



SIDE FEED BALER

540 RPM Driveline

Operator's and Parts Addendum

89-052

A Product of

Allied Systems
COMPANY

Sherwood, Oregon USA

Rev: 1/2020

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Safety

General

The following pages contain general safety warnings which supplement specific warnings and cautions appearing elsewhere in this manual. All electrical and hydraulic equipment is potentially hazardous. You must thoroughly review and understand this Safety Section before attempting to operate, troubleshoot, maintain or service this baler.

Time, money and effort have been invested in making your Baler a safe product. The dividend from this investment is **YOUR PERSONAL SAFETY**.

However, it must be realized that no power-driven equipment can be any safer than the person behind the controls. If you don't operate and maintain your Freeman Baler safely, our efforts will have been in vain.

The safety instructions and warnings, as documented in this manual and shipped with the machine, provide the most reliable procedures for the safe operation and maintenance of your Baler. It's your responsibility to see that they are carried out.

Allied Systems Company cannot anticipate all worksite conditions, local regulations, etc. It is the responsibility of the end user to be aware of and obey any specific worksite, local, state, or national regulations or procedures that are applicable to operating this baler.

NOTE: All possible safety hazards cannot be anticipated so as to be included in this manual. Therefore, you must always be alert to potential hazards that could endanger personnel and/or damage the equipment.



Figure 1 - Freeman 375 Driveline Baler

Safety Symbols

The following symbols/terms are used to emphasize safety precautions and notices in this manual:



DANGER

The “**DANGER**” symbol indicates a hazardous situation which, if not avoided, will result in death or serious injury. Carefully read the message that follows to prevent serious injury or death.



WARNING

The “**WARNING**” symbol indicates a hazardous situation which, if not avoided, could result in death or serious injury. Carefully read the message that follows to prevent serious injury or death.



CAUTION

The “**CAUTION**” symbol indicates a hazardous situation which, if not avoided, could result in minor or moderate injury, or equipment damage. Carefully read the message that follows to prevent minor or moderate injury.

NOTICE

The “NOTICE” symbol alerts to a situation that is not related to personal injury but may cause equipment damage.

NOTE: ...

The term “**NOTE**” highlights operating procedures or practices that may improve equipment reliability and/or personnel performance, or to emphasize a concept.

Intended Use Statement:

This baler is intended to gather and compress loose, fibrous material (i.e., hay) and form it into rectangular bales. Use in any other way is considered to be contrary to the intended use. If you are unsure of the material you intend to bale, consult the factory.

Operation Warnings



WARNING

Warning: Failure to observe the following safety rules may result in extreme personal injury, dismemberment or death. It is the operator's responsibility to understand the proper and safe use of this baler.

- Make sure that you read, understand, and obey all of the safety precautions and operating instructions in this Operator's Manual.
- Keep this Operator's Manual and the Safety Card (Allied form #89-028) with the baler at all times.
- Do not operate the baler unless you are authorized and trained to do so. If it has been some time since you last operated the baler, re-familiarize yourself with the baler before starting, then proceed slowly.
- Do not operate the baler if you are aware of any malfunctions, needed maintenance or repairs.
- Stop the baler immediately if any problems arise.
- Never allow others to ride on the baler.
- Never allow anyone within 10 ft of the baler while the baler is in operation.
- Never operate the baler without all safety shielding in place.
- Keep hands, feet, hair, jewelry and clothing away from moving parts, including but not limited to the pickup, knotter, and PTO shaft.
- Avoid wearing loose clothing which can easily be caught in moving parts.
- Use appropriate signs (i.e., Slow Moving Vehicle sign), signals or warning lights when transporting on highways.
- Always use lights when working at night or in low light conditions.



- Know your job-site rules. Some have site specific directions and procedures. The methods outlined in this manual provide a basis for safe operation of the baler. Because of special conditions, your company's baling procedures may be somewhat different from those shown in this manual.
- Do not start the tractor if the key had been marked with a "DO NOT START" or "RED" tag.
- Never operate any of the tractor's controls from anywhere other than the operator's seat.
- Alert personnel in the area before starting the engine, and make sure everyone is clear. Be sure that all controls are in neutral and the baler is disengaged before starting the engine.
- Each country has its own safety legislation. It is in the operator's own interest to be conversant with these regulations and to comply with them in full. This also applies to local bylaws and regulations in force on a particular worksite.
- Should the recommendations in this manual deviate from those in the user's country, the national regulations should be followed.
- Never attempt to disconnect any of the safety devices built into the baler or tractor.
- Maintain proper clearance from energized equipment, energized power lines or other power sources. High voltage electricity can discharge to ground without direct contact with the baler's or tractor's structure. If the baler or tractor contacts energized equipment, or if electrical energy does discharge through the machine—stay clear, and prevent anyone else from coming in contact with the baler or tractor. If you are on the tractor, stand fast, avoid contact with metal surfaces, and do not permit anyone to come into contact with the tractor or baler. Finally, **Do not jump off.**

Hydraulic Hazards

Be aware of the hazards of pressurized hydraulics:

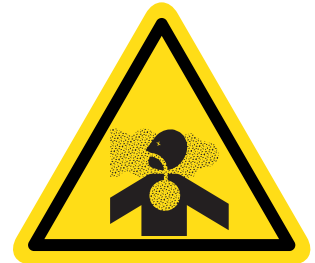
- Wear personal protective equipment, such as gloves and safety glasses, whenever servicing or checking a hydraulic system.
- Assume that all hydraulic hoses and components are pressurized. Relieve all hydraulic pressure before disconnecting any hydraulic line.
- Never try to stop or check for a hydraulic leak with any part of your body; use a piece of cardboard to check for hydraulic leaks.
- Small hydraulic hose leaks are extremely dangerous, and can inject hydraulic oil under the skin, even through gloves.
- Infection and gangrene are possible when hydraulic oil penetrates the skin. See a doctor immediately to prevent loss of limb or death.



Maintenance Safety

- Perform all routine maintenance outlined in this Operator's Manual in the time intervals indicated.
- Maintenance, lubrication and repair of this machine can be dangerous unless performed properly. In order to ensure safety, each person working on this baler must have the necessary skills, information, tools and equipment, and satisfy himself that his work method is safe, correct, and meets his own company's requirements.
- Do not attempt to make adjustments, or perform repairs unless you are authorized and qualified to do so.
- Never attempt to service energized equipment.
- Do not rely on the hydraulic system to support any part of the baler during maintenance or lubrication. Never stand under a baler component that is supported only by the hydraulic system. Ensure components are resting on their mechanical stops or supported with appropriate safety stands during maintenance or lubrication.
- Never attempt servicing while the baler is moving. Shut off the tractor and secure power.

- Shut off tractor engine, engage the parking brake, disengage the baler, and wait for all movement to stop before adjusting, lubricating, cleaning, or servicing the baler.
- Tag the key switch with a "DO NOT START" sign and/or remove the key.
- Always perform all maintenance and lubrication procedures with the baler on level ground, parked in a safe area.
- Block the tires to keep the machine from rolling.
- Any unauthorized modifications made to the baler by the customer or parties other than Allied Systems will relieve Allied Systems Company and your Freeman dealer of any liability for damage or injury.
- Replace any worn parts only with genuine Freeman parts. Call your dealer for assistance.
- Unless specified in service procedures, never attempt maintenance or lubrication procedures while the baler is moving or the engine is running.
- Engine exhaust fumes can cause death. If it is necessary to run the engine in an enclosed space, remove the exhaust fumes from the area with an exhaust pipe extension. Use ventilation fans and open shop doors to provide adequate ventilation.



- Before making adjustments to the electrical system, disconnect all baler wiring from the tractor. An electrical spark could cause a fire, explosion or severe burns.



Safety Equipment

- Ensure test equipment is in good condition.
- If an instrument must be held while taking measurements, ground the case of the instrument before energizing equipment.
- Do not touch live equipment or personnel working on live equipment while holding a multimeter. Some types of measuring devices should not be grounded—do not hold such devices while taking measurements.
- Prevent personal injury or equipment damage by using a lifting device with a lifting capacity greater than twice the weight of any equipment to be lifted.
- Always use personal protective equipment (PPE) appropriate to the situation. This may include the use of hearing protection, eye protection, a respirator, a hard hat, leather gloves, steel toed boots, etc.



Electrical Hazards

- An electric shock could be fatal. Ensure power to the baler is “OFF” before opening electrical panels.
- All electrical cables and connectors must be in good condition (free of corrosion, damage, etc). Use caution in wet weather to avoid danger from electrical shock. Never attempt electrical testing or repair while standing in water.
- Do not wear electrically conductive jewelry, clothing, or other items while working on the electrical system.



Hot Oil Hazards

- Burns from hot oil can be severe—Always allow lubricating and hydraulic oil to cool before draining.

Compressed Air Hazards

- When using compressed air to dry parts, pressure should not exceed 30 psi (200 kPa).
- Air pressure penetrating your skin can be fatal. Never direct compressed air at anyone.

Fire Safety



WARNING

WARNING: Diesel fuel and hydraulic oil are flammable. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on or near fuel lines, tanks, or containers. Keep open flames and sparks away from the machine.

Reduce the Risk of Fire

- Keep the baler free of oil, grease, hay, and trash accumulations. Regular cleaning is recommended for fire prevention and general safety. Use an approved solvent to clean machine parts. Never use gasoline or diesel fuel.
- Shut off the engine and electrical equipment while filling the fuel tank. Use extra caution when fueling a hot engine. Always ground the fuel nozzle against the filler neck to avoid sparks.
- Never overfill the fuel or hydraulic tanks. Any overflow could cause a fire. Immediately repair any hydraulic or fuel leaks and clean up any spills.
- Handle all solvents and dry chemicals according to procedures identified on manufacturer's containers. Work in a well-ventilated area. Make sure you know where fire extinguishers are kept and how to use them.
- Avoid spilling fuel or other hazardous liquids. If a spill occurs, follow local or state regulations for clean-up. Contact your state's OSHA office for details.
- Always ensure that excess grease and oil accumulation, including spillage, is cleaned up immediately.
- Inspect the baler daily for potential fire hazards and make any necessary repairs immediately.
- Check all the electrical wiring and connections for defects, and repair or replace as necessary. Keep battery terminals clean and tight.



- Never perform welding operations until the entire machine has undergone a thorough cleaning. In addition, cover rubber hoses, disconnect the battery, and have at least a fire extinguisher at hand.
- Hydraulic fluid is flammable. Do not weld on or near pipes, tubes, or hoses that are filled with fluid. Do not smoke when checking or filling the tank. Keep open flames and sparks away from the baler.
- Hay dust is combustible. Do not have an open flame or weld in dusty environments.
- Maintain the engine cooling system to avoid overheating.
- Remember, there is always a risk of fire.

Fire Fighting Equipment

- It is recommended to carry an "ABC" fire extinguisher on the baler or in the pull vehicle at all times. Install it within easy reach of the operator in a position that protects it from damage. Use only a "quick release" type of mount. It is also recommended to carry a four gallon water container with a pump, or as required by local and state law.
- Keep your fire extinguisher(s) fully charged and in good working order. Know how to use them.
- Read and understand the instructions printed on the canisters and learn how to operate them. Learn how to remove the canisters from their mounting brackets in the shortest amount of time.
- Service the extinguisher according to the manufacturer's specifications. Service after every use, no matter how short a time.

Fire Suppression

- Do not panic. At the first sign of trouble (burning smell, smoke, visible flame, etc), stop the tractor and turn off the engine in the clearest area available, with the tractor upwind from the baler if possible.
- If the fire cannot be extinguished safely, immediately evacuate the area. DO NOT attempt to extinguish it. DO NOT risk personal injury. Contact your local fire department.
- If you have determined that the fire may be safely extinguished, use the fire extinguisher according to the manufacturer's instructions, or use the water pump, aiming water at the base of the fire.
- When the baler has fully cooled, thoroughly inspect, and make all necessary repairs to return the baler to normal operation.
- Recharge or replace the extinguishers before returning to work.

Driveline Safety



WARNING

Any contact with a rotating driveline, no matter how slowly it may be rotating, by you or anything you may be wearing or holding can result in death or serious injury.

- Make sure all shields and guards are in place and in good working order. Ensure that PTO drivelines are fully shielded.
- Disengage the PTO, turn off the tractor engine, and wait for the PTO to completely stop before making adjustments or repairs, or when connecting or disconnecting the driveline.
- Stay well clear of rotating PTO drivelines. Treat them as danger zones.
- Always walk around the equipment to avoid being near the PTO. Stepping over, leaning across, or crawling under a rotating PTO driveline, no matter how slowly it may be turning, can easily lead to an entanglement.



- Do not attempt to operate tractor controls from the rear of the tractor.
- Do not wear loose, torn or baggy clothing around PTO drivelines or any other moving parts.
- Keep long hair tied up in order to avoid entanglement.
- Never use nails, cotter pins, or long bolts on the driveline. Any protrusion can catch your clothing and entangle you.
- Check the drawbar for proper adjustment when hooking up PTO driven equipment.
- Keep all bystanders away from PTO driven equipment and never allow children to be in the area around the equipment.

Operations

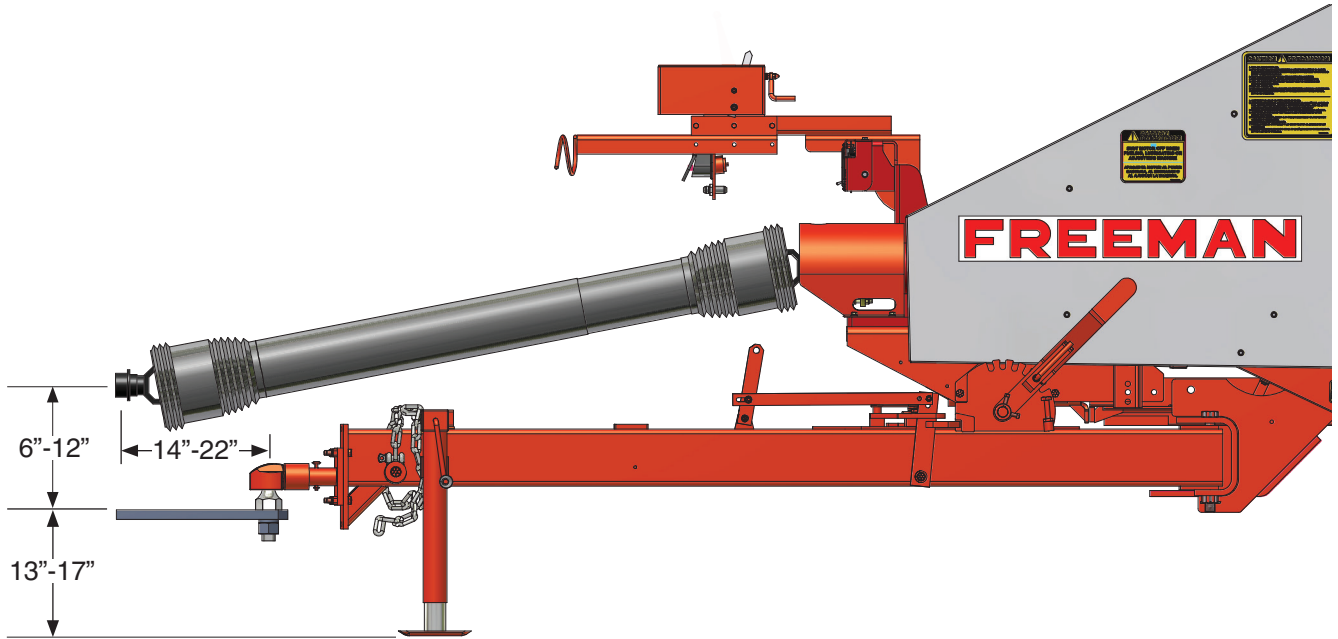


Figure 2 - Driveline Attaching Measurements, One Piece Driveline.

Operation



WARNING

Always inspect the driveline shielding for damage each and every time the baler is used. Replace any damaged shielding immediately, before using the baler.

Contacting the rotating driveline can cause death!



CAUTION

The Driveline Baler is designed to be run at 540 RPM. DO NOT EXCEED THIS SPEED.

- Check to make sure that all shields are in place, in good working order, and rotate freely.
- The shaft and tube of the telescopic shaft should be well-lubricated so that the PTO shaft can telescope freely (see Figure 4).
- Check oil level in the PTO gearbox before starting operation each day (see “Maintenance” on page 11).
- Operate PTO drive only with the drawbar swung to the left (away from pickup).
- Transport the baler with hitch swung to the right (toward pickup).
- Do not exceed a 70° turn when the PTO is operating.
- Be sure the tractor and baler connection meet the requirements shown in Figure 2 above.
- Before operating the baler, read “Attaching Driveline Baler To Tractor” included in your owners’ manual.

Operating Speed

The baler is designed to be operated at or near maximum capacity. This requires the feeder house to be full of material at all times. To achieve this, the operator regulates the baler plunger speed and ground speed.

The baler is designed for the plunger to be operating at 84 strokes per minute for optimal bale density. This should correspond to a PTO speed of 540 RPM.

The ground travel speed should be regulated according to the volume and condition of the hay. To check this, count the number of plunger strokes in each bale. There should be 12 to 16 plunger strokes in each bale under normal conditions. The plunger strokes are counted between each time the knotter ties a bale. The baler should not be run at high speeds when it is empty.

Increasing the ground speed will increase the amount of material in the feeder house, thus reducing the number of plunger strokes in each bale.

Decreasing the ground speed will decrease the amount of material in the feeder house, thus increasing the number of plunger strokes in each bale.

If enough material can not be kept in the feeder house by increasing the ground speed (i.e. rough field conditions,) then the plunger speed may need to be reduced to achieve 12 to 16 strokes per bale. The plunger speed should not be reduced below 74 strokes per minute (unless re-baling). When the windrow density increases, the operator should return to the desired 84 plunger strokes per minute before reducing the ground speed.

If the material is entering the feeder at too high of a rate, the pickup and feeder will stall. If this happens, ensure that the plunger speed is at 84 strokes per minute, then reduce ground speed.

A quality bale can be produced by adhering to the above instructions.

Bale Length

Consistent bale length is of great importance when using any automatic stacking system. Consistent bale length will occur as a result of following the above instructions. For easy, efficient stacking and hauling set and maintain the bale length at 46 inches

Maintenance

Gearbox

Use Mobilube HD Plus 80W-90 Gear Oil, Allied P/N 235720.

Check oil level daily:

With the baler sitting level, remove the lower plug. Oil should be level with the bottom of the opening (see Figure 3.) Add oil as necessary through the upper plug opening. Replace plugs and tighten securely.

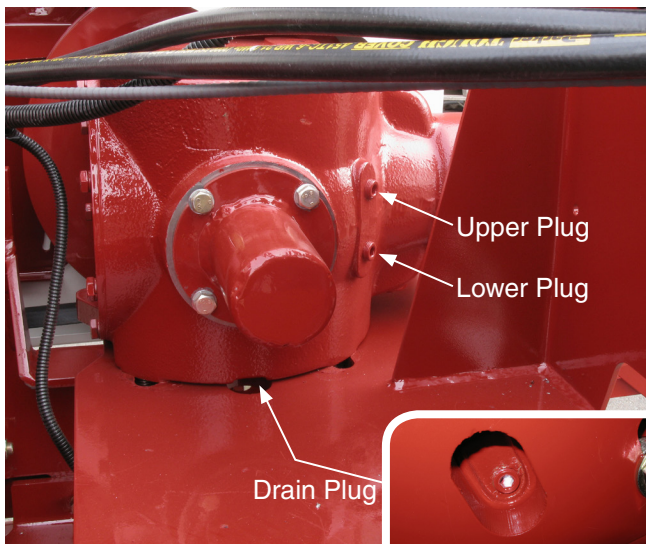


Figure 3 - Gearbox

Change oil after first 50 hours, then every 500 hours or annually, whichever comes first:

1. Place a catch pan in the space beneath the gearbox, under the drain plug.
2. Remove the drain plug from the bottom of the gearbox via the access hole in the gearbox mount plate and let the oil drain into the catch pan.
3. Remove the upper and lower plugs from the side of the gearbox.
4. Replace the drain plug.
5. Add new oil through the upper opening until it is level with the lower opening (see Figure 3.) Replace plugs and tighten securely.
6. Dispose of used oil in accordance with local regulations.

The gearbox has approximately 135 oz (4 liters) capacity.

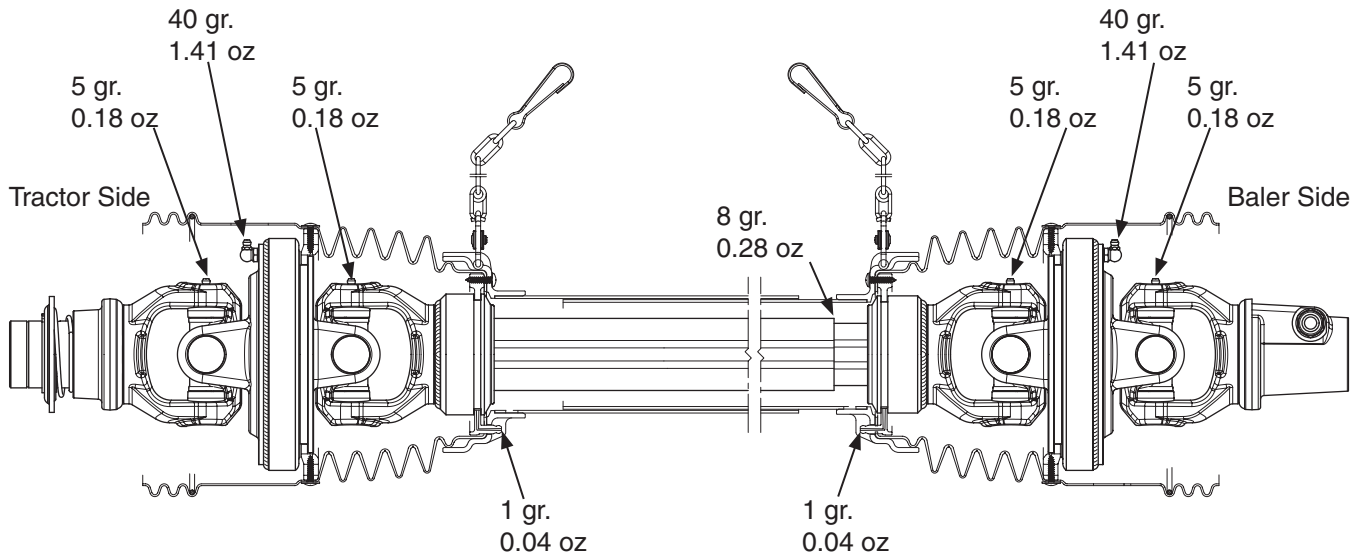


Figure 5 - Driveline Lubrication Points and quantities. Lubricate every 50 hours.

Driveline

Clean grease fittings before applying grease.

Use multi-purpose Lithium base #2, EP grease, Allied Part Number: LBR0000099

WARNING

Read and understand the manual that comes attached to the driveline thoroughly before using the baler.

Keep all shields and safety decals in place. Immediately replace any shield or decal that becomes damaged.

Lubrication

Lubricate the driveline every 50 hours as shown in Figure 4. The driveline shield may need to be rotated to line up the openings in the shielding with the lubrication fittings.

Inspect the shielding for any wear or damage. Replace any damaged or missing shielding immediately!

At the end of the season, the driveline should be cleaned and lubricated before being stored. Any accumulated grease should be removed from inside the shields.

Never operate the driveline without all of its shielding in place and in good condition.



Driveline Clutch Taper Pin

The driveline clutch uses a threaded taper pin with nut and washer to keep the clutch secured to the splined shaft. Check this torque after the initial 8 hours of use, and then again at regularly scheduled maintenance intervals. Any looseness requires re-torquing the taper pin. Coat the male shaft splines with a never-seize type lubricant before installation.

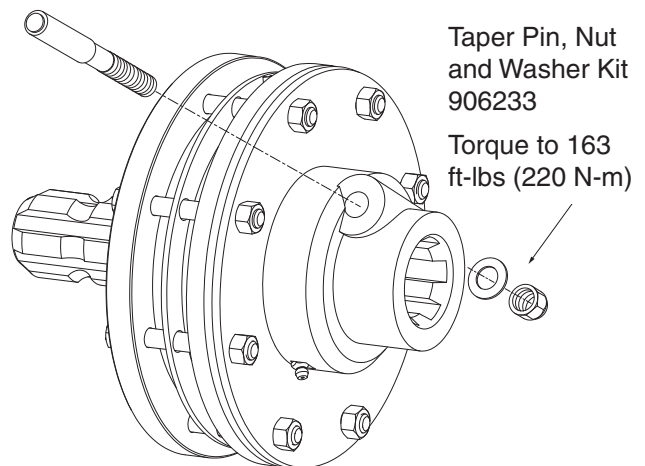


Figure 4 - Driveline Clutch Taper Pin Torque

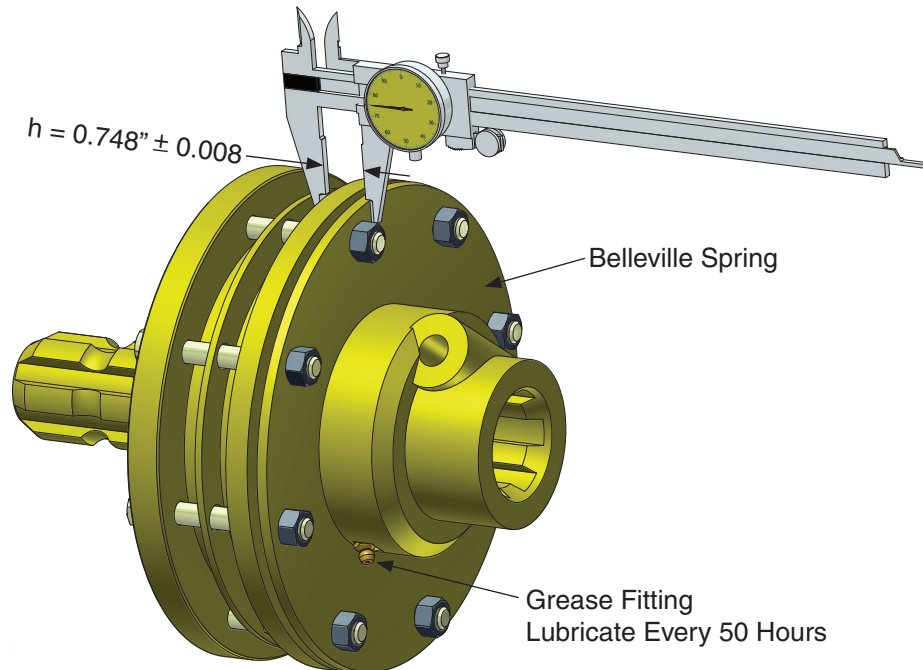


Figure 6 - Driveline Clutch.

Driveline Clutch

The driveline clutch uses a combination friction torque limiter and overrunning clutch.

The friction portion of the clutch limits torque transmitted to the machine by allowing the clutch plates to slip relative to each other. Torque peaks of short duration overloads are limited when the clutch is used and adjusted properly. Clutch tension is maintained by the deflection of the conical Belleville spring.

The overrunning portion of the clutch prevents transmission of inertial loads from the implement to the tractor during deceleration or stopping of the PTO.

Clutch Pressure Setting

As the friction disks wear, each of the eight nuts must be tightened to maintain proper pressure on the clutch discs. Measure and record the Belleville spring height “h” next to each bolt as shown in Figure 5. It should be 0.748” +/- 0.008 at each bolt.

Adjust each nut to maintain this measurement. Avoid excessive tightening of the bolts - implement, tractor, or driveline damage may occur.

Following seasonal use, relieve the spring pressure and keep the clutch in a dry place. Check the condition of friction disks and restore spring pressure before using the clutch the next season.



CAUTION

Friction clutches may become hot during use; do not touch! Keep the area around the friction clutch clear of any material which could cause a fire.

Avoid prolonged slipping of the clutch. If the clutch overheats due to frequent or prolonged slipping, consult your dealer.

Lubrication

Clean grease fitting before applying grease.

Use multi-purpose Lithium base #2, EP grease, Allied Part Number: LBR0000099

Grease the clutch every 50 hours of use and after storage.



WARNING

Keep clear of the machine until all parts have stopped moving.

Driveline Baler Parts

This section contains all components of the Driveline baler that are not included in the standard Engine/Hydro Parts Manual. This includes all parts that can be separately identified as well as parts necessary for equipment support.

Illustrations

Illustrations are provided whenever possible to represent component parts and the mounting location of those parts. The numbered labels correspond to the item numbers in the parts list.

Parts Lists

Component parts lists are presented in a 5-column format:

Item: Index numbers found in this column correspond to the numbers found on the respective parts location illustration. Some items are shown for reference purposes only to illustrate their relationship to other systems.

Notes: This column identifies footnotes applicable to specified items.

Part Number: This column lists the Allied Systems Company Part Number.

Quantity: This column lists the total number of a specific item required per assembly or subassembly. This number may not necessarily be the number of items used in the end item or system. Only one set of components is listed whenever the components of two assemblies are the same.

“**A/R**” (as required) identifies bulk items whose length or other dimension must be specified when requisitioning.

“**Ref**” identifies items shown for reference purposes only to illustrate their relationship to other systems.

“**NSS**” (not sold separately) identifies items such as valve housings and spools, ring gears and pinions, etc., which must be ordered as a set because they are closely mated at manufacture.

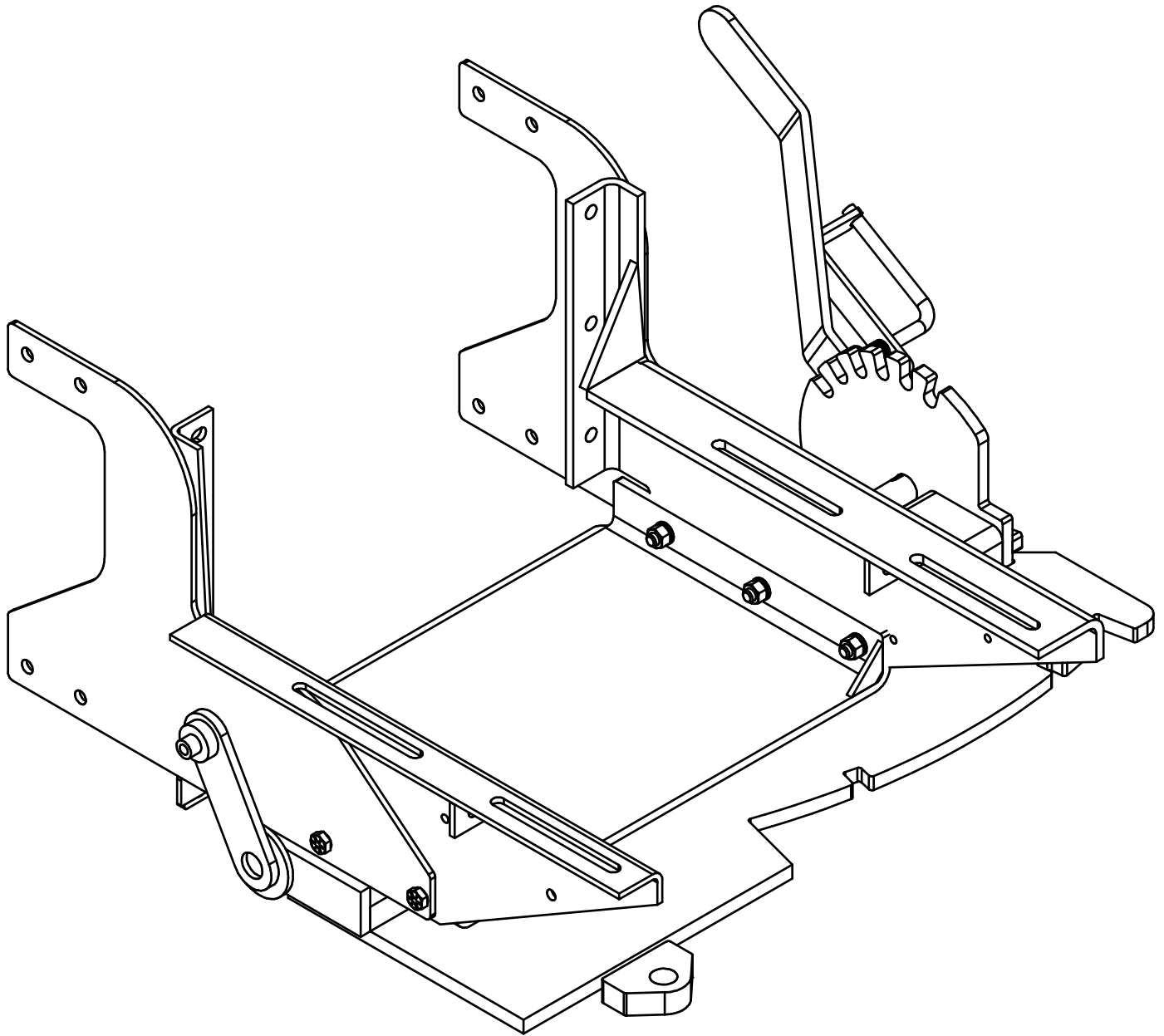
Description: This column lists the item nomenclature along with those modifiers necessary to identify the item. Additionally, cross references for repairable subassemblies are listed in this column. One dot preceding the description indicates that the item is a component part of the previously listed item or assembly with no dot. Two dots indicate that the item is part of the previously listed item with one dot.

Example:

Engine Installation
. Engine Assembly
. . Manifold Assembly
. . Control Box Assembly
. . . Module Assembly

The Engine Assembly is a first level subassembly of the Engine Installation as indicated with one dot. The Manifold Assembly and the Control Box Assembly are second level components of the Engine Assembly as indicated by the two dots. The Module Assembly is a third level component of the Control Box Assembly which is indicated with three dots.

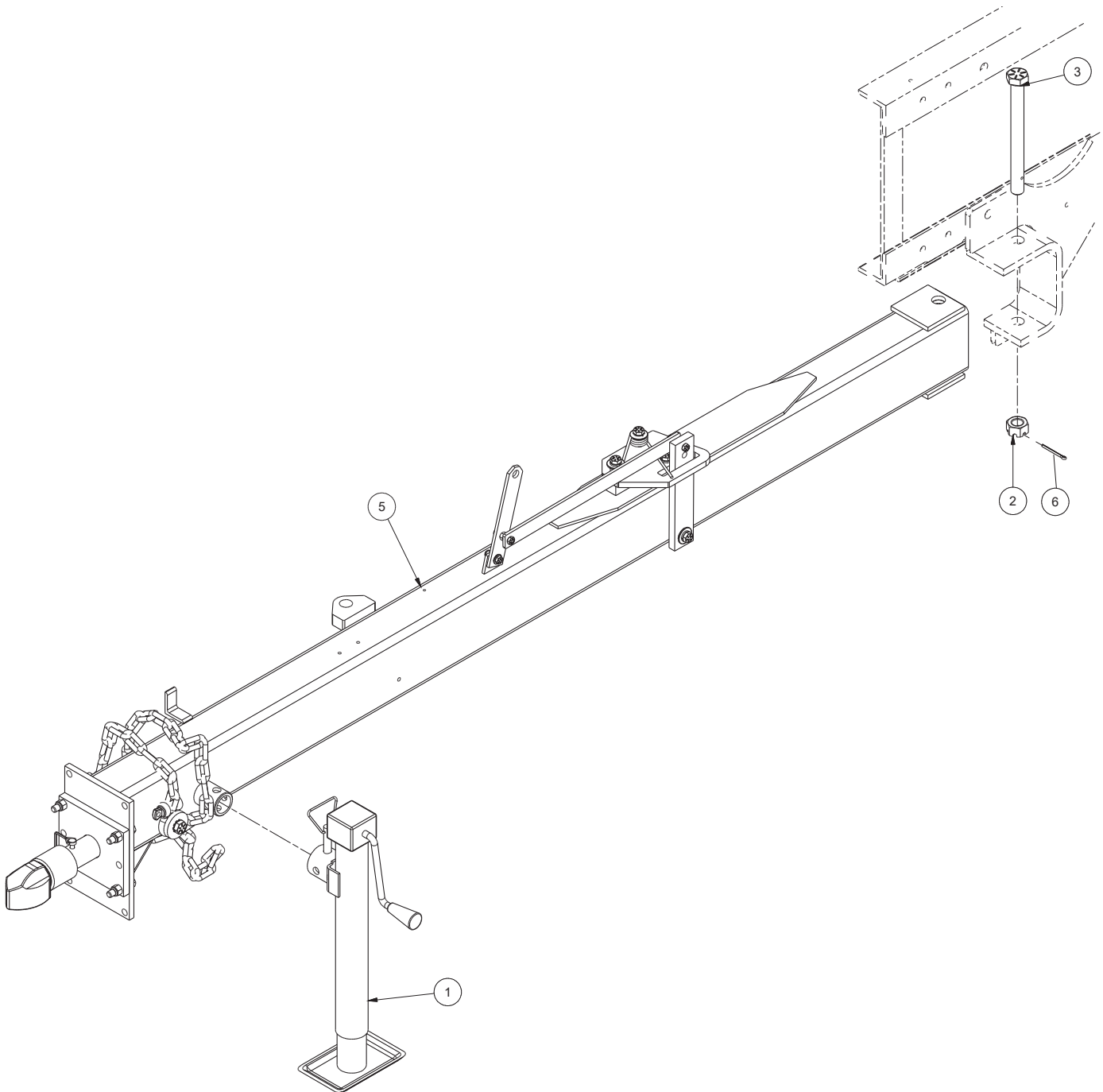
Driveline Front End Assembly



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
904095 Front End Assembly, Driveline, Bullgear							
1	F000007539	1	. Lever	12	Y25G-0824	1	. Capscrew
2	F000007540	1	. Pin, Lift Lever Adj	13	SQS3751250	2	. Set Screw
3	F000007541	1	. Compression Spring	14	SQS5003000	1	. Screw, Set
4	904098	1	. Mounting, RH	15	15135W	1	. Washer
5	F000008247	2	. Washer	16	R13812516	6	. Lockwasher
6	904100	2	. Plate,Support	17	221711W	1	. Hex Nut
7	904099	1	. Mounting, LH	18	221712W	5	. Hex Nut
8	PLF0026952	1	. Pickup Lift Lever	19	234218	1	. Jam Nut
9	909778	1	. Hitch Base	20	15223W	1	. Cotter Pin
10	R13806345	3	. Capscrew	21	48688	1	. Key
11	234176	2	. Capscrew	22	11079	1	. Fitting, Lube

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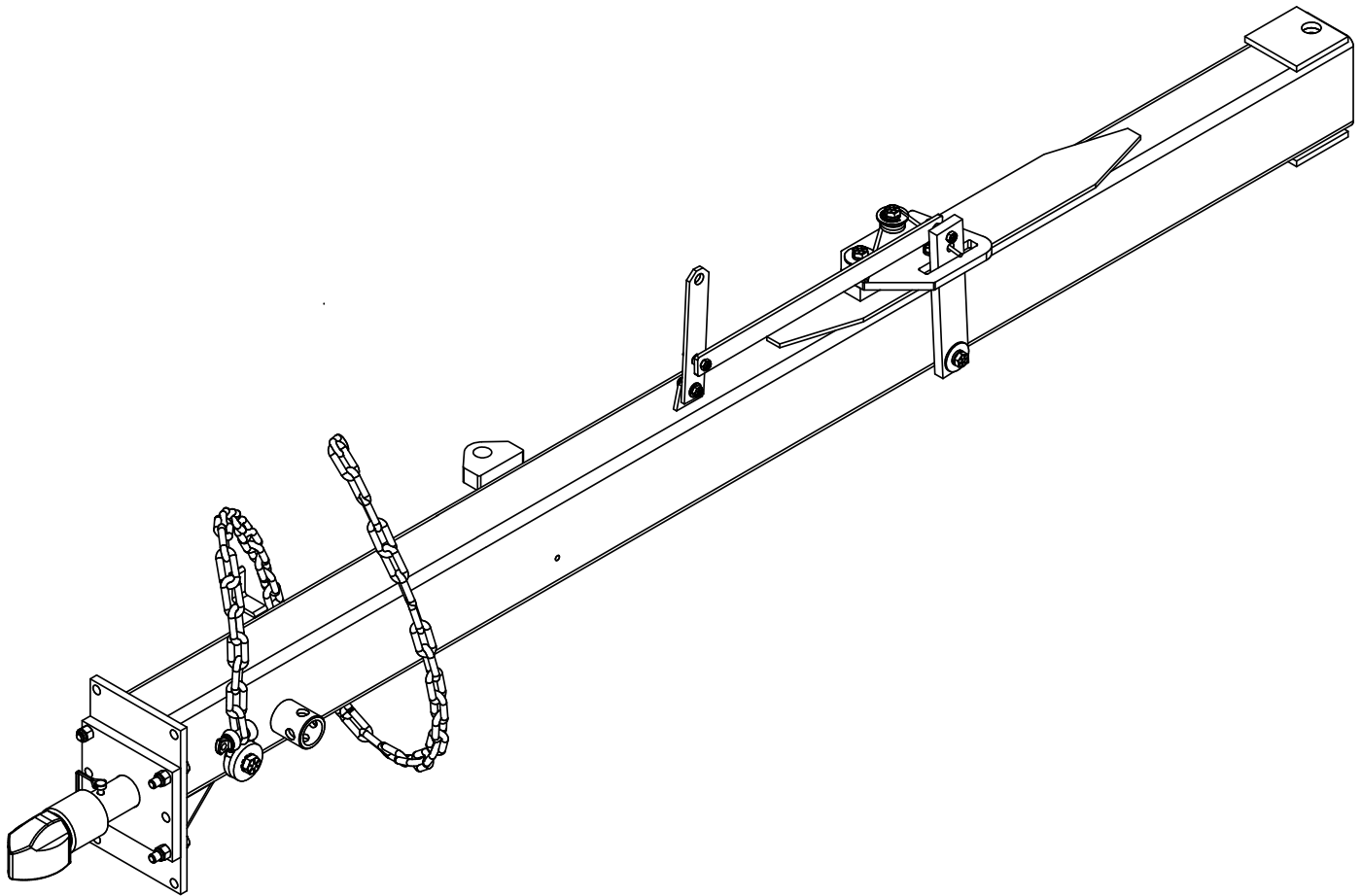
Drawbar Installation, PTO



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
904110 Drawbar Installation, PTO							
1	JCK0178203	1	. Jack	5	* 904111	1	. Drawbar Assembly
2	NSL0001000	1	. Nut, Castle	6	212255	1	. Cotter Pin
3	PIN0018909	1	. Pin				
4	ROP0000012	1	. Rope				
					* See Separate Coverage Page 17		

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Drawbar Assembly, PTO



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
904111 Drawbar Assembly; PTO							
1	BSH0011985	2	. Bushing	16	221560W	2	. Capscrew
3	CHN0000370	1	. Chain, Ag Safety	17	R13811077	2	. Capscrew
4	F000000440	1	. Ferrule	18	Y18C-1016	1	. Capscrew
5	F000001891	1	. Spring, Torsion Latch	20	221767W	2	. Washer
6	HTH0021097	1	. Hitch	21	15178W	3	. Washer
7	LEV0013885	1	. Bar, Lever	22	234665	4	. Lockwasher
8	LTH0011229	1	. Tongue Latch	23	WAS037158A	1	. Washer, Safety Chain
9	904696	1	. Bar, Link	24	WES0006250	1	. Washer
10	PLT0011228	1	. Plate, Tongue Latch	25	221707W	2	. Hex Nut
11	904112	1	. LH Drawbar	26	237567	3	. Locknut
12	221574W	4	. Capscrew	27	223587	4	. Locknut
13	221499W	1	. Capscrew				
14	Y17C-0624	1	. Capscrew				
15	R13801813	1	. Capscrew				

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Driveline PTO Installation, 3-Tie Bull Gear

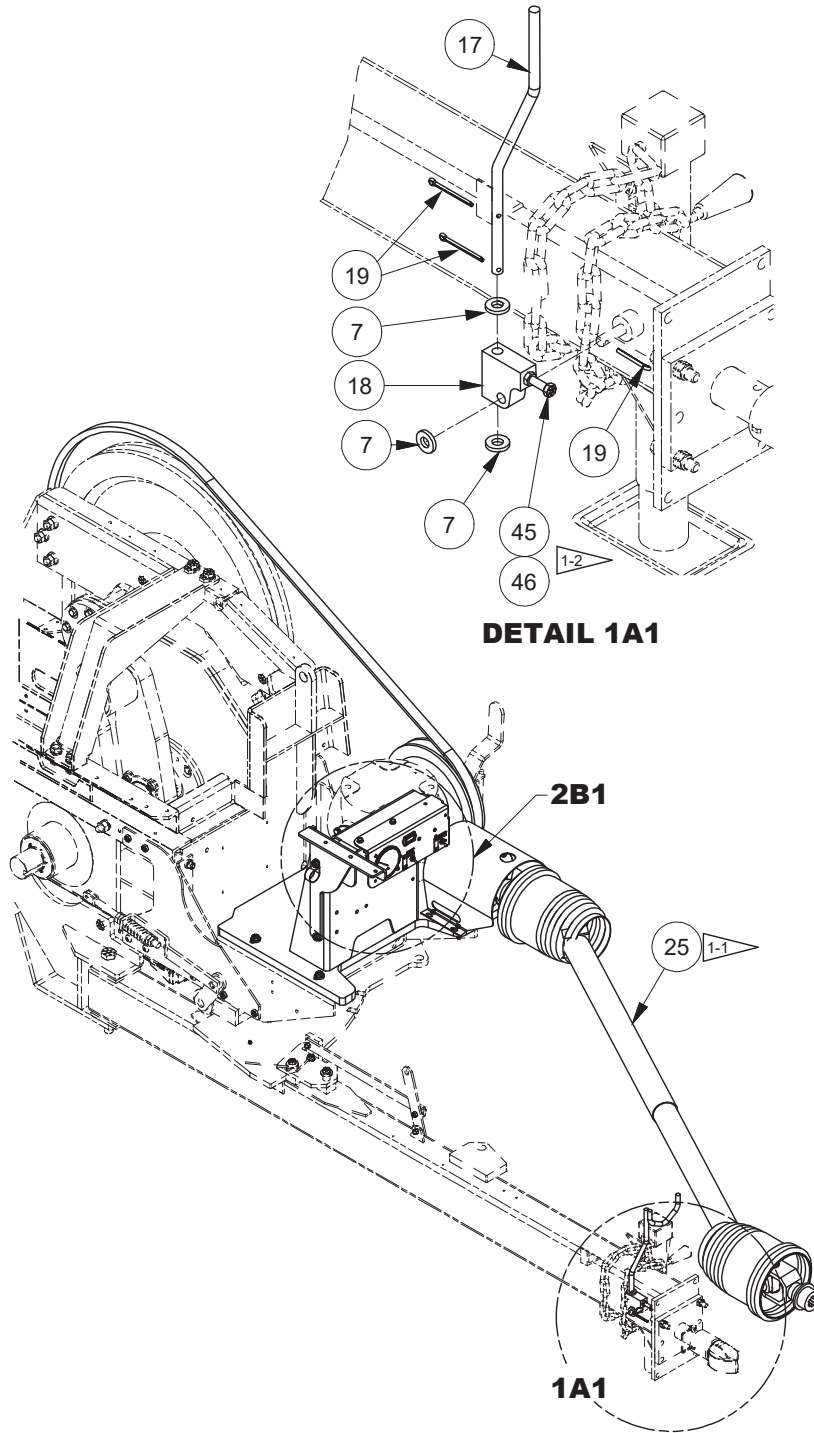
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Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	904094		Driveline PTO Installation				
1	904125	1	Mounting Weldment	31	223588	4	Nut, Esna
2	257532	1	Gearbox	32	236805	4	Capscrew
	908127	3	. Seal	33	296420W	4	Washer
3	293708W	4	Capscrew	34	R13802914	4	Washer
4	296430W	4	Washer	35	229289	2	Switch, Toggle
5	R13811077	1	Capscrew	36	GAG0001133	1	Hour Meter
6	Y22E-08	4	Washer	37	909083	1	Gauge, Tension Controlled
7	221771W	9	Washer	38	252619	1	Relay
8	200454W	2	Capscrew	39	258409	1	Decal, Work Lights
9	221711W	6	Hex Nut	40	258410	1	Decal, Power
10	R13811080	1	Capscrew	41	561929	2	Decal, On-Off
11	F000007010	2	Bolt, Adjusting	42	Y25G-(1024)122		Capscrew
12	F000007000	1	Belt, Drive	43	220044	2	Nut
13	904126	1	Plate, Instrument Pane, L	44	WIS0001000	2	Lockwasher
14	2305631W	4	Screw, Ser Flg	45	180959W	1	Capscrew
15	191534W	4	Nut	46	235708	1	Jam Nut
16	Y27E-06	4	Washer	47	235720	2GL	Lubricant, Gear
17	904133	1	Stand Weldment	48	209427	1	Fitting
18	904136	1	Plate, Swivel Block	49	209700	1	Clip, Insul
19	Y01F-0636	3	Cotter Pin	50	209695	1	Clamp
20	906512	1	Plate, Sheave	51	R13801782	1	Capscrew
21	904129	1	Hub, Sheave	52	221703W	2	Hex Nut
22	R13811082	1	Capscrew	53	909396	1	Bolt, Retaining
23	223587	3	Locknut	54	2305986W	4	Set Screw
24	R13801813	4	Capscrew	55	302398W	2	Locknut
25	*a 258050	1	Driveline	56	221569W	1	Capscrew
26	904434	1	Cover Weldment, Shaft				
27	*b 904680	1	Clutch				
		1	. Taper Pin	*a	See Separate Coverage	Page 23	
		1	. Washer	*b	See Separate Coverage	Page 24	
		1	. Nut				
28	904562	1	Plate, Guard				
29	904490	1	Plate, Mounting				
30	R13811017	4	Capscrew				

Rev CP

Driveline PTO Installation, 3-Tie Bull Gear

Page 2 of 5

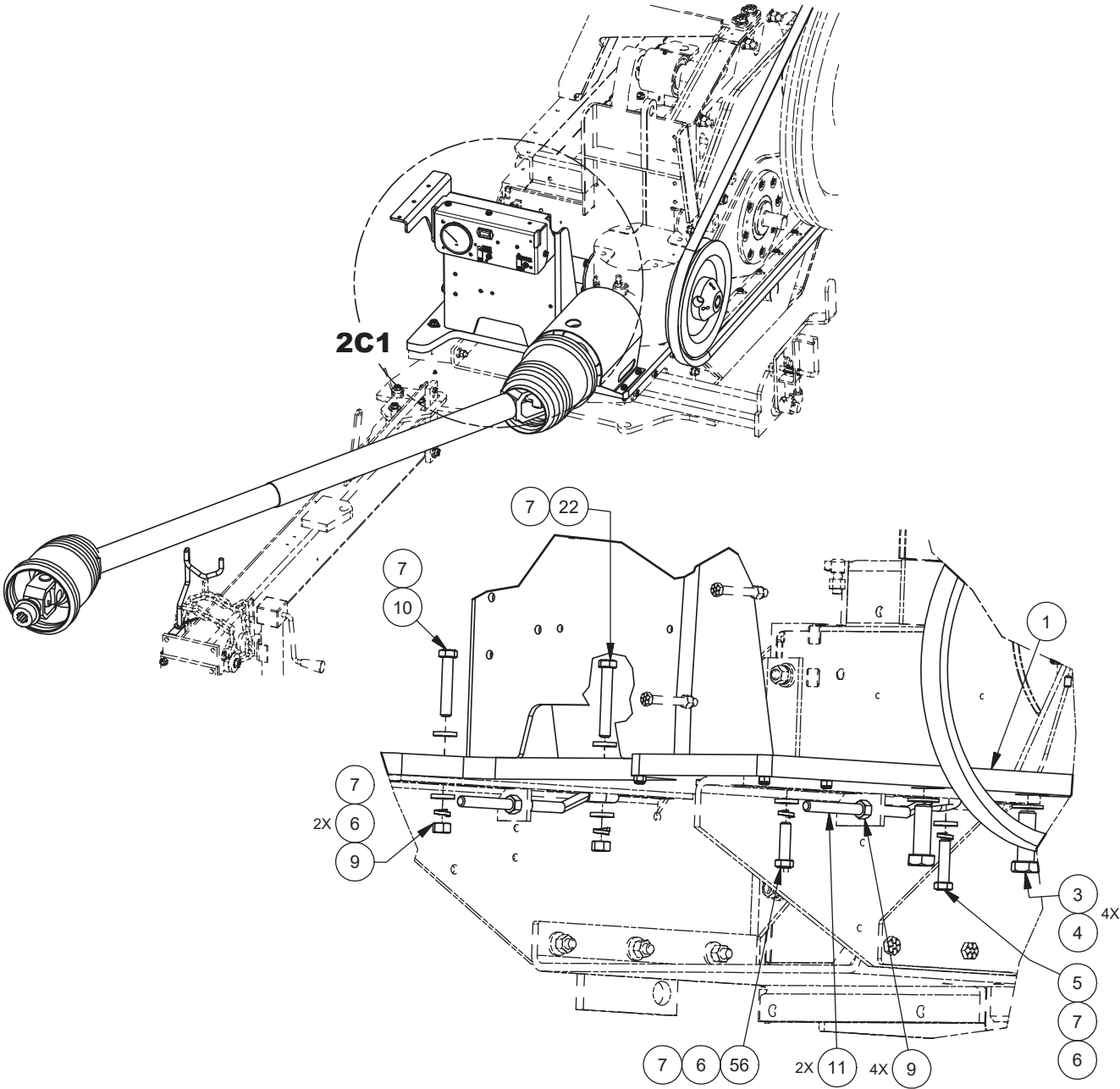


NOTES:

1-1 TIGHTEN CONNECTION BOLT FROM DRIVELINE TO GEARBOX INPUT SHAFT TO 162 FT-LBS.

1-2 ADJUST SCREW LENGTH SO SUPPORT BAR IS IN A VERTICAL POSITION WHEN DRIVELINE IS PLACED IN HOLDER. ENGAGE JAM NUT TO LOCK SCREW IN PLACE.

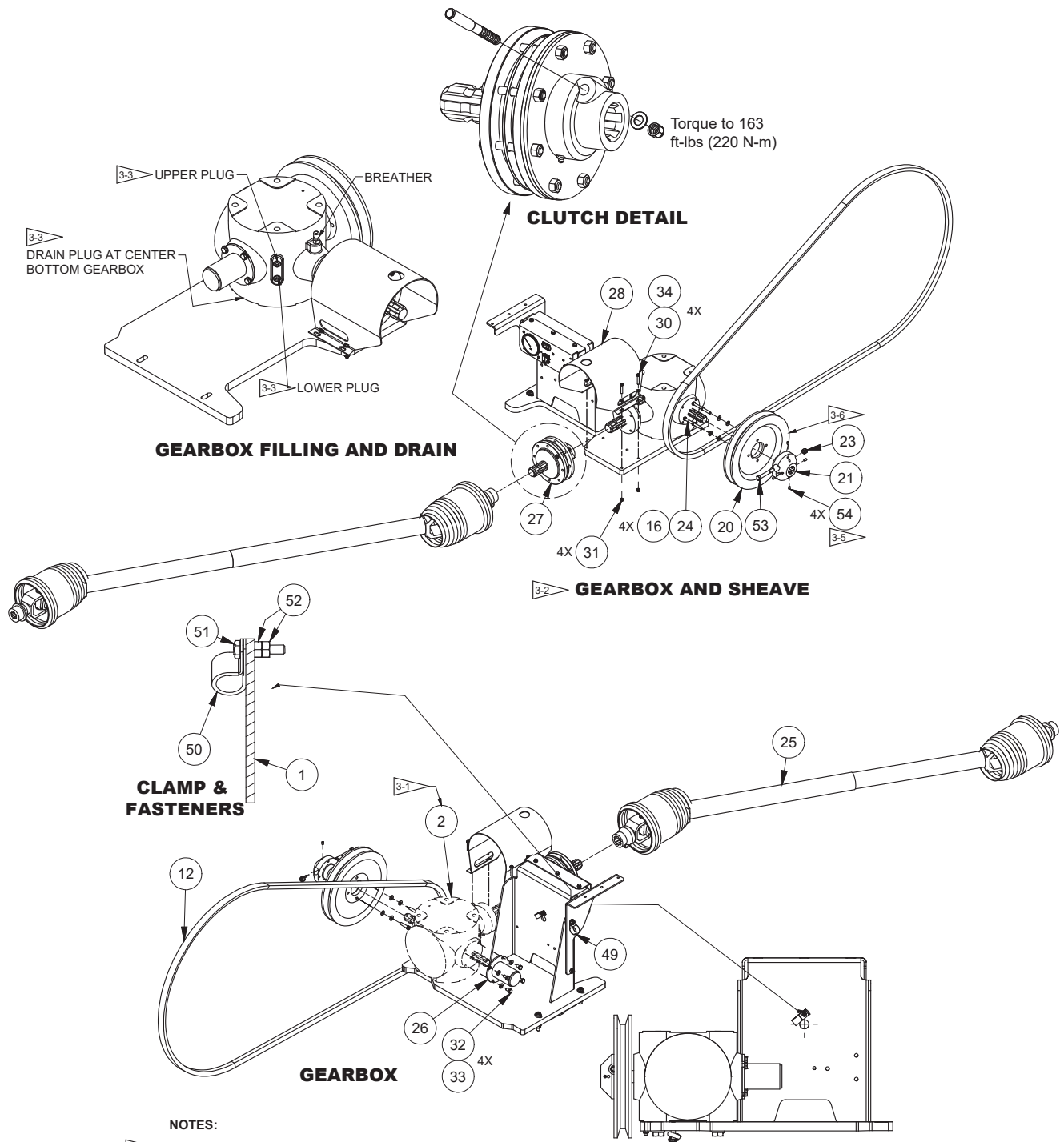
Driveline PTO Installation, 3-Tie Bull Gear



DETAIL 2C1
GEARBOX MOUNTING PLATE

Driveline PTO Installation, 3-Tie Bull Gear

Page 4 of 5



NOTES:

3-1 GEARBOX MUST BE INSTALLED SO CCW INPUT OF FRONT SHAFT PRODUCES CCW OUTPUT ON SHAFT W/ SHEAVE.

3-2 CHECK BELT TIGHTNESS. APPLY 20 LBS AT THE LOCATION INDICATED ON THE MID-SPAN OF BELT IN DOWNWARD DIRECTION. BELT DEFLECTION SHOULD BE 0.75" +/- 0.13".

3-3 USE MOBILUBE HD PLUS 80W-90 GEAR OIL, ALLIED P/N 235720.

WITH THE BALER SITTING LEVEL, REMOVE THE LOWER PLUG. OIL SHOULD BE LEVEL WITH THE BOTTOM OF THE OPENING (SEE VIEW "GEARBOX FILLING AND DRAIN"). ADD OIL AS NECESSARY THROUGH THE UPPER PLUG OPENING, REPLACE PLUGS AND TIGHTEN SECURELY.

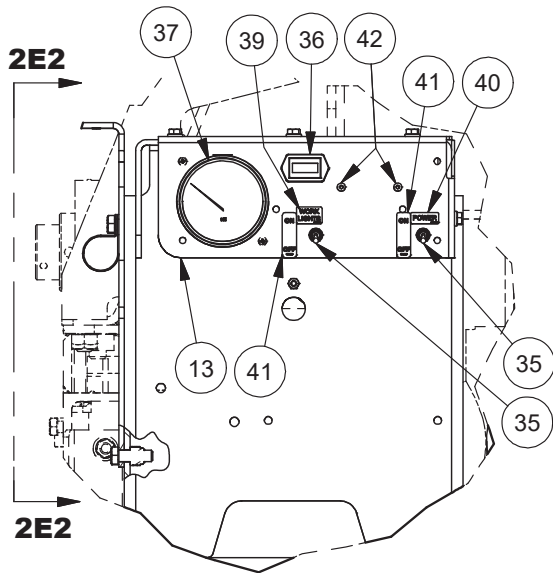
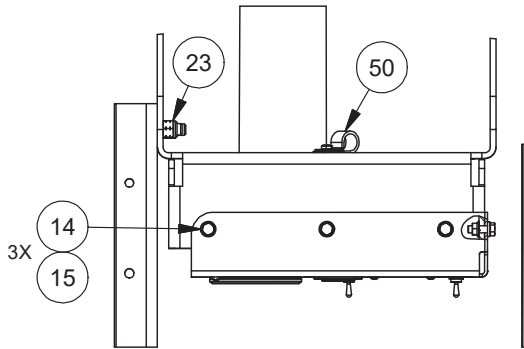
THE GEARBOX HAS APPROXIMATELY 135 OZ (4 LITERS) CAPACITY.

3-5 LOCATE SET SCREWS EVENLY.

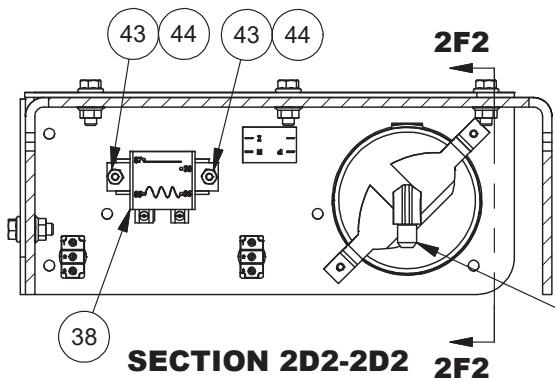
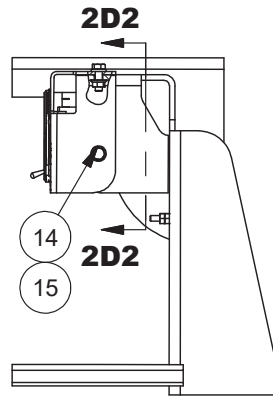
3-6 TOTAL RUNOUT OF SHEAVE SHOULD NOT EXCEED 0.020".

Driveline PTO Installation, 3-Tie Bull Gear

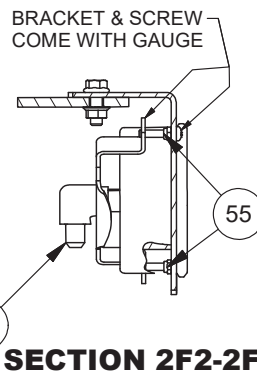
Page 5 of 5



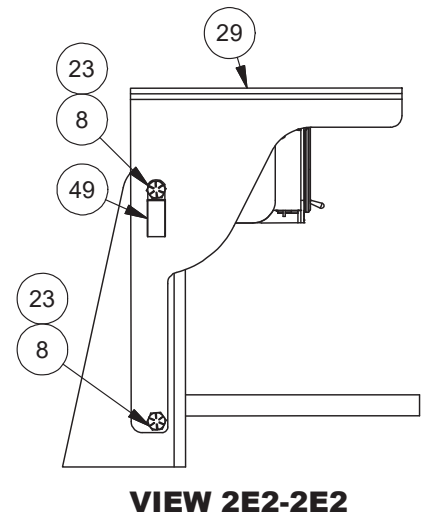
DETAIL 2B1
INSTRUMENT PANEL



SECTION 2D2-2D2



SECTION 2F2-2F2

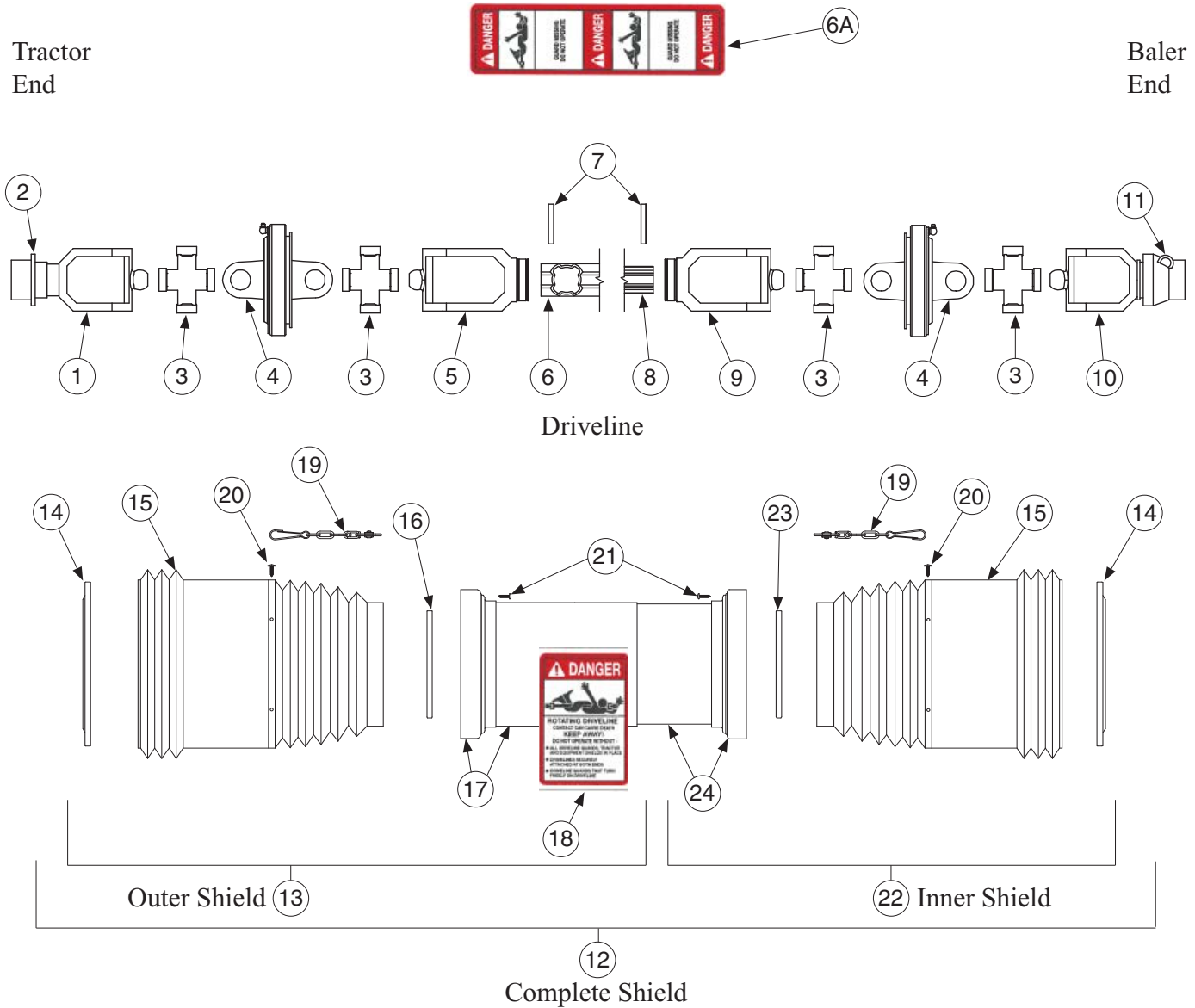


VIEW 2E2-2E2

Driveline Assembly

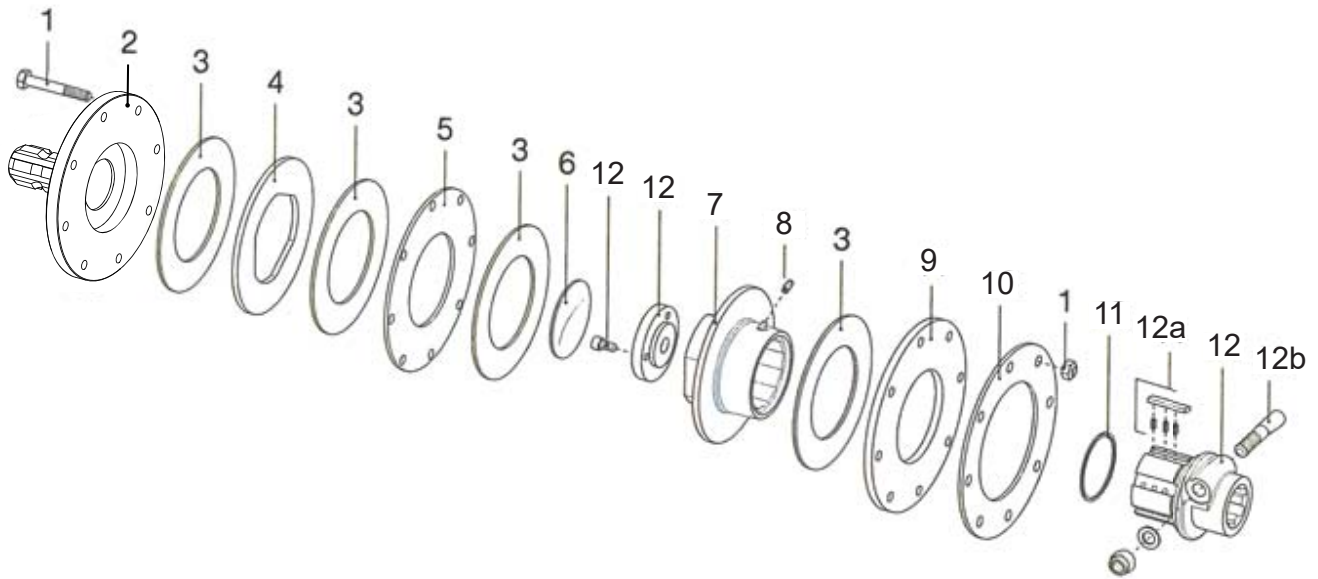
Tractor
End

Baler
End



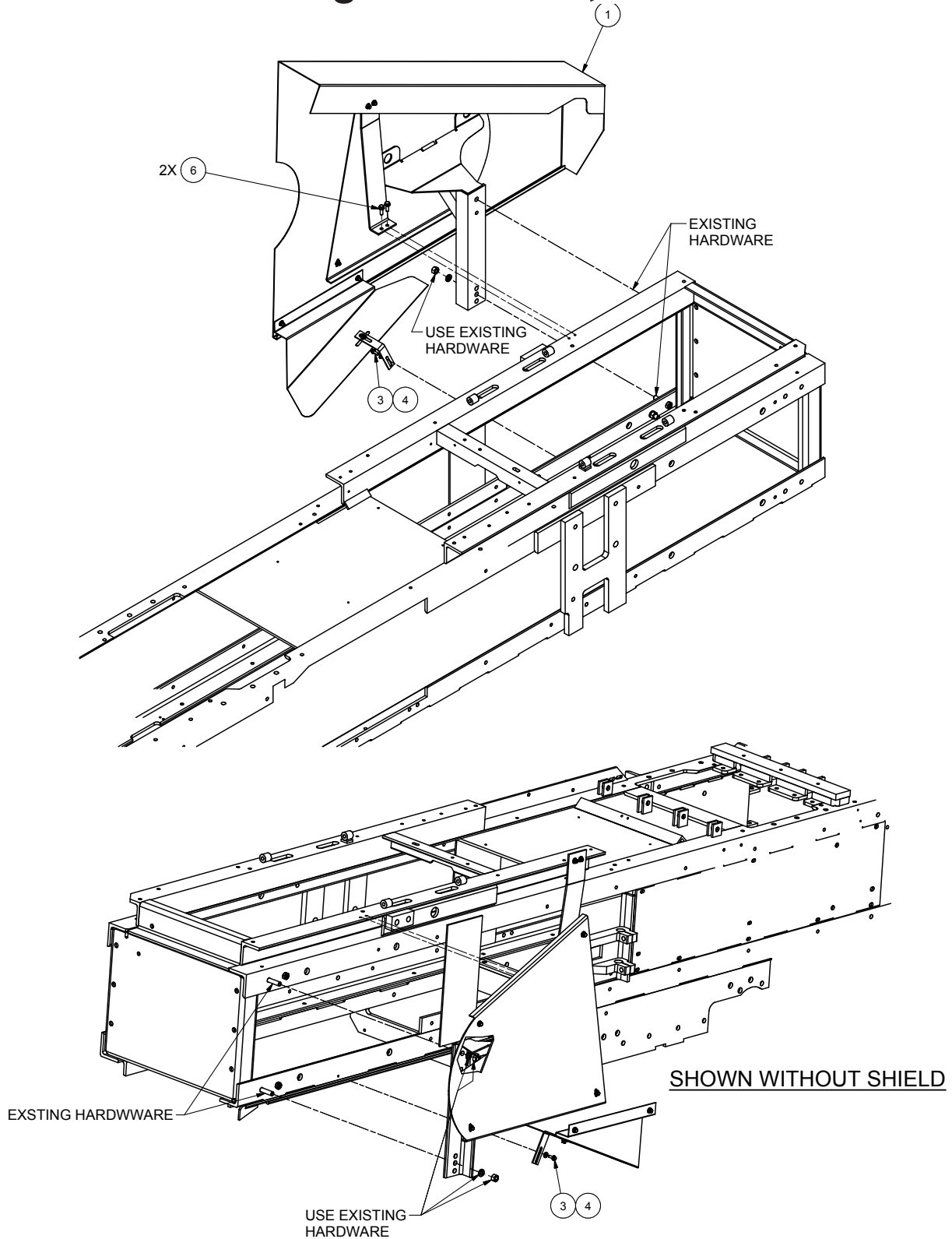
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	258050		Driveline Assembly				
1	906277	1	. Yoke, Ball Collar	15	906290	1	... CV Shield Cone
2	906332	1	.. Kit, Ball Collar Slide & Detent	16	906291	1	... Bearing Ring, Outer Tube
3	906278	4	. Cross Journal	17	906329	1	... Shield, Outer Tube
4	906279	2	. CV Body	18	906293	1 Outer Safety Decal
5	906280	1	. Yoke, CV Outer Tube	19	906331	1	... Chain, Shield
6	906281	1	. Cardan Tube, Outer	20	NSS	6	.. Screw
6A	906282	1	. Decal, Safety, On Tube	21	NSS	3	.. Screw
7	906283	2	. Roll Pin	22	906335	1	.. Shield, Inner 1/2 Shaft
8	906284	1	. Cardan Tube, Inner	14	906289	1	... CV Shield Cone Bearing Ring
9	906286	1	. Yoke, CV Inner Tube	15	906290	1	... CV Shield Cone
10	906287	1	. Yoke, Taper Pin	23	906292	1	... Bearing Ring, Inner Tube
11	906233	1	.. Kit, Taper Pin, Nut & Washer	24	906330	1	.. Shield, Inner Tube
12	906288	1	. Shield Kit, Complete	19	906331	1	... Chain, Shield
13	906334	1	.. Shield, Outer 1/2 Shaft	20	NSS	6	.. Screw
14	906289	1	... CV Shield Cone Bearing Ring	21	NSS	3	.. Screw

Clutch Assembly, Driveline



Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	904680		Clutch, Driveline				
1	906263	1	. Bolt & Nut - Pkg 8	8	252028	1	. Grease Fitting
2	904561	1	. Spline, Clutch Flange	9	906269	1	. Pressure Plate
3	906264	1	. Friction Disk -Pkg 8	10	906270	1	. Belleville Spring
4	906265	1	. Drive Plate	11	906271	1	. Retaining Ring
5	906266	1	. Inner Plate	12	906272	1	. Hub w/Taper Pin & Cap
6	906267	1	. Seal Plate	12a	906273	6	.. Ratchet w/Springs
7	906268	1	. Housing w/Flange	12b	906274	1	.. Taper Pin w/Nut & Washer

Shielding Installation, Drive Belt



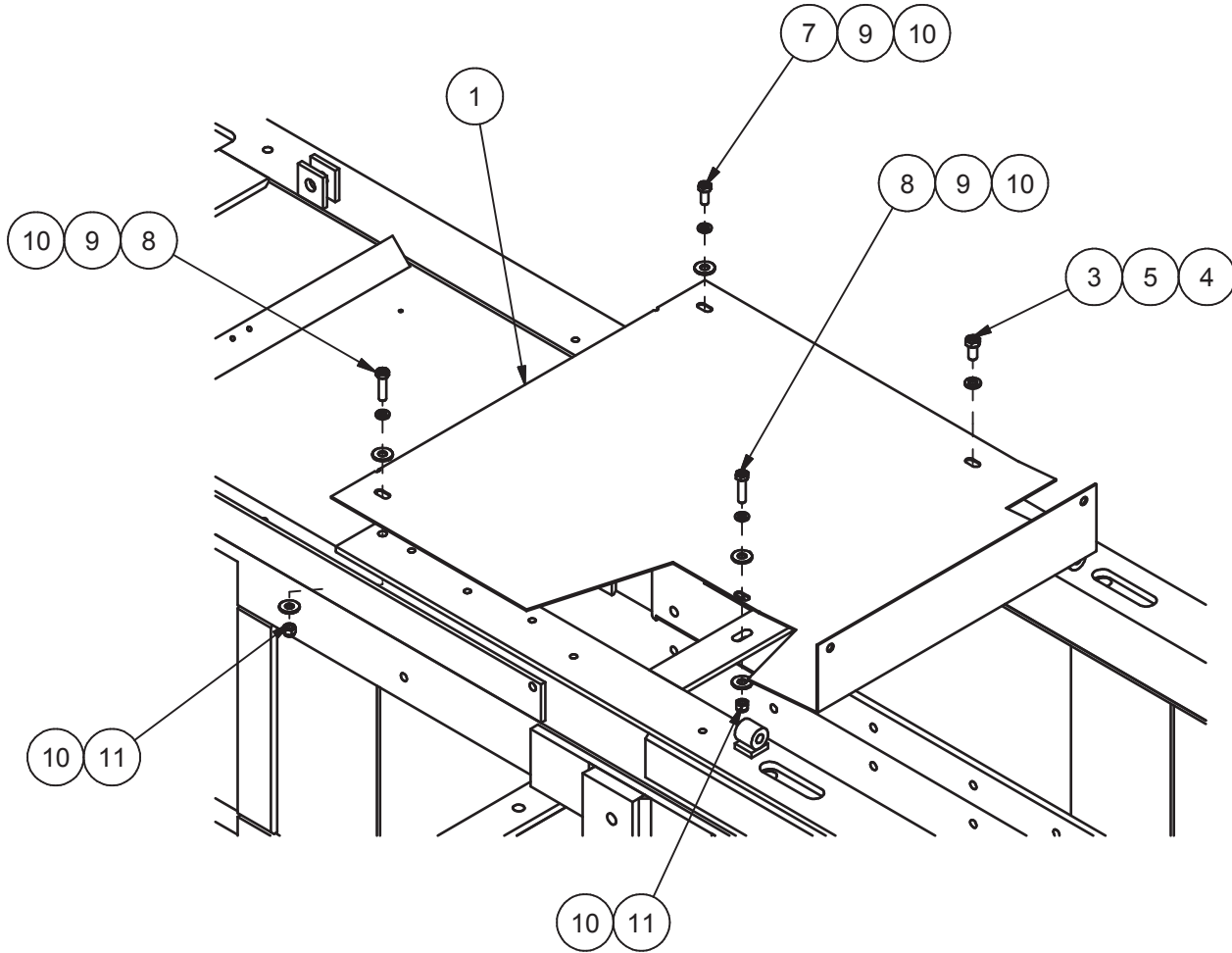
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	904146		Shielding Installation, Belt (Driveline Balers)				
1	* 904145	1	. Shield Sub-Assembly, Belt	6	2305631W	2	. Screw, Ser Flg
3	399741W	1	. Screw, Ser Flg				
4	221763W	1	. Washer				

* See Separate Coverage

Rev A

Shield Installation, Top Chamber

(Bullgear, Hydro, and Driveline Balers)

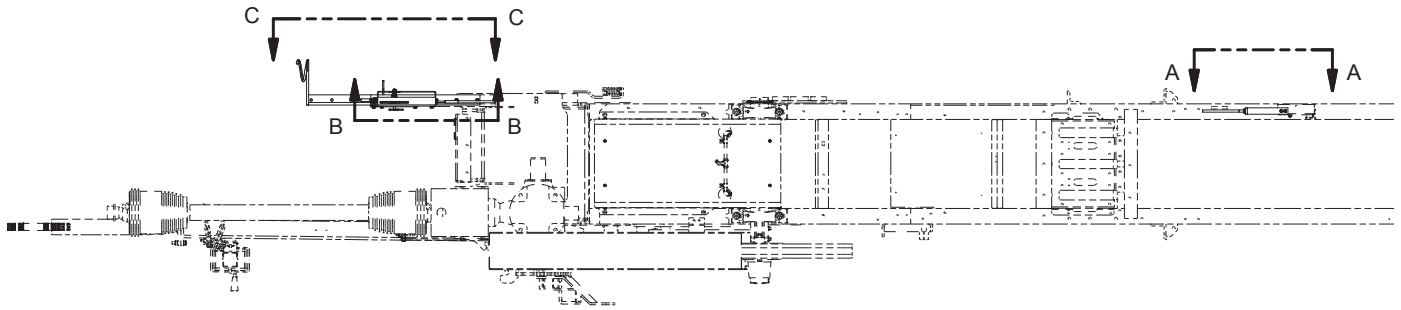


Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
906134 Shielding Installation, Top Chamber (Bullgear, Hydro, and Driveline Balers)							
1	SHD037519D	1	. Plate, Top Shield	8	R13811015	2	. Capscrew
3	162572W	1	. Capscrew	9	R13812513	3	. Lockwasher
4	221767W	1	. Washer	10	223428	5	. Washer
5	R13812514	1	. Lockwasher	11	R13811190	2	. Locknut
7	R13801791	1	. Capscrew				

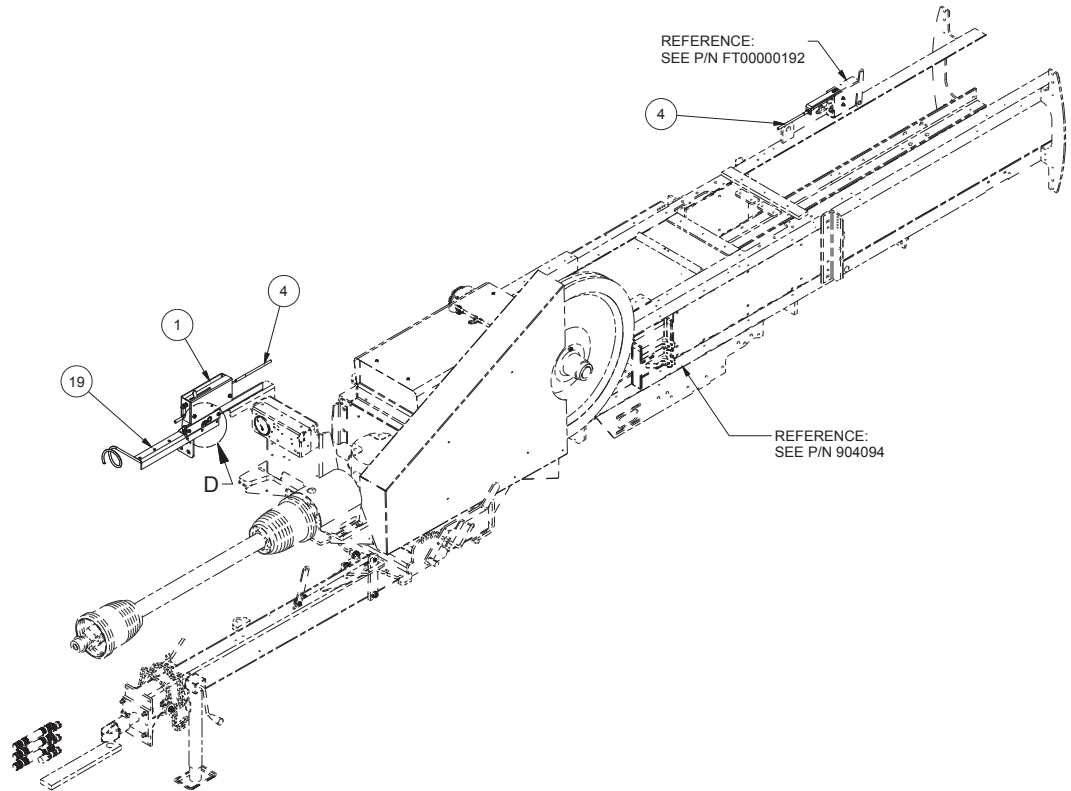
Rev B

Tension Control Box Installation

Page 1 of 2



TOP VIEW



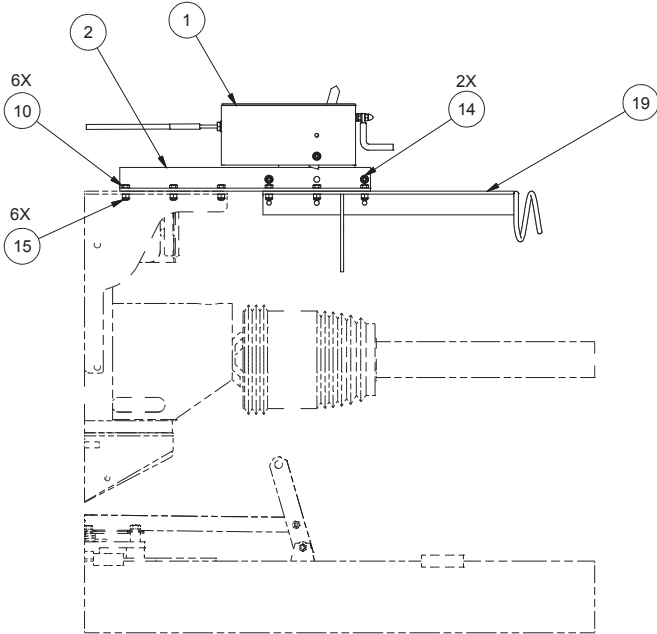
Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
	906098		Tension Control Box Installation				
1	* 902830	1	. Control Box Assembly	11	SMS0000300	2	. Bolt, Whiz
2	STN0004937	1	. Plate, Mounting	12	223428	6	. Flat Washer
3	F000001018	1	. Plate, Mounting	13	09416918	2	. Nut, Serrated
4	CBL1743324	1	. Cable, Control	14	00273802	2	. Nut, Serrated
5	F000001020	1	. Clevis Pin	15	237567	6	. Nut, Esna
6	F000001019	1	. Pin, Hairpin Cotter	18	220044	2	. Hex Nut
7	CLV0125001	2	. Clevis	19	906181	1	. Holder, Wire/Hose
8	BKT0024669	1	. Bracket, Rear				
9	R13811014	2	. Capscrew				
10	Y17C-0616	6	. Capscrew				

* See Separate Coverage

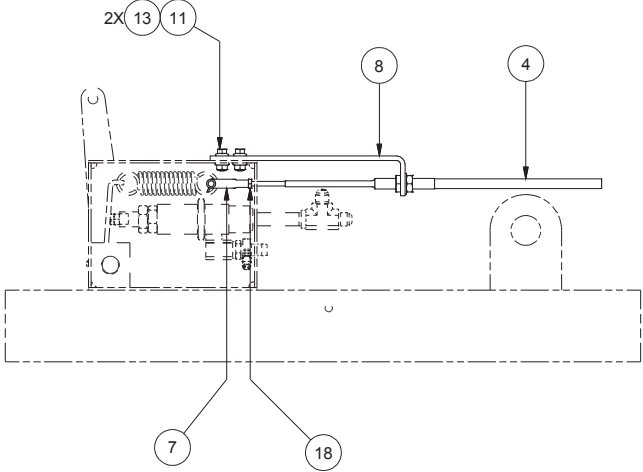
Rev A

Tension Control Box Installation

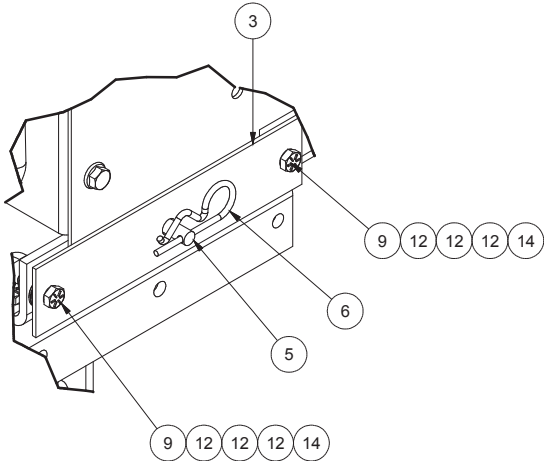
Page 2 of 2



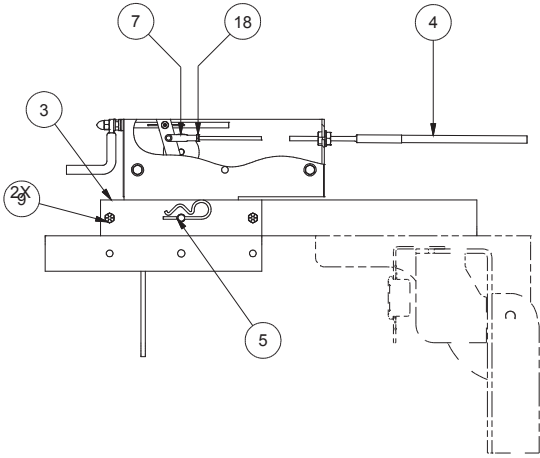
VIEW C-C
TENSION CONTROL BOX MOUNT
(RIGHT SIDE)



VIEW A-A
CABLE INSIDE TENSION BOX

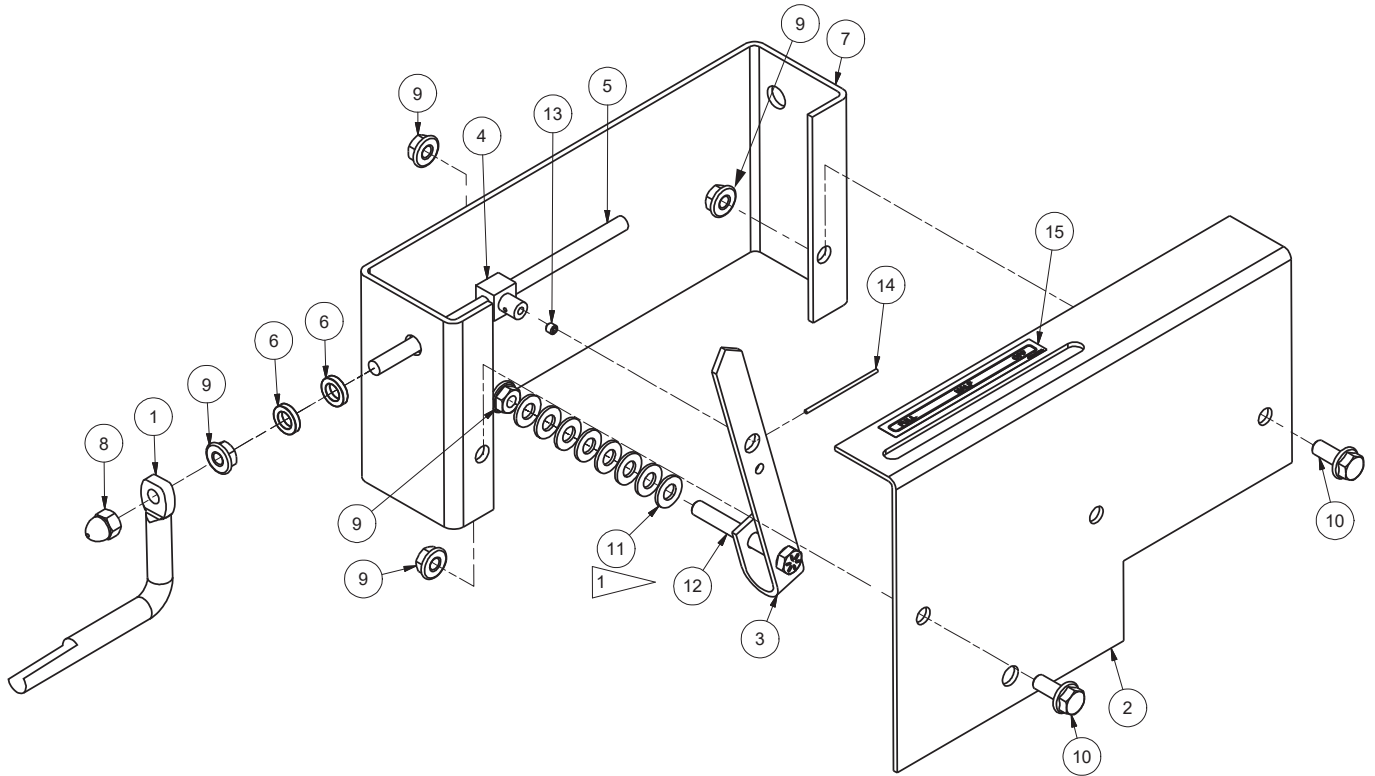



DETAIL D



VIEW B-B
CABLE INSIDE TENSION CONTROL
(LEFT SIDE)

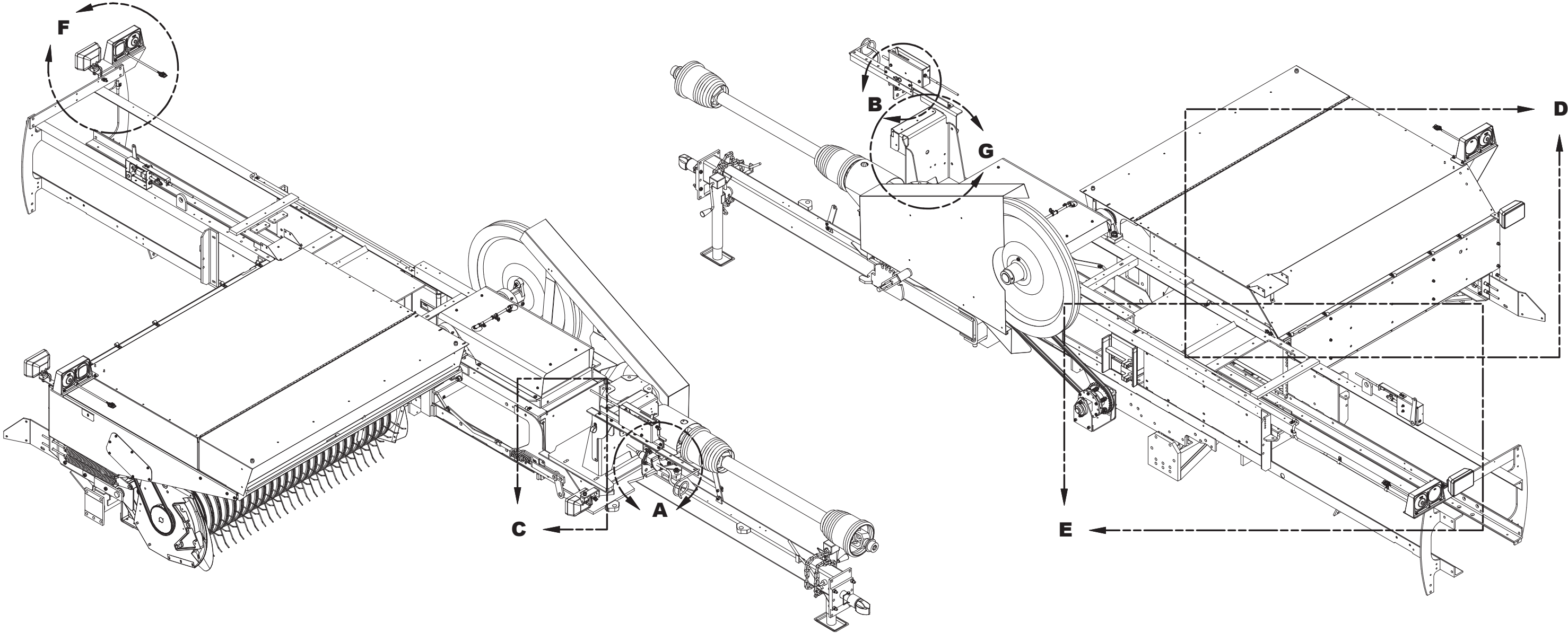
Box Assembly, Tension Control, Hydro & Driveline Balers



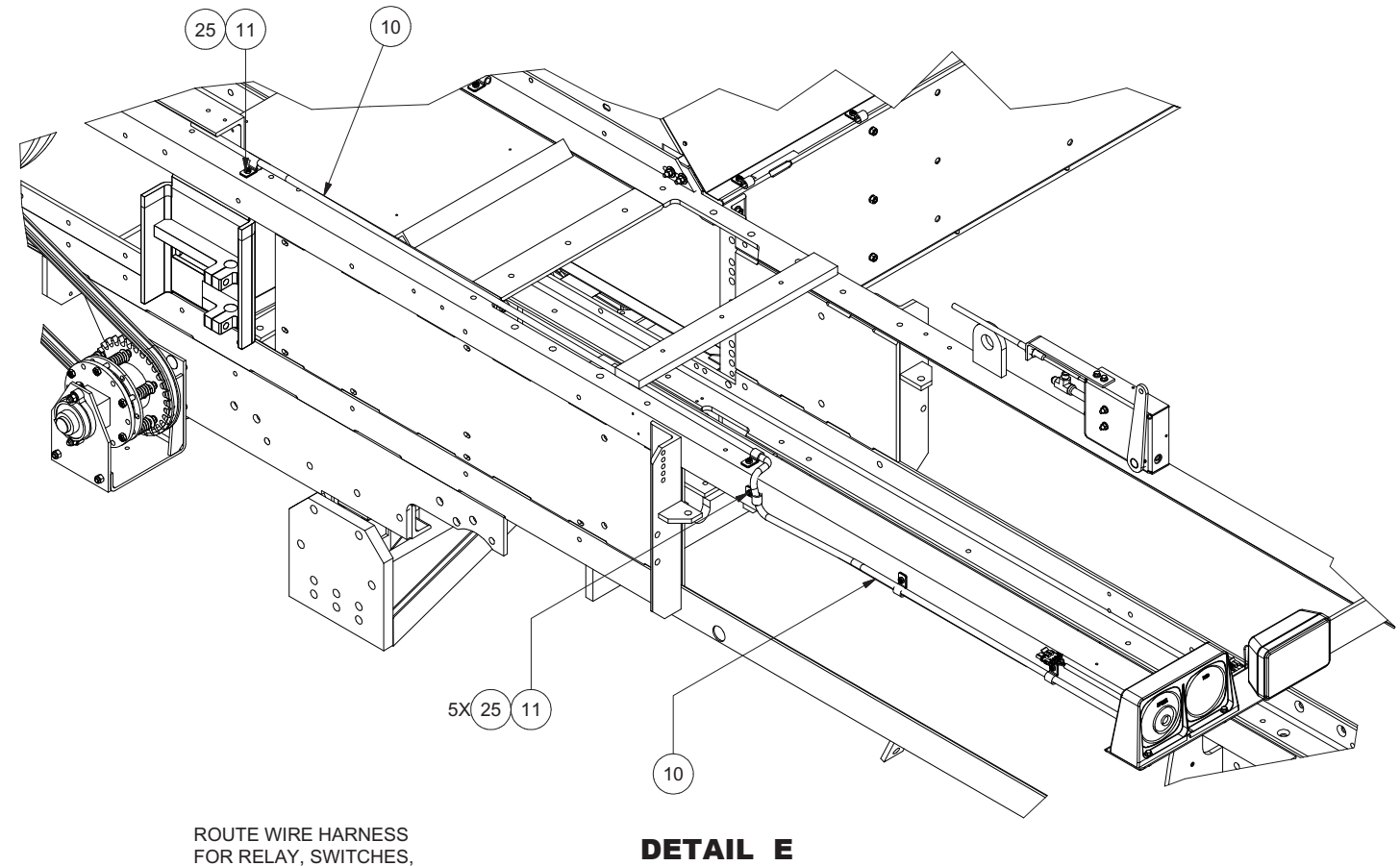
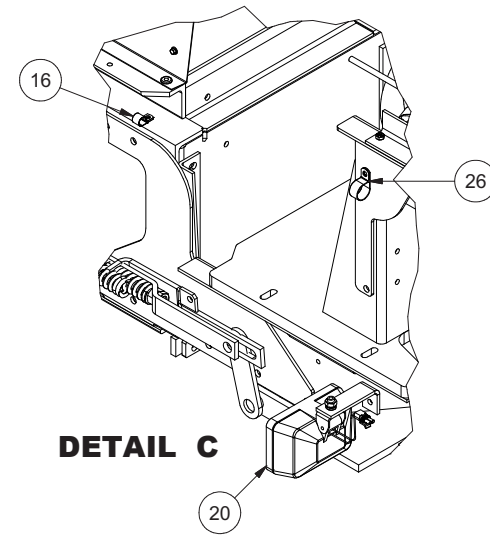
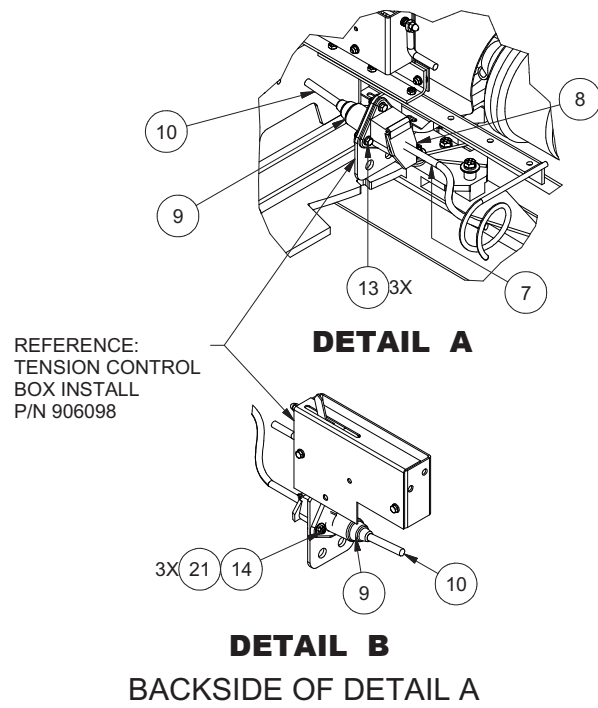
 USE WASHERS AS NEEDED TO ALIGN INDICATOR IN GROOVE.

Item	Part No.	Qty	Description	Item	Part No.	Qty	Description
902830				Box Assy, Tension Control			
1	CRA0018809	1	Rod, Crank	9	00273802	5	Nut, Serrated
2	CVR0024670	1	Control Box Cover	10	SMS0000184	2	Screw, Ser Fig
3	F000001004	1	Bar, Indicator	11	18515W	8	Washer
4	F000001005	1	Adjusting Stud Nut	12	R13811020	1	Capscrew
5	F000001006	1	Rod	13	STS1032251	1	Set Screw
6	905968	2	Washer, Brass	14	WIR0150072	1'	Wire
7	MNT0024671	1	Plate, Control Box	15	FD00000001	1	Decal
8	NCA0003125	1	Nut, Acorn				

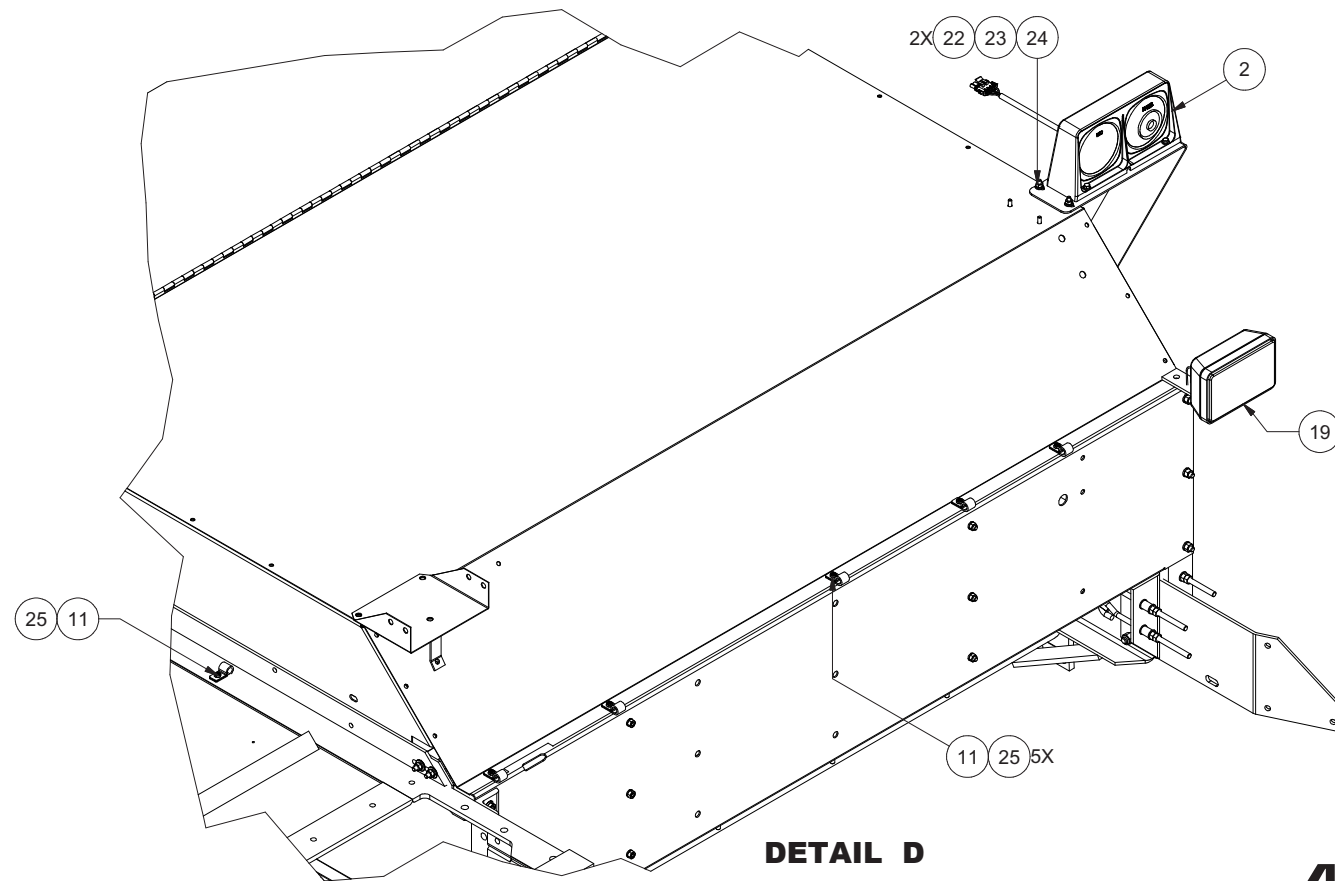
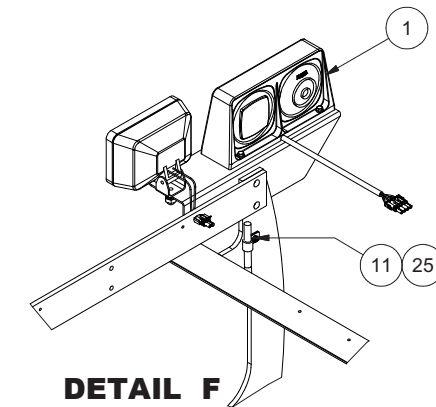
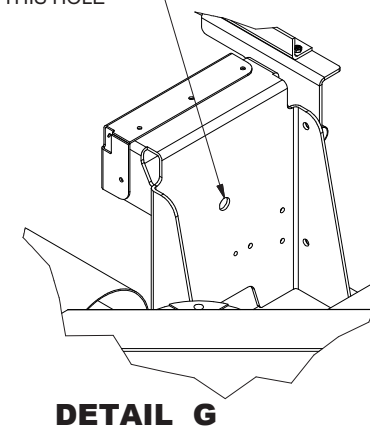
Rev F



Light Installation, 70/75 Driveline



ROUTE WIRE HARNESS
FOR RELAY, SWITCHES,
AND HOUR METER THROUGH
THIS HOLE

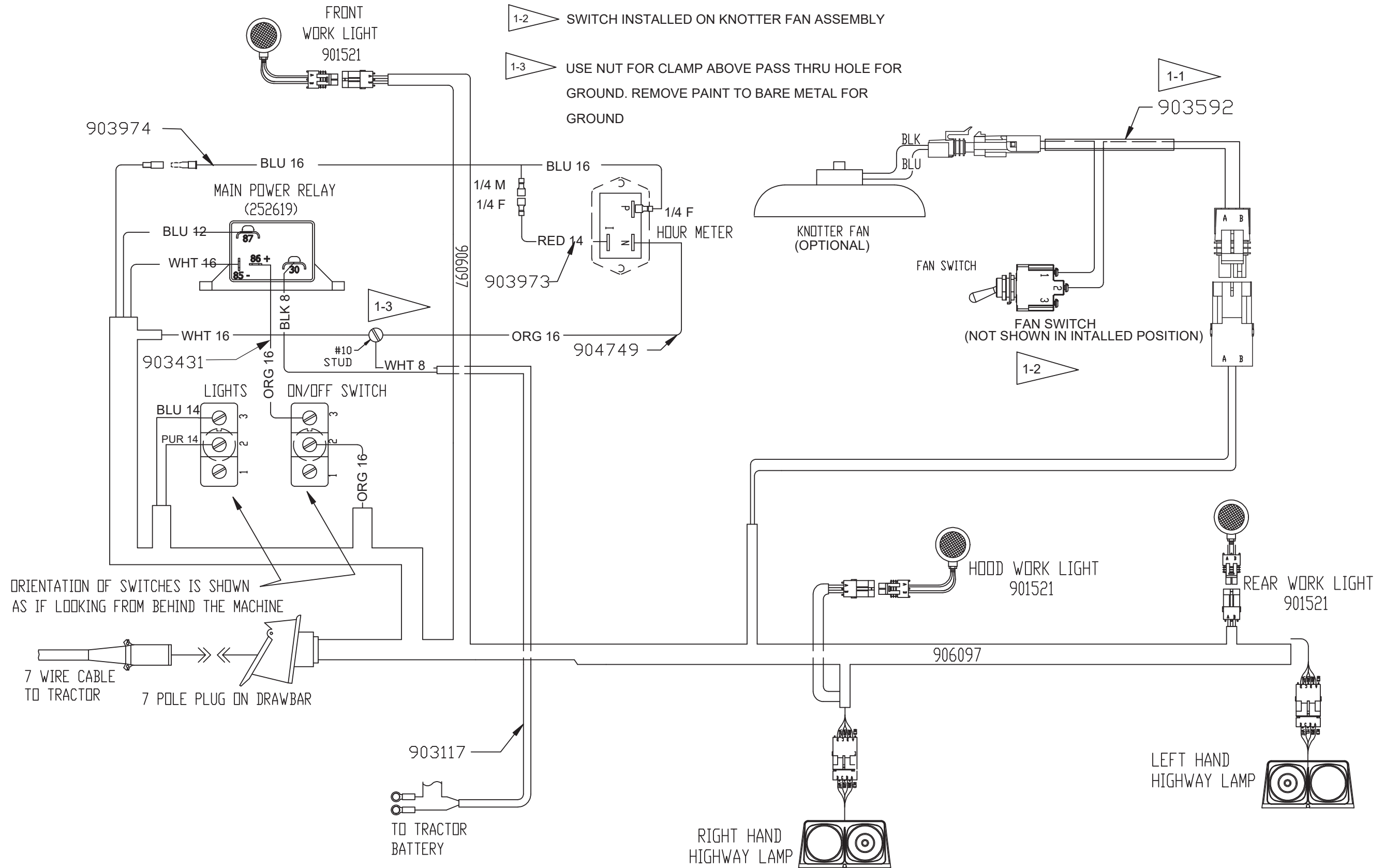


NOTES:

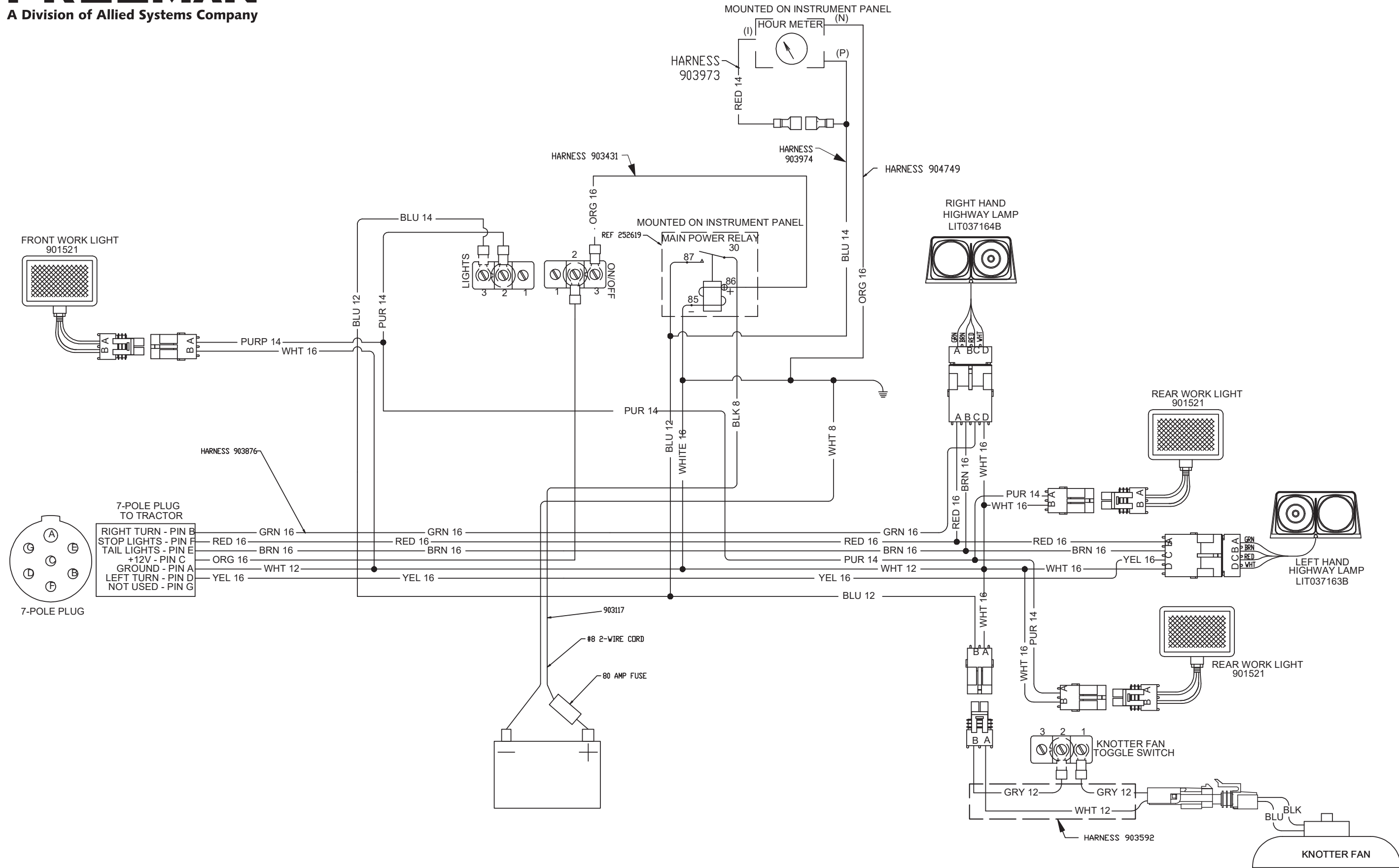
- 1 - ALL CLAMP LOCATIONS ARE NOT SHOWN. USE CLAMP (P/N 209579) AND SCREW (R13810989) AS NEEDED TO SECURE WIRE HARNESS (P/N 906097).

NOTES

- 1-1 WIRE HARNESS ONLY REQUIRED IF KNOTTER FAN OPTION IS INSTALLED
- 1-2 SWITCH INSTALLED ON KNOTTER FAN ASSEMBLY
- 1-3 USE NUT FOR CLAMP ABOVE PASS THRU HOLE FOR GROUND. REMOVE PAINT TO BARE METAL FOR GROUND



ORIENTATION OF SWITCHES IS SHOWN AS IF LOOKING FROM BEHIND THE MACHINE



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