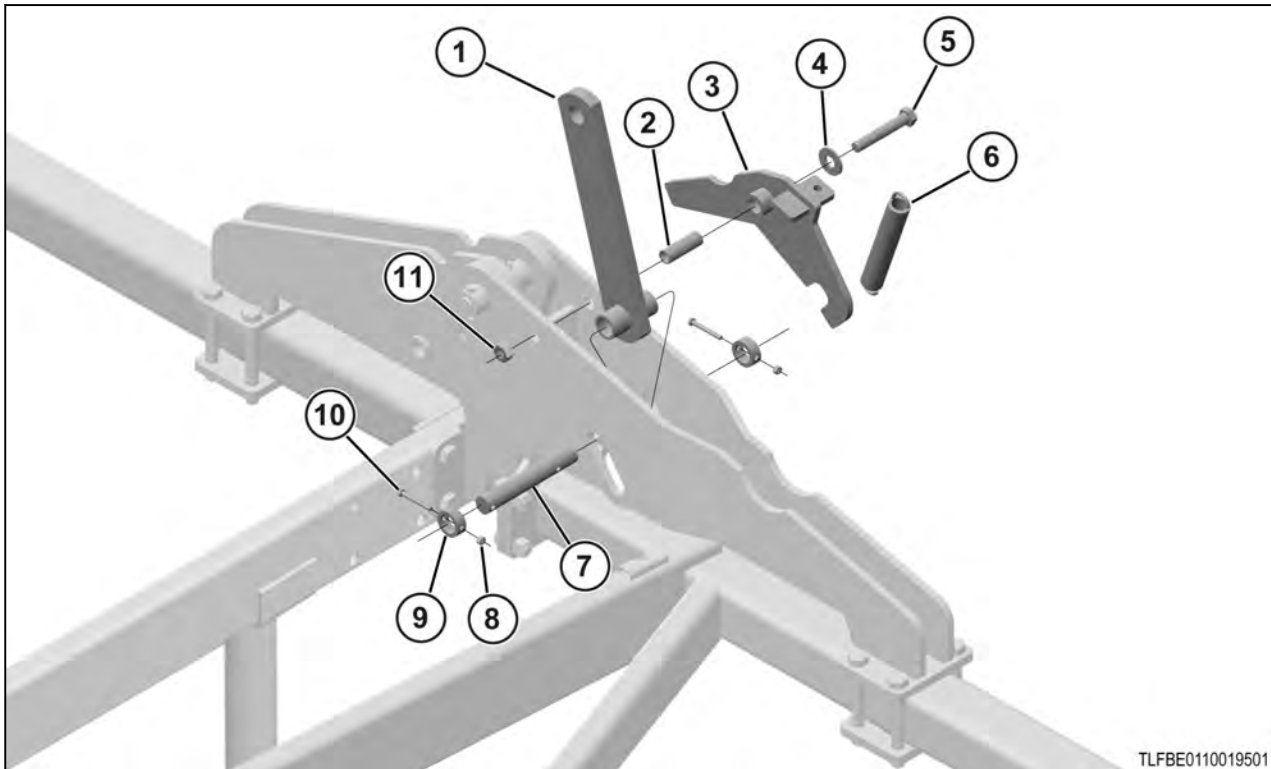


Fig. 29

1. Assemble the outer wing latch.

Item	Number	Description
1	353637	Outer wing link
2	236391	Pivot tube
3	236394	Outer wing latch bracket
4	88131	3/4 flat washer
5	88953	3/4 x 4 1/2 hex bolt
6	25863	Spring - 30 coils
7	233900	Lock pin
8	88540	5/16 lock nut
9	233589	Pin bushing
10	89004	5/16 x 2 1/2 hex bolt
11	88665	3/4 lock nut

2. Fasten with the correct hardware.

7.12 Installing the outer wing frame shanks

7.12.1 Installing the 650 lb shanks

Procedure

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

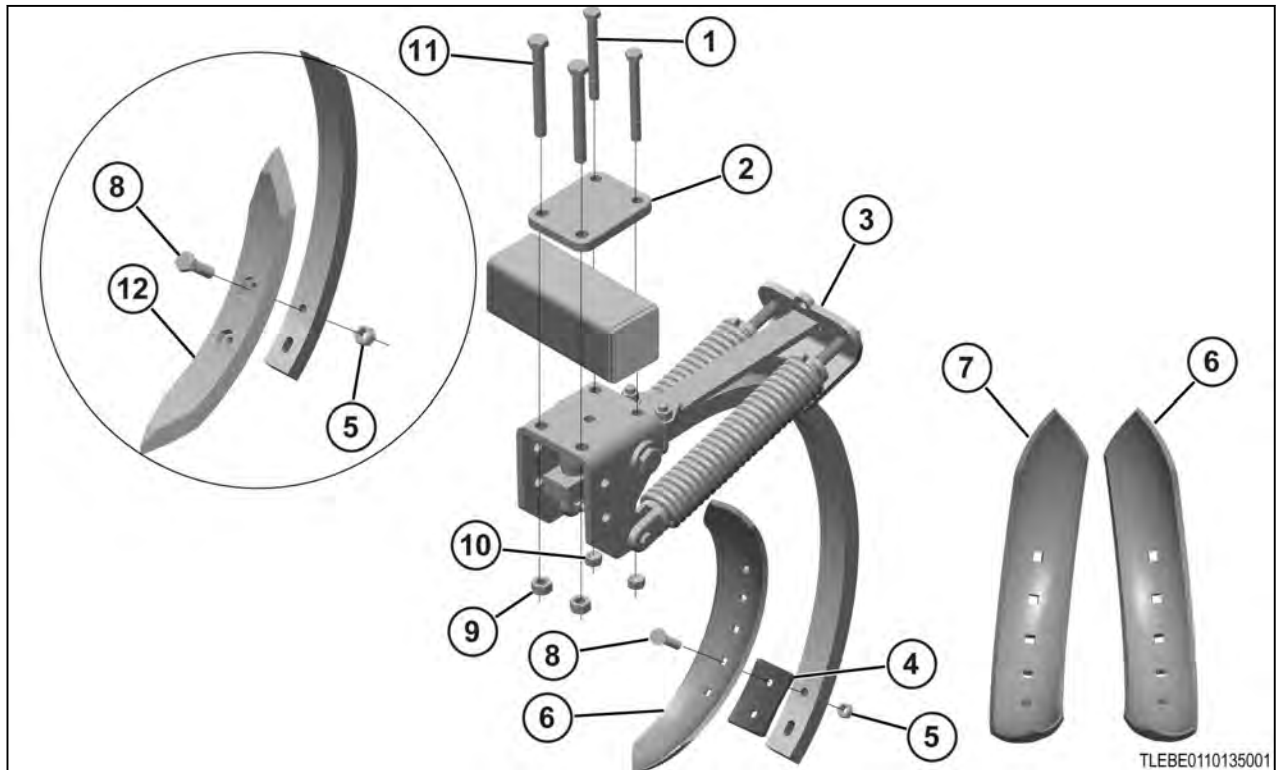


Fig. 30

2. Install the shanks as shown.

Item	Number	Description
1	88837	5/8 x 6 1/2 hex bolt
2	234084	Top plate
3	3151662	Spring retainer
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	89386	3/4 nut
10	88369	5/8 lock nut
11	89385	3/4 x 6 1/2 hex bolt
12	247912	7/8 x 2 x 19 1/2 spike

7.12.2 Installing the 1000 lb shanks

Procedure

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

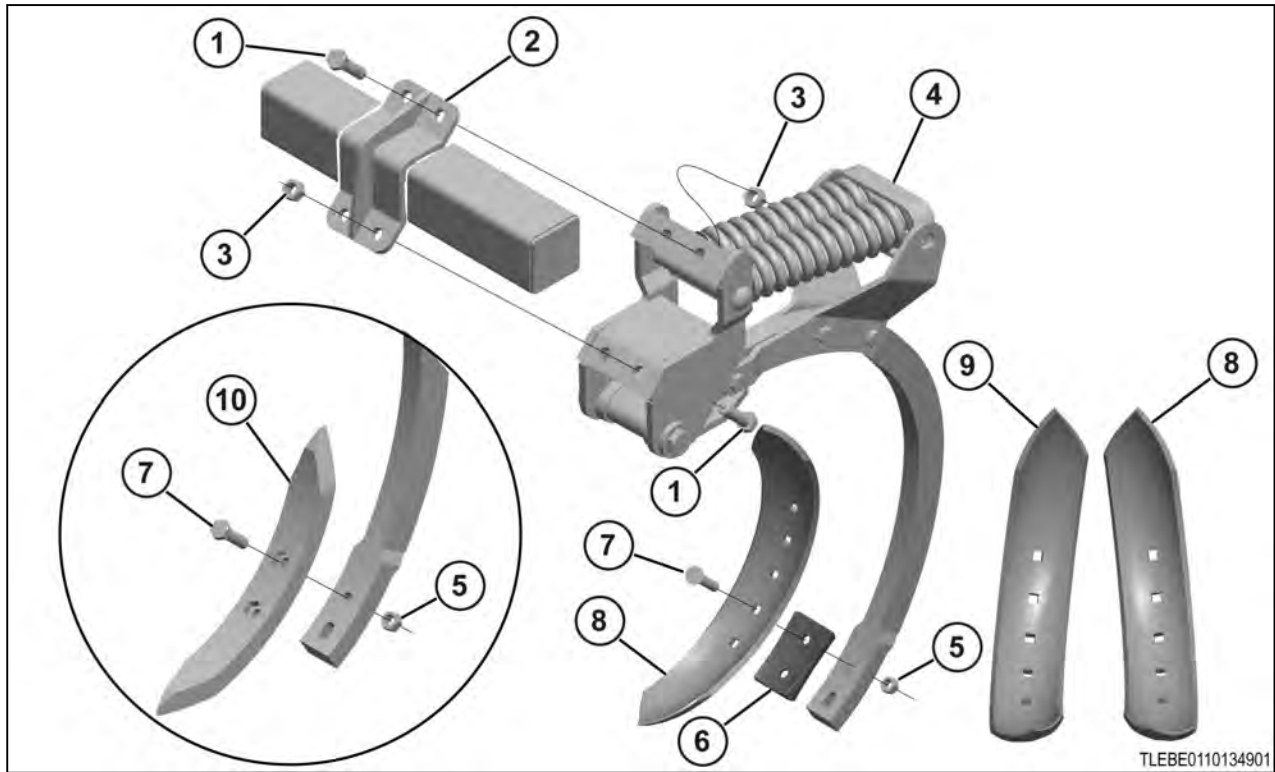


Fig. 31

2. Install the shanks as shown.

Item	Number	Description
1	89433	3/4 x 2 1/4 hex bolt
2	235768	Bracket
3	88665	3/4 lock nut
4	65373C	Spring retainer
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

7.13 Installing the outer wing lifts

Procedure

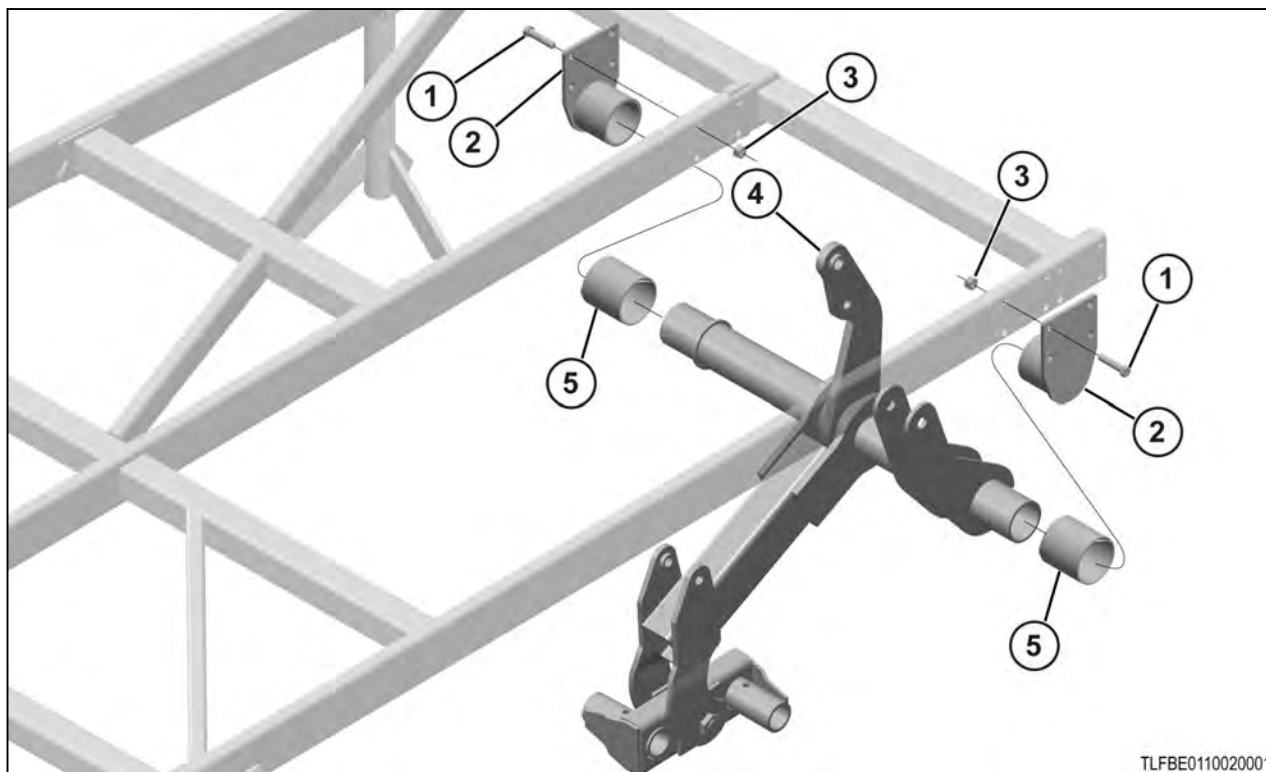


Fig. 32

1. Install the outer wing lifts.

Item	Number	Description
1	89495	3/4 x 3 1/2 hex bolt
2	248409	Bearing cap
3	88356	3/4 lock nut
4	351729	Outer wing lift
	351731	Outer wing lift
5	351762	Plastic bearing

2. Fasten with the correct hardware.

7.13.1 Installing the outer wing lift hubs and wheels

Procedure

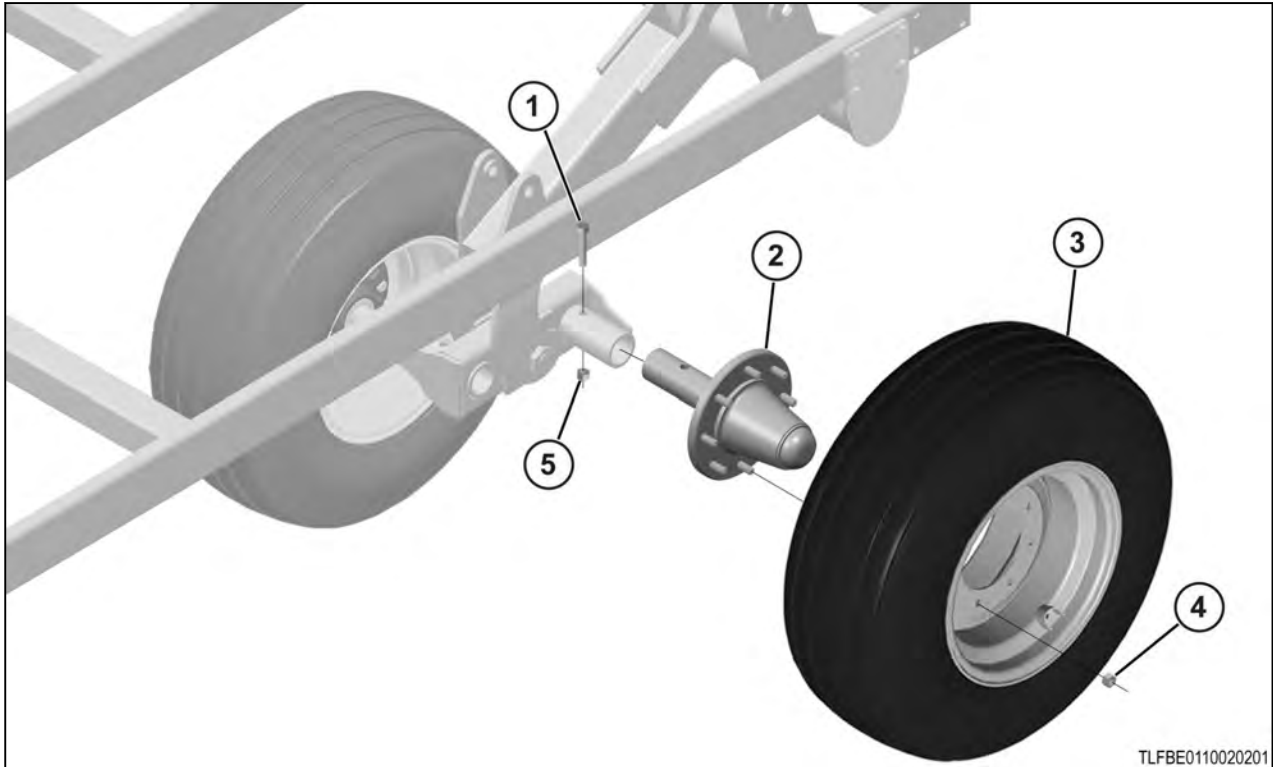


Fig. 33

1. Install the outer wing lift hub and wheel assemblies.

Item	Number	Description
1	88298	5/8 x 4 hex bolt
2	16154	Hub and spindle
3	353477 (used)	Wheel assembly
	354507 (new)	
4	W103636	Stud nut
5	88369	5/8 lock nut

2. Fasten with the correct hardware.

7.14 Installing the outer wing frame mast tubes

Procedure

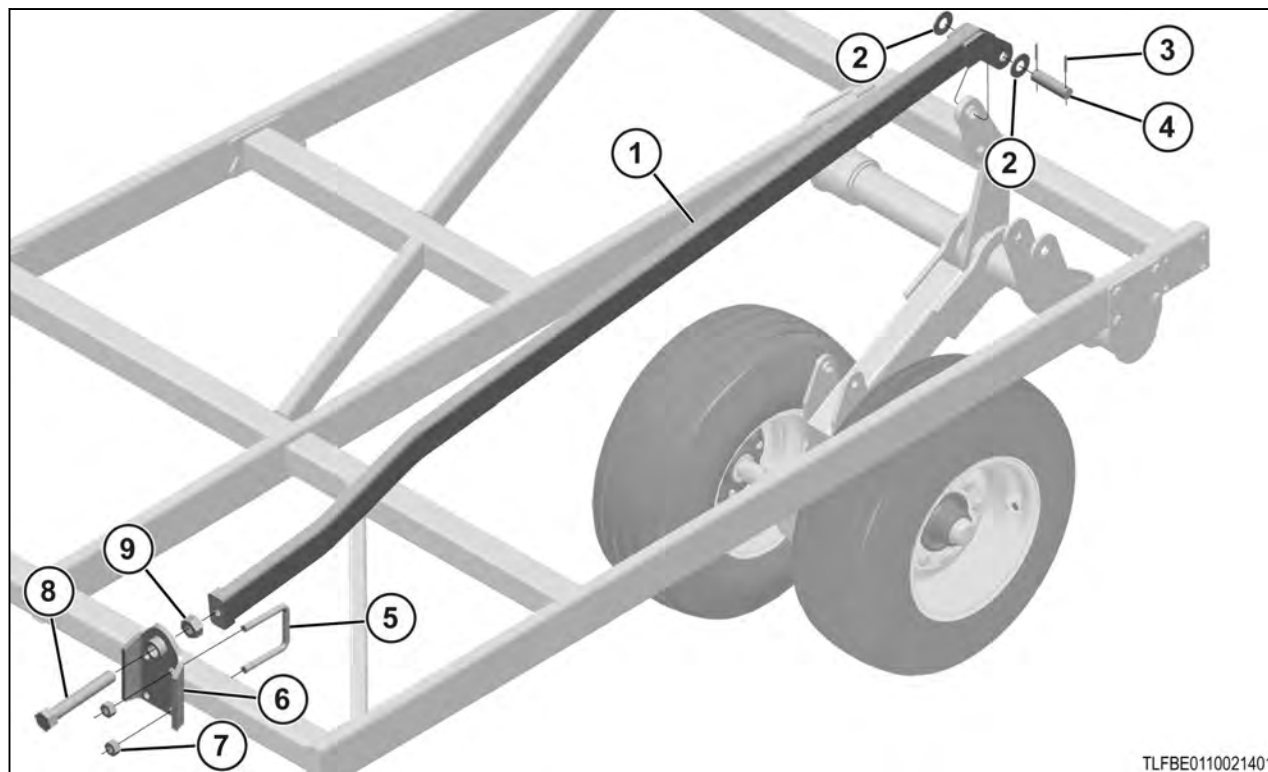


Fig. 34

1. Install the wing mast tubes as shown.

Item	Number	Description
1	248426	Right-hand wing mast tube (used on 16.8 to 18 m (55 to 59 ft) machines)
	352358	Left-hand wing mast tube (used on 16.8 to 18 m (55 to 59 ft) machines)
	355100	Right-hand wing mast tube (used on 14.9 to 16.2 m (49 to 53 ft) machines)
	355091	Left-hand wing mast tube (used on 14.9 to 16.2 m (49 to 53 ft) machines)
2	88602	1 1/4 washer
3	42484	1/4 x 2 1/4 pin
4	67854	1 1/4 x 4 1/2 pin
5	88145	5/8 x 4 x 5 1/4 U-bolt
6	350500	Wing mast anchor
7	88369	5/8 lock nut
8	69799	Adjuster rod
9	88613	1 1/4 hex nut

2. Fasten with the correct hardware.

7.15 Installing the stroke control assembly

7.15.1 Mounting the stroke control valve

Procedure

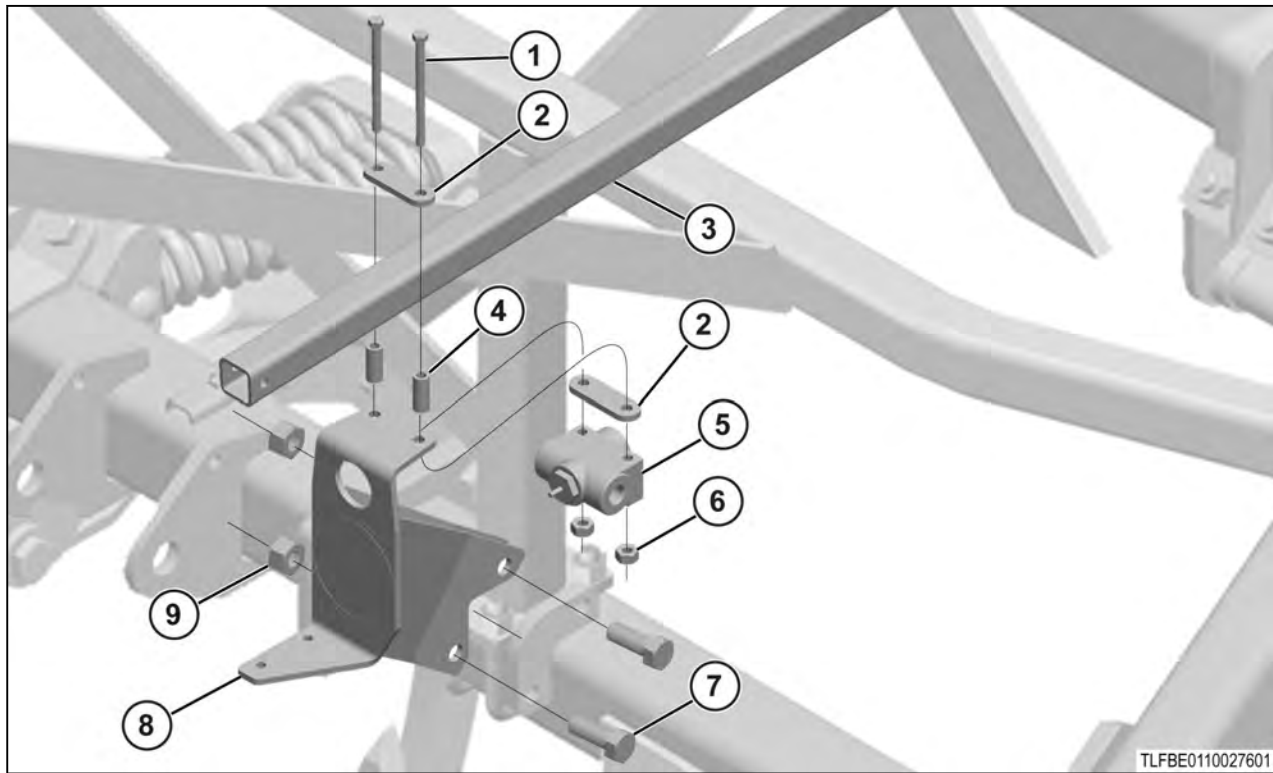


Fig. 35

1. Mount the stroke control valve as shown.

Item	Number	Description
1	88812	5/16 x 4 1/2 hex bolt
2	238636	valve spacer
3	241488	Single point inner tube
4	238637	Spacer tube
5	247429	Stroke control valve
6	88540	5/16 lock nut
7	88825	1/2 x 2 1/4 hex bolt
8	238638	Single point bracket
9	88363	1/2 lock nut

2. Fasten with the correct hardware.

7.15.2 Mounting the front of the stroke control

Procedure

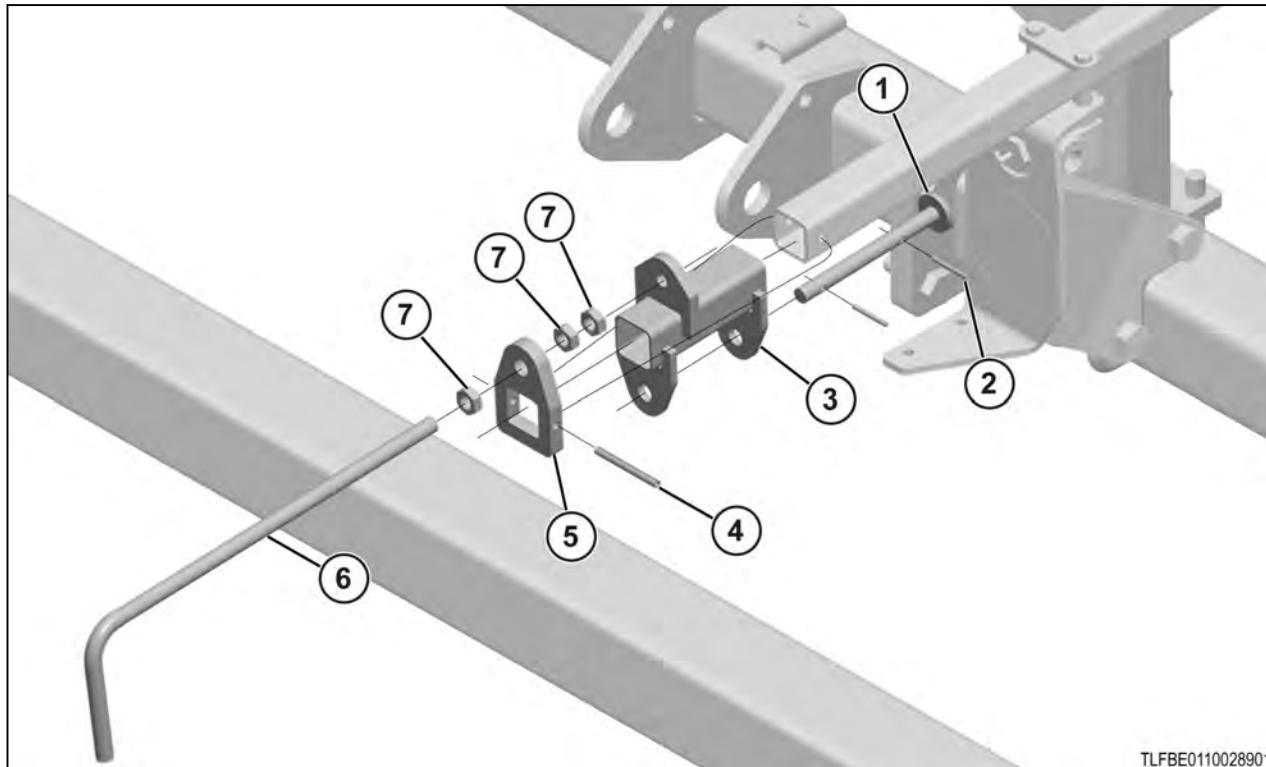


Fig. 36

1. Mount the front of the stroke control as shown.

Item	Number	Description
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	238657	Adjust crank
7	88561	1/2 jam nut

2. Fasten with the correct hardware.

7.15.3 Mounting the rear of the stroke control

Procedure

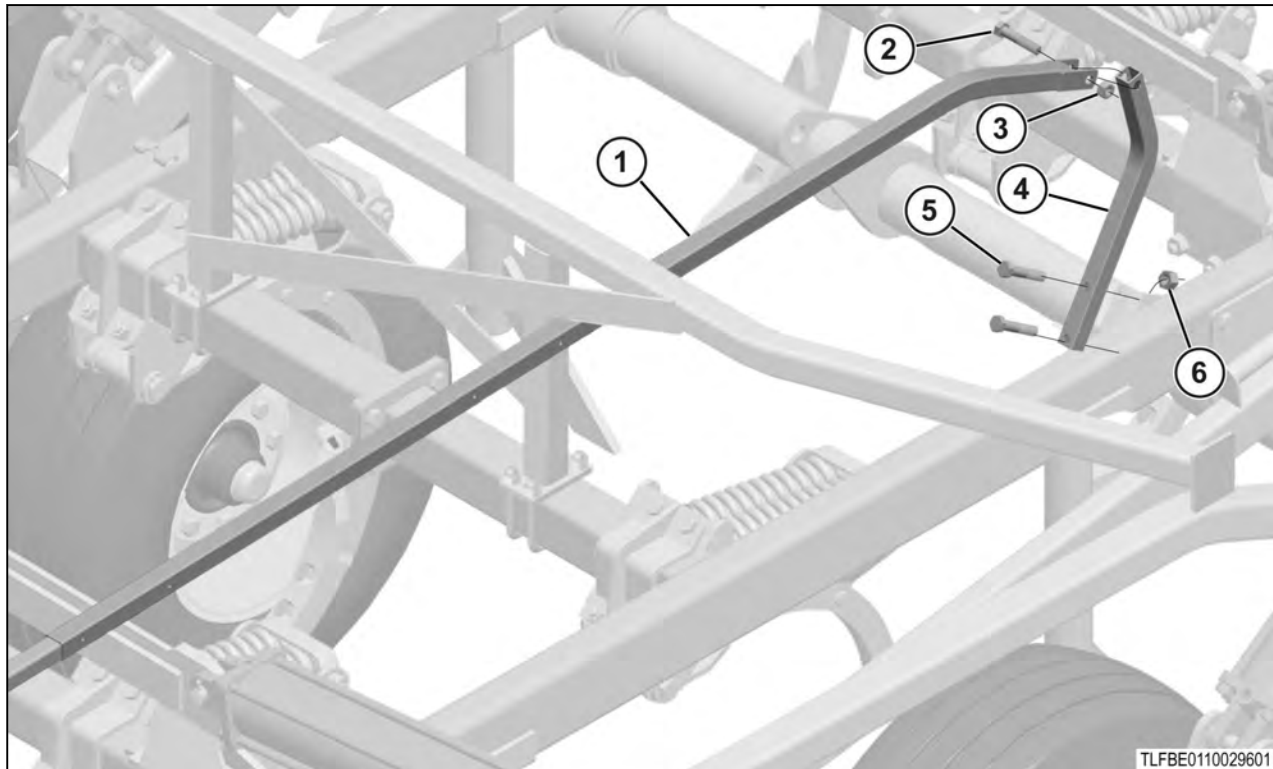


Fig. 37

1. Mount the rear of the stroke control as shown.

Item	Number	Description
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

2. Fasten with the correct hardware.

7.16 Installing the hydraulic gauge wheels

7.16.1 Installing the gauge wheel mount - hydraulic

Procedure

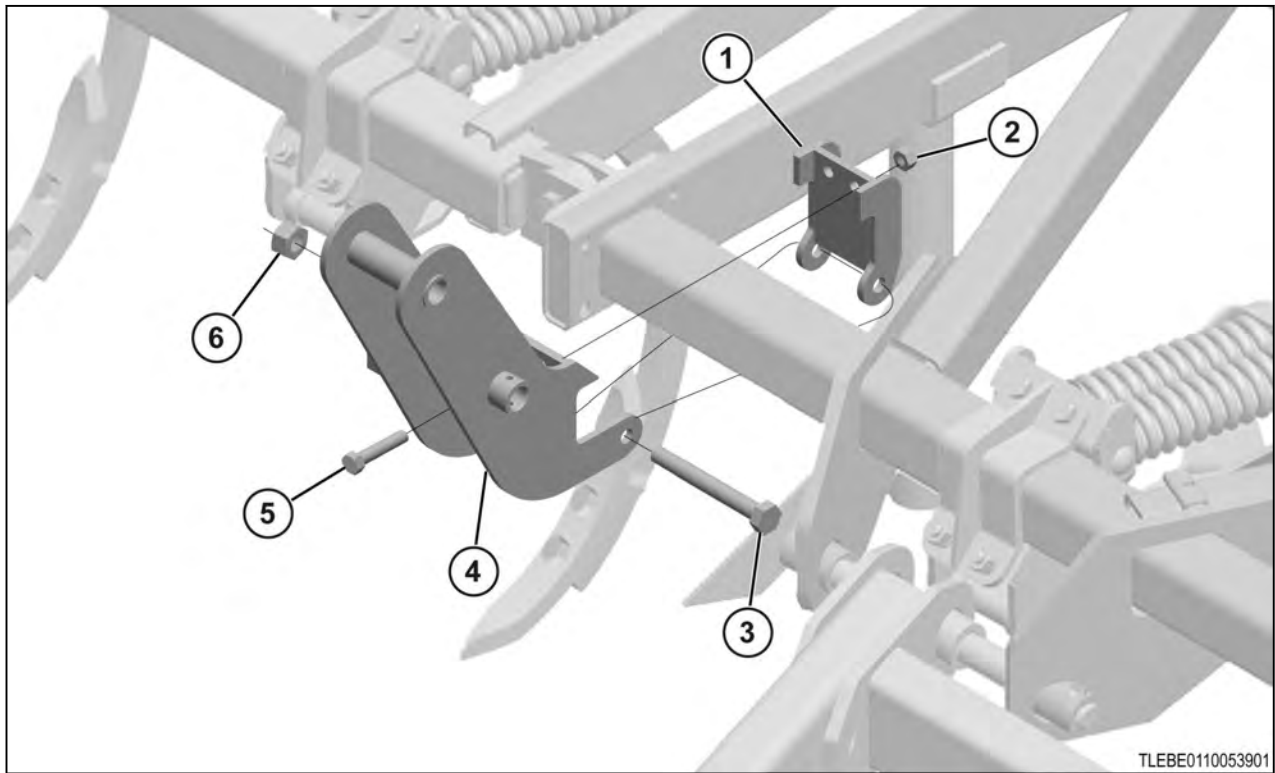


Fig. 38

1. Install the gauge wheel mount as shown.

Item	Number	Description
1	353493	Caster wheel tube clamp
2	88356	3/4 lock nut
3	89359	1 x 8 hex bolt
4	35612	Front lift mast
5	88947	3/4 x 6 hex bolt
6	88348	1 lock nut

2. Fasten with the correct hardware.

7.16.2 Installing the gauge wheel linkage - hydraulic

Procedure

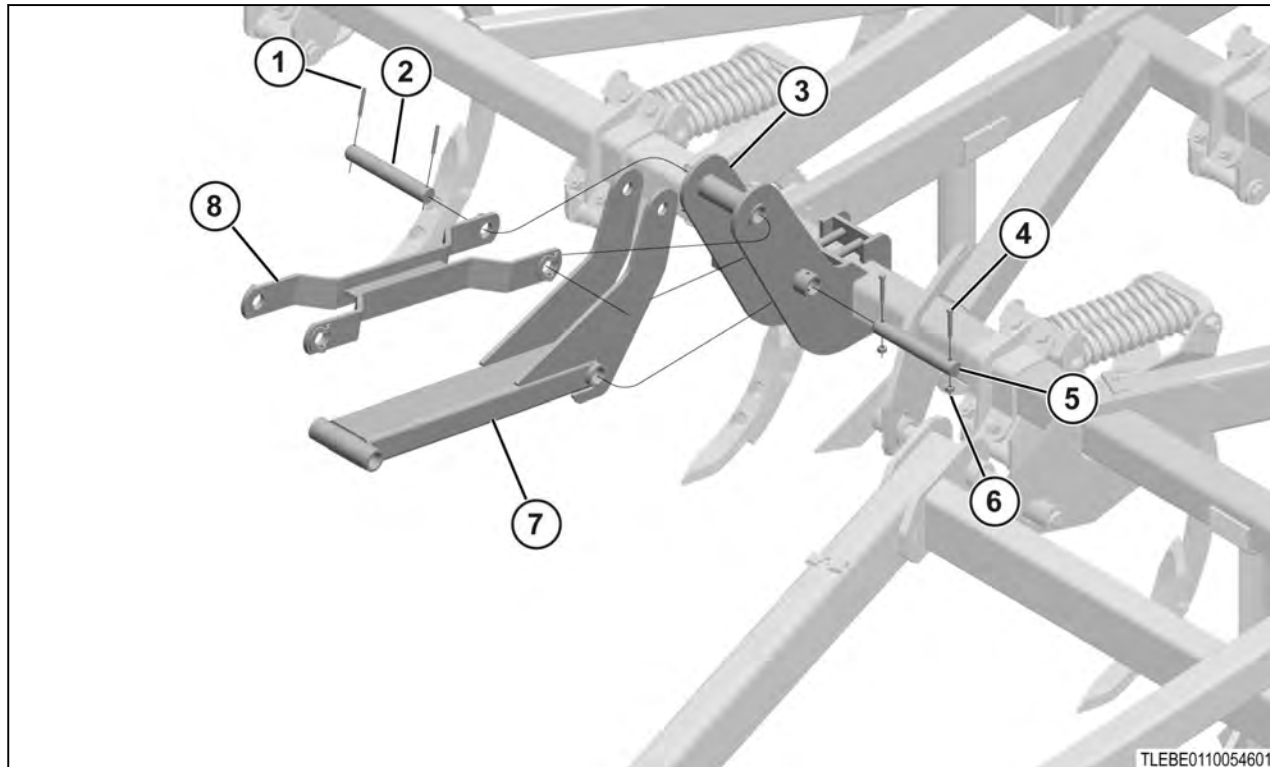


Fig. 39

1. Install the gauge wheel linkage as shown.

Item	Number	Description
1	88771	3/8 x 3 pin
2	350775	Pivot pin
3	353612	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

2. Fasten with the correct hardware.

7.16.3 Assembling the center frame gauge wheel axle - hydraulic

Procedure

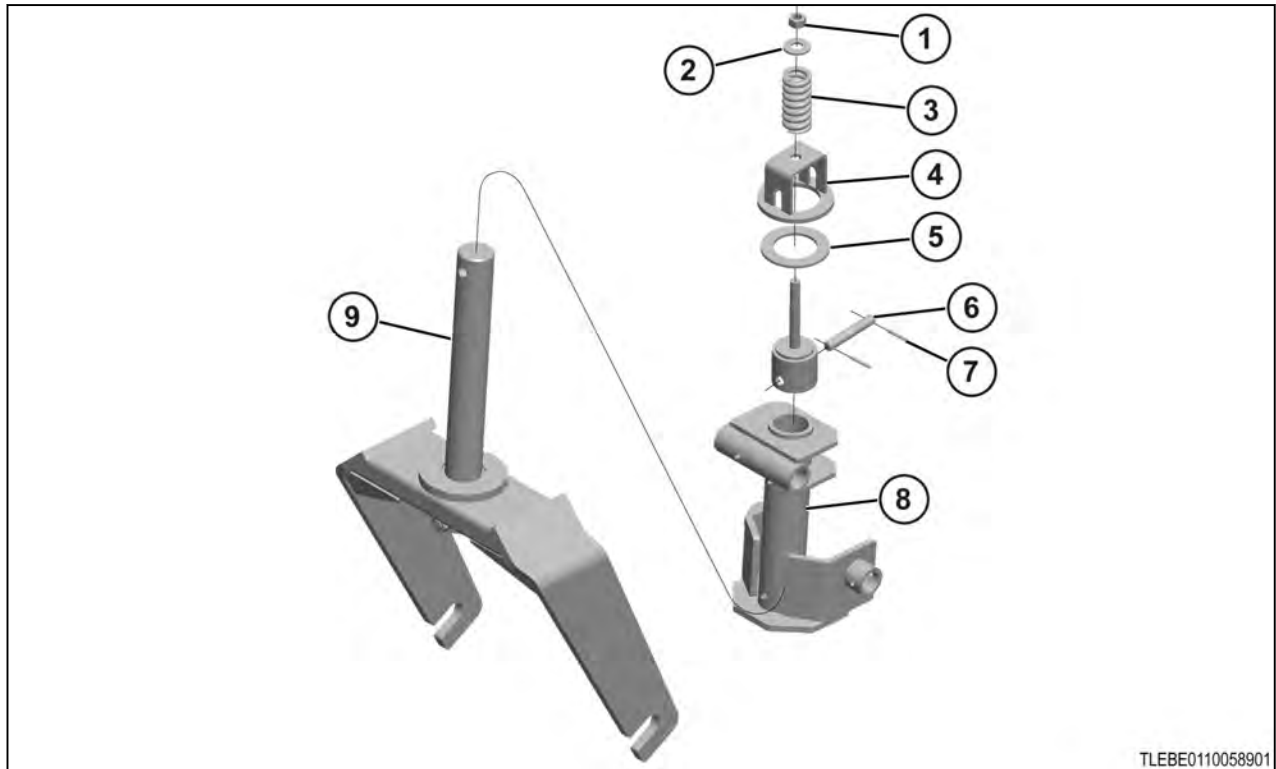


Fig. 40

1. Assemble the gauge wheel axle as shown.

Item	Number	Description
1	88611	3/4 lock nut
2	88131	3/4 flat washer
3	353612	Compressor spring
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	246786	Gauge wheel yoke

2. Fasten with the correct hardware.

7.16.4 Installing the center frame gauge wheel axle - hydraulic

Procedure

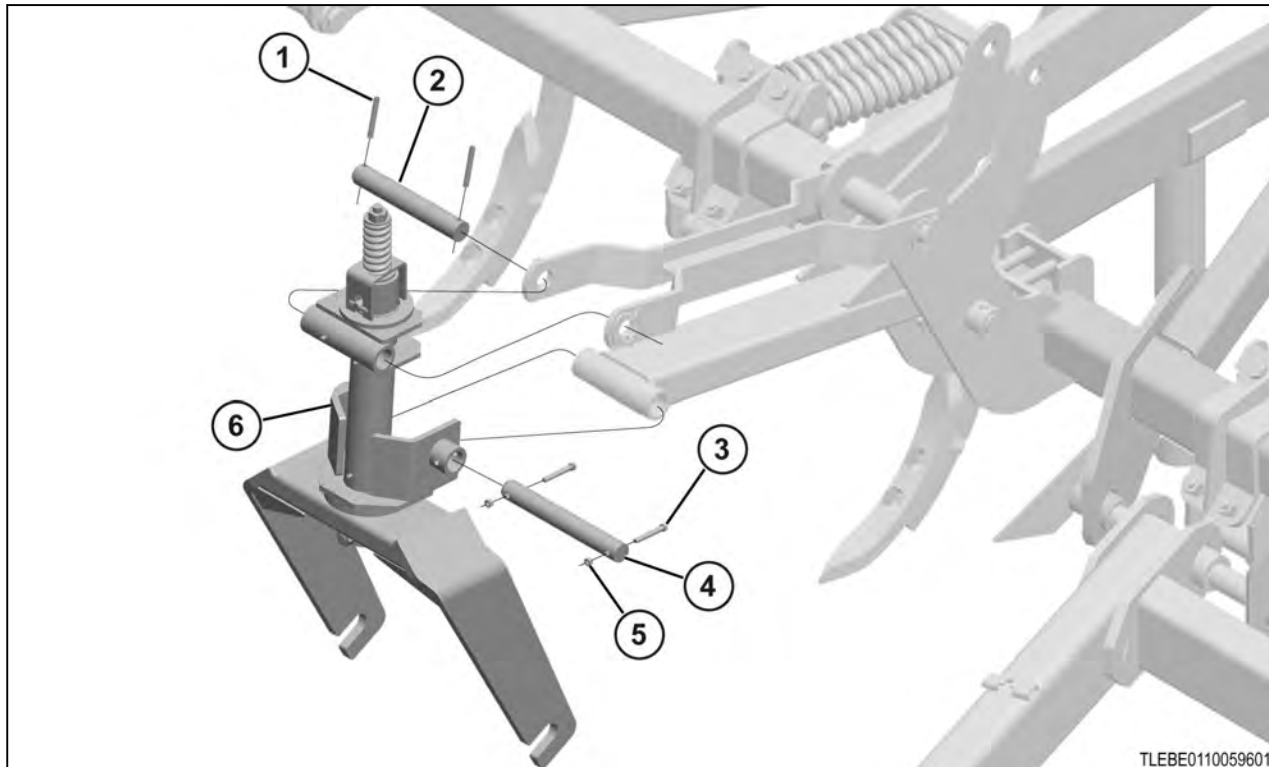


Fig. 41

1. Install the gauge wheel axle as shown.

Item	Number	Description
1	88628	1/4 x 1 3/4 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 and axle

2. Fasten with the correct hardware.

7.16.5 Assembling the wing frame gauge wheel axle - hydraulic

Procedure

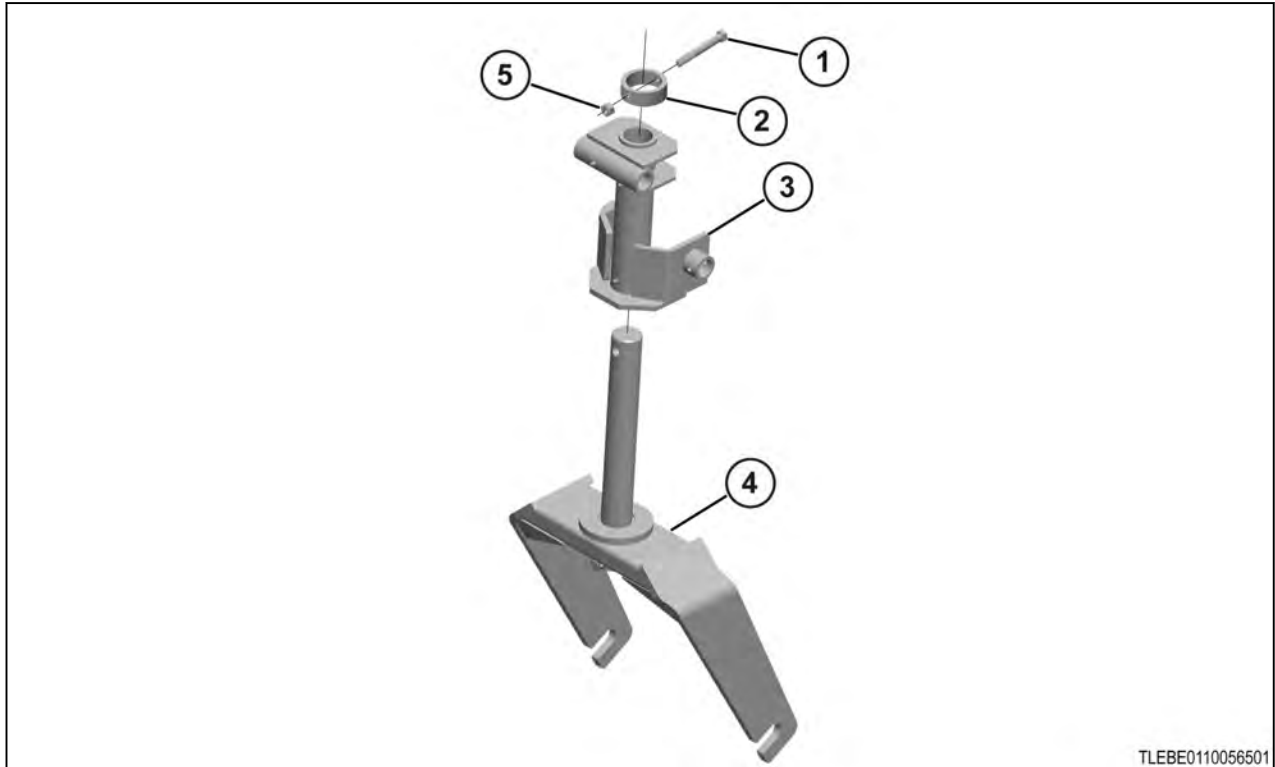


Fig. 42

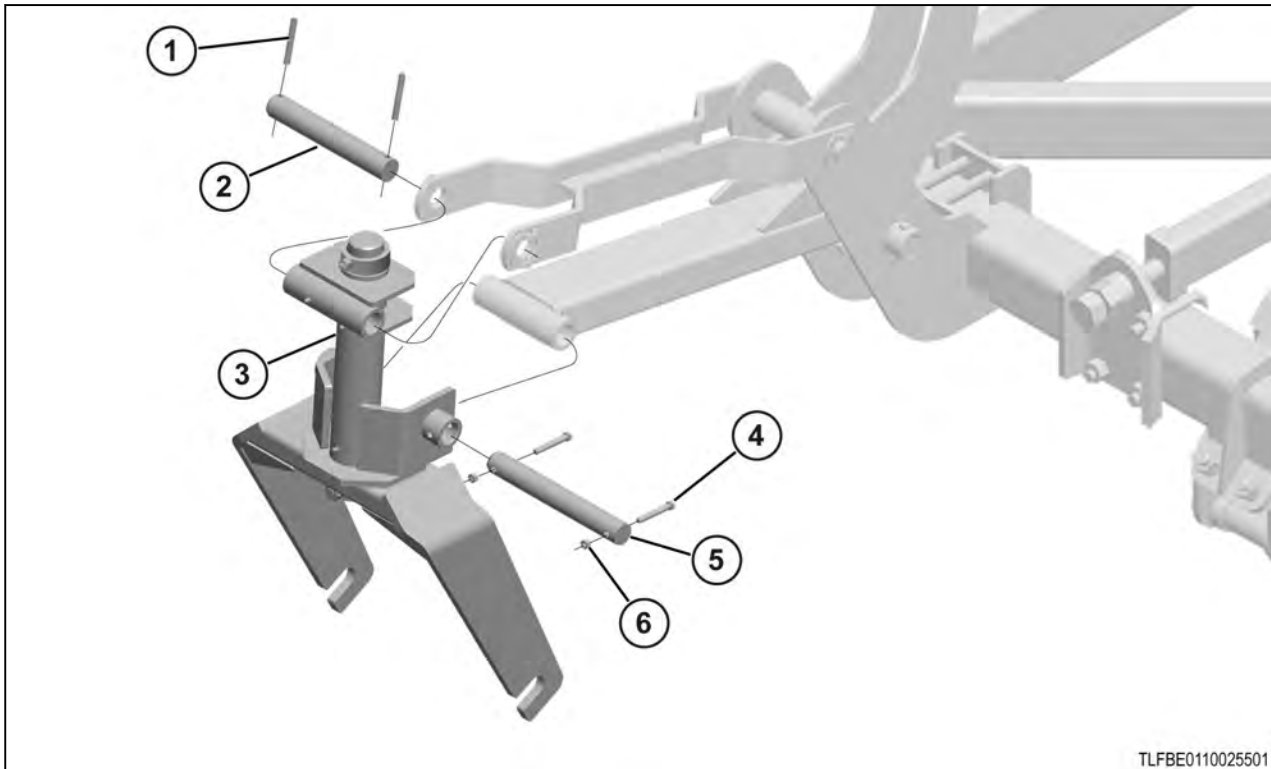
1. Assemble the gauge wheel axle as shown.

Item	Number	Description
1	88272	3/4 x 4 hex bolt
2	16009	Collar
3	54571	Gauge wheel pivot
4	246786	Gauge wheel yoke
5	88356	3/4 lock nut

2. Fasten with the correct hardware.

7.16.6 Installing the wing frame gauge wheel axle - hydraulic

Procedure



TLFBE0110025501

Fig. 43

1. Install the gauge wheel axles as shown.

Item	Number	Description
1	88628	1/4 x 1 3/4 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

2. Fasten with the correct hardware.

7.16.7 Installing the gauge wheel hubs and wheels - hydraulic

Procedure

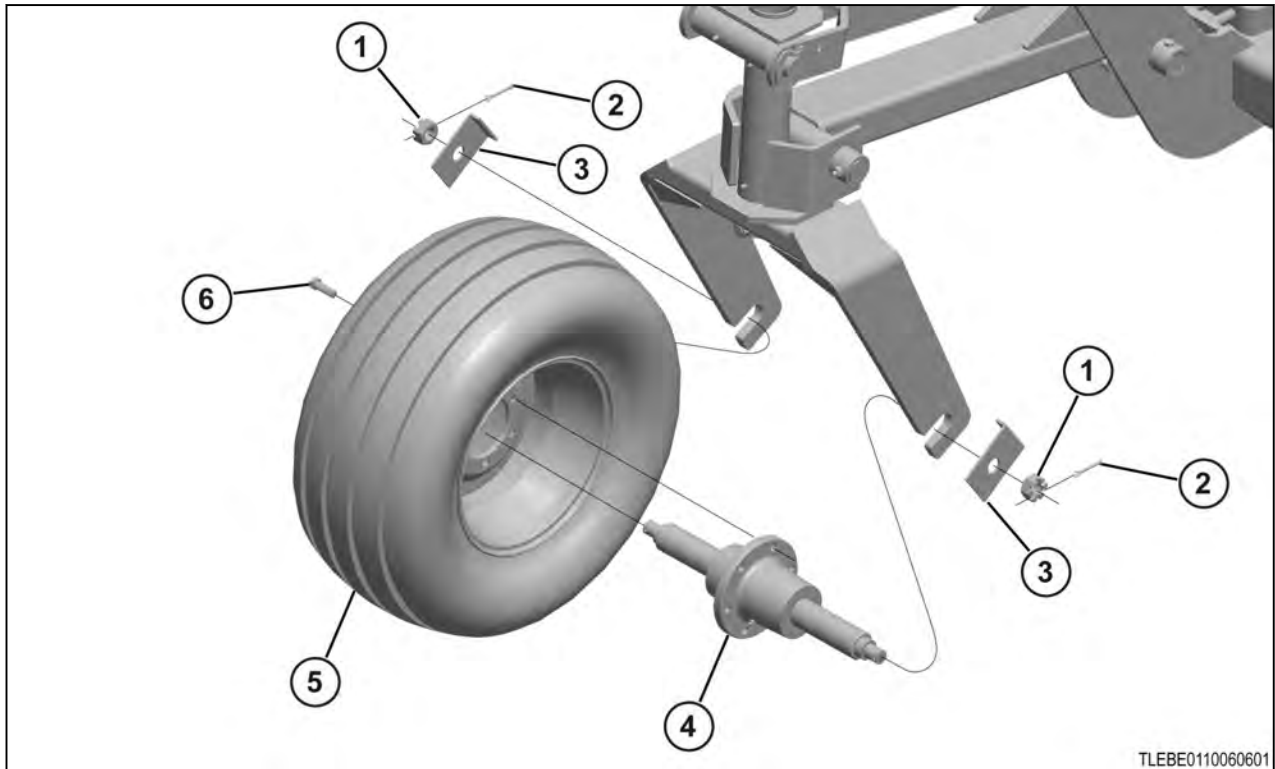


Fig. 44

1. Install the wheel hubs and wheels as shown.

Item	Number	Description
1	88299	1 slotted nut
2	88133	Cotter pin
3	55150	Spindle lock
4	58294	Yoke hub assembly
5	222087	Wheel assembly - 31 x 13.5
6	63831	9/16 x 1 1/2 wheel bolt

2. Fasten with the correct hardware.

7.16.8 Installing the center frame gauge wheel lift tubes - hydraulic

Procedure

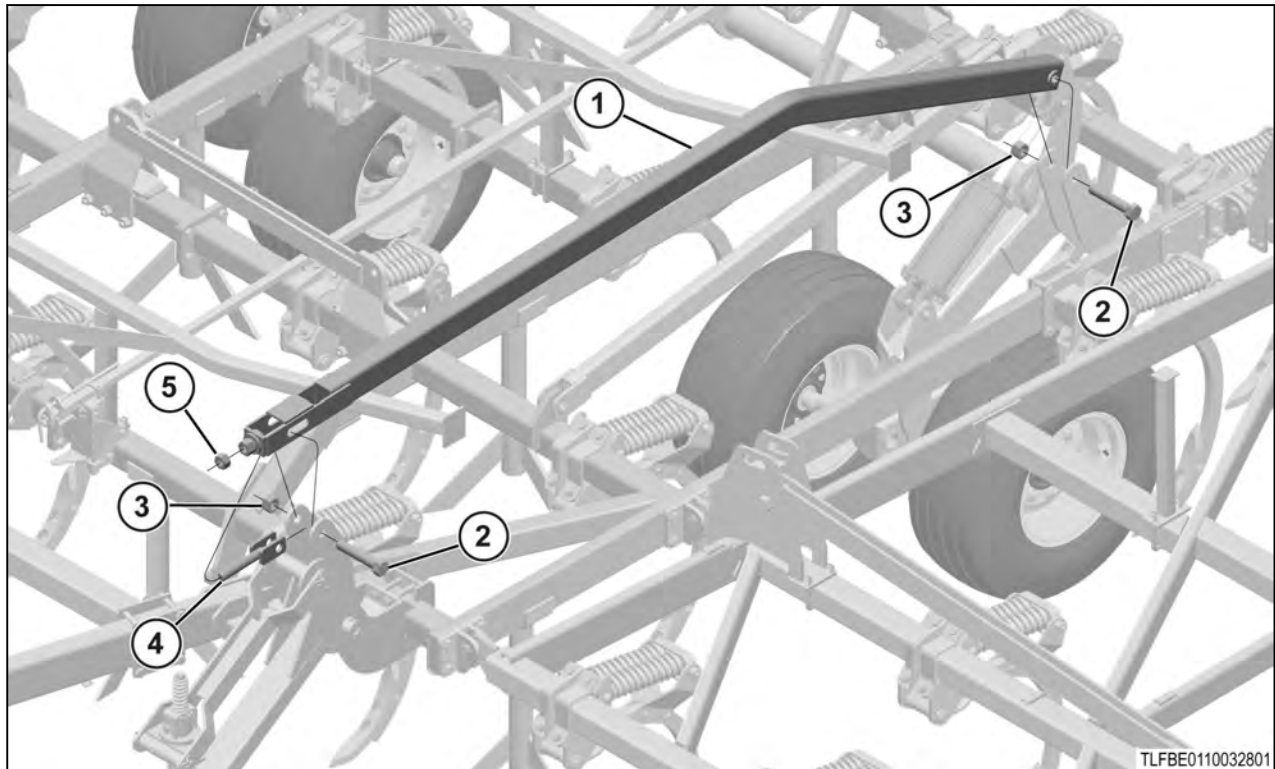


Fig. 45

1. Install the lift tubes as shown.

Item	Number	Description
1	353658	Lift tube
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

2. Fasten with the correct hardware.

7.16.9 Installing the wing frame gauge wheel lift tubes - hydraulic

Procedure

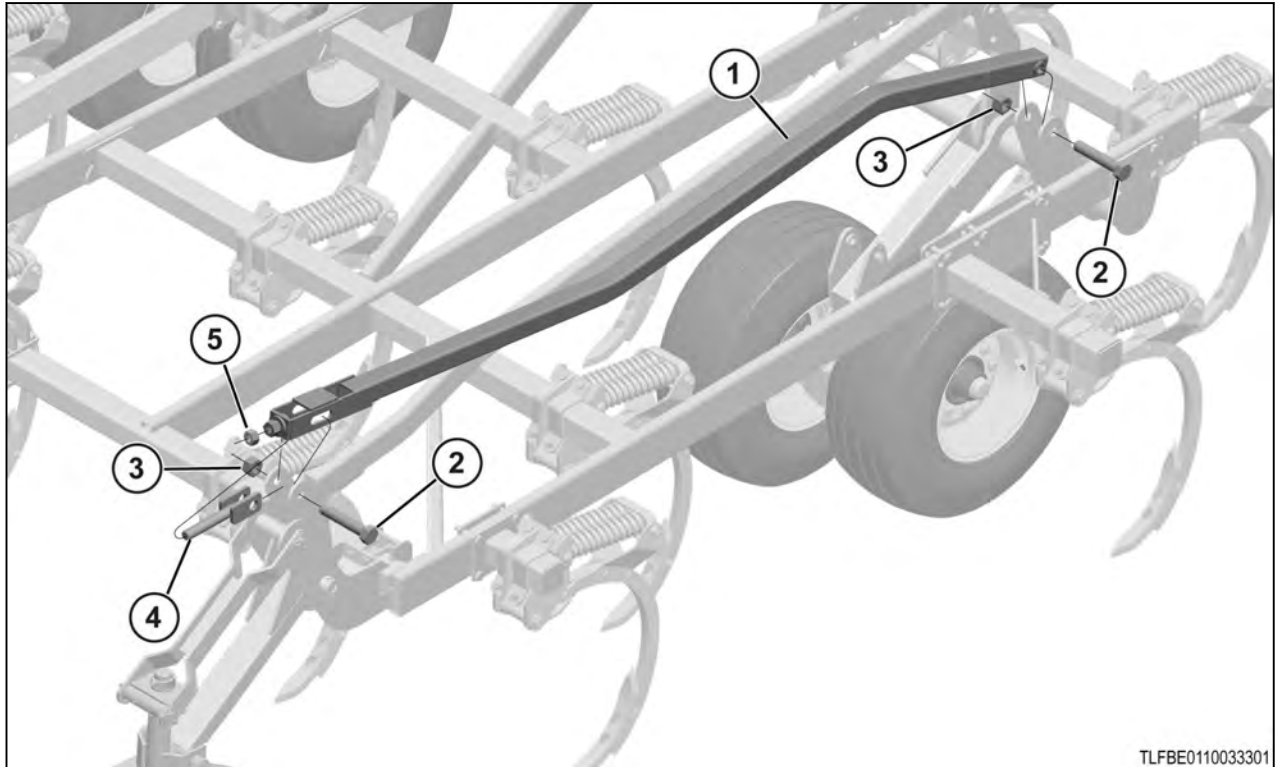


Fig. 46

1. Install the lift tubes as shown.

Item	Number	Description
1	353613	Lift tube
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

2. Fasten with the correct hardware.

7.17 Installing the marker lamps

Procedure

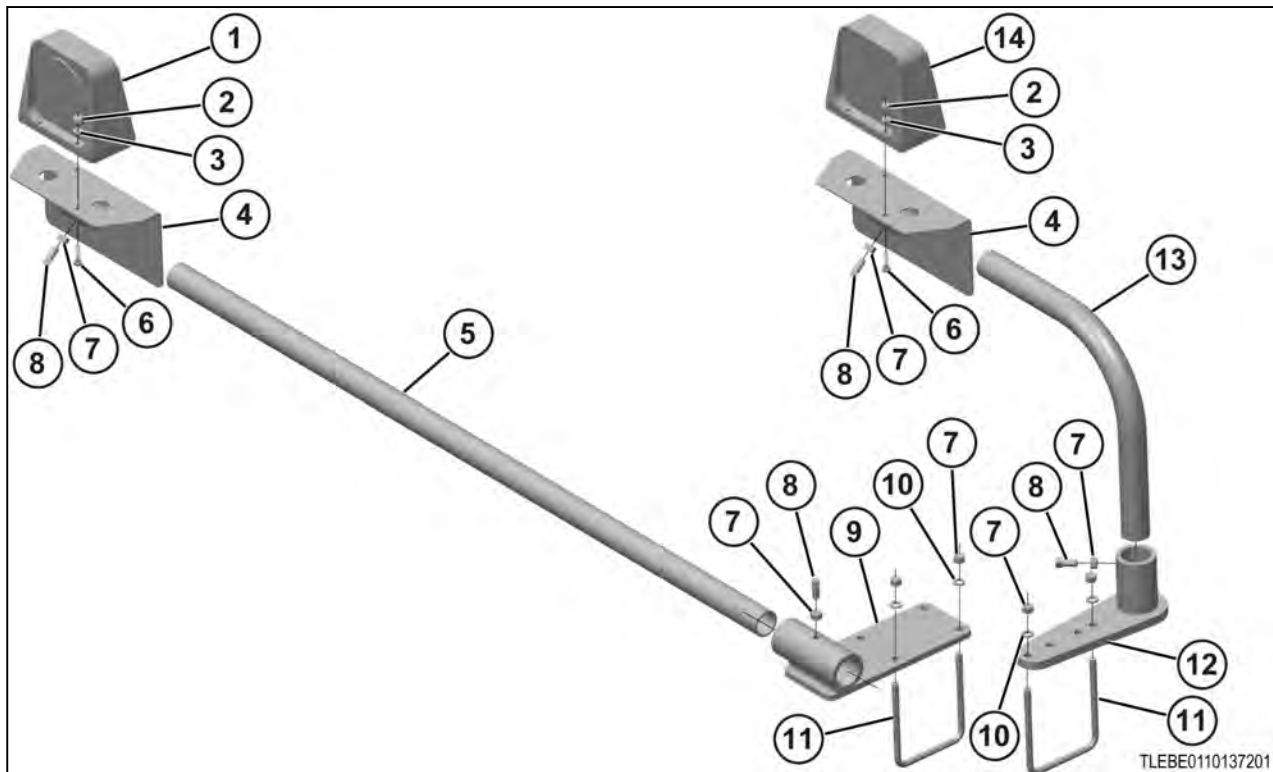


Fig. 47

1. Install the marker lamps as shown.

Item	Number	Description
1	223143	Amber lamp
2	88172	1/4 hex nut
3	88262	1/4ID washer
4	223126	Lamp bracket
5	108528	Lamp arm - 48 in
6	88203	1/4 x 1 hex bolt
7	88103	3/8 hex nut
8	88702	3/8 x 3/4 screw
9	353989	Lamp tube bracket
10	88362	3/8ID washer
11	88385	3/8 x 4 x 5 U-bolt
12	223130	Short base pivot
13	223140	Lamp arm
14	223144	Red lamp

2. Fasten with the correct hardware.

7.17.1 Installing the marker lamp harness

Procedure

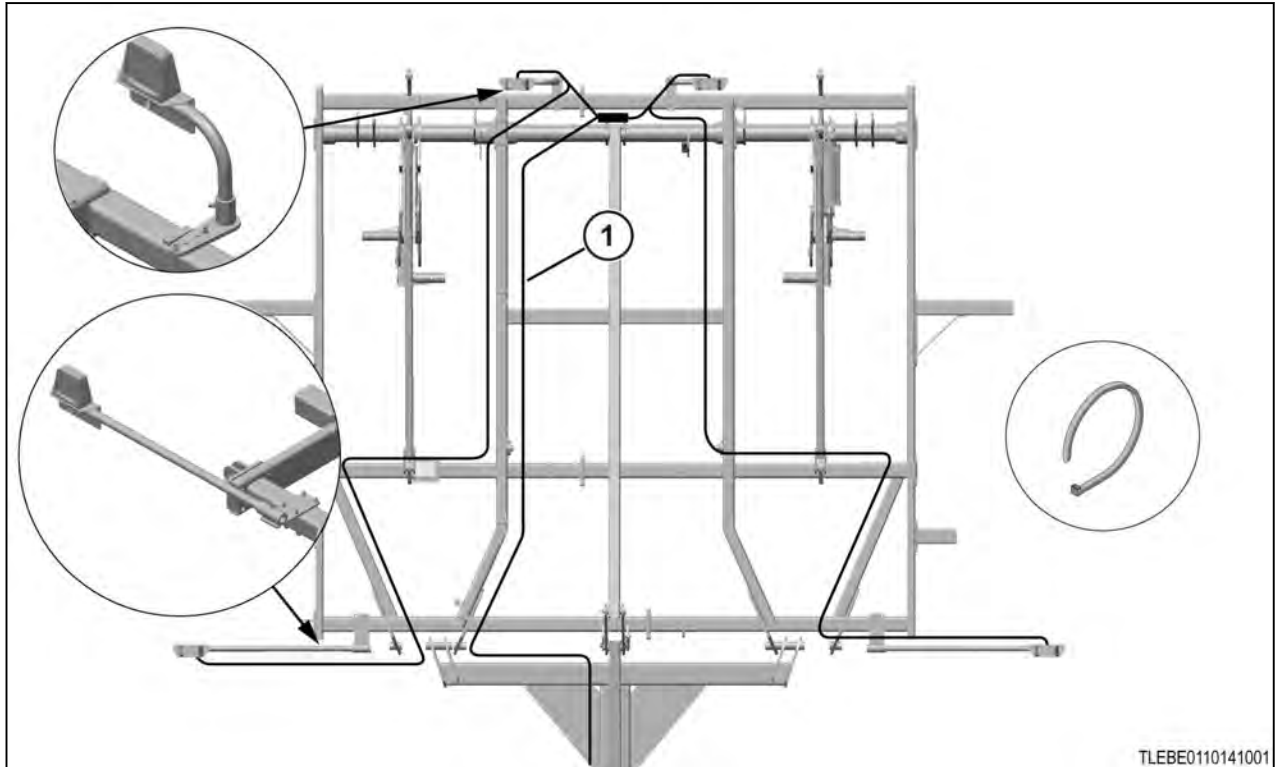


Fig. 48

1. Install the marker lamp harness as shown.

Item	Number	Description
1	223330	Marker lamp harness

2. Fasten with the correct hardware.

7.18 Installing the rear tow hitch

Procedure

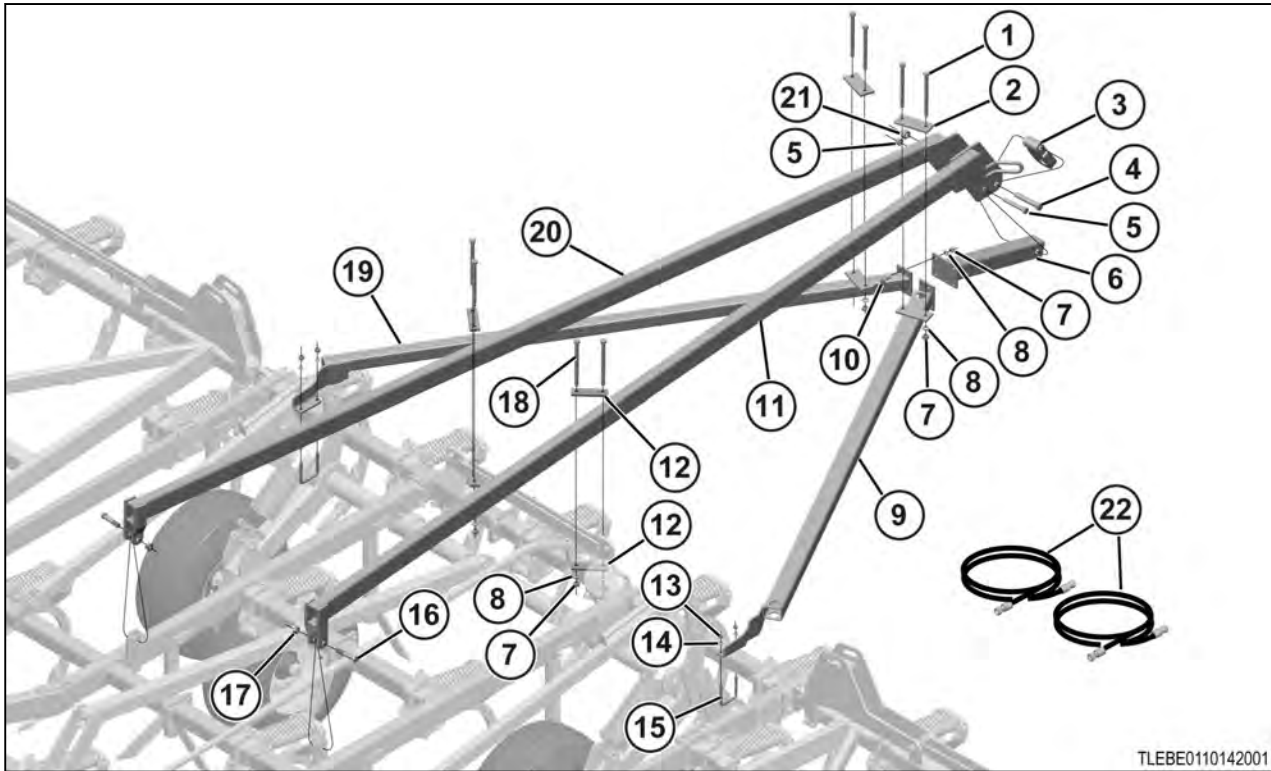


Fig. 49

1. Install the rear tow hitch as shown.

Item	Number	Description
1	88335	3/4 x 7 hex bolt
2	233406	Tie plate
3	50292	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

Item	Number	Description
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

2. Fasten with the correct hardware.

7.19 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.

7.19.1 Installing the center lift cylinders

Procedure

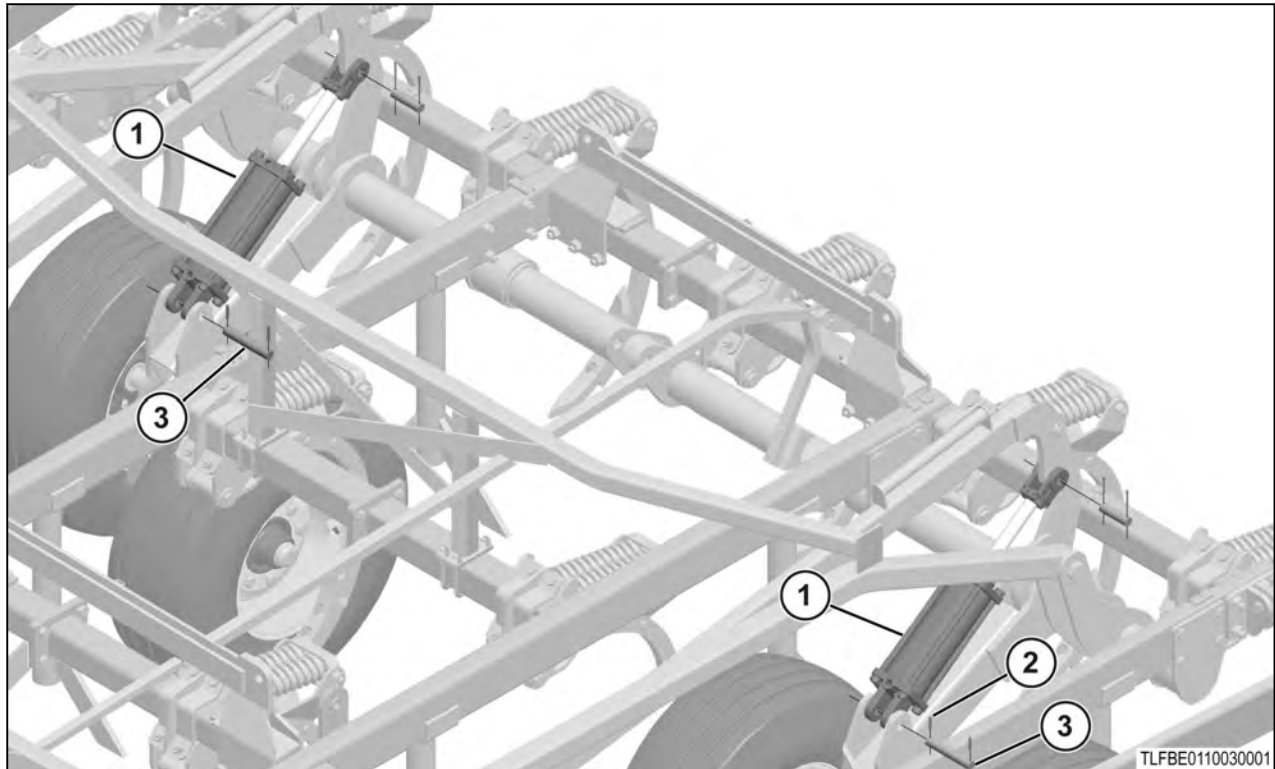


Fig. 50

1. Install the center lift cylinders.

Item	Number	Description
1	351767	5 x 10 cylinder
2	42484	1/4 x 2 1/4 pin
3	68033	1 x 6 3/8 pin

- Fasten with the correct hardware.

7.19.2 Installing the wing lift cylinders

Procedure

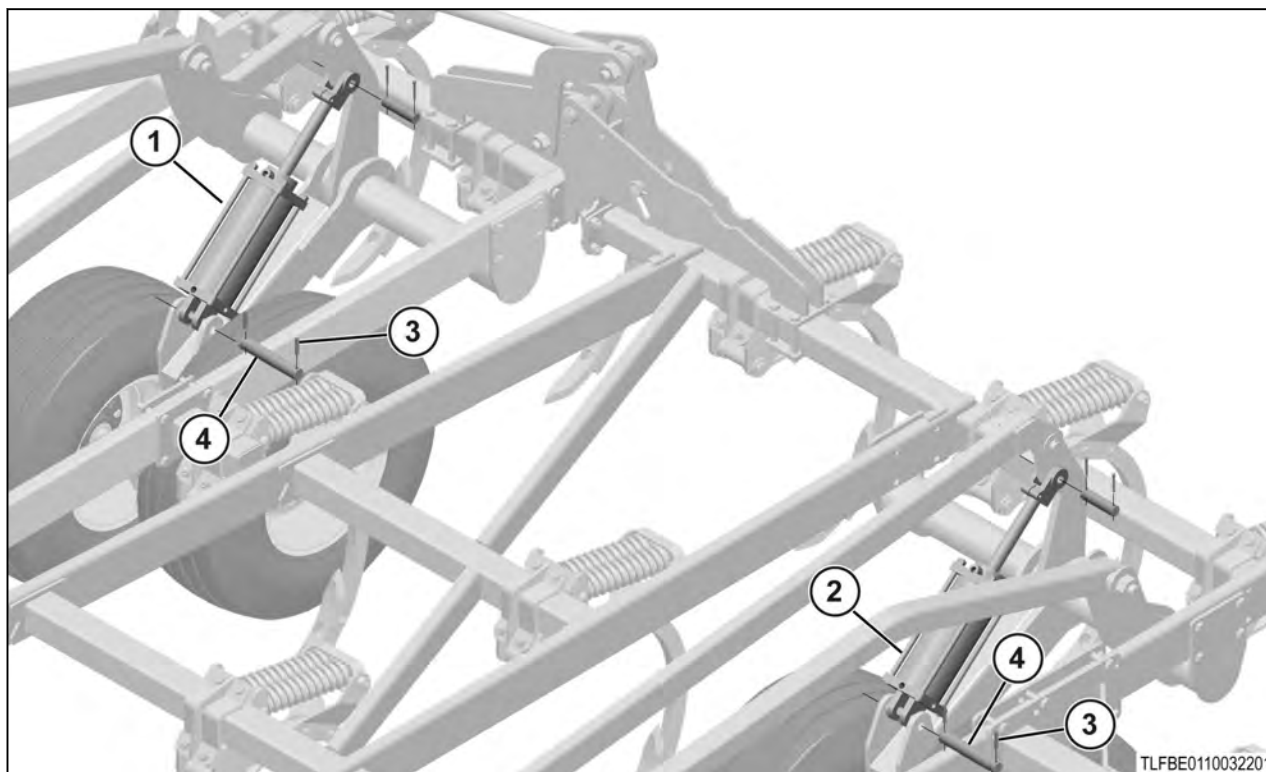


Fig. 51

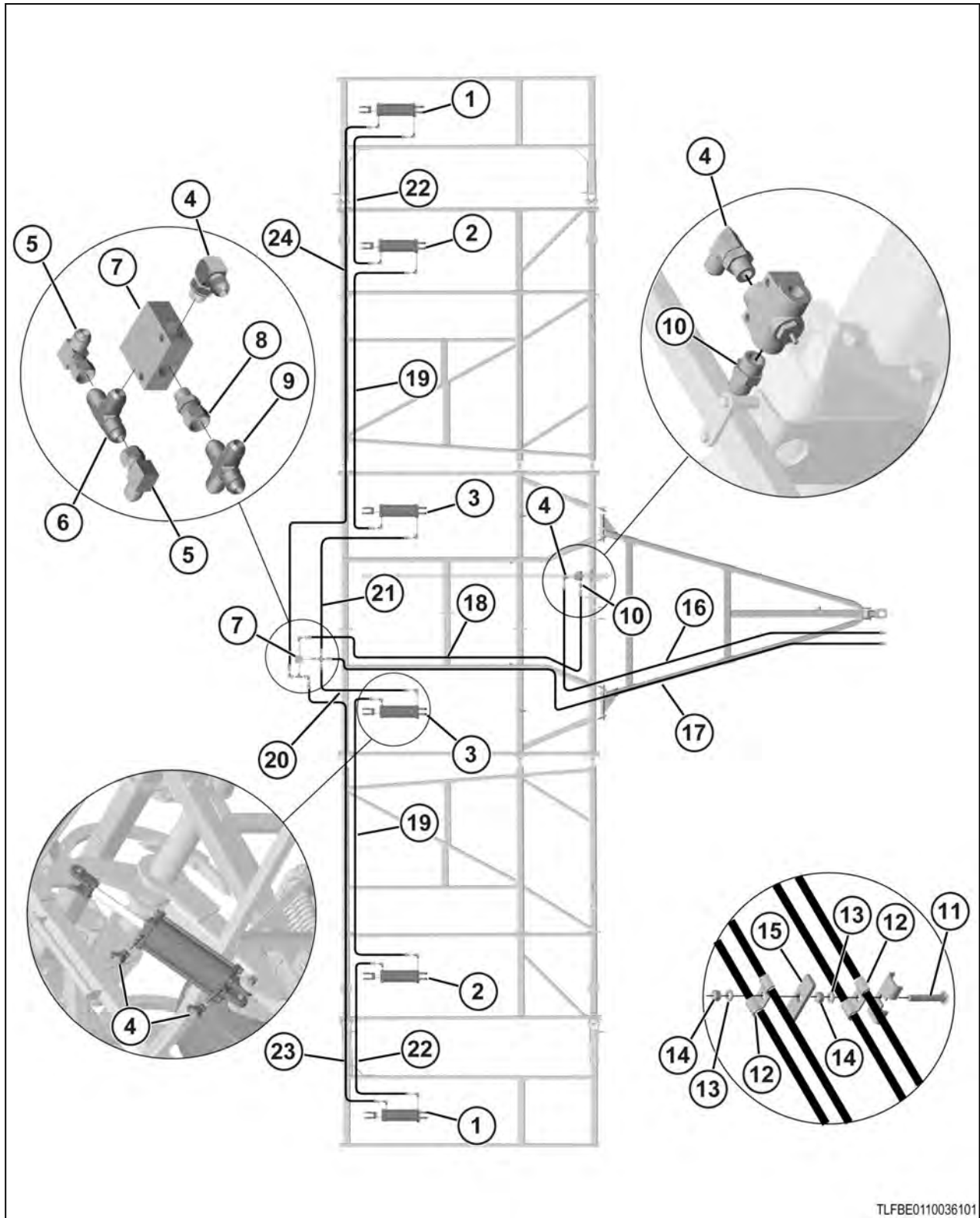
- Install the wing lift cylinders.

Item	Number	Description
1	351768	4 3/4 x 10 cylinder
2	351768	4 3/4 x 10 cylinder
3	42484	1/4 x 2 1/4 pin
4	68033	1 x 6 3/8 pin

- Fasten with the correct hardware.

7.19.3 Installing the 14.9 to 16.2 m (49 to 53 ft) lift hydraulics

Procedure



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Fig. 52

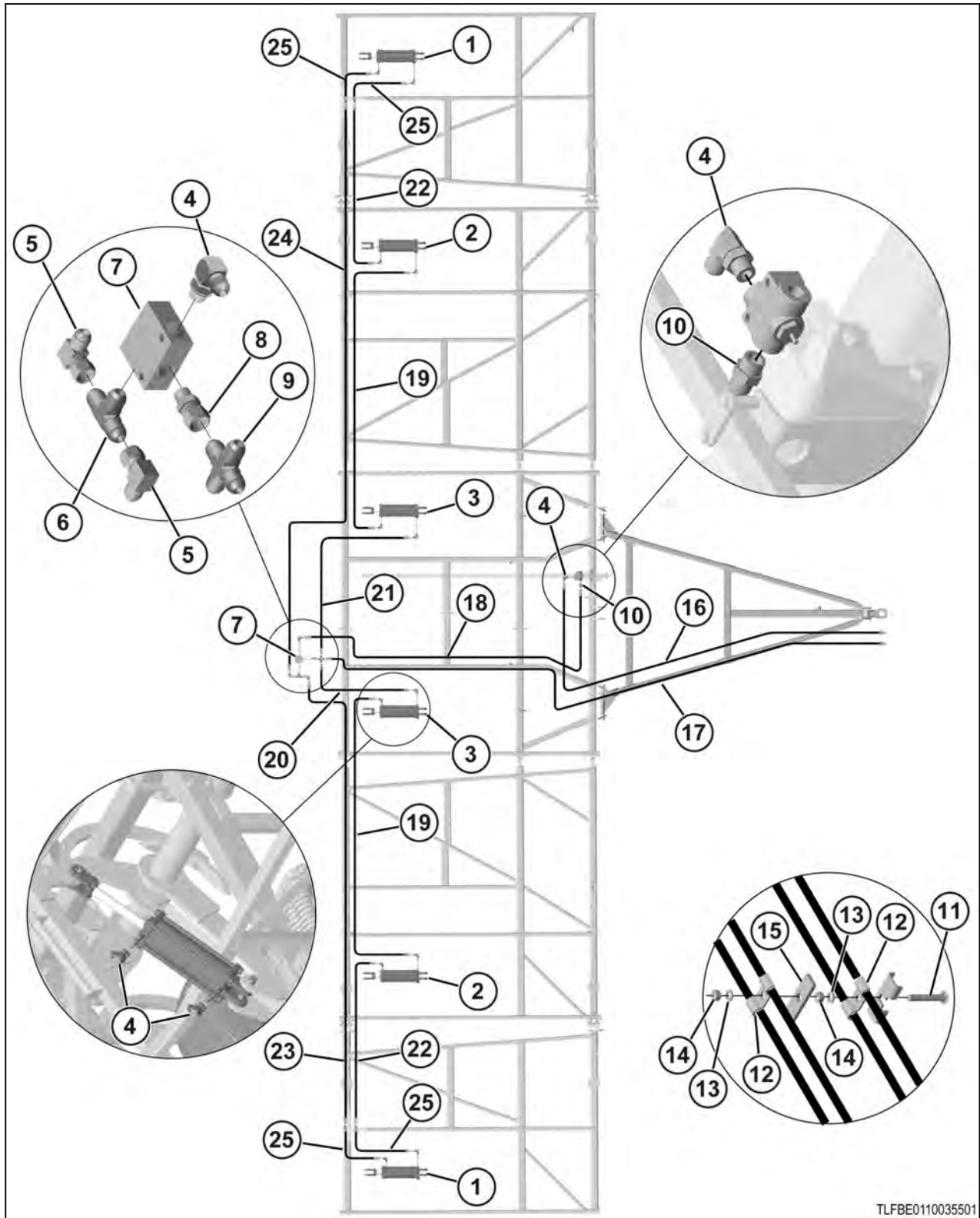
1. Install the lift hydraulics as shown.

Item	Number	Description
1	351601	4 1/2 x 10 cylinder
2	351768	4 3/4 x 10 cylinder
3	351767	5 x 10 cylinder
4	25580	Elbow fitting - 8MORB x 8MJ
5	25591	Elbow fitting - 8MJ X 8FJX
6	56534	Tee fitting
7	241317	Check valve
8	24004	Adapter fitting
9	15910	Cross fitting
10	24024	Adapter fitting
11	89473	Carriage bolt - 3/8 x 2 1/2
12	13215	Clamp
13	88362	3/8 ID washer
14	88103	3/8 hex nut
15	15543	Base plate
16	208612	Hose - 1/2 x 204
17	209032	Hose - 1/2 x 348
18	241494	Hose - 1/2 x 276
19	234947	Hose - 3/8 x 194
20	56539	Hose - 3/8 x 50
21	13482	Hose - 3/8 x 108
22	13483	Hose - 3/8 x 120
23	67576	Hose - 3/8 x 276
24	240609	Hose - 3/8 x 324

2. Fasten with the correct hardware.

7.19.4 Installing the 16.8 to 18 m (55 to 59 ft) lift hydraulics

Procedure



TLFBE0110035501

Fig. 53

1. Install the lift hydraulics as shown.

Item	Number	Description
1	351601	4 1/2 x 10 cylinder
2	351768	4 3/4 x 10 cylinder
3	351767	5 x 10 cylinder
4	25580	Elbow fitting - 8MORB x 8MJ
5	25591	Elbow fitting - 8MJ X 8FJX
6	56534	Tee fitting
7	241317	Check valve
8	24004	Adapter fitting
9	15910	Cross fitting
10	24024	Adapter fitting
11	89473	Carriage bolt - 3/8 x 2 1/2
12	13215	Clamp
13	88362	3/8 ID washer
14	88103	3/8 hex nut
15	15543	Base plate
16	208612	Hose - 1/2 x 204
17	209032	Hose - 1/2 x 348
18	241494	Hose - 1/2 x 276
19	234947	Hose - 3/8 x 194
20	56539	Hose - 3/8 x 50
21	13482	Hose - 3/8 x 108
22	13483	Hose - 3/8 x 120
23	67576	Hose - 3/8 x 276
24	240609	Hose - 3/8 x 324
25	13263	Hose - 3/8 x 36

2. Fasten with the correct hardware.

7.19.5 Installing the center fold cylinders

Procedure

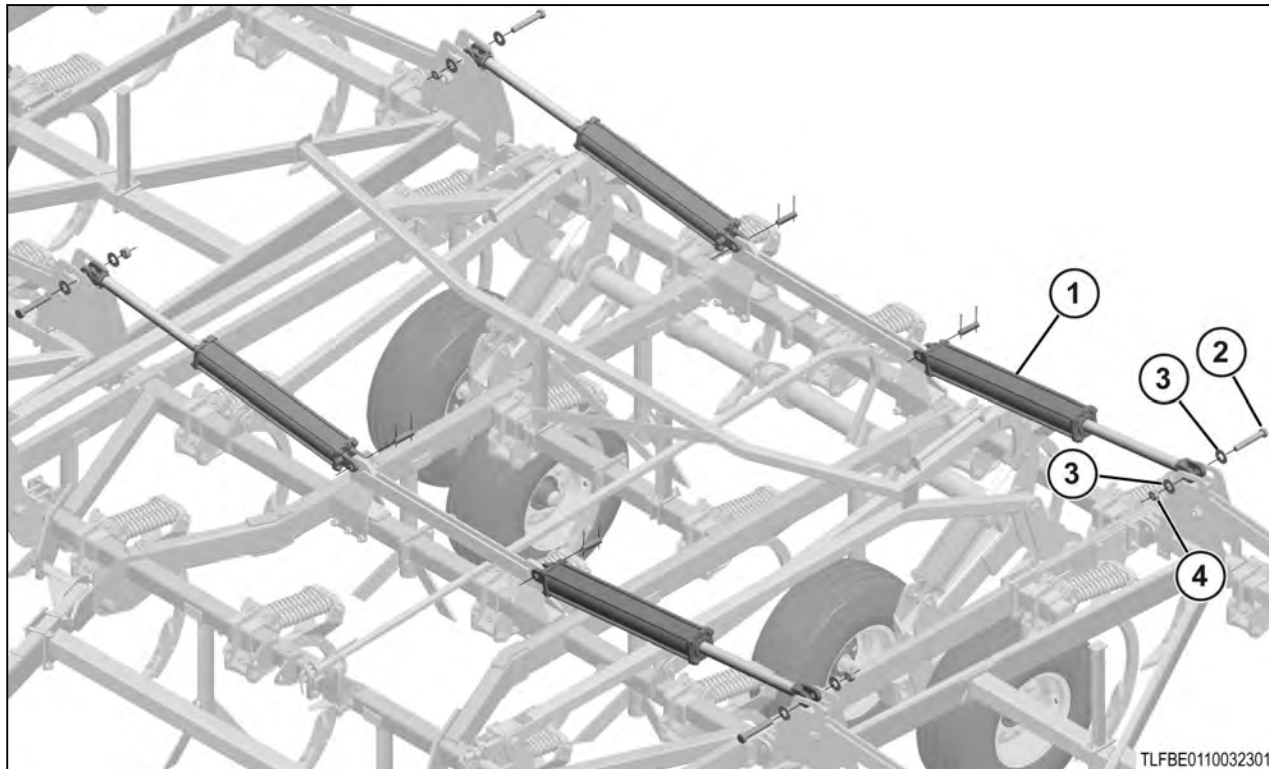


Fig. 54

1. Install the center fold cylinders.

Item	Number	Description
1	354281	5 x 30 cylinder
2	88349	1 1/4 x 6 1/2 hex bolt
3	88602	1 1/4 washer
4	88613	1 1/4 hex nut

2. Fasten with the correct hardware.

7.19.6 Installing the outer fold cylinders

Procedure

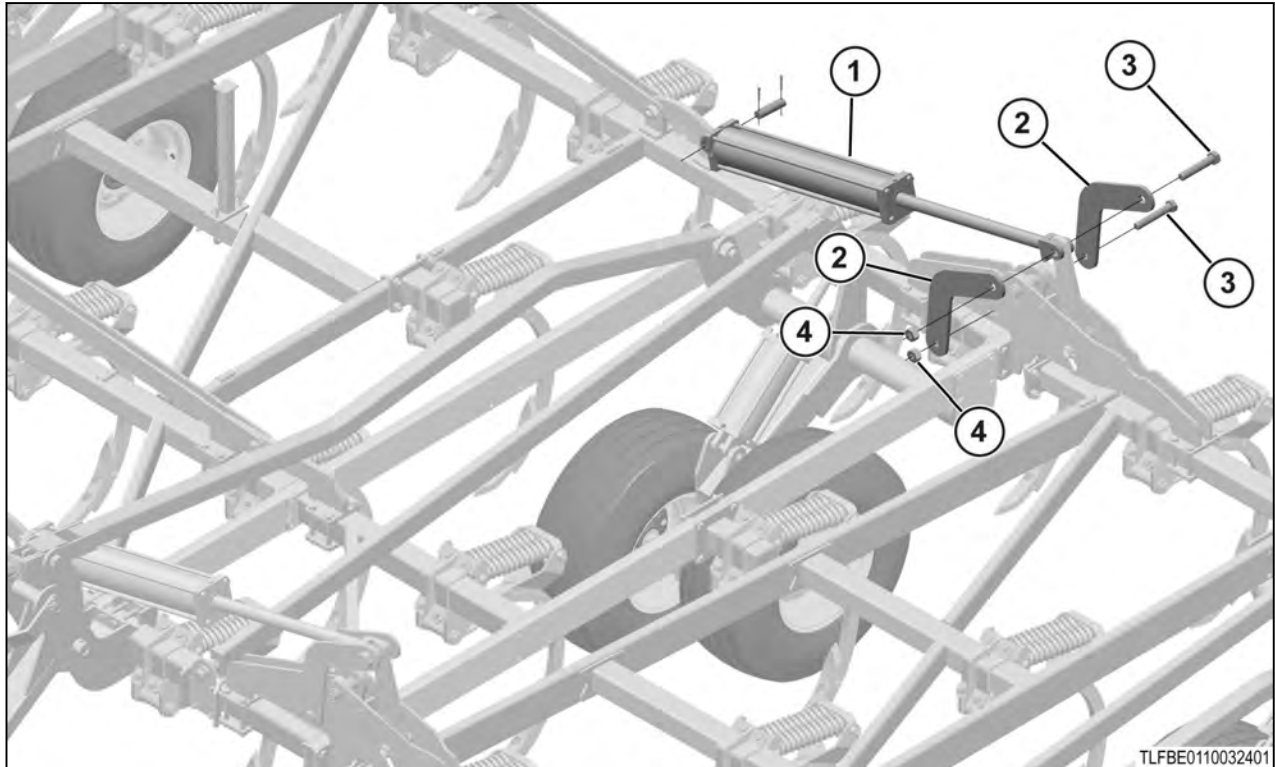


Fig. 55

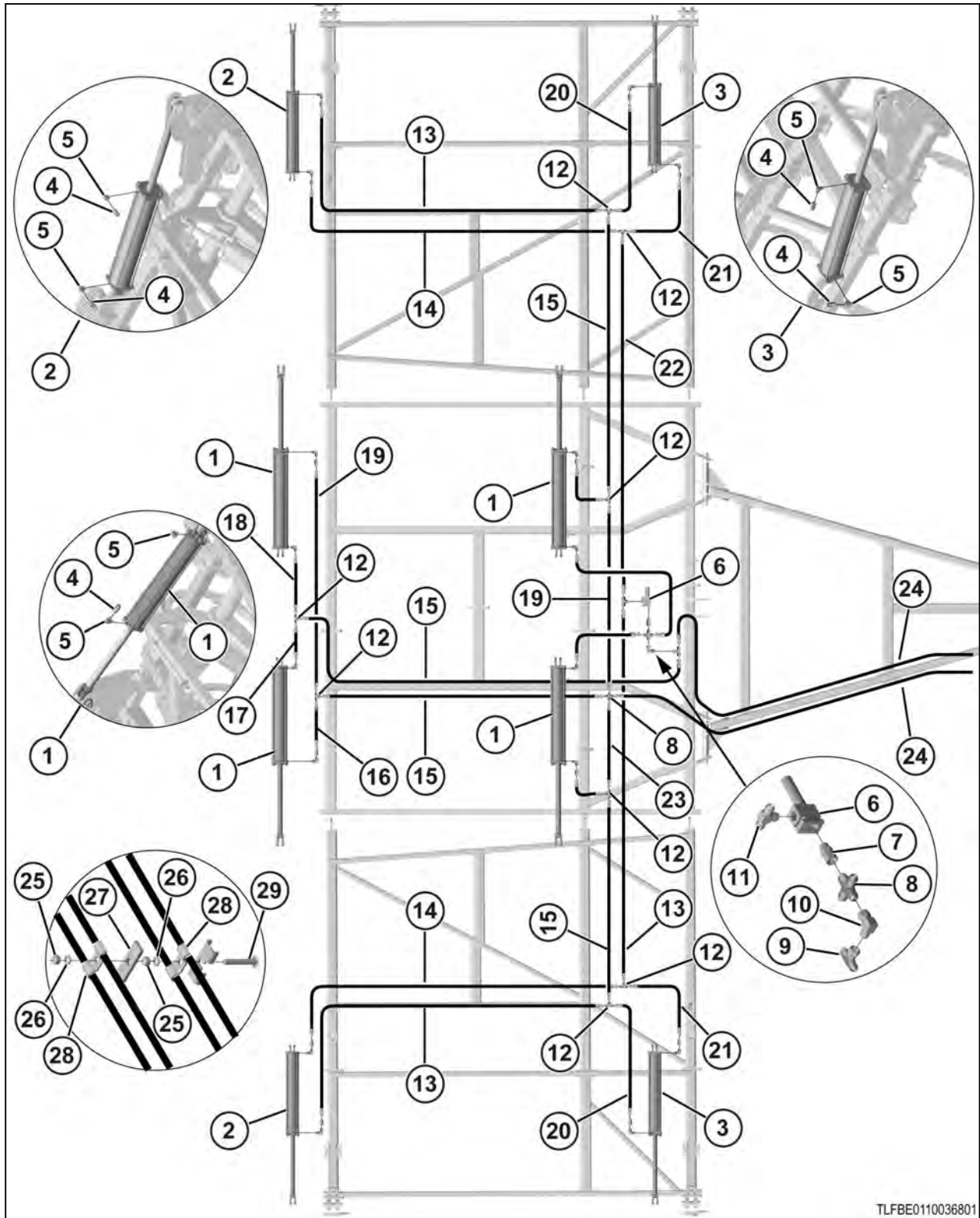
1. Install the outer fold cylinders.

Item	Number	Description
1	354281	5 x 30 cylinder
2	353635	Wing link
3	88349	1 1/4 x 6 1/2 hex bolt
4	88613	1 1/4 hex nut

2. Fasten with the correct hardware.

7.19.7 Installing the fold hydraulics

Procedure



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Fig. 56

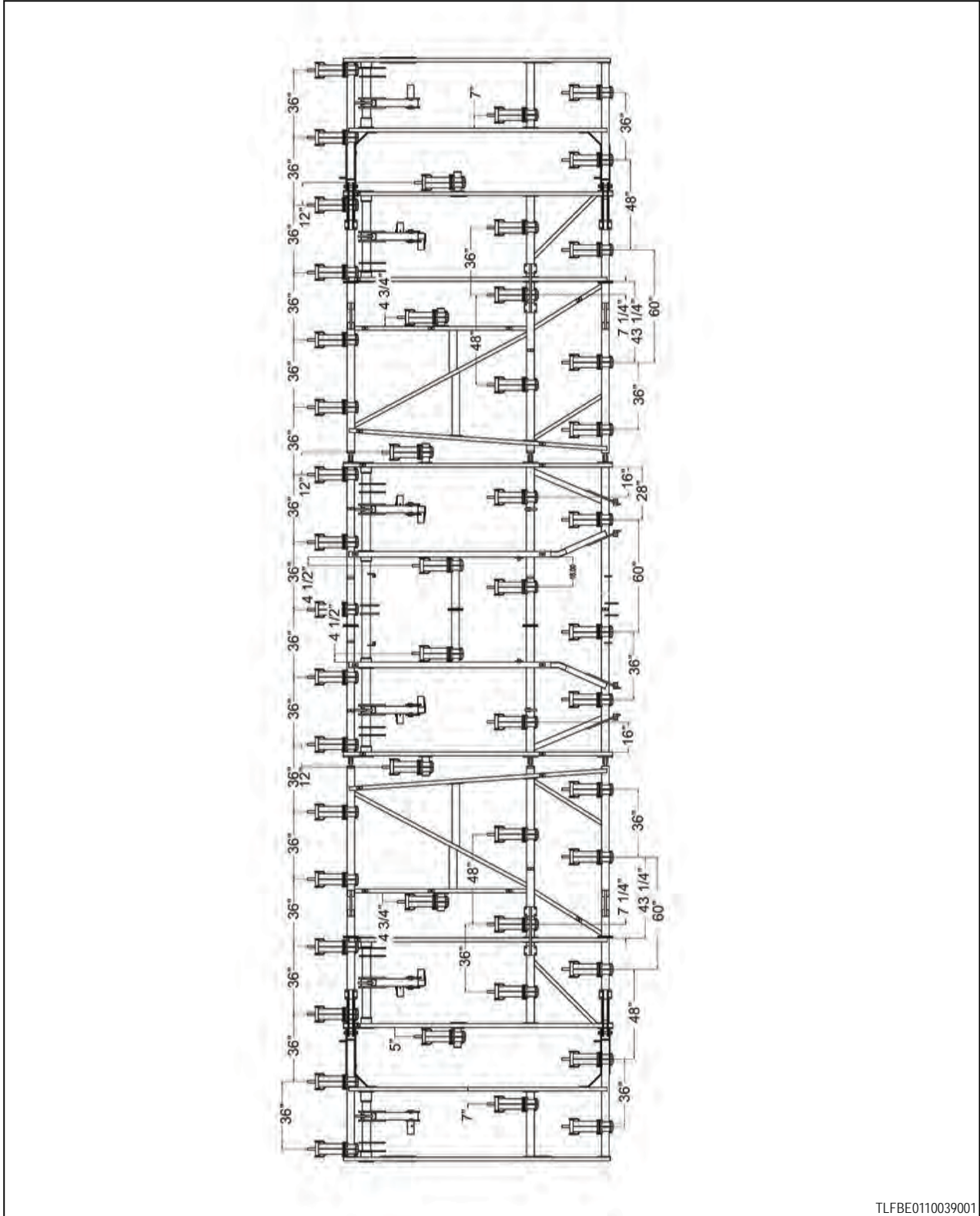
1. Install the fold hydraulics as shown.

Item	Number	Description
1	354281	5 x 30 cylinder
2	354281	5 x 30 cylinder
3	354281	5 x 30 cylinder
4	1019844	Adapter fitting
5	A65901	Elbow fitting
6	65870	Sequence valve
7	24004	Adapter fitting
8	15910	Cross fitting
9	69080	Tee fitting
10	25591	Elbow fitting
11	56534	Tee fitting
12	13238	Tee fitting
13	235386	Hose - 3/8 x 137
14	13482	Hose - 3/8 x 108
15	235388	Hose - 3/8 x 102
16	14644	Hose - 3/8 x 36
17	13261	Hose - 3/8 x 30
18	15515	Hose - 3/8 x 62
19	56540	Hose - 3/8 x 89
20	67636	Hose - 3/8 x 72
21	13265	Hose - 3/8 x 56
22	235388	Hose - 3/8 x 102
23	13262	Hose - 3/8 x 30
24	237155	Hose - 3/8 x 244
25	88103	3/8 hex nut
26	88362	3/8 ID washer
27	15543	Base plate
28	13215	Clamp
29	89473	3/8 x 2 1/2 carriage bolt

2. Fasten with the correct hardware.

7.20 Shank locations - 30.5 cm (12 in) spacing

7.20.1 14.9 m (49 ft) shank locations - 30.5 cm (12 in) spacing

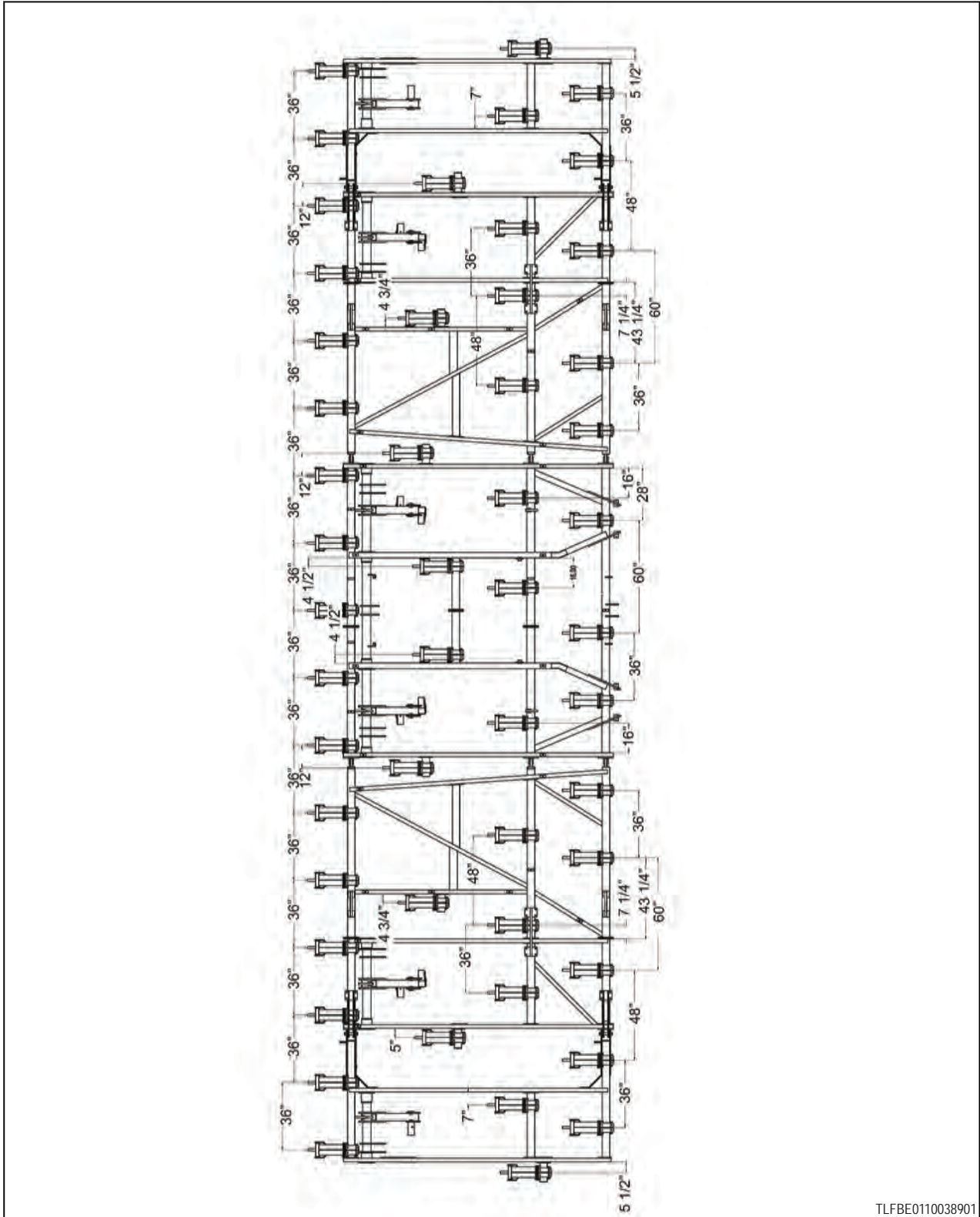


TLFBE0110039001

Fig. 57

English measurement	Metric measurement
4 1/2"	11.4 cm
4 3/4"	12.1 cm
5"	12.7 cm
7"	17.8 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
28"	71.1 cm
36"	91.4 cm
43 1/4"	109.9 cm
48"	121.9 cm
60"	152.4 cm

7.20.2 15.5 m (51 ft) shank locations - 30.5 cm (12 in) spacing

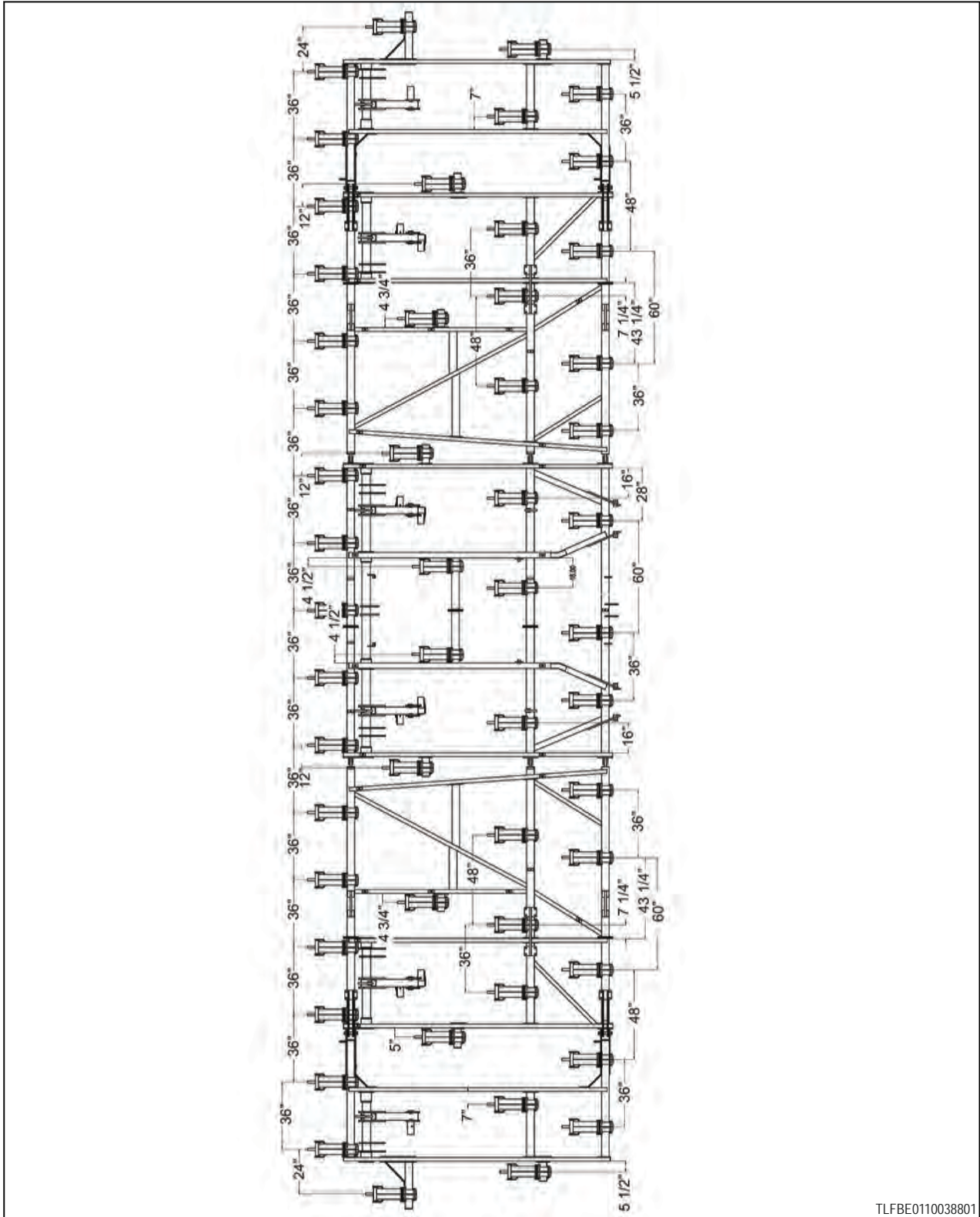


TLFBE0110038901

Fig. 58

English measurement	Metric measurement
4 1/2"	11.4 cm
4 3/4"	12.1 cm
5"	12.7 cm
5 1/2"	14.0 cm
7"	17.8 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
28"	71.1 cm
36"	91.4 cm
43 1/4"	109.9 cm
48"	121.9 cm
60"	152.4 cm

7.20.3 16.2 m (53 ft) shank locations - 30.5 cm (12 in) spacing

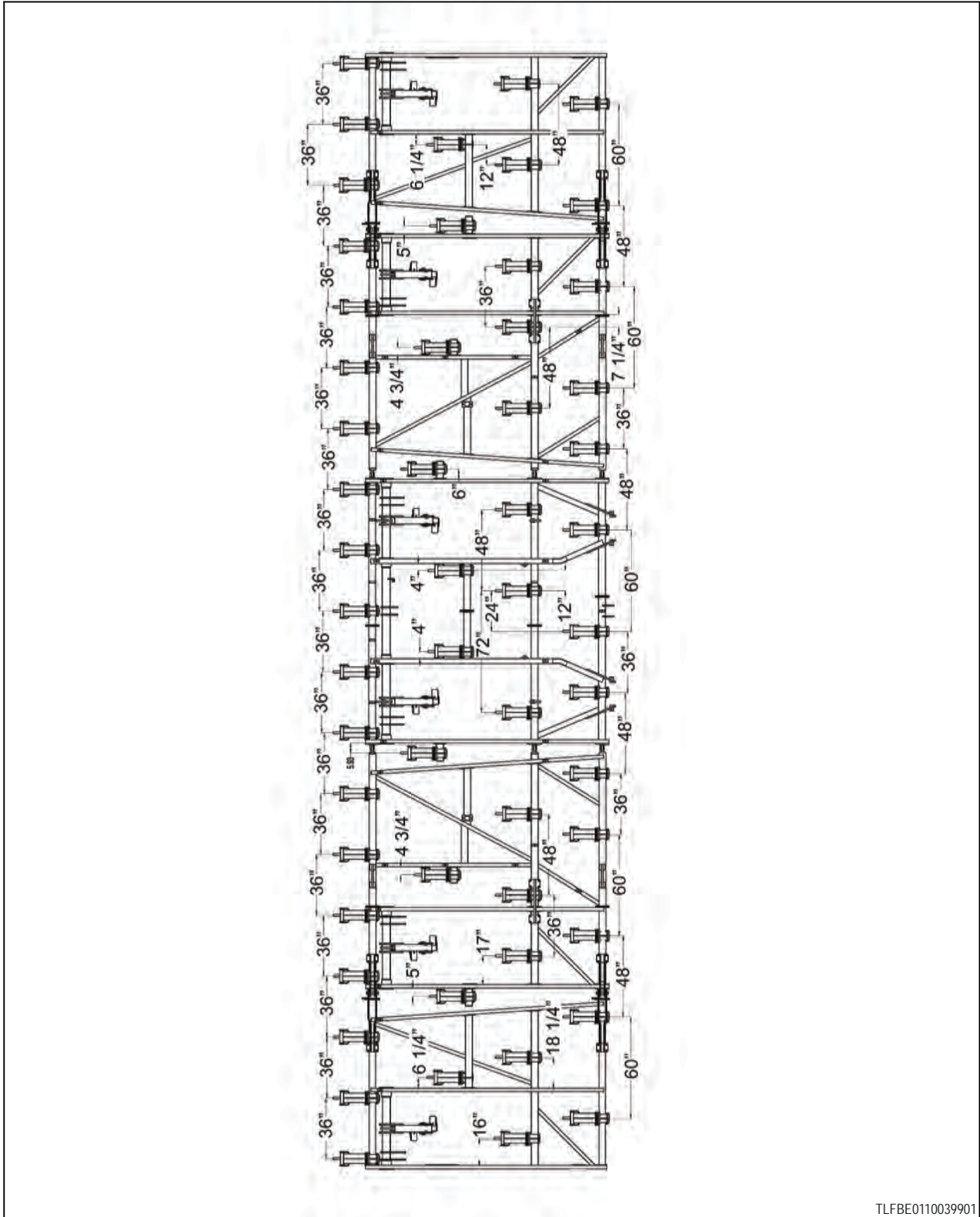


TLFBE0110038801

Fig. 59

English measurement	Metric measurement
4 1/2"	11.4 cm
4 3/4"	12.1 cm
5"	12.7 cm
5 1/2"	14.0 cm
7"	17.8 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
24"	61.0 cm
28"	71.1 cm
36"	91.4 cm
43 1/4"	109.9 cm
48"	121.9 cm
60"	152.4 cm

7.20.4 16.8 m (55 ft) shank locations - 30.5 cm (12 in) spacing



TLFBE0110039901

Fig. 60

English measurement	Metric measurement
4"	10.2 cm
4 3/4"	12.1 cm
5"	12.7 cm
6"	15.2 cm
6 1/4"	15.9 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
17"	43.2 cm
18 1/4"	46.4 cm
24"	61.0 cm
36"	91.4 cm
48"	121.9 cm
60"	152.4 cm
72"	182.9 cm

English measurement	Metric measurement
4"	10.2 cm
4 3/4"	12.1 cm
5"	12.7 cm
6"	15.2 cm
6 1/4"	15.9 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
17"	43.2 cm
18 1/4"	46.4 cm
24"	61.0 cm
36"	91.4 cm
48"	121.9 cm
60"	152.4 cm
72"	182.9 cm

English measurement	Metric measurement
4"	10.2 cm
4 3/4"	12.1 cm
5"	12.7 cm
6"	15.2 cm
6 1/4"	15.9 cm
7 1/4"	18.4 cm
12"	30.1 cm
16"	40.6 cm
17"	43.2 cm
18"	45.7 cm
18 1/4"	46.4 cm
24"	61.0 cm
36"	91.4 cm
48"	121.9 cm
60"	152.4 cm
72"	182.9 cm

7.21 Shank locations - 38.1 cm (15 in) spacing

7.21.1 14.9 m (49 ft) shank locations - 38.1 cm (15 in) spacing

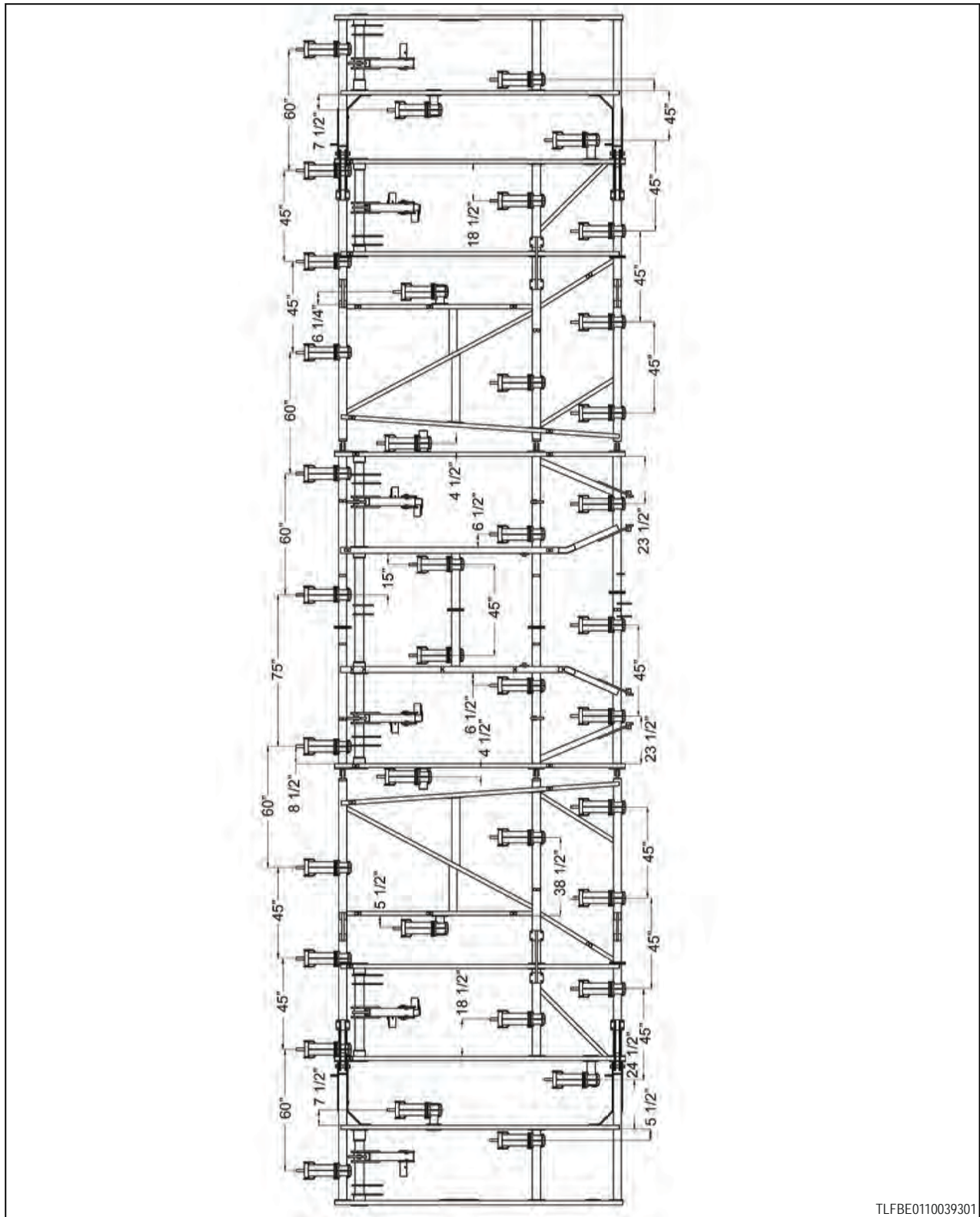
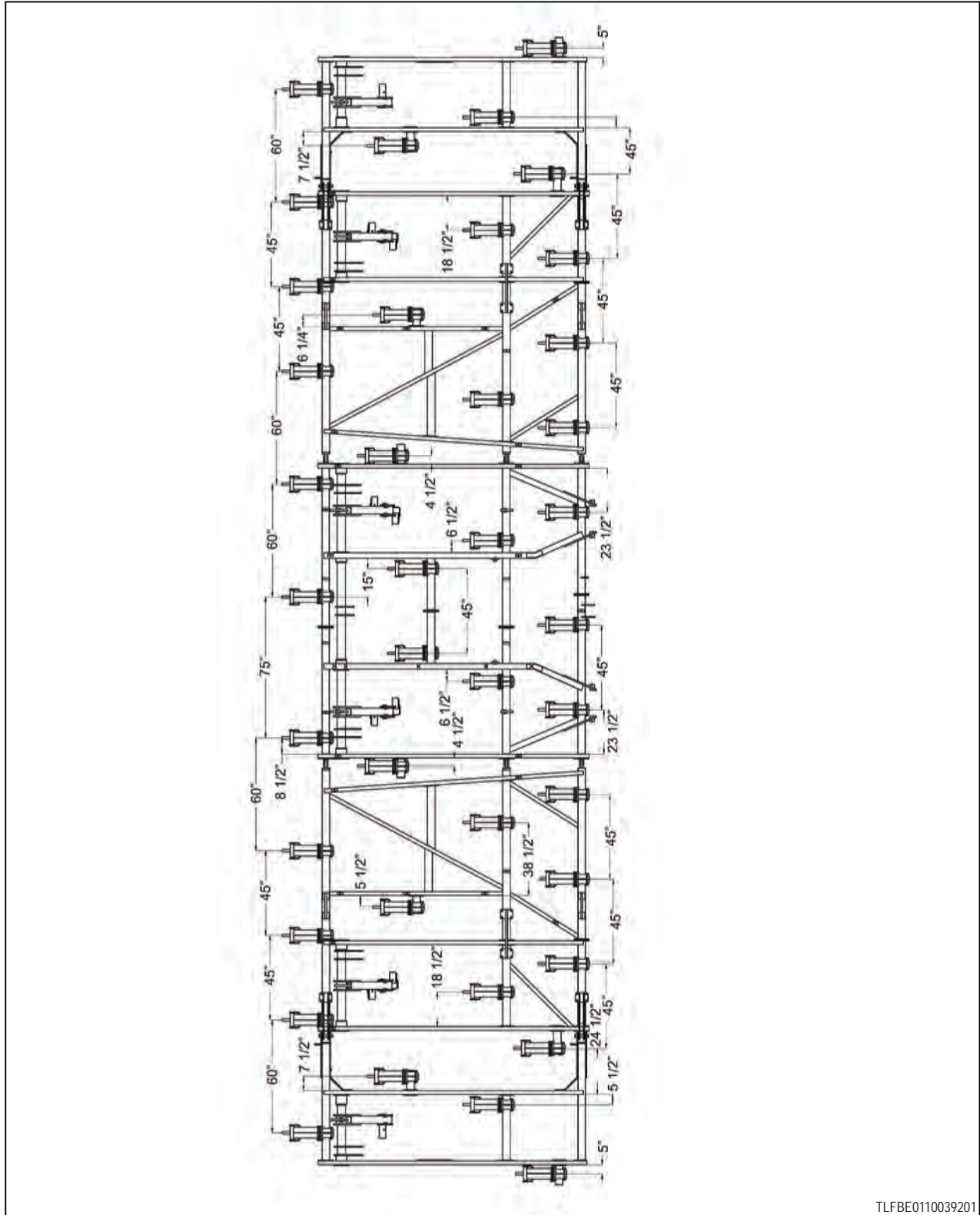


Fig. 63

English measurement	Metric measurement
4 1/2"	11.4 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
7 1/2"	19.1 cm
8 1/2"	21.6 cm
15"	38.1 cm
18 1/2"	47.0 cm
23 1/2"	59.7 cm
24 1/4"	61.6 cm
38 1/2"	97.8 cm
45"	114.3 cm
60"	152.4 cm
75"	190.5 cm

7.21.2 15.5 m (51 ft) shank locations - 38.1 cm (15 in) spacing

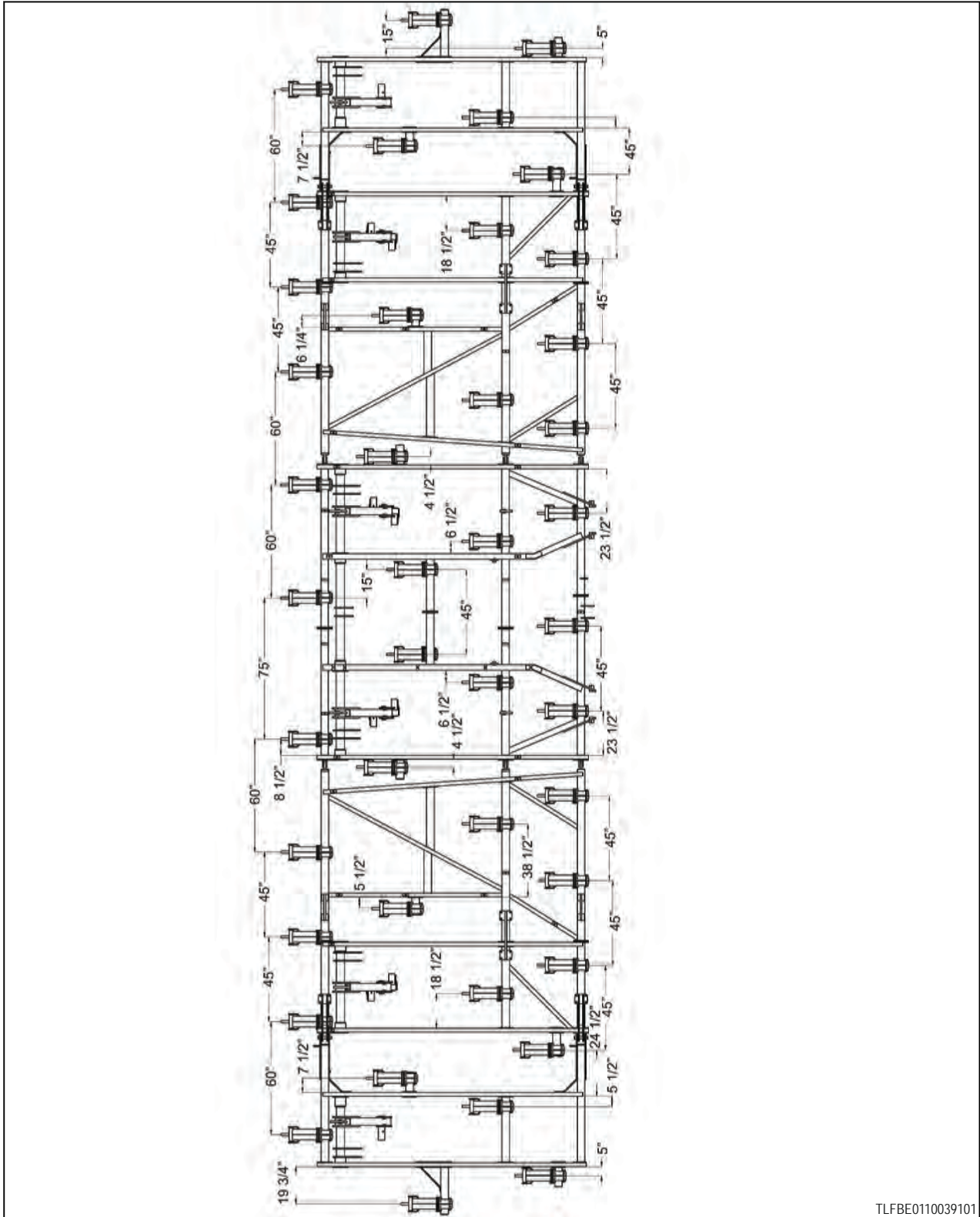


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Fig. 64

English measurement	Metric measurement
4 1/2"	11.4 cm
5"	12.7 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
7 1/2"	19.1 cm
8 1/2"	21.6 cm
15"	38.1 cm
18 1/2"	47.0 cm
23 1/2"	59.7 cm
24 1/2"	62.2 cm
38 1/2"	97.8 cm
45"	114.3 cm
60"	152.4 cm
75"	190.5 cm

7.21.3 16.2 m (53 ft) shank locations - 38.1 cm (15 in) spacing



TLFBE0110039101

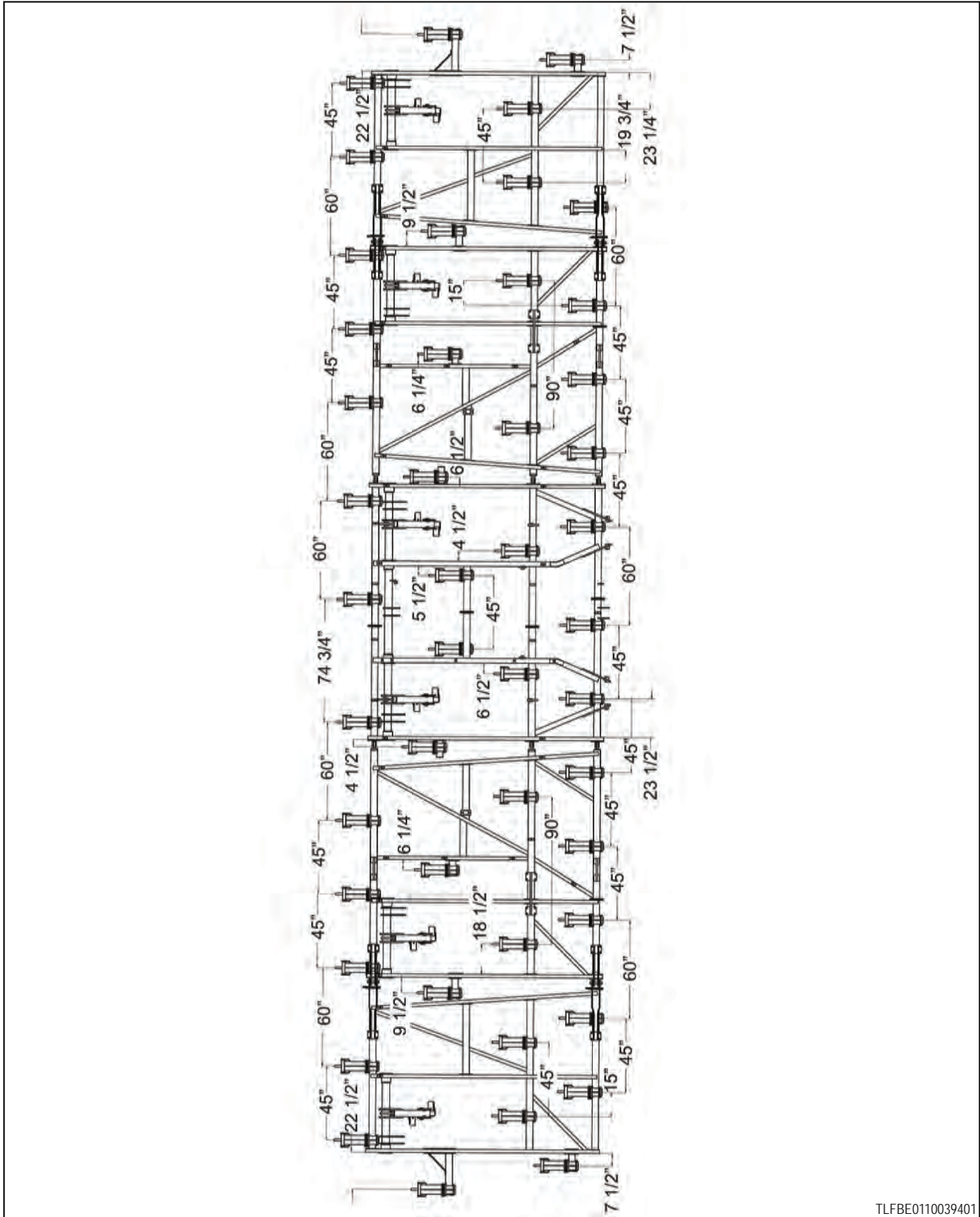
Fig. 65

English measurement	Metric measurement
4 1/2"	11.4 cm
5"	12.7 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
7 1/2"	19.1 cm
8 1/2"	21.6 cm
15"	38.1 cm
18 1/2"	47.0 cm
19 3/4"	50.2 cm
23 1/2"	59.7 cm
24 1/2"	62.2 cm
38 1/2"	97.8 cm
45"	114.3 cm
60"	152.4 cm
75"	190.5 cm

English measurement	Metric measurement
4 1/2"	11.4 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
9 1/2"	24.1 cm
15"	38.1 cm
18 1/2"	47.0 cm
19 3/4"	50.2 cm
22 1/2"	57.2 cm
23 1/4"	59.1 cm
23 1/2"	59.7 cm
45"	114.3 cm
60"	152.4 cm
74 3/4"	189.9 cm
90"	228.6 cm

English measurement	Metric measurement
4 1/2"	11.4 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
7 1/2"	19.1 cm
9 1/2"	24.1 cm
15"	38.1 cm
18 1/2"	47.0 cm
19 3/4"	50.2 cm
22 1/2"	57.2 cm
23 1/4"	59.1 cm
23 1/2"	59.7 cm
45"	114.3 cm
60"	152.4 cm
74 3/4"	189.9 cm
90"	228.6 cm

7.21.6 18.0 m (59 ft) shank locations - 38.1 cm (15 in) spacing



TLFBE0110039401

Fig. 68

English measurement	Metric measurement
4 1/2"	11.4 cm
5 1/2"	14.0 cm
6 1/4"	15.9 cm
6 1/2"	16.5 cm
7 1/2"	19.1 cm
9 1/2"	24.1 cm
15"	38.1 cm
18 1/2"	47.0 cm
19 3/4"	50.2 cm
22 1/2"	57.2 cm
23 1/4"	59.1 cm
23 1/2"	59.7 cm
45"	114.3 cm
60"	152.4 cm
74 3/4"	189.9 cm
90"	228.6 cm

7.22 Checklists

7.22.1 Pre-delivery checklist

Attention dealer, refer to AGCO SOURCE for machine pre-delivery inspection information.

7.22.2 Delivery checklist

1	Make arrangements for dealer personnel to be present when starting the machine in the field. Confirm all systems are working correctly. Review the Operator's Manual to confirm the machine is set up correctly.
2	Explain the Warranty of the machine to the owner. Complete the Warranty Registration form and list the serial number of the machine. The dealer and the owner must both sign the form.
3	Review the Safety Section with the machine operator. Review various warning decals for dangerous operating procedures or conditions. Instruct the owner of the machine to review the operator manual with each operator of the machine.
4	If required, review with operator how to adjust, connect, or disconnect other attachments to the machine.
5	Review with the operator the locations and functions of the controls. Refer to the Operation section.
6	Inform the operator about the adjustments for varying field conditions.
7	Inform the operator about the importance of proper lubrication and servicing. Refer to the Lubrication and Maintenance Section.
8	Review with the operator the use the lighting system when operating a machine on the road at night and during the day. The tail lamps, warning lamps, and SMV (Slow Moving Vehicle) emblem must be used for warning operators of other vehicles. Inform the customer to check local government regulations that deal with movement of slow and over width vehicles.
9	Give the Operator's Manual to the owner. Make sure the owner will review all sections of the manual.

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