

Farm King

OPERATOR AND PARTS MANUAL

Conventional Auger

13" x 36' Model



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Manufacturer’s statement: for technical reasons Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions and other factors.

Introduction

The Farm King conventional augers deliver numerous well-proven design features for more convenience, efficiency and safety. A longer bottom end below the gearbox allows the auger further into the bin.

These augers are well balanced for easy handling. A belt tightener and improved hinged belt-guards provide you with added convenience and an extra measure of safety. Beefy, wide-stance undercarriages and lift-systems with automotive-type hubs and bearings are all Farm King standards. Strength and stability come with square tube construction. Farm King gives you all the drive options:

- Direct PTO
- Belt Drive PTO
- Gas Engine Drive
- Electric Motor Drive (belt and direct)

All belt drive engine models have self-levelling motor mounts. Reliable safety clutch winches are used. The double flighting intake rotates in a brass bushing on all conventional auger intake guards. A new, narrow safety guard and removable clevis hitch allows for easier penetration into smaller openings. A storage bracket holds the clevis hitch when not needed. Sealed lubrication in the top drive assembly makes it resistant to heat, dust, debris and moisture. It also reduces maintenance requirements and adds to the longevity of the chain and sprockets.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Farm King Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhlerindustries.com for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

Safety

Safety Instructions

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.



The safety alert symbol means...
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



CAUTION

The caution symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



WARNING

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



DANGER

The Danger Symbol indicates an imminently hazardous situation that, if not avoided will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

General Safety Instructions

- Have a first-aid kit available for use and know how to use it.
- Have a fire extinguisher available, stored in a highly visible location, and know how to use it.
- Wear appropriate protective gear. This list may include but is not limited to:
 - hard hat
 - protective shoes with slip resistant soles
 - protective glasses or goggles
 - heavy gloves
 - wet weather gear
 - hearing protection
 - respirator or filter mask
- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.
- Do not attempt any unauthorized modifications to your Farm King product as this could affect function or safety, and could affect the life of the equipment.
- Inspect and clean the working area before operating.
- Keep hands, feet, clothing, and hair away from moving parts.
- Ensure bystanders are clear of the area before operating.

Start-Up Safety

- Do not let inexperienced operators or children run this equipment.
- Place all tractor and machine controls in neutral before starting.
- Operate only with ROPS and seatbelt equipped tractors.
- Do not operate inside a building unless there is adequate ventilation.
- Ensure all shields are in place and in good condition before operating.
- Stay clear of PTO shaft and machine when engaging PTO.
- The auger must be on a level surface and wheels free to move when raising or lowering. Everyone should be kept clear during these operations.
- Make certain electric motors are grounded.

Operation Safety

- Do not permit riders.
- Do not wear loose fitting clothing during operation.
- Empty the auger before moving to prevent upending.
- Do not allow anyone other than the operator close to the Auger when in operation.
- Never stand under the auger while raising or lowering.
- When filling tall bins, tanks, or granaries, it is advisable to anchor the auger to the bin or building to prevent it from being tipped over by the wind or a sudden movement.
- Never operate a Conventional Auger with the intake end off the ground.
- Never operate over 540 PTO rpm speed.
- Never raise the intake end of the auger above waist high, as the balance shifts forward, and the auger will tip over.
- Stay away from overhead obstructions and power lines during operation and transporting.
- Electrocutation can occur without direct contact.

Transport Safety

- Review Transport Safety instructions in tractor manual before moving.
- Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
- Do not tow equipment that does not have brakes at speeds over 20 mph (32km/h).
- Do not tow equipment that does not have brakes that, when fully loaded, has a mass (weight) over 3300 lb (1.5 t) and more than 1.5 times the mass (weight) of the towing unit.
- Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
- Never have the equipment in operation during transport.
- Always transport the Conventional Auger in the down position, carrying the weight of the auger on the winch cable and not on the track stops.
- Take extreme caution in maneuvering on or around tight corners so as not to catch the end of the auger on trees, buildings, power lines, etc.
- The equipment should never be towed without the safety chain securely attached to the auger and the towing vehicle.
- When moving the auger on the road, always use a red flag, or if absolutely necessary to move at night, accessory lights for adequate warning to operators of other vehicles.
- Always travel at a safe speed.
- Inflate transport tires to recommended pressure.

Service and Maintenance

- Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.
- Support the equipment with blocks or safety stands before working beneath it.
- Follow good shop practices including:
 - keep service area clean and dry
 - be sure electrical outlets and tools are properly grounded
 - use adequate light for the job.
- Use only tools, jacks, and hoists of sufficient capacity for the job.
- Replace and secure all shields removed during servicing before operating.
- Use heavy leather gloves to handle sharp objects.
- Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death.

Storage Safety

- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.
- When storing an Auger, park it on level ground so that the bottom end will never be over its center of gravity.
- Block the wheels of the Auger so that it will not move and tear the jack from it's mount.
- When storing the auger, the intake end should be tied or weighted to prevent tipping.

Safety Signs

- The following illustration shows the approximate location and detail of safety signs.
- Keep all safety signs clean and legible and replace any that are damaged or missing.
- When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

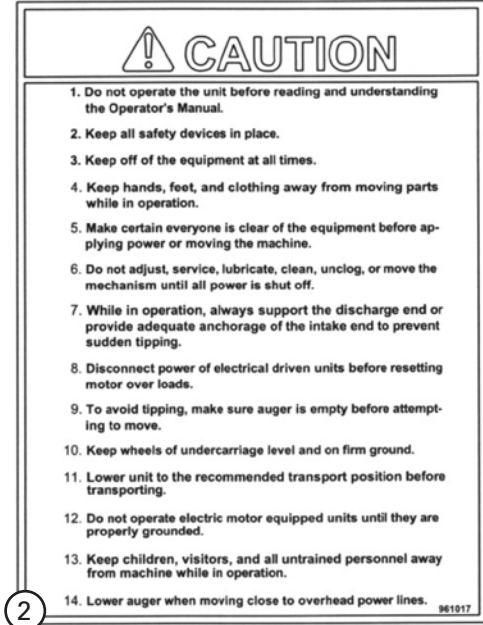
Installation

- To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place.
- Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.



CA-18

- Replace safety signs immediately should they become damaged, torn or illegible. Obtain replacements from your authorized dealer using the part numbers shown.



Assembly Instructions

1. Page 22: Assemble the bottom section (#1) to the top section (#2) making sure the flighting is aligned and locked with a hex bolt and lock nut. (1/2" x 2-3/4" grade 8). Use hex bolts, lock washers and hex nuts to fasten the auger rings together. (7/16" x 1-1/4" hex bolt). Align the two sections before tightening the bolts. Be sure to tighten bolts evenly – first one side and then the other. Bolt the intake guard (#12) to the bottom of the auger using 3/8" x 2" full thread hex bolts, lock washers and hex nuts.
2. The gearbox is shipped without oil. Before you mount the gearbox on the auger, remove the lid and fill the gearbox about 1/3 full with SAE80-90 oil (oil should just be touching the bottom of the gears, do not overfill).

Use gasket glue when replacing the cover to reduce the chance of leaks. The gearbox may be used on either the left or the right side. Check to see that the breather plug on the gearbox lid will be on the top and the drain plug will be at the bottom when the gearbox is bolted to the auger. Connect the gearbox to the splined coupler on the drive line and bolt on the gearbox using 1/2" x 1" hex bolts and lock washers. Bolt the gearbox plate (#7) to the top of the gearbox with the ring on the drive side. The extension shield holder (#8) bolts on top of the plate with the welded bolt turned towards the top of the auger. Use the same hardware as for the gearbox.

3. Page 22: Mount the driveline shields (#10) starting at the top of the auger before you lift the auger. The final extension shield (#9) will be mounted after the auger is assembled. Bolt the extension shield to the shield holder (#8) using a 5/16" flat washer, lock washer and hex nut.
4. Page 26: Mount the two undercarriage arms (#1) and (#2) to the pivot pin under the welded gearbox mount using 2" washers (#19) and 5/16" x 2-1/4" cotter pins (#20). Bolt the undercarriage arms to the axle (#14) using hex bolts, lock washers and hex nuts. (1/2" x 3-1/4" hex bolt). Slide the track roller assembly (#54) onto the track with the large roller turned to the bottom of the auger. Bolt the lift arm extension (#13) to the track roller using 5/8" x 6" hex bolts and lock nuts. Bolt the lift arm extension to the top of the two lift arms (#12). Use 5/8" x 4-1/2" bolts, lock washers and hex nuts. Bolt the track stops (#16) (Pages 15-18) to the top and 10-3/4" from the bottom of the track using 3/8" x 1-1/4" hex bolts, lock washers and hex nuts. The cable anchor (#17) (Pages 15-18) bolts to the very bottom of the track using the same hardware.

The bottom of the lift arms bolt to the inside of the welded axle brackets using bolts and lock nuts (5/8" x 2). The right (#3) and left (#4) cross tubes bolt to the undercarriage using 1/2" x 3" hex bolts, lock washers and hex nuts and to the axle using 1/2" x 1-1/2" hex bolts, lock washers and hex nuts. The R.H. brace is the one with the winch bracket. Make sure it is turned as shown in drawing.

5. Page 26: Bolt the mounting plate (#16) to the undercarriage arms using 3/8" x 2-3/4" bolts, lock washers and hex nuts. Fit the slots in the winch bracket onto the right hand cross tube and slide against the welded stop. The slots in the winch bracket at 90° to the cross tube are turned up. Bolt in place using two connector plates and 3/8" x 1" hex bolts, lock washers and hex nuts. Bolt the winch (#15) to the winch bracket on the R.H. cross tube (#3) using 3/8" x 1" hex bolts, lock washers and hex nuts. Flat washers are supplied for bolts which go through slotted holes.
6. Page 26: Bolt the swivel pulley holder (#7) to the loops at the top and inside of the undercarriage using 5/16" x 2" hex bolts, lock washers and hex nuts. The pulley holder is offset on the shaft and should be assembled to the same side as the drive.

7. Page 40: Thread the cable (#1) as shown in the drawing. From the winch the cable goes around the cable pulley on the idler plate. From there you go around the swivel and around the groove in the bottom roller of the track roller assembly. The end of the cable is clamped to the cable anchor at the bottom of the track assembly. Clamp to the winch spool using the clamps supplied with the winch.
8. Page 26: A clevis holder (#11) bolts to the top end of one undercarriage arm using a 3/8" x 3" hex bolt, lock washer and hex nut. This holder is used as a place to leave the intake swivel clevis when it is removed prior to inserting the auger in a bin.
9. Page 26: Mount the wheels (#48) and tires on the axle using 1/2" wheel bolts.

PTO Belt Drive Augers

10. Page 30

- Install the hanger (#15) between the welded brackets near the bottom of the undercarriage using the 1" shaft (#17) and two 1/4" x 1-1/2" cotter pins. Turn as shown in drawing.
- Bolt the PTO mount assembly (#20) to the hanger using 1/2" x 1-1/4" hex bolts, lock washers and hex nuts.
- Bolt the guard plate (#3) to the back of the sheave guard (#1) using 1/4" x 1/2" bolts, lock washers and hex nuts. Slide onto the welded ring on the PTO mount (#20). The guard is held on by a ring (#40) with two 5/16" x 3/4" set screws and hex nuts. Hinge on guard must be up.
- Attach the 12" sheave (#38) to the arbor shaft (#21) using a 1/4" x 3-3/8" key and set screws.
- A 13-3/4" pivot arm (#54) bolts to the inside of the guard with a 3/8" x 1" hex bolt and lock nut and to the undercarriage with a 3/8" x 2-3/4" hex bolt and lock nut. Turn as shown in drawing.
- Bolt a guard plate (#3) to the 6" guard (#4). Attach to the welded ring on the gearbox plate. The guard is held on by a ring (#40) with two 5/16" x 3/4" set screws and hex nuts. Hinge on guard must be up.
- Bolt the 9" long guard pivot arm (#58) to the back of the guard using 5/16" x 3/4" hex bolts, lock washers and hex nuts. A 10" pivot arm (#5) bolts to the end of the 9" arm and to the undercarriage. Turn arm as shown in drawing.
- Mount the 6" sheave (#37) on the gearbox. Fasten with a 3/8" key and set screws.
- Align the sheaves with the tube and mount belts (#53).
- Bolt the belt tightener (#16) under the gearbox with the bevel to the intake end using 3/8" x 3" bolts and lock nuts. The outer tightener tube (#11) bolts to the brackets using 1/2" x 3" bolts and lock nuts. The inner tightener tube (#14) slides into the outer and bolts to the bottom of the hanger (#15) using a 1/2" x 3" bolt and lock. Tension belts and hold in place using the set screw in the outer tube.
- Bolt a guard plate (#2) on the outside of the 6" guard (#4) to cover the opening using 1/4" x 1/2" hex bolts, lock washers and hex nuts. Bolt the guard mount (#55) to the outside of the 12" guard with the same size of hardware. Slide the flexible PTO guard (#56) and the guard clamp (#57) on to the PTO shaft (#6). Attach the PTO shaft using 1/4" key, set screws and clamp bolt. Securely tighten set screws and clamp bolt. After mounting the PTO, clamp on the flexible PTO guard using a 5/16" x 1-1/4" hex bolt, lock washer and hex nut.
- Bolt the PTO cradle (#63) & (#64) onto the lift arm for transport position. A pin in the cradle keeps the PTO shaft from falling out during transport.
- When the belts and sheaves are aligned, bolt the bottom edges of both guards together using 1/4" x 1/2" hex bolts, lock washers and hex nuts.

Engine Belt Drive Augers:

11. Page 34:

- Install the hanger (#15) between the welded brackets near the bottom of the undercarriage using the 1" shaft (#17) and two 1/4" x 1-1/2" cotter pins. Turn as shown in drawing.
- The motor mount (#19) should be installed so the handle is toward the axle. Use 1/2" x 1-1/4" hex bolts, lock washers and hex nuts.
- The motor mount spacer (#24) and the guard mount (#23) fit under the motor base and are bolted on together with the gas motor. The ring on the guard mount is used to clamp on the guard for the motor sheave.
- Bolt the guard plate (#3) to the back of the 12" guard (#1) using 1/4" x 1/2" bolts, lock washers and hex nuts. Slide onto the welded ring on the gearbox plate. The guard is held on by a ring (#40) with two 5/16" x 3/4" set screws and hex nuts. Hinge on guard must be up.
- Mount the 12" sheave (#38) on the gearbox using a key (3/8" x 3-3/8") and set screws.
- A 10-3/4" pivot arm (#5) bolts to the inside of the guard with a 3/8" x 1" hex bolt and lock nut and to the undercarriage with a 3/8" x 2-3/4" hex bolt and lock nut. Turn as shown in drawing.
- Bolt the clamp plate (#6) to the back of the engine sheave guard. Turn as shown in drawing. Clamp the guard to the welded ring on the guard mount (#23) using 5/16" x 1-1/4" hex bolts, lock washers and hex nuts. Hinge on guard must be up.
- Mount the engine sheave (#37) on the gas engine. This sheave must be supplied by the customer.
- Align the sheaves with the tube and mount the belts (#18).
- The next step in assembly is to bolt the idler guard arm (#42) to the idler mounting plate using 5/16" x 2" hex bolts, lock washers and hex nuts. Bolt the idler guard (#43) to this arm using 5/16" x 1" hex bolts, lock washers and hex nuts. The idler sheave assembly bolt fits through the slots in the arm and guard. A flat washer on the idler bolt is placed on each side of the slot.
- Bolt the belt tightener brackets (#16) under the gearbox with the bevel to the intake end using 3/8" x 3" bolts, lock washers and hex nuts. The outer level rod (#11) bolts to the brackets using 1/2" x 3" bolts and lock nuts. The inner tightener tube (#14) slides into the outer and bolts to the bottom of the hanger (#15) using 1/2" x 3" bolt and lock nut. Tension belts and hold in place using the set screw in the outer rod.
- Bolt a guard plate (#2) on the outside of both sheave guards using 1/4" x 1/2" hex bolts, lock washers and hex nuts.
- The quick release on the motor mount (#19) is used when starting the engine and to stop the auger without shutting off the engine.
- When belts, sheaves and idler are aligned, bolt the bottom edges of all guards together using 1/4" x 1/2" hex bolts, lock washers and hex nuts.

Direct Drive Augers

12. Page 38

- Bolt the PTO holder (#9) to the welded bracket on the tube using 3/8" x 1" hex bolts, lock washers and hex nuts. A pin (#7) holds the PTO in place during transport.
- Mount the PTO guard holder (#14) to the welded ring on the gearbox plate using a 4" I.D. clamp (#15) with 5/16" x 1-1/4" hex bolts, lock washers and hex nuts.
- Slide the flexible PTO guard (#2) and the guard clamp (#3) onto the PTO shaft. Attach the PTO shaft using a key, (3/8" x 2") set screws and clamp bolt. Securely tighten the set screws and clamp bolt. After mounting the PTO, clamp on the flexible PTO guard using a 5/16" x 1-1/4" hex bolt, lock washer and hex nut.

13. Re-check and tighten all bolts. Of particular importance are:

- Cable clamps and winch.
- Bolts on track roller assembly.
- Bolts on lift arm joining axle and extension tube.
- Bolts joining undercarriage, cross tubes and axle.
- Gearbox mounting bolts.
- Track stop bolts.
- All bolts on shields.
- Wheel bolts.
- Set screws and clamp bolts holding on the PTO shaft.
- Auger tube flange bolts.

14. NOTES:

- Gearbox is shipped without oil. Add oil as described in section 2.
- Do not exceed 600 rpm flighting speed when operating auger.
- An external chain tightener is supplied with all augers.
- High position: it is dangerous to move auger in raised position in vicinity of electrical lines.
- Keep all shields and guards in place.
- Turn off power when servicing or unplugging auger.
- Check that intake guard bolts are tight and that the swivel clevis pin has the hitch pin in place before transporting the auger.

Operation Instructions

- All augers may be elevated up to 45°: however, for best operating efficiency, 35° should not be exceeded. At angles over 35° the capacity and life of the auger decreases.
- Never operate an empty auger for over one minute, as the flighting and housing will experience excessive wear.
- To position the auger, always tow or move the auger in the down position to a point as close as possible to the bin or barn.



ALERT

Always keep the wheels level. Raise the auger to the desired height and back the auger into position. As an auger is emptied the head becomes heavy, the tail becomes light, and the auger could tip.



ALERT

Never place blocks under the wheels to increase the elevation of auger.

- Be sure the wheels are free to move and no one is standing close to the auger when raising or lowering. Never attempt to raise or lower the auger while it is in operation.
- The auger is equipped with a safety brake winch. The auger may be raised or lowered by simply turning the winch handle in the proper direction until the desired discharge height is obtained.
- Never have less than three wraps of cable on the drum of the winch.



ALERT

Arrow on winch shows proper direction of rotation. Improper rotation may cause winch brake failure.



ALERT

All wiring should be done by a competent electrical contractor to ensure the electric motor is receiving the correct voltage and the cable will carry the correct load.

- The life of a motor is greatly reduced if it is run at too high or too low voltage. Also, a motor cannot develop full power if the cable is too small. The electrical supply to each motor should include an enclosed safety switch or circuit breaker of the correct size to protect the motor from being overloaded. The switch should be under a padlock to prevent the motor from being turned on by accident while working on or moving the auger. This will also prevent unauthorized people or children from operating the motor. A magnetic starter should be used to shut off the motor in case of low voltage, loss of power, or overloading the motor.

- The electric motor must then be started manually.
- Power take-off drives are designed for tractors with 540 PTO rpm and should not be run by tractors with 1000 PTO rpm.

**CAUTION**

Always check to see that both ends of the PTO shaft are securely attached before using any PTO drive auger. This should always be done with the tractor shut off.

- To ensure a long life from a PTO tumbler shaft, operate the shaft at the least angle possible and always keep the tractor axle parallel to the side of the auger housing.

**ALERT**

Always maintain at least a 6" overlap on the tumbler shields. Be sure they turn freely and make certain everyone stands clear of the tractor, tumbler shaft, and auger before engaging PTO. Be sure ends are securely connected to the auger and tractor.

- Before engaging PTO, start tractor and idle engine. Engage PTO slowly and bring up to recommended speed of 500 PTO rpm.
- Before stopping auger (except in an emergency) let all grain empty out of the auger, idle engine then disengage PTO. Shut off tractor.

**ALERT**

When operating an auger for the first time when new or at the beginning of a season, run only partially full until flighting becomes polished. It is always a good idea to check the flighting for freedom of movement by turning pulley or tumbler shaft by hand before connecting to a power source. Other items to check are the head (spout) and intake cage for bird nests or other obstructions before starting the auger.

**ALERT**

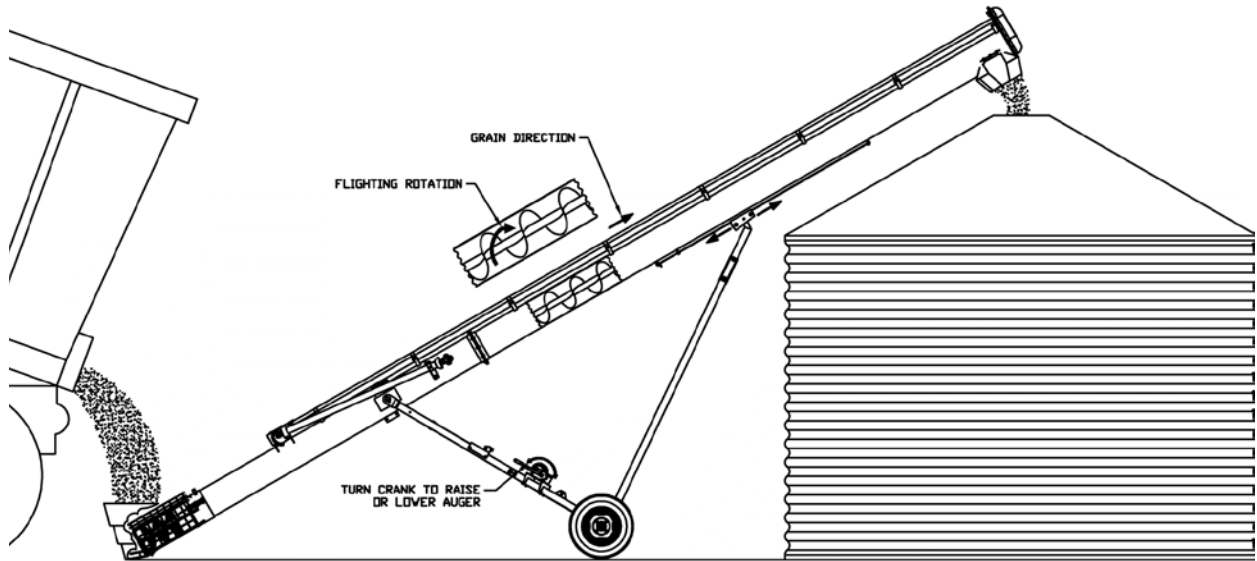
Always lower auger before transporting and allow the weight of the auger to rest on the winch cable and not on the transport stops.

**ALERT**

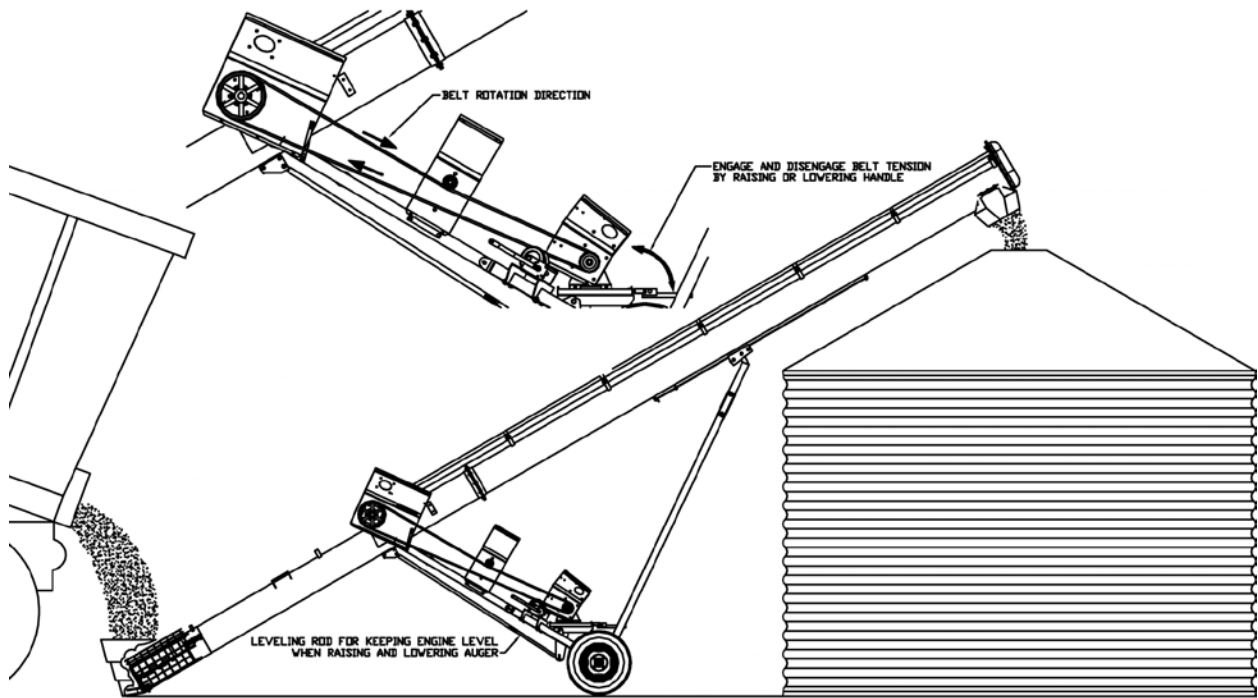
When towing the auger, never exceed 32 km/h (20 mph).

- Use signal lights and a safety rated tow chain when towing an auger on a road. Check your local regulations for further safety devices in this regard.

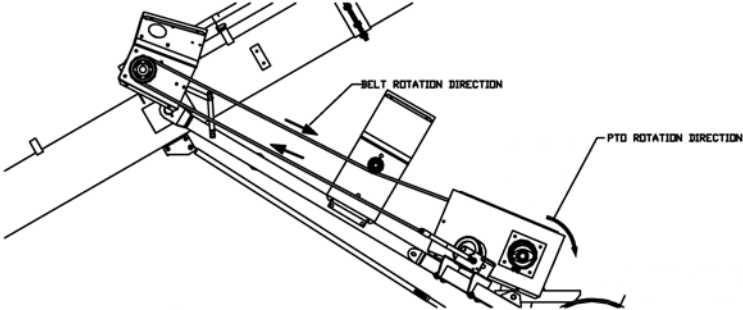
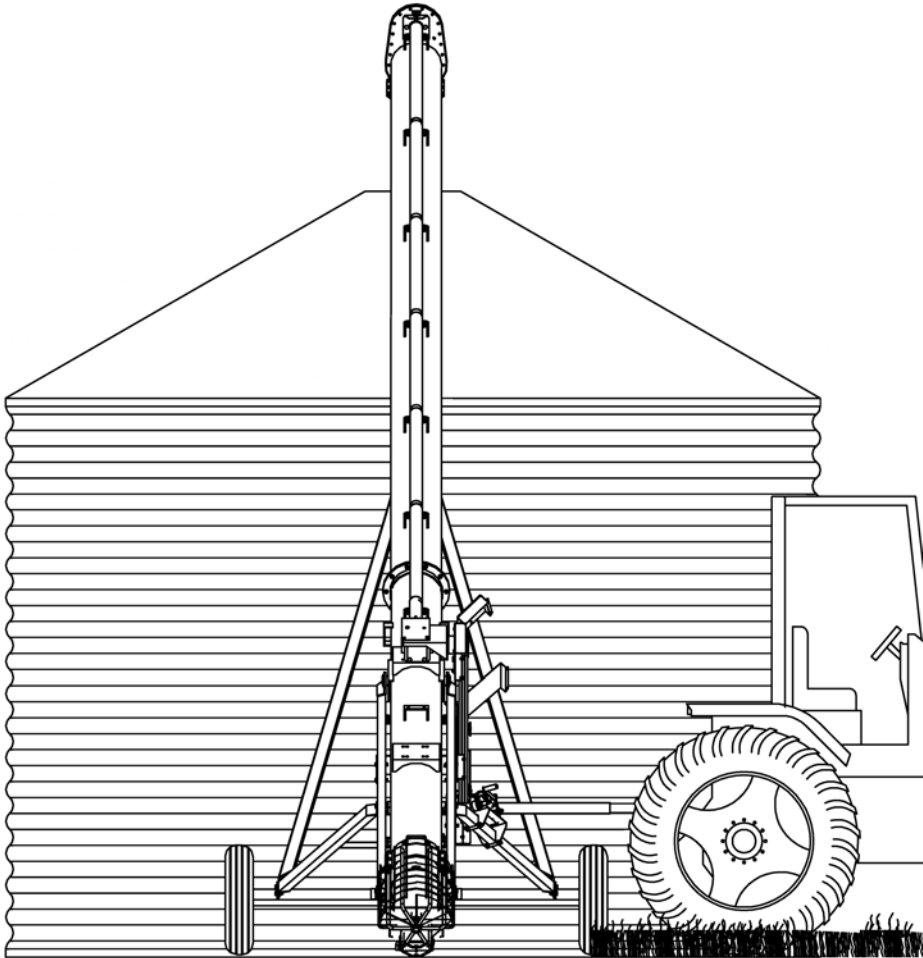
Theory of Operations



CA-41



CA-42



CA-43

Maintenance Instructions

- Check condition of winch cable occasionally and replace if it shows wear. The greatest wear will occur on the first few wraps around the drum of the winch.
- The main thing to check on the cable is for broken strands or rust, which penetrates the cable core. This is particularly important if the auger is more than a few years old.
- Oil the moving parts of the winch two times per year.
- Lubricate the PTO tumbler shaft universal joints every five hours. Grease the PTO shear yoke before using PTO for the first time.
- Oil the moving parts of the winch two times per year.
- Check the oil level of the gearbox one time per year and maintain the level at 1/2 full. Use SAE90.



ALERT

When replacing bearings or tightening a loose bearing collar, always tighten collar in the direction of shaft rotation using a center punch or a similar tool.

- The plastic chain guard at the top of the auger must be removed to inspect or replace the chain and sprockets. When replacing the plastic guard, clean off the residue from the old silicone and apply a fresh bead using a caulking gun. There must be about 2 lbs (0.9 kg) of grease in the guard. The bolts should be tightened in a criss-cross sequence to ensure proper seating of the guard. The bolts are a 1/4" grade 5 which should be torqued to about 9 ft-lbs (12 N-m) using a torque wrench.
- After every 40 hours of use, add approximately 10 squirts of grease to chain cover at the top of the auger.
- If the auger is towed extensively, the wheel bearings should be repacked at least semi-annually. Keep tire pressure at 37 psi maximum. (255 kPa)
- Regularly check the tightness of all cable clamps to avoid slipping.
- Inspect wire rope regularly for evidence of wear or corrosion. Such inspections should take place at progressively shorter intervals over the useful life of the rope, as wear tends to accelerate with use and/or age. Where wear is rapid, the outside of a wire rope will show flattened surfaces in a short time. A piece of cloth or rag, rubbed along the wire rope will help to reveal broken wires. The effects of corrosion are not easy to detect because the exterior wires may appear to be only slightly rusty, and the damaging effects of corrosion may be confined to the hidden inner wires where it cannot be seen. To prevent damage by corrosion, the rope should be kept well lubricated. Periodic cleaning of wire rope by using a stiff brush and kerosene or with compressed air or live steam and relubricating will help to lengthen rope life and reduce abrasion and wear on sheaves and drums.

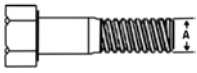



Storage

- The auger should be stored in a dry place if possible. If stored outside, lower auger to its lowest position and tie the tail end down so that no one can accidentally overturn it.
- Clean auger thoroughly as dirt draws moisture and causes metal to rust. If the auger has been used to move fertilizer, clean thoroughly and apply oil or grease on entire flighting and inside the housing to stop and prevent further corrosion.
- Remove belts and store in a cool dry place if auger is to be left outdoors.
- At this time check all moving parts for wear and order replacement parts from your nearest dealer.
- When taking the auger out of storage, clean it thoroughly and check for obstructions at the inlet and outlet ends. Check the oil in the gearbox.
- Check all bolts and set screws.

Bolt Torque

Checking Bolt Torque

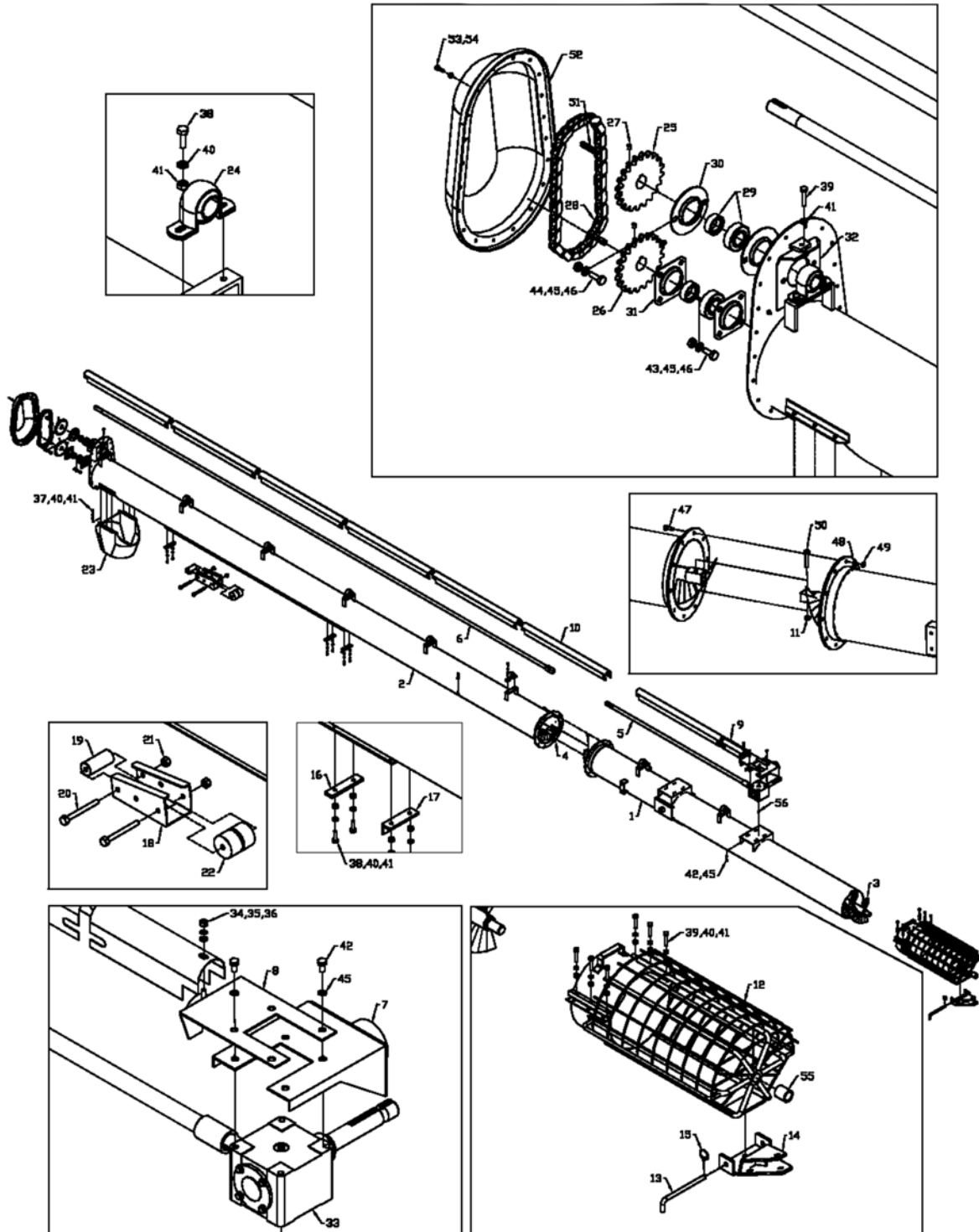
The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Bolt Torque*						
						
Bolt Diameter	Grade 2 Bolts		Grade 5 Bolts		Grade 8 Bolts	
(inches)	SAE 2		SAE 5		SAE 8	
"A"	(lb-ft)	(N.m)	(lb-ft)	(N.m)	(lb-ft)	(N.m)
0.25 (1/4)	6	8	9	12	12	17
0.313 (5/16)	10	13	19	25	27	36
0.375 (3/8)	20	27	33	45	45	63
0.438 (7/16)	30	42	53	72	75	100
0.5 (1/2)	45	61	80	110	115	155
0.563 (9/16)	70	95	115	155	165	220
0.625 (5/8)	95	128	160	215	220	305
.75 (3/4)	165	225	290	390	400	540
0.875 (7/8)	170	230	420	570	650	880
1	225	345	630	850	970	1320

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

* Torque value for bolts and hex bolts are identified by their head markings.

Tube Assembly Drawing



CA-32

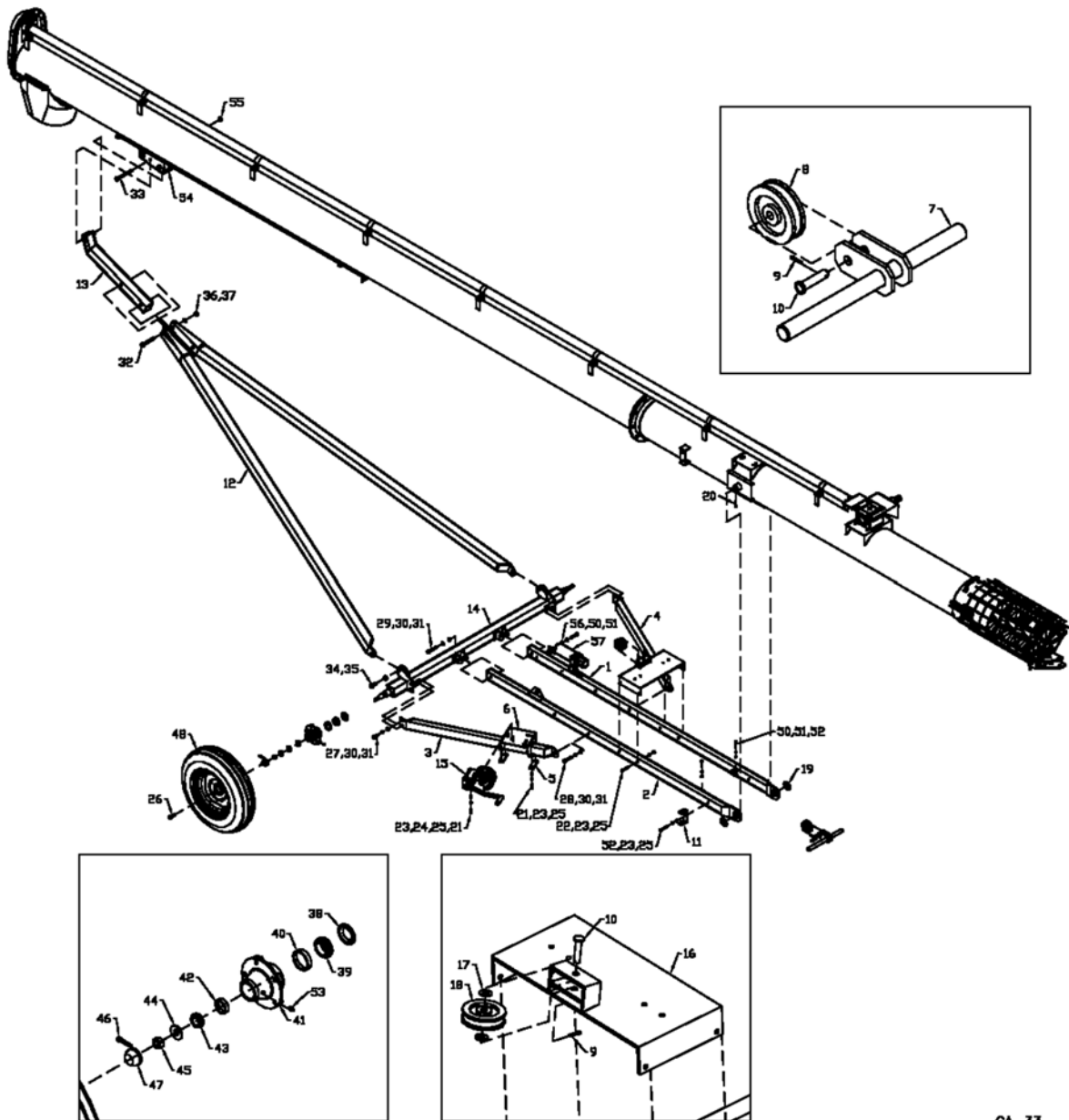
When Ordering Parts

Always give your dealer the Model, Color and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

Item	Part Number	Description
1	905460	Extension Auger Weldment 13" x 12.5' Lg
2	905463	Basic Auger Weldment 13" x 22' Lg
3	905482	Extension Auger Flighting Weldment
4	905485	Basic Auger Flighting Weldment
5	905472	Direct Drive Extension Drive Line Weldment 78-3/4" Lg
	905468	Belt Drive Extension Drive Line Weldment 30-3/4" Lg
6	905474	Drive Line Tube Weldment 262-1/2" Lg
7	906093	Gearbox Plate Weldment
8	961346	Extension Shield Holder Weldment
9	906078	Drive Line Shield 12-1/4" Lg
		(7 Req'd per Direct Drive / 6 Req'd per Belt Drive)
10	906077	Drive Line Shield 49-1/2" Lg
11	812364	1/2" Lock Nut (pl)
12	905996	Intake Guard Weldment
13	906100	Clevis Pin 5/8" x 11-1/4"
14	905527	Clevis Hitch Weldment
15	966729	3/16" Linch Pin
16	905489	Track Stop 1-1/4" x 5-1/2"
17	961350	Cable Anchor 1-1/2" x 5-1/8"
18	961354	Track Roller Frame 7 Ga
19	902365	Roller 2" O.D. x 4-1/2" Lg
20	812087	5/8" x 6" Hex Bolt (pl)
21	812482	5/8" Lock Nut (pl)
22	902364	Track Roller 3.35" O.D. x 4-1/2" Lg
23	F9716	Discharge Spout 13"
24	906588	Bearing & Flange Set 1-1/2" - Wooden
	906587	Bearing Only 1-1/2" - Wooden
25	906086	Sprocket 80B 20T w/ 1-1/2" Bore (Direct Drive)
	960719	Sprocket 80B 15T w/ 1-1/2" Bore (Belt Drive)
26	906086	Sprocket 80B 20T w/ 1-1/2" Bore (Direct Drive)
	906084	Sprocket 80B 28T w/ 1-1/2" Bore (Belt Drive)
27	988999	Socket Setscrew 3/8" x 3/8"
28	906473	Chain #80 41 Link Include Connector Plus Offset (Direct Drive)
	906557	Chain #80 44 Link Include Connector (Belt Drive)
29	968627	1-1/2" Bearing w/ Collar
30	906092	Flange Bearing (80mm-4R x 2Hole) Pair

Item	Part Number	Description
31	967260	Flange Bearing (80mm - 4 Hole) Pair
32	906083	Chain Tightener Bracket Weldment
33	907207	Gear Box Assy
	907413	Optional Reverse Gear Box Assy
34	81570	5/16" Flat Washer (pl)
35	81569	5/16" Lock Washer (pl)
36	81568	5/16" Lock Washer (pl)
37	86170	3/8" x 1" Hex Bolt (pl)
38	86171	3/8" x 1-1/4" Hex Bolt (pl)
39	811795	3/8" x 2" Full Thread Hex Bolt (pl)
40	81593	3/8" Lock Washer (pl)
41	81592	3/8" Hex Nut (pl)
42	81619	1/2" x 1" Hex Bolt (pl)
43	812768	1/2" x 1-1/4" Hex Bolt (pl)
44	812217	1/2" x 1-1/2" Carriage Bolt (pl)
45	81637	1/2" Lock Washer (pl)
46	81636	1/2" Hex Nut (pl)
47	81598	7/16" x 1-1/4" Hex Bolt (pl)
48	81615	7/16" Lock Washer (pl)
49	81614	7/16" Hex Nut (pl)
50	9812368	1/2" x 2-3/4" (Gr8) Hex Bolt (pl)
51	968807	Key 3/8" Sq. x 2" Lg
52	906581	Plastic End Cover
53	967473	1/4" x 3/4" Flange Hex Bolt (pl)
54	967474	1/4" Flange Hex Nut (pl)
55	905995	Brass Bushing 2" OD x 1-1/2" ID x 2" Lg
56	81638	1/2" Flat Washer (pl)

Undercarriage, Axle, and Lift Arm Assembly Drawing

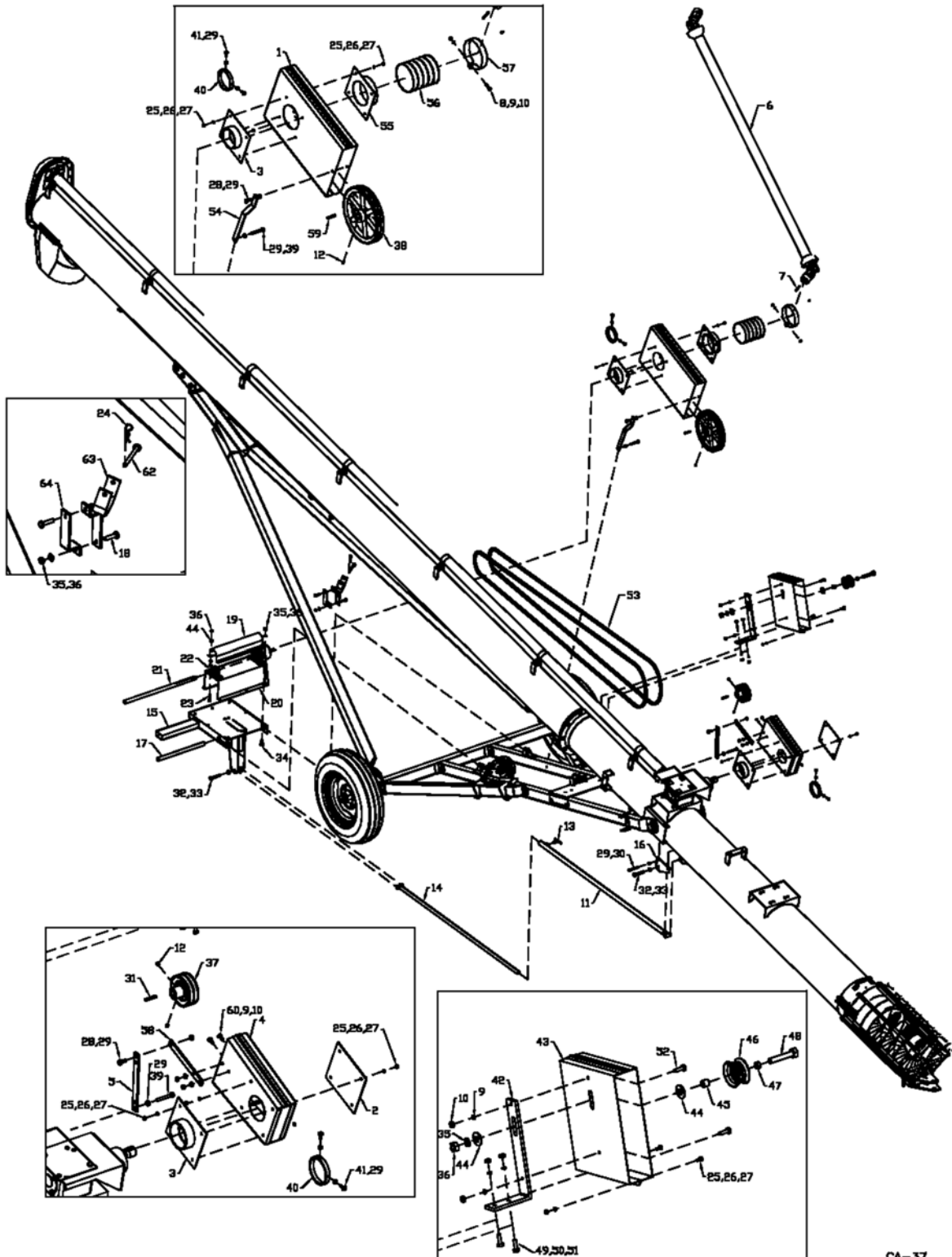


CA-33

Item	Part Number	Description
1	909548	Undercarriage Arm 2" x 3" x 108" - L
2	905582	Undercarriage Arm 2" x 3" x 108" - R
3	905584	Cross Tube Weldment 2" x 3" x 44" - R
4	905585	Cross Tube Weldment 2" x 3" x 44" - L
5	903402	Connector Plate 1-1/4" x 4-3/8"
6	903401	Winch Bracket 8-1/4" x 19"
7	905587	Swivel Pulley Holder Weldment
8	961846	4" Cast Cable Pulley
9	9812430	1/8" x 1" Cotter Pin (pl)
10	961010	1/2" x 2-1/8" Clevis Pin
11	903392	Clevis Holder 1-1/4" x 9-1/8"
12	905639	Lift Arm Weldment 3" x 3" x 116"
13	961330	Lift Arm Extension Weldment
14	905576	Axle Weldment 3" x 3" x 72"
15	961945	K2550 Winch
16	905493	Idler Mounting Plate Weldment
17	84048	1/2" SAE Flat Washer BS (pl)
18	961846	4" Cable Pulley 1/2" Bore
19	967153	2" x 10 Ga Rim Washer (pl)
20	967913	5/16" x 2-1/4" Cotter Pin
21	86170	3/8" x 1" Hex Bolt (pl)
22	967488	3/8" x 2-3/4" Hex Bolt (pl)
23	81593	3/8" Lockwasher (pl)
24	84000	3/8" Flat Washer (pl)
25	81592	3/8" Hex Nut (pl)
26	968404	1/2" Wheel Bolt (pl)
27	84277	1/2" x 1-1/2" Hex Bolt (pl)
28	81627	1/2" x 3" Hex Bolt (pl)
29	81628	1/2" x 3-1/4" Hex Bolt (pl)
30	81637	1/2" Lock Washer (pl)
31	81636	1/2" Hex Nut (pl)
32	81672	5/8" x 4-1/2" Hex Bolt (pl)
33	812087	5/8" x 6" Hex Bolt (pl)
34	81684	3/4" x 2-1/4" Hex Bolt (pl)
35	812365	3/4" Lock Nut (pl)
36	81676	5/8" Hex Nut (pl)
37	81677	5/8" Lock Washer (pl)
38	968430	Oil Seal (SE14X)
39	967208	Inner Cone (LM67048)
40	968412	Inner Cup (LM67010)

Item	Part Number	Description
41	968403	5-Bolt Hub w/ Bearing Cups
	968431	H516 Hub Assembly
42	968405	Outer Cup (LM11910)
43	968406	Outer Cone (LM11949)
44	9812416	3/4" S.A.E. Washer
45	81834	3/4" Slotted Hex Nut (br)
46	9812486	1/8" x 1-1/2" Cotter Pin
47	968409	Dust Cap (DC12)
48	F0110	15" x 5" x 5-Bolt Wheel
49	810640	5/16" x 2" Hex Bolt (pl)
50	81569	5/16" Lock Washer (pl)
51	81568	5/16" Hex Nut (pl)
52	81583	3/8" x 3" Hex Bolt (pl)
53	967900	1/4" Grease Fitting
54	904942	Track Roller Assembly
55	812482	5/8" Lock Nut (pl)
56	909277	Manual Holder
57	810582	5/16" x 3" Hex Bolt (pl)

PTO Belt Drive Assembly Drawing

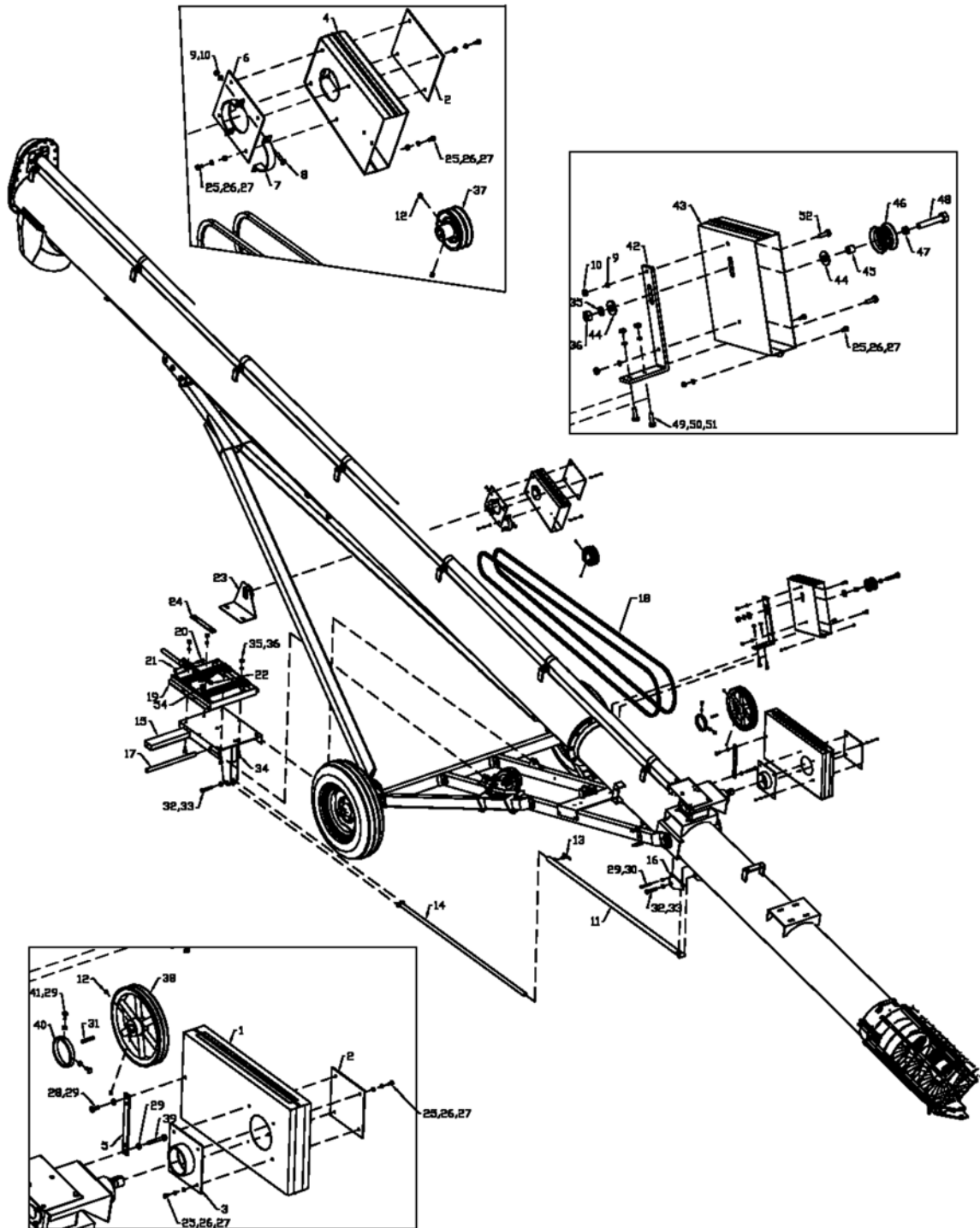


CA-37

Item	Part Number	Description
1	961370	12" Guard Weldment
2	961358	Guard Mount Plate 8" x 8"
3	961357	Guard Plate Weldment
4	961356	6" Sheave Guard Weldment
5	906079	Guard Pivot Arm 1" x 10"
6	F0466	PTO Shaft
7	968811	1/4" x 1/4" x 2" Key
8	81552	5/16" x 1-1/4" Hex Bolt (pl)
9	81568	5/16" Hex Nut (pl)
10	81569	5/16" Lock Washer (pl)
11	908702	1-5/16" x 55" Outer Tube Weldment
12	81213	3/8" x 1" Square Head Set Screw
13	961647	1/2" Tightener Screw
14	961694	Inner Tube Weldment 1" x 57"
15	905593	Hanger Weldment
16	961372	Belt Tightener Brkt 4" x 6"
17	905594	Hanger Swivel Shaft 1" x 16-1/4"
18	811792	3/8" x 1-1/2" Hex Bolt (pl)
19	961367	20 Ga x 12-3/4" Arbor Shaft Shield
20	961363	PTO Mount Weldment
21	961365	PTO Arbor Shaft 1-1/4" Dia. x 25" Lg
22	973223	1 1/4" Pillow Bearing w/ Collar
23	811791	1/2" x 2" Hex Bolt (pl)
24	12780	#7 Hair Pin Clip
25	81523	1/4" x 1/2" Hex Bolt (pl)
26	81545	1/4" Lock Washer (pl)
27	81544	1/4" Lock Nut (pl)
28	86170	3/8" x 1" Hex Bolt (pl)
29	812363	3/8" Lock Nut (pl)
30	81583	3/8" x 3" Hex Bolt (pl)
31	967044	3/8" x 3/8" x 3-3/8" Key (pl)
32	81627	1/2" x 3" Hex Bolt (pl)
33	812364	1/2" Lock Nut (pl)
34	81620	1/2" x 1-1/4" Hex Bolt (pl)
35	81637	1/2" Lock Washer (pl)
36	81636	1/2" Hex Nut (pl)
37	961074	6" Triple Sheave (1-1/2" Bore)
38	961004	12" Triple Sheave (1-1/4" Bore)
39	967488	3/8" x 2-3/4" Hex Bolt (pl)
40	961383	Guard Holder Ring 4-1/2" OD x 5/8" Lg

Item	Part Number	Description
41	9812377	5/16" x 3/4" Sq. Head Set Screw (pl)
42	903588	Idler Guard Arm 2" x 18-1/4"
43	961696	Idler Guard Weldment
44	81638	1/2" Flat Washer (pl)
45	961699	Spacer .840" O.D. x .622" I.D. x 1/2" Lg
46	961001	Idler Sheave Single Flange
47	962000	Spacer .840" O.D. x .622" I.D. x 3/8" Lg
48	967911	1/2" x 5" Hex Bolt Gr.8 (pl)
49	86171	3/8" x 1-1/4" Hex Bolt (pl)
50	81593	3/8" Lock Washer (pl)
51	81592	3/8" Hex Nut (pl)
52	812026	5/16" x 1" Hex Bolt (pl)
53	907059	Belt B221
54	961371	Guard Pivot Arm 1" x 13-3/4"
55	961368	Guard Weldment 10 Ga x 8" x 8"
56	961201	Flexible Guard 6" OD x 6-1/2" Lg
57	961200	Guard Clamp 16 Ga x 1-1/4" x 21-1/2" Lg
58	961359	Guard Pivot Arm 9" Lg
59	961384	1/4" x 1/4" x 3-3/8" Key
60	81549	5/16" x 3/4" Hex Bolt
62	961539	PTO Holder Pin 3/8" dia x 4-1/2" Lg
63	961380	PTO Holder Weldment
64	961382	PTO Holder Bracket
65	811792	3/8" x 1-1/2" Hex Bolt (pl)

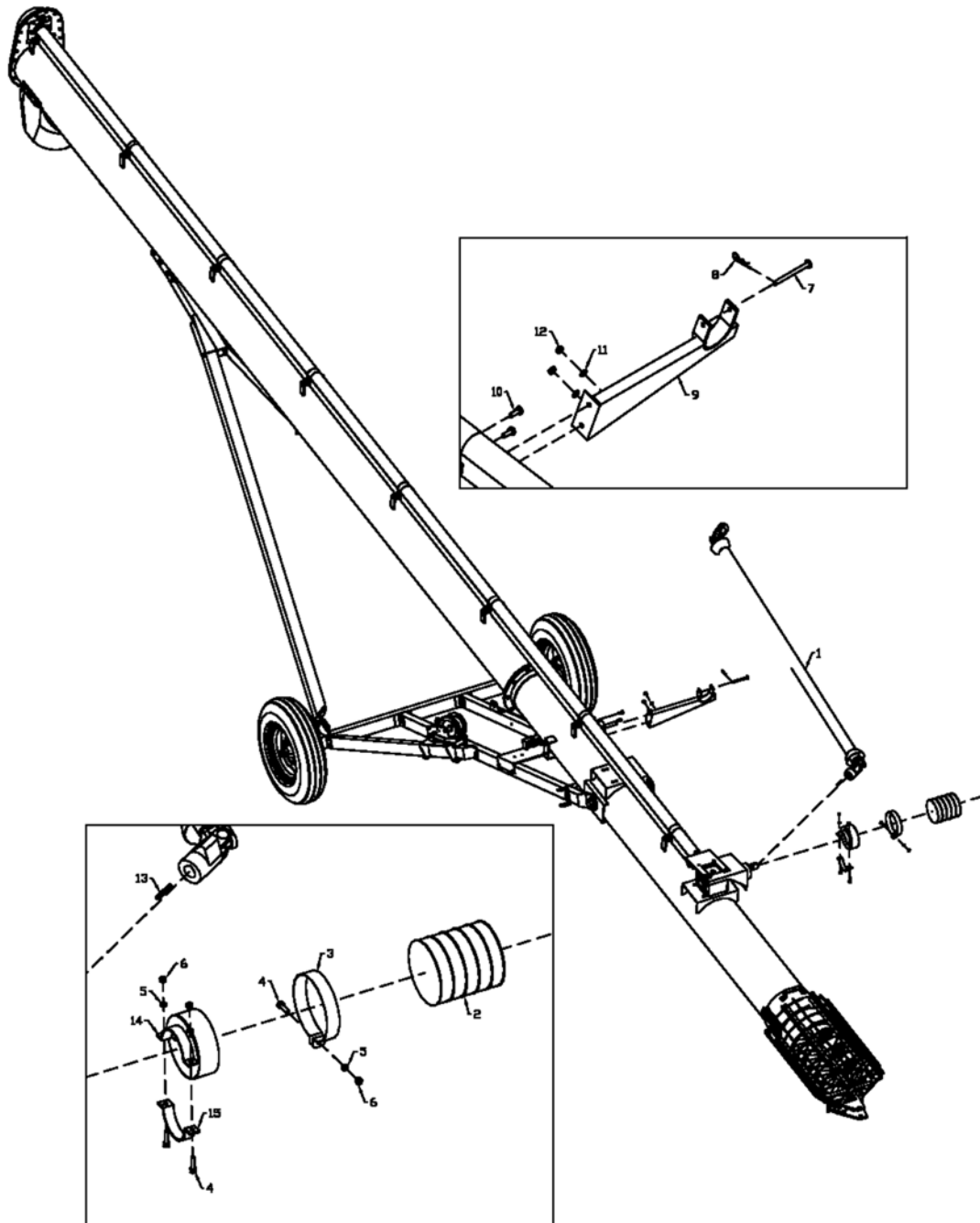
Engine Drive Assembly Drawing



Item	Part Number	Description
1	961370	12" Guard Weldment
2	961358	Guard Mount Plate 8" x 8"
3	961357	Guard Plate Weldment
4	961356	6" Sheave Guard Weldment
5	906079	Guard Pivot Arm 1" x 10"
6	962066	Clamp Weldment 8" x 8" x 10 Ga
7	961896	Clamp 10 Ga x 1" x 8" Lg
8	81552	5/16" x 1-1/4" Hex Bolt (pl)
9	81568	5/16" Hex Nut (pl)
10	81569	5/16" Lock Washer (pl)
11	908702	1-5/16" x 55" Outer Tube Weldment
12	81213	3/8" x 1" Square Head Set Screw (pl)
13	961647	1/2" Tightener Screw
14	961694	Inner Tube Weldment 1" x 57"
15	905593	Hanger Weldment
16	961372	Belt Tightener Bracket 4" x 6"
17	905594	Hanger Swivel Shaft 1" x 16-1/4"
18	907059	Belt B221
19	908010	Motor Mount Weldment
20	981601	7/16" x 2" Hex Bolt (pl)
21	86273	7/16" Lock Nut (pl)
22	961973	12" Adjustment Rod
23	961166	Guard Mount Weldment 10" x 13"
24	961167	Motor Mount Guard Spacer 1-1/4" x 10" x 10 Ga
25	81523	1/4" x 1/2" Hex Bolt (pl)
26	81545	1/4" Lock Washer (pl)
27	81544	1/4" Lock Nut (pl)
28	86170	3/8" x 1" Hex Bolt (pl)
29	812363	3/8" Lock Nut (pl)
30	81583	3/8" x 3" Hex Bolt (pl)
31	967044	3/8" x 3/8" x 3-3/8" Key
32	81627	1/2" x 3" Hex Bolt (pl)
33	812364	1/2" Lock Nut (pl)
34	81620	1/2" x 1-1/4" Hex Bolt (pl)
35	81637	1/2" Lock Washer (pl)
36	81636	1/2" Hex Nut (pl)
37		3-1/2" Triple Sheave (By Customer)
38	961187	12" Triple Sheave (1-1/2" Bore)
39	967488	3/8" x 2-3/4" Hex Bolt (pl)
40	961383	Guard Holder Ring 4-1/2" OD x 5/8" Lg

Item	Part Number	Description
41	9812377	5/16" x 3/4" Sq. Head Set Screw (pl)
42	903588	Idler Guard Arm 2" x 18-1/4"
43	961696	Idler Guard Weldment
44	81638	1/2" Flat Washer (pl)
45	961699	Spacer .840" O.D. x .622" I.D. x 1/2" Lg
46	961001	Idler Sheave Single Flange
47	962000	Spacer .840" O.D. x .622" I.D. x 3/8" Lg
48	967911	1/2" x 5" Hex Bolt Gr.8 (pl)
49	86171	3/8" x 1-1/4" Hex Bolt (pl)
50	81593	3/8" Lock Washer (pl)
51	81592	3/8" Hex Nut (pl)
52	812026	5/16" x 1" Hex Bolt (pl)
53	907059	Belt B221
54	811852	3/4" Sq. Nut (pl)

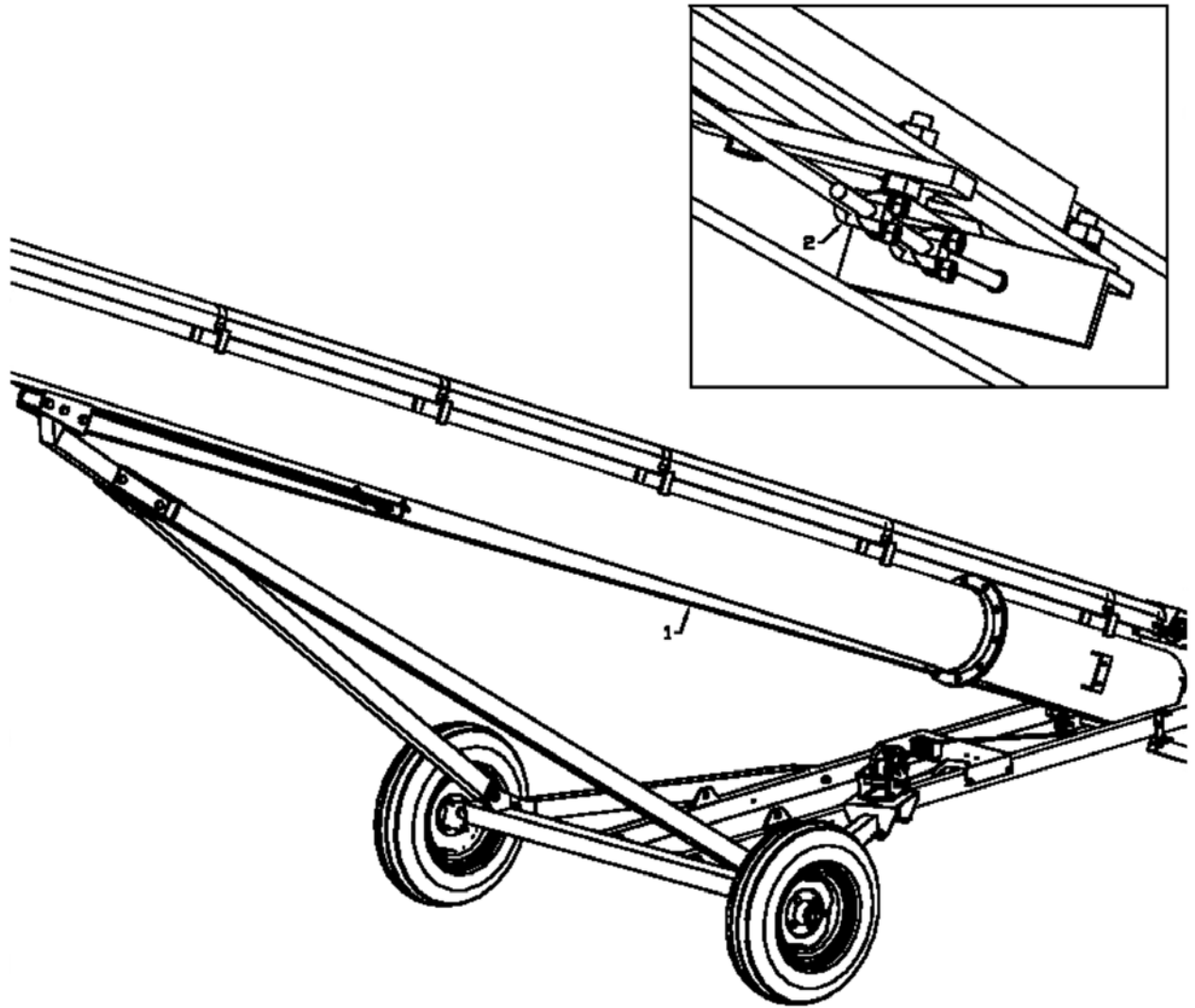
Direct Drive Assembly Drawing



CA-34

Item	Part Number	Description
1	F0466	13" PTO Shaft
2	961201	6" Plastic Tube 6-1/2" Long
3	961200	6-1/4" x 1-1/4" Guard Clamp
4	81552	5/16" x 1-1/4" Hex Bolt (pl)
5	81569	5/16" Lock Washer (pl)
6	81568	5/16" Hex Nut (pl)
7	961539	3/8" x 4-1/2" Pin
8	12780	#7 Hair Pin Clip
9	961790	PTO Hanger
10	86170	3/8" x 1" Hex Bolt (pl)
11	81593	3/8" Lock Washer (pl)
12	81592	3/8" Hex Nut (pl)
13	968807	3/8" x 3/8" x 2" Key
14	961202	PTO Guard Holder (W/4" I.D. Clamp)
15	961896	Clamp (4" I.D.)

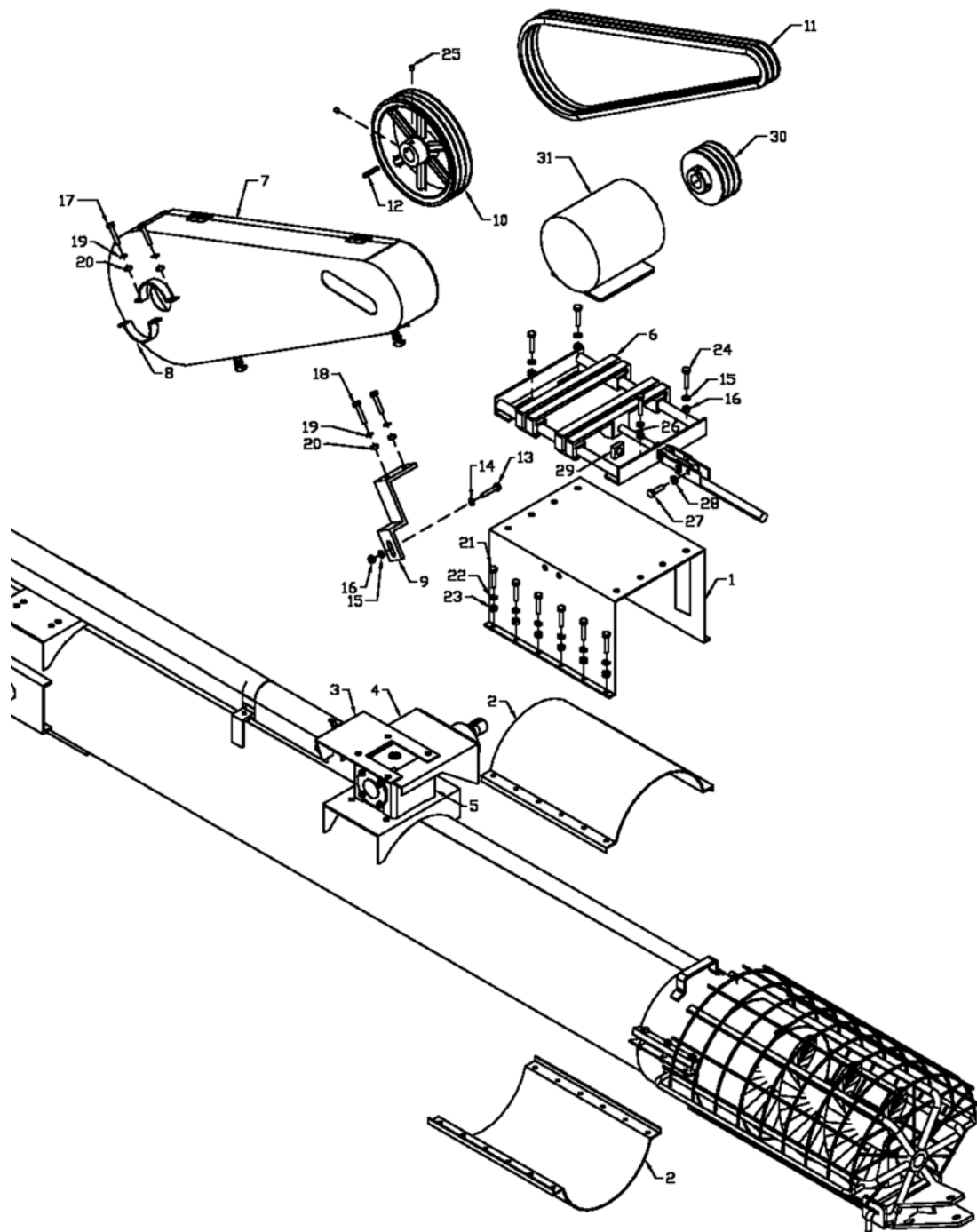
Cable Assembly Drawing



CA-36

Item	Part Number	Description
1	906925	Cable 5/16" x 32'- 6"
2	961763	5/16" Cable Clamp

Clamp-on Motor Mount Drawing



Item	Part Number	Description
1	907353	Motor Mount Stand
2	907351	Motor Mount Clamp
3	961346	Extension Shield Holder Weldment
4	906093	Gearbox Plate Weldment
5	907207	Gearbox Assembly
	907413	Optional Reverse Gearbox Assembly
6	907360	Clamp-On Motor Mount Weldment
	907361	Clamp-On Motor Mount Assembly
7	F0033	Belt Guard Assembly
8	961896	4" Clamp
9	907362	Guard Mounting Bracket
10	961187	12" Triple Sheave 1-1/2" bore
11	973417	B-83 V-Belt
12	967044	3/8" Sq. x 3-3/8" Key - 10"
13	84277	1/2" x 1-1/2" Hex Bolt (pl)
14	84048	1/2" SAE Flat Washer (pl)
15	81637	1/2" Lock Washer (pl)
16	81636	1/2" Hex Nut (pl)
17	81552	5/16" x 1-1/4" Hex Bolt (pl)
18	812026	5/16" x 1" Hex Bolt (pl)
19	81569	5/16" Lock Washer (pl)
20	81568	5/16" Nut (pl)
21	9812483	3/8" x 2" Hex Bolt (pl)
22	81593	3/8" Lock Washer (pl)
23	81592	3/8" Hex Nut (pl)
24	81620	1/2" x 1-1/4" Hex Bolt (pl)
25	81213	3/8" x 1" Square Head Set Screw
26	961973	12" Adjustment Rod
27	981601	7/16" x 2" Hex Bolt
28	86273	7/16" Lock Nut
29	811852	3/4" Square Nut (pl)
30*		Motor Pulley (Supplied by customer)
31*		Electric Motor (Supplied by Customer)

*See instructions for correct Sheave and Motor sizes on next page.

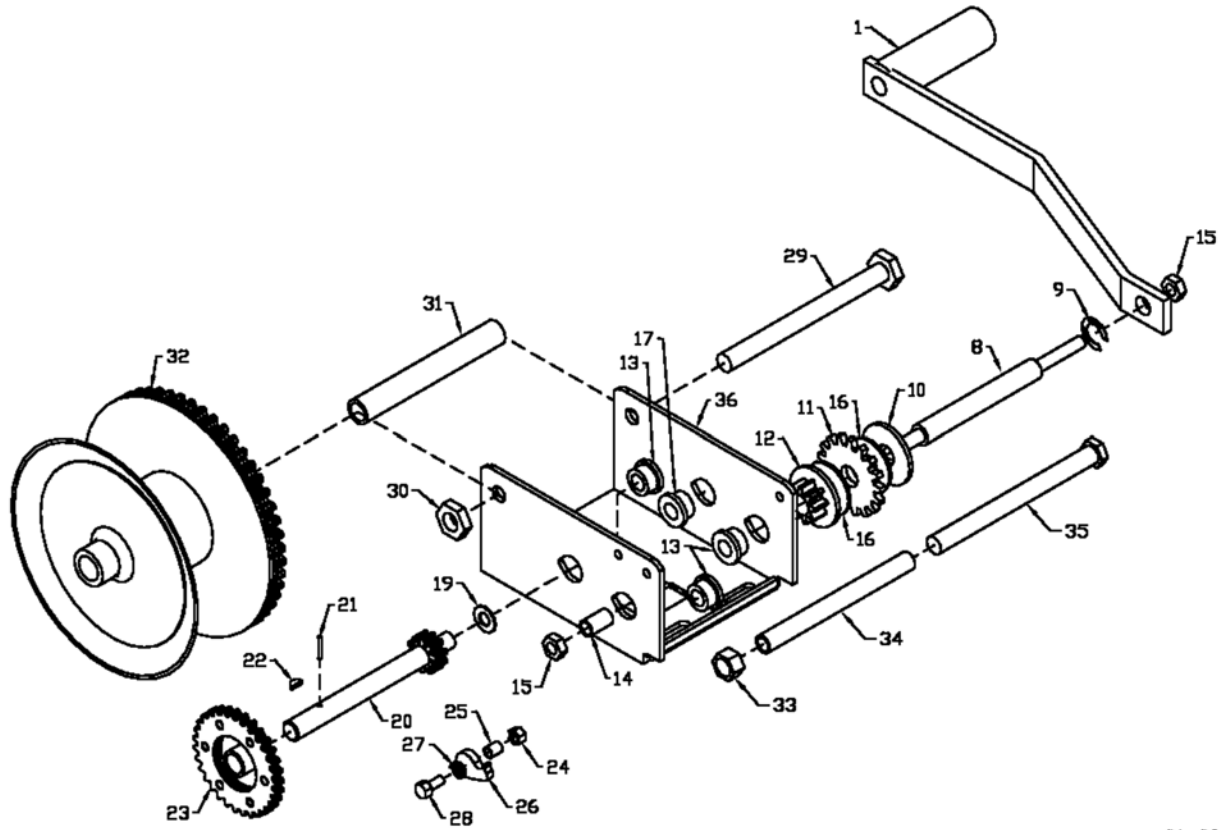
Clamp-on Motor Mount Kit Instructions

1. The procedure is the same for belt drive or direct drive. Bolt the motor mount stand (#1) and two clamps (#2) to the tube using 3/8" x 2" hex bolts, lock washers and hex nuts. Tighten these bolts when exact position is determined with the pulleys and belts mounted.

NOTE: The motor mount cannot be mounted below the gearbox on belt drive augers.

2. Bolt the motor mount assembly (#6) to the stand using 1/2" x 1-1/4" hex bolts, lock washers and hex nuts. Mount the electric motor (#30) (supplied by customer) to the motor mount. A triple B-groove sheave is required. Do not tighten bolts until both sheaves are aligned. The electric motor is a 1725-rpm with at least 20hp. Sheave sizes are: direct drive – 3-1/2"; belt drive – 6". Pulleys are mounted after the guard is in place. Electric motor sheave is supplied by customer.
3. Mount the belt guard assembly (#7) (hinge up). The bottom end of the guard clamps to the ring on the gearbox plate weldment (#4) using a 4" clamp (#8) and 5/16" x 1-1/4" hex bolts, lock washers and hex nuts. A guard-mounting bracket (#9) holds the top end. Use 5/16" x 1" and 1/2" x 1-1/2" hex bolts with lock washers and hex nuts. There are two sets of holes in the guard and two holes in the motor mount stand. Use appropriate holes and slot in mounting bracket to adjust guard height to match height of the motor shaft.
4. Mount the 12" triple sheave on the gearbox using key and set screws supplied. Mount the motor sheave and align the two sheaves with the auger tube. Tighten sheave set screws and motor mount bolts after sheaves are aligned. Mount the belts on the sheaves. Adjust stand position to fit belt length and tighten stand bolts. The motor mount handle acts as a belt tightener. Adjust sheave position as required so they are approximately in the middle of the guard.

Winch Drawing



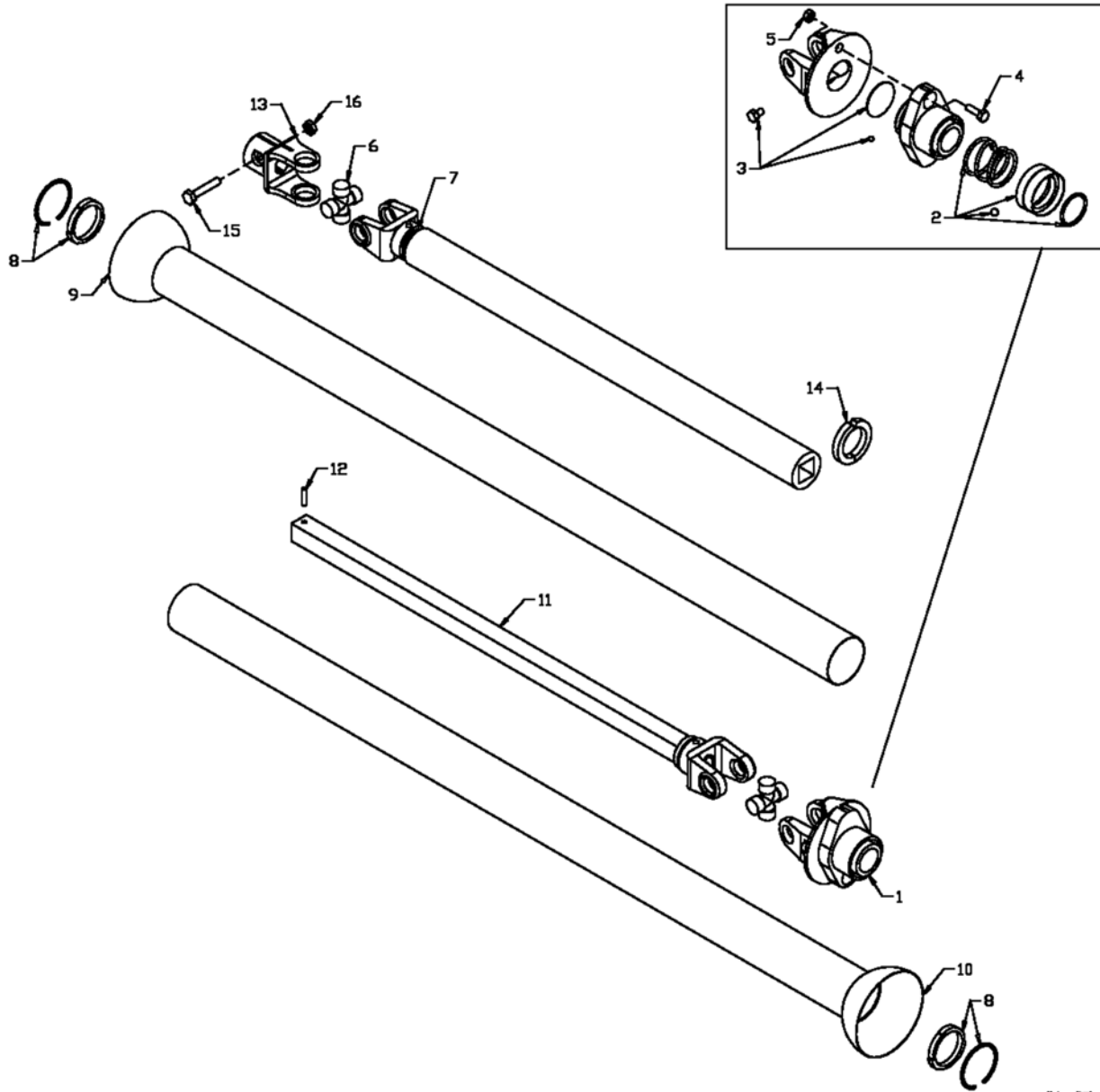
CA-28

Item	Part Number	Description
1	2461S01	Handle
	5621S01	Cable Keeper Kit
4		Bolt
5		Cable Clamp
6		Lockwasher
7		Nut
	1565S01	Input Shaft Kit
8		Input Shaft
9		Retaining Ring
10		Brake Disc
11		Ratchet Gear
12		Pinion Gear
13		Bushing
14		Spacer
15		Nut
16	1578S00	Friction Disc
	1569S01	Intermediate Shaft Kit
17		Bushing
19		Washer
20		Intermediate Shaft
21		Roll Pin
22		Woodruff Key
23		Gear
	6730S00	Ratchet Kit
24		Nut
25		Spacer
26		Ratchet Pawl
27		Spring
28		Shoulder Bolt

Item	Part Number	Description
29*		Drum Bolt
30*		Lock Nut
31*		Drum Spacer
32*		Drum Assembly
33*		Lock Nut
34*		Frame Spacer
35*		Bolt
36*		Frame
	906537	Bushing Kit
13		Bushing
17		Bushing

*Not available

PTO Assembly Drawing

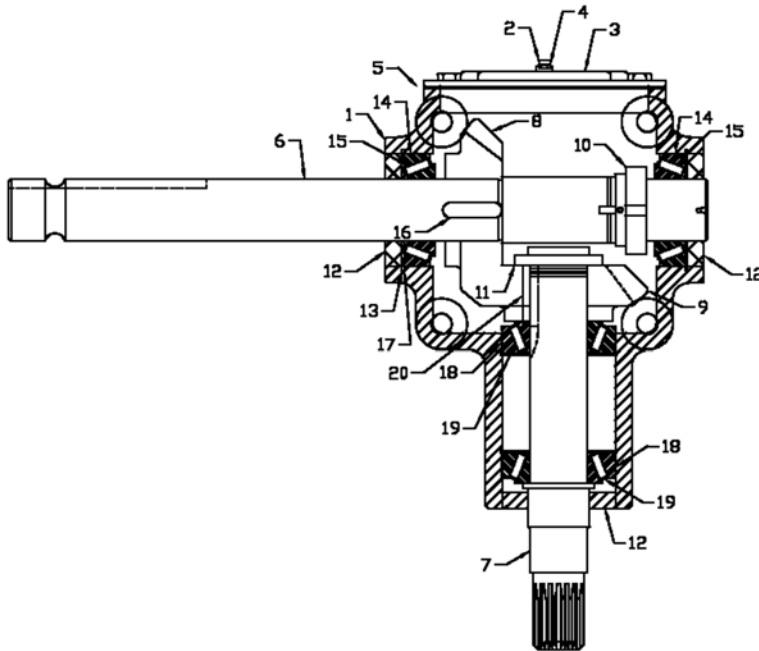


CA-27

Item	Part Number	Description
PTO Direct Drive Assembly		
	F0466	Shaft Complete
	908960	Tractor Half of PTO (shear)
	908958	Implement Half of PTO
1	936324	Shear Assembly
2	936168	Spring-Lok Repair Kit
		(Collar, Spring, Ret. Ring, 2-3/8" Balls)
3	936248	Shear Assembly Repair Kit
		(3/8" x 1/2" Bolt, (Grade 5) - one required
4	86170	3/8" x 1" Shear Bolt (Grade 5) - one required
5	812363	3/8" Lock Nut
6	936093	Repair Kit
7	936325	Yoke & Tube
8	936320	Nylon Bearing Repair Kit
9	908956	Inner Guard
10	907397	Outer Guard
11	936329	Yoke & Shaft
12	936315	1/4" x 1" Roll Pin
13	936376	Clamp Yoke
14	936316	Shield Bearing
15	81628	1/2" x 3-1/4" Hex Bolt
16	812364	1/2" Lock Nut

Item	Part Number	Description
PTO Belt Drive Assembly		
	F0467	Shaft Complete
	908960	Tractor Half of PTO (Shear)
	908959	Implement Half of PTO
1	936324	Shear Assembly
2	936168	Spring-Lok Repair Kit (Collar, Spring, Ret. Ring, 2-3/8" Balls)
3	936248	Shear Assembly Repair Kit (3/8" x 1/2" Bolt, Blank, 24-1/4" Balls)
4	86170	Shear Bolt - 3/8" x 1" (Gr.5)
5	812363	3/8" Lock Nut
6	936093	Repair Kit
7	936325	Yoke & Tube
8	936320	Nylon Bearing Repair Kit
10	908956	Inner Guard
11	908397	Outer Guard
12	936329	Yoke & Shaft
13	936315	Roll Pin (1/4" x 1")
14	936262	Clamp Yoke
15	936316	Shield Bearing
16	81628	1/2" x 3-1/4" Hex Bolt
17	812364	1/2" Lock Nut

Gearbox Drawing



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Item	Part Number	Description
	907207	Gearbox Complete
1	BU50310	Gearbox Casting Only
2	BU500089-3	Pipe Plug
3	BU50457	Gearbox Cover
4	BU500167-1	Relief Valve
5	BU50458	Gearbox Gasket
6	24970	Cross Shaft
7	BU50502	Pinion Shaft
8	BU50329	Bevel Gear 1-1/2" B
9	BU50331	Bevel Gear 1-3/8" B
10	BU50428	Adjusting Nut
11	BU50444	Adjusting Nut
12	BU50422-1	Oil Seal (3 Used)
13	BU50415	Retainer Ring (4 Used)
14	BU575902	Bearing Cup (2 Used)
15	BU575901	Bearing Cone (2 Used)
16	BU50429	Key
17	BU50210X	Shim Set
18	BU575907	Bearing Cup (2 Used)
19	BU575906	Bearing Cone (2 Used)
20	BU50417-1	Key

Shipping Kit and Bundle Numbers

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

Quantity	Bundle Number	Description
C1336E - 13" x 36' Conventional Auger Engine Drive		
1	F0098	Lift Arms
1	F0673	Extension Auger
1	F0118	Basic Auger
1	F0602	Crate of Parts
1	F0337	Undercarriage & Axle
C1336D - 13" x 36' Conventional Auger Direct Drive		
1	F0098	Lift Arms
1	F0672	Extension Auger
1	F0117	Basic Auger
1	F0674	Crate of Parts
1	F0337	Undercarriage & Axle
C1336D - 13" x 36' Conventional Auger Direct Drive		
1	F0098	Lift Arms
1	F0673	Extension Auger
1	F0118	Basic Auger
1	F0677	Crate of Parts
1	F0337	Undercarriage & Axle

Farm King Limited Warranty

This document limits your warranty rights.

Base Limited Warranty

Buhler Industries Inc. provides this warranty only to original retail purchasers of its product. Buhler Industries Inc. warrants to such purchasers that all Buhler Industries Inc. manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of 12 months (80 days for commercial applications). This limited warranty applies only to those parts and components manufactured by Buhler Industries Inc. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Buhler Industries Inc. reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Buhler Industries Inc. will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Buhler Industries Inc. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance. Also: Buckets and Bucket Tines carry no warranty, Bent Spears carry no warranty, Snowblower Fan Shafts carry no warranty, Mower Blades carry no warranty, Portable Auger Parts Have Two (2) Year Warranty, Loader Parts Have Two (2) Year Warranty. The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Industries Inc. will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

Repair Parts Limited Warranty

Buhler Industries Inc. warrants Farm King replacement parts purchased after the expiration of the Buhler Industries Inc. Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to Buhler Industries Inc. at the purchaser's expense.

What is Not Covered

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Buhler Industries Inc.; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Buhler Industries Inc.

Authorized Dealer and Labor Costs

Repairs eligible for labor under this limited warranty must be made by Buhler Industries Inc. or an authorized Farm King dealer. Buhler Industries Inc. retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Buhler Industries Inc. determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Buhler Industries Inc. will not approve or pay invoices sent for repairs that Buhler Industries Inc. has not previously approved. Warranty service does not extend the original term of this limited warranty.

Warranty Requirements

To be covered by warranty, each Farm King new product must be registered with Buhler Industries Inc. within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Buhler Industries Inc. will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

Warranty Claims:

Warranty requests must be prepared on Buhler Industries Inc. Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

Warranty Labor:

Any labor subject to warranty must be authorized by Buhler Industries Inc. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer's posted shop rate.

Exclusive Effect of Warranty and Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON BUHLER INDUSTRIES INC.'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON PRODUCTS MANUFACTURED BY BUHLER INDUSTRIES INC. ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL BUHLER INDUSTRIES INC. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

(Note that some provinces or states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from province to province or state to state.

Buhler Industries Inc. neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Buhler Industries Inc. to the purchaser, and Buhler Industries Inc. shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Buhler Industries Inc.'s ability to obtain materials or manufacture replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

Government Legislation:

Warranty terms and conditions are subject to provincial or state legislation.

Important Note: This warranty does not apply to rentals.

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