



Owner's Manual

10" HP Mechanical Drive Swing Away Augers

Publication No. 9001366 rev. 3

Toll Free 1-866-427-2638
www.brandt.ca

Brandt

Pre-delivery Inspection Sheet

To the Dealer

In order to ensure that this Auger will provide your customer with many years of trouble free service, please ensure that the following Dealer Inspection has been performed.

DEALER INSPECTION REPORT

General

- ☐ Wheel Bolts Tight. (90 ft-lbs.)
- ☐ Tire Pressure as per sidewall marking.
- ☐ Check tube alignment for straightness.
- ☐ Truss cables are tensioned properly.
- ☐ Truss cable clamps tight (45 ft-lbs)
- ☐ Winch lift cable clamps tight (15 ft-lbs)
- ☐ All fasteners tight (Except pivot bolts)
- ☐ All grease points have been lubricated including the PTO Shaft. See Section 5.
- ☐ All Bearing lock collars are tight.
- ☐ Hopper drive U-Joint set screws are tight.
- ☐ All shields, cleanout covers and doors are in place.
- ☐ PTO shields in place & rotate freely.
- ☐ Set Screws on Drive Sprockets are tight.
- ☐ Drive chain tensioned correctly.
- ☐ PTO shields in place and rotate freely.
- ☐ Gearbox oil levels checked (See Section 5.3)
- ☐ Mover drive chains tensioned correctly.
- ☐ Hubs installed as per section 5.8.
- ☐ All safety decals in place and legible.
- ☐ Paint scratches are touched up.
- ☐ All applicable service bulletins performed.

Run In

- ☐ Auger has been elevated and lowered without any problems.
- ☐ Hydraulics pressure checked for leaks.
- ☐ Auger has been run for 2 minutes and checked for unusual noise and vibration.

Date _____ Dealer's Signature: _____

Table of Contents

CHAPTER 1	<i>Introduction</i>	1
	1.1 Operator Orientation	1
	1.2 Safety Awareness Sign Off Form	2
	1.3 General Specifications	3
	1.4 Description and Location of Major Components	4
CHAPTER 2	<i>Important Safety Information</i>	5
	2.1 Safety Symbols / Signal Words	6
	2.1.1 Recognizing Safety Information	6
	2.1.2 Understanding Signal Words	6
	2.1.3 Safety Messages / Decals	7
	2.2 General Safety Precautions	8
	2.2.1 Personal Protection Equipment	9
	2.2.2 Handling Chemicals Safely	9
	2.3 Operating Precautions	10
	2.4 Hydraulic System Safety Precautions	11
	2.5 Transport Safety	11
	2.5.1 Safety Chain Installation	12
	2.6 Welding/Heating Safety Precautions	13
	2.7 Maintenance Safety	13
	2.8 Grain Bin Safety	14
	2.9 Safety Decals	14
	2.10 Safety Decal Locations	15
	2.11 Work Area Safety	21
	2.11.1 Transport	21
	2.11.2 Operating Position	22
CHAPTER 3	<i>Assembly</i>	23
	3.1 Preparing the Assembly Site	23
	3.2 Tube Assembly	23
	3.3 Tube Truss Assembly	27
	3.3.1 1060 Truss Assembly	28
	3.3.2 1070 Truss Assembly	31
	3.3.3 1080 Truss Assembly	33
	3.3.4 Cable Truss Tensioning	35
	3.4 Final Undercarriage Assembly	37
	3.5 Hydraulic Cylinder Installation	40
	3.6 Misc. Tube and Boot Parts	42
	3.7 Swing Tube and Spout	43
	3.8 Swing Hopper Assembly	44
	3.9 Installing the Swing Tube	47

CHAPTER 4	<i>Operation</i>	49
4.1	Principles of Operation	49
4.2	Setup for Operation of a New Machine	50
4.2.1	Before running the new Auger	50
4.2.2	Checking Tractor Hitch Length	50
4.3	Attaching the Auger to the Tractor	51
4.4	Pre-Operation Checklist	52
4.5	Work Area Placement	53
4.5.1	Moving the Auger into Working Position	53
4.5.2	Moving the Auger out of Working Position	54
4.6	Hydraulic Shut Off Valve	55
4.7	Auger Drive Lock Out	55
4.8	Startup and Break In of a New Auger	56
4.9	Full Load Operating Procedures	57
4.10	PTO Shear Bolts	58
4.11	Conveyor Shutdown	59
4.11.1	Normal Shutdown	59
4.11.2	Emergency Shutdown	59
4.12	Reverser Operating Procedure	59
4.13	Clean Up and Storage	60
4.14	Transport	61
CHAPTER 5	<i>Maintenance</i>	63
5.1	Fluids and Lubricants	63
5.2	Lubrication	63
5.3	Service Intervals	63
5.3.1	4 Hours or Twice Daily	63
5.3.2	10 Hours or Daily	63
5.3.3	50 Hours or Weekly	63
5.3.4	Annually	64
5.4	Hopper Wheel Height Alignment	66
5.5	Electric Swing Tube Mover Wheel Drive Chains	66
5.6	Swing Auger Location - Adjusting to the Right or Left Side of Auger	67
5.7	PTO Shear Bolt	68
5.8	Wheel Hub Installation	69
5.8.1	Adjusting the Hub Tightness	69
5.8.2	Checking Endplay of an Installed Hub	69
5.9	Tube Truss Adjustment	70
5.10	Drive Chain Tension Adjustment	71
5.11	Service Record	72

CHAPTER 6	<i>Troubleshooting</i>	73
CHAPTER 7	<i>Options</i>	75
	7.1 Reversing Kit	75
CHAPTER 8	<i>Additional Information</i>	79
	8.1 General Torque Specifications	79
	8.1.1 Unified Inch Bolt and Screw Torque Values	80
	8.1.2 Metric Bolt and Screw Torque Values	81
	8.1.3 Suggested Torque for Hydraulic Fittings	82
	8.1.4 Suggested Torque for Tapered Pipe Thread Hydraulic Fittings	82
	8.1.5 Cable Clamps	83
	8.2 SAE to Metric Conversions	83
	8.3 Acronyms and Abbreviations	84
CHAPTER 9	<i>Parts List</i>	85
	9.1 Drawing List	85

10" MDSA Augers

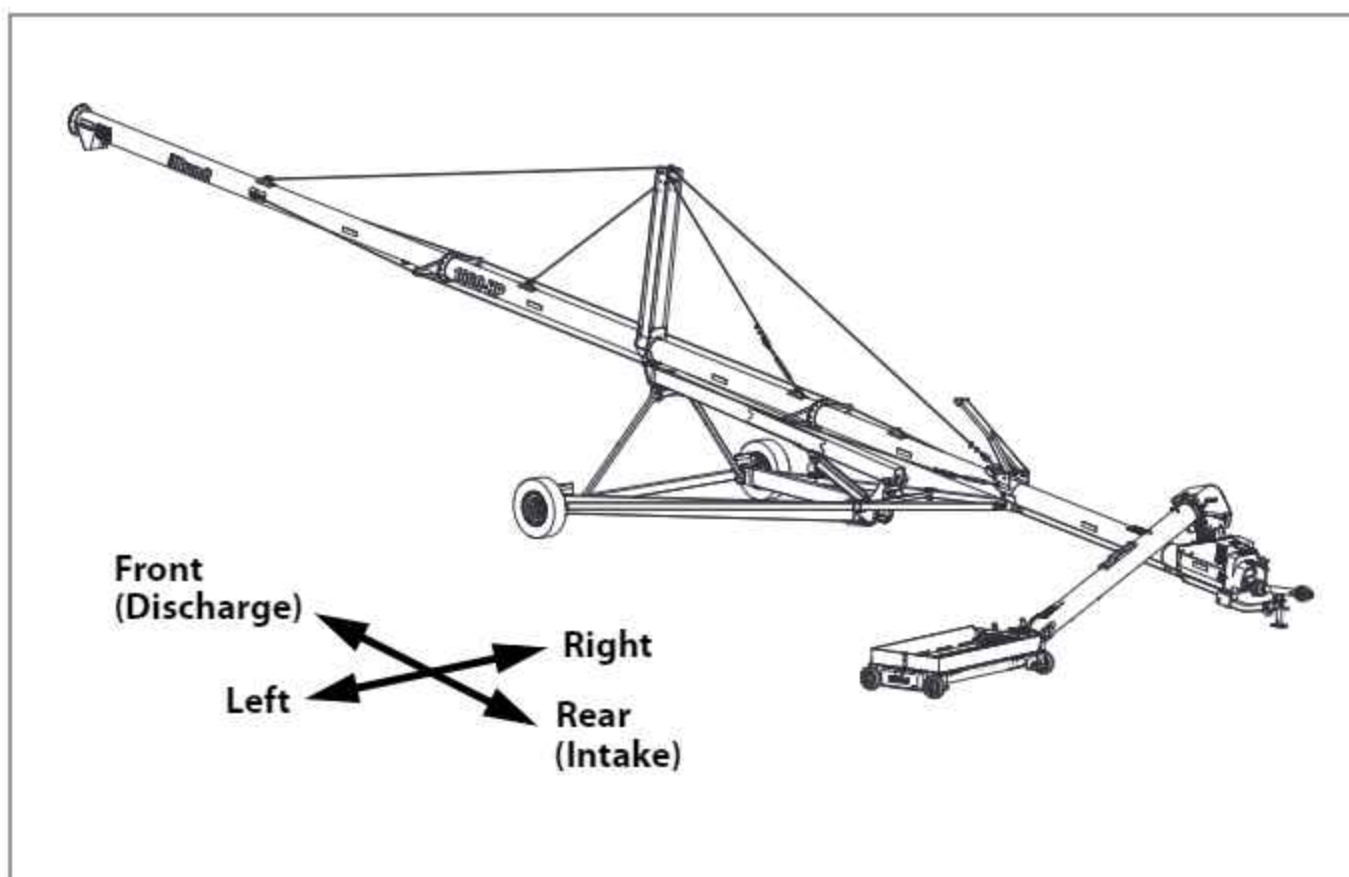
CHAPTER 1 Introduction

This manual is for use with Brandt Industries Ltd. 10" Mechanical Drive Swing Auger. Safe and efficient operation of your Auger requires that anyone who will inspect and operate this machine read and understand the information included in this manual. A person that is not trained and has not read this manual is not qualified to operate this machine. Read this manual before proceeding with any inspections or repairs on this machine.

Use the Table of Contents as a guide. Keep all manuals for future use. Contact Brandt Industries Ltd. if you need additional copies of this manual.

1.1 Operator Orientation

The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the boot facing the discharge outlet.



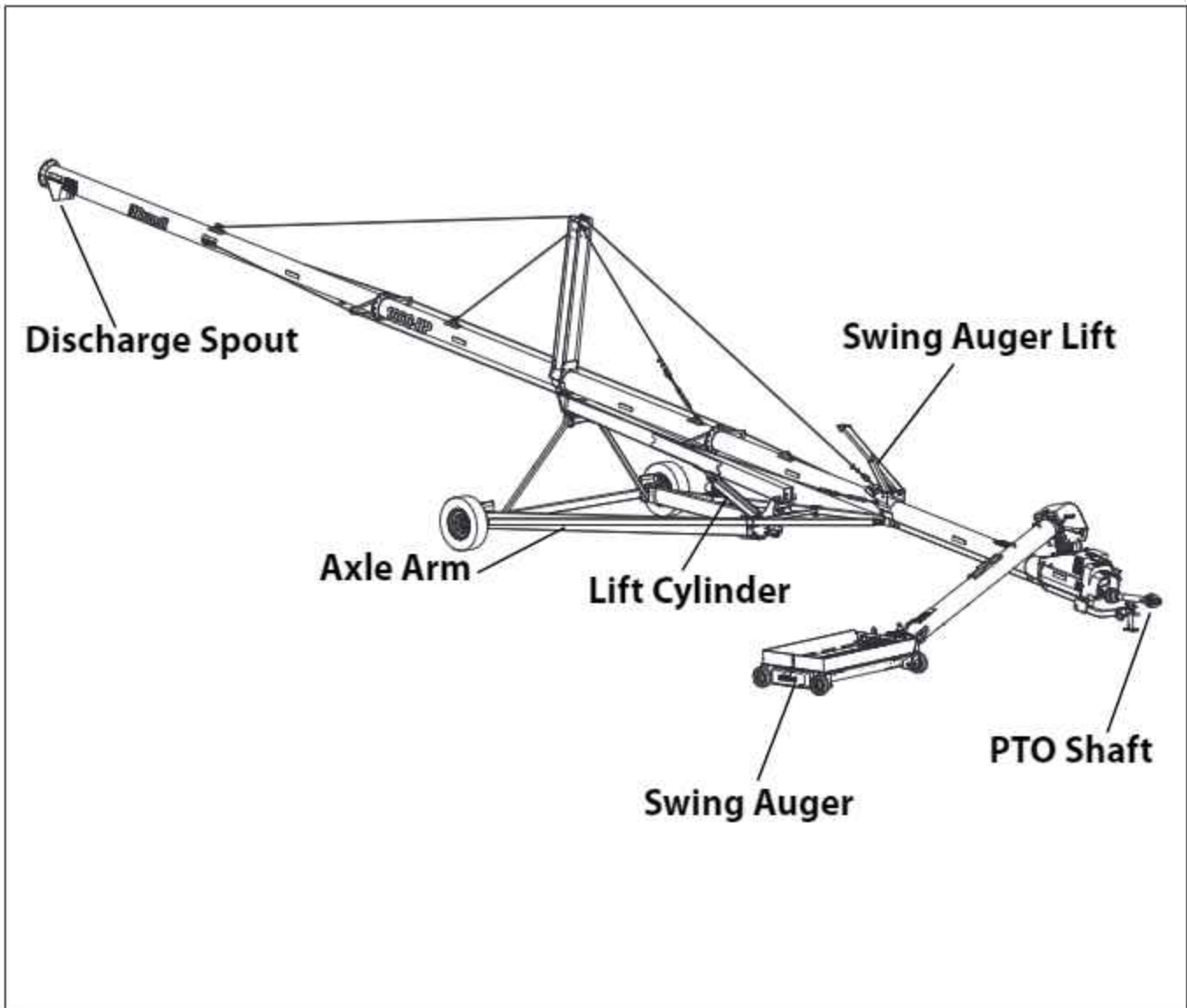
1.3 General Specifications

10" HP Mechanical Drive Swing Away Auger Specifications

Main Auger Specifications	10"x 60' HP	10"x70' HP	10"x 80' HP
Lowered Height (to bottom discharge tube)	9'-8"	11'-0"	11'-6"
Maximum Height (to bottom discharge tube)	42'-0"	48'-6"	52'-9"
Lowered Reach	25'-6"	35'-6"	42'-8"
Maximum Height Reach	16'-6"	22'-6"	30'-0"
Transport Height (hitch height of 15")	12'-4"	12'-6"	13'-4"
Transport Length	62'-3"	72'-2"	82'-2"
Wheel Track Width - Transport (centre to centre)	11'-10"	11'-10"	11'-10"
Tube Thickness	13 ga	13 ga	13 ga
Flighting Thickness	3/16"	3/16"	3/16"
Main Auger Flighting Core	2" OD x 3/16" wall	2" OD x 3/16" wall	2" OD x 3/16" wall
Auger Flighting Speed	540 RPM max.	540 RPM max.	540 RPM max.
Main Auger Bearing Size	1 3/8"	1 3/8"	1 3/8"
Swing Auger Drive Gearbox Shaft Diameter	1 1/4"	1 1/4"	1 1/4"
Total Weight (lbs.)	3,460 lbs	3,600 lbs	4,380 lbs
Hitch Weight (lbs.)	500 lbs	850 lbs	850 lbs
Horsepower Requirements (minimum)	95	105	115
Capacity (approx.)	7,200 bu/hr *	7,200 bu/hr *	7,200 bu/hr *
Extended Life CV PTO Shaft (540 RPM)	14E, Optional 35E	35E Standard	35E Standard
Guarding	Meets ASABE Standards		
Undercarriage Specifications			
Lift Mechanism	Scissor Lift	Scissor Lift	Scissor Lift
Frame Arms	6" x 8" x 3/16" HSS	6" x 8" x 3/16" HSS	6" x 8" x 1/4" HSS
Axle	4" x 4" x 3/16" HSS	4" x 4" x 3/16" HSS	4" x 4" x 3/16" HSS
Hydraulic Requirements	1600 psi	1400 psi	1400 psi
Hydraulic Cylinder Size (bore and stroke)	4"x 30"	4"x 30"	4.5"x 30"
Tire Size	ST205/75R15	ST205/75R15	ST225/75R15
Ply Rating	6	6	6
Self Leveling Low Profile Hopper Specifications			
Hopper Width	48"	48"	48"
Hopper Length	70"	70"	70"
Hopper End Height	10"	10"	10"
Size of Horizontal Flights	6 3/4"	6 3/4"	6 3/4"
# of Horizontal Flights	2	2	2
Flighting Thickness	3/8"	3/8"	3/8"
# of Hopper Support Wheels	4	4	4
Warranty	12 months - Parts and Labour		

* All auger capacities are based on wheat at a 30 degree angle of incline with a moisture content of 14.5%. Capacities will vary depending on commodities and other environmental factors.

1.4 Description and Location of Major Components



CHAPTER 2 **Important Safety Information**

It is your responsibility as an owner, operator or supervisor to know what specific requirements, precautions and work hazards exist. It is also your responsibility to make these known to all other personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required.

You are responsible for the safe operation and maintenance of this equipment. Make sure that all persons who operate, maintain or work near this equipment know the contents of this manual.

You are the key to safety. These safety precautions protect you and the people near you. Include these precautions in your safety program. Accidents can be prevented.

THINK SAFETY

WORK SAFELY

2.1 Safety Symbols / Signal Words

2.1.1 Recognizing Safety Information



This is the Safety Alert Symbol. It is used to alert you to injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

2.1.2 Understanding Signal Words

A signal word – DANGER, WARNING or CAUTION – is used with the Safety Alert Symbol.



DANGER! Is reserved for a hazard that, if not avoided, will result in death or serious injury.



WARNING! Indicates a hazard that, if not avoided, could result in death or serious injury.



Caution. Shows a hazard that, if not avoided, could result in injury.



Notice. Indicates that your heightened awareness is required to avoid practices not related to personal injury.

These safety signs include a message that tells what the hazard is, and the steps to avoid the hazard.

2.1.3 Safety Messages / Decals

Different safety messages are displayed on this equipment. Locate, read, and understand the safety messages. The DANGER, WARNING, CAUTION or NOTICE symbol can be shown with a safety message.

These messages mean:



Note: Some of these messages will not be used on this product. They are shown for example only.

NOTICE

Notice. Replace safety signs when they become damaged. Make sure to include safety signs on replacement parts. New safety signs are available from Brandt Industries Ltd.

2.2 General Safety Precautions

- **THE MOST IMPORTANT SAFETY DEVICE ON THIS MACHINE IS A SAFE OPERATOR.** It is the operator's responsibility to read and understand all safety and operating instructions in the manual and to follow them.
- Auger owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes them self and bystanders to possible serious injury or death.
- Read and understand the Operator's manual and all safety signs before operating, maintaining, adjusting, unplugging or transporting the Auger.
- Keep equipment, operator's stations, and the area around the equipment clean.
- Do not perform unauthorized modifications to this equipment.
- Make and follow an approved maintenance and inspection schedule.
- Do not remove, change, or disable machine guards.
- Keep railings, fences, and barriers in good condition and in place.
- Correct malfunctions and preform repairs immediately on discovery.
- Do not replace fasteners, or hardware, or mechanical connectors with a different or unknown grade or type. Torque fasteners and hardware to the correct value.
- Do not overload or exceed the machine capacity. Do not operate the machine at speeds or systems pressures that exceed the designed ratings.
- Use tools applicable to the work. Use power tools to loosen threaded fasteners only. Do not use SAE tools on SI (metric) fasteners.
- Use the correct lifting equipment for moving heavy parts. Follow recommended procedures for removal and installation of parts.
- Always have two people present when operating the machine.
- Keep the area clear of bystanders, especially children. Always ensure a clear path to the power source is available should the need arise to shut it down in case of an emergency.
- Have a first-aid kit available for use should the need arise and know how to use it.
- Provide a fire extinguisher for use in case of a fire. **Store in a highly visible place.**
- Do not allow riders on the machine.
- Place all controls in neutral, stop and lock out the power source and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging the machine.
- Know where overhead electrical lines are located and stay away from them. Electrocutation can occur without direct contact.
- Know the location and read all decals on the machine. They contain important alerts and precautions which are to be followed at all times.

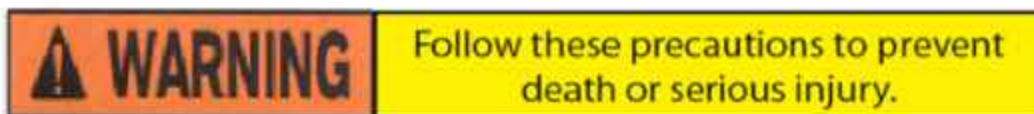
2.2.1 Personal Protection Equipment

- Wear close-fitting clothing and personal protection equipment that is required for the work. Do not allow clothing to interfere with vision, hearing, or free use of hands and feet.
- Wear approved hearing protection as required. Continuous exposure to high noise levels can cause loss of hearing.
- Wear hand protection suitable for the work. The appropriate gloves will reduce exposure to surface temperatures, chemical absorption through the skin, cuts and skin injury.
- Wear eye and face protection required for the work.
- Hard hats should be worn while working on this machine.
- Wear approved steel-toe footwear.
- **DO NOT** wear neckties, jewelry or loose-fitting clothing when operating or working on this equipment.
- Safety requires your full attention to the work. DO NOT wear a radio or music headphones.
- Dusts, moulds and other pollutants can cause health problems. Operators should wear the appropriate breathing apparatus when operating or working on this equipment.

2.2.2 Handling Chemicals Safely

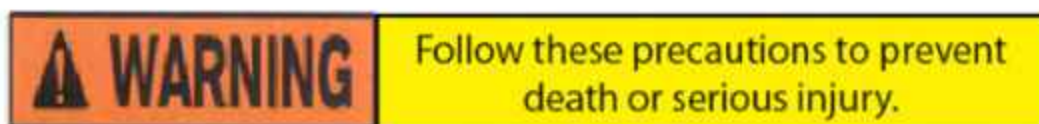
- Direct exposure to hazardous chemicals can cause serious injury. Hazardous chemicals used in Brandt products can include lubricants, coolants, paints, fuels, adhesives and other products.
- A Material Safety Data Sheet (MSDS) provides specific details on these chemical products; physical and health effects; safety precautions; and emergency response procedures.
- Check the MSDS before you start any job that involves a potentially hazardous chemical. You will understand the risk and how to do the work safely. Follow procedures and use approved equipment.

2.3 Operating Precautions



- Read and understand the operator's manual prior to operating the Auger.
- Read and understand the operator's manual for the brake winch prior to operating the Auger.
- Complete an inspection of the machine before operating. Check condition of belts, gearboxes, drivelines, etc. and repair or replace if necessary.
- Watch for overhead electrical lines when moving the auger.
- Ensure all guards are in place and in good repair before operating.
- Keep hands, feet, hair and clothing away from all moving or rotating parts.
- Clear the area of all bystanders, especially children, before starting.
- Keep away from the intake of the auger while the machine is running. Keep others away.
- When cleaning out the corners of a truck box, do not lean over the auger intake.
- Do not use your hands or feet when cleaning out the intake hopper.
- Do not use the auger downspout as a support.
- Stay clear of the auger discharge end.
- Make sure the intake end of the auger is anchored or the discharge end is supported before moving any product.
- Do not stand on the edge of the truck box when loading a truck.
- Use extreme caution when maneuvering at or near maximum height. While the auger is in transport position, it should be backed until it is close to the bin then raised to the height needed, then carefully moved back to the bin. Under no circumstances should the auger be moved while it is at maximum height.
- Dusts, molds and other pollutants can cause health problems. Therefore, operators should wear the appropriate breathing apparatus.
- Wear hearing protection while operating.
- Do not run the auger at high speeds when it is empty.

2.4 Hydraulic System Safety Precautions



- Lock-out/Tag-out the hydraulic system before performing maintenance or repairs to the machine.
- Ensure that the equipment being repaired is not connected to other systems (electrical, pneumatic) on the machine. Lock-out/Tag-out other systems to prevent unintended start-up or operation.
- Do not attempt temporary repairs to hydraulic components using tape, clamps, cement, etc. The hydraulic system operates using extremely high pressure. These repairs will fail suddenly and create a hazard and unsafe condition.
- Ensure replacement parts meet the capacity and pressure rating of the original part.
- When changing more than one part, completely install one part at a time to prevent incorrect connections. Protect openings from contamination.
- Wear appropriate personal protection equipment when searching for a hydraulic leak. Use a piece of wood or cardboard as a backstop instead of your hands to isolate and identify a leak. **If you suspect you have been injured by a concentrated high pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin.**

THERE MAY BE NO VISIBLE SYMPTOMS IMMEDIATELY AFTER EXPOSURE.

2.5 Transport Safety

- Make sure you are in compliance with all local regulations regarding transport of Agricultural equipment on public roads and highways.
- Make sure the hitch on the towing vehicle is rated for the gross weight of the towed machine.
- Always lower the auger to its lowest position before transporting.
- Pin the Hitch into the transport position.
- Make sure the Slow Moving Vehicle emblem and all the lights and reflectors that are required by the local highway and transporting authorities are in place, clean and can be seen clearly by all overtaking or oncoming traffic.
- Attach securely to tow vehicle or tractor using a 1 1/2" dia. pin with a retainer and safety chain. Refer to Fig. • in Section 2.5.1 for safety chain attachment method.
- When transporting use a clevis-to-tongue connection. Never use a clevis-to-clevis or tongue-to-tongue connection as this can lead to hitching failure. See Fig. 2-1.



FIG. 2-1. Hitch Connection

- Do not exceed 32 km/h (20 mph) when towing an Auger.
- The auger is not equipped with brakes. Make sure the tow vehicle has sufficient braking capacity to handle the extra load. The auger may not exceed 1.5 times the towing vehicle weight.
- Check the tires for cracks and make sure they are inflated to the recommended pressure as per sidewall marking.
- When transporting the auger with a vehicle other than a tractor, remove the complete PTO Shaft from the auger and place it in the transport vehicle.
- Never allow riders on the auger.
- Use hazard flashers on tow vehicle except where prohibited by law.
- Stay clear of all overhead electrical lines. Electrocutation can occur without direct contact.
- Be careful not to turn too sharply when transporting the auger. Damage to the auger and/or towing vehicle can occur.
- Be aware of posts, trees, buildings and other obstacles when turning.

2.5.1 Safety Chain Installation

- Ensure that the chain has a load rating equal to or greater than the Gross Vehicle Weight.
- Attach the safety chain from the auger to the towing vehicle. The chain should be noosed around the tube on the underside of the boot. Route the chain through the intermediate supports on the side of the auger hitch to the towing vehicle. Do not use the intermediate support as the primary method of attachment.
- Allow no more slack in the chain than necessary for articulation.
- Do not leave the safety chain attached to the auger while moving product. When not in use, store the safety chain in a clean dry place.
- The safety chain should be replaced and not be used if one or more of the links or end fittings are broken, stretched or otherwise damaged or deformed. The replacement chain must be rated and stamped for the appropriate towing operation.

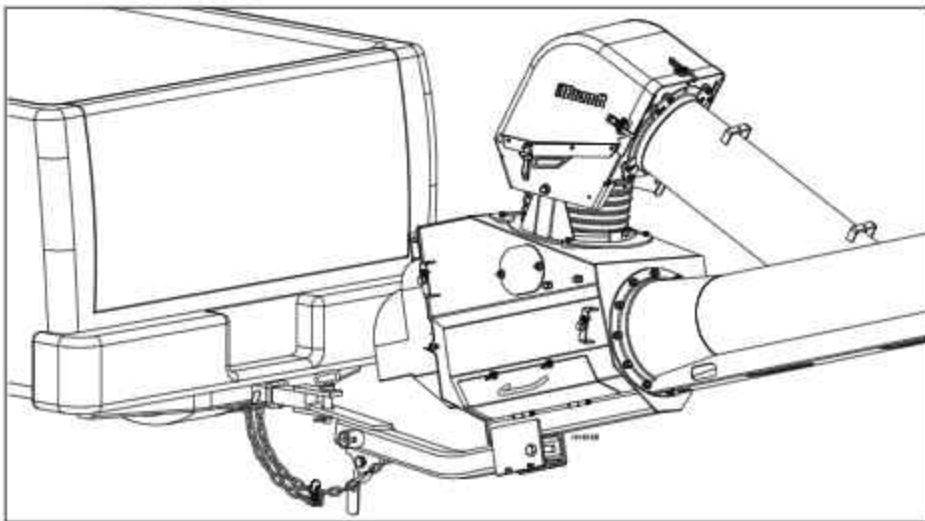
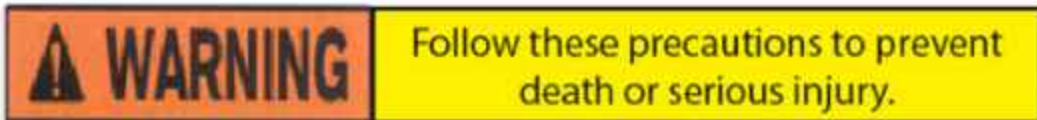


FIG. 2-1. Safety Chain

2.6 Welding/Heating Safety Precautions



- Do not weld or use a torch near pressurized hydraulic fluid lines. Hydraulic lines can burst and create a flammable spray, resulting in severe burns to yourself and bystanders.
- Toxic fumes may be created when paint is heated by welding or using a torch. Remove paint a minimum of 4 inches (100mm) from the area affected by heating.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before heating. Remove the solvent or paint stripper and flammable material from the area. Ventilate the area for 15 minutes before welding or heating.
- Lock-out/Tag-out electrical power to the machine.
- Ground welding machine as near to the weld area as possible.
- Do not use chlorinated solvent in the area where welding will take place.
- Perform all work in a well-ventilated area. Use a welder's respirator.
- Dispose of paint and solvents properly.

2.7 Maintenance Safety

- Always disengage power, shut down the engine, remove the ignition key, be sure all moving parts have stopped before attempting to maintain or service the unit.
- Support the machine with blocks or stands when changing tires or working beneath.
- Follow good shop practices:
 - keep service areas clean and dry.
 - be sure electrical tools are properly grounded.
 - use adequate light for the job at hand.
 - use personal protective equipment. (ie. gloves, safety glasses, etc.)
- Use only tools, jacks and hoists of sufficient capacity for the job.
- Relieve pressure from the hydraulic system before servicing.
- Before applying pressure to a hydraulic system, be sure all connections and fittings are tight and in good condition. Never check for leaks with your hands. Always use a piece of wood.
- Replace all shields after maintenance. Never operate without shields, guards or access doors in place.

2.8 Grain Bin Safety

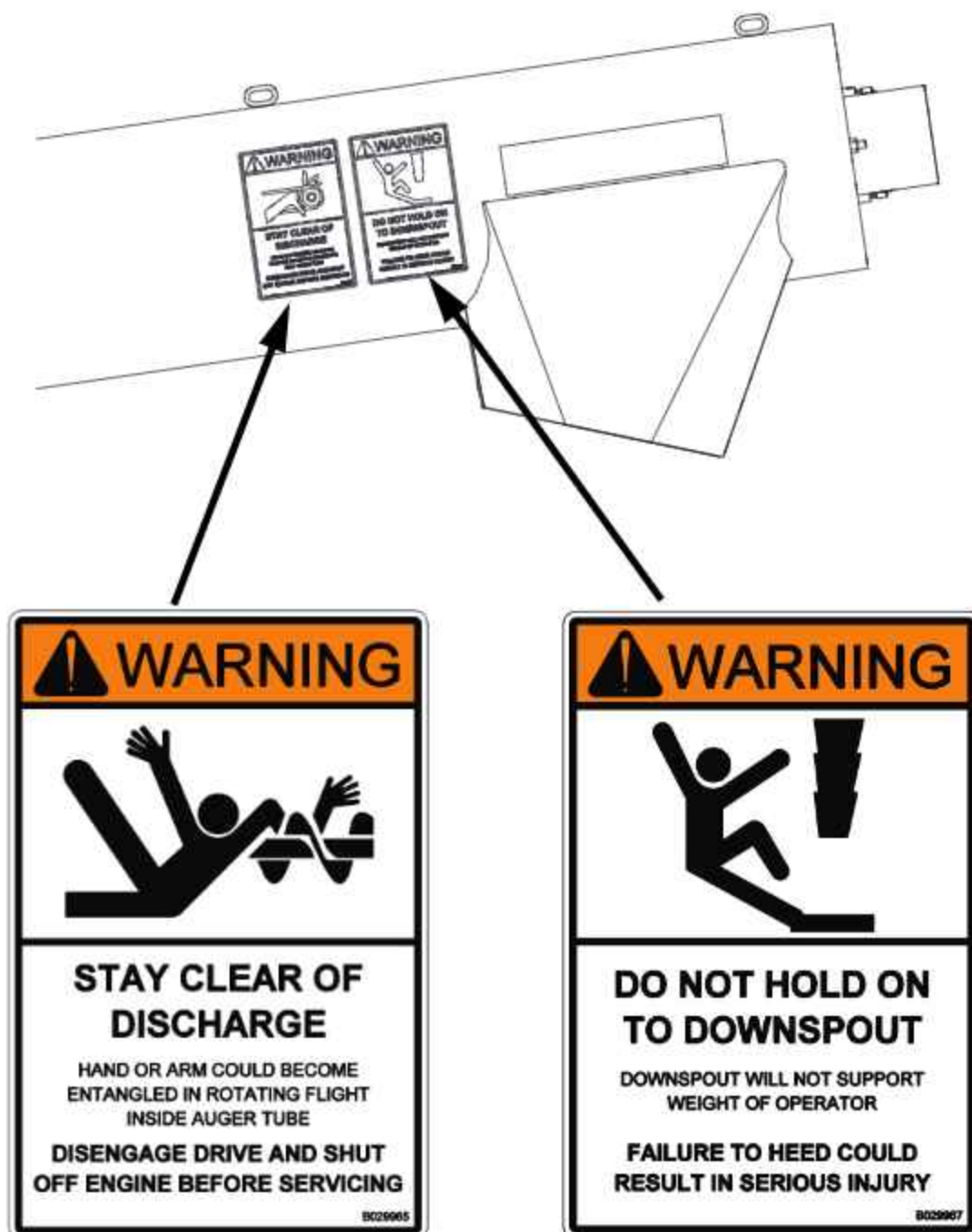
- Never enter a grain bin unless at least two people are present. Have one person outside the bin who can shut down the machine if an emergency arises.
- Always ensure an escape route exists before entering the bin.
- Do not walk on top of the grain in a bin unless another person is present and the person on the grain is equipped with a safety line.

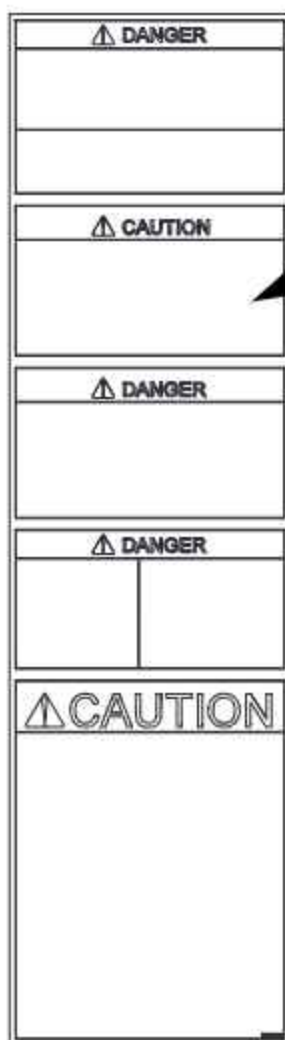
2.9 Safety Decals

- Read and understand all decals before operating. Take care to follow all precautions and warnings displayed on the decals.
- Keep safety decals and signs clean and legible at all times.
- Replace safety decals and signs that are missing or have become illegible.
- Replaced parts that originally displayed a safety sign must also display the original sign.
- Safety decals or signs are available from your Dealer Parts Department or the factory.

2.10 Safety Decal Locations

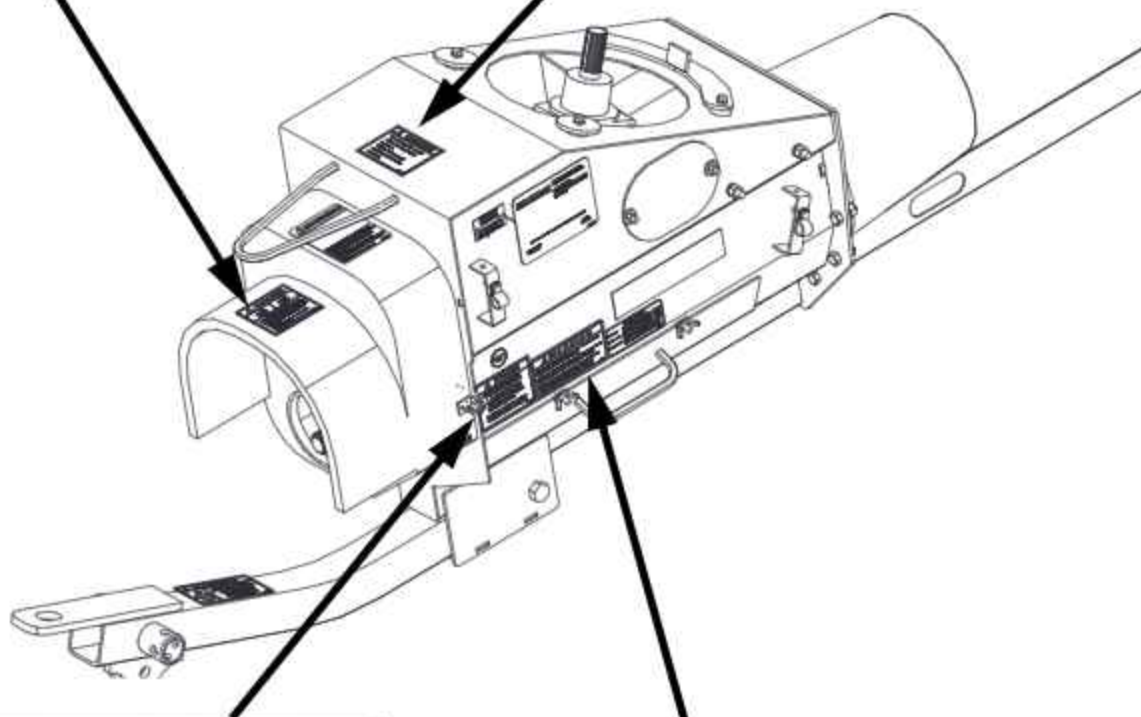
The following illustrations show the position and content of the various safety decals on the Brandt 16" MDSA. If safety decals ever become damaged, removed or illegible, new decals must be applied.

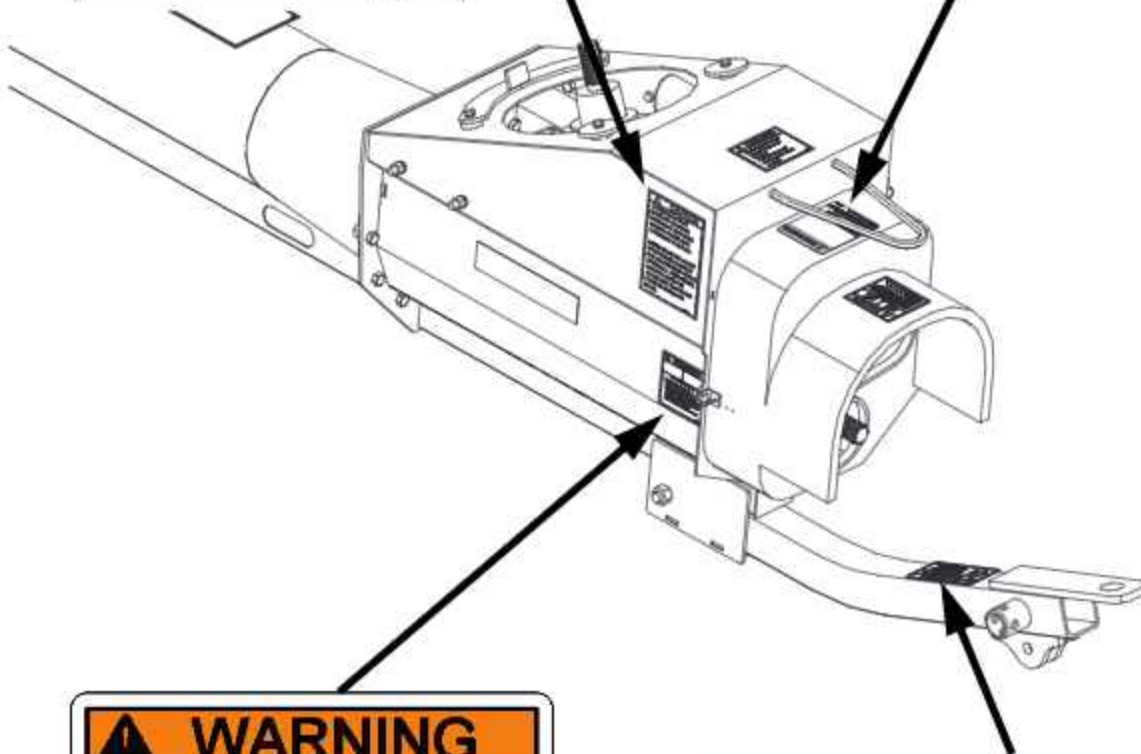
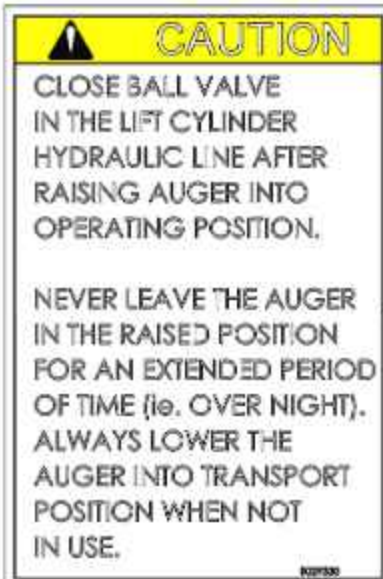




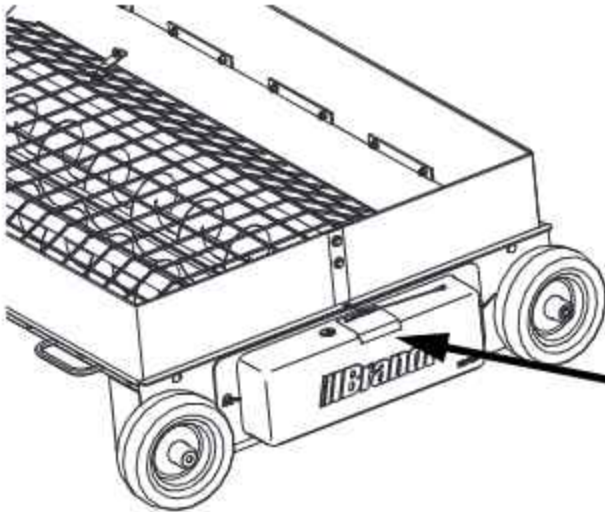
Main Tube

⚠ DANGER	
	
<p>To Prevent Serious Injury or Death: Keep hands, feet and clothing away from auger intake.</p>	
⚠ CAUTION	
WINCH OPERATION	
<ol style="list-style-type: none"> 1. After lowering the auger always turn the winch handle clockwise at least two clicks to tighten the brake lock. 2. Maintain control of the winch handle at all times. 3. Maintain tight cable tension when in the towing position. 4. Do not put lubrication of any kind on the brake pad. 5. Check cable before each use. Replace if frayed or damaged. 	
⚠ DANGER	
UPENDING HAZARD	
<ol style="list-style-type: none"> 1. The intake end of the auger must always have downward weight. 2. Always test it before releasing it from the vehicle or hold down. 3. Lift the intake slowly and keep it no higher than the tractor tow bar when attaching or releasing it. 4. Don't push the undercarriage. 5. Immediately lower the auger to transport position before moving. <p>FAILURE TO DO SO WILL CAUSE UPENDING, WHICH WILL RESULT IN SERIOUS INJURY OR DEATH.</p>	
⚠ DANGER	
	<p>ELECTROCUTION HAZARD To prevent serious injury or death from electrocution: Stay away from overhead power lines when transporting or raising auger.</p> <p><i>This machine is not grounded.</i> Electrocution can occur without direct contact.</p>
⚠ CAUTION	
<ol style="list-style-type: none"> 1. Read and understand the operator's manual before operating. 2. Keep all safety shields and devices in place. 3. Make certain everyone is clear before operating or moving the machine. 4. Keep hands, feet and clothing away from all moving parts. 5. Shut off power to adjust, service or clean the auger. 6. Support discharge and/or anchor intake to prevent upending. (See Operator's Manual) 7. Disconnect power before resetting motor overload. (Electric Motor Drive) 8. Empty auger before moving to prevent upending. 9. Lower auger to transport position before moving or transporting. 10. Make certain electric motors are grounded. 11. Use only genuine Brandt replacement parts, especially shear pins and bolts. 12. Do not run the auger empty except at idling speed. 	
8029100	









! DANGER

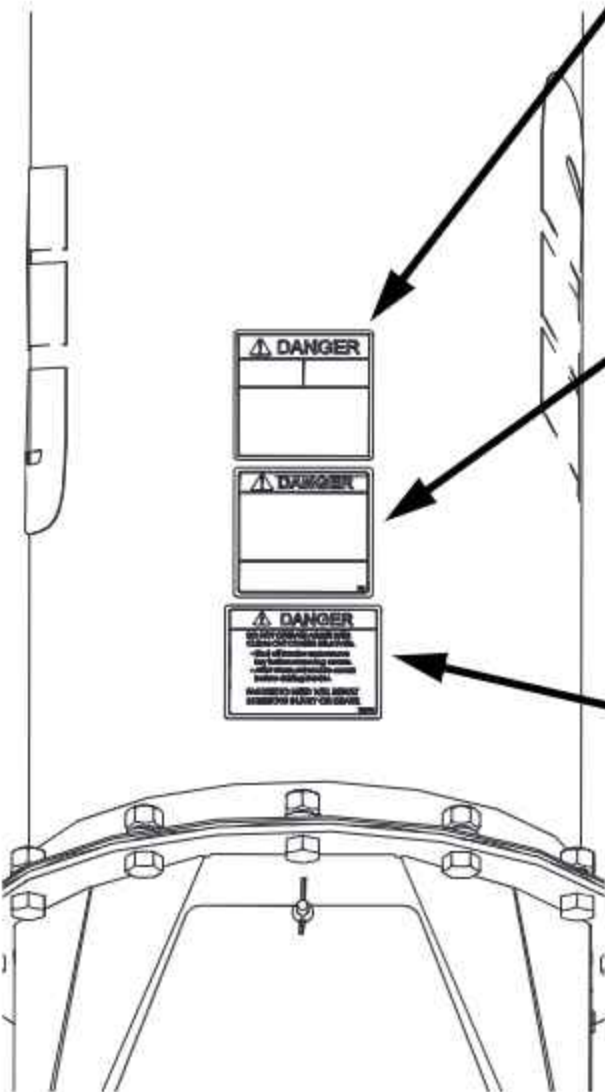



MOVING PART HAZARD

To prevent serious injury or death from moving parts:

- KEEP AWAY, Moving parts can crush and dismember.
- Do not operate without guards and shields in place.
- Close and secure guards and shields before starting.
- Keep hands, feet, hair and clothing away from moving parts.
- Disconnect and lockout power source before adjusting and servicing.
- Do not stand or climb on machine when operating.

B029111



! DANGER



To Prevent Serious Injury Or Death:
Keep hands, feet and clothing away
from auger intake.

103

! DANGER

**DO NOT OPERATE AUGER WITH
CLEAN-OUT COVERS REMOVED.**

- Shut off tractor and remove key before removing covers.
- After clean out secure covers before starting tractor.

**FAILURE TO HEED WILL RESULT
IN SERIOUS INJURY OR DEATH.**

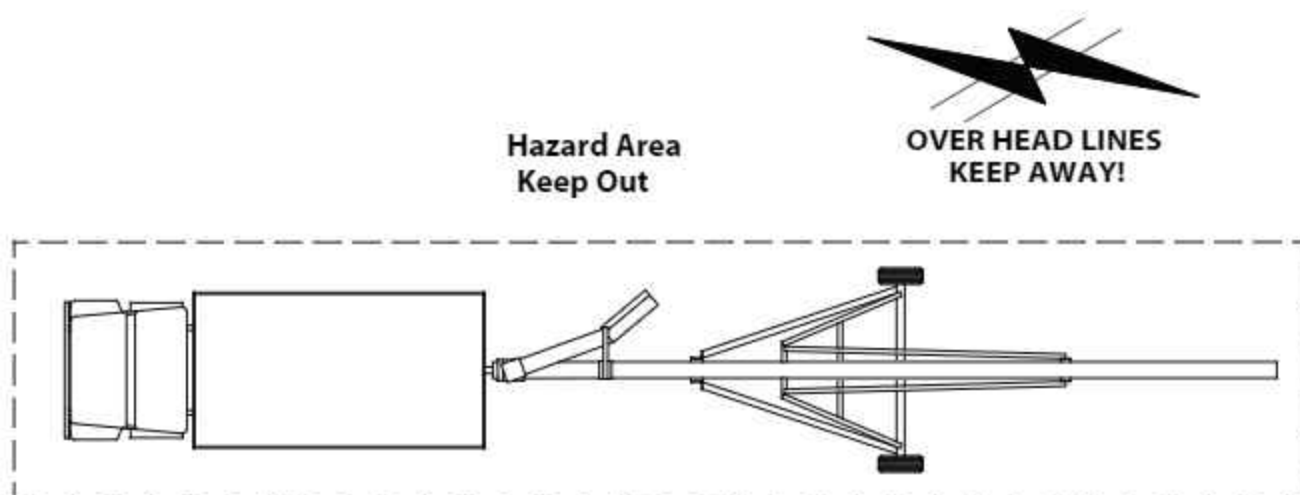
B029310

Swing Tube

2.11 Work Area Safety

The work areas shown below and on the next page should be marked off with barriers. It shall be the duty of the operator to see that children and/or other persons stay out of the work area! Trespassing into the work area by any one not directly involved in the actual operation, or trespassing into the hazard area by anyone, shall result in an immediate shut down by the operator. Prior to start up and during operation, it shall be the responsibility of the operator to see that the work area has secure footing, is clean and free of all debris and tools which may cause accidental tripping and/or falling.

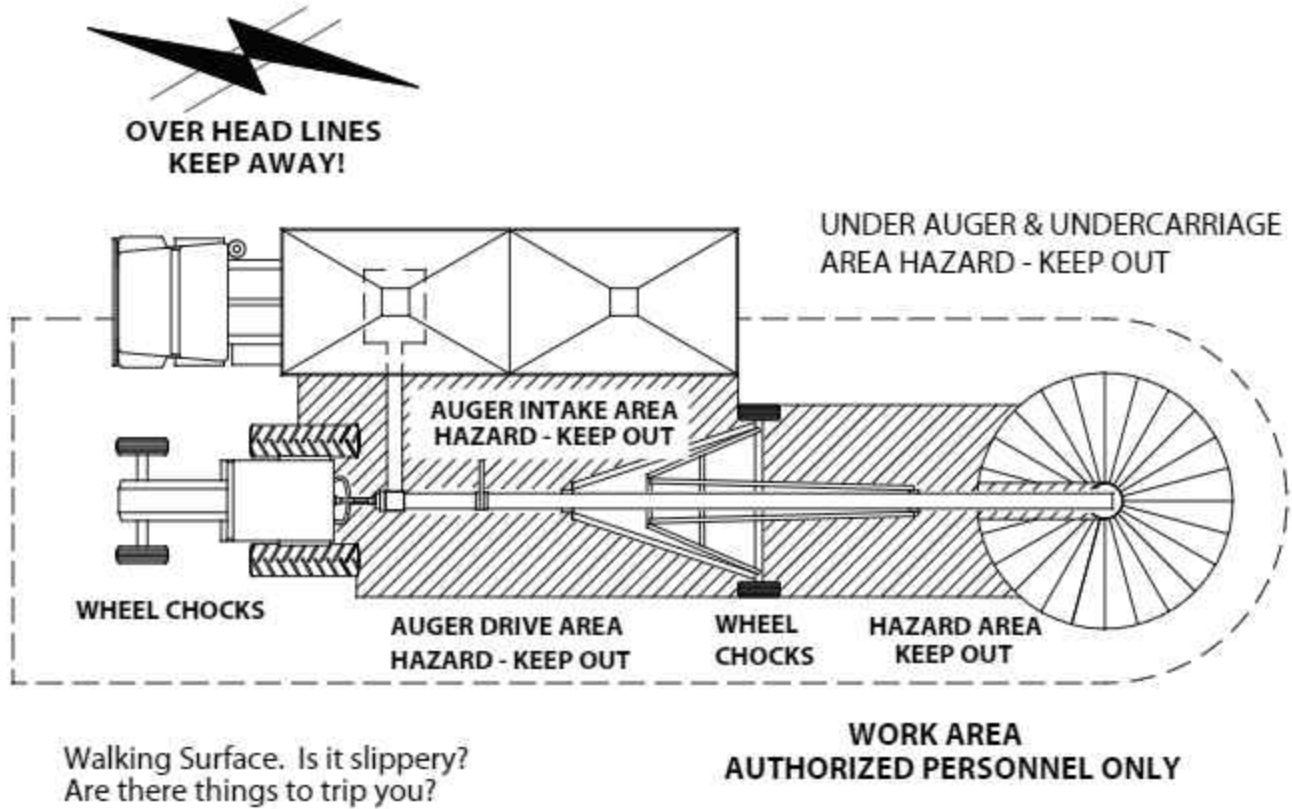
2.11.1 Transport Position



NOTE: When transporting the auger with a tractor, make sure the PTO Shaft has been disconnected from the tractor and placed in the PTO Shaft Holder. Failure to do this could cause damage to the auger, tractor and PTO Shaft.

When transporting the auger with a vehicle other than a tractor, remove the complete PTO Shaft from the auger and place it in the transport vehicle.

2.11.2 Operating Position



CHAPTER 3 Assembly

Before beginning to assemble your new Brandt Swing Auger, you are advised to read the following instructions carefully. Familiarize yourself with all the sub-assemblies and parts making up the auger. Check that all parts are on hand and arranged for easy access.

3.1 Preparing the Assembly Site

IMPORTANT: In order to setup the Swing Auger, at least three people are required and the assembly must be carried out in a large open area with a flat floor surface. Do not attempt to assemble the swing auger alone or without a forklift or overhead crane.

3.2 Tube Assembly

Note: Extra fasteners have been added to the bolt bag to make up for any shortages. There will be fasteners left over when the assembly is complete.

Note: The Swing Auger and Hopper has it's own bolt bag.

1. Mount the wheels to the Axle using the wheel nuts provided. **Torque the wheel nuts to 90 ft.lbs.** See Fig. 3-1.
2. Loosely attach the Lift Arms to the Axle using six 1/2" x 4" U-Bolts x 5" long and lock nuts. Position the arms on the axle where shown. Do not tighten the nuts yet. Place the other end of the Lift Arms on a wood 2x4.
3. Install the Lift Cross between the Lift Arms using twenty four 1/2" x 1 3/4" bolts and lock nuts. Make sure the Lift Cross is oriented as shown in Fig. 3-1. Tighten all the nuts and the nuts on the U-Bolts.

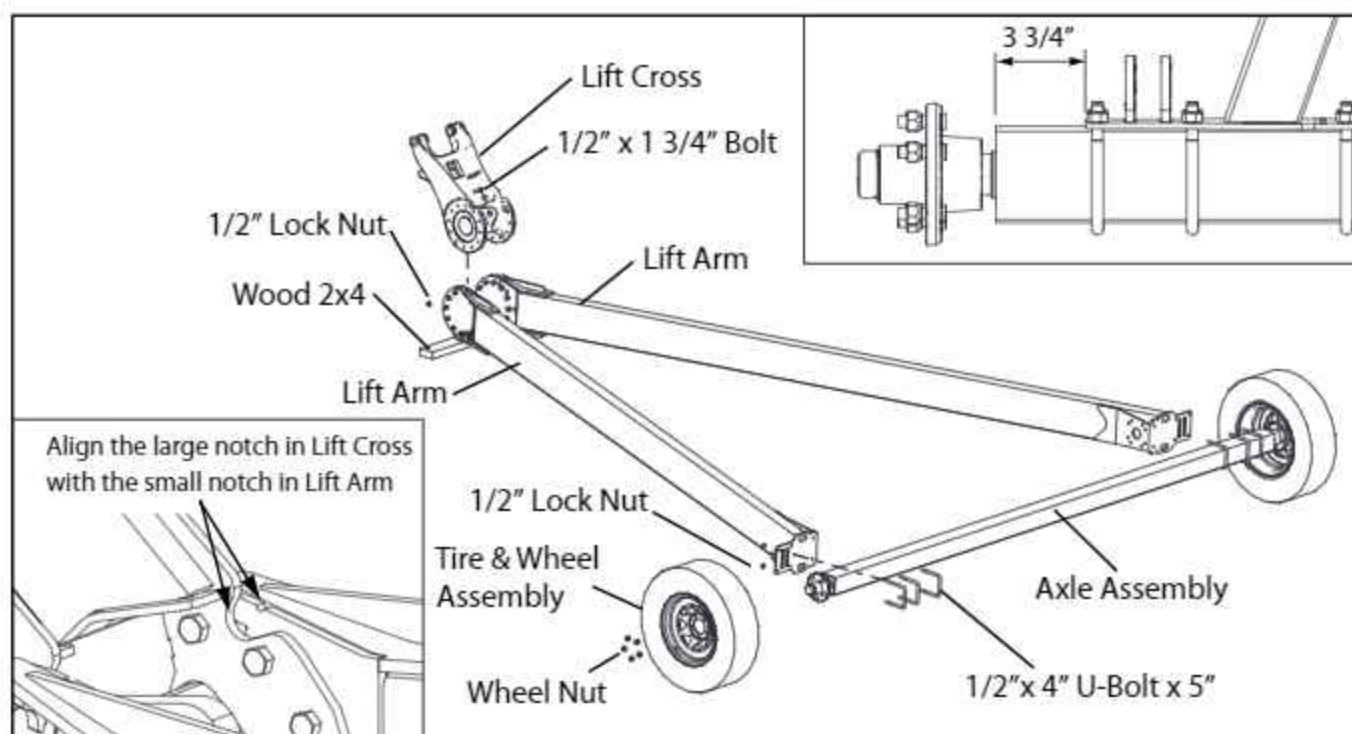


FIG. 3-1. Undercarriage Assembly

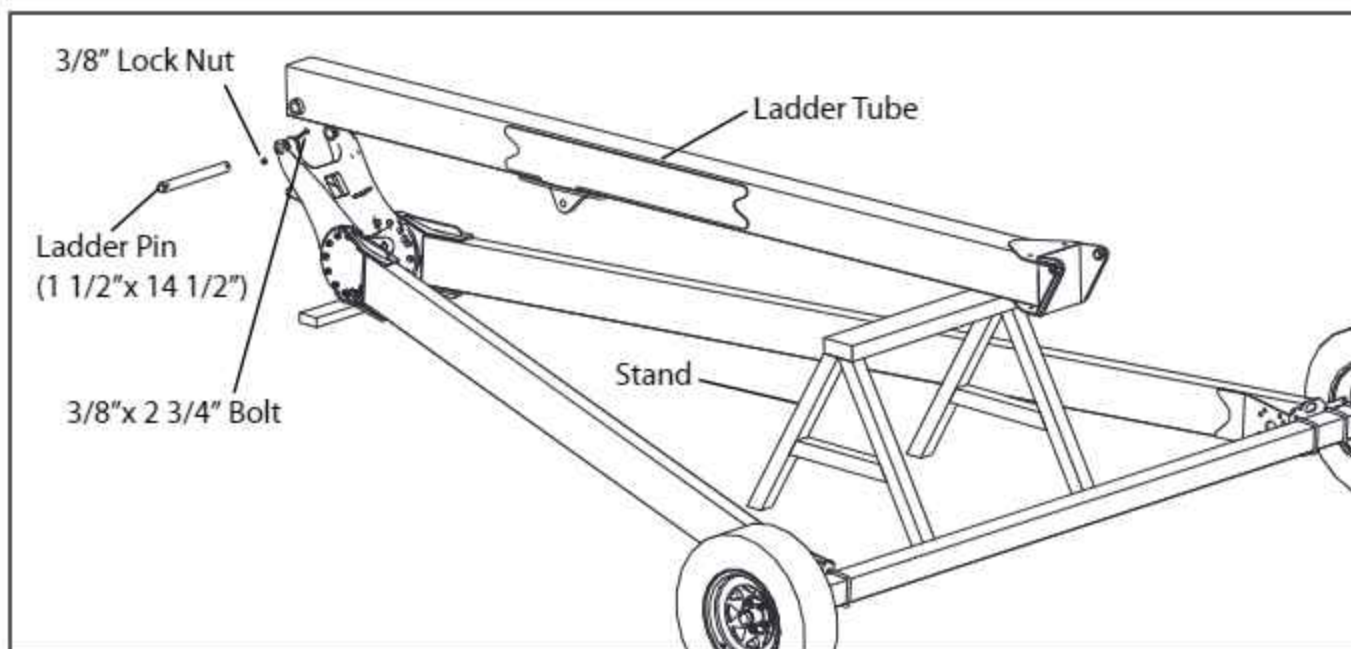


FIG. 3-2. Installing the Ladder Tube

4. Place a stand between the Lift Arms as shown in Fig. 3-2. Attach the Ladder Tube to the Lift Cross using the 1 1/2" Ladder Pin (1 1/2" x 14 1/2" long). Secure in place using two 3/8" x 2 3/4" bolts and lock nuts.
5. Place a stand where shown in Fig. 3-3. Bring in the Suspension Tube Assembly and attach it to the Ladder Tube using the 1" Ladder Pin (1" x 11 3/4" long). Secure the pin in place using a 5/16" x 2" bolt and lock nut.
6. Place a stand where shown in Fig. 3-4. Bring in the Lower Tube Assembly. Slide the flight out of the Suspension Tube and connect it to the Lower Tube Flight using three 1/2" x 3 1/4" bolts, SAE flat washers and lock nuts. Make sure the ends of the flights make one continuous flighting. If necessary, use a hammer to pound on the flight until the ends are tight together. Grind the flight joint to make a smooth outer edge.

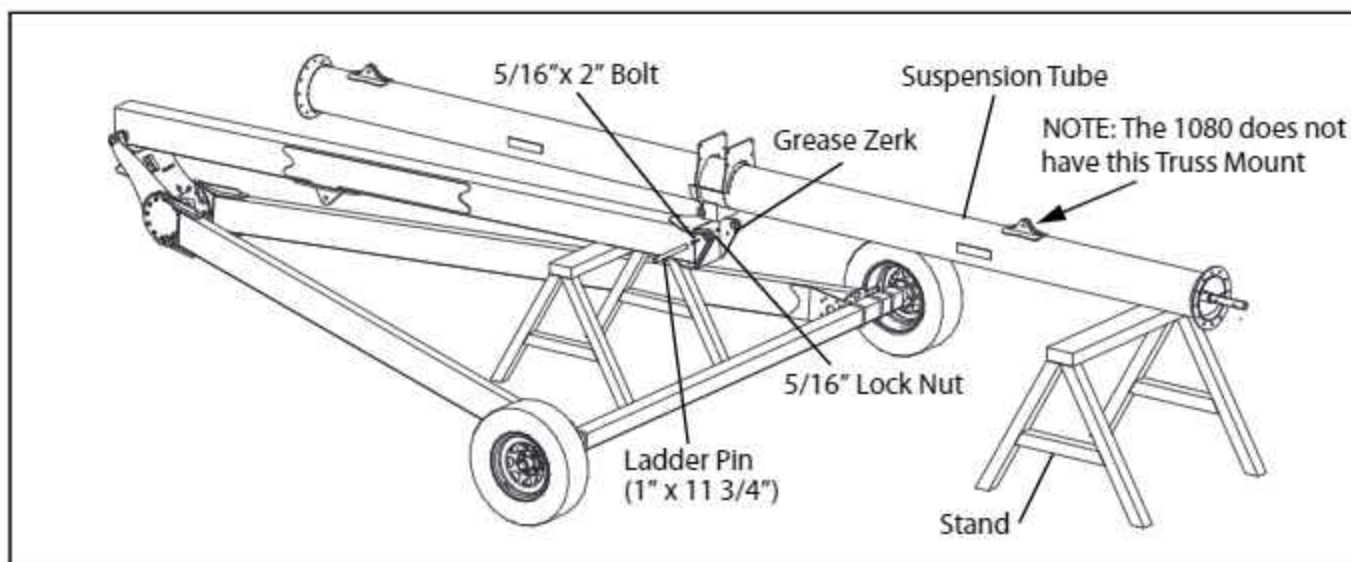


FIG. 3-3. Installing the Suspension Tube

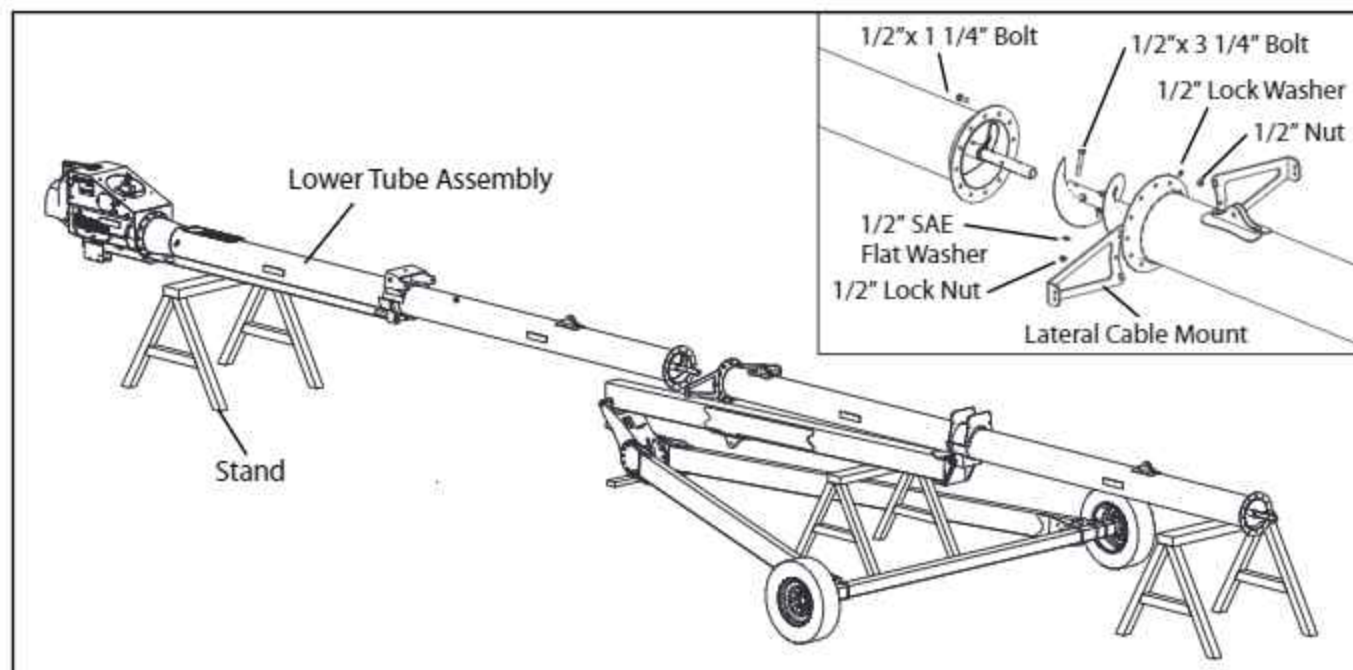


FIG. 3-4. Installing the Lower Tube

7. Slide the tubes together and join using twelve $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, lock washers and nuts. Make sure the Lateral Cable Mounts are placed where shown. Snug the four nuts on the top, bottom and either side at this time.

8. 1070 & 1080 Augers

Place a stand where shown in Fig. 3-5 or Fig. 3-6. Bring in the Third Tube Assembly. Slide the flight out of the tube and connect it to the Suspension Tube Flight using three $\frac{1}{2}$ " x $3\frac{1}{4}$ " bolts, SAE flat washers and lock nuts. Make sure the ends of the flights make one continuous flighting. If necessary, use a hammer to pound on the flight until the ends

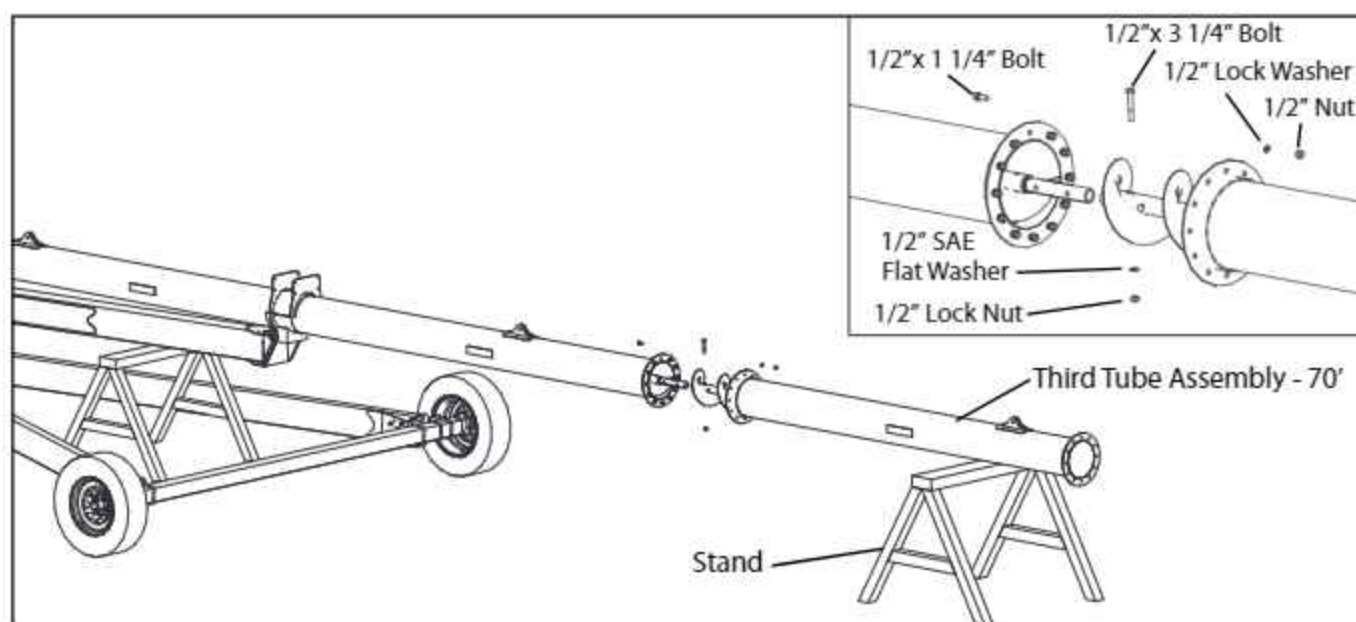


FIG. 3-5. Installing the 70' Third Tube

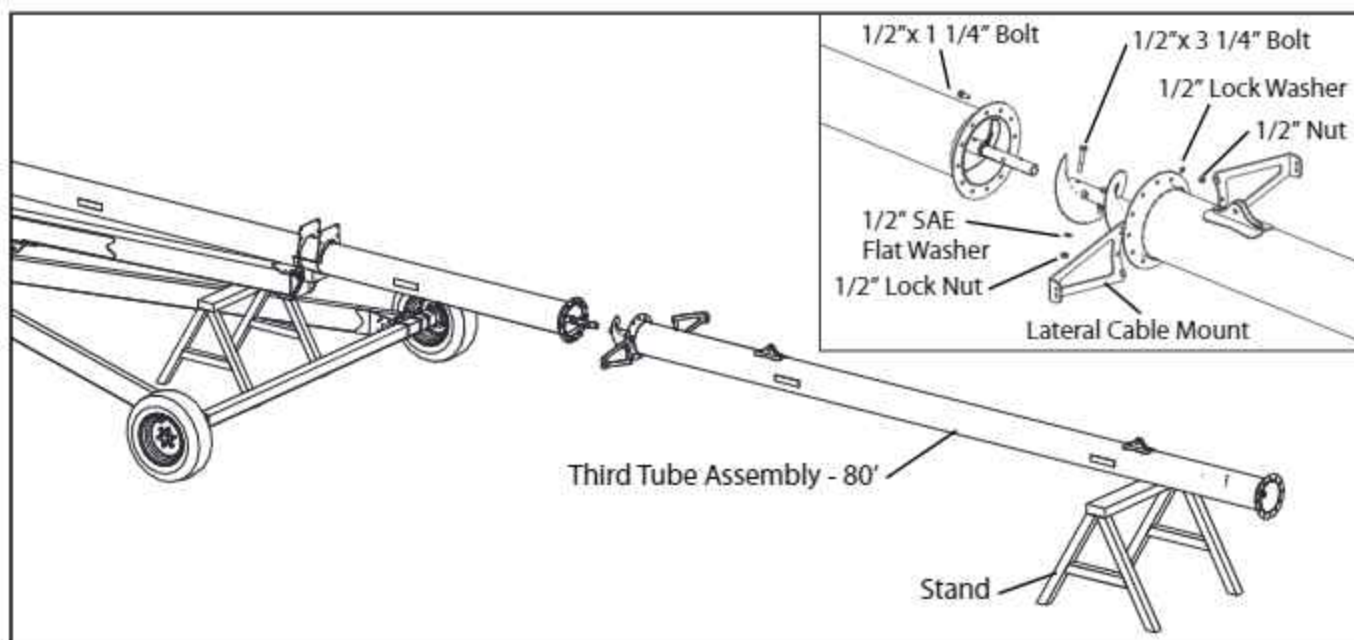


FIG. 3-6. Installing the 80' Third Tube

are tight together. Grind the flight joint to make a smooth outer edge.

9. Slide the tubes together and join using twelve 1/2" x 1 1/4" bolts, lock washers and nuts. If required, make sure the Lateral Cable Mounts are placed where shown.

Snug the four nuts on the top, bottom and either side at this time.

10. All Augers

Place a stand where shown in Fig. 3-7. Bring in the Upper Tube Assembly. Remove the Head End Bearing Cover and the lock collar

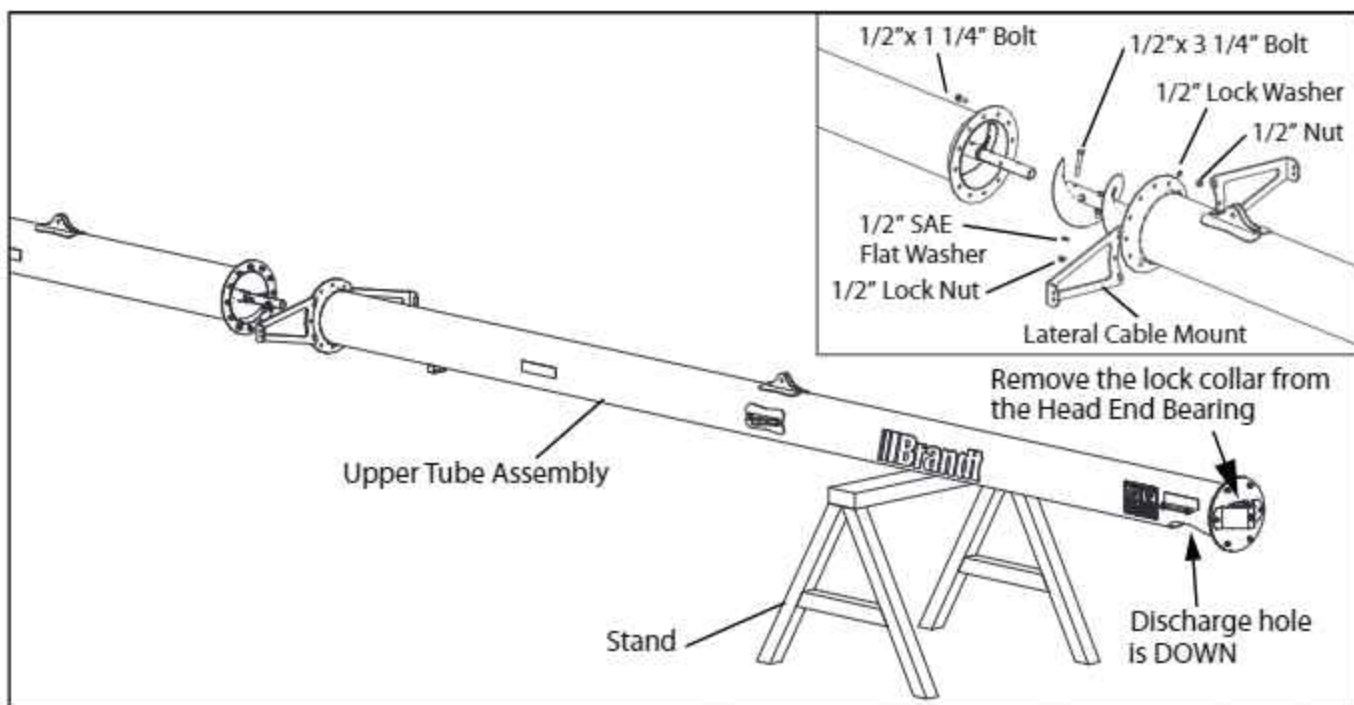


FIG. 3-7. Installing the Upper Tube

from the bearing and slide the flight out of the tube. Connect the flights using three $1\frac{1}{2}$ " x $3\frac{1}{4}$ " bolts, SAE flat washers and lock nuts. Make sure the ends of the flights make one continuous flighting. If necessary, use a hammer to pound on the flight until the ends are tight together. Grind the flight joint to make a smooth outer edge.

11. Slide the tubes together and join using twelve $1\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, lock washers and nuts. Make sure the Lateral Cable Mounts are placed where shown. Snug the four nuts on the top, bottom and either side at this time.
12. Reinstall the lock collar on the Head End Bearing. Make sure to lock the collar in direction the flight will rotate and tighten the set screw. See Fig. 3-8.
13. Reinstall the Head End Bearing Cover over the head end bearing and secure in place using the fasteners removed earlier. See Fig. 3-8.
14. Install the Left and Right Spout Half using the fasteners shown.

NOTICE

Notice. Do not tighten the $3/8$ " mounting bolts so tight as to bend the mounting plates on the tube. A small gap between the mounting plates and the spout is allowable.

15. With a chalkline or by carefully eyeing the tube assembly from one end, ensure that the tube is straight side to side. Use shims if required.
16. Tighten the tube flange bolts securely in a sequence that starts at one bolt and progresses to the bolt on the opposite side of the tube. Keep progressing around the tube in this manner until all the bolts are tight.

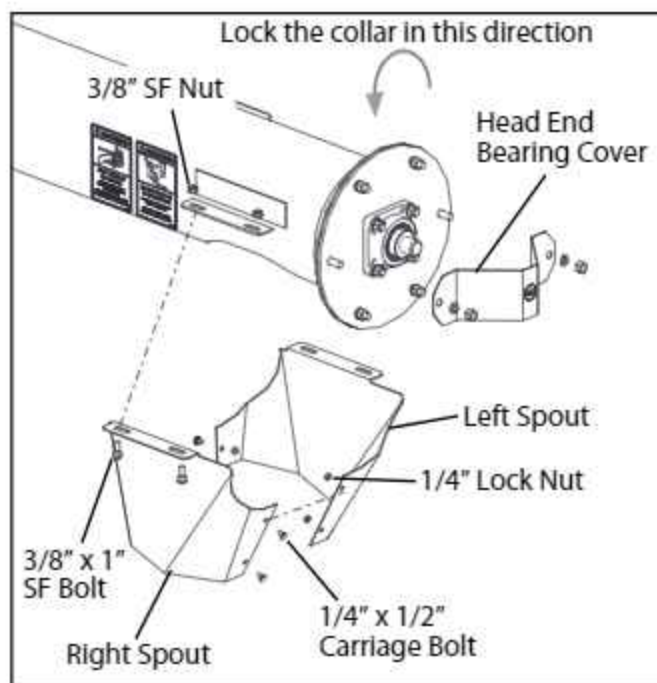


FIG. 3-8. Installing the Bearing Cover and Spout

3.3 Tube Truss Assembly

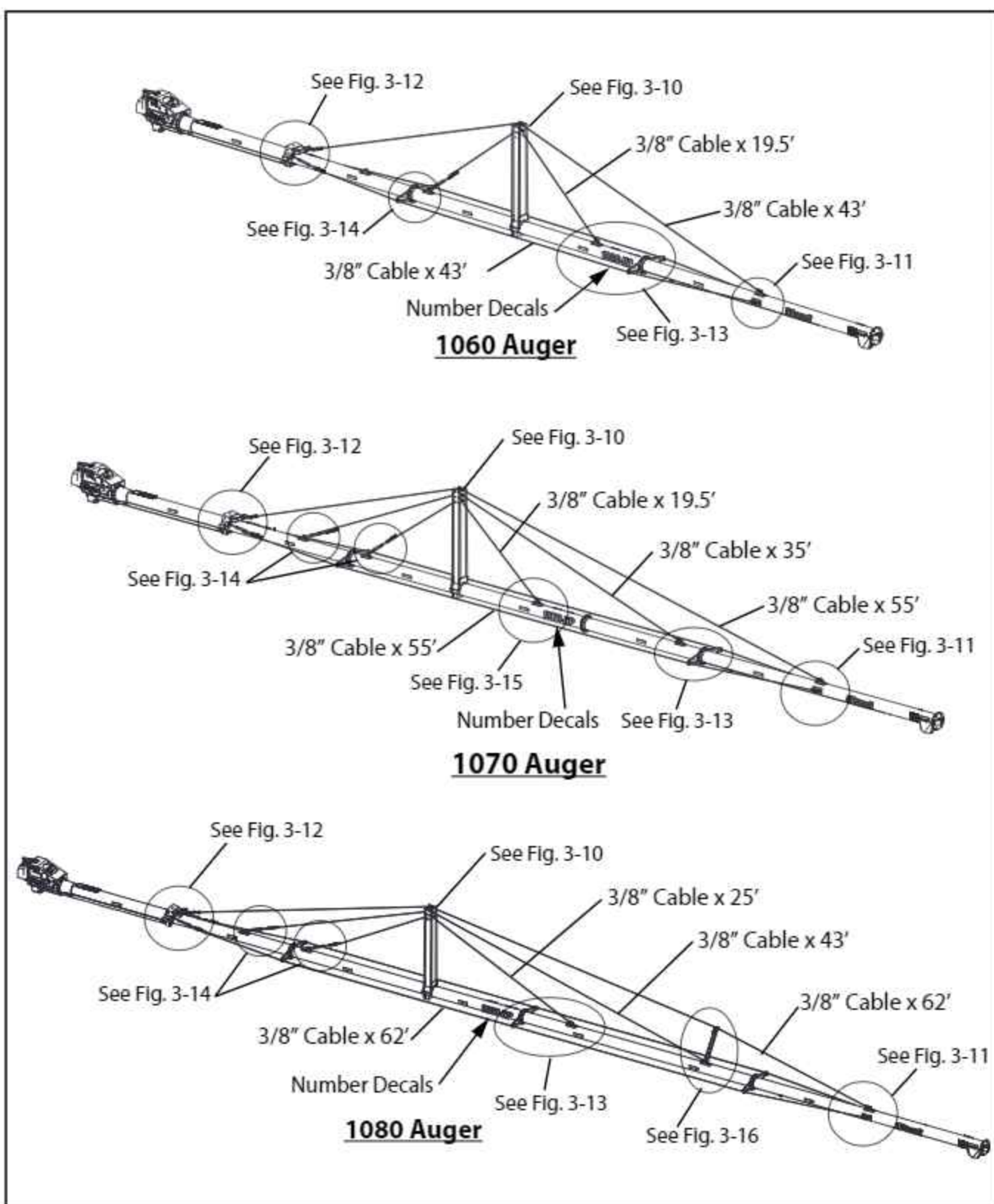


FIG. 3-9. Installing the Truss Cables

3.3.1 1060 Truss Assembly

1. Loosely attach the Main Tower Uprights to the tube using four 1/2" x 1 1/4" bolts and lock nuts in each. Do not fully tighten the nuts yet. See Fig. 3-10.
2. Install the two Tower Supports between the Uprights using four 1/2" x 1 1/4" bolts and lock nuts in each.
3. Tighten all the mounting bolts, making sure the Tower is as close to vertical as possible.
4. Loosely install a 3/8" Cable Clamp and flatwashers on both of the Tower Supports.
5. Attach the looped end of the three 43' truss cables to the discharge end of the auger tube, as shown in Fig. 3-11.
6. Route the cable on the top of the tube through the cable clamp on the top of the truss tower and down to the mount at the Lift Arm saddle. Do not tighten the cable clamp yet.
7. Attach the Swivel Cable Mount to the tube using the fasteners shown in Fig. 3-12. Do not fully tighten the nuts, the mount must be able to move.
8. Thread a 5/8" nut half way up a 5/8"x 9" eye bolt. Install a 5/8" flat washer onto the eye bolt. Insert the eye bolt into the mount, as shown in Fig. 3-12. Install another 5/8" flat washer on the end of the bolt and thread another 5/8" nut onto the end, just far enough to fully engage the nut.
9. Install a 3/8" cable thimble into the looped end of the eye bolt.
10. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-12 for the proper clamp orientation.

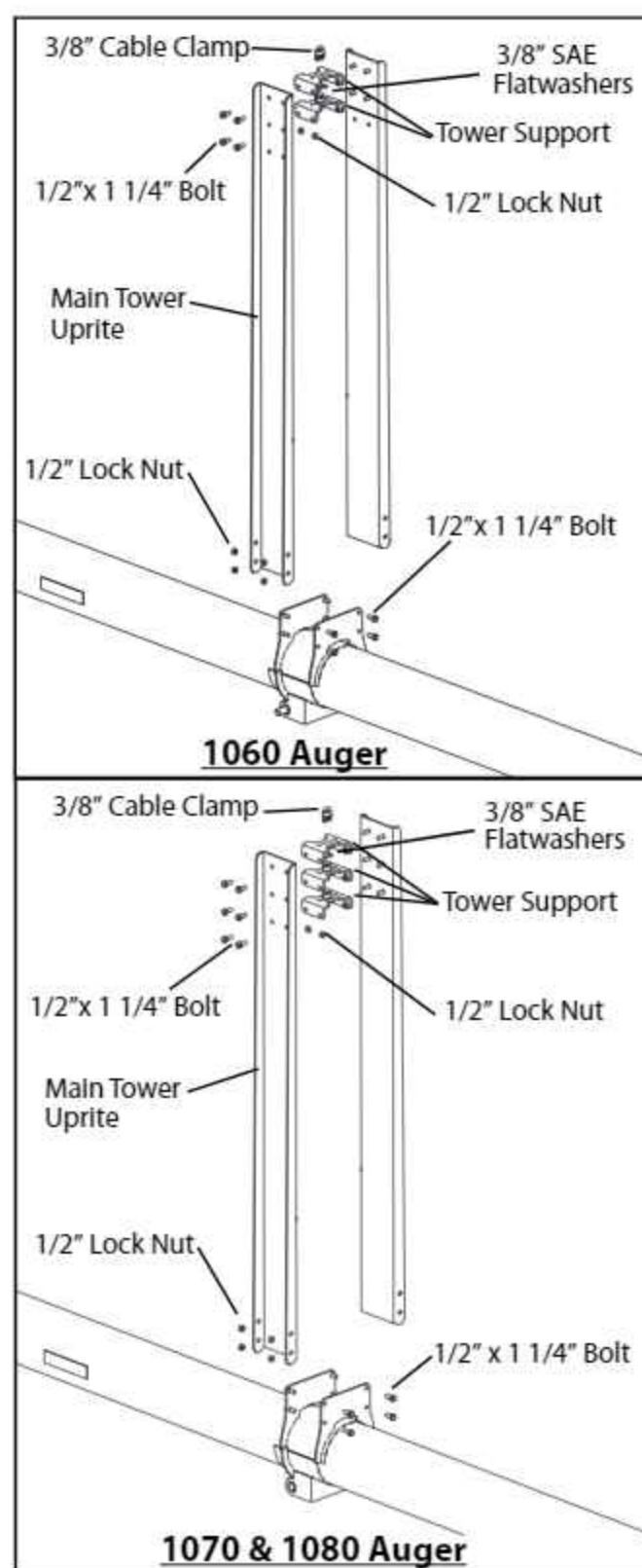


FIG. 3-10. Installing the Main Truss Tower

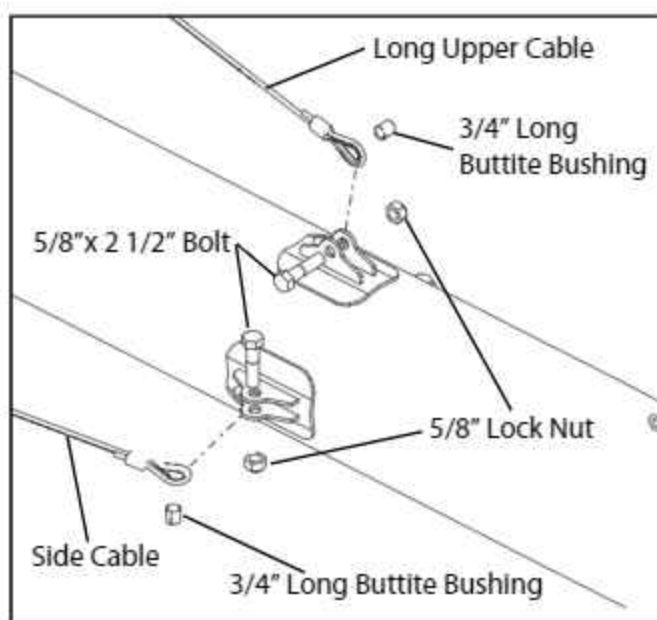


FIG. 3-11. Truss Cable Mounting

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

11. Loosely install a 3/8" cable clamp into each of the Lateral Cable Mounts as shown in Fig. 3-13.

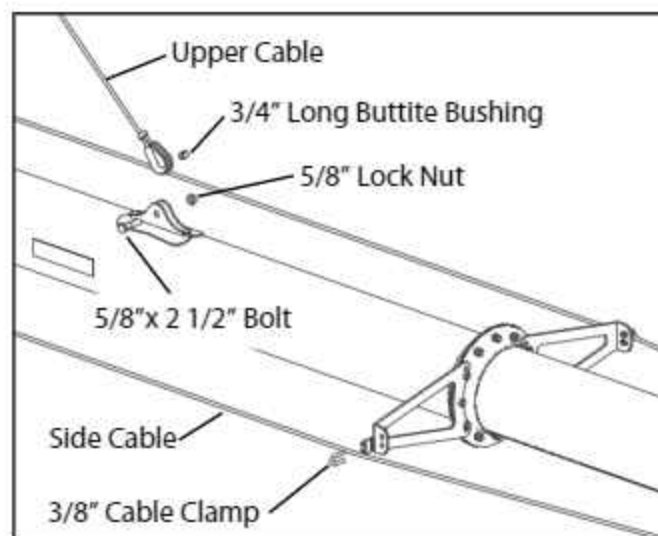


FIG. 3-13. Truss Cable Mounting

12. Route the cables on the sides of the tube through the cable clamp in the Lateral Cable Mounts and down to the mount at the Lift Arm saddle. Do not tighten the cable clamp yet.

13. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-12. Make sure the turnbuckle is fully extended.

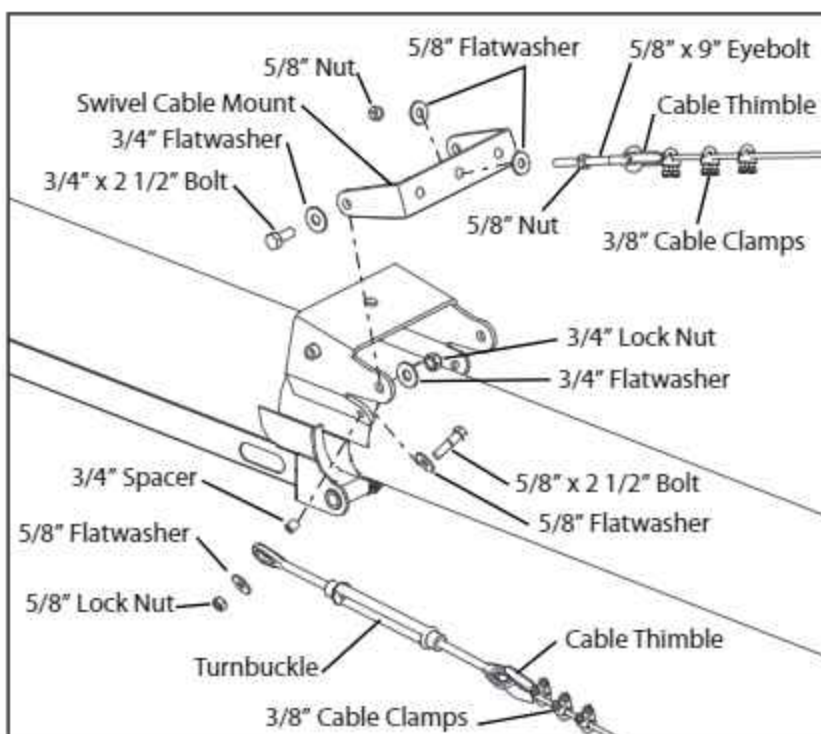


FIG. 3-12. Lower Tube Truss Cable Mounting

14. Install a 3/8" cable thimble into the other end of the turnbuckle.

15. Repeat step 10 with the lateral cables.

16. Attach the looped end of the 19.5' truss cable to the mount close to the Lateral Cable Mounts, as shown in Fig. 3-13.

17. Route the cable through the cable clamp on the lower plate of the truss tower and down to the mount on the tube closest to the Truss Tower. Do not tighten the cable clamp yet. See Fig. 3-9.

18. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-14. Make sure the turnbuckle is fully extended.

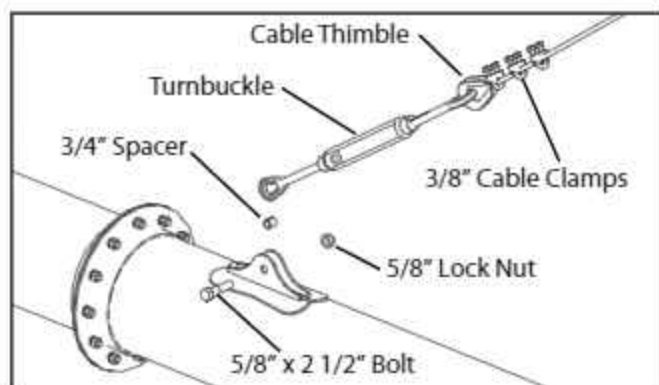


FIG. 3-14. Truss Cable Mounting

19. Install a 3/8" cable thimble into the other end of the turnbuckle.
20. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-14 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

21. Clean the area on the tube shown in Fig. 3-9 and apply the number decals.

3.3.2 1070 Truss Assembly

1. Loosely attach the Main Tower Uprights to the tube using four 1/2" x 1 1/4" bolts and lock nuts in each. Do not fully tighten the nuts yet. See Fig. 3-10.
2. Install the three Tower Supports between the Uprights using four 1/2" x 1 1/4" bolts and lock nuts in each.
3. Tighten all the mounting bolts, making sure the Tower is as close to vertical as possible.
4. Loosely install a 3/8" Cable Clamp and flatwashers on all of the Tower Supports.
5. Attach the looped end of the three 55' truss cables to the discharge end of the auger tube, as shown in Fig. 3-11.
6. Route the cable on the top of the tube through the cable clamp on the top of the truss tower and down to the mount at the Lift Arm saddle. Do not tighten the cable clamp yet.
7. Attach the Swivel Cable Mount to the tube using the fasteners shown in Fig. 3-12. Do not fully tighten the nuts, the mount must be able to move.
8. Thread a 5/8" nut half way up a 5/8" x 9" eye bolt. Install a 5/8" flat washer onto the eye bolt. Insert the eye bolt into the mount, as shown in Fig. 3-12. Install another 5/8" flat washer on the end of the bolt and thread another 5/8" nut onto the end, just far enough to fully engage the nut.
9. Install a 3/8" cable thimble into the looped end of the eye bolt.
10. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-12 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

11. Loosely install a 3/8" cable clamp into each of the Lateral Cable Mounts as shown in Fig. 3-13.
12. Route the cables on the sides of the tube through the cable clamp in the Lateral Cable Mounts and down to the mount at the Lift Arm saddle. Do not tighten the cable clamp yet.
13. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-12. Make sure the turnbuckle is fully extended.
14. Install a 3/8" cable thimble into the other end of the turnbuckle.
15. Repeat step 10 with the lateral cables.
16. Attach the looped end of the 35' truss cable to the mount close to the Lateral Cable Mounts, as shown in Fig. 3-13.
17. Route the cable through the cable clamp on the middle plate of the truss tower and down to the middle mount on the tube. Do not tighten the cable clamp yet. See Fig. 3-9.
18. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-14. Make sure the turnbuckle is fully extended.
19. Install a 3/8" cable thimble into the other end of the turnbuckle.
20. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-14 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

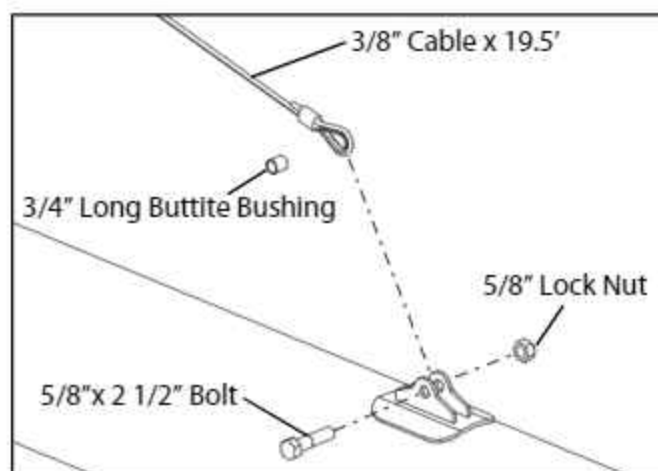


FIG. 3-15. 1070 Truss Cable Mounting

the clamp is on the dead or short side of the clamp.

21. Attach the looped end of the 19.5' truss cable to the mount on the tube, as shown in Fig. 3-15.
22. Route the cable through the cable clamp on the lower plate of the truss tower and down to the mount on the tube closest to the Truss Tower. Do not tighten the cable clamp yet. See Fig. 3-9.
23. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-14. Make sure the turnbuckle is fully extended.
24. Install a 3/8" cable thimble into the other end of the turnbuckle.
25. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-14 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

26. Clean the area on the tube shown in Fig. 3-9 and apply the number decals.

3.3.3 1080 Truss Assembly

1. Loosely attach the Main Tower Uprights to the tube using four 1/2" x 1 1/4" bolts and lock nuts in each. Do not fully tighten the nuts yet. See Fig. 3-10.
2. Install the three Tower Supports between the Uprights using four 1/2" x 1 1/4" bolts and lock nuts in each.
3. Tighten all the mounting bolts, making sure the Tower is as close to vertical as possible.
4. Loosely install a 3/8" Cable Clamp and flatwashers on all of the Tower Supports.
5. Assemble the Short Truss Tower and the looped end of the 43' truss cable to the mount on the tube shown in Fig. 3-9 and Fig. 3-16. Use the fasteners shown in Fig. 3-16.
6. Attach the looped end of the three 62' truss cables to the discharge end of the auger tube, as shown in Fig. 3-11.
7. Route the cable on the top of the tube through the cable clamps on the top of the truss towers and down to the mount at the Lift Arm saddle. Do not tighten the cable clamps yet.
8. Attach the Swivel Cable Mount to the tube using the fasteners shown in Fig. 3-12. Do not fully tighten the nuts, the mount must be able to move.
9. Thread a 5/8" nut half way up a 5/8"x 9" eye bolt. Install a 5/8" flat washer onto the eye bolt. Insert the eye bolt into the truss mount on the top of the tube, as shown in Fig. 3-12. Install another 5/8" flat washer on the end of the bolt and thread another 5/8" nut onto the end, just far enough to fully engage the nut.
10. Install a 3/8" cable thimble into the looped end of the eye bolt.
11. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as

possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-9 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

12. Loosely install a 3/8" cable clamp into each of the Lateral Cable Mounts as shown in Fig. 3-13.
13. Route the cables on the sides of the tube through the cable clamp in the Lateral Cable Mounts and down to the mount at the Lift Arm saddle. Do not tighten the cable clamps yet.
14. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-12. Make sure the turnbuckle is fully extended.
15. Install a 3/8" cable thimble into the other end of the turnbuckle.
16. Repeat step 11 with the lateral cables.

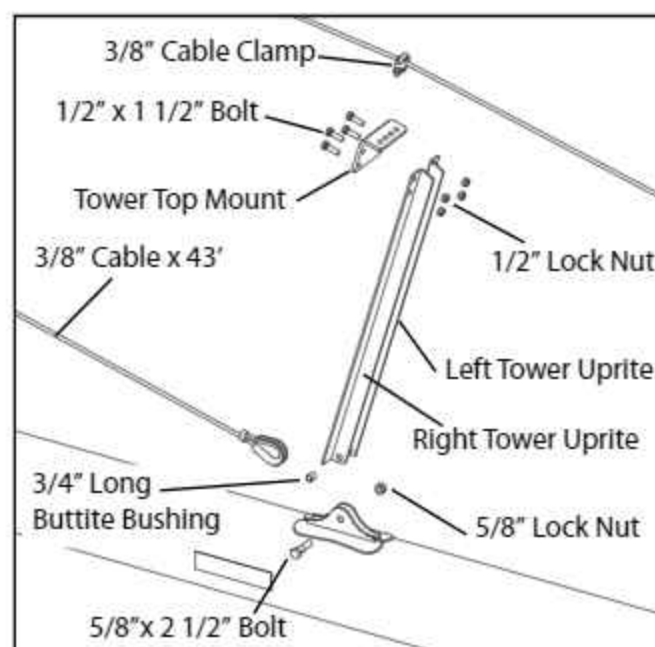


FIG. 3-16. 1080 Short Truss Tower Installation

17. Route the 43' cable through the cable clamp on the middle plate of the truss tower and down to the middle mount on the lower tube. Do not tighten the cable clamp yet. See Fig. 3-9.
18. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-14. Make sure the turnbuckle is fully extended.
19. Install a 3/8" cable thimble into the other end of the turnbuckle.
20. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-14 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

21. Attach the looped end of the 25' truss cable to the mount shown in Fig. 3-9 and Fig. 3-13.
22. Route the cable through the cable clamp on the lower plate of the truss tower and down to the mount on the tube closest to the Truss Tower. Do not tighten the cable clamp yet. See Fig. 3-9.
23. Attach one end of a turnbuckle to the tube using the fasteners shown in Fig. 3-14. Make sure the turnbuckle is fully extended.
24. Install a 3/8" cable thimble into the other end of the turnbuckle.
25. Thread the cable around the thimble. While wearing gloves, pull the cable as tight as possible and install a clamp about 12" from the centre of the eye bolt. Install a second clamp as close as possible to the cable thimble. Install a third clamp half way between the other two. See Fig. 3-14 for the proper clamp orientation.

Note: Make sure the base of the clamp is on the active side of the cable while the rod side of the clamp is on the dead or short side of the clamp.

26. Clean the area on the tube shown in Fig. 3-9 and apply the number decals.

3.3.4 Cable Truss Tensioning

1. Adjust the height of the tube so it appears straight when viewed from the side.
2. Wrap a sling around the upper tube where shown in Fig. 3-17 and 3-18, leaving the intake end on the stand. **CAREFULLY AND VERY SLOWLY**, raise the discharge end of the auger to the dimension shown in Fig. 3-18. This will put a bow in the auger tube. Be extremely careful not to kink the tube.
3. While wearing gloves, pull the upper truss cables as tight as possible and tighten the cable clamps. **Torque the cable clamps to 45 ft.lbs.** Tension the top long cable by adjusting the nuts on the eye bolt. Tighten the other top cables until they are tight. When the cables are adequately tight, tighten the jam nuts on the eye bolt and tighten down each of the clamps on the Main Truss Tower. Re-torque the clamps on the eye bolts. Lower the discharge end of the tube. Measure the distance between the tube and the stand. It should be very close to dimension 'B' in Fig. 3-18.

If the measured dimension is less than dimension 'B'

Raise the discharge end of the tube again, until the cables are slack and tighten the nuts on the eye bolts more or shorten the turnbuckles. Lower the tube and recheck the distance between the tube and the stand. Readjust if necessary.

If the measured dimension is more than dimension 'B'

Adjust the nuts on the eye bolt and adjust the turnbuckles to lower the discharge end to dimension 'B'.



FIG. 3-17. Lifting the Discharge End of Tube

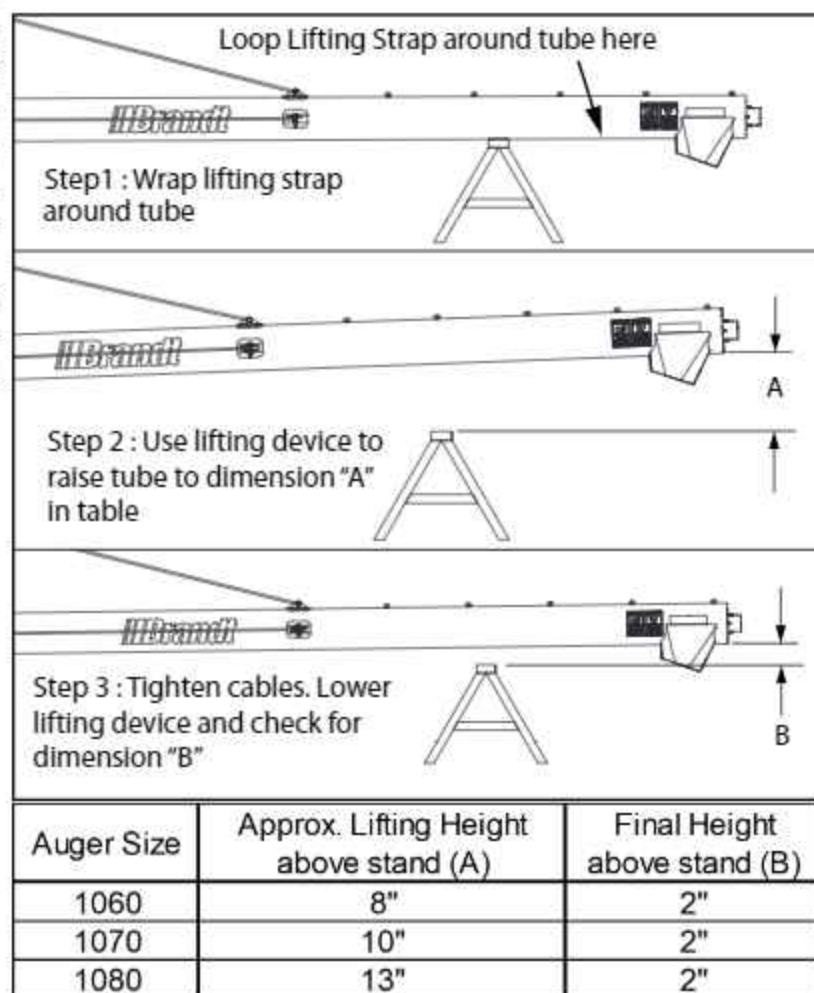


FIG. 3-18. Tension the Truss Cables

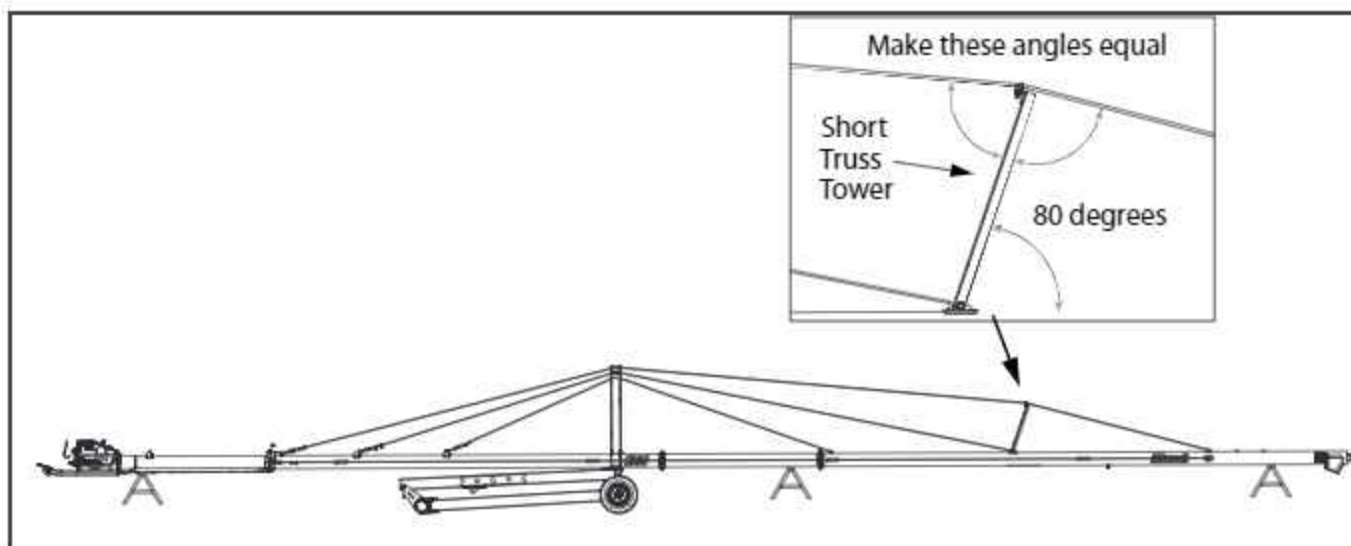


FIG. 3-19. Adjusting the 1080 Short Truss Tower

Note: The cables will stretch after some use and will require re-tightening as time passes.

4. On the 1080 auger, adjust the position of the Short Truss Tower as shown in Fig. 3-19. Make the angle of the truss tower to the upper truss cable approximately the same on both sides of the tower. An approximate angle from the tube to the truss tower is shown in Fig. 3-19.
5. Tighten the jam nuts on the eye bolts. Re-torque the clamps on the eye bolts and turnbuckles to 45 ft.lbs.
6. Tighten the clamps on all the Truss Towers.
7. Tension the side cables evenly by adjusting the turnbuckles. Tighten the cable until they are adequately tight while keeping a eye on the tube to make sure it remains straight. Re-torque the clamps on the turnbuckles to 45 ft.lbs. Tighten the clamps on all the Lateral Cable Mounts.

3.4 Final Undercarriage Assembly

1. Wrap a sling around the tube, close to the Truss Tower as shown in Fig. 3-20. Raise the tube about 4 feet.
2. Wrap another sling around the tube, close to the Boot. Raise the tube high enough to

remove the stand from under the Lower Tube. Lower the intake end to the ground.

3. Install the Transport Uprights and the Transport Rest as shown in Fig. 3-20, using sixteen $\frac{1}{2}$ "x $1\frac{1}{4}$ " bolts and lock nuts. Make sure the Transport Uprights are tipped toward the intake of the auger.

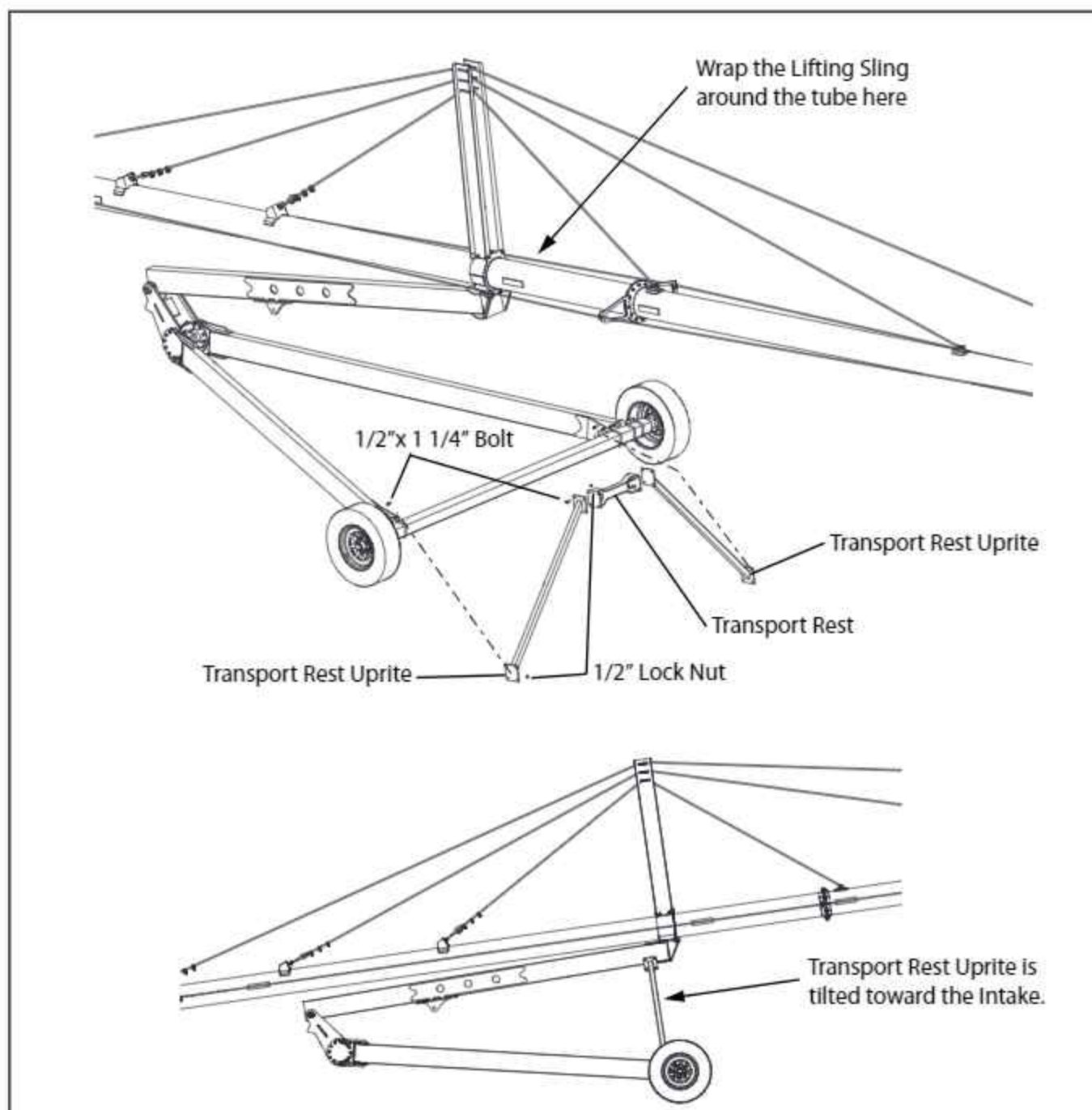


FIG. 3-20. Transport Rest Installation

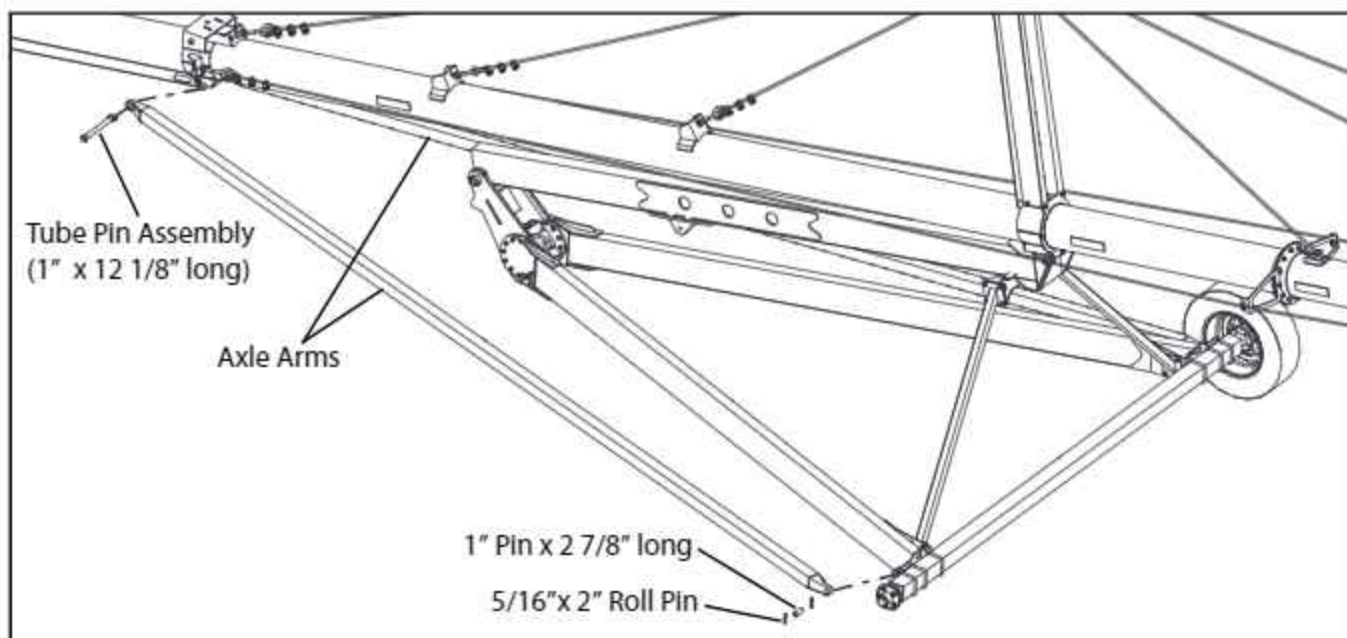


FIG. 3-21. Attaching the Axle Arms

4. Apply a thin layer of grease to the 1" dia x 2 7/8" pins. Attach the Axle Arms to the lugs welded to the Axle using the pins. See Fig. 3-21. Secure each pin in place using two 5/16"x 2" roll pins.
5. Wrap a sling around the Ladder and raise it until the Lift Arms are off the ground by approximately 12".
6. Remove the Pin Bushing from the end of the Tube Pin Assembly (1" x 12 1/8" long) by removing the nut and bolt. The nut and bolt will be reused.
7. Adjust the height of the tube and Ladder to allow connecting the Axle Arms to the tube using the Tube Pin (1" dia x 12 1/8" long). Slide the bushing onto the end of the pin and reinstall the bolt and nut.

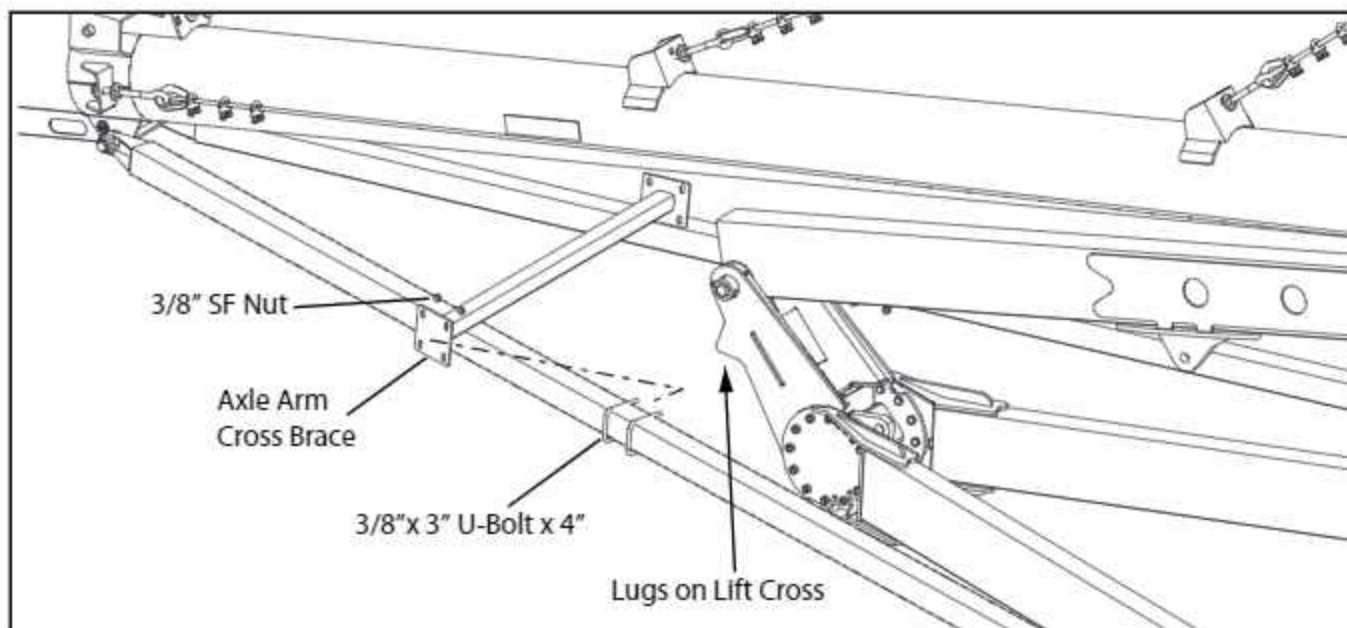


FIG. 3-22. Installing the Axle Frame Cross Brace

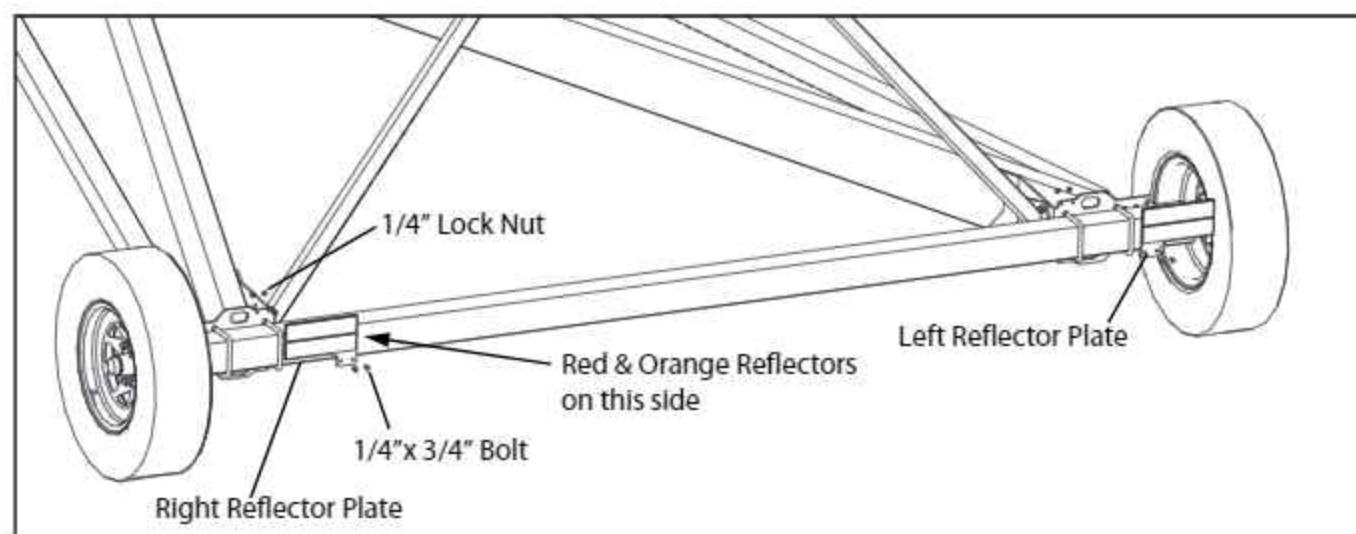


FIG. 3-23. Reflector Plate Installation

8. Install the Axle Arm Cross Brace between the Axle Arms using four $\frac{3}{8}$ "x 3" U-bolts and eight flange lock nuts. Do not tighten the nuts at this time. Position the Cross Brace so the lugs on the back of the Lift Cross will rest on the Cross Brace. See Fig. 3-22.
9. Carefully lower the tube and Ladder until the Ladder is sitting on the Transport Rest. Adjust the height of the Axle Arm Cross Brace so the lugs on the back of the Lift Cross are resting on it. Tighten the U-bolt nuts.
10. Install the Left And Right Reflector Plates to the lift arm mounts using two $\frac{1}{4}$ "x $\frac{3}{4}$ " bolts and lock nuts in each. Make sure the plates are oriented as shown in Fig. 3-23.
11. Mount the Plastic Manual Holder on the right Axle Arm using two Manual Holder Brackets, two $\frac{1}{4}$ " U-bolts, three $\frac{1}{4}$ " x $\frac{3}{4}$ " bolts, flat washers and seven $\frac{1}{4}$ " flange lock nuts. See Fig. 3-24.

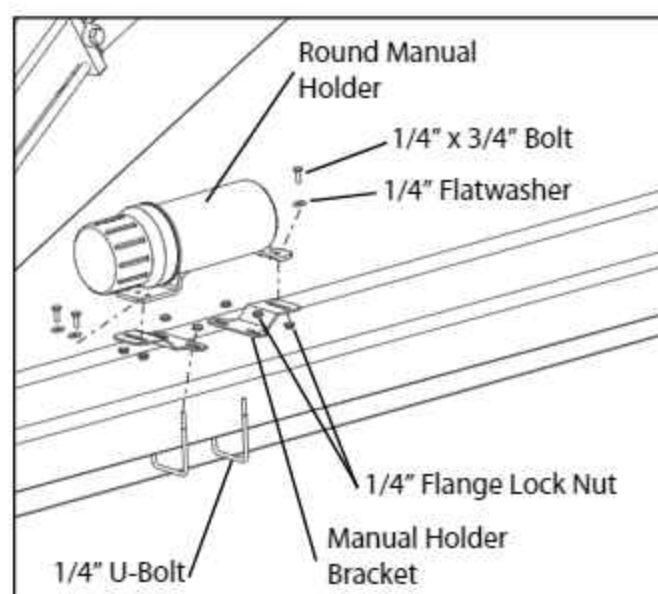


FIG. 3-24. Manual Holder Installation

3.5 Hydraulic Cylinder Installation

1. Install the #8MORB x #6MJIC fitting in the base end port of the hydraulic cylinder. On 1060 & 1070, move the port plug from the bottom to the side port, if required. See Fig. 3-25.
2. Install the #8MORB Breather fitting in the rod end port.
3. Mount the hydraulic cylinder between the Lift Cross and the Ladder with the rod end connected to the Ladder. See Fig. 3-25. It may be necessary to lift the auger tube slightly to make room for the cylinder. On the 1060 & 1070, make sure the breather port is on the right side and the base end port is down. On the 1080, make sure both ports are down.

Note: Due to factory pressure testing of the cylinders, there may be a small amount of oil left in the rod end cavity of the cylinder which will be forced out of the vented breather plug when extending the cylinder for the first time. This does not indicate leaking internal seals. Remove the vented breather plug when extending the cylinder for the first time and provide a catch basin to catch the expelled oil.

Note: Do not attach a hose to the rod end of the cylinder to make it dual acting. Damage to the tube and under carriage could occur.

4. Insert a Rubber Grommet into the oval holes in both ends of the right Lift Arm, as shown in Fig. 3-27 and 3-28.
5. Attach the female end of the hydraulic hose to the fitting in the base end of the cylinder. See Fig. 3-26.
6. Route the hydraulic hose as shown in Fig. 3-27, 3-28 and 3-30. Slide the hose through the oval hole in the Lift Arm. See Fig. 3-27. Push the hose down the inside of the lift arm

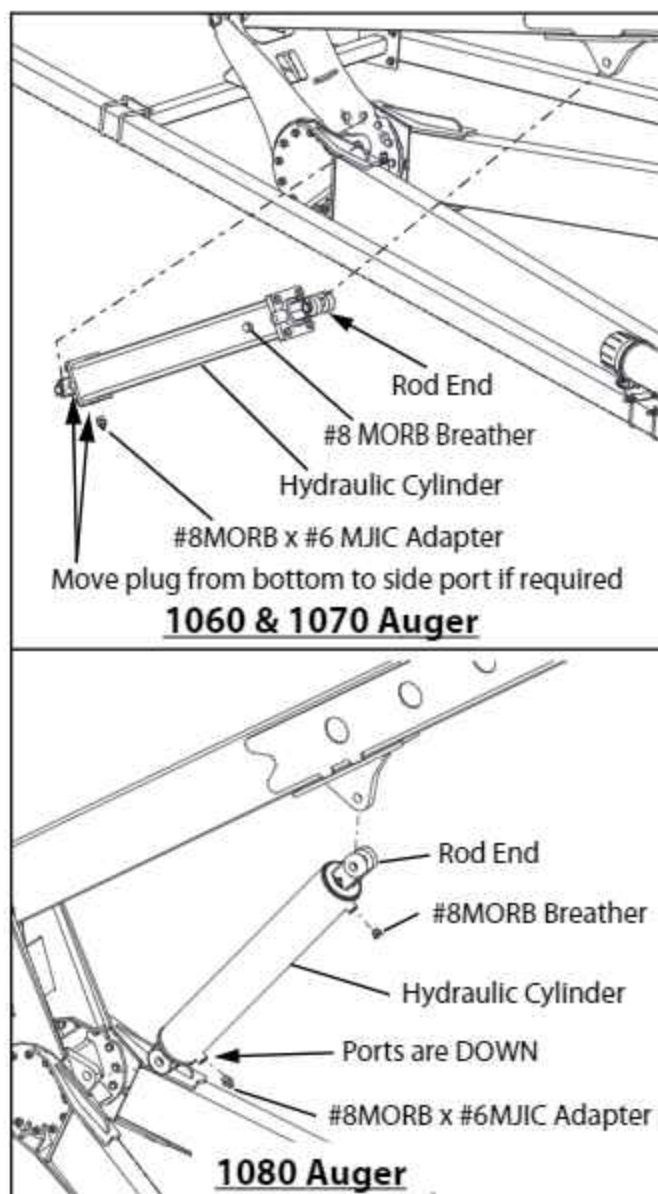


FIG. 3-25. Hydraulic Cylinder Installation

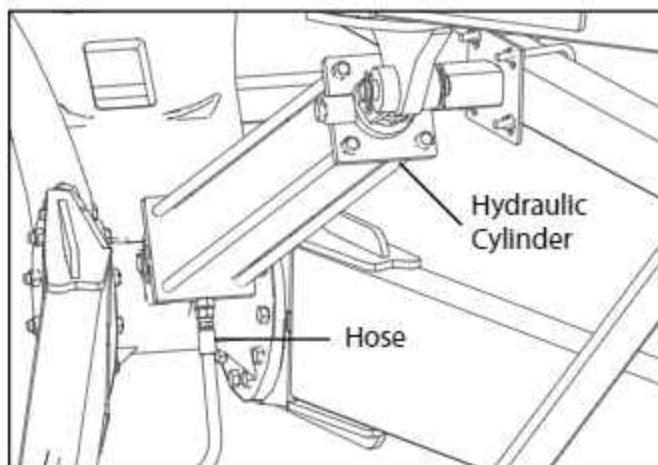


FIG. 3-26. Hydra. Hose to the Cylinder

and out the hole shown in Fig. 3-28. Push the hose up the inside of the Axle Arm to the tube connection. Push the hose through the channel welded to the underside of the tube, to the boot. The hose goes through the two loops welded to the side of the boot. See Fig. 3-30.

7. Thread the metal ball valve onto the end of the hose. Attach the 1/2" MPT x 3/8" MPT adapter and the Male Pioneer tip to the other end of the ball valve. Use teflon tape or pipe sealant on all pipe threads.

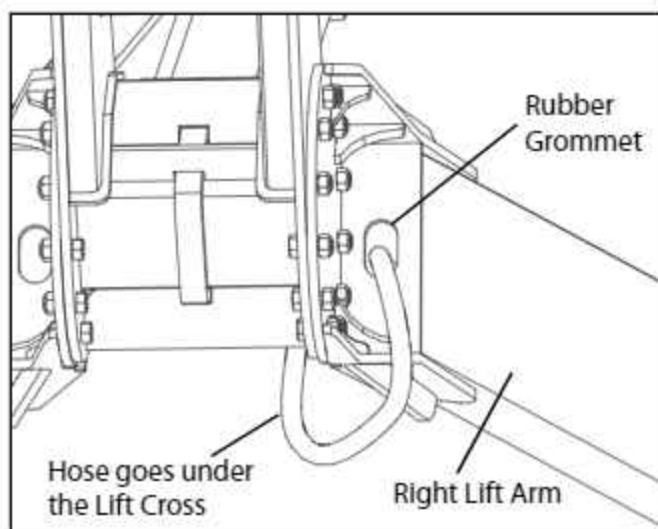


FIG. 3-27. Hydra. Hose Into the Lift Arm

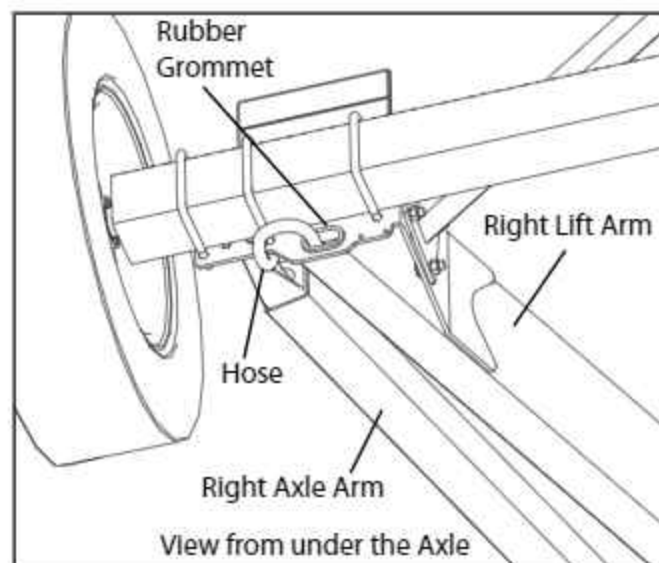


FIG. 3-28. Hose from Lift Arm to Axle Arm

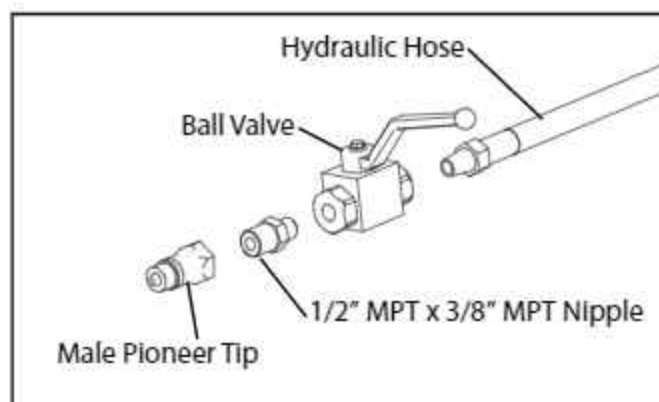


FIG. 3-29. Installing the Fittings on the Hose End

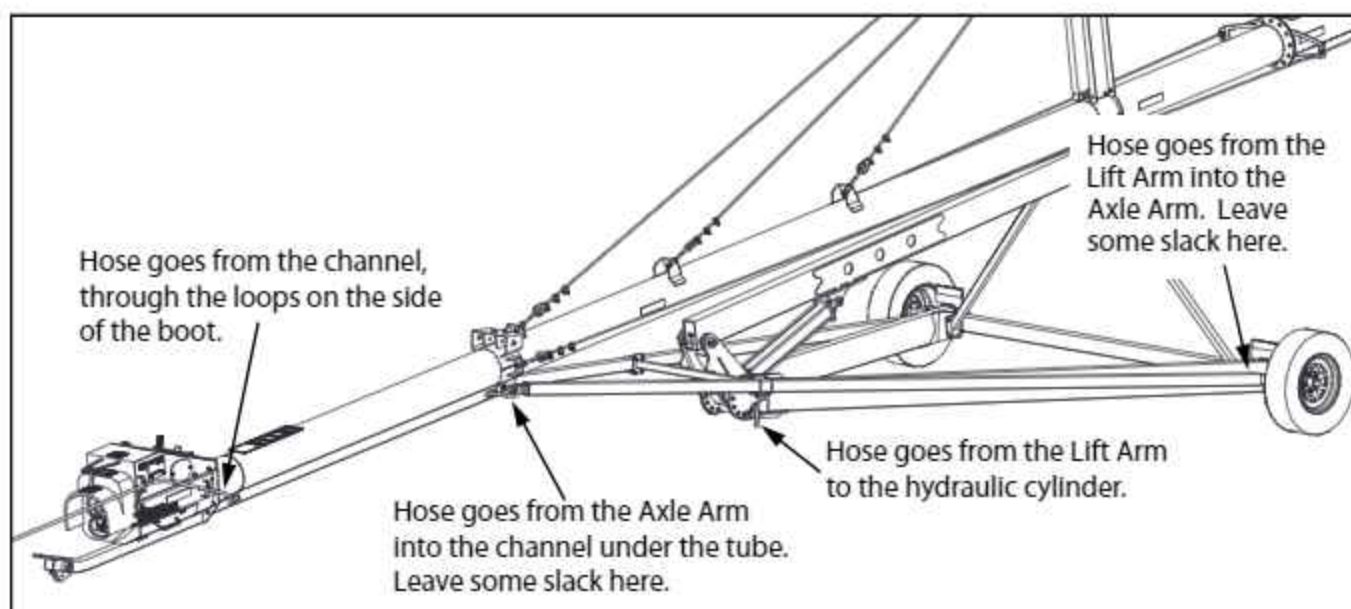


FIG. 3-30. Routing the Hydraulic Hose through the Undercarriage

3.6 Misc. Tube & Boot Parts

1. Elevate the intake end of the tube and install the Hitch using a $3/4" \times 4\ 1/2"$ bolt and lock nut as shown in Fig. 3-31.
2. Install the implement jack in a vertical position with the retaining pin securely in place as shown in Fig. 3-31. Mount the Jack on the same side of the auger as the Hopper Lift Arm.
3. Attach the PTO Clasp to the PTO Shaft Holder using a $5/16" \times 1"$ bolt and lock nut. Do not fully tighten the nut, the clasp must be able to move.
4. Retain the Clasp in the Holder using a $1/8"$ Hair Pin Clip.
5. Install the PTO Shaft on the flight drive stub and place the shaft in the holder.

Note: If the PTO Shaft will not fit into the Holder, adjust the length of the Holder to fit the shaft. Adjust the length of the Holder ONLY if required, it is intended to be a snug fit.

6. Install the Lift Arm onto the saddle on the tube so the long extended arm is on the side that the swing auger will be transported on. In most cases, this will be the left side. See Fig. 3-32. Secure the lift arm in place using a $1" \times 2"$ bolt and lock nut. Do not fully tighten the nut, the Lift Arm should be able to rotate. Insert the $1/2" \times 2\ 3/4"$ pin through the base of the Lift Arm and the mount welded to the tube. Secure in place with a $1/8"$ hair pin clip.

Note: The Swing Tube lifting device will be installed later.

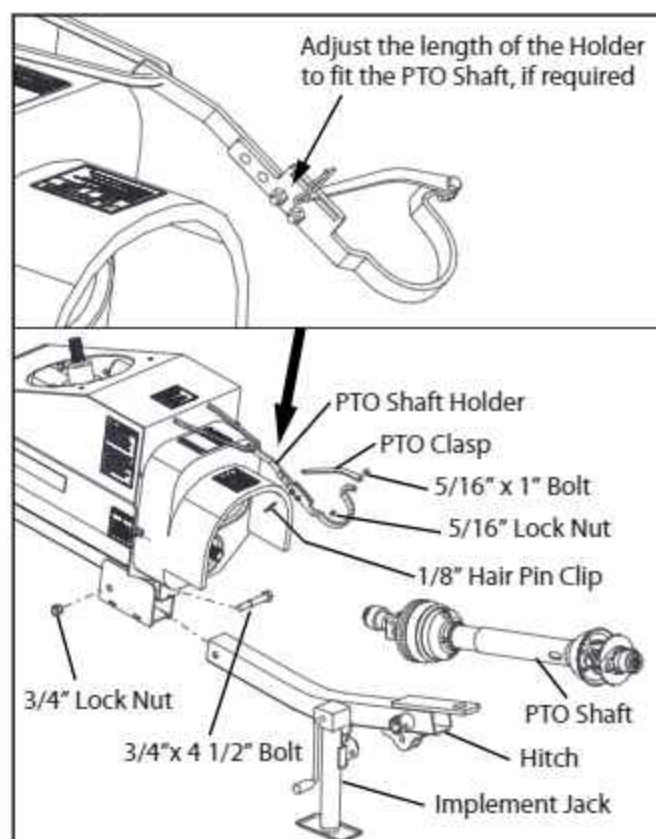


FIG. 3-31. Implement Jack & PTO Shaft Installation

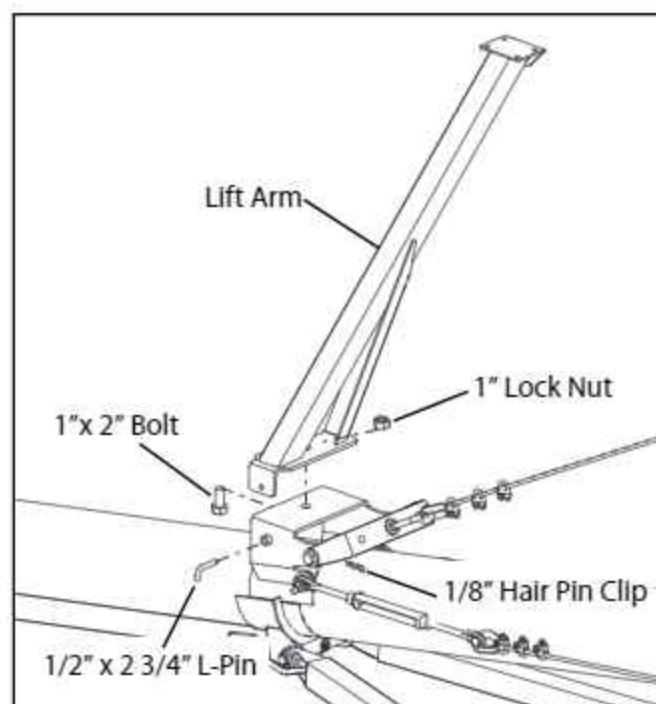


FIG. 3-32. Lift Arm Installation

3.7 Swing Spout and Tube

Important: Use the bolts from the smaller of the two bolt bags.

1. Suspend the upper end of the swing tube several feet off the ground with the front end loader or crane. Install six slider bushings into the six holes in the spout assembly and one into each Retainer Plate as shown in Fig. 3-33.
2. Remove the cover from over the inlet of the Swing Tube Spout. This will allow easier

access to the gearbox. Attach the Gearbox Sprocket to the Gearbox output shaft using two 3/8"x 3" Gr. 8 bolts and lock nuts.

3. Slide the spout assembly onto the swing tube until it is against the angle flange. Fasten the spout to the tube using the four Retainer Plates. Each plate uses two 3/8"x 1 1/4" bolts, lock washers and plastic spacer bushings. Do not fully tighten these bolts. The spout must be able to rotate on the tube. See Fig. 3-33.

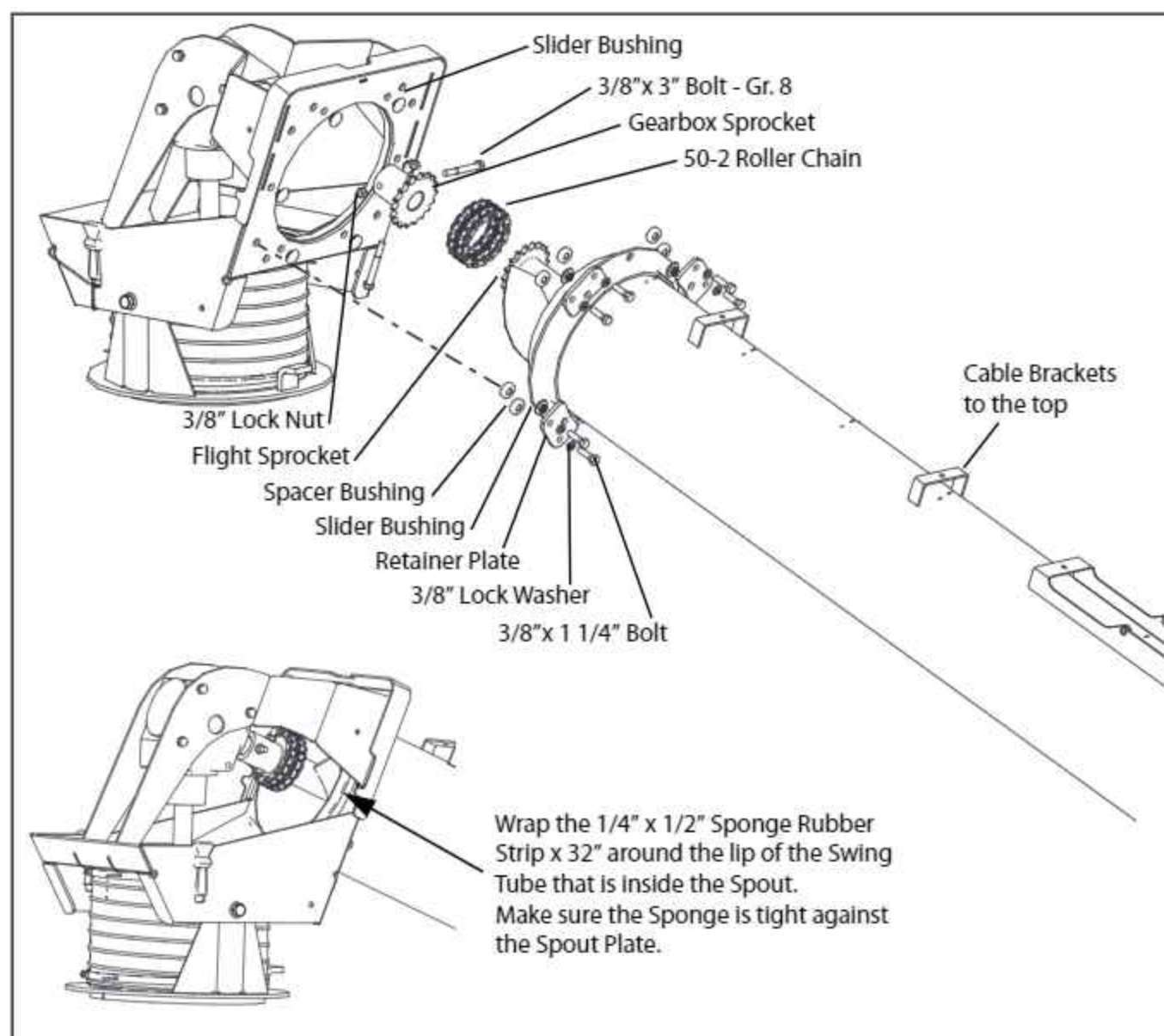


FIG. 3-33. Swing Tube / Spout Assembly

4. Install the 50-2 x 18 pitch roller chain around the coupler sprockets as shown in Fig. 3-33.
5. Remove the backing paper from the 32" foam strip and wrap it around the lip of the swing tube which is inside the Swing Tube Spout. Make sure the foam is tight against the inside of the spout plate. See Fig. 3-33.

Note: The plastic Spout Cover will be reinstalled after the Swing Auger is mounted to the main auger.

3.8 Swing Hopper Assembly

1. Remove the Baffle Plate and the Hopper Safety Mesh from the Hopper. The fasteners will be reused.
2. Attach the Hopper Transition to the lower end of the Swing Tube using five 1/2" x 1 1/4" carriage bolts, lock washers and nuts and one 1/2" x 1" bolt, SAE flat washer, lock washer and locking jam nut. See Fig. 3-34.
3. Install a woodruff key in the lower end of the Swing Tube Flight. Apply a thin coating of anti-seize compound to the shaft and inside the U-Joint.
4. Install the Rubber Seal on the bottom of the Hopper Transition area using the Seal Retaining Plate, three 5/16" x 1" carriage bolts and flange lock nuts. See Fig. 3-34.

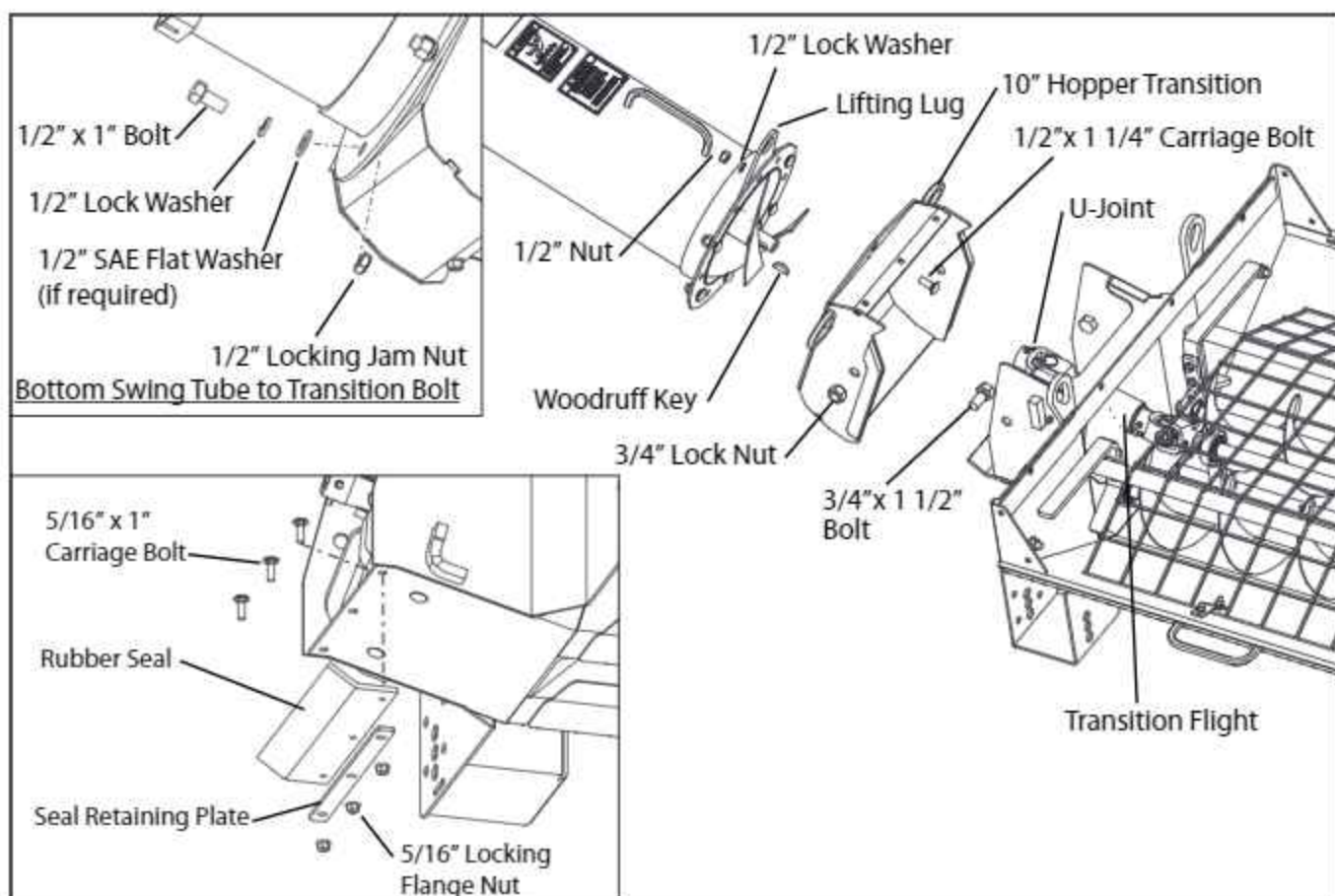


FIG. 3-34. Hopper to Tube Assembly

5. Move the Hopper toward the Swing Tube and slide the u-joint onto the Swing Tube Flight. Make sure the key is in place. Do not tighten the set screws yet.
6. Mount the 10" Hopper Transition to the holes in the hopper using two 3/4" x 1 1/2" bolts and lock nuts. Do not fully tighten the nuts. The transition must be able to rotate on the hopper. Make sure the Rubber Seal is inside the transition bolted to the swing tube.
7. Insert a straight edge through the access hole in the top of the transition. See Fig. 3-35. Place the straight edge over the centre of the two 3/4" Pivot bolts and adjust the position of the u-joint so the centre of the joint is inline with the centre of the pivot bolts.
8. Tighten the setscrews on the u-joint **snug only**. Raise and lower the Swing Tube while watching the u-joint. If the u-joint moves at all, the joint is not centered to the Pivot bolts. Adjust the position of the U-joint until it does not move when the Swing Tube is raised and lowered. Remove the u-joint setscrews, put a couple drops of medium strength thread locker on them and tighten them in place.
9. Remove the backing from the short Foam Strips. Place them on the hopper where shown in Fig. 3-36. Make sure the surface is clean before applying.
10. Attach the Latch Keepers to the Transition Cover using two 1/4" x 1/2" bolts and lock nuts in each.

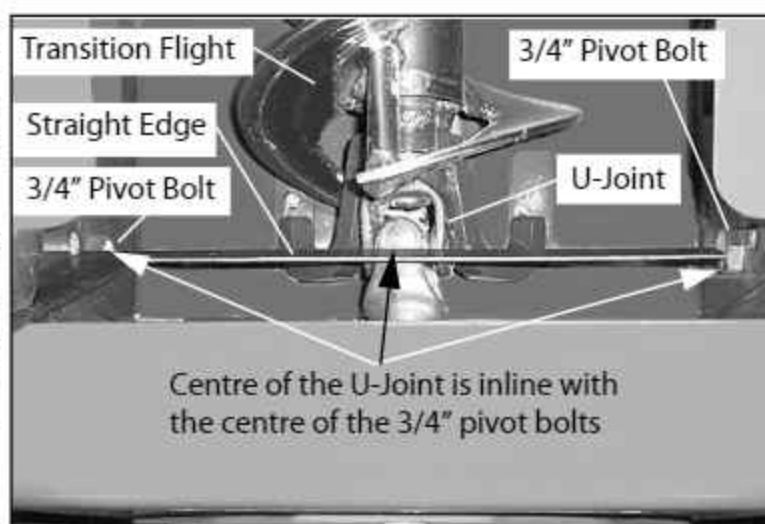


FIG. 3-35. Aligning the U-Joint and Pivot Bolts

11. Attach the Latches to the side of the Hopper where shown, using two 1/4" x 1/2" bolts and lock nuts in each.
12. Mount the Transition Cover to the Hopper Transition using three 5/16" x 1" carriage bolts and locking flange nuts.

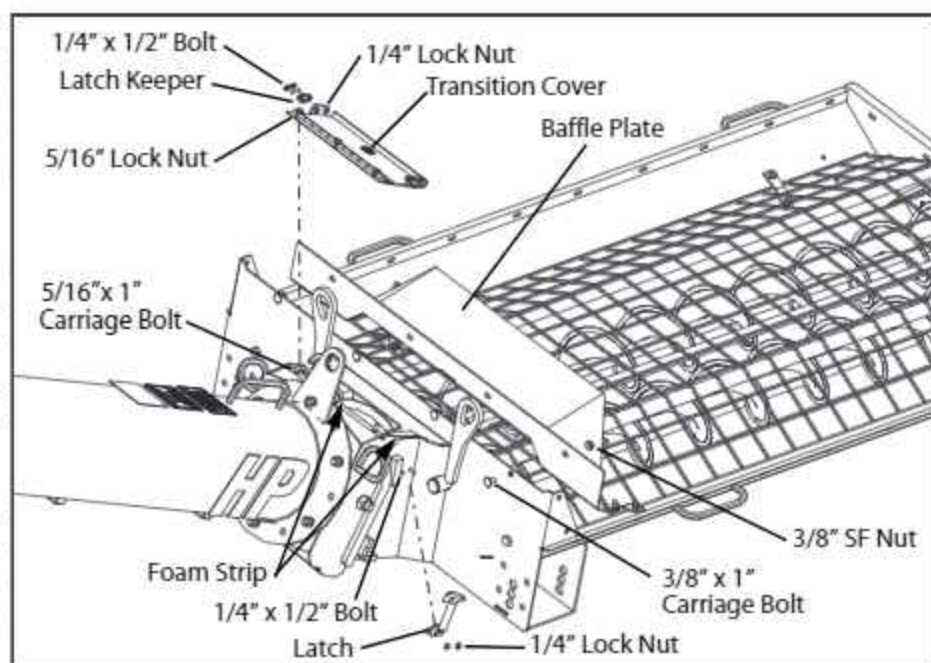


FIG. 3-36. Transition Cover Installation

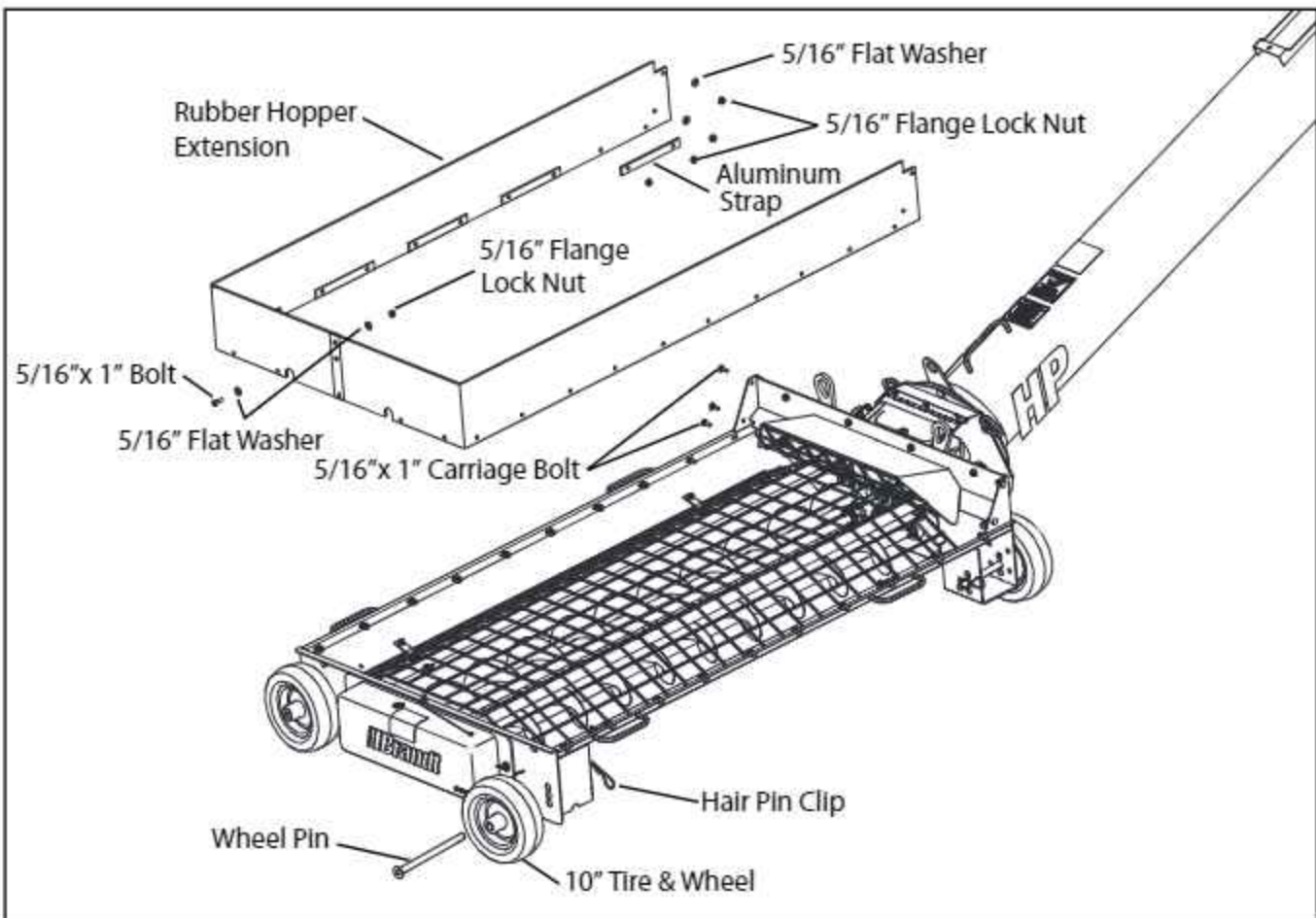


FIG. 3-37. Hopper Extension & Hopper Wheel Assembly

13. Install the hopper wheels on the hopper using a plated wheel pin (3/4" dia pin with two holes) and a 3/16" hair pin clip on both sides. See Fig. 3-37.
14. Install the rubber hopper extension on the inside of the hopper lip using the following bolts:
 - Angled front corners of the hopper - 5/16"x 1" carriage bolt and a 5/16" flat washer and 5/16" flange nut on the rubber side.
 - Bottom hole of the rear end of the hopper - 5/16"x 1" carriage bolt and a 5/16" flat washer and 5/16" flange nut on the rubber side.
 - Upper holes of the rear end of the hopper - 5/16"x 1" bolt, a 5/16" flat washer on both sides of the rubber and 5/16" flange nut.
15. Reinstall the Hopper Baffle and the Hopper Grate using the fasteners removed earlier.

3.9 Installing the Swing Tube

1. Clean the 21-spline shaft on the gearbox in the boot as well as the u-joint in the spout of the swing auger. Apply a thin layer of anti-seize compound on the shaft.
2. Using a front end loader and a sling, pick up the Swing Auger and hang the spout over the intake boot opening. Remove the inspection cover on the right side of the intake boot. With a stick or piece of metal, guide the U-Joint onto the boot gearbox while slowly lowering the Swing Auger. See Fig. 3-38.

WARNING

WARNING! Do not place your hands inside the boot while installing the Swing Tube. Severe injury could result.

3. When the swing tube spout is seated properly, the flange on the end of the spout should lay flat onto the boot. Secure in place using the hardware illustrated in Fig. 3-38. The 3/8" I.D. x 1 3/8" O.D. x 3/8" thick spacers washers are positioned next to the boot and outside the flange, followed by two 3/8" ID x 2 3/4" O.D. x 1/4" thick steel washers, the 3/8" lock washers and 3/8" x 1 1/2" bolts into the two holes on top of the boot which are closest to the PTO shaft. The Swing Stop Weldment is positioned on top of the other two washers as shown in Fig. 3-38. Rotate the swing auger to ensure correct setup.

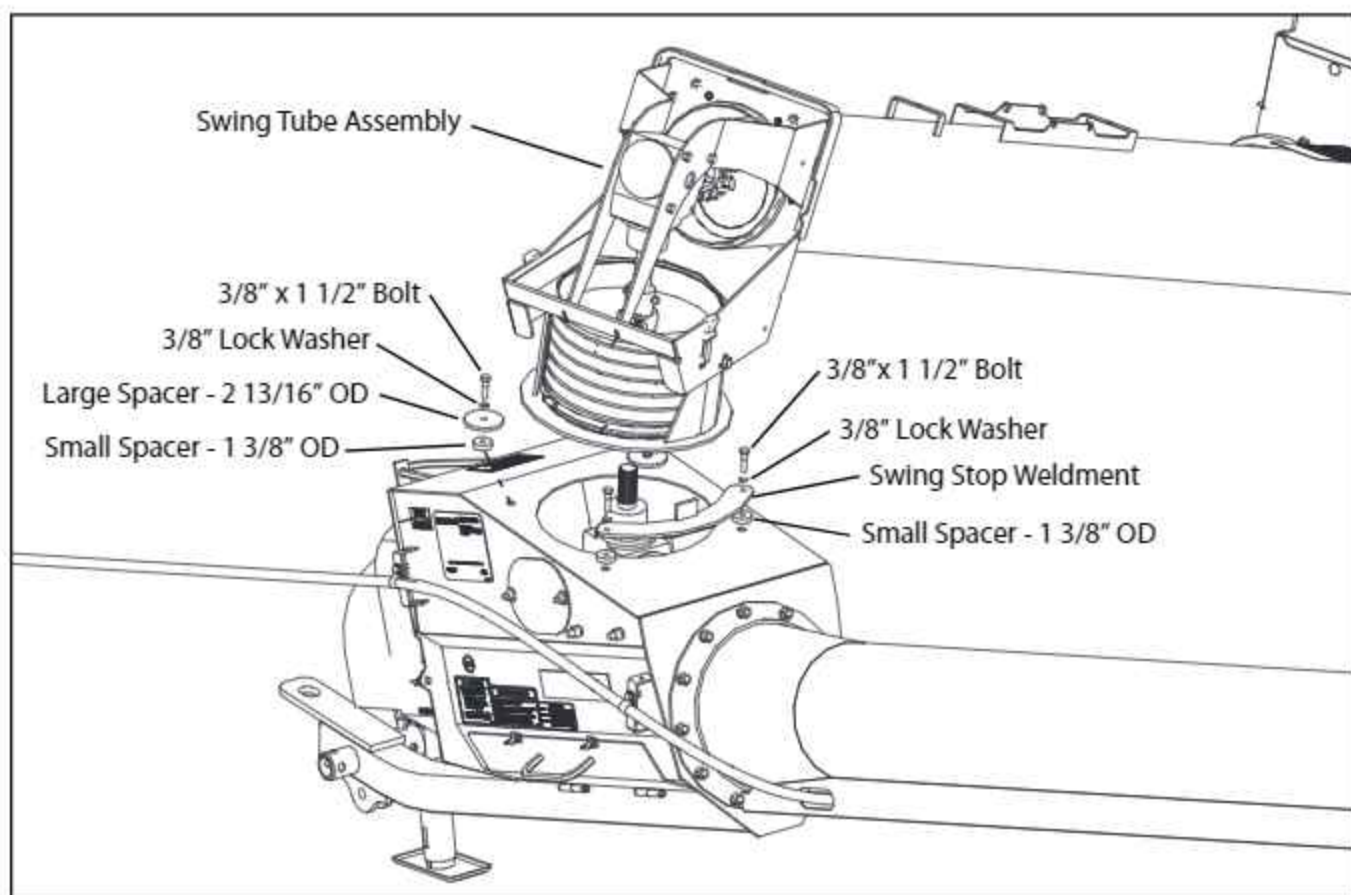


FIG. 3-38. Swing Tube to Boot Assembly

4. Reinstall the plastic Swing Spout Cover.

5. **Testing Hydraulic System.**

Connect the tractor or hydraulic power source to the Pioneer coupling and apply pressure to the system. See Section 4.3 before connecting the tractor to the auger.

Note: Due to factory pressure testing of the cylinder, there may be a small amount of oil left in the rod end cavity of the cylinder which will be forced out of the vented breather plug when extending the cylinder for the first time. This does not indicate leaking internal seals. Remove the vented breather plug when extending the cylinder for the first time and provide a catch basin to catch the expelled oil.

After lifting the auger up several feet, stop and check for leaks.

Fix any leaks found and cycle the auger up & down several times to ensure that it moves through its full range of travel without binding.

WARNING

WARNING! Never attempt to stop or find a hydraulic leak with your bare hands or fingers. Always use a board or piece of cardboard. High pressure hydraulic fluid easily penetrates skin and clothing causing severe injuries. Wear proper eye protection and gloves when inspecting or working around a high pressure hydraulic system.

Note: The assembly of the Swing Auger Lift Arm and the Swing Auger Mover is covered in the Swing Auger Mover manual B012677.

CHAPTER 4 Operation

4.1 Principles of Operation

The Brandt Swing Away Augers are used for moving products to or from a storage site. The auger is powered by a tractor, connected to the intake end. Power is transferred from the tractor, through a CV PTO shaft to the auger. 10" HP series augers are powered by the tractor's 540 rpm PTO shaft. The tractor's hydraulic system is used to raise and lower the main auger.

Grain enters the auger via a short, movable Swing Auger, pivoting on the intake end of the main auger. The pivoting action of the Swing Auger allows it to easily be moved under belly dump trailers. The Swing Auger is mechanically powered by the main auger through a series of gearboxes. The Swing Auger is raised and lowered by either an electric, hydraulic or manually powered winch.

Options include hydraulic or electrical swing auger mover, a Right Angle Drive kit, safety lights, work lights, a full bin sensor, a plastic down spout, a hopper cover and a Reversing kit.

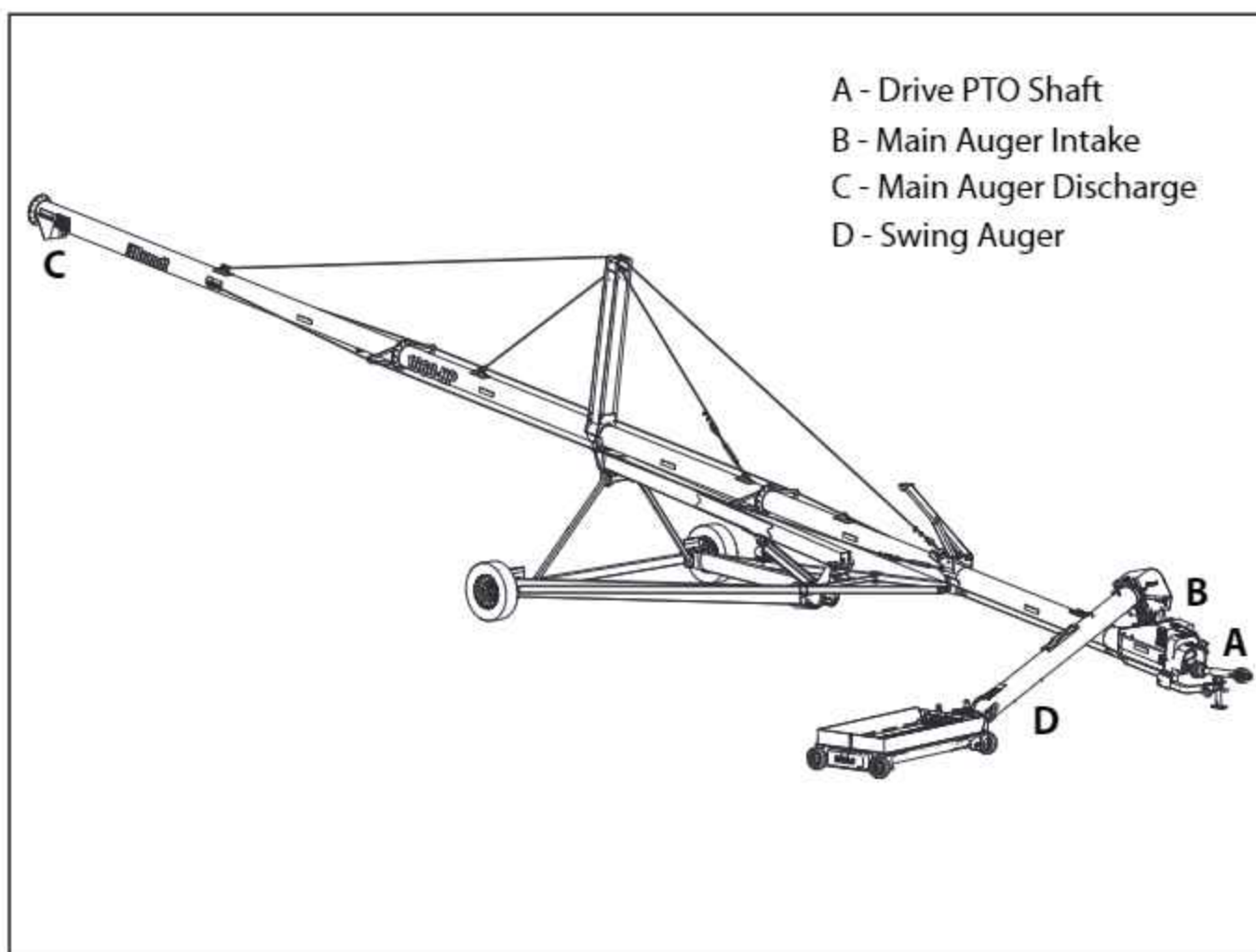


FIG. 4-1. Principles of Operation

4.2 Setup for Operation of a New Machine

4.2.1 Before running the new Auger

1. Read the operator's manual, especially Sections 1, 2, 4 and 5.
2. Torque the wheel nuts to 90 ft.lbs.
3. Check all fasteners and ensure they are tightened to specified torque levels.
4. Check the oil level in swing auger drive gearboxes. See Chapter 5 Maintenance for type of oil and oil levels.
5. Check that all guards are in place, secure and functional.
6. Check the hydraulic lift system for leaks. Repair any leaks immediately.
7. Make sure the PTO shaft is properly attached to both the tractor and the auger and the safety locks are engaged. Check by pulling and pushing on the PTO shaft several times.

⚠ DANGER

DANGER! Serious injury or death can occur if the PTO shaft is not securely attached to the tractor.

4.2.2 Checking Tractor Hitch Length.

NOTICE

Notice. Auger must be attached to a tractor for all operations including transport, raising, placement and moving grain.

Tractor Draw Bar Length.

The Brandt Swing Away Auger is designed to become an integral unit with the tractor during placement and operation. Because of the length and position changes during lifting and turning corners, the measurement between the tractor draw bar and PTO shaft become very important. Fig. 4-2 shows the required measurements on the tractor. Most tractors fall in the range shown. Be sure to measure your tractor before hook-up and adjust as required. If your tractor does not fall in the ranges shown, see the next page for potential problems and their solutions.

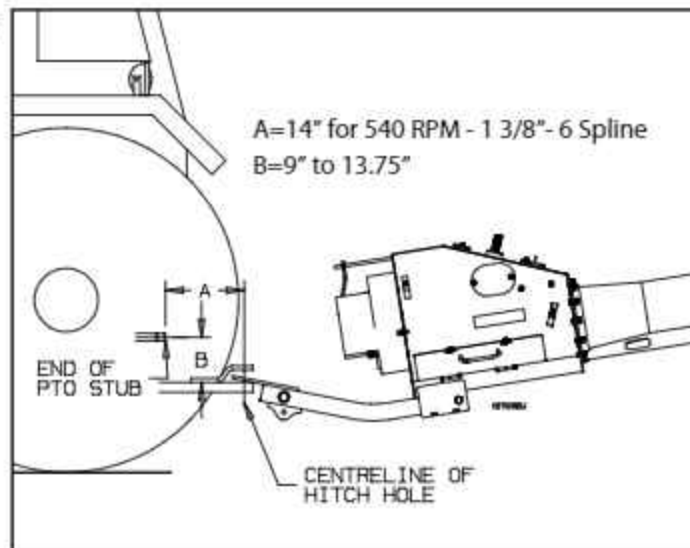


FIG. 4-2. Tractor Hookup

a) **Dimension "A" Shorter than 14 in.**

The PTO drive shaft may bottom out when the auger is raised or when turning corners. This will damage the PTO drive shaft, the tractor drive shaft, the lower bearing, the flighting stub and/or the intake boot.

Solution: Lengthen hitch and get the required 14 inches from the hitch pin hole to the end of the tractor PTO shaft.

b) **Dimension "A" Longer Than 14 Inches.**

The PTO drive shaft may separate with the auger in the lowered position and cause damage to equipment and injury to personnel.

Solution: Shorten hitch to get the required 14 inches from the hitch pin hole to the end of the tractor PTO shaft.

c) **Dimension "B" More than 13.75 Inches.**

The PTO drive shaft may bottom out as the auger is raised or when turning corners. This will damage the PTO drive shaft, the tractor PTO shaft, the lower bearing, the flighting stub, and/or the intake boot.

Solution: Reposition the tractor draw bar or use spacers between the hitch plate of the auger and the tractor draw bar.

NOTICE

Notice. If a PTO Adapter Shaft will be used to convert the tractor to a 1 3/8"OD - 6 spline shaft, the tractor draw bar MUST be adjusted to get the 14" dimension shown in Fig. 4.2. MAKE SURE TO ADJUST THE ENGINE SPEED TO HAVE A MAXIMUM OF 540 RPM AT THE PTO SHAFT. Use a hand tach on the PTO shaft to find the proper engine speed. Over speeding the auger will cause damage to the machine.

4.3 Attaching the Auger to the Tractor

1. Attach the auger to the tractor using a 1" dia. draw pin. Make sure the clevis strap is installed on the draw bar.

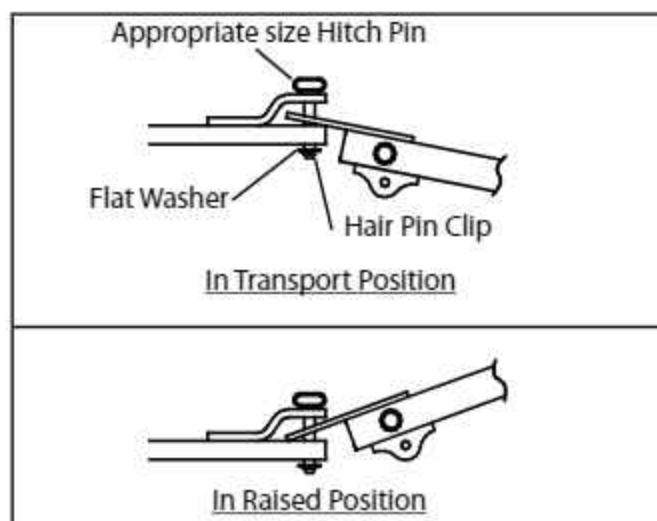


FIG. 4-3. Hitch Pin

2. Lower the implement jack and rotate it 90 degrees into transport position. Secure it in place with the pin provided.
3. Once the tractor hitch has been checked for the dimensions shown in Section 4.2.2, you can attach the PTO drive shaft to the auger. First attach the CV jointed 21 spline end to the auger and then the non-CV 6 spline end to the tractor PTO stub. Make sure the PTO shaft is properly attached and the safety locks are engaged. Check by pulling and pushing on the PTO shaft several times.

⚠ DANGER

DANGER! Serious injury or death can occur if the PTO shaft is not securely attached to the tractor.

4. Connect the hydraulic hose(s) to the tractor. Check your tractor manual or with your dealer regarding the correct type of quick coupler to be placed on the end of the hydraulic hoses. Clean the end of the hose of all dirt and foreign material before adding the quick coupler.

Also see that the power drive system safety shields are in place.

8. Before starting the tractor engine, be certain power to the PTO control is off.

DANGER

DANGER! Stay out of the hazard area of an operating PTO shaft.

4.4 Pre-Operation Checklist

Before operating the Brandt Swing Away Auger for the first time, and each time thereafter, the operator must check, but not be limited to checking, the following points:

1. All fasteners are secured as per assembly instructions.
2. All cable clamps are secure. 1/4" hopper lift cable clamps are torqued to 15 ft.lbs and the 3/8" and 1/2" truss cable clamps are torqued to 45 ft.lbs.
3. Hydraulic hoses are in good condition.
4. Hydraulic connections are in place and secure.
9. All clean out covers are in place and secure.
10. All safety shields and guards are in place and secure.
11. Swing Auger hopper and discharge spout are free of obstructions.
12. A second qualified person is present during operations.
13. Operators are aware of all safety precautions.
14. Proper maintenance has been preformed.

WARNING

WARNING! Do not disconnect hydraulic lines while system is under pressure. Consult your hydraulic systems operators manual for proper procedures.

5. Keep all hydraulic lines away from moving parts.
6. PTO drive shaft is connected to both the tractor and the auger and secure.
7. PTO drive shaft shields are in place and rotate freely.

DANGER

DANGER! Never use a PTO shaft without a rotating shield in good working order.

4.5 Work Area Placement

4.5.1 Moving the Auger into Working Position

1. Clear the entire area of all debris.
2. Make sure the auger is securely attached to the tractor. See Section 4.3.
3. If sharp turns are required when positioning the auger at the storage facility, the PTO Shaft must be disconnected from the tractor and placed in the PTO Shaft Holder.

WARNING

WARNING! Disconnect the PTO Shaft from the tractor before moving from bin to bin or to road transport. Failure to do so can cause damage or injury.

4. Check that the hydraulic connections are tight. If there are leaks or damage to the hoses, repair or replace before proceeding.
5. Ensure that the auger is on reasonably level ground and that the entire line of travel, on the ground and overhead, is clear of all obstructions or electrical wires.

DANGER

DANGER! Keep clear of all electrical wires. Electrocution can occur without direct contact with electrical wires.

6. Use extreme caution when moving the auger into working position. Make sure everyone is clear of the work area, especially children.
7. With the auger fully down, back it into position, just in front of the storage facility.

8. Raise the swing auger high enough to allow one to remove the transport chain hook from the Swing Hopper.

WARNING

WARNING! Make sure to shut off the tractor and remove the ignition key before entering the area between the Swing Hopper and the main Auger Tube.

9. Lower the swing auger until it is approximately 12" (30 cm) above the ground. Leave enough clearance so that the swing auger will not drag along the ground when the auger is moved.
10. Open the shut off valve on the lift cylinder hydraulic hose.
11. Raise the auger as required.
12. Carefully and slowly, move the auger into position over the storage facility.

DANGER

DANGER! Do not unhitch from the tractor and attempt to move the auger by hand.

DANGER

DANGER! Never attempt to increase the height of the auger by positioning the wheels on lumber, blocks or by any other means! To do so may result in equipment damage or personal injury.

13. When in position, leave the discharge end slightly above the bin roof and tie it down to the bin to prevent the wind upsetting the auger. Close the shut off valve in the lift cylinder hydraulic hose.

⚠ WARNING

WARNING! If the shut off valve remains open, a loss of hydraulic pressure with the tractor system will allow the auger to lower inadvertently damaging equipment and/or causing personal injury.

⚠ CAUTION

Caution. NEVER leave the auger in the raised position for an extended period of time (over night). Always lower the auger into transport position when not in use.

14. The tractor should be positioned in line with the auger so that the PTO drive shaft is as straight as possible.
15. Chock the auger wheels on both sides and apply parking brake (or chock tractor wheels) to prevent movement during operation.
16. Lower the Swing Hopper to the ground and disconnect the lift cables. Hang the lift cables over the main auger so they will not create a tripping hazard.
17. Couple the PTO Shaft to the tractor.
18. Make sure the PTO shaft is properly attached to the tractor and the safety lock is engaged. Check by pulling and pushing on the PTO shaft several times.

⚠ DANGER

DANGER! Serious injury or death can occur if the PTO shaft is not securely attached to the tractor.

4.5.2 Moving the Auger out of Working Position

1. Clear the entire area of all debris. Make sure everyone is clear of the work area, especially children. Make sure you are aware of any obstructions or electrical wires.

⚠ DANGER

DANGER! Keep clear of all electrical wires. **Electrocution can occur without direct contact with electrical wires.**

2. Make sure the auger is securely attached to the tractor. See Section 4.3.
3. If sharp turns are required when moving the auger away from the storage facility, the PTO Shaft must be disconnected from the tractor and placed in the PTO Shaft Holder.

⚠ CAUTION

Caution. Damage to the tractor and auger can occur if the PTO shaft bottoms out while moving or raising.

4. Check that the hydraulic connections are tight. If there are leaks or damage to the hoses, repair or replace before proceeding.
5. If the discharge end of the auger was tied down to the bin roof, remove the tie down now.
6. Move the Swing Hopper under the Lift Arm. Connect the Lift Cable to the hopper as shown in Fig. 4-4 and raise it off the ground using the winch.
7. Remove the chocks from the auger and tractor wheels.
8. Open the shut off valve on the lift cylinder hydraulic hose.

9. Raise the auger high enough to clear the roof of the storage facility.
10. Carefully and slowly, move the auger away from the storage facility.
11. When the auger is clear of the storage facility, stop and lower it into transport position. The Swing Auger will have to be raised to keep it off the ground.
12. If the auger will be transported on a public road, the Swing Tube must be placed in road transport position. See Section 4.14.

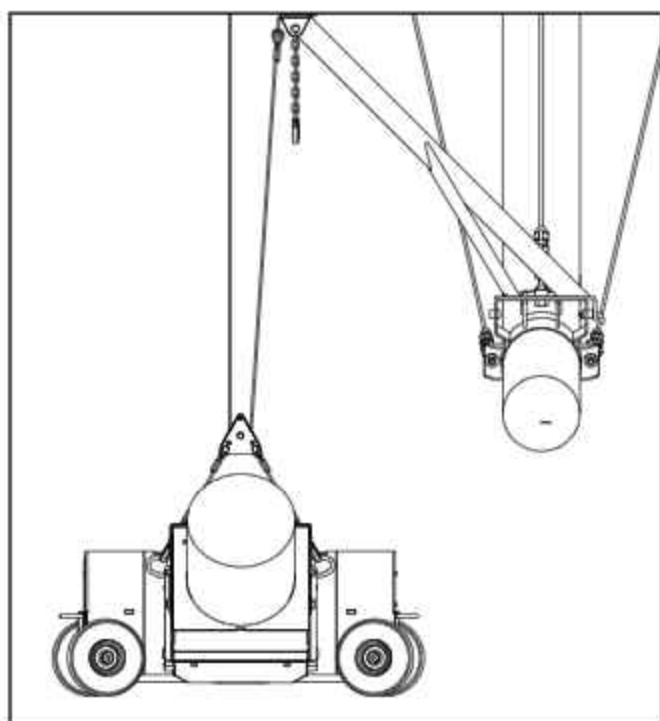


FIG. 4-4. Raising the Swing Auger

4.6 Hydraulic Lift Shut-off Valve

A shut-off valve located on the end of the hydraulic lift hose has been provided to hold the auger at what ever height is needed.

Make sure the valve is open whenever raising or lowering the Auger.



FIG. 4-5. Hydraulic Lift Shut-off Valve

4.7 Auger Drive and Lock Out

It is essential to inspect your auger drive before adding power and know how to shut it down in case of an emergency.

Whenever you must service or adjust the auger, make sure to stop the engine and lock out the power source.

4.7.1 PTO Drive

1. Never use a PTO shaft without a rotating shield in good working order. Also see that the power drive system safety shields are in place at the conveyor and the power source.
2. Be certain that the PTO shaft is securely attached to the auger and the power source.
3. Before starting the power source, make sure the power to the PTO is off.
4. Stay out of the hazard area of the operating PTO shaft.
5. Keep all guards and shields in place.

4.8 Startup And Break In of a New Auger

Read the Operator's manual thoroughly. Take extra notice of "Safety Warnings". The manual has been created to assist the operator in having a "Safety First" mindset while attaining the maximum benefit from the grain auger. All operators should be documented in the manual on the "Sign Off Form". Proper initial "break-in" of your new auger will greatly increase the efficiency and lifespan of the auger.

When pre-start-up operations have been accomplished as set forth in the preceding pages, follow these procedures:

WARNING

WARNING! Never run a new auger empty until the break in procedure has been done.

CAUTION

Caution. During the initial start up and break in period, the operator shall be aware of any unusual vibrations or noises. If anything unusual is noticed, shut down the auger, lock out the power source and adjust according to the manual or your local dealer.

CAUTION

Caution. Use extreme caution when moving the auger into working position! Make sure everyone is clear of the work area, especially small children!

1. Lower the Swing Auger and position it in the required location under the truck unloading chute.

2. Open the unloading chute and fill the hopper to a level where you can just see the flighting shafts, approximately half full, then close the chute.
3. Start the tractor and idle at low rpm. Engage the PTO control to start the auger.
4. With the auger running at idling speed, open the chute on the truck and allow product into the auger at a rate that just keeps the flighting shafts covered, approximately half full.

WARNING

WARNING! Trying to move the full rated capacity of the auger at a reduced speed will add excess strain to all the drive components and can cause drive failures.

CAUTION

Caution. Do not allow the auger to run empty!

5. Continue this procedure until the auger has ran with grain in it for at least 20 minutes.
6. When grain flow stops, close the chute on the truck and decrease the auger speed until all the product is clear of the auger. Disengage the tractor's PTO drive.
7. Shut down and lock out the tractor and conduct a complete inspection of the auger.
8. Upon completion of the inspection and making any required adjustments, your auger is now ready for "Full Load Operation". Normal operation does not include running the auger at high speeds without grain. Following this "Start Up Procedure" at the beginning of every augering season will enhance the auger's lifespan and user experience.

4.9 Full Load Operating Procedures

DANGER

DANGER! Keep hands, feet, and clothing away from moving parts! Failure to do so could result in severe injury or death!

During the regular operation of your auger, a second person shall be in a position to monitor the operation and initiate a shut down in case of an emergency.

It is also a good practice to visually inspect the auger during the actual operation. You should be alert for unusual vibrations, noises and the loosening of any fasteners.

Always use a tractor with adequate horsepower. The 1060HP requires approx. 95 HP, the 1070HP requires approx. 105 HP and the 1080HP requires approx. 115 HP.

1. Position the auger at the storage facility as explained in Section 4.5.1.
2. Lower the Swing Auger and position it in the required location under the truck unloading chute.
3. Start the tractor and idle at low rpm. Engage the PTO control to start the auger.
4. Increase the engine speed as you start to introduce grain into the Swing Auger hopper.
5. Run the auger at the rated speed of 540 RPM for optimum capacity. If full capacity is not desired, reduce the PTO speed.

NOTICE

Notice. If you do not wish to run the auger at the full rated speed, you **MUST** reduce the amount of grain being introduced in the auger. If the auger will be run at 75% of the rated speed, the amount of grain being moved by the auger must be reduced to 75% of the rated capacity. Trying to move the full rated capacity of the auger at a reduced speed will add excess strain to all the drive components and can cause drive failures.

6. When the truck is empty, allow the auger to completely clean out before shutting down.
7. Always throttle down engine to idle speed before engaging or disengaging the PTO clutch.
8. Do not judge fullness of the bin by allowing the auger to plug at the top end and break the shear bolt. Damage to the auger can occur.

4.10 PTO Shear Bolts

Before you service or adjust your equipment, make sure you stop your engine and lock out your power source!

CAUTION

Caution. Lock Out the power source by removing the ignition key or coil wire before servicing. If this is not possible, remove the PTO shaft from the work area!

The driveline is protected by a shear bolt(s) inside the bell of the PTO shaft where it connects to the tractor as shown in Fig. 4-6. If the shear bolt(s) fail:

1. Shut down and lock out tractor.
2. Check for obstructions and clean away as much grain as possible.
3. Install new shear bolt(s). See Fig. 4-6.

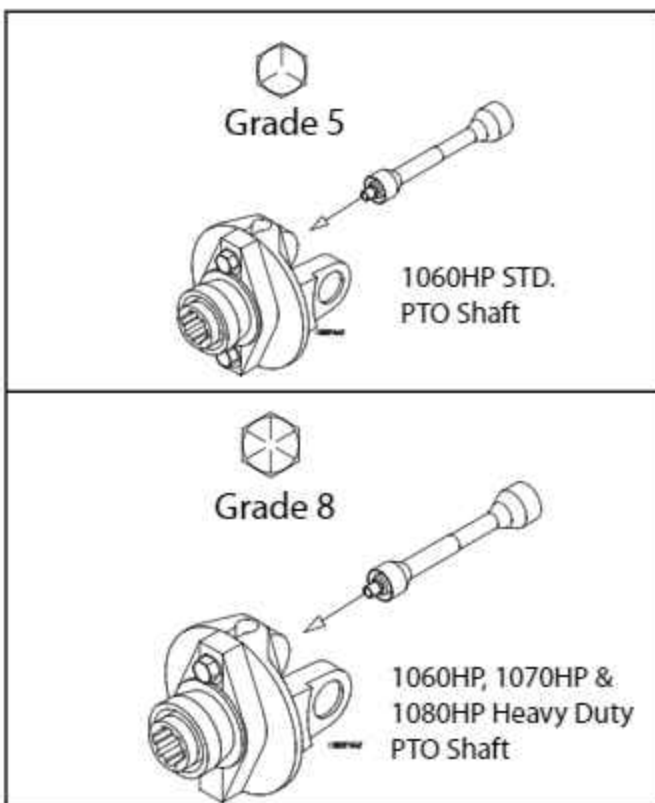


FIG. 4-6. PTO Shaft Shear Bolts

NOTICE

Notice. 1060HP Augers with the standard PTO shaft require two 5/16" x 1" Grade 5 bolts.

1060HP, 1070HP & 1080HP Augers with the Heavy Duty PTO shaft require one 3/8" x 1" Grade 8 bolt.

4. Slowly engage the PTO drive and allow the auger to clean out.
5. If the replacement shear bolts fail while restarting the auger, it may be necessary to isolate the Swing Auger from the Main Auger. Do this by removing the coupling chain which connects the swing tube flight to the upper gearbox. Run the main auger until all the grain is removed from it, then reinstall the coupling chain and empty the Swing Tube and Hopper.

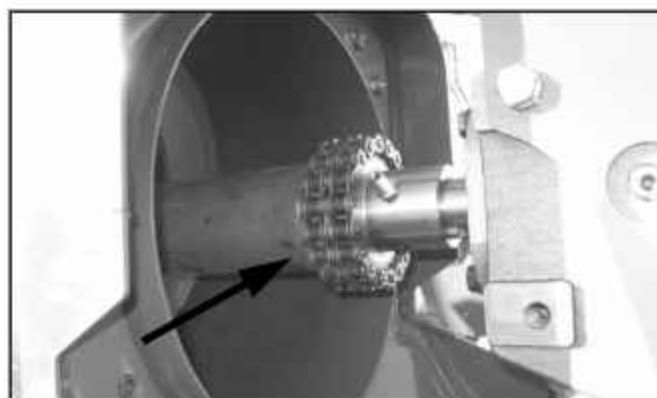


FIG. 4-7. Swing Tube Coupler Chain

WARNING

WARNING! Do not replace the shear bolt with a larger or stronger one. Damage to other auger components and/or injury may result.

DANGER

DANGER! Do not remove the PTO shaft guard.

4.11 Auger Shutdown

4.11.1 Normal Shutdown

1. Reduce the flow of grain into the auger slowly.

NOTICE

Notice. If the flow of grain into the auger is shut off too quickly, tipping of the auger from uneven weight distribution may occur. Make sure the auger hitch has been connected to the tractor draw bar using the fastener told in Section 4.3.

2. Make sure the hopper and tube are empty of product before stopping the unit.
3. Before the operator leaves the work area, the power source must be locked out.

4.11.2 Emergency Shutdown

1. Immediately, shut down the tractor.
2. Should it be necessary to shutdown the auger under load, disconnect and lock out the power source. Clear as much product from the hopper and tube as possible. Never attempt to start the auger when full.

NOTICE

Notice. Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment and is not covered under warranty.

4.12 Reverser Operating Procedures

Operation of the reverser requires extreme care and attention. All safety precautions highlighted in this manual must be observed. Although the reverser spline is guarded according to ASAE specifications, it is still a potentially dangerous area.

NOTICE

Notice. The reverser is designed to assist in the clean-out of the auger. IT IS NOT INTENDED TO CLEAN OUT A PLUGGED AUGER. When operating the reverser, the auger performance must be carefully monitored to prevent the boot from overfilling. Excessive back pressure will cause possible damage to the flighting, upper bearing, PTO shaft and/or the reverser drive. Brandt Industries Ltd. recommends that the reverser be run at a maximum PTO Speed of 100 RPM.

CAUTION

Caution. Keep away from the front of the boot at all times during operation of the auger!

DANGER

DANGER! NEVER operate the reverse kit with any guards removed.

DANGER

DANGER! NEVER place your hands into the cleanout door area and/or any other area where drive components and/or flighting exists.

⚠ CAUTION

Caution. NEVER operate the reverse kit at speeds greater than 100 RPM.

1. Before using the reverser, open the clean out door located at the lower right of the boot. This will allow all grain to exit the auger.
2. Remove the PTO shaft from the forward drive stub and attach it to the reverser stub.
3. Run the tractor PTO (at less than 100 RPM) watching that the grain is not piling up in and under the boot.

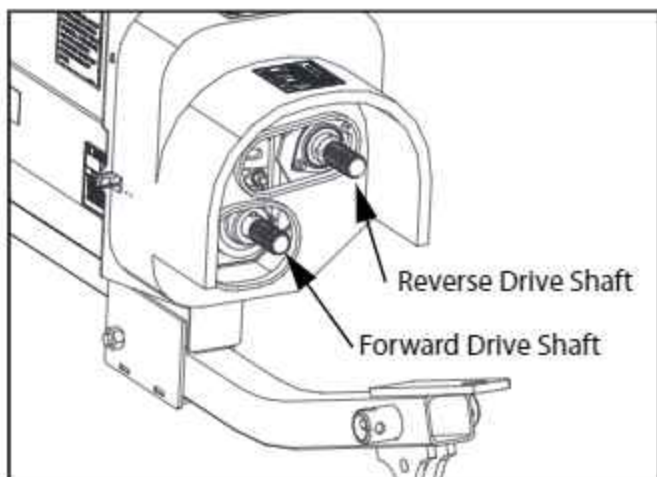


FIG. 4-8. Drive Stubs

4. When empty, replace the clean out door. Remove the PTO shaft from the reverser stub and reattach it to the forward drive stub.

4.13 Clean Up and Storage

When the operation has been completed, it is recommended that you move the auger to the new work area or to a storage area.

1. Clean entire work area.
2. Remove anchors, support and chocks.
3. Raise the Swing Auger so that it will not drag on the ground as the auger is lowered.
4. Move the auger slowly out of working position with the tractor - Not by hand.
5. If the auger is not already in transport position, lower the auger to the full down position immediately upon clearance of any obstructions. Make sure the swing auger does not drag on the ground.
6. Transport the auger to the new work area or storage area. We recommend that the auger be stored in the full down position with the intake end anchored. Never leave the auger resting on a bin or storage building.

4.14 Transport

⚠ DANGER

DANGER! Keep children and all unauthorized personnel away.

⚠ DANGER

DANGER! Attach a Slow Moving Vehicle (SMV) emblem before moving equipment. Do not tow faster than 20 MPH(32 KM/H).

⚠ DANGER

DANGER! Use extreme caution in turning and cornering.

⚠ DANGER

DANGER! Do not tow auger across slopes greater than 20 degrees.

⚠ DANGER

DANGER! Do not allow persons to ride on the auger when it is being transported.

⚠ DANGER

DANGER! Always tow the auger in the fully lowered position, with the tube on the transport rest.

⚠ DANGER

DANGER! Be alert for overhead electrical lines.

1. The Brandt Swing Away Auger is designed to be transported and operated while hitched to a tractor. Observe all safety precautions before transporting the auger.

2. Before transporting the auger, ensure that the main auger is in the full down position, on the transport rest.
3. Make certain that the hitch pin is in place and secure. Brandt Industries Ltd. recommends the use of a safety chain for added safety when transporting the auger. Refer to Section 2.5.
4. Make certain the PTO Shaft has been disconnected from the tractor and placed in the transport holder. See Section 2.11.1.
5. The swing auger on this unit transports on its side as shown in Fig. 4-11. To secure it in this position, follow the sequence detailed in Fig. 4-9.
 - First attach the hooks onto the outside lifting lug on the transition. Fig. 4-9 shows an end view of the swing auger showing how the lift cables should attach.
 - Lift the swing auger with the winch until the swing auger is high enough to attach

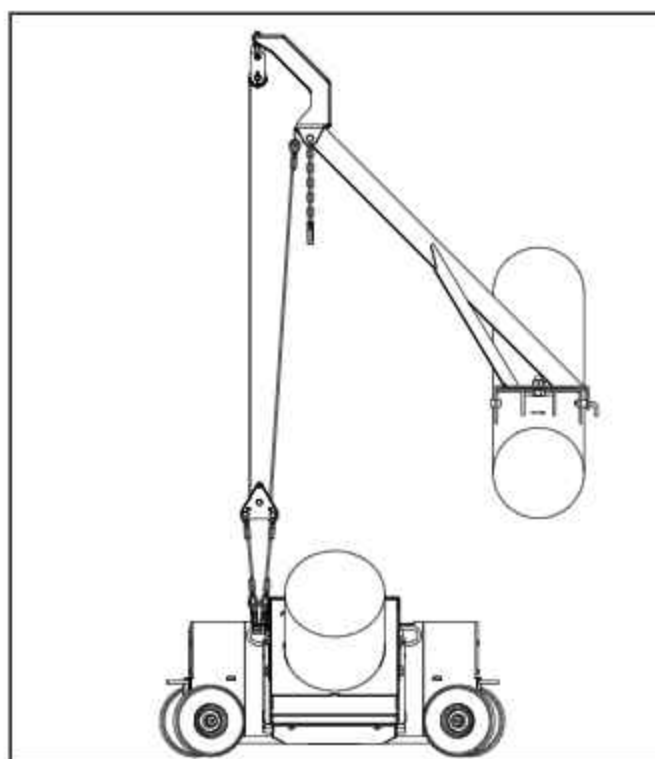


FIG. 4-9. Connection for Long Transport

the transport chain hook as shown in Fig. 4-10 and Fig. 4-11.

- Once the transport hook is attached, lower the swing auger with the winch. The transport chain must support all of the weight of the swing auger hopper, however, the lift cable should have slight tension on it to prevent the swing auger from whipping when in transport. Do not remove the lifting hooks while in transport position.

Note: The Swing Hopper can be transported in the horizontal position as shown in Fig. 4-12 when moving from bin to bin.

Do not transport the hopper in this position when traveling on a road.

- Ensure that the screw jack on the hitch is locked in transport position.
- Be sure to observe all regulations concerning marking, lighting, towing and maximum width for your area.
- Be alert for overhead wires and obstructions.

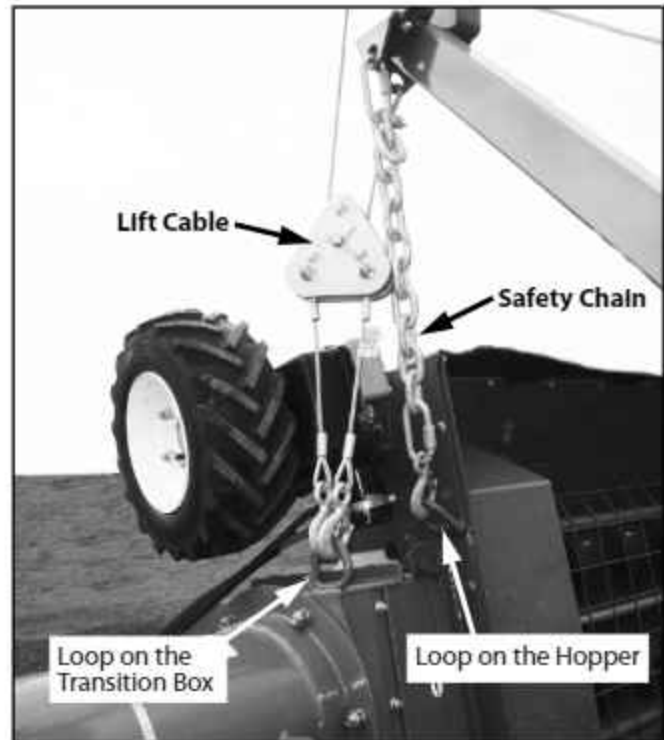


FIG. 4-11. Long Distance Transport Position

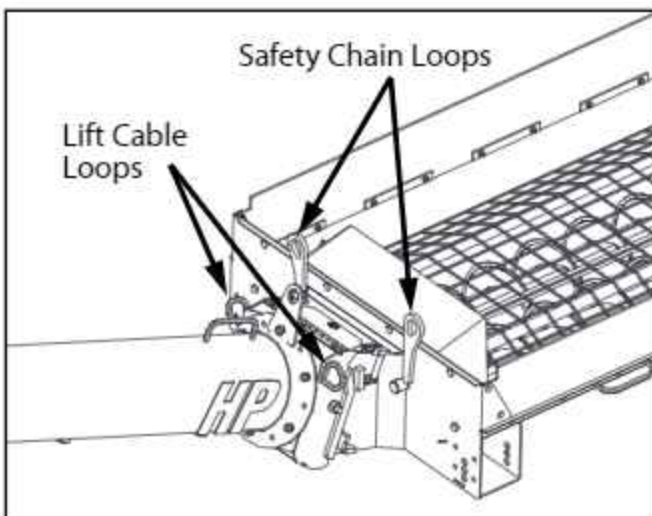


FIG. 4-10. Hopper Lifting Loops

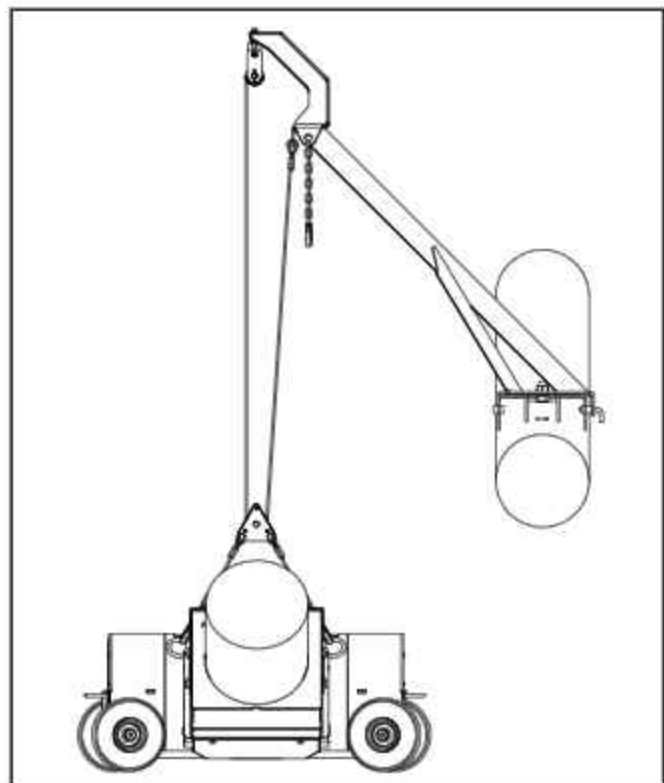


FIG. 4-12. Short Distance Transport Position

CHAPTER 5 Maintenance

WARNING

WARNING! Before any maintenance or adjustment is done on your equipment, ensure you stop, disconnect and lock out all power sources, including the PTO shaft.

WARNING

WARNING! Perform all service and maintenance with the Auger in the fully lowered position.

5.1 Fluids and Lubricants

1. Grease - For all points except the PTO Shaft. Use an SAE multipurpose high temperature grease with extreme-pressure (EP) rating. Also acceptable is an SAE multipurpose lithium based grease.
2. Grease - For PTO Shaft. Use a good quality Lithium Soap Compatible E.P. grease containing no more than 1% Molybdenum Disulfide.
3. Swing Tube Internal Gear Boxes - Use EP 80-90 Gear Oil.
4. Storing Lubricants - Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

5.2 Lubrication

1. Use the provided Maintenance Checklist to keep a record of all scheduled maintenance.
2. Use a hand held grease gun for all greasing.

3. Wipe fittings clean before greasing to avoid injecting dirt and grit.
4. Repair and replace broken or missing fittings immediately.
5. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

Note: DO NOT OVER GREASE AS THIS MAY DAMAGE THE SEAL.

5.3 Service Intervals

These service intervals are listed in addition to the new machine break in items as described in the first Operation Section on Section 4.1.

5.3.1 4 Hours or Twice Daily

1. Grease ball socket of the CV joint in PTO Shaft.

5.3.2 10 Hours or Daily

1. Inspect the seals on all gear boxes for evidence of weeping oil and check level if seeping has occurred.
2. Grease Hopper flighting U-joints
3. Grease Swing Auger drive U-joints
4. Grease the Hopper Flight bearings.
5. Grease the Swing Flight bearing.

5.3.3 50 Hours or Weekly

1. All daily grease points.
2. Grease the complete PTO shaft.
3. Grease the upper main flighting bearing.

4. Grease the upper bearing in the Boot Gearbox.
5. Grease the Undercarriage Pivot Pins
6. Lubricate and check the hopper chain tension
7. Lubricate and check the Swing Tube Mover drive wheel chain tension (if equipped).
8. Check the swing tube gearboxes for oil leaks.
9. Inspect the Hopper lift cables. Replace if any signs of fraying.

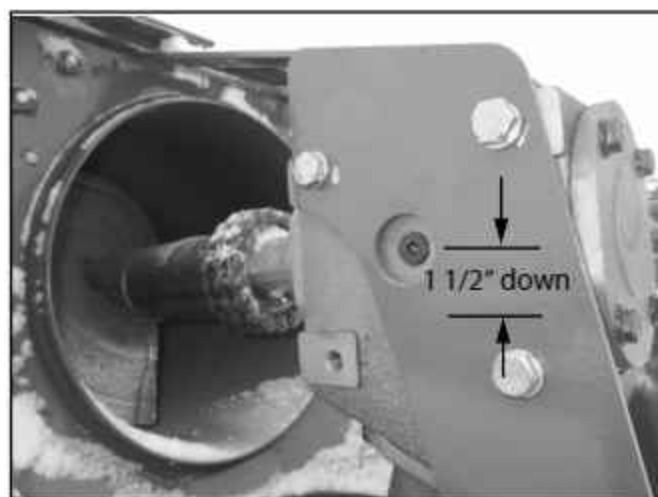


FIG. 5-1. Upper Gearbox Oil Level

5.3.4 Annually

1. Inspect the oil level in both upper and lower swing tube gearboxes. See section 5.1 for oil type. See Fig. 5-1 and 5-2.
2. Inspect the seals in all gearboxes for weeping oil and replace seals as required.
3. Inspect the U-joints in the hopper flight and swing auger drive for wear and replace as required.
4. Inspect the Hopper lift cable and replace any frayed cables immediately.
5. Oil the cable sheave pins on the hopper lift arm (if applicable). Inspect the sheaves, pins and side plates for wear and replace if necessary.
6. Retension the tube truss to maintain auger tube straightness. See section 3.3.4 and section 3.6.
7. Repack wheel bearings with lithium based grease.
8. Lubricate the bushings, drum shaft and ratchet on the winch with a film of grease (if applicable).
9. Inspect the hydraulic hoses and replace any cracked hoses.

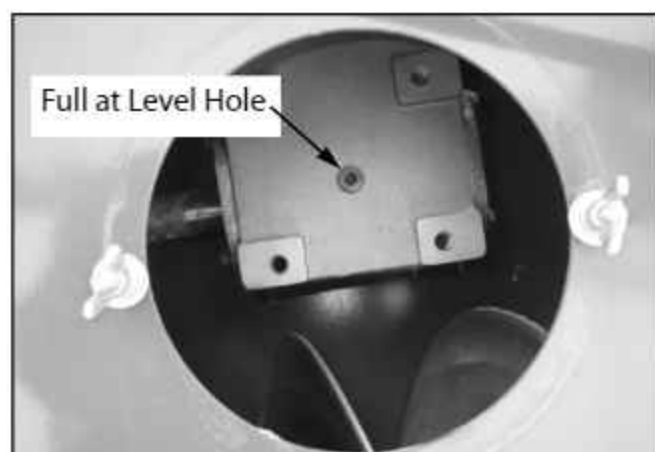


FIG. 5-2. Lower Gearbox Oil Level

10. Inspect the sprockets and drive chains for wear and replace as required.
11. Run auger for several minutes. Inspect all bearings for heat and seal weeping. Replace as required.
12. Inspect the hydraulic cylinders for leaks; replace seals as required.
13. Inspect tires and adjust air pressure as required.
14. Check that all hardware is properly tightened and secure.
15. Check the wheel bolts for proper torque.

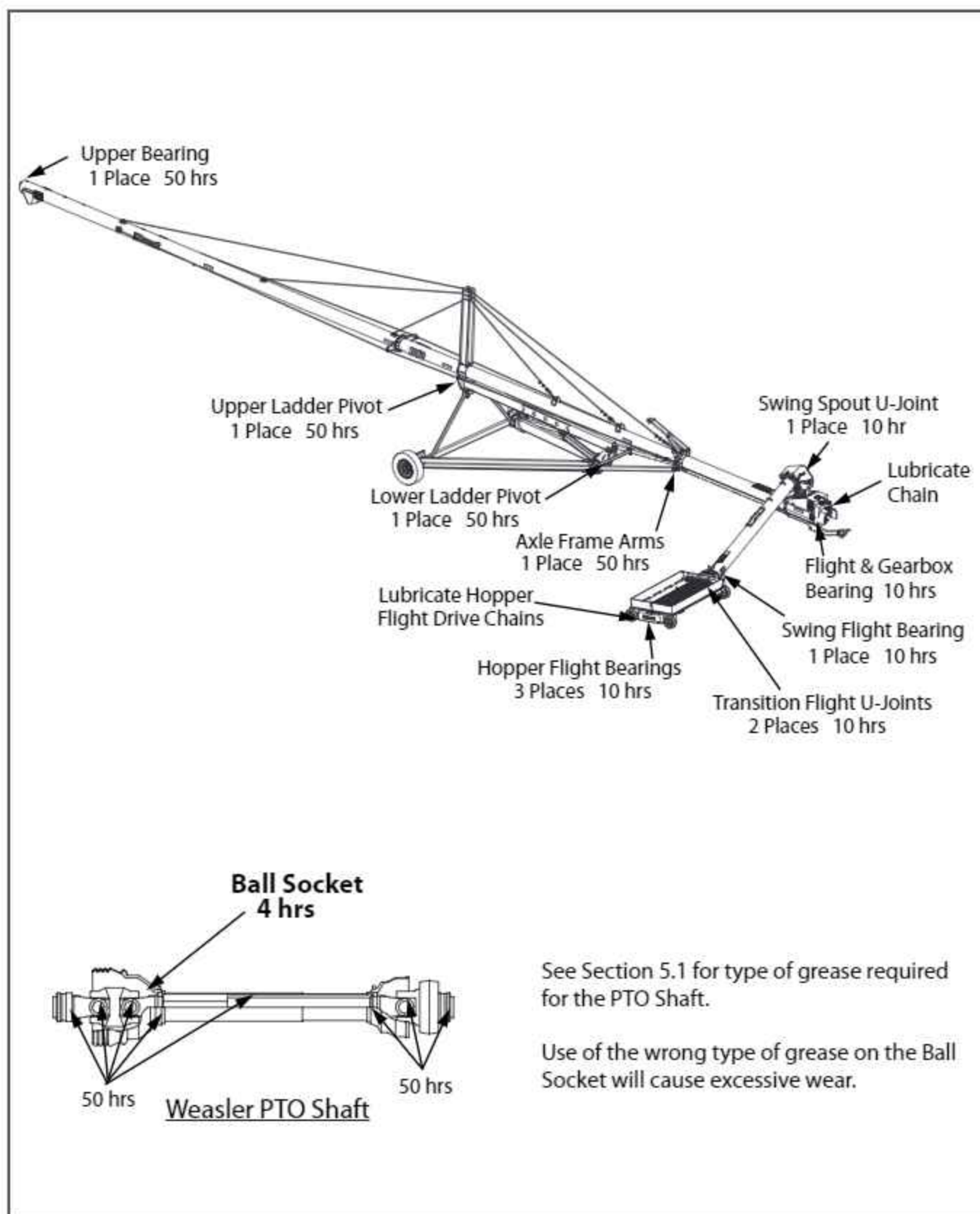


FIG. 5-3. Lubrication Schedule

5.4 Hopper Wheel Height Adjustment

To adjust the hopper wheel height, simply adjust the hopper wheel up or down by moving the pin on the wheels. See Fig 5-4.

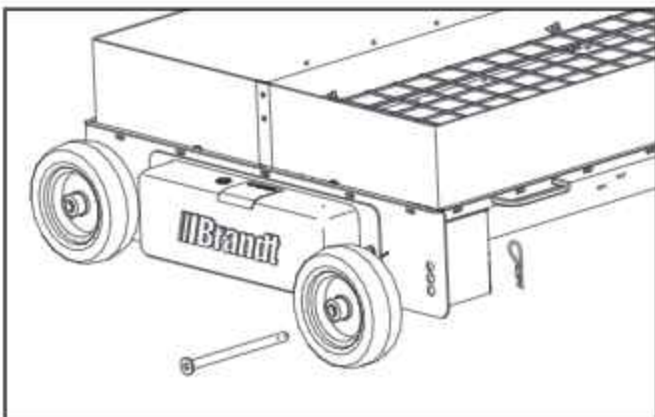


FIG. 5-4. Hopper Wheel Adjustment

Auger with a Hopper Mover

Adjust the height of the two small wheels as shown in Fig. 5-4.

Adjust the height of the two large lugged wheels by removing the Height Adjustment Pins and moving the wheel assembly as required. See Fig. 5-5.

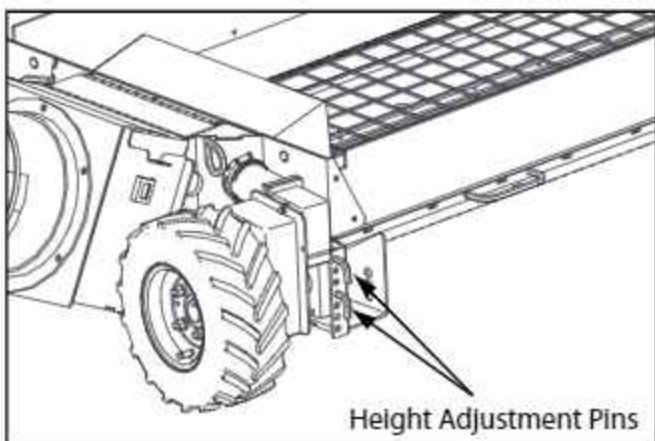


FIG. 5-5. Mover Wheel Height Adjustment

5.5 Electric Swing Tube Mover Wheel Drive Chains

A chain transmits power from the electric motor to the mover wheel. The tension should be checked during break-in and every 8 hours thereafter. The tension will require adjustment as the chain stretches and wears. See Fig. 5-6.

To adjust the tension, follow this procedure:

1. Clear the area of all bystanders, especially small children, before starting.
2. Remove the guard covering the chain.
3. To adjust the chain tension:
 - a. Loosen the four bolts holding the motor mount to the frame.
 - b. Slide the motor mount in the appropriate direction to adjust the chain tension. The chain should have a slight deflection in the middle of the span.
 - c. Tighten the mounting bolts. Reinstall the chain guard.

⚠ WARNING

WARNING! Machine is shown with the chain guard removed for illustrated purposes only. Do not operate the machine with the guard removed.

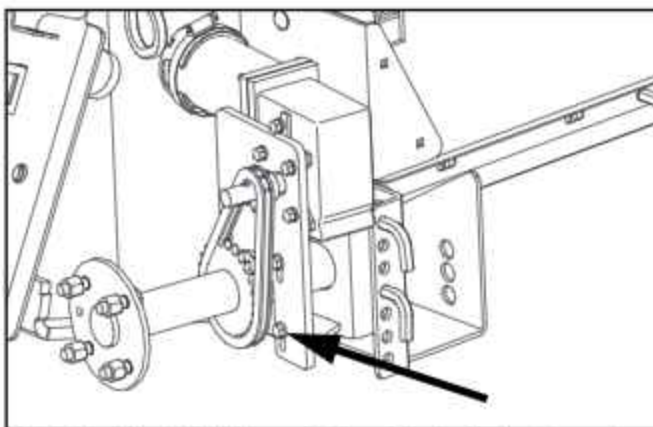


FIG. 5-6. Electric Mover Drive Chain Adjustment

5.6 Swing Auger Location - Adjusting to the Right or Left Side of Auger

1. Lower the swing hopper to the ground and disconnect the auger from the tractor.
2. Remove the hairpin from the lift arm L-Pin.
3. Remove the lift arm L-Pin and rotate the lift arm to the opposite side. The Lift Arm will pivot on the 1" bolt.
4. Re-install the lift arm L-Pin and hairpin.
5. **Manual Winch Only**
Remove the winch retaining pin and move the winch to the opposite side of the intake boot and re-secure with the winch retaining pin. Note that the winch will be mounted upside down when it is mounted on the left side of the boot.
6. Rotate the swing auger around the front of the boot to the opposite side.

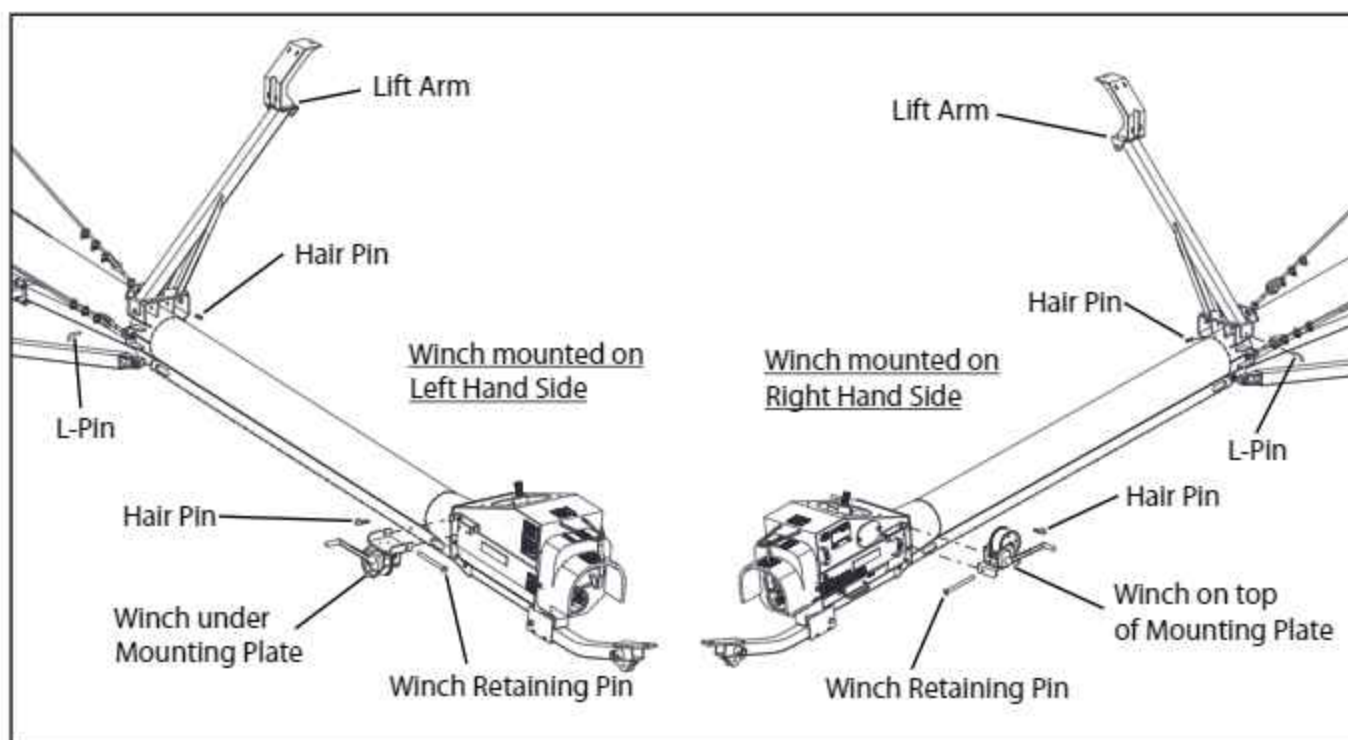


FIG. 5-12. Lift Arm/Manual Winch Location

5.7 PTO Shear Bolt

Before you service or adjust your equipment, make sure you stop your engine and lock out your power source!

CAUTION

Caution. Lock Out the power source by removing the ignition key or coil wire before servicing. If this is not possible, remove the PTO shaft from the work area!

The driveline is protected by a shear bolt(s) inside the bell of the PTO shaft where it connects to the tractor as shown in Fig. 5-7. If the shear bolt(s) fail:

1. Shut down and lock out tractor.
2. Check for obstructions and clean away as much grain as possible.
3. Install new shear bolt(s). See Fig. 5-7.

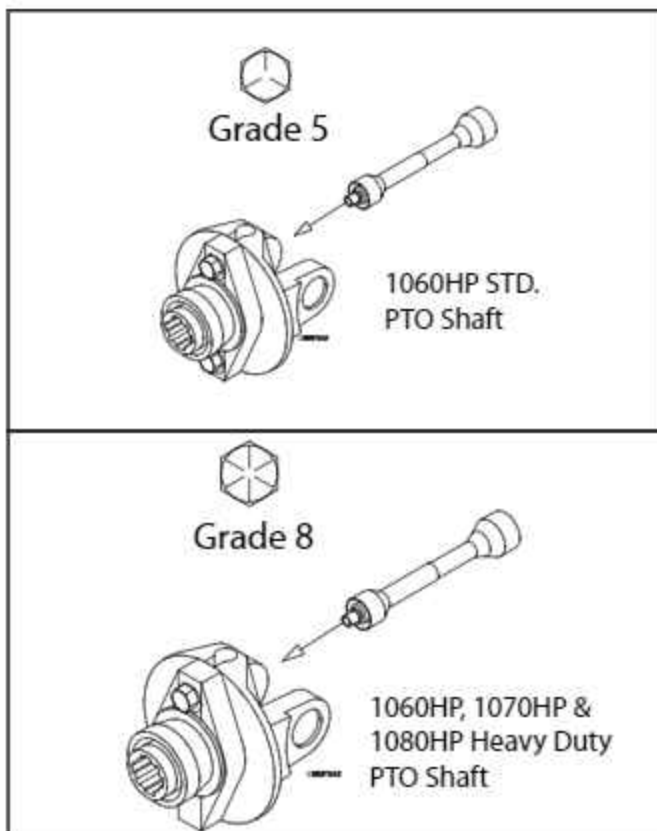


FIG. 5-7. PTO Shaft Shear Bolts

NOTICE

Notice. 1060HP Augers with the standard PTO shaft require two 5/16" x 1" Grade 5 bolts.

1060HP, 1070HP & 1080HP Augers with the Heavy Duty PTO shaft require one 3/8" x 1" Grade 8 bolt.

4. Slowly engage the PTO drive and allow the auger to clean out.
5. If the replacement shear bolts fail while restarting the auger, it may be necessary to isolate the Swing Auger from the Main Auger. Do this by removing the coupling chain which connects the swing tube flight to the upper gearbox. Run the main auger until all the grain is removed from it, then reinstall the coupling chain and empty the Swing Tube and Hopper.

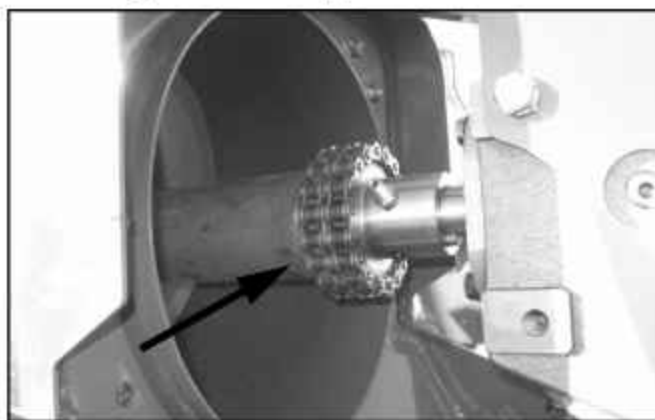


FIG. 5-8. Swing Tube Coupler Chain

WARNING

WARNING! Do not replace the shear bolt with a larger or stronger one. Damage to other auger components and/or injury may result.

DANGER

DANGER! Do not remove the PTO shaft guard.

5.8 Wheel Hub Installation

5.8.1 Adjusting the Hub Tightness

To adjust the 5 and 6 bolt wheel hub tightness, use the following instructions.

1. Remove the dust cap from the hub. Remove the cotter pin holding the castle nut in place.
2. Torque the castle nut to 50 ft-lbs (5 bolt) or 100 ft-lbs (6 bolt). Turn the hub one full rotation to seat the cups and cones. Repeat this process of tightening and rotating four times. This will ensure the cones are properly seated in the cups.
3. Loosen the castle nut one full turn or until the nut can be turned by hand.
4. Torque the castle nut to 20 ft-lbs (5 bolt) or 30 ft-lbs (6 bolt). Turn the hub one full rotation to seat the cones in the cups.
5. Loosen the castle nut until the first castellation lines up with the cotter pin hole. This should be no more than 1/8 to 1/6 of a turn.
6. Install the cotter pin but do not bend the ends yet.
7. Turn the hub and make sure it rotates freely. If the hub is the proper tightness, bend the ends of the cotter pin, pack the dust cap with grease and install.

5.8.2 Checking Endplay of an Installed Hub

Note: Endplay must be checked with a Dial Indicator.

1. Ensure the hub has been installed using the previous installation instructions.
2. Attach the base of the Dial Indicator to the mounting face of the hub. See Fig. 5-9.

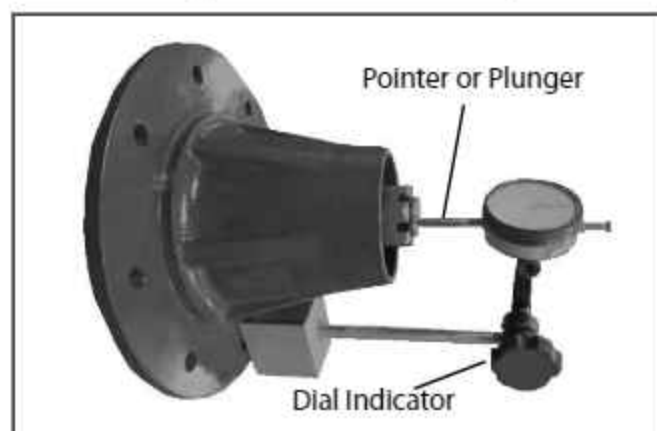


FIG. 5-9. Installing the Dial Indicator

3. Adjust the Dial Indicator plunger or pointer so it is parallel with the spindle axis.
4. Grasp the hub assembly at the 3 o'clock and 9 o'clock positions. Push and pull on the hub and read the bearing end play as the total indicator movement.
5. End play must be within the range of 0.001" to 0.005". If it is, proceed to step 8.
6. If the endplay measurement exceeds 0.005", repeat the procedure in Section 5.8.1 and recheck the endplay.
7. If the endplay still exceeds 0.005" after repeating the instructions in Section 5.8.1, tighten the castle nut to the next castellation. This should not exceed 1/6 of a turn.
8. Install the cotter pin and check to ensure the hub rotates freely.
9. Pack the dust cap with grease and install.

5.9 Tube Truss Adjustment

After using the auger for some time, it may be necessary to retension the truss cables in order to maintain the auger tube straightness. Proceed as follows. Refer to Fig. 5-10.

1. Hook up the auger to the drawbar of a tractor to provide stability to the auger while performing this operation.
2. With a front end loader, remove the weight off the under carriage by raising the discharge end of the auger slightly by lifting in the centre of the top tube.
3. Loosen the cable clamps on the top of the Truss Tower.
4. With a chalk line fixed to the top side of auger ends and drawn taught, measure the perpendicular vertical distance between the chalk line and the upper tube face at both ends and in the middle. The distance should be the same at all three locations. If the tube is bowed down, ie, the middle measurement is less than both ends, then tighten the upper truss cables evenly until the middle dimension is slightly greater than both end measurements (approximately 3/4").
5. Move the chalk line to either the left or right side of the auger ends and with the chalk line taught measure the horizontal perpendicular distance between the chalk line and the tube side face at both ends and in the middle. This measurement should be equal at all locations.
 - a) If the tube is bowing to the right, then the truss cable on the right should be loosened evenly and at the same time the left truss cable should be tightened until the middle dimension is the same as the end dimensions.
 - b) If the tube is bowing to the left, then the truss cable on the left should be loosened evenly and at the same time the right truss cable should be tightened until the middle dimension is the same as the end dimensions.
6. Once the tube has been straightened in the above described manner, check all the tube flange bolts for tightness. If any tightening is required, do it in a sequence that tightens one bolt, moves to the bolt on the opposite side of the tube and tighten it the same amount, move around to the bolt adjacent to the first one and tighten it similarly and proceed in this manner until all bolts have been tightened.
7. Re-tighten the cable clamps on the top of the Truss Tower.

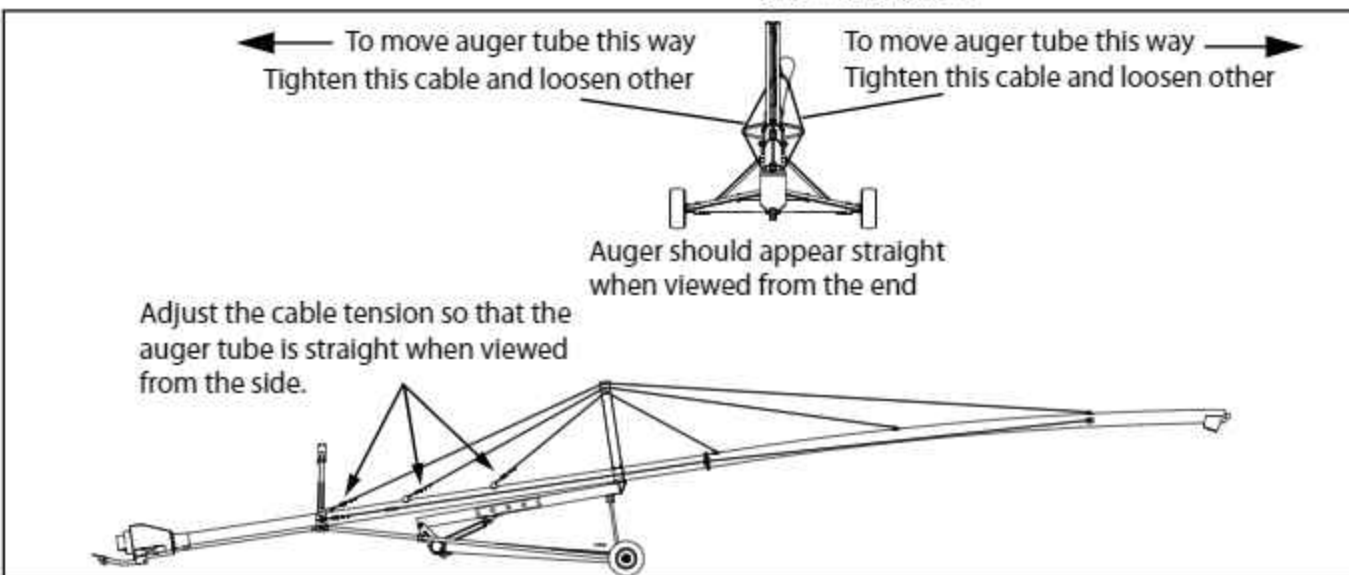


FIG. 5-10. Tube Truss Adjustment

5.10 Drive Chain Tension Adjustment

Augers Without a Reverser

1. The Chain does not have a tension sprocket and therefore any tension adjustment is made by moving the main flighting shaft up or down and by removing or adding links and offset links. The auger shaft can be moved approximately $\frac{3}{16}$ " up and down and an offset link is $\frac{5}{16}$ " long, so a combination of the two will result in correct chain tension. See Fig. 5-11.
2. If the chain is too loose, move the main auger flighting shaft down to tension the chain. If there is not sufficient adjustment, move the shaft back up and remove an offset link. If there is no offset link, then remove one full link and add an offset link.

Note: When moving the flight up, be careful not to move the flight too high as it can contact the bottom of the gear box. Remove the side cover on the boot and check for clearance between the flight and the gear box.

Augers With a Reverser

1. Loosen off the mounting nut and the adjustment nut and rotate the reverser assembly toward or away from the chain to obtain the correct tension. Re-tighten the nuts.

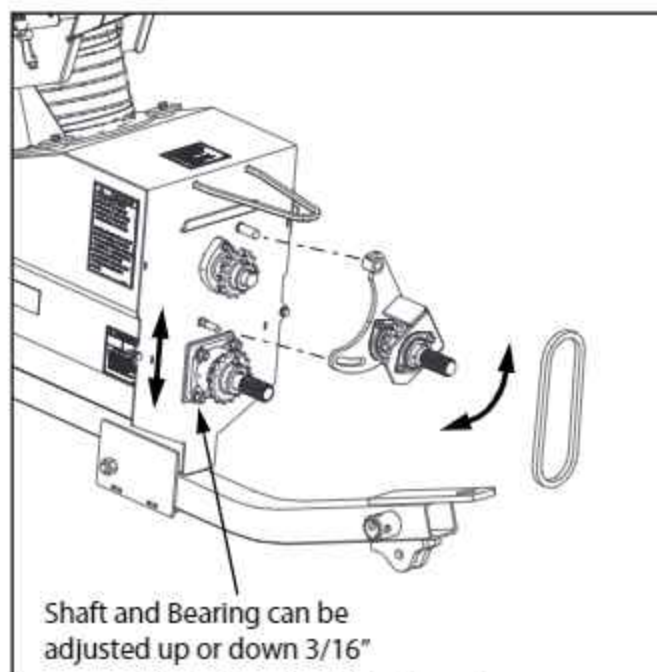


FIG. 5-11. Chain Tension Adjustment

5.11 Service Record

Use this table to record the service work done to the machine. See Lubrication Section 5.2 for details of service.

Table Codes C - Check L - Lubricate

Hours									
Serviced by, Initial									
Service Schedule									
4 Hours or Twice Daily									
L - Ball Sockets on both CV Joints on PTO Shaft									
10 Hours or Daily									
C - Seals of all gearboxes for weeping									
L - Hopper Flight U-Joints									
L - Hopper Flight Bearings									
L - Bearings on front of Boot									
L - Swing Auger Drive U-Joints									
50 Hours or Weekly									
L - Complete PTO Shaft									
L - Upper Main Flight Bearing									
L - Upper Bearing on Boot Gearbox									
L - Undercarriage Pivot Pins									
L - Hopper Chains									
C - Hopper Chain Tension									
L - Electric Hopper Mover Drive Chains									
C - Electric Hopper Mover Drive Chain Tension									
C - All Gearboxes for oil leaks.									
C - Auger Lift Cables									
Annually									
C - Oil Levels in all gearboxes									
C - Gearbox Seals for weeping									
C - All Flight Drive U-Joints									
C - Auger Lift Cables									
C - Hopper Lift Cables									
L - Cable Sheaves on Hopper Lift									
L - Repack Wheel Bearings									
C - Auger Lift Cylinders for leaking									
C - All Hydraulic Hoses									
C - Hopper Drive Sprockets and Chains									
C - Tire Pressure and Wear									
C - All hardware for tightness									
C - Wheel bolts for proper torque									

CHAPTER 6 Troubleshooting

The Brandt MDSA Augers have been designed to give long and trouble-free use. Minor problems do, however, occur from time to time. In the following section, we have listed many of the problems, causes and solutions to the problems that you may encounter. If you encounter a problem that is difficult to solve, even after reading through this trouble shooting section, please contact your local Brandt dealer. Before you call, please have this manual and the serial number from your Auger at hand.

Problem	Possible Cause	Solution
Noisy Flight	Foreign object stuck on the flight	Remove the foreign object
	Worn flight bearings	Replace the flight bearing as required.
	Bent Flight	Contact the Brandt Dealer about straightening the flight.
	Dented Auger Tube	Contact the Brandt dealer about having the dent removed.
	High Spots in the flight.	Check the auger tube for hot spots. Remove the flight from the auger and grind the flight in the appropriate areas.
Shear Bolt Breaking	Foreign object stuck in the flight	Remove the foreign object and replace the shear bolt(s) with the proper size as shown in Section 5.7
	Flight bearings seized.	Replace the flight bearings and lubricate as shown in Section 5.3.
	Swing Tube Gearbox(es) has failed	Rebuild or replace the failed gearbox.
	Auger flight running too slow	Make sure tractor is running at full PTO speed, 540rpm for 10" HP Auger.
Poor Capacity	Auger Flight running too slow	Make sure tractor is running at full PTO speed, 540rpm for 10" HP Auger.
	Tractor does not have sufficient power to run the auger at full capacity.	Use a tractor with the horsepower rating shown in Section 4.9.

CHAPTER 7 Options

7.1 Reversing Kit

The reverser kit available for the Brandt Mechanical Swing Away auger helps the operator clean out the auger when finished moving grain. The reverser kit is available as an add on kit. Contact your local dealer for information.

Assembly

1. Remove the PTO shaft if it is attached to the auger.
2. Unlatch the front guard and remove it. Remove the chain.
3. Slide a 1/2" thick spacer washer onto the lower 1/2" diameter bolt. See Fig. 7-1.
4. Slide the reverser assembly onto the two studs as shown in Fig. 7-1. Secure the top of the reverser assembly with a 3/4" locknut and the bottom slot with a 1/2" flatwasher and a 1/2" locknut. Leave the assembly loose at this time.
5. Adjust the sprocket on the reverser to be inline with the sprockets on the main swing auger drive. The easiest way to accomplish this is to measure the distance from the centre of the teeth to the boot on all three sprockets. This distance should be the same for all three sprockets. See Fig. 7-2.
6. Insert the half link into the chain assembly. See Fig. 7-1.
7. Assemble the chain onto the sprockets. The reverser sprocket should be on the outside of the chain while the other two sprockets are on the inside of the chain.
8. Snug both locknuts holding the reverser on the boot. The assembly should be loose enough so that the unit can still rotate.

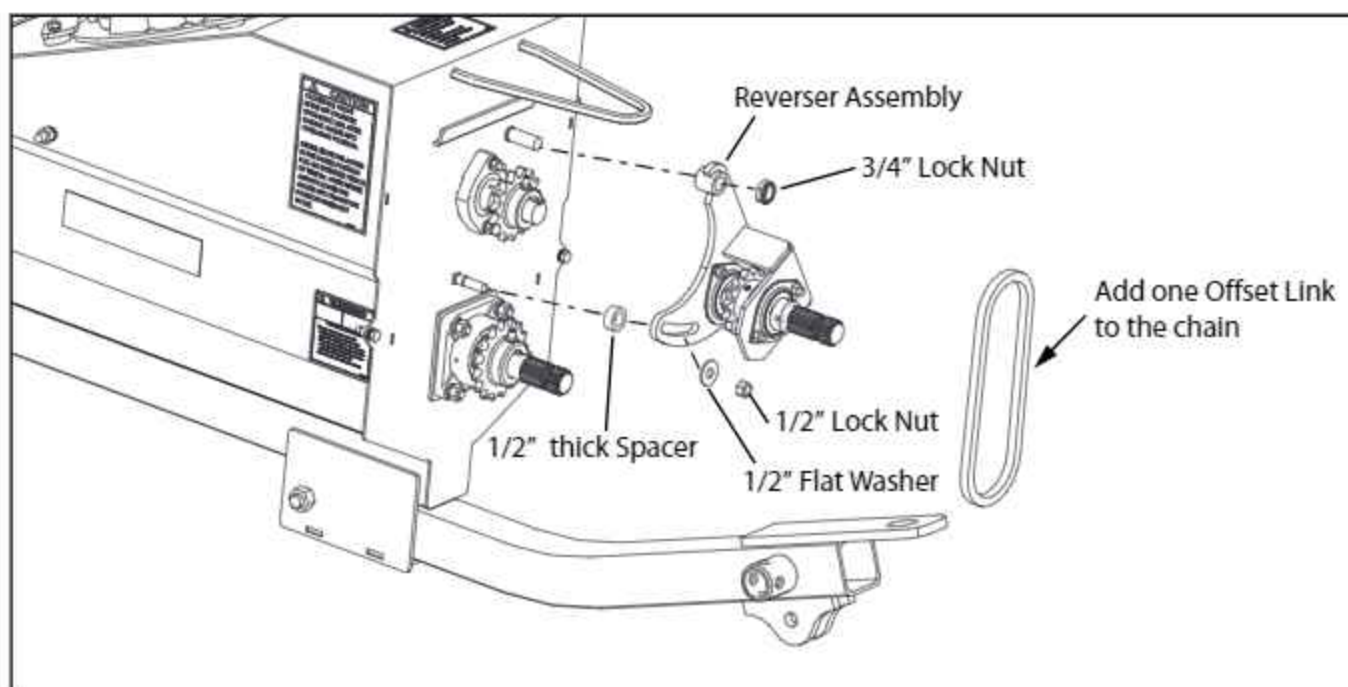


FIG. 7-1. Installing the Reverser Assembly

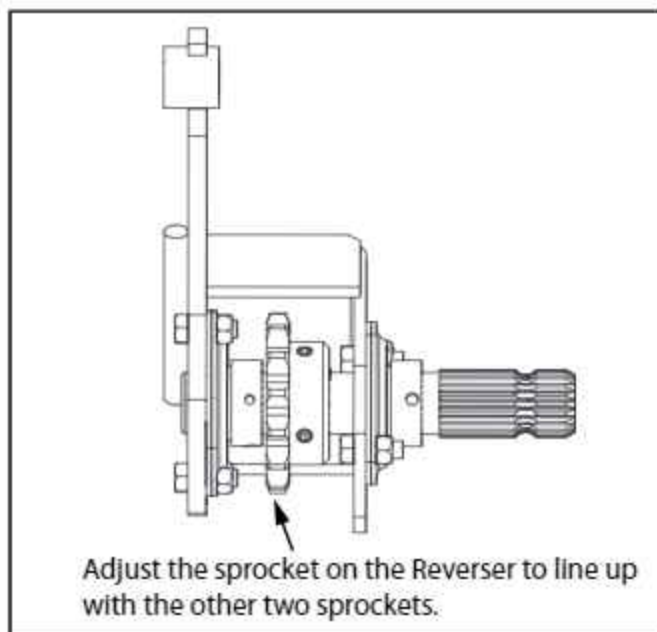


FIG. 7-2. Reverser Sprocket Alignment

9. Rotate the reverser in to snug up the chain. **Do not overtighten the chain. Damage to the bearings will result.** Once set tighten both locknuts. Rotate the auger by hand, checking for tight and loose spots. Make sure the chain does not get too tight or too loose. Adjust as required.
10. Remove the extra shield cover in the guard as shown in Fig. 7-3. Replace the guard and bolt in place.

NOTICE

Notice. Test run the reverser at a very slow speed while the auger is empty. If any unusual noises are heard, find the cause and correct it now.

Operating Instructions.

Operation of the reverse kit requires extreme care and attention. All safety precautions highlighted in this manual must be observed. Although the reverser spline is guarded according to ASAE specifications, it is still a potentially dangerous area.

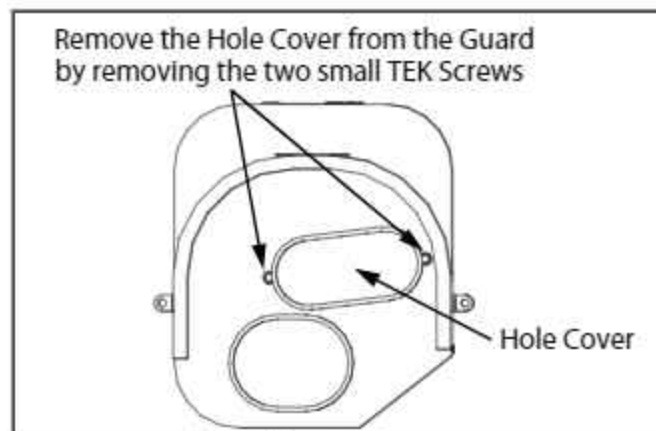


FIG. 7-3. Guard Modification

NOTICE

Notice. The reversing kit is designed to assist in the clean-out of the auger. It is **NOT** intended to clean out a plugged auger.

When operating the reverse kit, the auger performance must be monitored to prevent the boot from overfilling. Excessive back pressure will cause possible damage to the flighting, bearing, PTO shaft and/or the reverser drive. Brandt Industries Ltd. recommends that the reverser be run at a maximum of 100 RPM.

CAUTION

Caution. Keep away from the front of the boot at all times during operation of the auger!

1. Before using the reverse kit, open the clean out door located at the lower right of the boot. This will allow all grain to exit the auger.
2. Remove the PTO shaft from the flight stub and attach it to the reverser stub.
3. Run the tractor PTO (at less than 100 RPM) while watching that the grain is not piling up in or under the boot.

4. When empty, close the clean out door and replace the PTO shaft onto the lower flight stub.

⚠ DANGER

DANGER! Never operate the Reversing Kit with any of the guards removed

⚠ DANGER

DANGER! Never place your hands into the clean out door area and/or any other area where drive components and/or flighting exists.

⚠ CAUTION

Caution. Never operate the Reversing Kit at speeds greater than 100 RPM.

CHAPTER 8 **Additional Information**

8.1 General Torque Specifications

Use the following guidelines when tightening bolts.

- Tighten all bolts to the torques specified in charts unless otherwise noted throughout this manual.
- Check the tightness of the bolts periodically, using the bolt-torque chart as a guide.
- Replace hardware with the same strength bolt.
- Torque figures are valid for non-greased or non-oiled threads and heads unless otherwise specified. Do not grease or oil bolts or cap screws unless specified in this manual. When using locking elements, increase the torque values by 5%.

8.1.1 Unified Inch Bolt and Screw Torque Values

TS1671 -JUN-01MAY03



TABLE 8-1. Unified Inch Bolt and Screw Torque Values

Bolt or Screw Size	SAE Grade 1				SAE Grade 2 ^a				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c	
	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N.m	lb-ft	N.m	lb-ft
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N.m	lb-ft	N.m	lb-ft				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N.m	lb-ft	N.m	lb-ft	N.m	lb-ft								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N.m	lb-ft														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^a Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152mm) long. Grade 1 applies for hex cap screws over 6 in. (152mm) long and for all other types of bolts and screws of any length.

^b Lubricated means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C zinc flake coating.

^c Dry means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B zinc flake coating.

8.1.2 Metric Bolt and Screw Torque Values

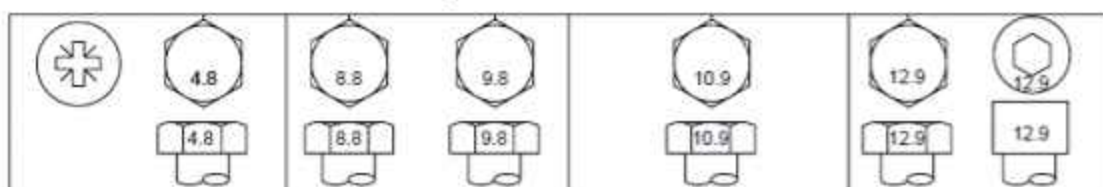


TABLE 8-2. Metric Bolt and Screw Torque Values

Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c	
	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in	N.m	lb-in
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N.m	lb-ft	N.m	lb-ft	N.m	lb-ft								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N.m	lb-ft														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^b Lubricated means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C zinc flake coating.

^c Dry means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B zinc flake coating.

8.1.3 Suggested Torque for Hydraulic Fittings

TABLE 8-3. Suggested Torque for Hydraulic Fittings

Fitting Size	Dash Size	Torque					
		37° JIC		ORB		ORF	
		ft-lb	N-m	ft-lb	N-m	ft-lb	N-m
1/4	04	12	15	14	20	12	15
3/8	06	20	25	23	30	25	35
1/2	08	40	55	40	55	55	75
5/8	10	60	80	45	60	75	100
3/4	12	80	110	75	100	130	175
7/8	14	-	-	85	115	170	230
1	16	110	150	120	165	210	285
1-1/4	20	130	175	155	210	250	340
1-1/2	24	165	225	170	230	320	435

8.1.4 Suggested Torque for Tapered Pipe Thread Hydraulic Fittings

TABLE 8-4. Tapered Pipe Thread Torque

Suggested Wrenching Torque for Tapered Pipe Thread Fittings						
Tapered Pipe Thread with Sealant*			Tapered Pipe Thread without Sealant			
Thread Size	N-m	lb-ft	Thread Size	N-m	lb-ft	
1/16-27 UNF	15	10	1/16-27 UNF	20	15	
1/8-27 UNF	20	15	1/8-27 UNF	25	20	
1/4-18 UNF	25	20	1/4-18 UNF	35	25	
3/8-18 UNF	35	25	3/8-18 UNF	45	35	
1/2-14 UNF	45	35	1/2-14 UNF	60	45	
3/4-14 UNF	60	45	3/4-14 UNF	75	55	
1-11 1/2 UN	75	55	1-11 1/2 UN	90	65	
1-1/4-11 1/2 UN	95	70	1-1/4-11 1/2 UN	110	80	
1-1/2-11 1/2 UN	110	80	1-1/2-11 1/2 UN	130	95	
2- 11 1/2 UN	130	95	2- 11 1/2 UN	160	120	
*SUGGESTED WRENCHING TORQUE FOR TAPERED PIPE THREAD chart meets FUNK Engineering Procedures Manual Torque Specifications QS04.01.4 (YZ5-101)						

8.1.5 Cable Clamps

TABLE 8-5. Cable Clamp Torque Values

Cable Clamp Size	Min. Number of Clamps	Amount of Cable to turn back in inches	Torque in lb-ft
3/16"	2	3 3/4"	7.5
1/4"	2	4 3/4"	15
5/16"	2	5 1/4"	30
3/8"	2	6 1/2"	45
1/2"	3	11 1/2"	45
5/8"	3	12"	90

8.2 SAE-to-Metric Conversions

This manual provides values and measurements in units according to the standards of the Society of Automotive Engineers (SAE). Table 8-6 provides the conversion factor for SAE units to SI units (metric system).

TABLE 8-6. SAE-to-Metric Conversion

SAE Unit	Conversion Factor	SI Units (Metric)
ft/min	x 0.3048	Metres/min (m/min)
ft/s	x 0.3048	Metres/s (m/s)
US gallon	x 3.7854	Litres (L)
US gal/min (GPM)	x 3.7854	Litres/min (L/min)
hp	x 0.7457	Kilowatts (kW)
in	x 2.54	Centimetres (cm)
in	x 25.4	Millimetres (mm)
in ³	x 16.3871	Cubic centimetres (cm ³ or cc)
lb	x 0.4535	Kilogram (kg)
lbf	x 4.4482	Newtons (N)
lbf.ft or ft-lb	x 1.3558	Newton metres (N.m)
lbf.in or in-lb	x 0.1129	Newton metres (N.m)
mph	x 1.6063	Kilometres/hour (km/h)
oz	x 29.5735	Millilitres (ml)
psi	x 0.06894	Bar
psi	x 6.8948	Kilopascals (kPa)
psi	x 0.00689	Megapascals (MPa)

8.3 Acronyms and Abbreviations

TABLE 8-7. Acronyms and Abbreviations

Term / Symbol	Definition
'	Foot
"	Inch
A	Ampere
API	American Petroleum Institute
ASABE	American Society of Agricultural and Biological Engineers
ASTM	American Society of Testing and Materials
F	Fahrenheit
ft	Foot
ft/min	Feet per minute
ft/s	Feet per second
GPM	U.S. gallons per minute
hp	Horsepower
HPU	Hydraulic power unit
Hz	Hertz
in ³	Cubic inches
ID	Inside diameter
lb	Pound
lbf	Pounds force
lbf.ft or ft-lb	Pound feet or foot pounds
lbf.in or in-lb	Pound inches or inch pounds
mph	Miles per hour
N/A	Not applicable
OD	Outside diameter
OEM	Original Equipment Manufacturer
oz	Ounce
PH	Phase
psi	Pounds per square inch
RPM	Revolutions per minute
SAE	Society of Automotive Engineers
VAC	Volts, alternating current
VDC	Volts, direct current

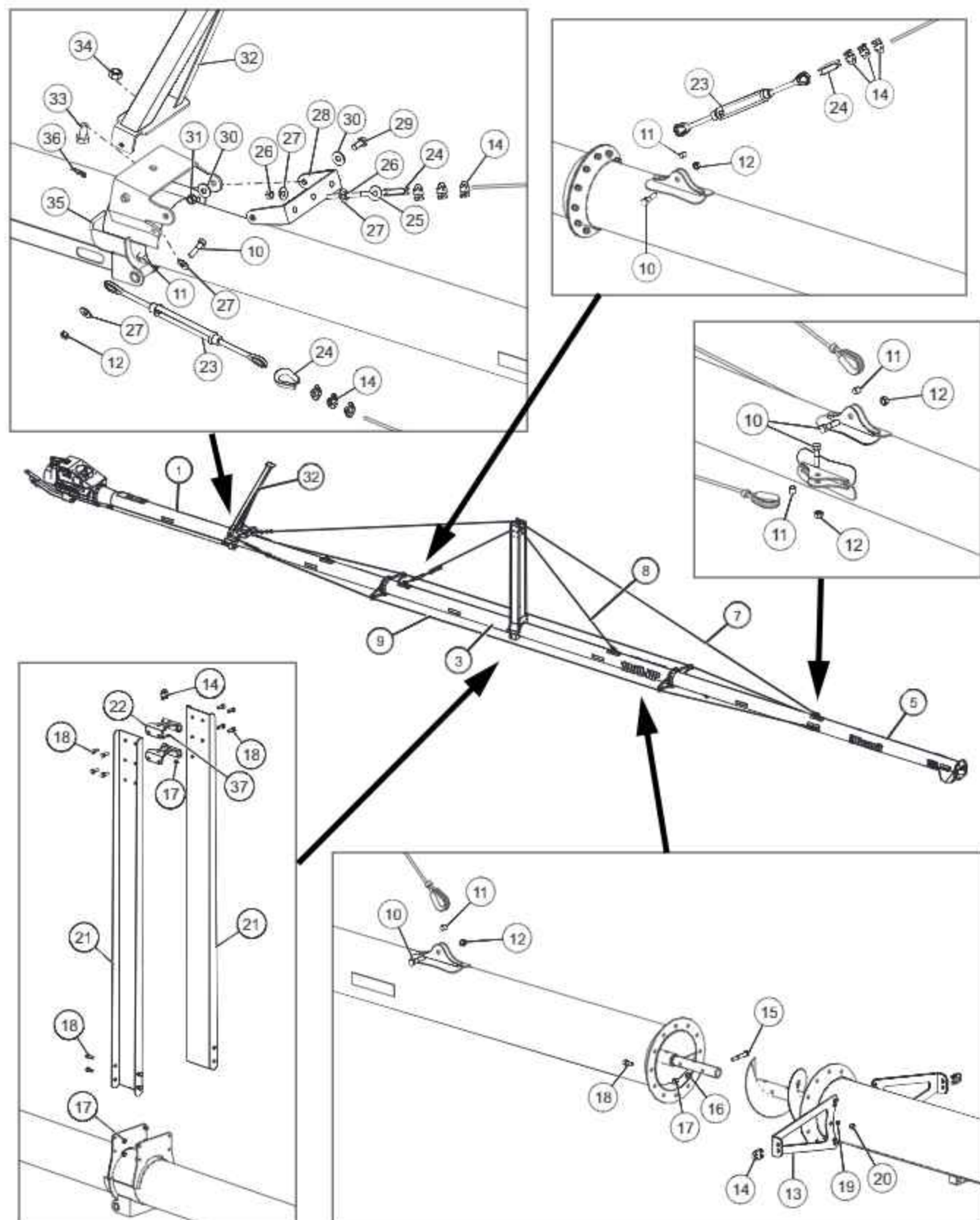
CHAPTER 9 **Parts List**

Serial No. 140000 - Present & 3975 - Present

9.1 Drawing List

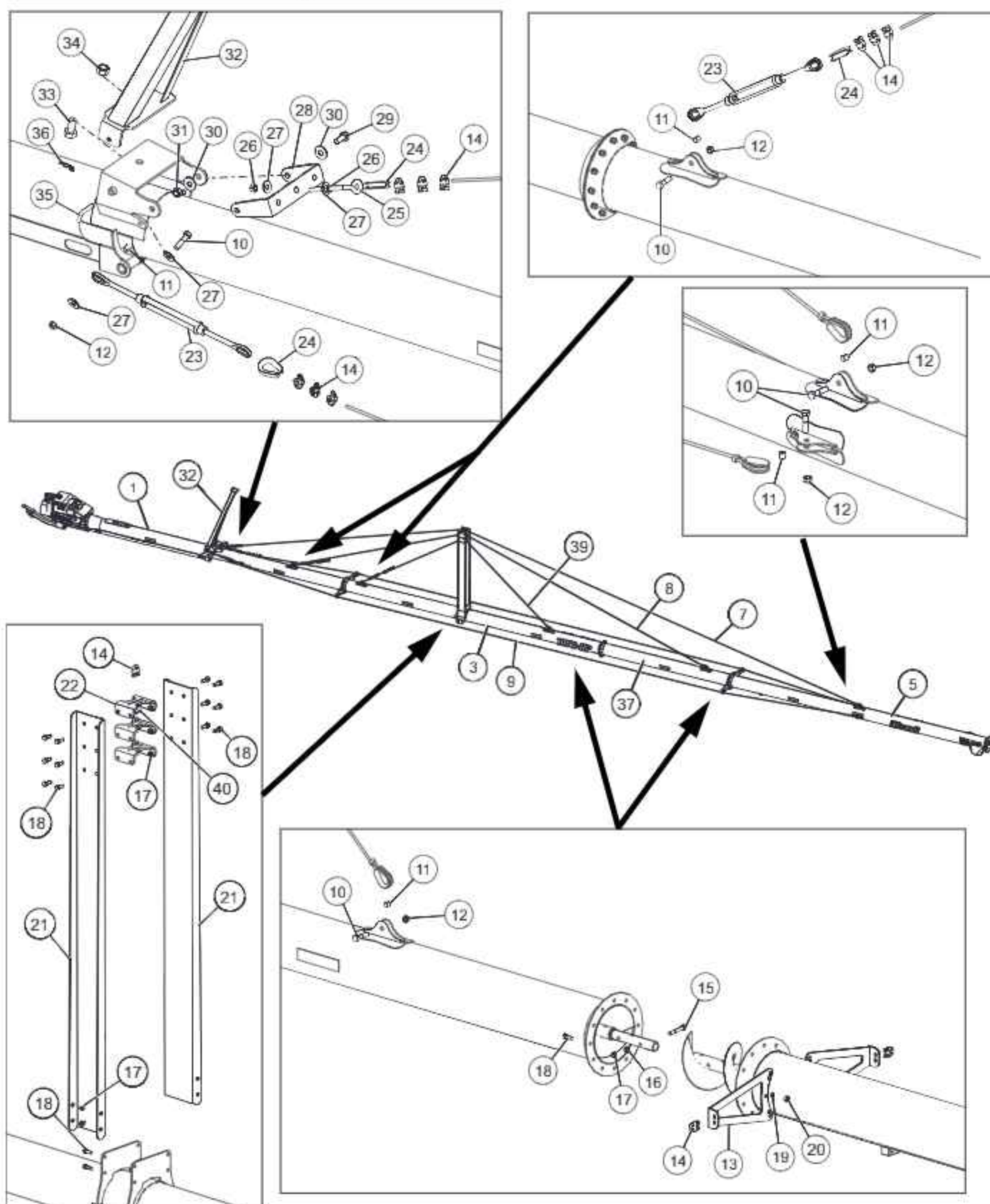
1. "1060 Tube Assembly" on page 86
2. "1070 Tube Assembly" on page 88
3. "1080 Tube Assembly" on page 90
4. "Boot Assembly - All Sizes" on page 92
5. "Undercarriage Parts - All Sizes" on page 94
6. "Common Parts - All Sizes" on page 96
7. "Auger Tube Decals" on page 98
8. "Swing Tube & Spout Assembly" on page 100
9. "Swing Hopper Assembly" on page 102
10. "Swing Hopper Drive" on page 104
11. "PTO Shaft Breakdown" on page 106 & 107
12. "Upper Swing Tube Gearbox Breakdown" on page 108
13. "Lower Swing Tube Gearbox Breakdown" on page 109
14. "Reversing Kit" on page 110

1060 Tube Assembly



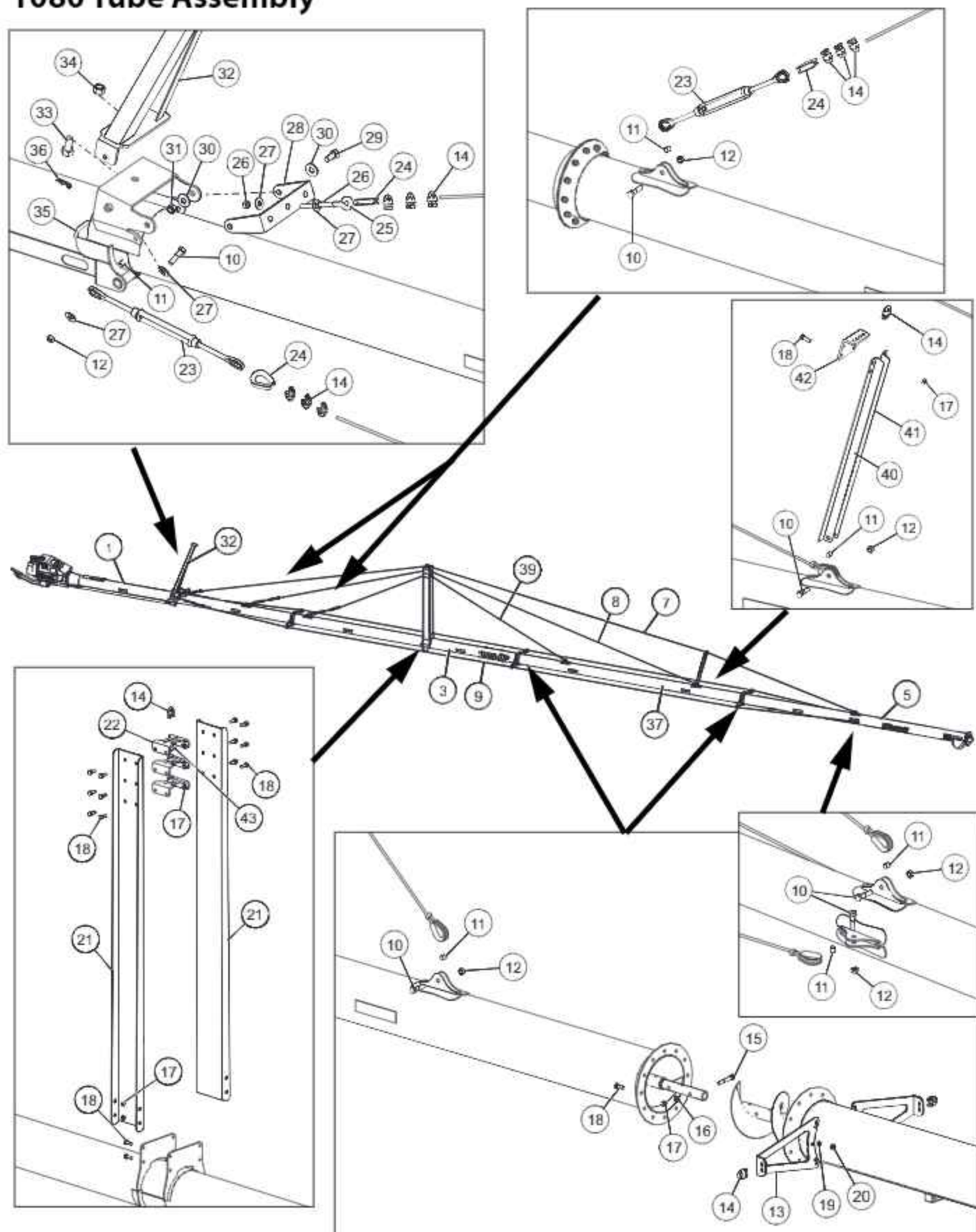
REF #	PART No.	DESCRIPTION	QTY
1	2065447	LOWER TUBE WELDMENT	1
2	2066820	LOWER TUBE FLIGHT WELDMENT	1
3	2065449	SECOND TUBE WELDMENT	1
4	2066808	SECOND TUBE FLIGHT WELDMENT	1
5	2065461	UPPER TUBE WELDMENT	1
6	2066814	UPPER TUBE FLIGHT WELDMENT	1
7	B0083081	TRUSS CABLE - 3/8" x 43'	1
8	B008312	TRUSS CABLE - 3/8" x 19.5'	1
9	B0083081	TRUSS CABLE - 3/8" x 43'	2
10	8000487	5/8" x 2 1/2" BOLT - GR.5	7
11	B002311	5/8" ID SPACER x 3/4" LONG	7
12	8000061	5/8" LOCK NUT	7
13	2064513	SIDE TRUSS MOUNT	4
14	B008080	3/8" CABLE CLAMP	18
15	8000414	1/2" x 3 1/4" BOLT - GR.5	6
16	8001118	1/2" SAE FLAT WASHER	6
17	8015210	1/2" LOCK NUT	22
18	8023370	1/2" x 1 1/4" BOLT	40
19	8001122	1/2" FLAT WASHER	24
20	8000775	1/2" HEX NUT	24
21	2064511	MAIN TRUSS UPRITE	2
22	2064512	TRUSS TOWER SUPPORT	2
23	B00847	5/8" x 12" TURN BUCKLE	3
24	B008081	3/8" CABLE THIMBLE	4
25	B0020246	5/8" x 9 3/8" EYE BOLT	1
26	8000796	5/8" HEX NUT	2
27	8001127	5/8" FLAT WASHER	6
28	2066980	SWIVEL CABLE MOUNT	1
29	8000539	3/4" x 2 1/2" BOLT - GR.5	2
30	8001135	3/4" FLAT WASHER	4
31	8023319	3/4" LOCK NUT	2
32	C310303	LIFT ARM	1
33	8000600	1" x 2" BOLT - GR.5	1
34	8000064	1" LOCK NUT	1
35	B0020297	1/2" x 2 3/4" L-PIN	1
36	B002094	1/8" x 2 9/16" HAIR PIN CLIP	1
37	8001100	3/8" SAE FLAT WASHER	4

1070 Tube Assembly



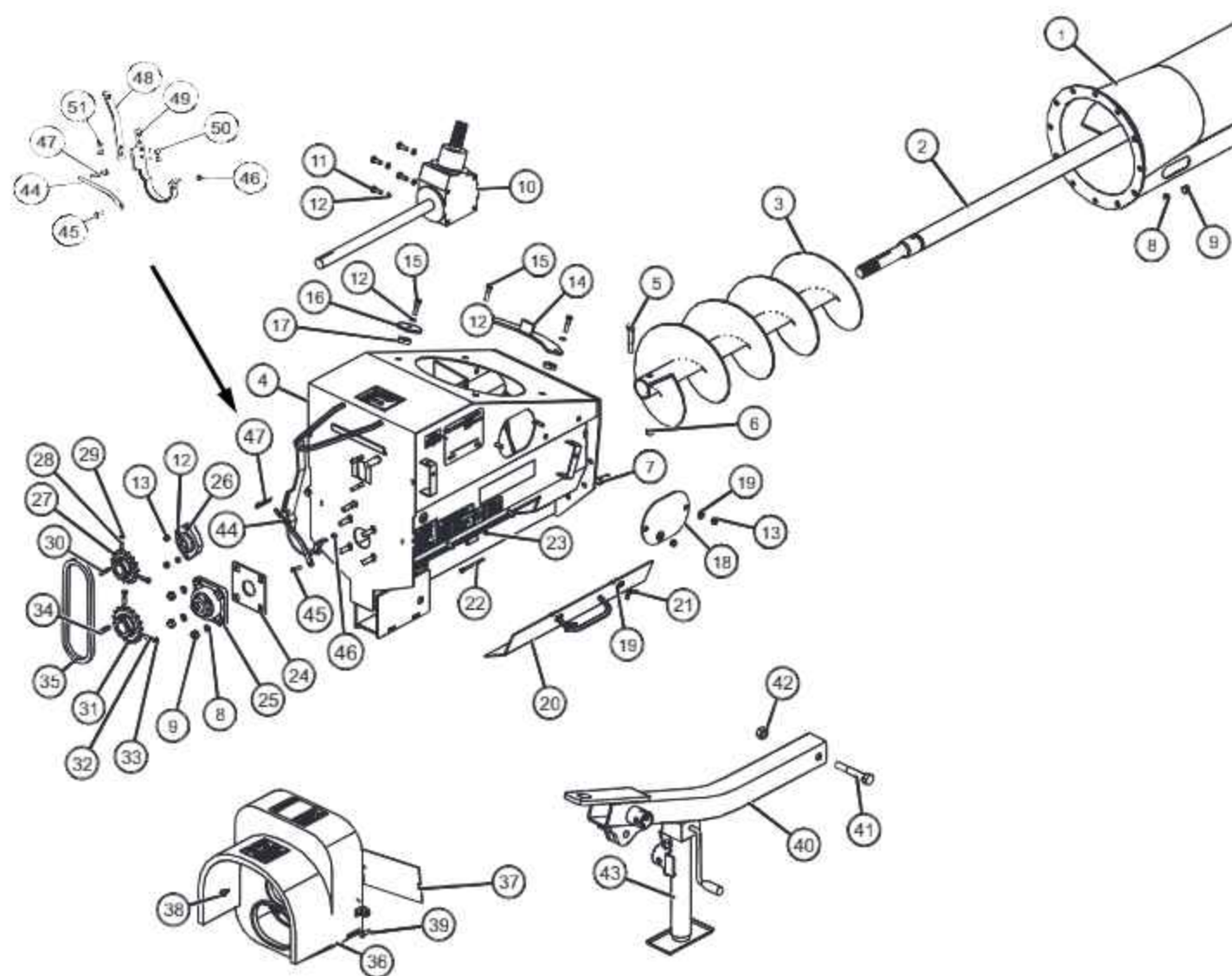
REF #	PART No.	DESCRIPTION	QTY
1	2065447	LOWER TUBE WELDMENT	1
2	2066820	LOWER TUBE FLIGHT WELDMENT	1
3	2065449	SECOND TUBE WELDMENT	1
4	2066808	SECOND TUBE FLIGHT WELDMENT	1
5	2065461	UPPER TUBE WELDMENT	1
6	2066814	UPPER TUBE FLIGHT WELDMENT	1
7	B008108	TRUSS CABLE - 3/8" x 55'	1
8	B0083082	TRUSS CABLE - 3/8" x 35'	1
9	B008108	TRUSS CABLE - 3/8" x 55'	2
10	8000487	5/8" x 2 1/2" BOLT - GR.5	8
11	B002311	5/8" ID SPACER x 3/4" LONG	8
12	8000061	5/8" LOCK NUT	8
13	2064513	SIDE TRUSS MOUNT	4
14	B008080	3/8" CABLE CLAMP	22
15	8000414	1/2" x 3 1/4" BOLT - GR.5	9
16	8001118	1/2" SAE FLAT WASHER	9
17	8015210	1/2" LOCK NUT	25
18	8023370	1/2" x 1 1/4" BOLT	52
19	8001122	1/2" FLAT WASHER	36
20	8000775	1/2" HEX NUT	36
21	2064511	MAIN TRUSS UPRITE	2
22	2064512	TRUSS TOWER SUPPORT	3
23	B00847	5/8" x 12" TURN BUCKLE	4
24	B008081	3/8" CABLE THIMBLE	5
25	B0020246	5/8" x 9 3/8" EYE BOLT	1
26	8000796	5/8" HEX NUT	2
27	8001127	5/8" FLAT WASHER	6
28	2066980	SWIVEL CABLE MOUNT	1
29	8000539	3/4" x 2 1/2" BOLT - GR.5	2
30	8001135	3/4" FLAT WASHER	4
31	8023319	3/4" LOCK NUT	2
32	C310303	LIFT ARM	1
33	8000600	1" x 2" BOLT - GR.5	1
34	8000064	1" LOCK NUT	1
35	B0020297	1/2" x 2 3/4" L-PIN	1
36	B002094	1/8" x 2 9/16" HAIR PIN CLIP	1
37	2065462	THIRD TUBE WELDMENT	1
38	2066795	THIRD TUBE FLIGHT WELDMENT	1
39	B008312	TRUSS CABLE - 3/8" x 19.5'	1
40	8001100	3/8" SAE FLAT WASHER	6

1080 Tube Assembly



REF #	PART No.	DESCRIPTION	QTY
1	2065447	LOWER TUBE WELDMENT	1
2	2066820	LOWER TUBE FLIGHT WELDMENT	1
3	2065460	SECOND TUBE WELDMENT	1
4	2066808	SECOND TUBE FLIGHT WELDMENT	1
5	2065461	UPPER TUBE WELDMENT	1
6	2066814	UPPER TUBE FLIGHT WELDMENT	1
7	2066537	TRUSS CABLE - 3/8" x 62'	1
8	B0083081	TRUSS CABLE - 3/8" x 43'	1
9	2066537	TRUSS CABLE - 3/8" x 62'	2
10	8000487	5/8" x 2 1/2" BOLT - GR.5	8
11	B002311	5/8" ID SPACER x 3/4" LONG	8
12	8000061	5/8" LOCK NUT	8
13	2064513	SIDE TRUSS MOUNT	6
14	B008080	3/8" CABLE CLAMP	25
15	8000414	1/2" x 3 1/4" BOLT - GR.5	9
16	8001118	1/2" SAE FLAT WASHER	9
17	8015210	1/2" LOCK NUT	29
18	8023370	1/2" x 1 1/4" BOLT	56
19	8001122	1/2" FLAT WASHER	36
20	8000775	1/2" HEX NUT	36
21	2064511	MAIN TRUSS UPRITE	2
22	2064512	TRUSS TOWER SUPPORT	3
23	B00847	5/8" x 12" TURN BUCKLE	4
24	B008081	3/8" CABLE THIMBLE	5
25	B0020246	5/8" x 9 3/8" EYE BOLT	1
26	8000796	5/8" HEX NUT	2
27	8001127	5/8" FLAT WASHER	6
28	2066980	SWIVEL CABLE MOUNT	1
29	8000539	3/4" x 2 1/2" BOLT - GR.5	2
30	8001135	3/4" FLAT WASHER	4
31	8023319	3/4" LOCK NUT	2
32	C310303	LIFT ARM	1
33	8000600	1" x 2" BOLT - GR.5	1
34	8000064	1" LOCK NUT	1
35	B0020297	1/2" x 2 3/4" L-PIN	1
36	B002094	1/8" x 2 9/16" HAIR PIN CLIP	1
37	2065463	THIRD TUBE WELDMENT	1
38	2066808	THIRD TUBE FLIGHT WELDMENT	1
39	B0083084	TRUSS CABLE - 3/8" x 25'	1
40	2064508	SHORT TRUSS UPRITE - RIGHT	1
41	2064506	SHORT TRUSS UPRITE - LEFT	1
42	2064510	TOWER TOP MOUNT	1
43	8001100	3/8" SAE FLAT WASHER	6

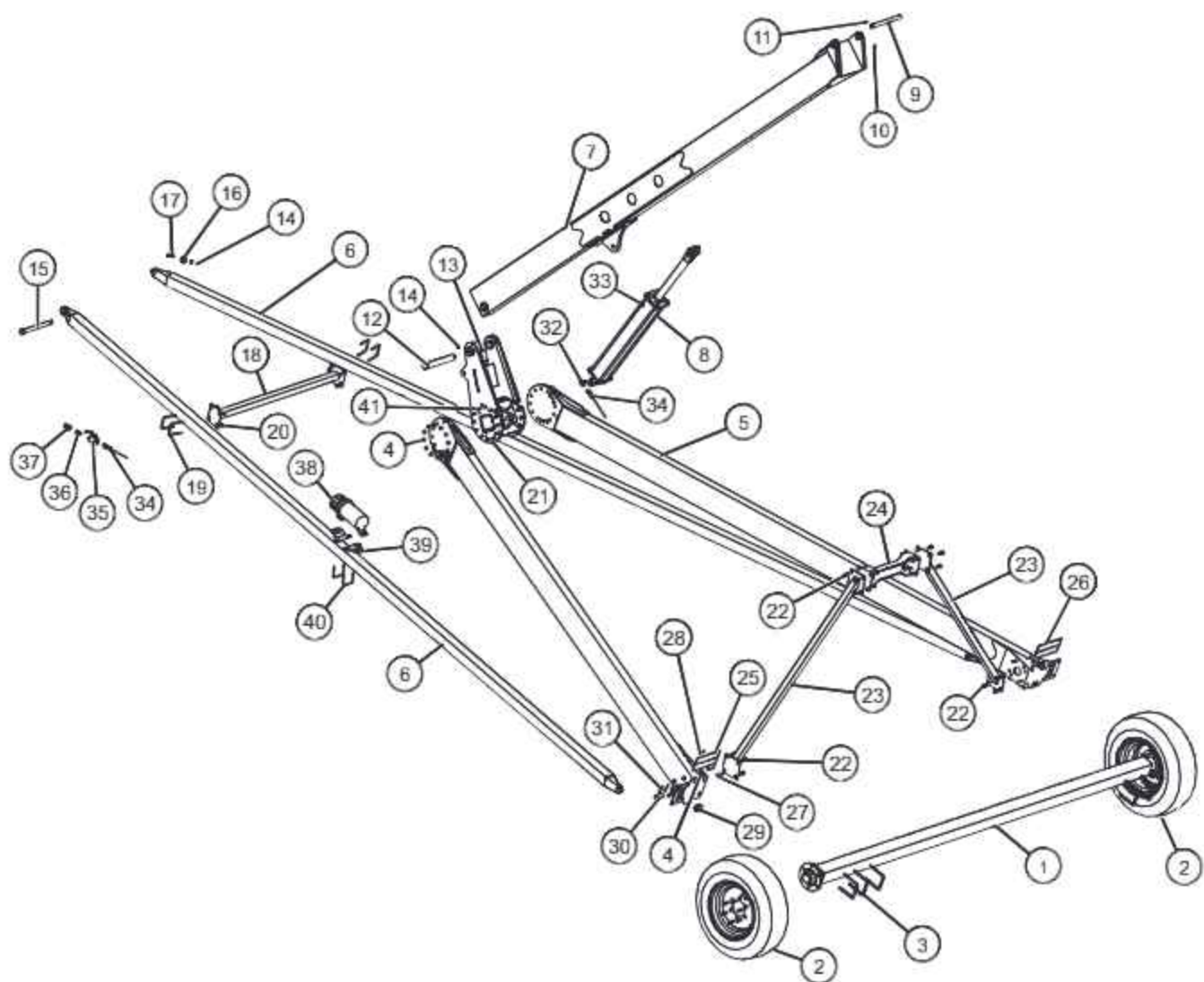
Intake Boot Assembly - All Sizes



REF #	PART No.	DESCRIPTION	QTY
1	2065447	LOWER TUBE WELDMENT	1
2	2066820	LOWER FLIGHT WELDMENT	1
3	C116439	10" HP BOOSTER FLIGHT	1
4	C116431A	10" HP BOOT c/w DECALS	1
5	8000411	1/2" x 3" BOLT - GR.8	1
6	8015210	1/2" STOVER LOCK NUT	1
7	8023370	1/2" x 1 1/4" BOLT	13

REF #	PART No.	DESCRIPTION	QTY
8	8001122	1/2" LOCK WASHER	20
9	8000775	1/2" HEX NUT	20
10	B003110	10" HP BOOT GEARBOX	1
11	8000237	3/8" x 1" BOLT	4
12	8001107	3/8" LOCK WASHER	10
13	8000755	3/8" HEX NUT	4
14	C100872	SWING TUBE STOP	1
15	8000250	3/8" x 1 1/2" BOLT	4
16	B198361	LARGE SWING TUBE RETAINER	2
17	C100889	SMALL SWING TUBE RETAINER	4
18	C116471	ACCESS COVER	1
19	8001100	3/8" FLAT WASHER	4
20	C116473	10" HP BOOT CLEANOUT DOOR	1
21	8000764	3/8" WING NUT	2
22	8000156	1/4" x 3 1/2" BOLT	2
23	8000731	1/4" LOCK NUT	4
24	B194335	10" INNER SPACER PLATE	1
25	B017160	1 3/8" BEARING - 4 BOLT FLANGE	1
26	B017200	1 1/4" BEARING - 2 BOLT FLANGE	1
27	B0090085	60-15 SPROCKET - 1 1/4" BORE	1
28	8000960	5/16" x 1" SET SCREW	2
29	8000743	5/16" JAM NUT	2
30	B689169	1/4" KEY x 1 1/2" LONG	1
31	B009028	60-17 SPROCKET x 1 3/8" BORE	1
32	8000972	3/8" x 1" SET SCREW	2
33	8000760	3/8" JAM NUT	2
34	B194012	5/16" KEY x 1 1/2" LONG	1
35	B0090131	R60 CHAIN x 39 PITCH	1
36	B027504A	DRIVE GUARD c/w DECALS	1
37	B199007	540 COVER PLATE	1
38	8000959	5/16" x 3/4" THREAD CUTTING SCREW	2
39	8000237	3/8" x 1" BOLT	2
40	C116527	10" HP HITCH TUBE	1
41	8000560	3/4" x 4 1/2" BOLT	1
42	8000809	3/4" LOCK NUT	1
43	B030500	IMPLEMENT JACK - 5000 LB SIDE WIND	1
44	C305026	PTO CLASP	1
45	8000177	5/16" x 1" BOLT - GR.5	1
46	8000056	5/16" LOCK NUT	1
47	B002094	HAIR PIN CLIP	1
48	2114007	UPPER PTO SHAFT HOLDER	1
49	2114021	LOWER PTO SHAFT HOLDER	1
50	8000237	3/8" x 1" BOLT - GR.5	2
51	8014204	3/8" LOCK NUT	2

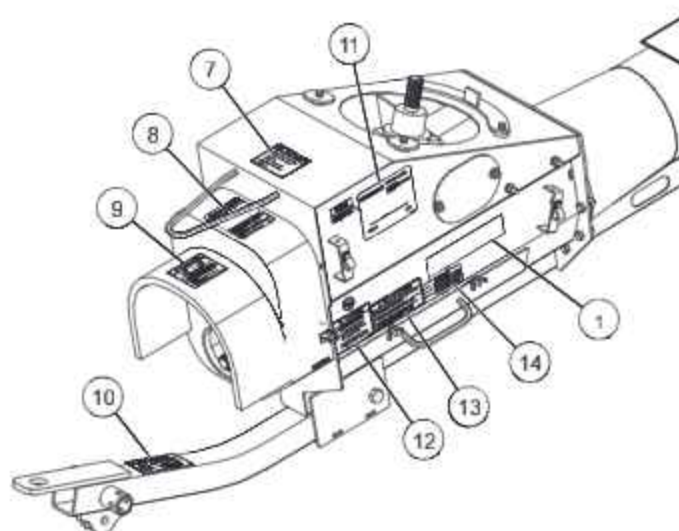
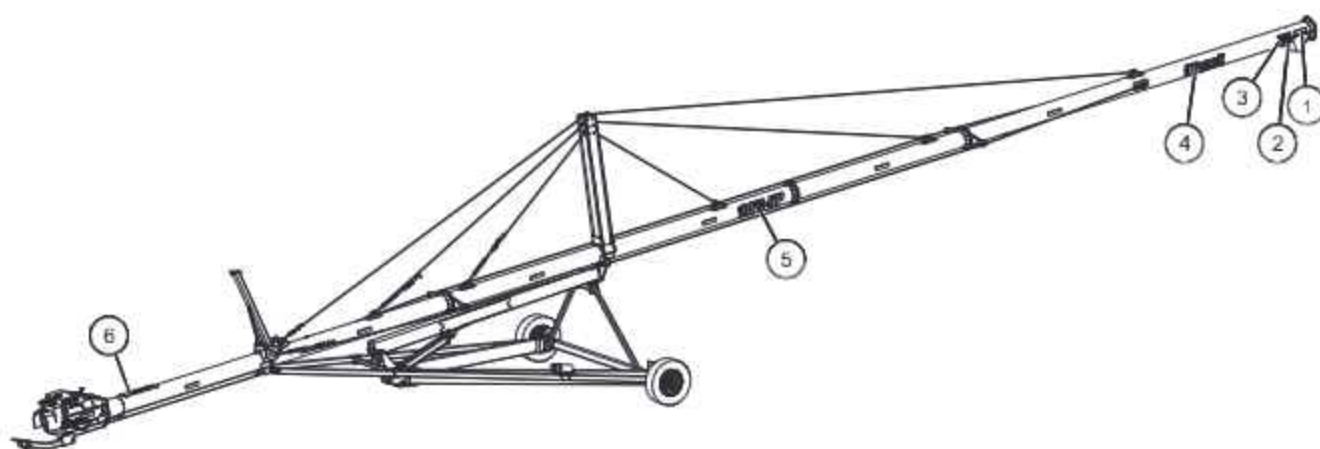
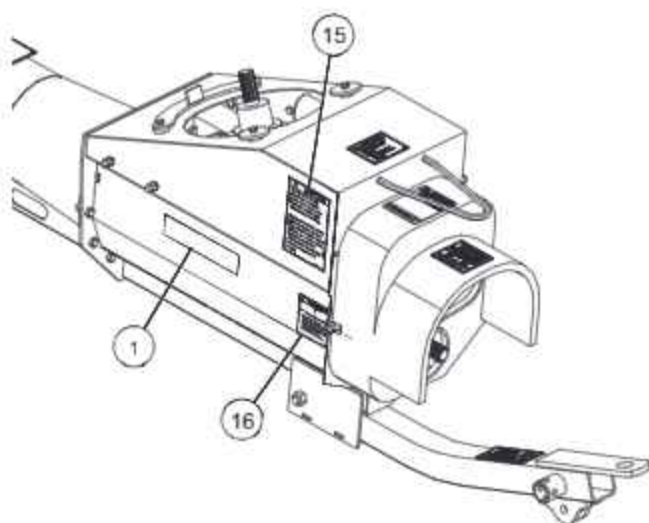
Undercarriage Parts - All Sizes



REF #	PART No.	DESCRIPTION	QTY
1	C116525A	AXLE ASSEMBLY - 5 BOLT HUB - 1060 & 70	1
1	C116410A	AXLE ASS'Y - 6 BOLT HUB - 1080 (1060 & 70 HD)	1
2	B011209	205/75D15 6 PLY TIRE (5 BOLT RIM	2
2	B011221	ST225/75R15 8 PLY TIRE & 6 BOLT RIM	2
3	B0020177	1/2" x 4" U-BOLT x 5" LG	6
4	8015210	1/2" STOVER LOCK NUT	52
5	C116407	LIFT ARM WELD - 1060 & 70	2
5	C116507	LIFT ARM WELD - 1080	2
6	C116408	AXLE ARM WELD - 1060 & 70	2
6	C116508	AXLE ARM WELD - 1080	2
7	C116405A	LADDER ASS'Y - 1060 & 70	1
7	C116505A	LADDER ASS'Y - 1080	1
8	B019865	4" x 30" HYDRAULIC CYINDER - 1060 & 70	1
8	B0198655	4 1/2" x 30" HYDRAULIC CYLINDER - 1080	1
9	C116506	LADDER to TUBE PIN	1
10	8000192	5/16" x 2" BOLT	2
11	8000056	5/16" LOCK NUT	2
12	C114418	LIFT CROSS PIN	1
13	8000278	3/8" x 2 3/4" BOLT	2
14	8014204	3/8" LOCK NUT	3
15	C114417	AXLE ARM to TUBE PIN	1
16	C114419	AXLE ARM to TUBE PIN BUSHING	1
17	8000261	3/8" x 2" BOLT	1
18	C114409	AXLE ARM CROSS BRACE - 1060 & 70	1
18	C116509	AXLE ARM CROSS BRACE - 1080	1
19	B0020163	3/8" x 3" U-BOLT x 4" LG	4
20	8000762	3/8" SERRATED FLANGE NUT	8
21	2077338	10" HP LIFT CROSS	1
22	8023370	1/2" x 1 1/4" BOLT	16
23	C116412	TRANSPORT UPRITE	2
24	C311277	TRANSPORT REST CROSS MEMBER	1
25	C116485	RIGHT RELECTOR ASSEMBLY	1
26	C116486	LEFT REFLECTOR ASSEMBLY	1
27	8000117	1/4" x 3/4" BOLT	4
28	8000731	1/4" LOCK NUT	4
29	B0211395	OVAl GROMMET	2
30	C114420	AXLE ARM PIN - 1" x 3" LG	2
31	B002059	5/16" x 2" ROLL PIN	4
32	B0194165	#8 MORB x #6 MJIC ADAPTER - 1/16" REST	1
33	B0193052	#8 MORB BREATHER	1
34	B019292	3/8" HYDRA. HOSE x 56' - 1060 & 70	1
34	B0192891	3/8" HYDRA. HOSE x 61' - 1080	1
35	B019300	SHUT OFF VALVE - 3/8" FPT	1
36	B019516	3/8" MPT x 1/2" MPT REDUCER NIPPLE	1
37	B019200	PIONEER MALE TIP - 1/2" FPT	1
38	B0275102	LARGE TUBE MANUAL HOLDER	1
39	C314500	MANUAL HOLDER BRACKET	2
40	B0020115	1/4" x 3" U-BOLT x 4" LG	2
41	8000371	1/2" x 1 3/4" BOLT	24

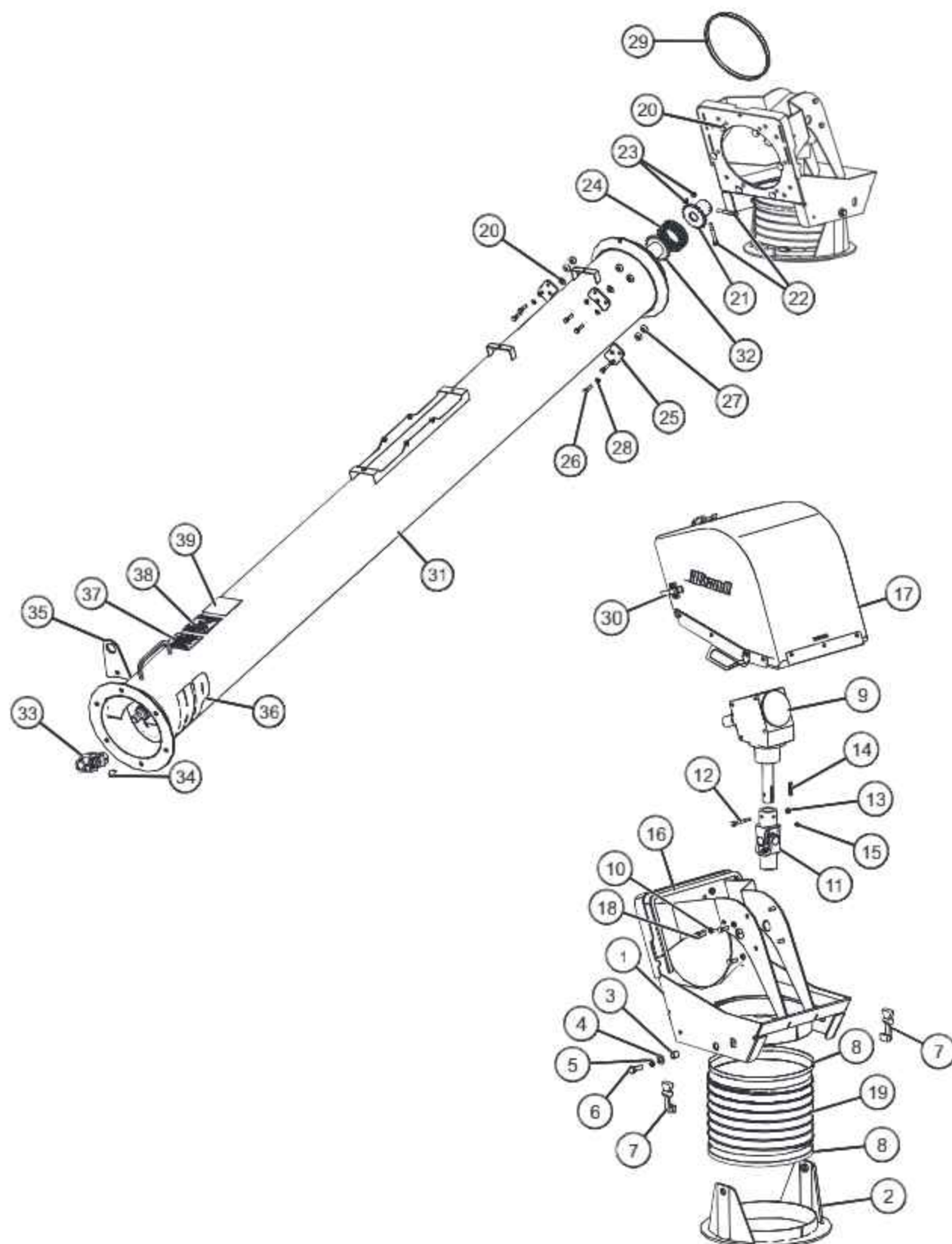
REF #	PART No.	DESCRIPTION	QTY
1	B011503	DUST CAP - 6 BOLT HUB	1 per hub
2	B011681	1" CASTLE NUT	1 per hub
3	B001158	1" SAE FLAT WASHER	1 per hub
4	B011603	OUTER CONE - 6 BOLT HUB - LM67048	1 per hub
5	B011602	OUTER CUP - 6 BOLT HUB - LM67010	1 per hub
6	B011003	6 BOLT HUB c/w BEARINGS	1 per hub
7	B011652	INNER CUP - 6 BOLT HUB - LM29710	1 per hub
8	B011651	INNER CONE - 6 BOLT HUB - LM29749	1 per hub
9	B011650	GREASE SEAL - 6 BOLT HUB - 17617	1 per hub
10	B011221	ST225/75R15 TIRE & RIM - 1080 (60 & 70 HD)	2
11	B011504	WHEEL BOLT	6 per hub
12	B002054	3/16" x 2" COTTER PIN	1 per hub
13	B0116407	DUST CAP - 5 BOLT HUB	1 per hub
14	B001525	1" SLOT NUT	1 per hub
15	B002073	MACH. BUSHING - 1"ID x 1 1/2"OD x 1/8"	1 per hub
16	B0116405	OUTER CONE - 5 BOLT HUB - L44659	1 per hub
17	B0116404	OUTER CUP - 5 BOLT HUB - L44610	1 per hub
18	B0116401	HUB ONLY - 5 BOLT HUB	1 per hub
19	B0116402	INNER CUP - 5 BOLT HUB - L68111	1 per hub
20	B0116403	INNER CONE - 5 BOLT HUB - L68149	1 per hub
21	B0116406	GREASE SEAL - 5 BOLT HUB - 17415	1 per hub
22	B011209	ST205/75 6 PLY TIRE & 5 BOLT RIM (60 & 70)	2
23	B0116408	WHEEL NUT - 5 BOLT HUB	5 per hub
24	B002054	3/16" x 2" COTTER PIN	1 per hub
25	B017090	1 1/4" BEARING - 4 BOLT HUB	1
26	8001122	1/2" LOCK WASHER	10
27	8000775	1/2" HEX NUT	10
28	2066426	HEAD END BEARING COVER	1
29	2066422	HEAD END PLATE	1
30	B0029967	DOWNSPOUT WARNING DECAL	2
31	B029965	AUGER DISCHARGE DECAL	2
32	B0210276	2" x 9" AMBER REFLECTOR TAPE	2
33	2066432	DISCHARGE SPOUT - RIGHT	1
34	2066433	DISCHARGE SPOUT - LEFT	1
35	8025249	1/4" x 1/2" CARRIAGE BOLT	3
36	8000055	1/4" LOCK NUT	3
37	8000240	3/8" x 1" SERRATED FLANGE BOLT	4
38	8000763	3/8" FLANGE LOCK NUT	4
39	8000371	1/2" x 1 3/4" BOLT - GR.5	4
40	8000364	1/2" x 1 1/2" BOLT - GR.5	6

Auger Tube Decals - All Augers



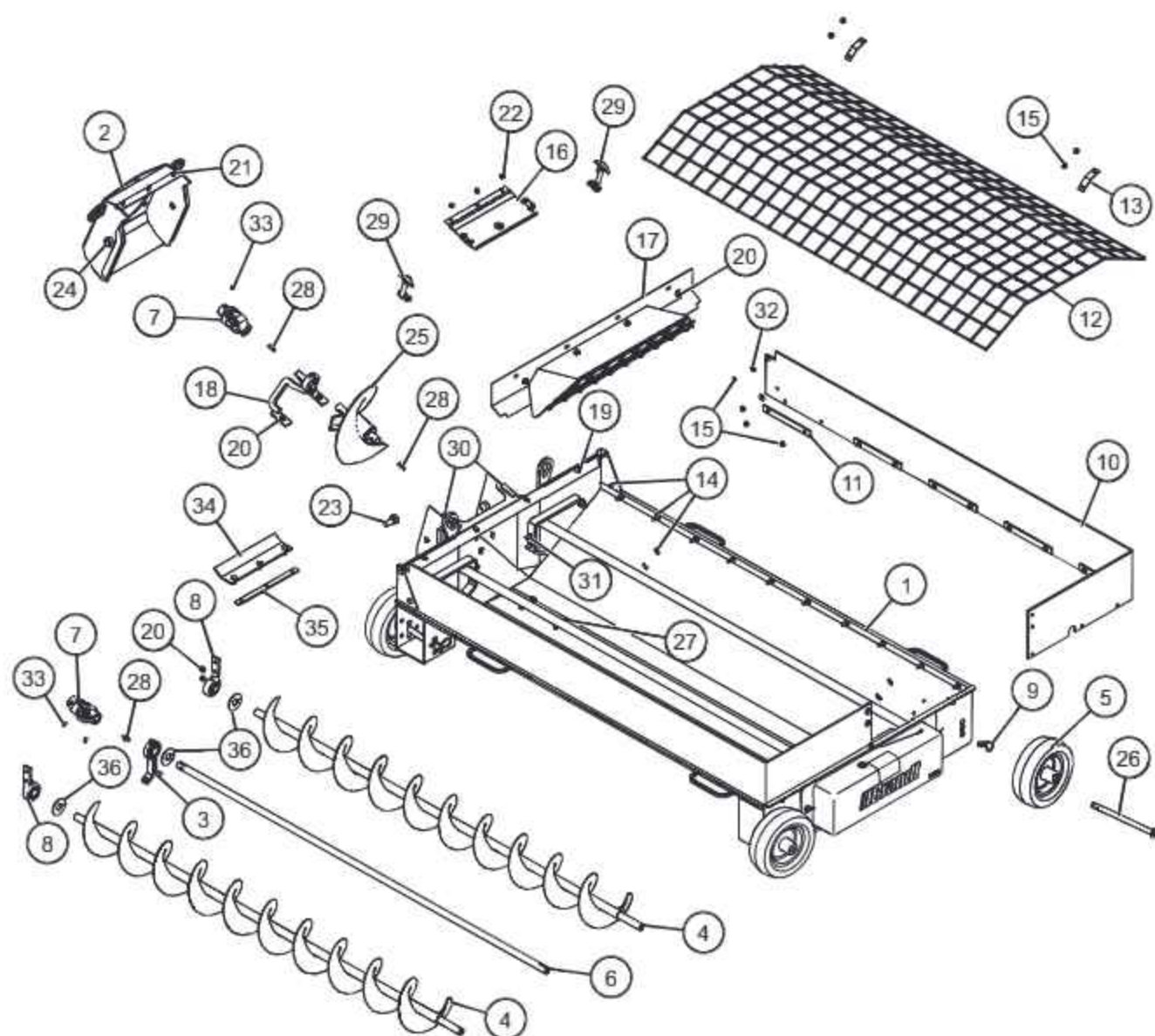
REF #	PART No.	DESCRIPTION	QTY
1	B0210276	2" x 9" AMBER REFLECTIVE TAPE	12
2	B029967	DOWNSPOUT WARNING DECAL	2
3	B029965	AUGER DISCHARGE DECAL	2
4	B029150	LARGE 'BRANDT' DIE CUT DECAL	2
5	B029656	'1060-HP' DECAL	2
5	B029659	'1070-HP' DECAL	2
5	B029665	'1080-HP' DECAL	2
6	B029100	COMBINATION DANGER DECAL	1
7	B029410	SWING AUGER DECAL	1
8	B029340	REMOVE PTO DECAL	1
9	B029111	MOVING PARTS HAZARD DECAL	1
10	B029970	HITCH PIN DECAL	1
11	B0290615	HITCH/PTO DIMENSIONS DECAL	1
12	B029310	CLEAN OUT COVERS DECAL	1
13	B029971	SAFE TRANSPORT DECAL	1
14	B029072	10" SHEAR BOLT DECAL	1
15	B029330	NEEDLE VALVE DECAL	1
16	B029350	HYDRAULIC OIL DECAL	1

Swing Tube & Spout Parts



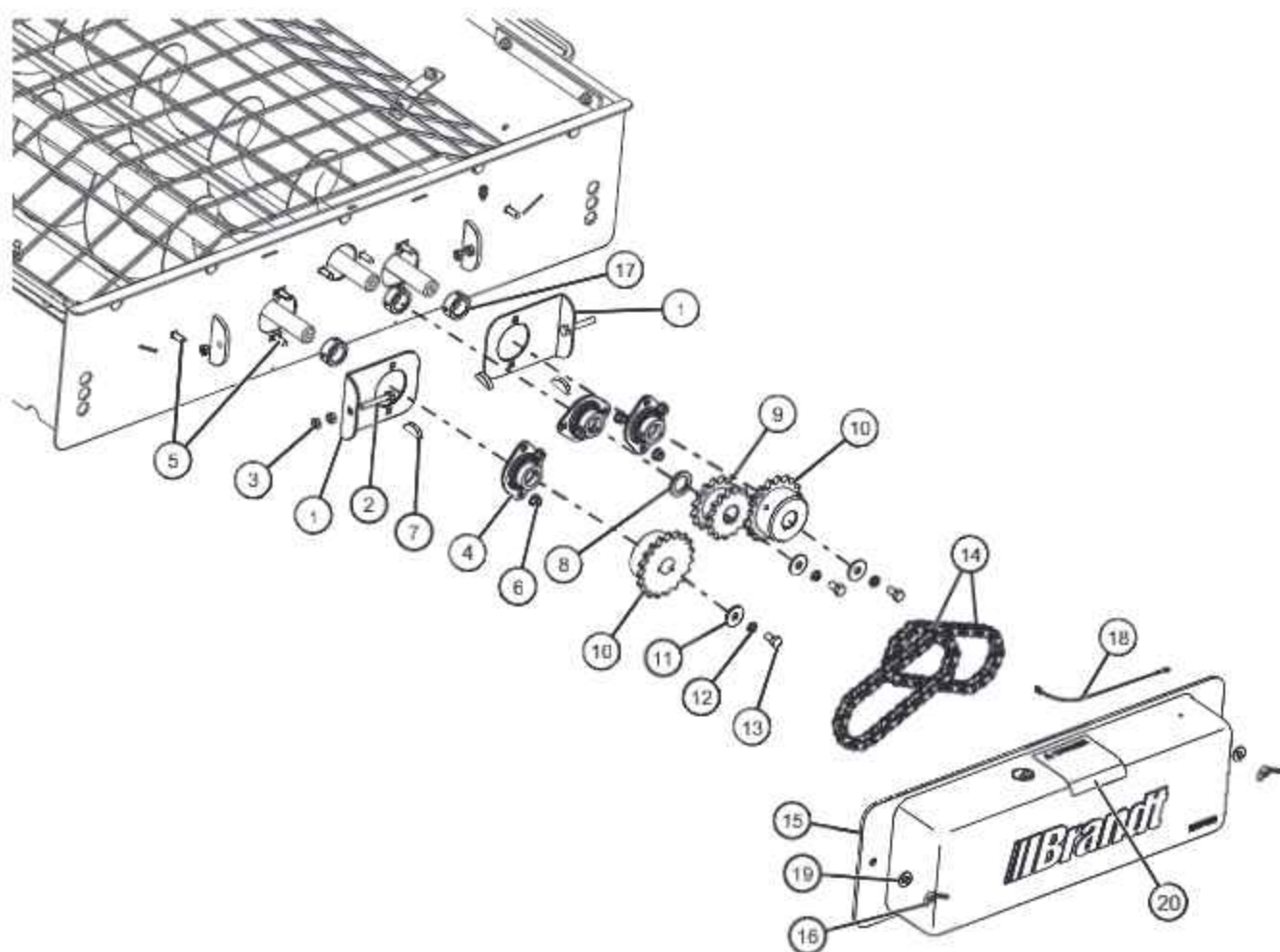
REF #	PART No.	DESCRIPTION	QTY
1	C105867	10" SPOUT WELDMENT	1
2	C100868	LOWER SWIVEL WELDMENT	1
3	C100869	SWIVEL BUSHING	2
4	8001118	1/2" SAE FLAT WASHER	2
5	8001122	1/2" LOCK WASHER	2
6	8023370	1/2" x 1 1/4" BOLT	2
7	B0219992	RUBBER LATCH	2
8	B024213	13" HOSE CLAMP	2
9	B003014	10" UPPER GEARBOX	1
10	8001107	3/8" LOCK WASHER	6
11	B032135	U-JOINT - 1 1/4" DIA x 1 3/8"-21 SPLINE	1
12	8000200	5/16"x 2 1/2" BOLT	1
13	8000056	5/16" STOVER LOCK NUT	1
14	B689169	1/4" KEY x 1 1/2" LG	1
15	8000967	3/8" x 3/8" SET SCREW	1
16	C103953	10" SPOUT TUBE SEAL	1
17	C106876	10" PLASTIC SPOUT COVER ASSEMBLY	1
NS	B0275036	PLASTIC SPOUT COVER ONLY	
18	8000237	3/8" x 1" BOLT	6
19	C100879	DOWNSPOUT HOSE - 12" ID x 12" LG	1
20	B027500	PLASTIC WEAR BUSHING	10
21	B0090024	50-18 SPROCKET x 1 1/4" BORE	1
22	8000283	3/8" x 3" BOLT - GR.8	2
23	8000761	3/8" LOCK NUT	2
24	B009593	R50-2 x 18 PITCH ROLLER CHAIN	1
25	C100870	RETAINER PLATE	4
26	8000244	3/8" x 1 1/4" BOLT	8
27	B027499	PLASTIC SPACER BUSHING	8
28	8001107	3/8" LOCK WASHER	8
29	C103953	10" SPOUT SEAL FOAM	1
30	B021110	SMALL LATCH ASSEMBLY	2
31	C116461A	10" SWING TUBE ASSEMBLY	1
32	2067461	10" SWING FLIGHT	1
33	B0321125	U-JOINT - 1" x 1"	1
34	B009700	1.25" x .25" WOODRUFF KEY - #810	1
35	C109096	10" LIFTING LUG	1
36	B029664	HP DECAL	2
37	B029310	CLEAN OUT COVER DECAL	1
38	B029090	KEEP HANDS AND FEET CLEAR DECAL	1
39	B029111	MOVING PARTS HAZARD DECAL	1

Swing Hopper Parts



REF #	PART No.	DESCRIPTION	QTY
1	C118305	10" HP SWING HOPPER WELDMENT	1
2	C118307	10" HP HOPPER TRANSITION	1
3	C116446A	DRIVELINE HANGER ASS'Y c/w BEARING	1
NS	B017261	1" BEARING ONLY	
4	C104009	HOPPER FLIGHT	2
5	B011046	10" SOLID HOPPER TIRE & RIM	4
6	C116445	10" HP HOPPER DRIVESHAFT	1
7	B0321125	1" x 1" U-JOINT - 6R	2
8	C311380	FLIGHT HANGER ASS'Y c/w BEARING	2
NS	B017261	1" BEARING ONLY	
9	B002091	.177" x 3 3/4" HAIR PIN CLIP	4
10	B0210418	RUBBER HOPPER EXTENSION	2
11	B198071	ALUMINUM HOLD DOWN STRAP	12
12	C104010	HOPPER SAFETY GRATE	1
13	B198358	HOPPER MESH RETAINER	4
14	8000174	5/16" x 1" CARRIAGE BOLT	36
15	8000747	5/16" FLANGE LOCK NUT	36
16	C118308	TRANSITION COVER	1
17	C313134	BAFFLE PLATE	1
18	C116447A	10" HP TRANSITION FLIGHT SUPPORT	1
NS	B017261	1" BEARING ONLY	1
19	8000235	3/8" x 1" CARRIAGE BOLT	6
20	8000762	3/8" SERRATED FLANGE NUT	8
21	8000167	5/16" x 3/4" CARRIAGE BOLT	3
22	8000056	5/16" LOCK NUT	3
23	8000526	3/4" x 1 1/2" BOLT	2
24	B001143	3/4" LOCK NUT	2
25	C116448	10" TRANSITION FLIGHT	1
26	B198856	HOPPER WHEEL PIN	4
27	8000240	3/8" x 1" SERRATED FLANGE BOLT	4
28	B009700	1.25" x .25" WOODRUFF KEY - #810	4
29	8020359	LATCH	2
30	C104022	HOPPER FOAM SEAL	2
31	8000242	3/8" x 1 1/4" CARRIAGE BOLT	4
32	8001093	5/16" FLAT WASHER	8
33	8000968	3/8" x 1/2" SET SCREW	4
34	C118301	RUBBER SEAL	1
35	C118488	RUBBER SEAL RETAINER	1
36	B027815	HOPPER BEARING SHIELD	3

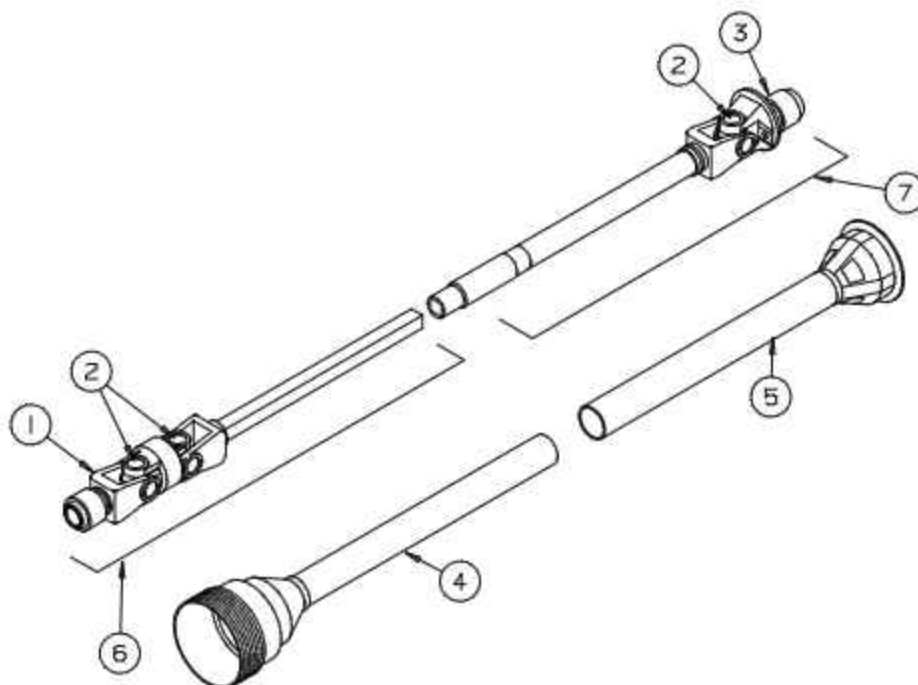
Swing Hopper Drive Parts



REF #	PART No.	DESCRIPTION	QTY
1	C104017	CHAIN TENSION PLATE	2
2	8000193	5/16" x 2" FULL THREAD BOLT	2
3	8000739	5/16" HEX NUT	6
4	B017111	1" - 2 BOLT FLANGETTE BEARING	3
5	8000174	5/16" x 1" CARRIAGE BOLT	8
6	8000747	5/16" LOCKING FLANGE NUT	6
7	B009700	1.25" x .25" WOODRUFF KEY - #810	3
8	8001162	1 1/2" OD x 1" ID x 10 GA MACH. BUSHING	1
9	B0090022	50-15 DOUBLE SPROCKET - 1" BORE	1
10	B0094126	50-19 SPROCKET - 1" BORE - EXTENDED HUB	2
11	8001105	1 1/4" OD x 3/8" ID WASHER	3
12	8001107	3/8" LOCK WASHER	3
13	8000230	3/8" x 5/8" BOLT	3
14	B0090056	R50 x 33 PITCH ROLLER CHAIN c/w OFF & CONN	2
15	C104021	HOPPER CHAIN GUARD	1
16	8000748	5/16" WING NUT	2
17	B0210011	1" ID COLLAR	3
18	B008800	24" CABLE LANYARD	1
19	8001093	5/16" FLAT WASHER	2
20	B029111	MOVING PARTS HAZARD DECAL	1

PTO Shaft Parts

1060HP Standard PTO Shaft



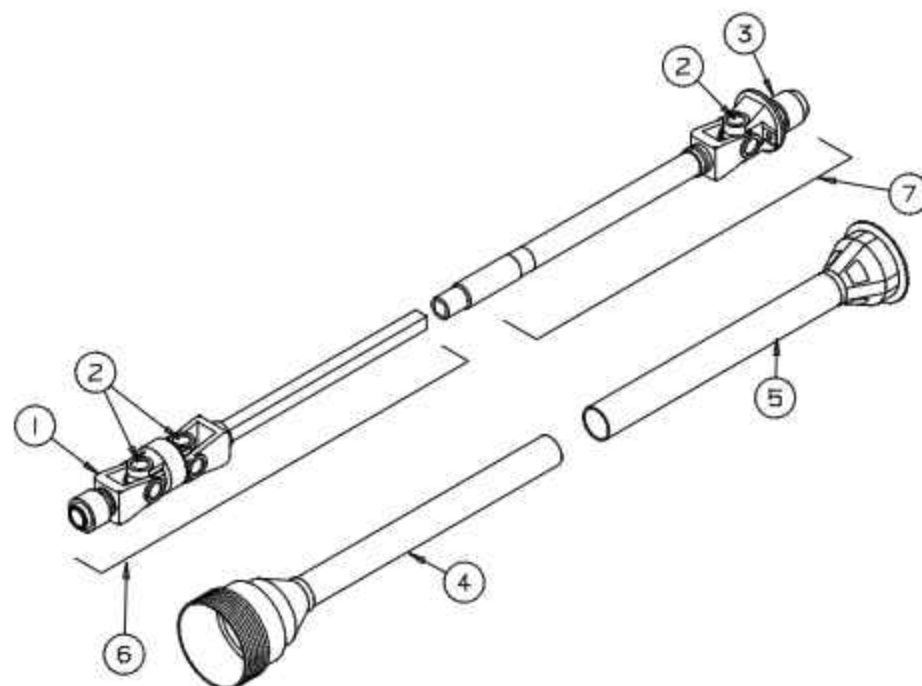
Weasler Series 14E - 50 CV

REF #	PART No.	DESCRIPTION	QTY
1	B003730	YOKE - 21 SPLINE	1
2	B0037101	CROSS & BEARING KIT	3
3	B00308901	SHEAR YOKE - 6 SPLINE	1
4	B003736	OUTER GUARD	1
5	B003737	INNER GUARD	1
6	B003049A	HALF SHAFT - IMPLEMENT END c/w GUARD	1
7	B003089T	HALF SHAFT - TRACTOR END - c/w GUARD	1
NS	8000177	SHEAR BOLT - 5/16" x 1" - GR.5	2
MS	8000056	SHEAR NUT - 5/16" STOVER LOCK NUT	2
NS	B003089	PTO SHAFT - COMPLETE	1

PTO Shaft Parts

1070HP & 1080HP HD PTO Shaft

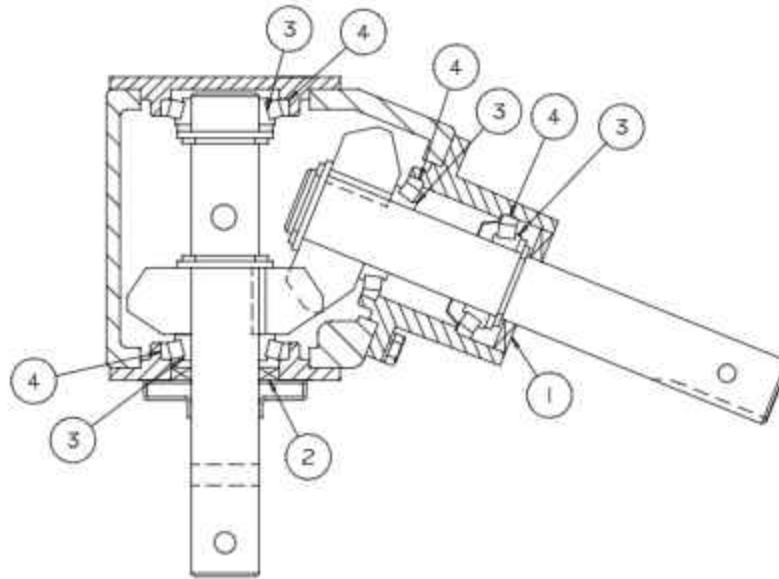
(Optional on 1060HP)



Weasler Series 35E - 50 CV

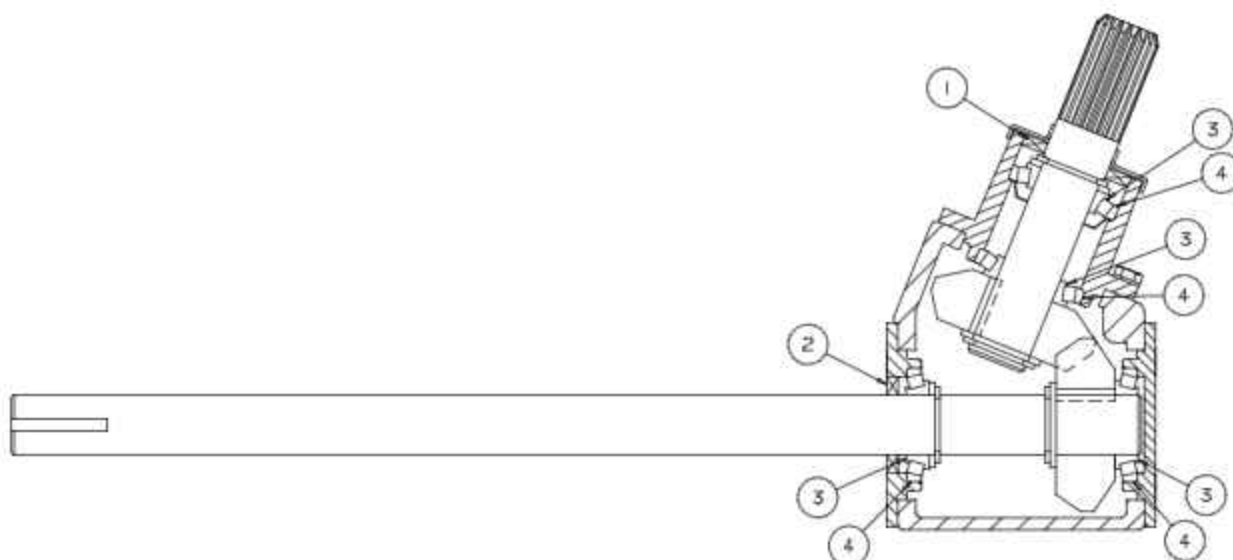
REF #	PART No.	DESCRIPTION	QTY
1	B003740	YOKE - 21 SPLINE	1
2	B0037151	CROSS & BEARING KIT	3
3	B003089101	SHEAR YOKE - 6 SPLINE	1
4	B003876	OUTER GUARD	1
5	B003877	INNER GUARD	1
6	B003870	HALF SHAFT - IMPLEMENT END c/w GUARD	1
7	B0030891T	HALF SHAFT - TRACTOR END - c/w GUARD	1
NS	8000017	SHEAR BOLT - 3/8" x 1" - GR.8	1
MS	8014204	SHEAR NUT - 3/8" STOVER LOCK NUT	1
NS	B0030891	PTO SHAFT - COMPLETE	1

Upper Swing Drive Gearbox



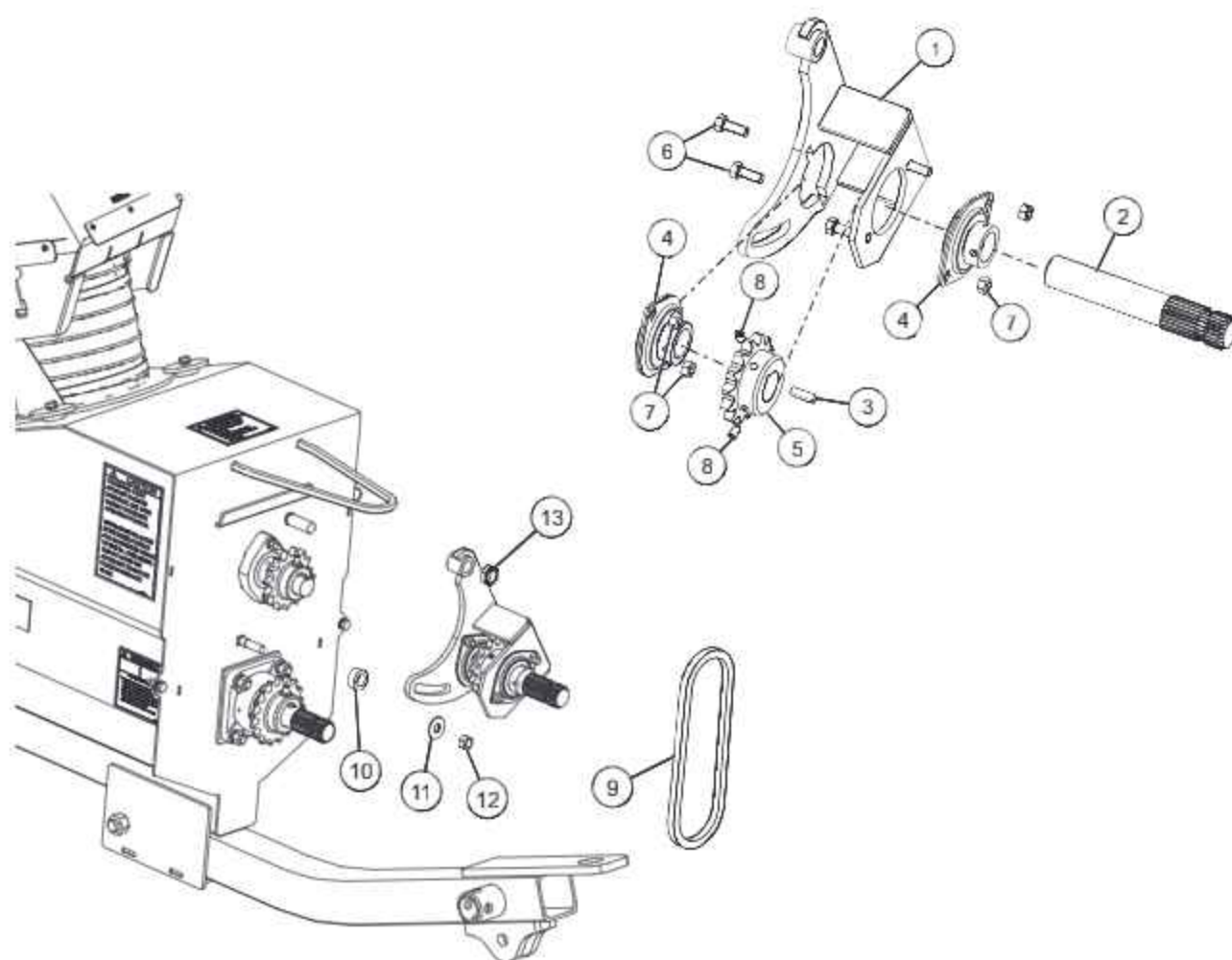
REF #	PART No.	DESCRIPTION	QTY
1	B00301410	INPUT SHAFT SEAL	1
2	B00301411	OUTPUT SHAFT SEAL	1
3	B011603	BEARING CONE - LM67048	4
4	B011602	BEARING CUP - LM67010	4
NS	B003014	GEARBOX - COMPLETE	1

Lower Swing Drive Gearbox



REF #	PART No.	DESCRIPTION	QTY
1	B00301410	OUTPUT SHAFT SEAL	1
2	B00301411	INPUT SHAFT SEAL	1
3	B011603	BEARING CONE - LM67048	4
4	B011602	BEARING CUP - LM67010	4
NS	B003110	GEARBOX - COMPLETE	1

Reversing Kit



REF #	PART No.	DESCRIPTION	QTY
1	B194200	REVERSER - MAIN BRACKET	1
2	B032203	REVERSER - SPLINED SHAFT	1
3	B185206	1/4" KEY x 1" LONG	1
4	B017120	1 1/4" BEARING - 2 BOLT FLANGETTE	2
5	B009027	60-14 SPROCKET - 1 1/4" BORE	1
6	8000237	3/8" x 1" BOLT	3
7	8014204	3/8" STOVER LOCK NUT	4
8	8000957	5/16" x 1/2" SET SCREW	2
9	NPN	R60 CHAIN x 41 PITCH	1
10	B194201	1/2" SPACER BUSHING	1
11	8001118	1/2" FLAT WASHER	1
12	8000780	1/2" LOCK NUT	1
13	8000814	3/4" LOCK NUT	1



Toll Free: 1-866-427-2638
www.brandt.ca