PROAG
Morris

OPERATOR'S MANUAL

900
Hay Hiker

K49076-04

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Section 1: Safety

Section Contents

SAFETY-ALERT SYMBOL

Watch for this symbol. It identifies potential hazards to health or personal safety. It means:

ATTENTION - BE ALERT.
Your Safety is involved.

Familiarize yourself with the location of all decals. Read them carefully to understand the safe operation of your machine.

Signal Words

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

Three words are used in conjunction with the safety-alert symbol:

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

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

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

Replace any **DANGER, WARNING, CAUTION** or instructional decal that is not readable or is missing. The location and part number of these decals is identified later in this section of the manual.

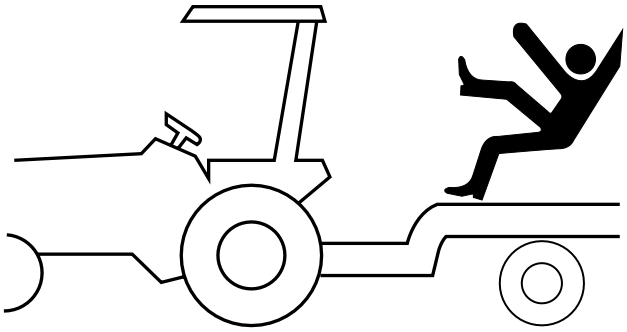
The words **Important** and **Note** are not related to personal safety but are used to give additional information and tips for operating or servicing this equipment.

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

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

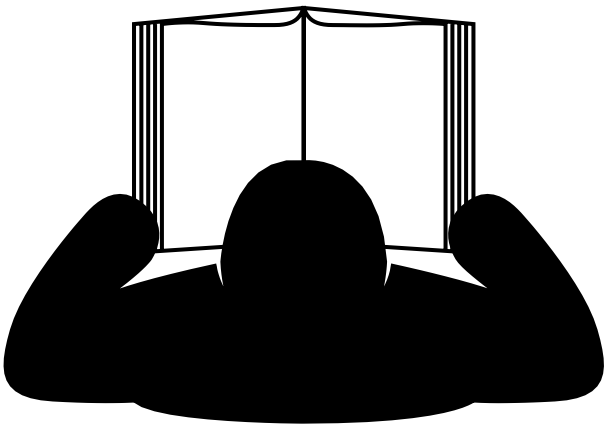
General Operation

- **DO NOT RIDE!!** Do not allow riders on the implement when in motion.
- Do not allow extra riders in the tractor unless an instructor seat and seat belt are available.
- **Check behind** when backing up.
- **Reduce speed** when working in hilly terrain.
- Never allow anyone within the immediate area when operating machinery.
- **Keep all shields in place**, replace them if removed for service work.
- Always lock bale fork in raised position.



Tractor Operation

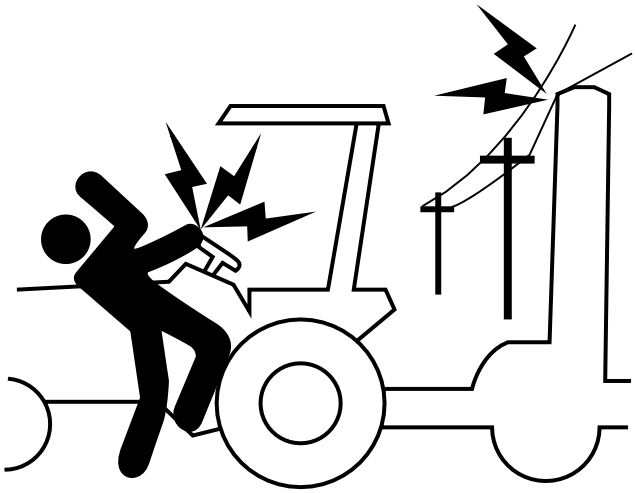
- Be aware of the correct tractor operating procedures, when working with implements.
- Review tractor operator's manual.
- Secure hitch pin with a retainer and lock drawbar in centre position.



Transporting

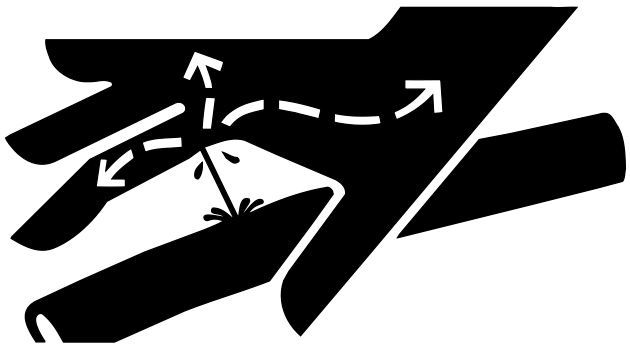
- **Be aware** of the height, length and width of implement. Make turns carefully and be aware of obstacles and overhead electrical lines.
- Always travel at a safe speed. Do Not Exceed 20 M.P.H. (32 kph).
- **REDUCE SPEED** with a load. **Do Not** Exceed a speed of 10 M.P.H. (16 kph).

  Use an agricultural tractor that is large enough with sufficient braking capacity so that the weight of the loaded equipment towed does not exceed 1.5 times the weight of the tractor.
- The slow moving vehicle (SMV) emblem and reflectors must be secured and be visible on the machine for transport.
- Use flashing amber warning lights, turn signals and SMV emblems when on public roads.
- Do not transport in poor visibility.
- Avoid soft surfaces, the additional wing weight on the wheels could cause the machine to sink.
- Check that bale fork is fully raised and transport lock is secure.



Hydraulics

- **Do not** search for high pressure hydraulic leaks without hand and face protection. A tiny, almost invisible leak can penetrate skin, thereby requiring immediate medical attention.
- Use cardboard or wood to detect leaks - never your hands.
- Double check that all is clear before operating hydraulics.
- **Never** remove hydraulic hoses or ends with machine elevated. Relieve hydraulic pressure before disconnecting hydraulic hoses or ends.
- Maintain proper hydraulic fluid levels.
- Keep all connectors clean for positive connections.
- Ensure all fittings and hoses are in good condition.
- Do not stand under wings.



Maintenance

- **Shut tractor engine off** before making any adjustments or lubricating the machine.
- **Block** machine securely to prevent any movement during servicing.
- Wear close fitting clothing and appropriate personal protective equipment for the job.
- **Do not** search for high pressure hydraulic leaks without hand and face protection. A tiny, almost invisible leak can penetrate skin, thereby requiring immediate medical attention.
- **To prevent personal injury**, do not walk within radius of raised bale fork or bed. Always ensure bale fork is locked in place.
- Do not modify the machine.

Caution

Keep service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment.

Storage

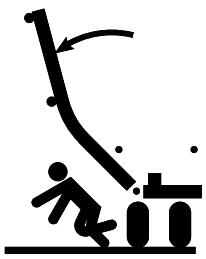
- Store implement away from areas of main activity.
- Level implement and block up securely to relieve pressure on jack.
- Do not allow children to play on or around stored implement.

Safety Signs

⚠ DANGER

OVERHEAD FALLING HAZARD

- Bale fork may fall rapidly causing bodily injury.
- Always stay clear of bale fork when being raised, lowered, or in elevated position.
- Always install transport lock when machine is left unattended with bale fork in elevated position.
- When transporting machine or servicing bale fork always install transport lock.
- Ensure cylinder is completely filled with hydraulic fluid to avoid unexpected movement.



K24212

⚠ WARNING

This implement may exceed maximum road regulations. Before you transport this implement contact a local agency regarding road regulations concerning maximum allowable implement dimensions.

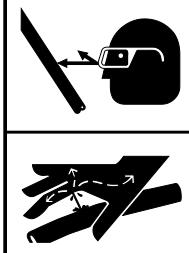
C31201

⚠ WARNING

Keep off while machine is moving or mechanism is running.

D13705

⚠ WARNING



HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- **Relieve pressure on hydraulic system before servicing or disconnecting hoses.**
- **Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.**
- **Keep all components in good repair.**

C-4262

⚠ WARNING

Personal injury or property damage may result from loss of control.

- **Always use large enough tractor with sufficient braking capacity.**
  - **Weight of fully loaded implement should not be more than 1.5 times weight of tractor.**
- **Maximum recommended towing speed is 20 mph (32 km/h).**
- **Use flashing amber warning lights and SMV emblem when on public roads, except where prohibited by law.**
- **Refer to tractor and implement Operator's Manuals for weights and further information.**

N24301

⚠ CAUTION

STAND CLEAR WHILE RAISING OR LOWERING MACHINE.

S-4785

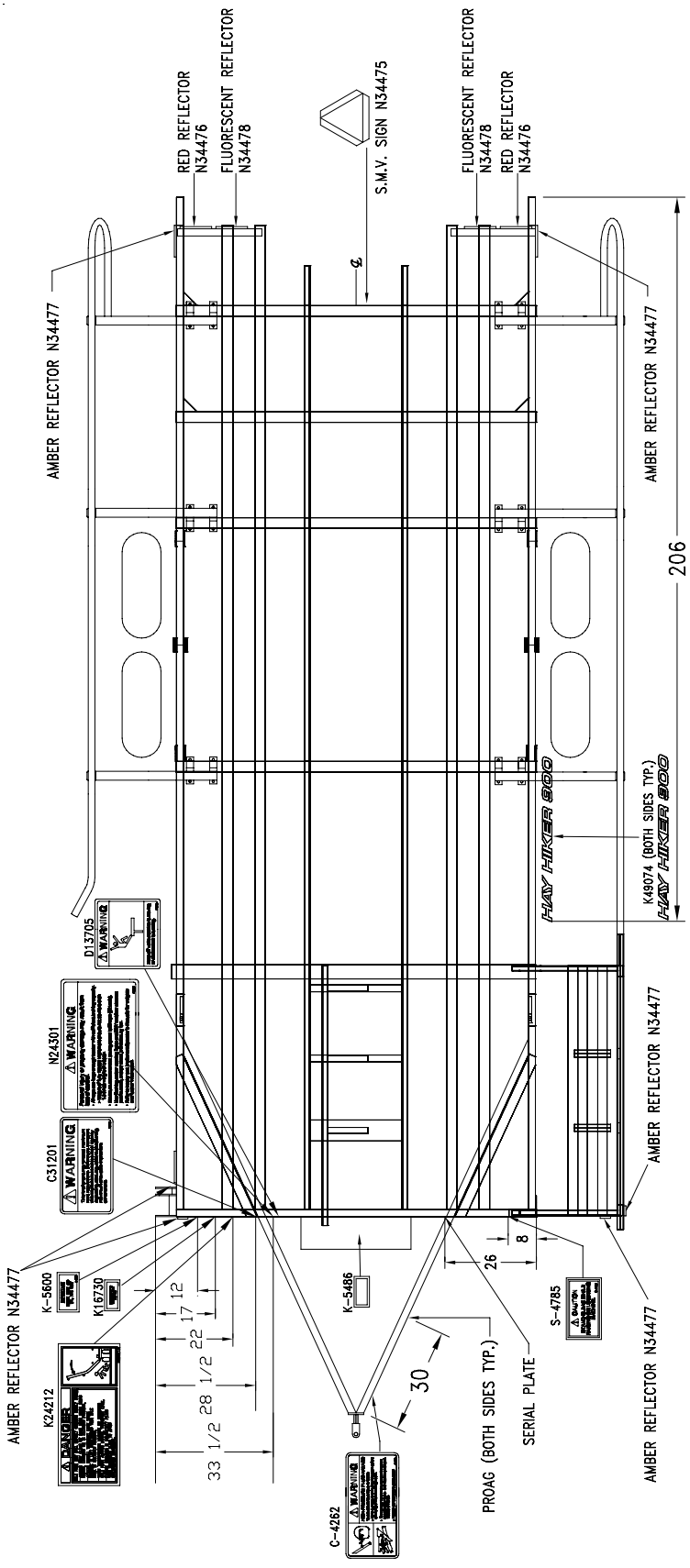
⚠ CAUTION

HELP PREVENT ACCIDENTS. KEEP SHIELD IN PLACE. STOP MACHINE TO GREASE OR ADJUST. KEEP HANDS AWAY FROM MOVING PARTS

K5486

Familiarize yourself with the location of all decals. Read them carefully to understand the safe operation of your machine.

Safety Signs - Continued



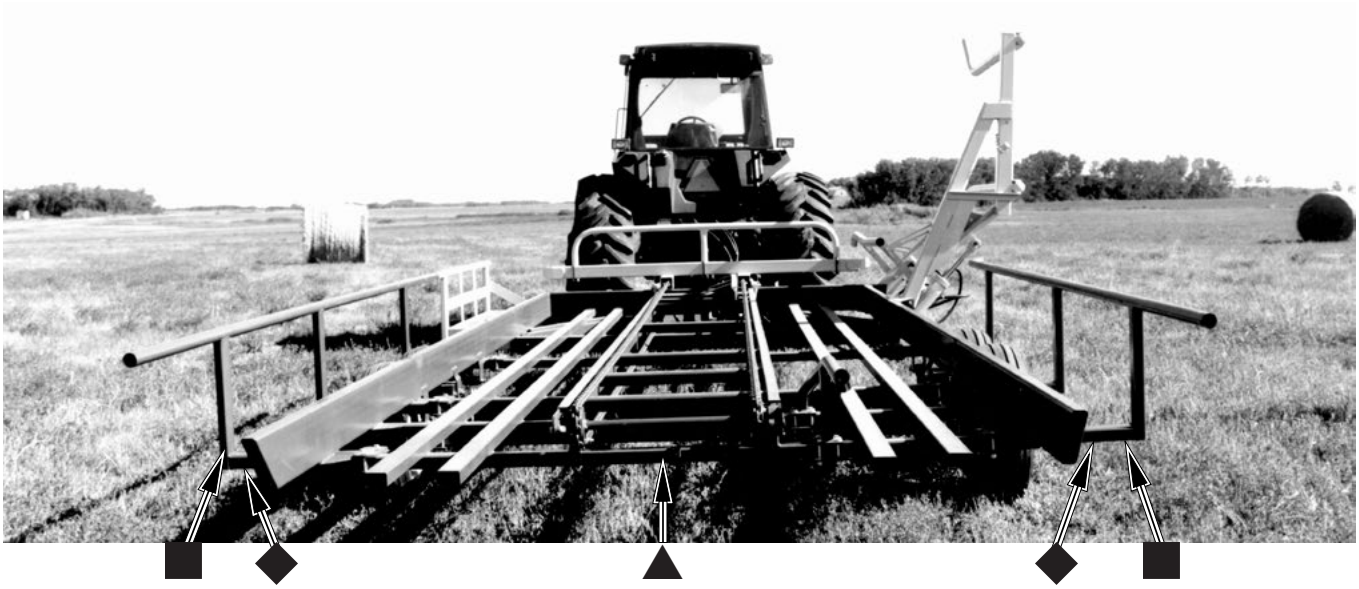
Reflectors

The Slow Moving Vehicle (S.M.V.) Emblem and Safety Reflectors must be secured on the machine to promote safe transportation of this implement.

Note: Always replace missing or damaged reflectors.

- ● **N34477 Amber Reflector**
- ■ **N34476 Red Reflector**
- ◆ **N34478 Fluorescent Reflector**
- ▲ **SMV Emblem**

Use SMV Emblem when transporting, to warn vehicles approaching from the rear. Comply with all provincial, federal and local laws when travelling on the highway.



Lighting and Marking

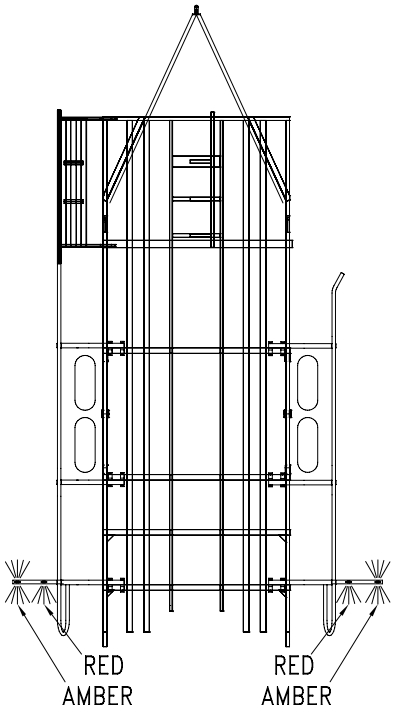
ProAG recommends the use of correct lighting and marking to meet the ASAE standard for roadway travel. Be familiar with and adhere to local laws.

Amber warning and red tail lights secured on the machine promote correct transportation of this implement.

Note: Always replace missing or damaged lights and/or connectors.

Amber warning and red tail lights must be mounted to the rear of the implement and be visible from front and rear. The lights must be within 16 inches (41 cm) of the extremities of the machine and at least 39 inches (99 cm), but not over 10 feet (3 m), above ground level.

Note: Always replace missing or damage front, side, rear reflectors and SMV emblem.



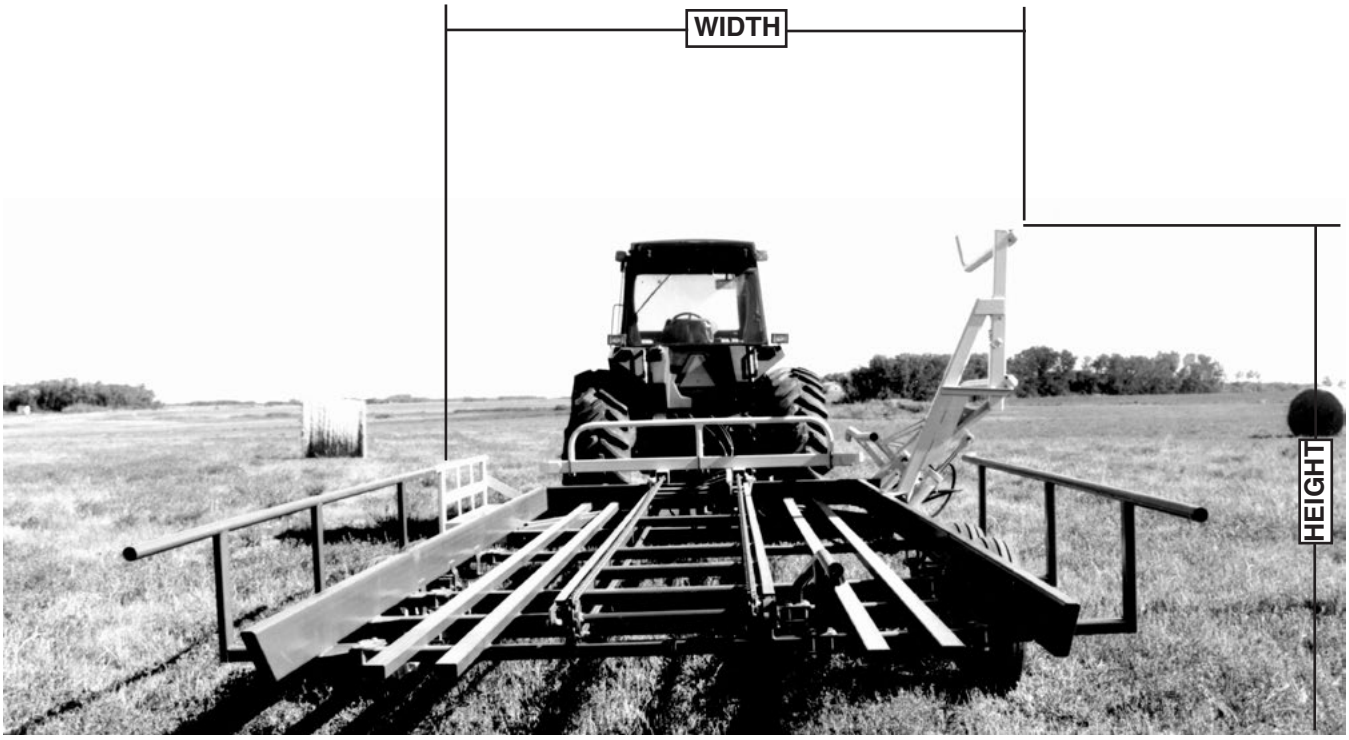
Notes

Section 2: Specifications

Section Contents

Specifications

Transport Dimensions



- **See Specification Sheet for transport dimensions.**

Bale Weights

Individual Bale Weights	
Bale Size	900
48” (1.22 m)	12 @ 1135 lbs. (514 kg)
60” (1.52 m)	8 @ 1700 lbs. (771 kg)
63” (1.60 m)	8 @ 1700 lbs. (771 kg)
72” (1.83 m)	8 @ 1700 lbs. (771 kg)

900 HAY HIKER
Specifications and Options

Model	900
Length	29’ 8 1/2” (9.06 m)
Width Unloaded	Rails Out - 13’ 9” (4.19 m)
	Rails In - 13’ 4” (4.06 m)
Weight Unloaded	5,377 lbs. (2,439 kg)
Weight Loaded	19,000 lbs. (8,618 kg)
Load Capacity Weight	13,623 lbs. (6,179 kg)
Load Capacity (Round Bales)	12 - 48” (1.22 m) Length
	8 - 60” (1.52 m) Length
	8 - 63” (1.60 m) Length
	8 - 72” (1.83 m) Length
Tires	(4) - 11L x 15FI - Load Range F 8 Bolt Hub
Transport Height	8’ (2.44 m)
Number of Wheels	4
Automatic Bale Turner	Standard
Automatic Bale Unloading	Standard
Frame - Tubing	2” (5 cm) x 8” (20.3 cm)
Bale Divider	Standard
Bale Stop	Standard
Side Rail Kit	Standard
Cylinders - Fork - Bed Lift	(2) - 3 1/2” (8.9 cm) x 8” (20.3 cm) (1) 3” (7.6 cm) x 12” (30.5 cm)
Selector Valve	Standard
Safety Lights	Standard
Safety Chain	Standard
Hitch Clevis	Standard - Single Tab Optional - Double Tab
Tractor Requirement	120 HP (88 kW) Minimum (Two Hydraulic Remotes)

Notes

Section 3: Checklist

Section Contents

SAFETY-ALERT SYMBOL

Watch for this symbol. It identifies potential hazards to health or personal safety. It points out safety precautions. It means:

ATTENTION - BE ALERT.

Your safety is involved.

Manuals

Note: Pre-Delivery Inspection Form must be completed and submitted to ProAG within 30 days of delivery date.

Warranty Void if Not Registered

Checklist

Please read the Operator's Manual carefully and become a "SAFE" operator.

Adopt a good lubrication and maintenance program.

General

____Check if assembled correctly.

____Proper chain tension.

____Check hose connections

Lubrication: Grease

____Fork Assembly

____Rear Drive Shaft Bearings

____Wheel Hubs

Lubrication: Oil

____Drive chain

____Push Bar Chain

Tire Pressure:

____See Maintenance, Section 6

Transport:

____Lock-up pins must be in place.

____Tighten wheel bolts.

____Check hose connections.

OWNER REFERENCE

Model: _____

Serial No: _____

Dealer: _____

Town: _____ State: _____

Phone: _____

OWNER/OPERATOR _____

Date: _____

TAKE SAFETY SERIOUSLY.

DO NOT TAKE NEEDLESS CHANCES!!

Notes

Section 4: Introduction

Section Contents

Introduction

This Operator's Manual has been carefully prepared to provide the necessary information regarding the operation and adjustments, so that you may obtain maximum service and satisfaction from your new ProAG Hay Hiker.

To protect your investment, study your manual before starting or operating in the field. Learn how to operate and service your Hay Hiker correctly, failure to do so could result in personal injury or equipment damage.

If you should find that you require information not covered in this manual, contact your local ProAG Dealer. The Dealer will be glad to answer any questions that may arise regarding the operation of your ProAG Hay Hiker.

ProAG Dealers are kept informed on the best methods of servicing and are equipped to provide prompt efficient service if needed.

Occasionally, your Hay Hiker may require replacement parts. Your Dealer will be able to supply you with the necessary replacement parts required. If the Dealer does not have the necessary part, the ProAG Factory will promptly supply the Dealer with it.

Your ProAG Hay Hiker is designed to give satisfaction even under difficult conditions. A small amount of time and effort spent in protecting it against rust, wear and replacing worn parts will increase the life and trade-in value.

Keep this book handy for ready reference at all times. It is the policy of ProAG to improve its products whenever it is possible to do so. The Company reserves the right to make changes or add improvements at any time without incurring any obligation to make such changes on machines sold previously.

Section 5: Operation

Section Contents

CAUTION

BE ALERT

SAFETY FIRST

REFER TO SECTION 1 AND REVIEW ALL SAFETY RECOMMENDATIONS.

Application

The ProAG Hay Hiker is designed to transport & store large round bales with a minimum amount of time and effort to the operator.

Tractor

Tires

- Proper ballast and tire pressure are required when pulling heavy implements.
- Consult your tractor operator's manual and follow all recommended procedures.

Hydraulics

- Wipe all hydraulic fittings and couplers with a clean cloth to avoid contaminating the system.
- Check that the hydraulic reservoir is filled to the proper level.

Drawbar

- Centre and pin in a fixed position for easier hitching and greater stability.

⚠ Warning

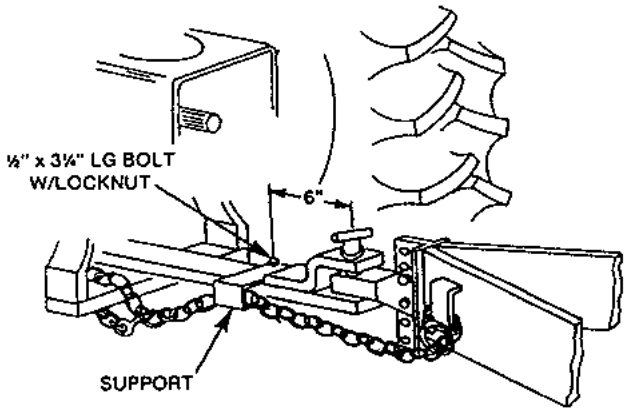
Do not permit smoking, sparks or an open flame where combustible fuels are being used. Keep the work area well ventilated.

⚠ Warning

Do not search for high-pressure hydraulic leaks without hand and face protection. A tiny, almost invisible leak can penetrate skin, thereby requiring immediate medical attention.

⚠ CAUTION

A safety chain will help control towed machines should it accidentally separate from the drawbar while transporting. A runaway machine could cause severe injury or death. Use a safety chain with a strength rating equal to or greater than the gross weight of the towed machines.



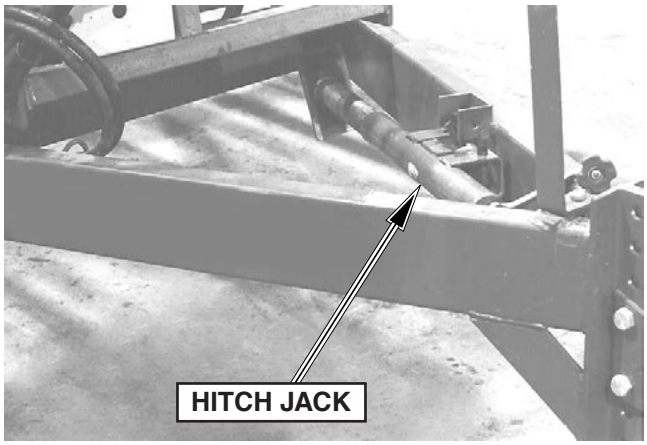
Attach safety chain to the tractor drawbar support or other specified anchor location with the appropriate parts.

Hitching

- Insure hitch pin is in good condition.
- Level clevis with tractor drawbar using hitch jack.
- Back tractor into position and attach hitch clevis to drawbar, using an adequate hitch pin.
- Lock hitch pin in place with a hairpin or other proper locking device.
- After tractor to implement connection is made, relieve pressure off the hitch jack.
- Place hitch jack in raised position.
- Route Safety Chain through chain support and drawbar support.
- Lock safety hook onto chain.

Note: Provide only enough slack in chain to permit turning.

- Ensure hydraulic hose quick couplers are dirt free.
- Inspect all fittings and hoses for leaks, bends or kinks.
- Connect the hydraulic hoses to the tractor quick couplers.

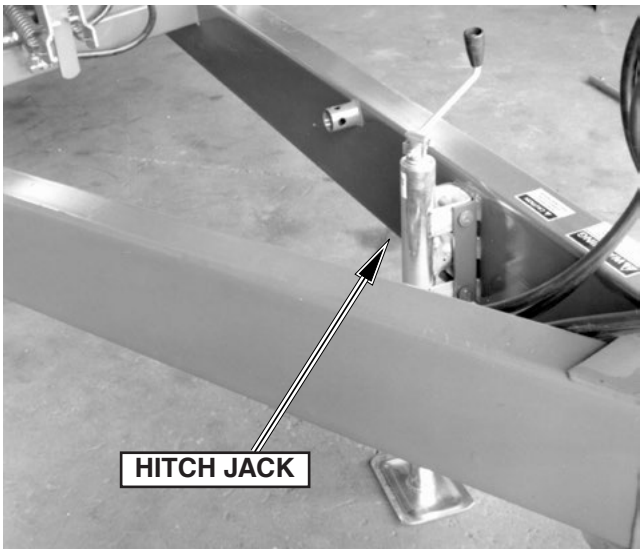


⚠ Caution

Dirt in the hydraulic system could damage O-rings, causing leakage, pressure loss and total system failure.

Unhitching

- Unload any bales that are on the Hay Hiker, the hitch jack will not safely support the added weight.
- Pin hitch jack in storage position.
- Lower hitch jack taking the weight off the Hay hiker clevis.
- Ensure all transport locks are properly secured. See Transport Section below for more details.
- Relieve pressure in the hydraulic hoses by positioning tractor hydraulic lever in “float” position or turn tractor engine off and cycle lever back and forth several times.
- Disconnect the hydraulic hoses.
- Remove the safety chain.
- Remove the drawbar pin.



CAUTION

Hydraulic oil under pressure can penetrate the skin causing serious injury. Avoid personal injury by relieving all pressure, before disconnecting hydraulic hoses.

Transport

Observe all applicable safety precautions under transport heading in Safety, Section 1.

- Refer to Specifications, Section 2 for weight, transport height and width.
- Transport with tractor only!
- Always connect safety chain provided to the towing vehicle.

Lights

- Ensure proper reflectors and safety lighting are in place. Refer to Safety Section 1.
- Be familiar with, and adhere to, local laws.

Speed

- Always travel at a safe speed. Do Not Exceed 20 M.P.H. (32 kph).
- The combined weight of the Hay Hiker and bales ***must not exceed 1.5 times*** the weight of towing vehicle.
- **REDUCE SPEED** with bale load. **Do Not** Exceed a speed of 10 M.P.H. (16 kph).
- Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

Transport - Continued

Transport to Field Position

- As a precaution, check surrounding area to be sure it is safe to lower fork.
- Operate hydraulics to extend fork cylinders.
- Remove the transport lock pin from the front cylinder and disengage by swinging transport lock bracket up.
- Secure transport lock bracket with lock pin.

Field to Transport Position

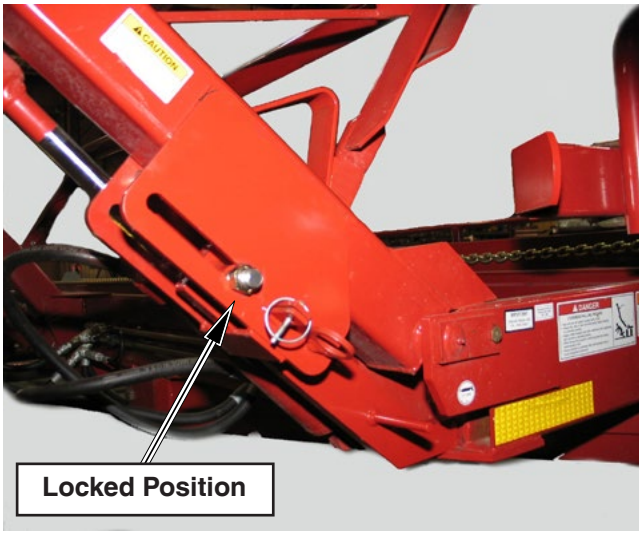
- Hydraulically raise fork to its highest position.
- Remove the transport lock pin and engage by swinging transport lock bracket down.
- Secure transport lock bracket with lock pin.

ProAG WILL NOT BE RESPONSIBLE FOR ANY DAMAGES OR OPERATOR INJURY RESULTING FROM NON-USE OR IMPROPER USE OF TRANSPORT LOCKS.

⚠ Danger

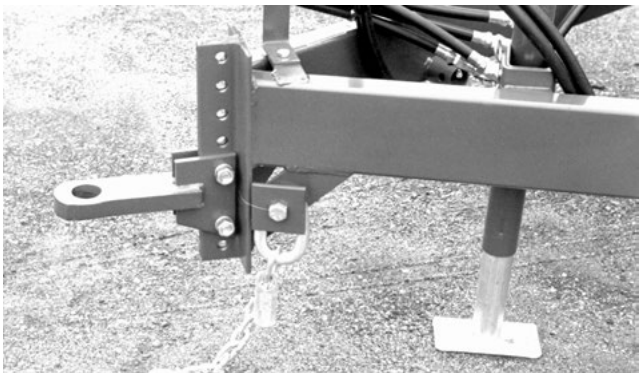
Always stay clear of bale fork being raised, lowered or in elevated position. Ensure cylinders are completely filled with hydraulic fluid - Fork may fall rapidly causing injury.

- Inspect tires for any serious cuts or abrasions. If such occurred, tire should be replaced.
- Ensure Safety Chain is properly installed. Refer to Safety, Section 1.
- Inspect axles and hubs for wrapped twine. Remove any twine to prevent damage to bearing seals.



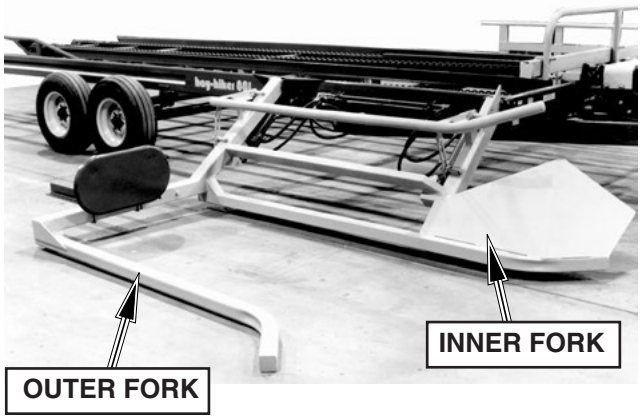
Level Hay Hiker

- Adjust the hitch clevis so the Hay Hiker runs Level.
- If Inner Fork touches ground first, the front of Hay Hiker is too low.
- If Outer Fork touches ground first, the front of Hay Hiker is too high.



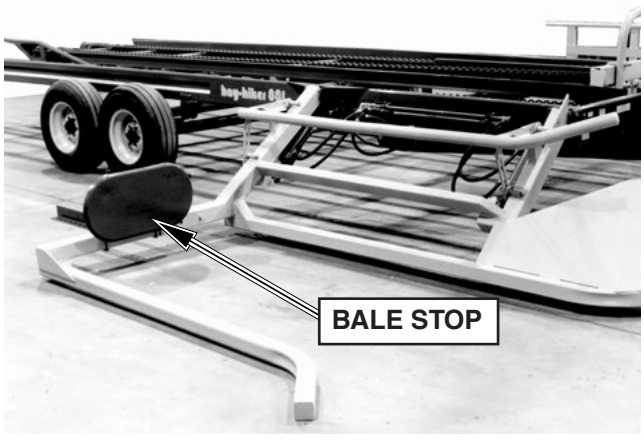
Bale Fork Adjustment

- Adjust the pick-up fork width to best suit the size of bales to be picked up. Do not attempt to lift bales over the maximum recommended weight as indicated in the chart below.
- 900 Hay Hiker adjust outer fork.



Bale Stop Adjustment

- Position the bale stop to best suit the size bales to be picked up.
- Locate the Bale Stop near outer fork, this will aid in eliminating soft centred bales from hooking on stop.



Side Rail

- Adjust Side Rails to best suit the size of the bales to be loaded.

900 Hay Hiker:

- Loosen “U”-bolts retaining side rails.
- Move bale stop to appropriate position.
  - Up to 60” diameter bales use inner position.
  - Over 60” diameter bales use outer position.
- Adjust side rails to match up with bale stop.

Loading

The ProAG Hay Hiker has a bale turner incorporated into the fork. The bale turner allows the operator to pick a bale at almost any angle desired, making loading easier and quicker.

- Drive Hay Hiker up to the bale, lowering the bale fork to run lightly on the ground surface.
- Position the inner corner of the bale with the bale deflector. Bale deflector should contact approximately 1/4 of the bale.
- Drive Hay Hiker forward allowing bale to rotate back between the forks.
- Once the bale is against the bale stop, raise the fork fully to the upright position, allowing the bale to roll over the bale deflector, and come to rest on the left side of the Hay Hiker bed.

Note: If the bed tilts slightly when operating the bale fork, this indicates that there is air in the system. With the bale fork fully raised hold the hydraulic lever for several seconds to phase out air from the hydraulic system.

Loading - Continued

- Follow the same procedure to pick up the second bale. As the second bale is being loaded it misses the now stationary deflector and rolls on the Hay Hiker bed next to the fork.
- When two bales are positioned on the Hay Hiker bed engage the Push Bar to push the bales back on the Hay Hiker bed far enough to allow more bales to be loaded.

  Hint - Use the Bale Deflector Actuator as a guide for when to stop pushing bales back.
- Return the Push Bar to the forward position.

Note: Push Bar must be returned to forward position to activate fork cylinders.

- Repeat above procedure to load Hay Hiker.

Note: Push Bar must push against two bales when being unloaded. If an uneven number of bales are to be loaded, the odd bale must be placed at the rear of the Hay Hiker bed.

1400 Hay Hiker illustrated in Photo


1400 Hay Hiker illustrated in Photo


1400 Hay Hiker illustrated in Photo

Unloading

- Put tractor in neutral. In extremely soft conditions the tractor should be in low gear.
- Lower fork slightly to clear the bales.
- Engage push bar moving it enough to switch the selector valve to the bed tilt cylinders.
- Tilt the bed until it skims the ground surface.

Note: Do not allow the bed to push any soil or debris. Dirt may build up on the rear causing damage to the push bar drive.

- Engage the Push Bar and push the bales off the Hay Hiker.
- As the bales come off, the Hay Hiker and tractor will be pushed ahead allowing a smooth movement of unloading.
- When the bales are unloaded lower the bed.
- Return the Push Bar to the forward position.
- Raise Fork to its highest position.
- Inspect Axle and Hubs for wrapped twine. Remove any twine to prevent damage to the bearing seals.

1400 Hay Hiker illustrated in Photo

1400 Hay Hiker illustrated in Photo

1400 Hay Hiker illustrated in Photo

1400 Hay Hiker illustrated in Photo

Push Bar Drive Hydraulics

The Push Bar is controlled by an orbit motor which can be used on a closed hydraulic system or open hydraulic system.

To move the Push Bar back, hydraulic fluid is forced from the tractor to the orbit motor. The hydraulic fluid flows through the orbit motor causing the drive shaft to turn, which moves the Push Bar back.

The fluid exits the orbit motor back to the tractor.

To return the Push Bar to the front of the Hay Hiker Bed, the hydraulic fluid flows though the orbit motor in the reverse direction to that described above, until the Push Bar.

See Hydraulic Schematics for more details.

Fork/Bed Tilt Hydraulics

The Hydraulic Fork/Bed Tilt lift system is controlled by a parallel hydraulic control system with a selector valve to switch between the Fork and Bed Tilt cylinders.

To lift the Fork, the Push Bar must be in its forward position which will automatically switch the selector valve to the fork cylinders.

Hydraulic fluid is forced through the selector valve to the butt ends of the Fork cylinders causing them to extend, raising the fork.

To lower the Fork the hydraulic fluid flows through the cylinders in the reverse direction.

Note: There is a check valve installed to prevent damage to the fork assembly if the transport lock was not removed prior to lowering the fork. If this occurs, the oil bypasses back to the tractor.

To lift the Hay Hiker Bed, the Push Bar must be moved back a few inches to switch the selector valve to the bed tilt cylinders.

Hydraulic fluid is forced through the selector valve to the butt ends of the tilt cylinders causing them to extend raising the bed of the Hay Hiker.

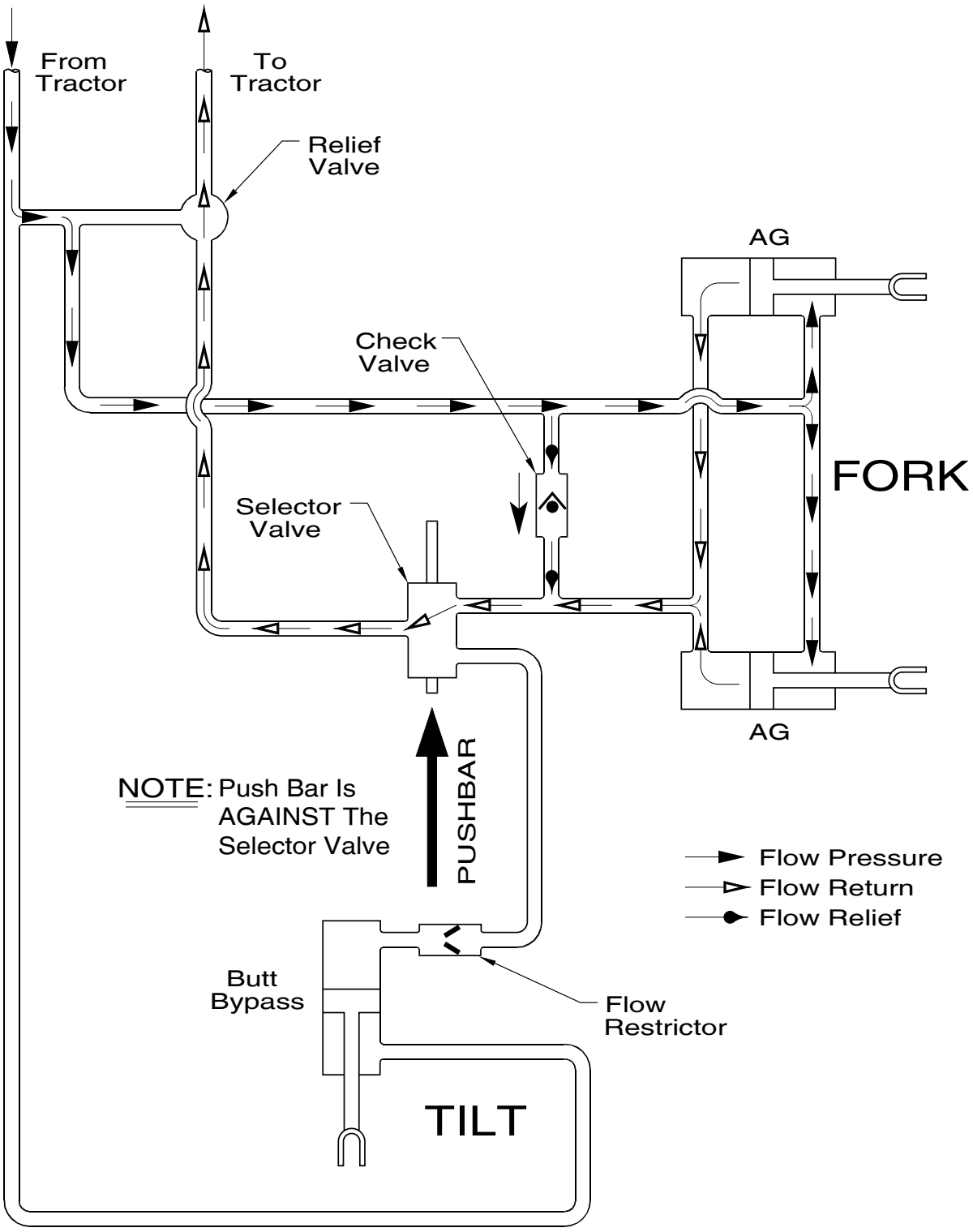
To lower the Hay Hiker Bed the hydraulic fluid flows through the cylinders in the reverse direction. The one-way restrictor valve prevents the bed from lowering too abruptly, maintaining a positive oil pressure in the bed cylinders.

Note: On the 900 a pressure relief valve is installed to prevent damage to the fork if the bale exceeds the maximum load which the fork can lift. If this occurs, the oil bypasses back to the tractor.

See Hydraulic Schematics for more details.

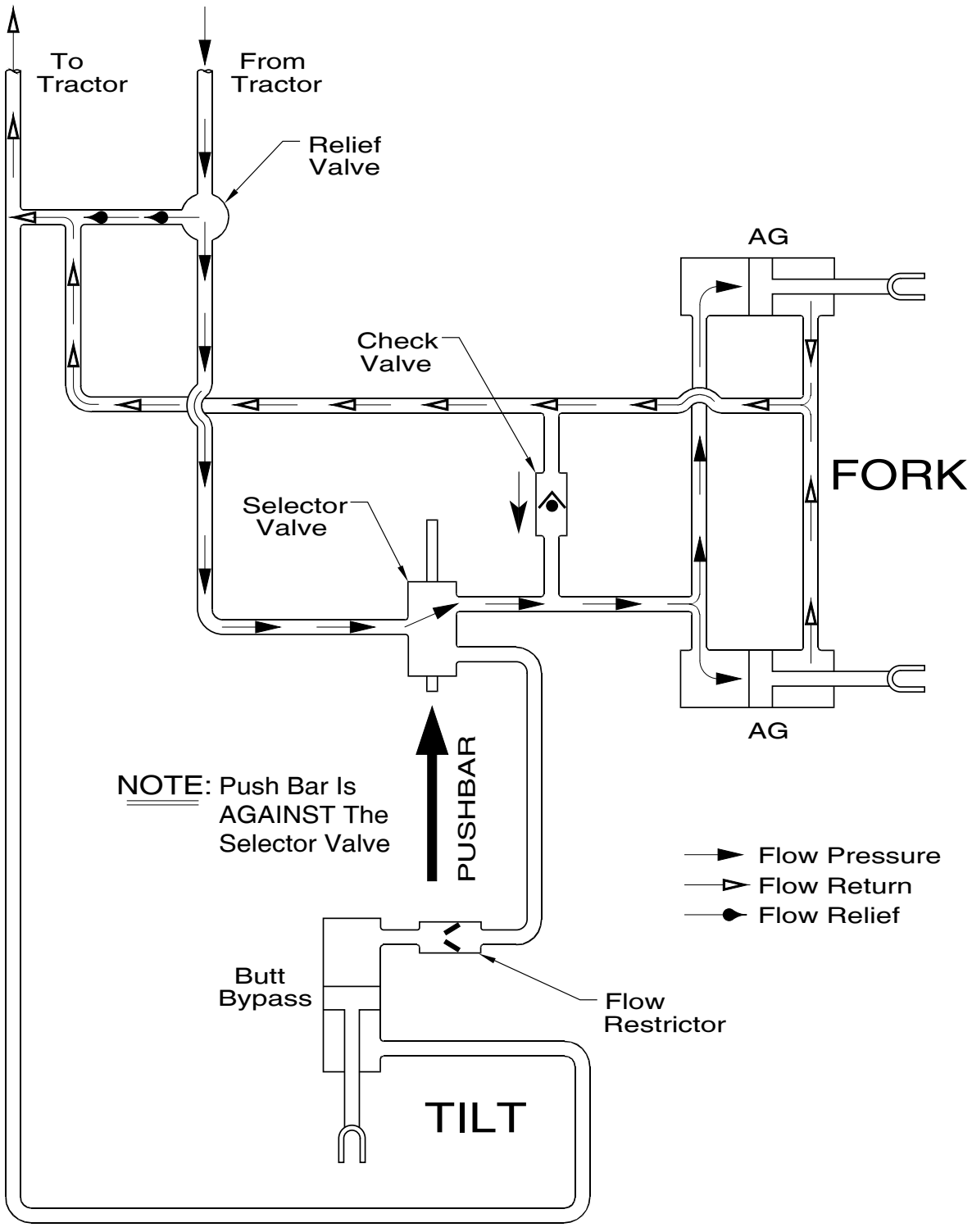
900 Hay Hiker Fork/Tilt Hydraulic Schematic

Lowering Fork



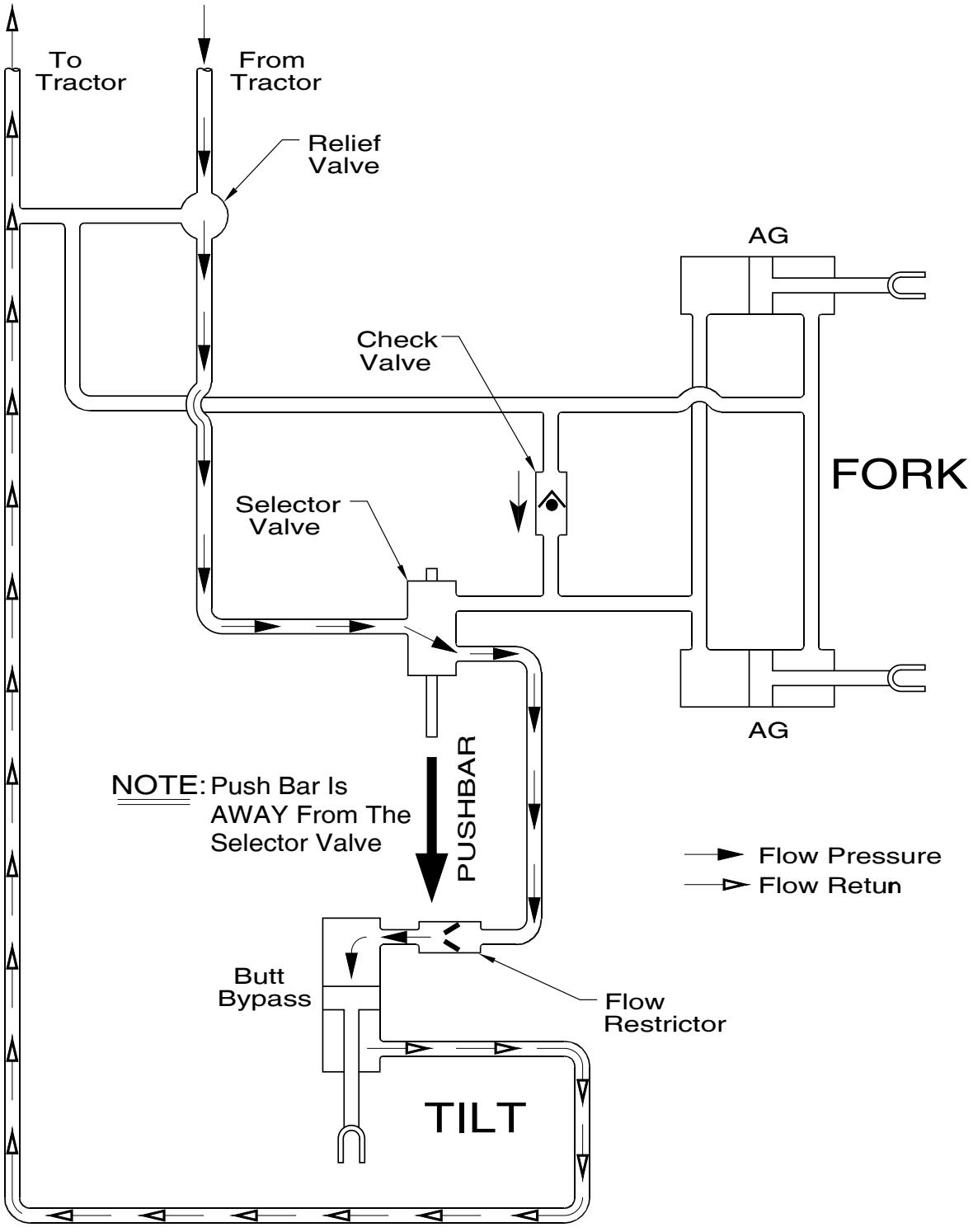
900 Hay Hiker Fork/Tilt Hydraulic Schematic

Raising Fork



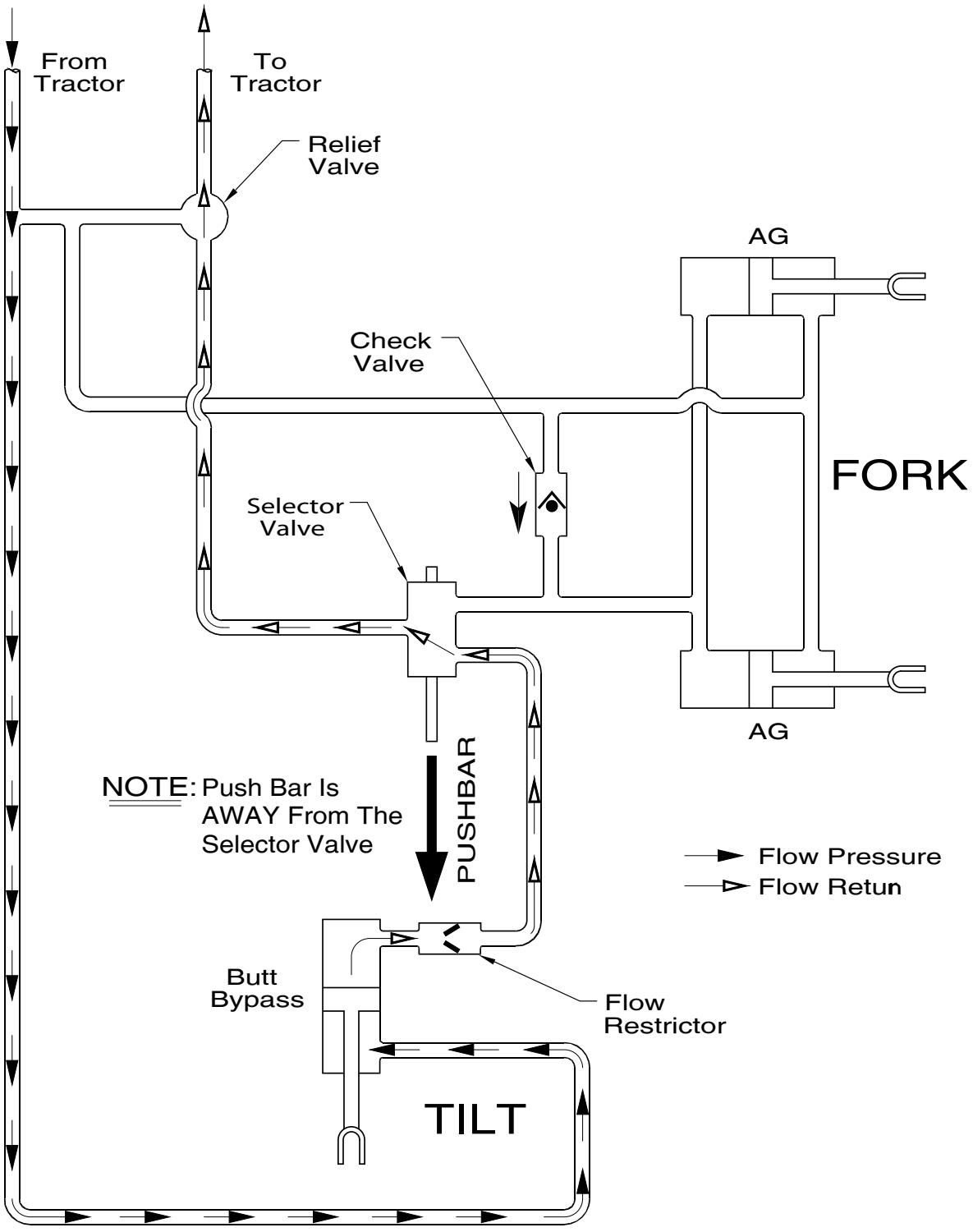
900 Hay Hiker Fork/Tilt Hydraulic Schematic

Raising Bed



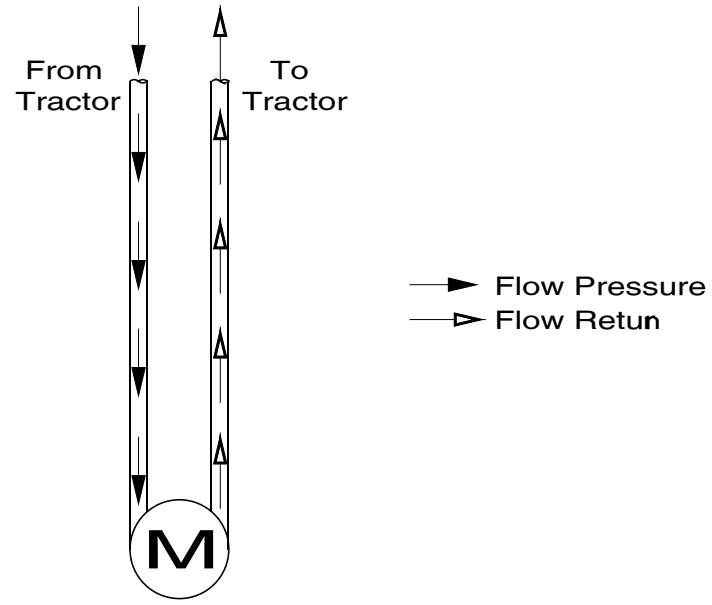
900 Hay Hiker Fork/Tilt Hydraulic Schematic

Lowering Bed

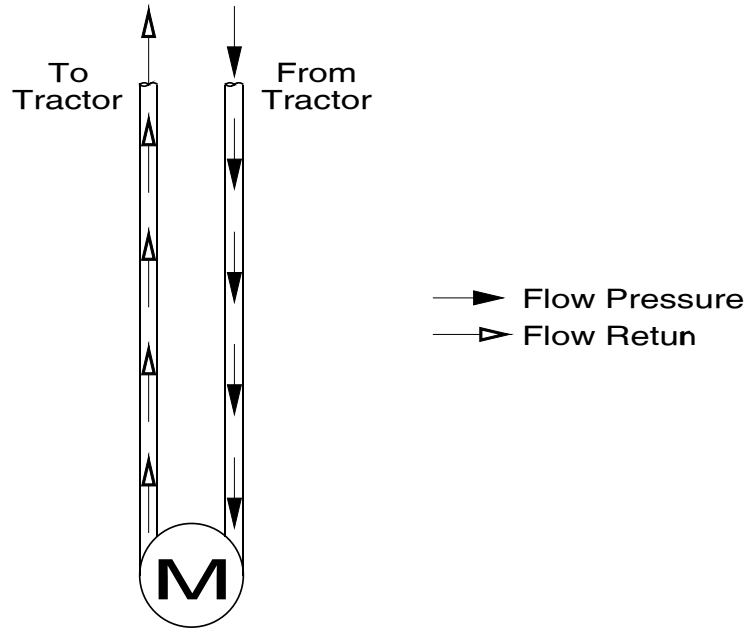


900 Hay Hiker Push Bar Drive Hydraulic Schematic

Pushing Off



Returning Push Bar



Notes

Section 6: Maintenance

Section Contents

CAUTION

BE ALERT

SAFETY FIRST

REFER TO SECTION 1 AND REVIEW ALL SAFETY RECOMMENDATIONS.

General

This section deals with two goals, maximum life and dependable operation. Adopt a regular maintenance and lubrication program. Care and sufficient lubrication is the best insurance against delays.

Safety

- Always shut off the tractor and remove the key before dismounting.
- Guard against hydraulic high pressure leaks with hand and face protection.
- Never work under the implement unless it is in the down position or transport lock pins are in place and secured with hair pins. Do not depend on the hydraulic system to support the frame.
- Always wear safety goggles, breathing apparatus and gloves when working on seeder filled with chemical. Follow manufactures recommended safety procedures when working with chemicals or treated seeds.

Warning

Securely support any machine elements that must be raised for service work.

Caution

Keep service area clean and dry. Wet or oily floors are slippery.

Tighten Bolts

- Before operating the Hay Hiker.
- After the first two hours of operation.
- Check tightness periodically thereafter.
- Use Bolt Torque Chart for correct values on various bolts.
- Note dashes on hex heads to determine correct grade.

Note: DO NOT use the values in the Bolt Torque Chart if a different torque value or tightening procedure is given for a specific application.

- Fasteners should be replaced with the same or higher grade. If higher grade is used, only tighten to the strength of the original.

Bolt Torque Chart

Grade 5 Bolt Marking		Bolt Size	Grade 8 Bolt Marking	
Nm	lb. ft.		lb. ft.	Nm
11	8	**1/4**	12	16
23	17	**5/16**	24	33
41	30	**3/8**	45	61
68	50	**7/16**	70	95
102	75	**1/2**	105	142
149	110	**9/16**	155	210
203	150	**5/8**	210	285
366	270	**3/4**	375	508
536	395	**7/8**	610	827
800	590	**1**	910	1234
1150	850	**1-1/8**	1350	1850
1650	1200	**1-1/4**	1950	2600
2150	1550	**1-3/8**	2550	3400
2850	2100	**1-1/2**	3350	4550

Tires

- Inspect tires and wheels daily for tread wear, side wall abrasions, damaged rims or missing lug bolts and nuts, replace if necessary.
- Tighten wheel bolts - refer to Bolt Torque Chart.
- Check tire pressure daily, when tires are cold.
- Correct tire pressure is important.
- Do not inflate tires above the recommended pressure.

Tire Specifications

SIZE	LOAD RANGE	PRESSURE
11L x 15FI	F	90 P.S.I.

Caution

Tire replacement should be done by trained personnel using the proper equipment.

Wheel Bolt Torque

SIZE	Torque
9/16	110 lb. ft. (149 Nm)

Lubrication

Greasing pivot points prevents wear and helps restrict dirt from entering. However, once dirt does enter a bearing, it combines with the lubricant and becomes an abrasive grinding paste, more destructive than grit alone.

- Apply new lubricant frequently during operation to flush out old contaminated lubricant.
- Use a good grade of **lithium based grease**.
- Use a good grade of machine oil.
- Clean grease fittings and lubricator gun before applying lubricant.

Refer to the photo below for grease fitting locations.

1. Hubs

- Repack with a good quality grease every 500 hours. See *"Wheel Bearings".*

2. Bale Fork Cylinder Pins

- Grease Daily.

3. Bale Fork Pins

- Grease Daily

4. Drive shaft bearings

- Grease every 50 hours.

5. Drive Chains

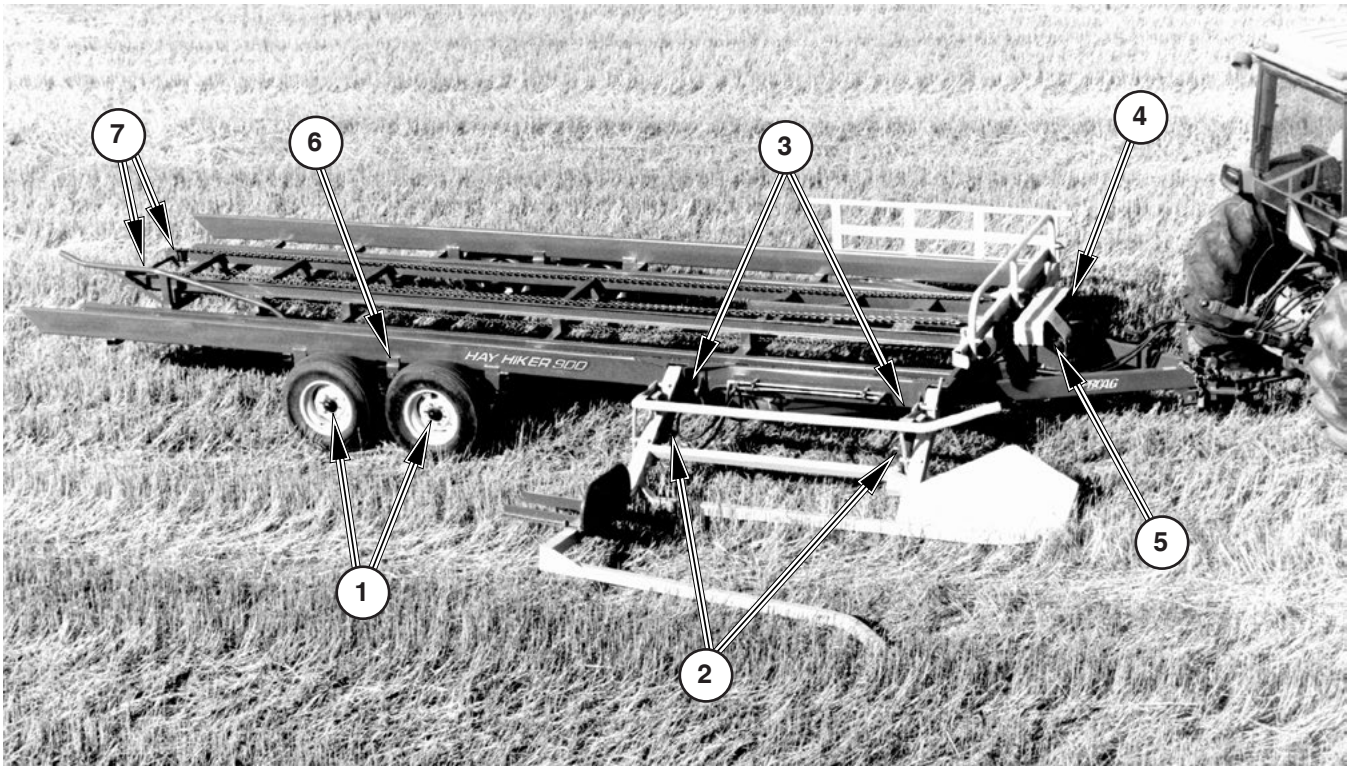
- Oil every 50 hours.

6. Spring Equalizer Arm Pivot Bolt

- Grease Daily.

7. Idler Pulleys

- Grease Daily.



Hydraulics

Refer to Section 1 regarding hydraulic safety. In addition:

- Inspect hydraulic system for leaks, damaged hoses and loose fittings.
- Damaged hoses and hydraulic tubing can only be repaired by replacement. DO NOT ATTEMPT REPAIRS WITH TAPE OR CEMENTS. High pressure will burst such repairs and cause system failure and possible injury.
- Leaking cylinders - install a new seal kit.
- Fittings - use liquid Teflon on all NPT hydraulic joints. **Do not use liquid Teflon or Teflon tape on JIC or ORB ends.**
- Hydraulic Hose Connections - when connecting the hoses to the cylinders, tubing, etc. always use one wrench to keep the hose from twisting and another wrench to tighten the union. Excessive twisting will shorten hose life.
- Keep fittings and couplers clean.
- Check the Tractor Manual for proper filter replacement schedule.

Refer to the Trouble Shooting Section.

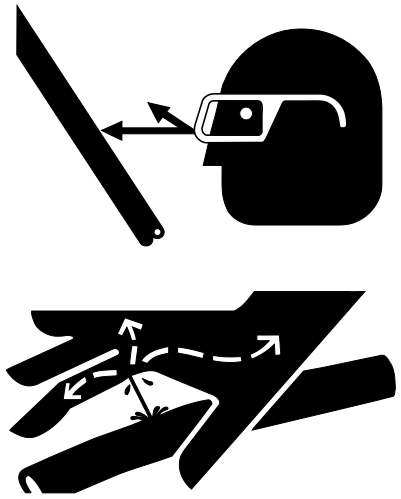
PROAG

Contact your nearest Dealer for genuine repair parts. Dealers carry ample stocks and are backed by the manufacture and regional associations.

⚠ Caution

Dirt in the hydraulic system could damage O-rings, causing leakage, pressure loss and total system failure.

Note: Extreme care must be taken to maintain a clean hydraulic system. Use only new hydraulic fluid when filling reservoir.



⚠ Warning

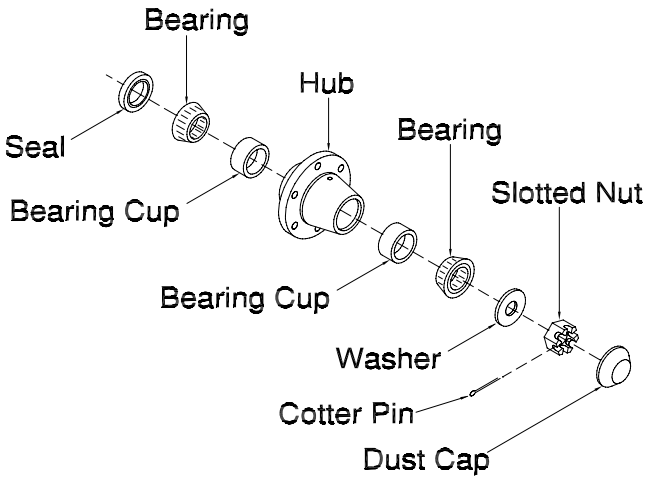
HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- **Relieve pressure on hydraulic system before servicing or disconnecting hoses.**
- **Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.**
- **Keep all components in good repair.**

Wheel Bearings

- Shut tractor off and remove key.
- Block wheel on tractor.
- Raise the Hay Hiker wheels enough to clear the surface.
- Securely block Hay Hiker frame.
- Remove wheel from hub.
- Remove the dust cap, cotter pin, and the slotted nut and washer.
- Be careful when pulling the hub off as not to drop the outer bearing.
- Clean spindle and bearing components with solvent.
- Inspect for wear on bearings, spindle and cups, replace parts as required.
- Do not reuse old seals. Use only new seals when assembling.
- Pack inner hub with bearing grease.
- Be sure bearing and cup are dry and clean.
- Work grease into the bearing rollers, until each part of the bearing is completely full of grease.
- Install inner bearing and cup first, then press new seals in place.
- Place hub on spindle.
- Install outer bearing, washer and slotted nut.
- Tighten nut while turning the wheel until a slight drag is felt.
- Back nut off one slot and install a cotter pin. Bend cotter pin up around nut.
- Pack grease inside the dust cap and tap into position.



Section 7: Storage

Section Contents

Preparing for Storage

- To insure longer life and satisfactory operation, store the implement in a shed.
- If building storage is impossible, store away from areas of main activity on firm, dry ground.
- Clean machine thoroughly.
- Inspect all parts for wear or damage.
- Avoid delays - if parts are required, order at the end of the season.
- Lubricate grease fittings. (Refer to Lubricating Section).
- Lubricate chains. (Refer to Lubricating Section).
- Tighten all bolts to proper specifications (Refer to Bolt Torque Chart).
- For a safer storage, lower the fork down and release the hydraulic pressure.
- If fork must be stored in a raised position, ensure that the fork is properly secured with lock pins.
- Level Hay Hiker using hitch jack and block up.
- Relieve pressure from hydraulic system.
- Raise main frame, block up and relieve weight from the tires.
- Cover tires with canvass to protect them from the elements when stored outside.
- Coat exposed cylinder shafts (Refer to "*Cylinder Shaft Protection*").
- Paint any surfaces that have become worn.

Warning

Do not allow children to play on or around the machine.

ProAG PAINT	
Part Number	**Description**
W-4647	Red ProAG Spray Can
N31087	White ProAG Spray Can
Z-10	Red ProAG Paint/Litre Can

Cylinder Shaft Protection

The steps summarized below should be followed when protecting chrome plated shafting on equipment:

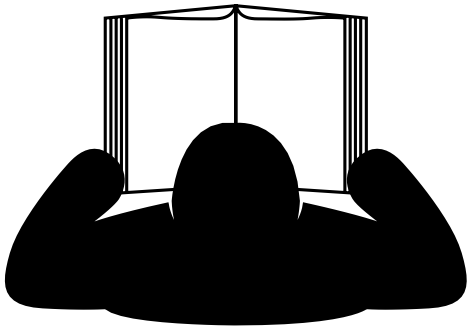
- Position the equipment as it will be stored, and identify all the exposed portions of the chrome plated shafts.
- Clean dirt and dust from the exposed portions of the shaft using a dry cloth or a cloth which has been dampened with an appropriate solvent.
- Prepare a mixture of 60% oil-based rust inhibitor and 40% Kerosene. Apply a thin coating of this mixture to the exposed surfaces of the chrome plated shaft. No. 1 fuel oil may be substituted for Kerosene. A cloth dipped in the mixture can be used to apply the coating.
- Inspect the shaft surfaces after six months and apply additional corrosion preventative mixture.
- If the equipment is to be moved and then stored again for an extended period of time, the steps above should be repeated for all shafts that were stroked during the move.
- **Before retracting the cylinders the protective coating should be removed.** This will prevent fine sand and dirt that has accumulated in the coating, from damaging the shaft seal. **Under no circumstances should sandpaper or other abrasive material be used to clean the surfaces.** Plastic or copper wool in combination with an appropriate solvent will remove most of the dirt.

⚠ Caution

Dirt in the hydraulic system could damage O-rings, causing leakage, pressure loss and total system failure.

Removing from Storage

- Review Operator's Manual.
- Check tire pressure (Refer to Tire Pressure List)
- Clean machine thoroughly. Remove coating from exposed cylinder shafts (Refer to Cylinder Shaft Maintenance).
- Lubricate grease fittings. (Refer to Lubricating Section).
- Lubricate chains. (Refer to Lubricating Section).
- Tighten all bolts to proper specifications (Refer to Bolt Torque Chart).



Notes

Section 8: Troubleshooting

Section Contents

Troubleshooting

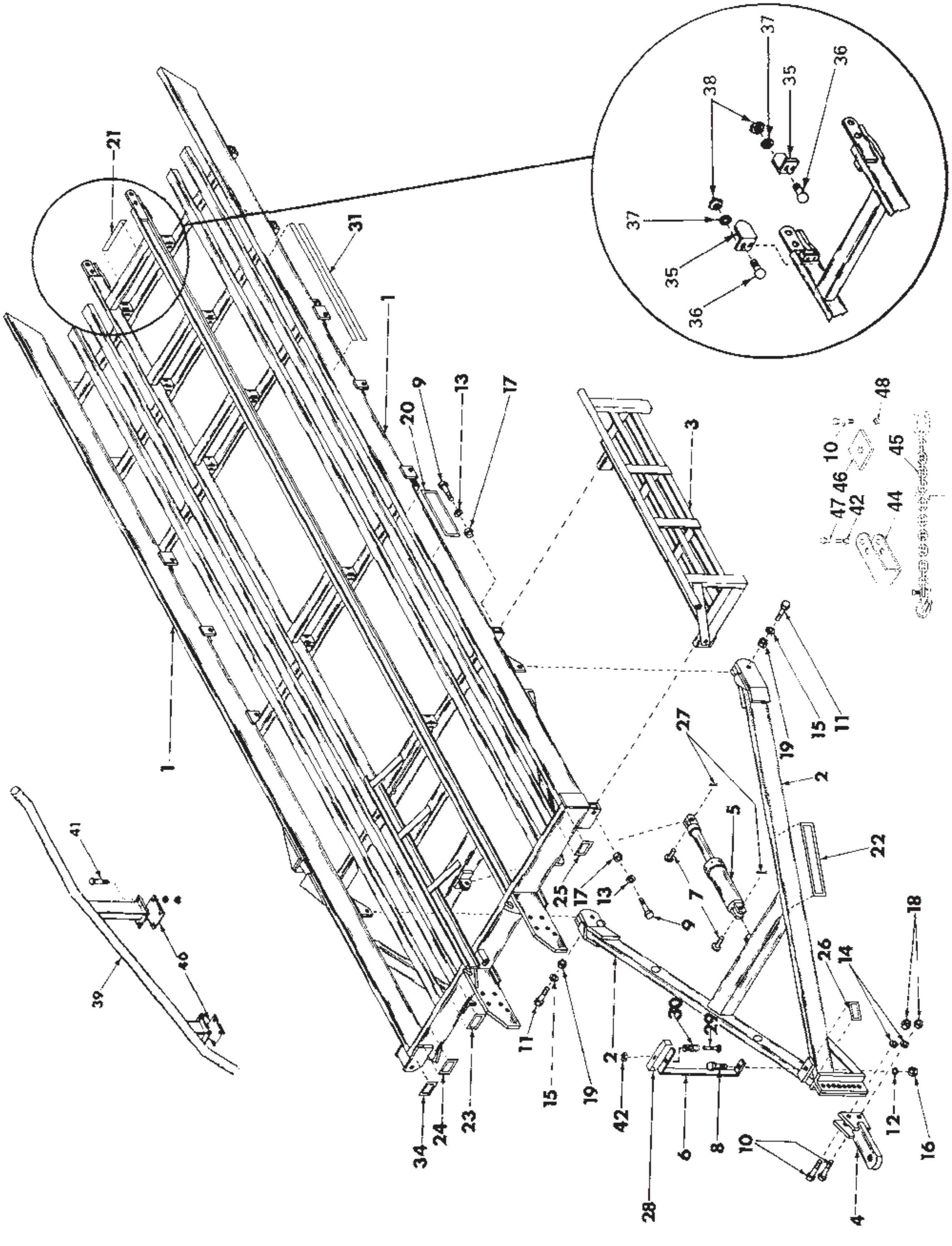
Problem	Cause	Correction
First bale not rolling to far-side of bed.	Fork not being raised to full height.	Raise fork to full height
	Bale deflector bar too low.	Raise bale deflector to give bale more momentum.
	Turning to the left while loading bale.	Avoid left hand turns while bale is being loaded.
Bale rolling in at an angle.	Hay Hiker not level.	Level Hay Hiker.
	Bales are slightly cone shaped.	Load larger end of bale onto fork first.
	Forks are spaced too wide.	Move forks closer together.
	Bent Fork.	Straighten or replace fork.
Poor Push Bar operation.	Chain timing out.	Adjust pull chains to pull evenly on push bar.
	Chain is too loose.	Keep chains evenly tightened.
	Wear blocks may be worn or binding.	Replace.
	Damaged links on pull chain.	Replace damaged links.
Poor fork operation	Push Bar.	Move push bar forward to switch selector valve.
	Selector valve not switching.	Adjust lever. Damaged valve shaft, replace.
	Air in hydraulic system.	Raise fork fully holding hydraulic lever for several seconds.
Poor bed tilt operation..	Push Bar.	Move push bar back a few inches to switch selector valve.
	Selector Valve.	Move shaft to its outermost position.
	Selector valve.	Check position of lever when push bar is fully returned.
Bed rises when lowering fork.	Air in system.	Raise fork to full position and hold the hydraulic lever for several seconds to phase out air from system.

Problem	Cause	Correction
Outer fork bending on bale fork.	Operator striking bale with outer fork.	Adjust fork to maximum width. Bales have flattened out and become too wide.
Oil accumulation	Normal.	Slight seepage from seal is normal.
	Damaged seal.	Replace seals.
	Loose fittings.	Tighten hose and pipe connections.
	Scored cylinder shaft will damage shaft seal.	Replace shaft and shaft seal.
Left side lifting with first bale.	Bale too heavy.	Ballast left side of Hay Hiker.

Problem	Cause	Correction

Section 9: Parts

Section Contents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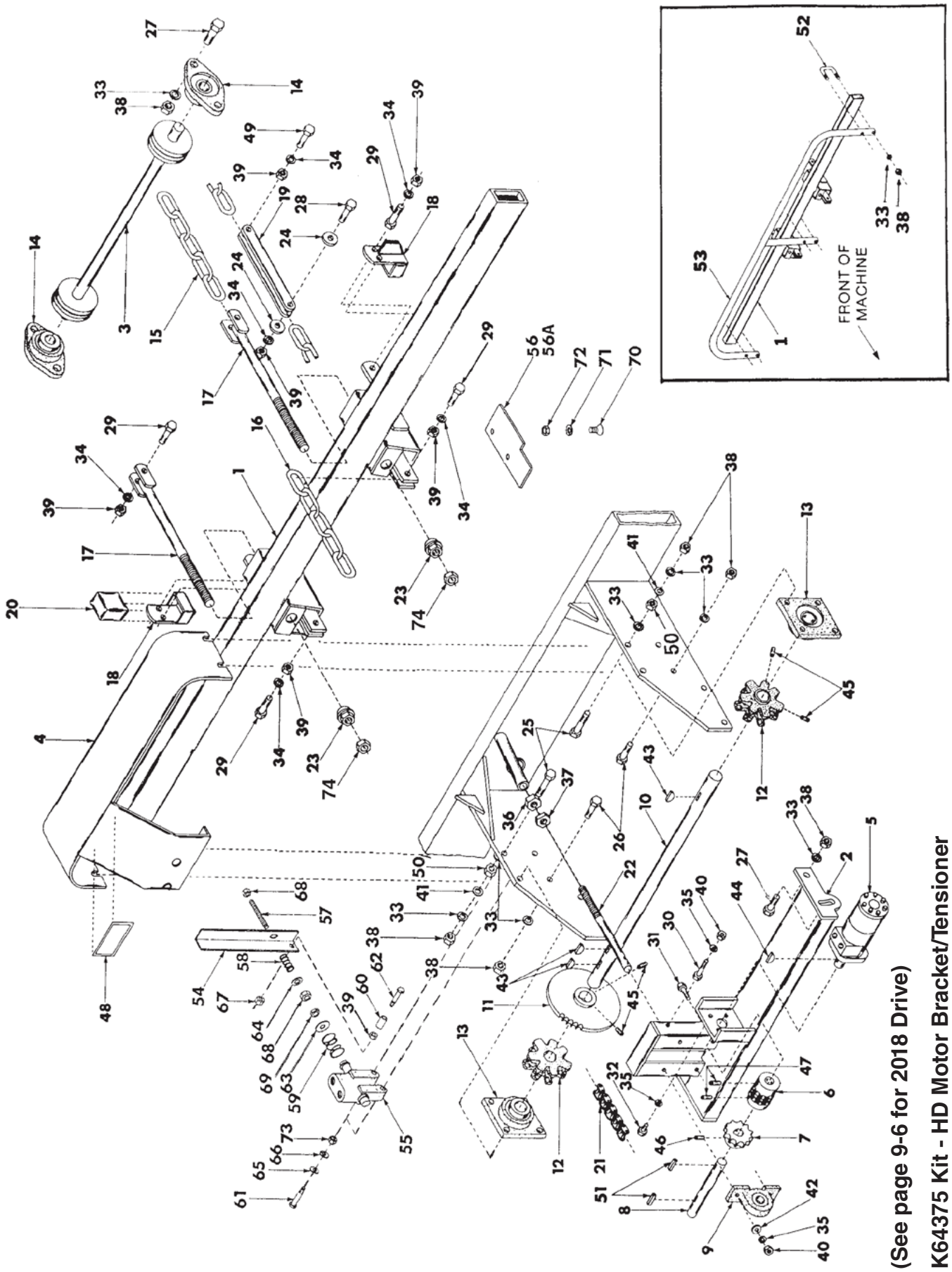
Frame & Hitch

Item	Part No.	Description	Qty
1	K40350	Main Frame - Extended	1
2	K-3801	Main Hitch	1
3	K29170	Bale Stop	1
4	W-1039	Clevis (Bar Type)	1
	K47728	Clevis (Optional “U” Type) (Not Shown)	1
5	C-2040	Hydraulic Cylinder - 3 x 12 Lg	1
6	K-5345	Hose Holder	1
7	W-558	Pin - 1 Dia x 2 1/4 Lg	2
8	W-485	Hex Bolt - 1/2 x 1 1/4 Lg	1
9	W-480	Hex Bolt - 3/8 x 2 1/2 Lg	2
10	W-509	Hex Bolt - 3/4 x 2 1/2 Lg	3
11	K-5478	Hex Bolt - 1 x 3 1/2 Lg	2
12	W-525	Lockwasher - 1/2	2
13	W-523	Lockwasher - 3/8	2
14	W-527	Lockwasher - 3/4	2
15	C-705	Lockwasher - 1	2
16	W-516	Hex Nut - 1/2	2
17	W-514	Hex Nut - 3/8	2
18	W-518	Hex Nut - 3/4	2
19	W-520	Hex Nut - 1	2
20	K49074	Decal - “Hay-Hiker 900”	2
21	* * * * *		
22	12194	Decal - “PROAG”	2
23	N24301	Decal - “CAUTION - Read Operator’s Manual”	1
24	C31201	Decal - “WARNING”	1
25	S-4785	Decal - “Caution Stand Clear”	1
26	C-4262	Decal - “Caution Never Remove”	1
27	W-4181	Cotter Pin - 1/4 x 2 Lg	2
28	K-5347	Hose Clamp	1
29	W-495	Hex Bolt - 1/2 x 4 Lg	1
30	K-5367	Hose Hanger Spring	1
31	K-5827	Decal - 3 1/2” Strip	8
32	* * * * *		
33	W-546	Washer - 1 1/8 x 14 Ga	1
34	K24212	Decal - “DANGER”	1
35	K11163	Hay Stripper	2
36	D-5259	Carriage Bolt - 5/16 x 3/4 Lg	4
37	W-522	Lockwasher - 5/16	4
38	W-513	Hex Nut - 5/16	4
39	K40362	Bale Divider (Optional)	1
40	K11167	Clamp Plates (Optional)	2
41	W-493	Hex Bolt - 1/2 x 3 1/2 Lg (Optional)	8
42	F-3405	Locknut - 1/2	2
43	W-539	Flatwasher - 1/2	1
44	C18758	Centre Support	1
45	C18760	20,000 lb Safety Chain	1
46	C18757	Retainer Washer (Used on 20,000 lb Chain)	1
47	D-5519	Hex Bolt - 1/2 x 3 3/4 Lg	1
48	D-5275	Locknut - 3/4	1
49	N34476	Reflector - Red (Not Shown)	2
50	N34477	Reflector - Amber (Not Shown)	6
51	N34478	Reflector - Orange (Not Shown)	2

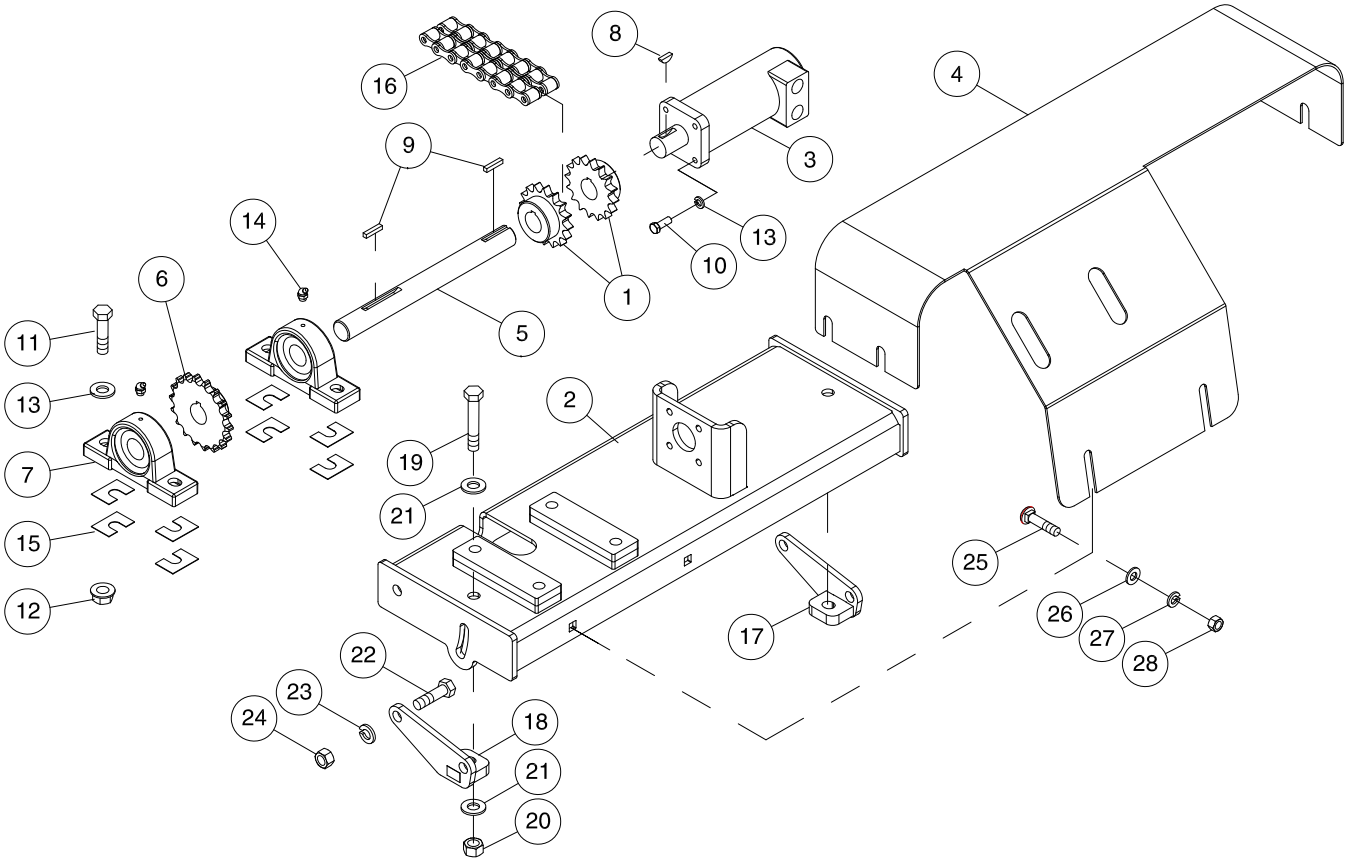


(See page 9-6 for 2018 Drive)

K64375 Kit - HD Motor Bracket/Tensioner
Refer to Technical Bulletin 454

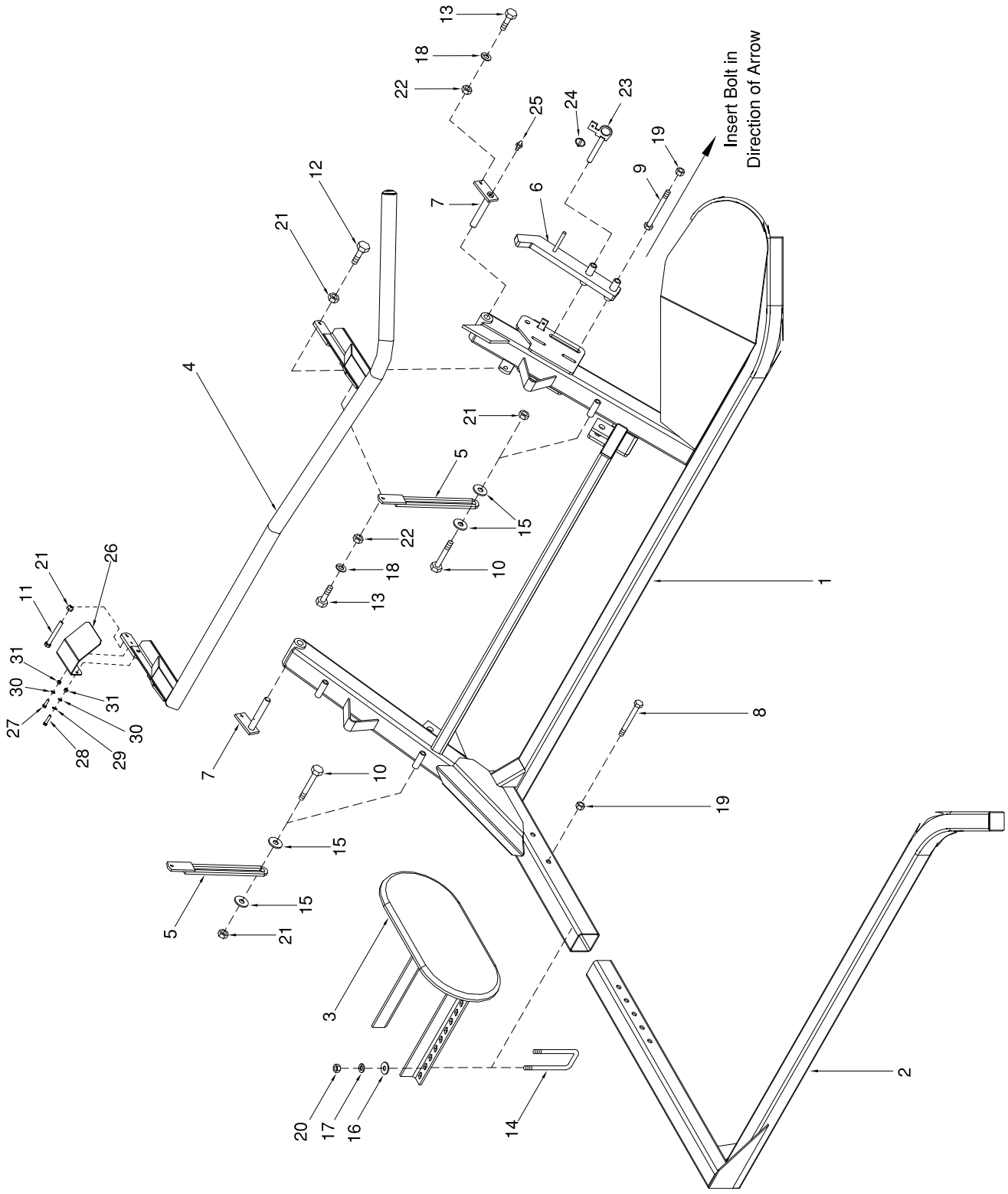
Item	Part No.	Description	Qty
1	K-5333	Bale Push Bar	1
2	K50375	Motor Bracket (See next page for 2018 Drive)	1
3	K-5335	Chain Roller	1
4	K-5350	Chain Guard	1
5	K51555	Orbit Motor (Prior to 2018)	1
	K-3813	Orbit Motor - Prior to 2012	
6	K-3821	Coupler Assembly (Prior to 2018)	1
7	K-4568	13 Tooth Drive Sprocket (Prior to 2018)	1
8	K-5351	Jackshaft - Short - (1" Dia) (Prior to 2018)	1
9	S-91	Pillow Block Bearing Assembly (Prior to 2018)	2
10	K-5348	Jackshaft (1 3/4 Dia)	1
11	K-5358	40 Tooth Sprocket	1
12	K-5352	Cast Drive Pulley	2
13	S-1115	Flange Bearing Assembly	2
14	K-5366	Flange Bearing Assembly	2
15	K-5363	Chain, Top - 287" Lg (Calibrated)	2
16	K40365	Chain, Bottom - 299" Lg (Calibrated)	2
17	K-5342	Chain Tightener	2
18	K-5343	Bushing Holder	2
19	K-5336	Clamp Strap	4
20	K24350	Nylon Wear Block	2
21	K-5365	Roller Chain No 60 (48 Links with Connectors)	1
	W-807	Chain Link - #60 Connector	1
	W-808	Chain Link - #60 Offset	1
22	K-5337	Adjusting Rod (Prior to 2018)	1
23	K-5476	Chain Tightener Nut	2
24	K-5477	Washer	4
25	W-502	Hex Bolt - 5/8 x 2 3/4 Lg	4
26	W-499	Hex Bolt - 5/8 x 2 Lg	4
27	W-498	Hex Bolt - 5/8 x 1 3/4 Lg	8
28	W-490	Hex Bolt - 1/2 x 2 1/2 Lg	2
29	W-488	Hex Bolt - 1/2 x 2 Lg	8
30	W-479	Hex Bolt - 3/8 x 2 1/4 Lg	1
31	W-477	Hex Bolt - 3/8 x 1 1/2 Lg	4
32	W-475	Hex Bolt - 3/8 x 1 Lg	4
33	W-526	Lockwasher - 5/8	26
34	W-525	Lockwasher - 1/2	12
35	W-523	Lockwasher - 3/8	9
36	W-520	Hex Nut - 1	1
37	S-711	Jam Nut - 1	1
38	W-517	Hex Nut - 5/8	22
39	W-516	Hex Nut - 1/2	13
40	W-514	Hex Nut - 3/8	5
41	W-540	Flatwasher - 5/8	4
42	W-538	Flatwasher - 3/8	8
43	W-1902	Woodruff Key - 3/8 x 1 3/8 Lg	3
44	S-239	Woodruff Key - 1/4 x 7/8 Lg	1
45	W-861	Setscrew - 3/8 x 5/8 Lg	6
46	S-1203	Setscrew - 5/16 x 1/2 Lg (Prior to 2018)	1
47	W-554	Setscrew - 5/16 x 5/16 Lg	2
48	K-5486	Decal - "Caution Help Prevent Accidents"	1
49	W-487	Hex Bolt - 1/2 x 1 3/4 Lg	2
50	C-1472	Jam Nut - 5/8	4
51	S10730	Keystock - 1/4 x 1/4 x 1 1/4 (Prior to 2018)	2
52	C-219	U-Bolt - 5/8 x 4 x 5 9/16 Lg	3
53	K12536	Extension - Push Bar	1
54	K25658	Activator Arm	1
55	S-4730	Selector Valve - 2 way	1
56	K25838	Plate - Left Wear - Push Bar	1
56A	K25837	Plate - Right Wear - Push Bar	1
57	K25657	Rod - Threaded	1
58	W-342	Spring - Slip Clutch (9/16 ID x 1 OD x 1 13/16 Lg).	1
59	K25655	Spring - 1 11/32 ID x 2 Lg	1
60	K25656	Spacer	1
61	J12217	Hex Bolt - 5/16 x 2 1/4 Lg	2
62	W-492	Hex Bolt - 1/2 x 3 Lg	1
63	W14504	Washer - 13/32 ID x 1 1/2 OD x 1/8	1
64	D-5579	Washer - 13/32 ID x 1 OD x 16 Ga	1
65	D-5488	Washer - 11/32 ID x 11/16 OD x 16 Ga	2
66	W-522	Lockwasher - 5/16	2
67	F-3405	Locknut - 1/2 Unitorque	1
68	M-3388	Locknut - 3/8 Unitorque	2
69	S-748	Jam Nut - 3/8	1
70	N25463	Countersunk Machine Screw - 3/8 x 3/4 Lg	4
71	W-523	Lockwasher - 3/8	4
72	K-5567	Hex Nut - 3/8 UNF	4
73	W-513	Hex Nut - 5/16	2
74	W-575	Jam Nut - 3/4	2

Push Bar, Fork & Drive
Orbit Motor Assembly - 2018



Push Bar, Fork & Drive - Orbit Motor Assembly - 2018

Item	Part No.	Description	Qty
1	K58125	Sprocket - H60B16 x 1-1/4 x 5/16 Keyway	2
2	K59877	Motor Mount	1
3	K58126	Hydraulic Motor - 1 1/4 Shaft	1
4	K60939	Drive Shield	1
5	K58127	Jack Shaft - 1 1/4 Dia	1
6	K59987	Drive Sprocket - H60B13 x 1-1/4"- 5/16 KW	1
7	K24116	Pillow Block Bearing - 1 1/4 Dia Shaft	2
8		Woodruff Key	
9	K58667	Keyway - 5/16 x 1 5/8 Lg	2
10	K58949	Hex Bolt - 3/8 x 1 Lg Gr 8	4
11	W-502	Hex Bolt - 5/8 x 2 3/4 Lg	4
12	W14434	Locknut - 5/8 Serrated Flange	4
13	S51182	Flatwasher - 0.656 ID x 1 OD x 10 GA	8
14	F-3009	Grease Fitting - 45 Degree	2
15	T-4832	Shim - 22 Ga - Use as required	8
16	K58124	#60-2 (Double Strand) Roller Chain with Connector Link	1
17	K59095	Tensioner - Motor Mount - Left	1
18	K59098	Tensioner - Motor Mount - Right	1
19	W-504	Hex Bolt - 5/8 x 4 Lg	2
20	N37509	Locknut - 5/8 Center	2
21	W-629	Flat Washer - 21/32 ID x 1 5/16 OD x 13 Ga	4
22	W-500	Hex Bolt - 5/8 x 2 1/4 Lg	4
23	W-526	Lockwasher - 5/8	4
24	W-517	Hex Nut - 5/8	4
25	T-5266	Carriage Bolt - 1/2 x 1 1/4	2
26	W-539	Flatwasher - 1/2	2
27	W-525	Lockwasher - 1/2	2
28	W-516	Hex Nut - 1/2	2
	K64375	Kit - HD Motor Bracket/Tensioner (Includes all items above) Refer to Technical Bulletin 454	


Insert Bolt in
Direction of Arrow
1
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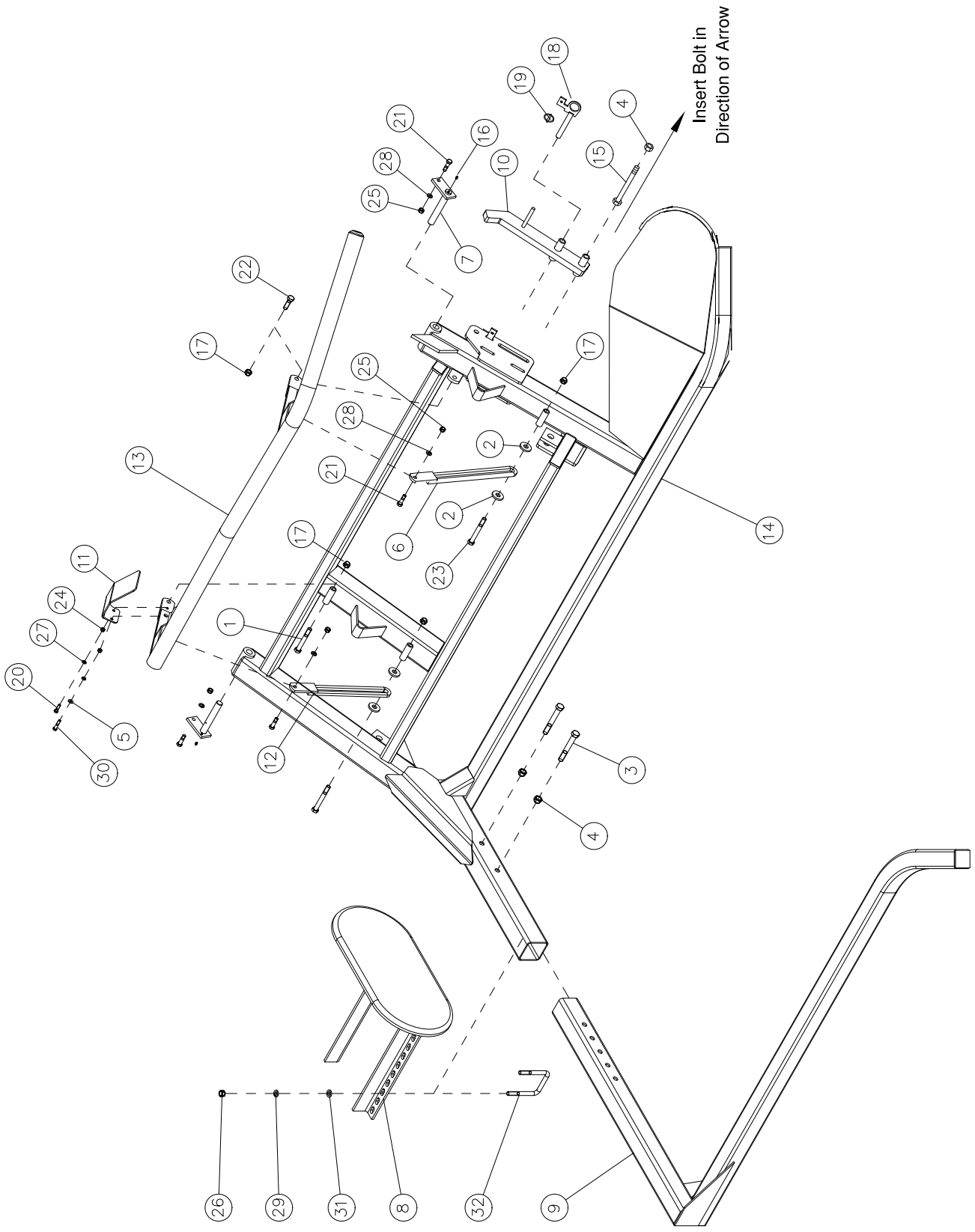
31

Push Bar, Fork & Drive - Fork

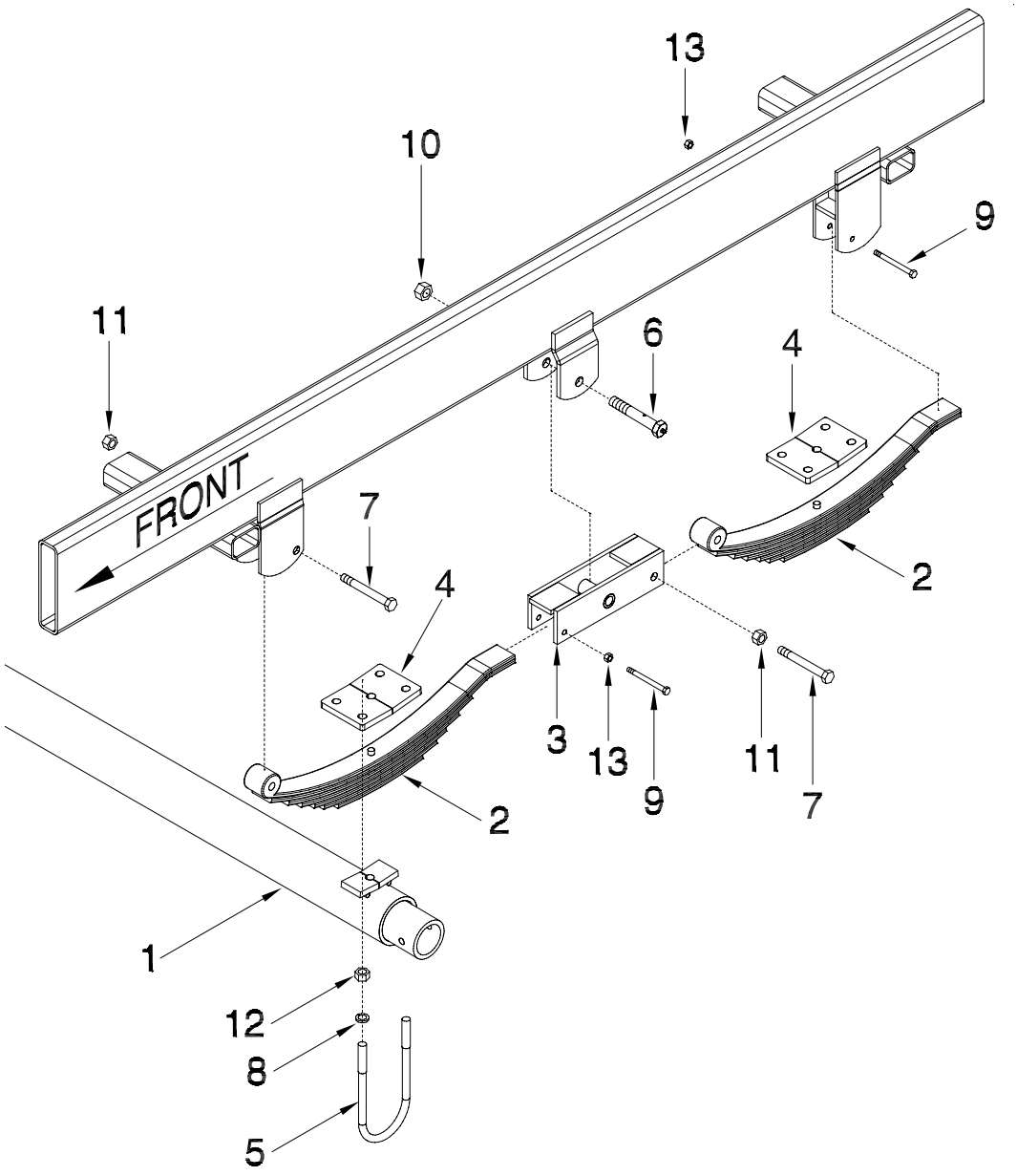
Item	Part No.	Description	Qty
1	K25638	Inner Fork	1
2	K21986	Outer Fork	1
3	K21447	Bale Stop	1
4	K34954	Bale Deflector	1
5	K-5340	Adjustment Loop	2
6	K50109	Transport Lock	1
7	K-5341	Hinge Pin	2
8	C-3919	Hex Bolt - 3/4 x 5 1/2 Lg.	1
9	D-5558	Hex Bolt - 3/4 x 6 Lg.	1
10	W-506	Hex Bolt - 5/8 x 5 Lg	2
11	C-852	Hex Bolt - 5/8 x 4 1/2 Lg	1
12	W-499	Hex Bolt - 5/8 x 2 Lg	1
13	W-487	Hex Bolt - 1/2 x 1 3/4 Lg.	4
14	W14503	U-Bolt - 5/8 x 4 x 5 1/4 UL	2
15	C-1526	Washer - Wear - (25/32 ID x 1 7/8 OD x 1/4 Thick)	4
16	W-793	Flatwasher - 5/8 (0.64 ID x 1 1/8 OD x 3/16 Thick)	4
17	W-526	Lockwasher - 5/8	4
18	W-525	Lockwasher - 1/2	4
19	D-5275	Locknut - 3/4	2
20	W-517	Hex Nut - 5/8	4
21	S-1197	Locknut - 5/8	4
22	W-516	Hex Nut - 1/2	4
23	K50106	Blain Pin - 3/4 Dia x 5 3/16 UL	1
24	N19307	Klik Pin - 1/4 Dia x 1 3/4 Lg.	1
25	S-752	Grease Zerk - 1/4 Straight	2
26	K34960	Guard	1
27	W-187	Hex Bolt - 3/8 x 1 1/4 Lg.	1
28	W-619	Hex Bolt - 3/8 x 1 3/4 Lg.	1
29	D-5489	Flatwasher - 3/8 (13/32 ID x 13/16 OD x 16 Ga)	1
30	W-523	Lockwasher - 3/8	2
31	W-514	Hex Nut - 3/8	2

Push Bar, Fork & Drive Fork (4 ft Bale Mod)

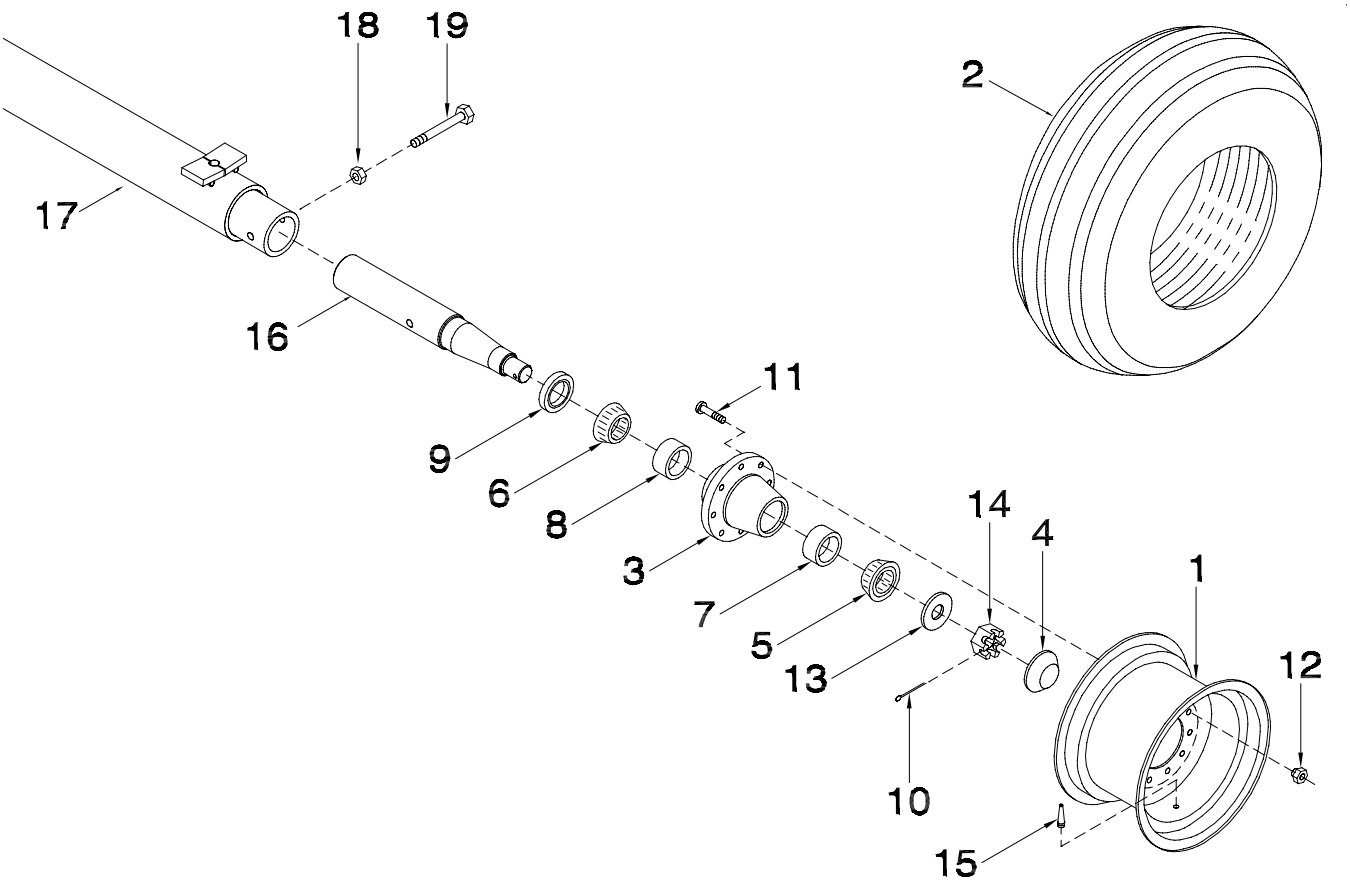


Push Bar, Fork & Drive - Fork (4 ft Bale Mod)

Item	Part No.	Description	Qty
1	C-852	Hex Bolt - 5/8 x 4 1/2 Lg	1
2	C-1526	Spacer Washer	4
3	C-3919	Hex Bolt - 3/4 x 5 1/2 Lg	2
4	D-5275	Locknut - 3/4 Unitorque	2
5	D-5489	Washer - 13/32 ID x 13/16 OD x 16 Ga	1
6	K-5340	Deflector Bar Adjustment Loop	1
7	K-5341	Hinge Pin	2
8	K21447	Bale Stop	1
9	K21986	Outer Fork	1
10	K50109	Transport Lock	1
11	K34960	Guard	1
12	K40353	Adjustment Loop Rear - 4 Ft Bale Mod	1
13	K40355	Bale Deflector - 4 Ft Bale Mod	1
14	K40360	Inner Fork W/Bale Turner - 4 Ft Bale Mod	1
15	D-5558	Hex Bolt - 3/4 x 6 Lg	1
16	S-752	Grease Fitting - 1/4 Straight	2
17	S-1197	Locknut - 5/8 Unitorque	4
18	K50106	Blain Pin - 3/4 Dia x 5 3/16 UL	1
19	N19307	Klik Pin - 1/4 Dia x 1 3/4 Lg	1
20	W-187	Hex Bolt - 3/8 x 1 1/4 Lg	1
21	W-487	Hex Bolt - 1/2 x 1 3/4 x 3/4 Lg Thread	4
22	W-499	Hex Bolt - 5/8 x 2 Lg	1
23	W-506	Hex Bolt - 5/8 x 5 Lg	2
24	W-514	Hex Nut - 3/8	2
25	W-516	Hex Nut - 1/2	4
26	W-517	Hex Nut - 5/8	4
27	W-523	Lockwasher - 3/8	2
28	W-525	Lockwasher - 1/2	4
29	W-526	Lockwasher - 5/8	4
30	W-619	Hex Bolt - 3/8 x 1 3/4 Lg	1
31	W-793	Washer - 5/8 ID x 1 1/8 x 3/16 Thick	4
32	W14503	U-Bolt - 5/8 x 4 x 5 1/4 UL	2

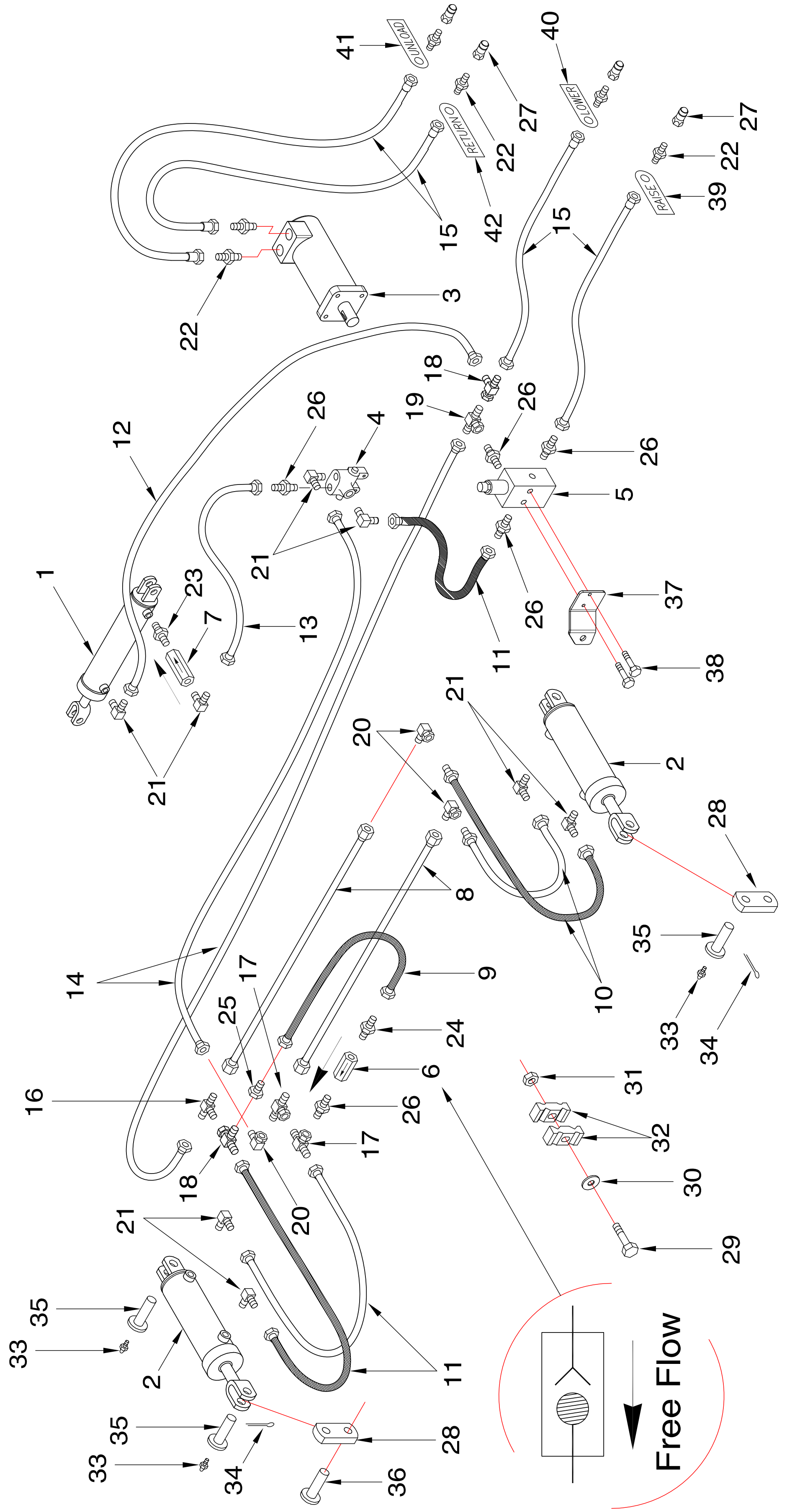


Item	Part No.	Description	Qty
1	K48283	Axle	2
2	K49075	Leaf Spring (Slipper Type)	4
	K21129	Shackle Bushing (Not Shown)	4
3	K-5700	Equalizer Arm	2
4	K48285	Spring Mounting Plate	4
5	K48287	U-Bolt - 5/8 x 4 1/2 x 9 Lg - 18 UNF	8
6	K-5693	Greaseable Bolt - 3/4 x 4 1/2 Lg - 16 UNF	2
7	K-5702	Hex Bolt - 5/8 x 3 5/8 Lg - 18 UNF	4
8	W-526	Lockwasher - 5/8	16
9	W-481	Hex Bolt - 3/8 x 3 1/2 Lg	4
10	K29464	Locknut - 3/4 - 16 UNF (Jam Clevlok)	2
11	K-5703	Locknut - 5/8 - 18 UNF	4
12	C-708	Hex Nut - 5/8 - 18 UNF	16
13	M-3388	Locknut - 3/8	4



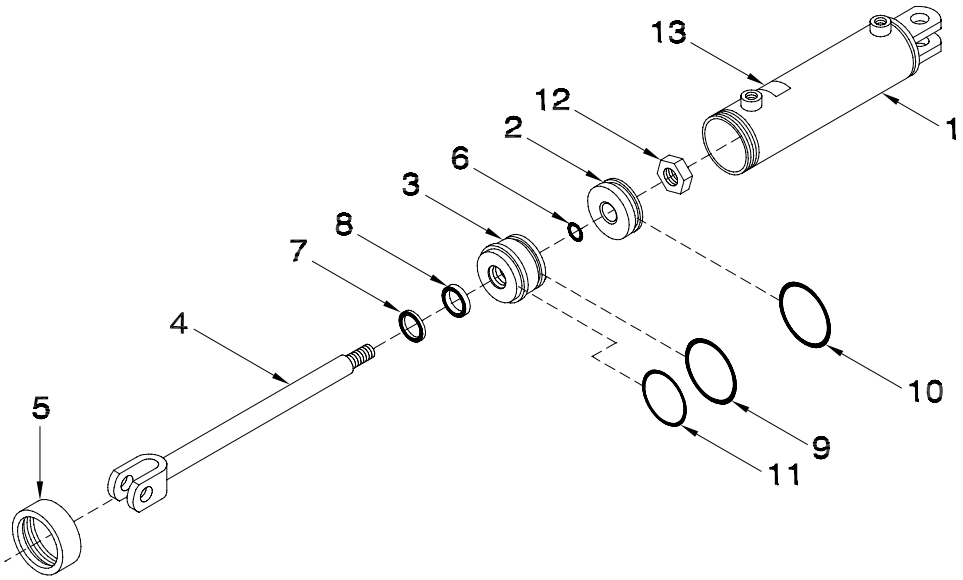
Quantities are per Axle Assembly

Item	Part No.	Description	Qty
1	C17355	Rim - 15 x 10 - 8 Bolt	2
2	C16609	Tire - 11L x 15 FI Load Range F (12 Ply Rating)	2
3	N36236	Non-Drive Hub (Includes Items 7, 8 and 11)	2
4	N19171	Dust Cap	2
5	N19170	Outer Bearing Cone - LM501349	2
6	N19169	Inner Bearing Cone - 387 AS	2
7	N19168	Outer Cup - LM501310	2
8	N19167	Inner Cup - 382 A	2
9	N19172	Shaft Seal - 2 1/2 (C/R #25108)	2
10	W-4181	Cotter Pin - 1/4 x 2	2
11	N36242	Wheel Stud - 5/8 - 18 UNF x 2 3/4	16
12	N19586	Tapered Wheel Nut - 5/8 - 18 UNF	16
13	D-5499	Washer - 1 5/16 ID x 2 3/4 OD x 9 Ga	2
14	N19484	Hex Slotted Nut - 1 1/4 - 12 UNF	2
15	C17348	Valve Stem (Not Shown)	2
16	N19166	Spindle - 2.5 Dia	2
17	K48283	Axle	2
18	F-3405	Locknut - 1/2	2
19	W-494	Bolt - 1/2 x 3 3/4 Lg	2
	K46396	Axle Assembly (Includes all above items)	

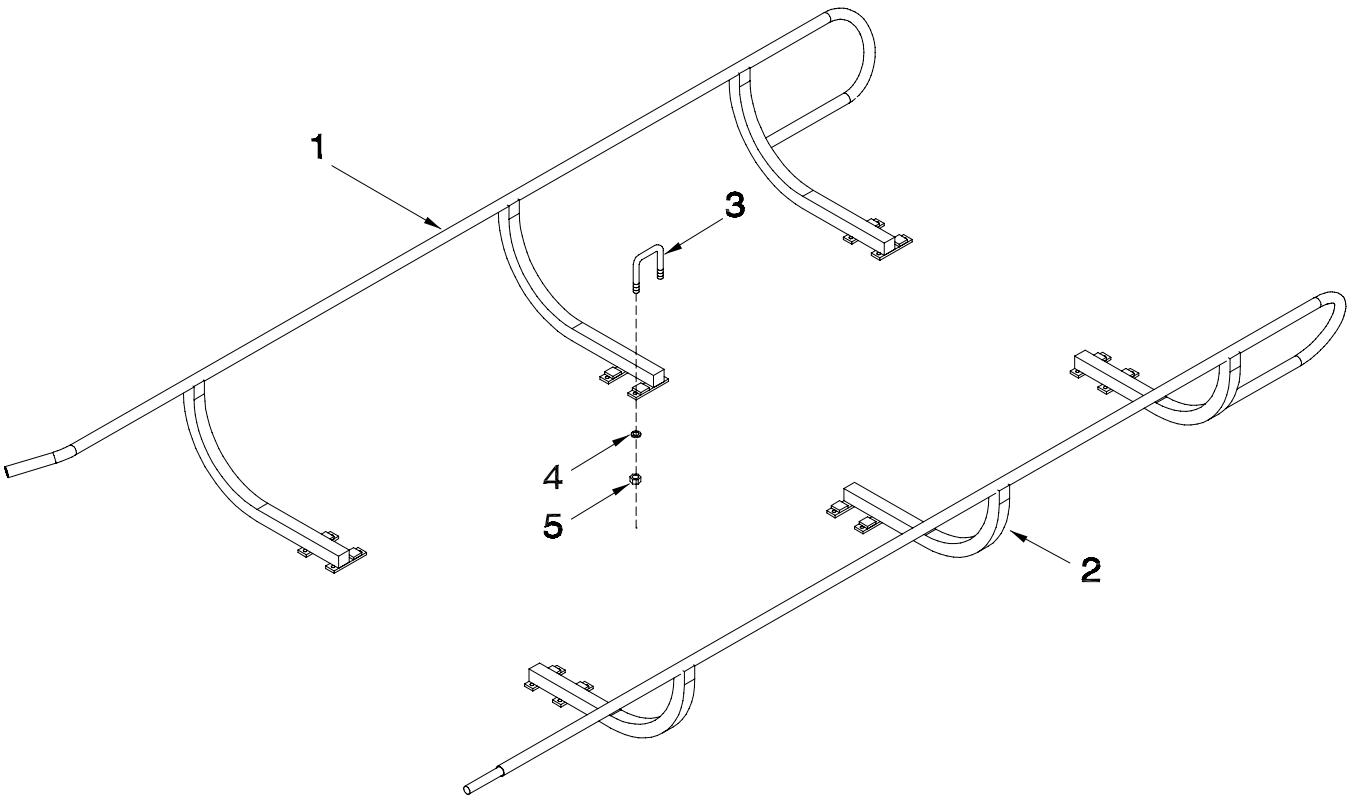

UNLOAD
RETURN
LOWER
RAISE
Free Flow

Hydraulics - 2018 to Present

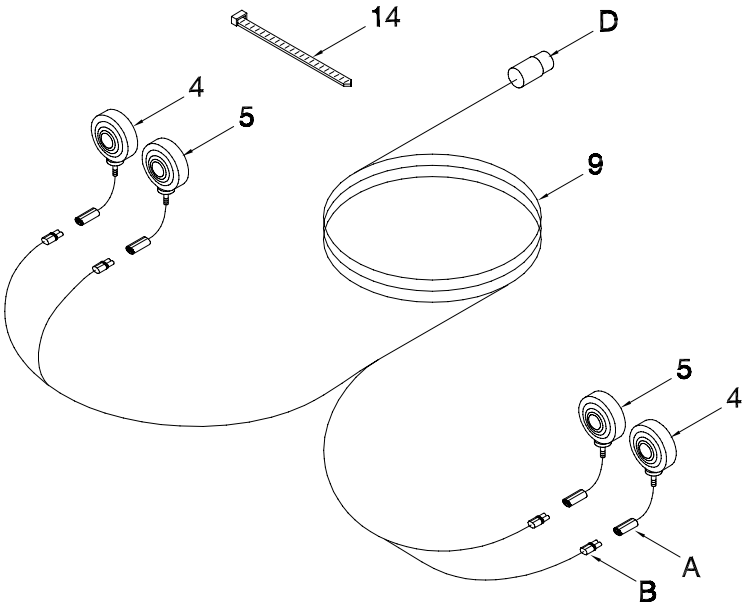
Item	Part No.	Description	Qty
1	K65192	Hydraulic Cylinder - 3 x 12 BBP - (ORB Ports)	1
2	K65190	Hydraulic Cylinder - 3 1/2 x 8 AG - (ORB Ports)	2
3	K51555	Orbit Motor	1
	K51556	Seal Kit for K51555 Orbit Motor	
	K62369	Mounting Flange for K51555 Orbit Motor	
	K18593	Screw - 5/16 - 24 UNF x 7/8 - 12PT - for Mounting Flange	
	S-239	Woodruff Key - 1/4 x 7/8	
4	K50180	Selector Valve - 3/4 ORB Ports	1
	N31601	Seal Kit	
5	K37578	Relief Valve	1
6	K60239	Check Valve	1
7	C15975	Flow Restrictor Valve (FRF-08-093) FORB	1
8	C-4363	Oil Line - 5/8 x 38 Lg w/ 7/8-14 (#10) FJIC	2
9	C-4467	Hyd Hose - 1/4 x 16 Lg w/ 9/16-18 (#06) FJIC	1
10	C-4387	Hyd Hose - 1/2 x 36 Lg w/ 7/8-14 (#10) FJIC Ends	2
11	C-4404	Hyd Hose - 1/2 x 36 Lg w/ 7/8-14 (#10) FJIC Ends	3
12	K-5685	Hyd Hose - 1/2 x 48 Lg w/ 7/8-14 (#10) FJIC Ends	1
13	F-4565	Hyd Hose - 1/2 x 60 Lg w/ 7/8-14 (#10) FJIC Ends	1
14	H-4410	Hyd Hose - 1/2 x 96 Lg w/ 7/8-14 (#10) FJIC Ends	2
15	F-5679	Hyd Hose - 1/2 x 96 Lg w/7/8-14 (#10) MJIC x 7/8-14 (#10) FJIC	4
16	C-4394	Tee - (3) 7/8-14 (#10) MJIC	1
17	F24559	Tee - (1) 7/8-14 (#10) FJIC x (2) 7/8-14 (#10) MJIC	2
18	H18746	Tee - (2) 7/8-14 (#10) MJIC x (1) 7/8-14 (#10) FJIC Swivel	2
19	F24559	Tee - (1) 7/8-14 (#10) FJIC x (2) 7/8-14 (#10) MJIC	1
20	K-5806	90 deg Elbow - 7/8-14 (#10) MJIC x 7/8-14 (#10) FJIC	3
21	C24585	90 Elbow - 7/8-14 (#10) MJIC x 3/4-16 (#08) MORB	8
22	N34505	Connector - 7/8-14 (#10) MJIC x 7/8-14 (#10) MORB	6
23	C15974	Connector - 3/4-16 (#08) MORB	1
24	C15348	Connector - 9/16-18 (#06) MJIC x 3/4-16 (#08) MORB	1
25	F10384	Connector - 9/16-18 (#06) MJIC x 7/8-14 (#10) FJIC	1
26	C14840	Connector - 7/8-14 (#10) MJIC x 3/4-16 (#08) MORB	5
27	N34498	Male Pioneer Tip - 7/8-14 FORB	4
28	K18500	Link	2
29	W-480	Hex Bolt - 3/8 x 2 1/2 Lg	2
30	D-5498	Flat Washer - 3/8	2
31	W-538	Lock Nut - 3/8 UNC	2
32	C-4698	Nylon Oil Line Clamp	4
33	S-752	Grease Zerk - 1/4 x 28 UNF STR	4
34	W-4181	Cotter Pin - 1/4 x 2 Lg	6
35	K-5694	Pin, Greaseable - 1 x 2 1/4 UL	4
36	W-558	Pin - 1 x 2 1/4 UL	2
37	K37577	Bracket	1
38	K-3830	Hex Bolt - 1/4 x 1/2 Lg	2
39	K29976	Tag - Hose ID - Fork/Bed - RAISE	1
40	K29977	Tag - Hose ID - Fork/Bed - LOWER	1
41	K29978	Tag - Hose ID - Push Bar - Unload	1
42	K29979	Tag - Hose ID - Push Bar - Return	1



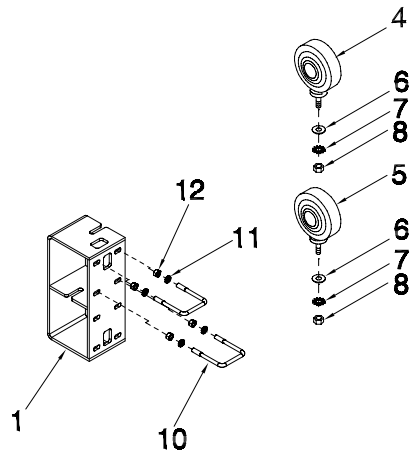
Item	Part No.	Description	Qty
		K65190 - 3 1/2 x 8 - AG CYLINDER (ORB Ports)	
1	K65188	Barrel - 3 1/2 x 8 AG. - ORB Ports	1
2	C-2039	Piston - 3 1/2 Dia - 7/8 Shaft	1
3	C-2037	Gland - 3 1/2 Dia - 1 1/4 Shaft	1
4	C-2239	Cylinder Shaft - 1 1/4 Dia x 17 7/8	1
5	C-2028	Collar - 3 1/2 Cylinder	1
6	C-2187	1 OD x 1/16 C/S 90D BUNA O-Ring	1
7	C-2007	1 1/4 ID x 3/16 C/S 90D URTH Wiper	1
8	C-2008	1 1/4 ID x 5/16 C/S 90D URTH U-Cup	1
9	C-2029	3 1/2 OD x 3/16 C/S 90D BUNA O-Ring	1
10	C-2022	3 1/2 OD x 3/16 C/S 90D URTH O-Ring	1
11	C-2214	3 OD x 1/16 C/S 70D BUNA O-Ring	1
12	C-2017	Locknut - 7/8 UNF Unitorque	1
13	K65189	Part # Plate for K65190	1
	K65190	Cylinder Assembly (Includes All Above Items)	
	C-2036	Seal Kit (Includes Items #6, 7, 8, 9, 10 & 11)	
		K65192 - 3 x 12 - GLAND-BY-PASS CYLINDER (ORB Ports)	
1	K65191	Barrel - 3 x12 Butt Bypass. - ORB Ports	1
2	C-2014	Piston - 3 Dia - 7/8 Shaft	1
3	C-2010	Gland - 3 Dia - 1 1/4 Shaft	1
4	C-2027	Cylinder Shaft - 1 1/4 Dia x 19 7/8	1
5	C-2009	Collar - 3 Cylinder	1
6	C-2187	1 OD x 1/16 C/S 90D BUNA O-Ring	1
7	C-2007	1 1/4 ID x 3/16 C/S 90D URTH Wiper	1
8	C-2008	1 1/4 ID x 5/16 C/S 90D URTH U-Cup	1
9	C-2012	3 OD x 3/16 C/S 90D BUNA O-Ring	1
10	C-2015	3 OD x 3/16 C/S 90D URTH O-Ring	1
11	C-2214	3 OD x 1/16 C/S 70D BUNA O-Ring	1
12	C-2017	Locknut - 7/8 UNF Unitorque	1
13	K65193	Part # Plate for K65192	1
	K65192	Cylinder Assembly (Includes All Above Items)	
	C-2002	Seal Kit (Includes Items #6, 7, 8, 9, 10 & 11)	



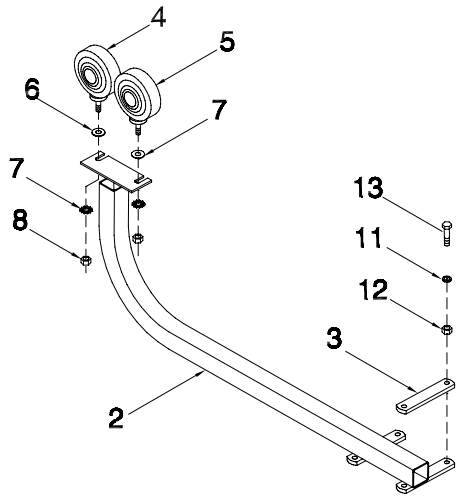
Item	Part No.	Description	Qty
1	K29160	Right Side Rail	1
2	K29165	Left Side Rail	1
3	K29164	U-Bolt - 5/8	6
4	W-526	Lockwasher - 5/8	12
5	W-517	Hex Nut - 5/8	12
	K29177	Side Rail Kit (Includes All Above Items) Kits must be ordered through Wholegoods	



900 HAY HIKER with SIDE RAILS

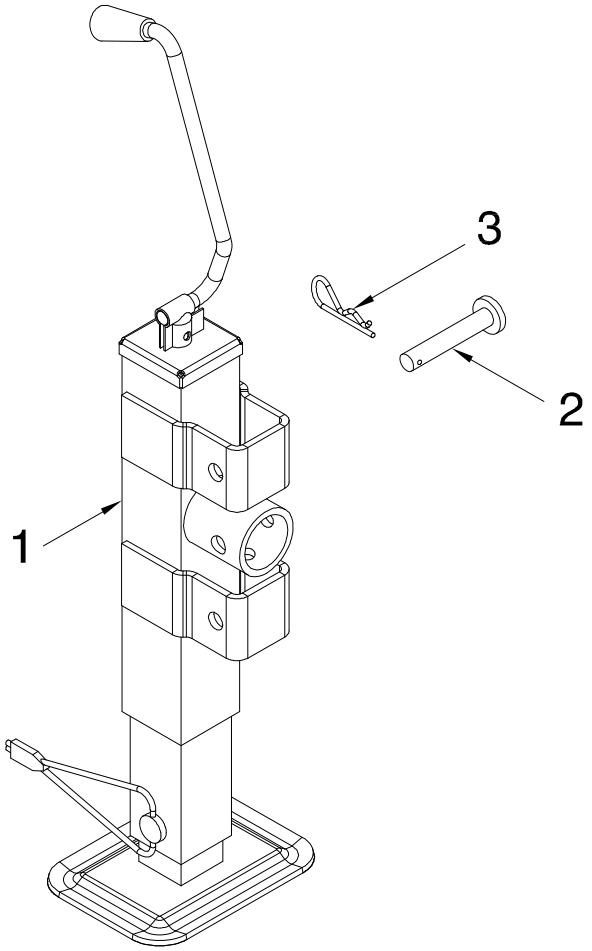


900 HAY HIKER without SIDE RAILS



Lighting - Marking Lights

Item	Part No.	Description	Qty
1	K37581	Bracket - Mounting	2
2	K31994	Bracket - Mounting	2
3	N19109	Strap - Mounting	4
4	C32765	Light - Amber	2
5	C32766	Light - Red	2
6	W-539	Flat Washer - 1/2	1
7	D-5280	Star Washer - 1/2	2
8	W-516	Hex Nut - 1/2	1
9	C31437	Wiring Harness - Main	1
10	N34950	U - Bolt - 3/8x 2 1/2 x 3 1/2 UL	2
11	W-523	Lockwasher - 3/8	8
12	W-514	Hex Nut - 3/8	8
13	W-481	Hex Bolt - 3/8 x 3 1/2 lg	8
14	D-4951	Nylon Tie Strap - 7 3/8 lg	5
14A	D-4838	Nylon Tie Strap - 14 1/2 lg	20
	C32761	Red Acrylic Lens	
	C32762	Amber Acrylic Lens	
	C32515	Bulb - #1156	
A	C32681	Receptacle Connector Assembly - GRAY - 2 Pin	
B	C32682	Plug Connector Assembly - GRAY - 2 Pin	
D	C32690	Connector Assembly - 7 Pin Plug (Complete with Cable Protector Spring)	
	C32688	Interior - Plug - 7 Pin Connector	
	C32689	Cable Protector Spring - Plug - 7 Pin Connector	
		ORDER KITS THROUGH PARTS ONLY	
	K30753	900 Hay Hiker with Side Rails Light Kit-Includes items 1, 4-9, 10, 11-16A	
	K31995	900 Hay Hiker without Side Rails Light Kit-Includes items 2, 3, 4-9, 11-13, 14 and 14A	



Item	Part No.	Description	Qty
1	H59985	Hitch Jack Assembly - 7000 lb	1
2	H10462	Button Head Pin	2
3	W-131	Hair Pin - #9	2

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