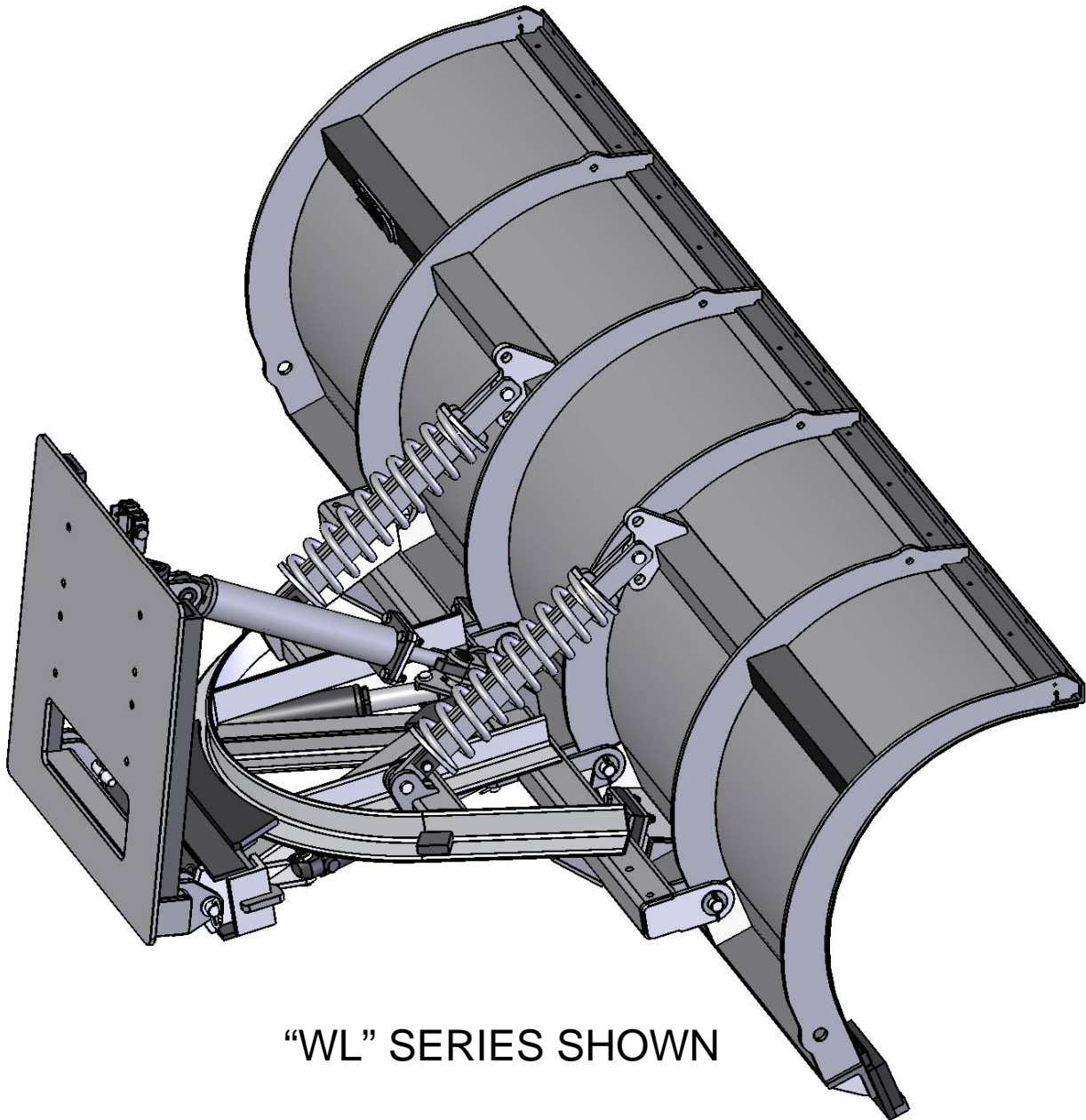


JRB HEAVY-DUTY SNOW PLOWS

“WL” Series for Wheel Loader Applications

“LB” Series for Loader-Backhoe Applications



“WL” SERIES SHOWN

**PARTS BOOK AND INSTALLATION MANUAL
VERSION 5.0, MARCH 2016**

SERIAL NUMBER: _____



HENKE MANUFACTURING CORPORATION

MANUFACTURERS OF SNOW REMOVAL EQUIPMENT FOR 95 YEARS

3070 WILSON AVE. LEAVENWORTH, KS 66048 PHONE (913)682-9000 FAX (913)682-0300

WEBSITE ADDRESS: WWW.HENKEMFG.COM EMAIL: PARTS@HENKEMFG.COM

Introduction

Thank you for your purchase of a Henke JRB Heavy-Duty snow plow. These plows feature extra-heavy components to withstand years of rugged use on industrial equipment. The “WL” series plows are designed specifically for use on wheel loaders equipped with JRB quick coupler hooks. The “LB” series plows are designed specifically for use on loader-backhoes equipped with JRB quick coupler hooks.

The parts list for the JRB snow plow is listed in Table 1. This list is important and should be referred to when ordering replacement parts from your local dealer or Henke Manufacturing Corporation. The parts diagram for the JRB snow plow is shown in Figure 1.

This Product Manual should be read in its entirety before using your JRB “WL” & “LB” series snow plows. For customer service, replacement parts, or answers to questions about your Henke plow, please call Henke Manufacturing at (913) 682-9000.

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SAFETY SECTION

Safety Section 1-1

SAFETY

GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all--- remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



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



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



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.




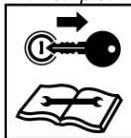

Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

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

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this Manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use good common sense to avoid hazards.



Pictographs are used throughout this manual to help bring your visual attention to safety issues.

SAFETY HAZARD	SAFETY AVOIDANCE	SAFETY PREVENTION
<p>Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided.</p> <p><i>Example:</i></p>  <p>Equipment contacting overhead electrical lines</p>	<p>Pictograph by itself or inside a box indicates an avoidance procedure that should be followed to prevent injuries.</p> <p><i>Example:</i></p>  <p>Always shut off engine and remove key before working on equipment.</p>	<p>A circle with a slash through it indicates an action that is prohibited.</p> <p><i>Example:</i></p>  <p>No Smoking</p>

NOTE: *If you want a translation of this safety section in one of the following Languages, please contact: Translations at 1502 E. Walnut Street Seguin, TX 78155; Fax: (830) 372-9529; Safety Section Translations are available in Spanish, Portuguese, French, German, Russian. P-GS-01*

SAFETY

OPERATOR SAFETY

			
Read and understand Operator's Manual	Wear Hard Hat, Safety Glasses & Safety Shoes	Never use Drugs or Alcohol when operating equipment	Wear Safety Vest when operating on or near roads



TO AVOID SERIOUS INJURY OR DEATH DO THE FOLLOWING:

- **READ, UNDERSTAND** and **FOLLOW** Operator's Manual instructions, Warnings and Safety Messages.
- **WEAR SAFETY GLASSES**, safety shoes, hard hat and gloves when operating or repairing equipment
- **DO NOT WEAR** loose clothing or jewelry to avoid rotating parts entanglement injury.
- **DO NOT USE DRUGS** or **ALCOHOL** before or while operating equipment.
- **DO NOT ALLOW** anyone to operate equipment under the influence of drug or alcohol.
- **CONSULT** medical professional for medication impairment side effects.
- **STAY ALERT**, prolonged operation can cause fatigue; **STOP** and **REST**.

GENERAL OPERATING SAFETY

VISIBILITY CONDITIONS WHEN PLOWING:

- **OPERATE IN DAYLIGHT** or with lights that give at least 100 yards clear visibility.
- **BE ABLE TO SEE** and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects.

GROUND SPEED WHEN PLOWING:

- **NORMAL SPEED** range is between 5 to 45mph.
- **ADJUST plowing SPEED** for terrain conditions.
- **REDUCE plowing SPEED** when near steep slopes, ditches, drop-offs, overhead obstructions, and power lines.

SAFETY SIGNS AND WARNING DECALS:

- **REPLACE** missing, damaged or unreadable safety signs immediately.

SHIELDING:

- **NEVER** remove protective shields and guards! **NEVER** modify or cut protective shields or guards!

PROLONGED OPERATION IN COLD WEATHER:

- May Cause Operator Hypothermia affecting safe operation of implement.
- Wear appropriate clothing and take scheduled breaks.
- If possible shut down equipment, exit cab, and warm body in properly heated area.
- **NEVER** operate implement in fatigued or impaired mental state.

COMMUNICATION:

- Verbal Communication can be difficult and dangerous near implement.
- Operating instructions and directions should be made prior to starting implement.
- If communication is necessary completely shutdown and exit implement.
- **NEVER** allow anyone to approach implement while in operation.

RIDING PASSENGERS:

- Never allow passengers whose presence distracts from safe operation or transporting of implement
- If passengers presence is needed, passenger must be seated securely and belted in passenger seat.
- **DO NOT** allow passenger in any other area of implement, other than in passenger seat during operation or transport.

CHEMICAL HAZARD

- Wear appropriate PPE when handling chemicals. Refer to Chemical MSDS sheets.
- Always wear safety glasses, shield, gloves, and apron.
- Wear Respirator when required.

PN P-OS-01

SAFETY

SAFETY

PERSONAL PROTECTION EQUIPMENT - PPE

			
Wear Safety Glasses	Wear Hard Hat	Wear Safety Shoes & Protective Gloves	Wear Safety Reflective Vest

Always wear all protective clothing and personal safety devices issued to you or called for by job conditions. This should always include:

- Hard hat - when working around raised hopper.
- Steel toed Safety shoes.
- Safety glasses, goggles or face shield.
- Close fitted clothing.
- Heavy gloves (chemical resistant).
- Reflective clothing.

PN PPE-02

SALT AND MATERIAL SPREADING

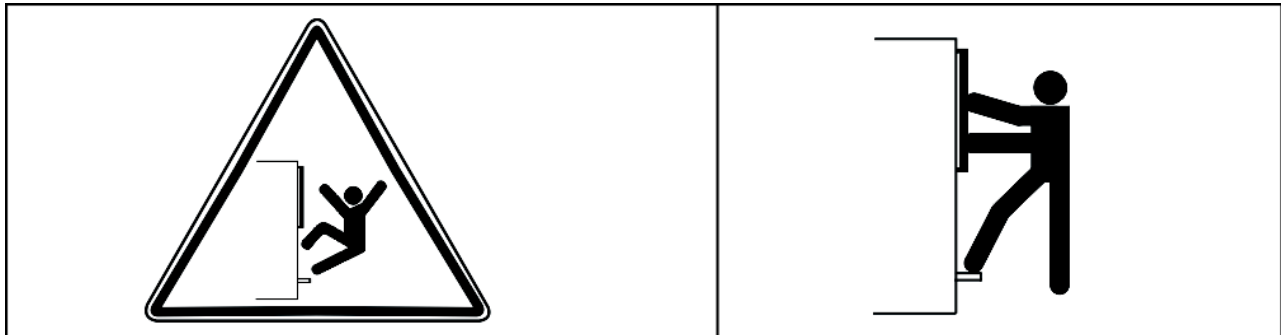
		
Wear Respirator	Chemical, Dust Hazard	Wear face protection - Face Shield or Goggles

When spreading salt or other materials make sure to wear appropriate protective clothing and personal safety devices such as respirator, heavy gloves that are chemical resistant, face shield, or goggles.

PN PPE-03

SAFETY

CRUSHING HAZARDS



Always use three point contact



TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF VEHICLE, EQUIPMENT RUN OVER, ROLLOVER AND CRUSHING BY FALLING IMPLEMENT:

CRUSHING BY FALLING from EQUIPMENT

- **ALWAYS BUCKLE UP** seat belt when operating vehicle and equipment.
- **ONLY OPERATE** vehicle and equipment while seated in vehicle seat.
- **STOP VEHICLE ENGINE**, place transmission into park, engage parking brake, and remove key.

TO AVOID FALLING OFF OR BEING CRUSHED BY EQUIPMENT

- Use extreme care when climbing onto vehicle or attachment. Also always use three point contact using available handles and steps on vehicle or power unit while exiting.
- Removing the vehicle key is a lockout procedure to prevent a coworker from starting the vehicle while someone is working on attachment.
- Never Attempt to mount the vehicle or attachment while unit is moving.
- Do not remove safety latches or chains on stowed equipment unless stowed equipment is being held in place by active hydraulic power or other secure method to prevent it from dropping.

TO AVOID CHILDREN FALLING OFF OR BEING CRUSHED BY EQUIPMENT:

- **NEVER ALLOW** children to play on or around vehicle or equipment.

PN P-CH-01

SAFETY

SAFETY

CONNECTING OR DISCONNECTING IMPLEMENT SAFETY

		
Foot Crushing Hazard	Hand Crushing Hazard	Stop Vehicle, Remove Key and Read Manual



TO AVOID SERIOUS INJURY OR DEATH FROM BEING CRUSHED BY VEHICLE OR ATTACHMENT:

WHEN ATTACHING UNIT TO VEHICLE:

- **DO NOT ALLOW BYSTANDERS** between vehicle and plow.
- Keep hands and body clear of the attachment and the attachment mounts.

BEFORE connecting and disconnecting Plow Components:

- **STOP VEHICLE ENGINE**, place transmission into park, engage parking brake, and remove key.

WHEN connecting and disconnecting Plow:

- DO NOT crawl or walk under the Plow when in storage position.
- Make sure Plow is properly attached to vehicle and the retaining pins, hardware, chains, and cables securely lock the Attachment into position.
- DO NOT attempt to disconnect trip edge by hand. Trip devices are spring loaded and sudden movement can occur resulting in serious injuries. *PN P-CD-01*

SAFETY

RUN OVER HAZARDS

		
Operator Run over hazard	Rider fall off Run over hazard	Rider fall off Run over hazard



TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF VEHICLE OR EQUIPMENT RUN OVER:

- **ONLY** start vehicle while seated in vehicle seat.
- **ALWAYS BUCKLE UP** seat belt when operating vehicle and equipment.
- **ONLY OPERATE** vehicle and equipment while seated in vehicle seat.
- **NEVER ALLOW RIDERS** on vehicle or implement.
- Ensure area is clear around vehicle and equipment before starting or operating equipment.

WHEN MOUNTING AND DISMOUNTING VEHICLE:

- **ONLY** mount or dismount when vehicle and moving parts are stopped.
- **STOP ENGINE**, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from vehicle. *PN P-RO-01*

SAFETY

THROWN OBJECTS HAZARDS

		
Plow Thrown Objects Hazard	Inspect Area Remove foreign objects	Do Not let Plow contact solid objects



PLOW IS CAPABLE OF PROPELLING OBJECTS UP TO 75 FEET.

TO AVOID SERIOUS INJURY TO OPERATOR OR PASSERSBY FROM THROWN OBJECTS:

- KEEP bystanders 100 feet away
- Stop plowing if bystanders are within the potential thrown area.

STOP PLOWING IF PASSERSBY ARE WITHIN 100 FEET:

- Make sure no bystander, animal or obstruction such as vehicle, building or street sign are within the width of plow.
- Avoid hitting solid, or oversized objects. Objects could become airborne and cause personal injury or damage to equipment.
- Remove or mark any foreign objects that could be propelled or cause damage to plow.

PLOW OPERATION:

- DO NOT exceed Plow's rated plowing speed.
- Ensure plow is equipped with warning signals to alert motorist and pedestrians.
- Always turn on all safety lights and flashers when operating plow. *PN P-TO-01*

SAFETY

BLADE CONTACT HAZARDS

		
Do not put fingers underneath Plow blade	Do not put foot underneath Plow blade	Stop Tractor Remove Key Read Manual

⚠ DANGER

KEEP AWAY FROM BLADE TO AVOID SERIOUS INJURY OR DEATH FROM BLADE CONTACT:

- **STAY AWAY** and **KEEP HANDS, FEET** and **BODY AWAY** from plow blade and parts until engine has come to a complete stop.
- **DO NOT** put hands or feet under plow blade.
- **STOP**, disengage power and ensure plow is resting and supported on blocks before adjusting plow blade.
- **STOP, LOOK**, and **LISTEN** before approaching the plow to make sure engine has stopped. PN P-BC-01

HIGH PRESSURE OIL LEAK HAZARD

		
High pressure oil penetrating skin	High pressure oil eroding skin	Using cardboard to check for oil leaks

⚠ DANGER

TO AVOID SERIOUS INJURY OR DEATH FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENERATING SKIN:

- **DO NOT OPERATE** equipment with oil or fuel leaks.
- **KEEP** all hydraulic hoses, lines and connections in **GOOD CONDITION** and **TIGHT** before applying system pressure.
- **RELIEVE HYDRAULIC PRESSURE** before disconnecting lines or working on the system.
- **REMOVE** and replace hose if you suspect it leaks. Have dealer test it for leaks.

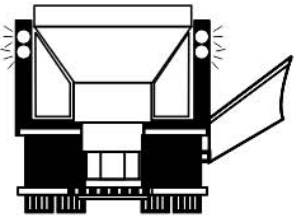


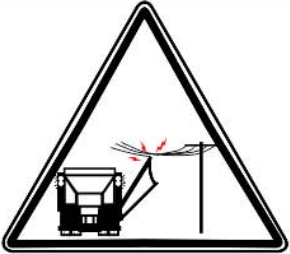
HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.

WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

- **ALWAYS WEAR** safety glasses and impenetrable gloves.
- **USE** paper or cardboard to search for leaks.
- **DO NOT USE** hands or body parts to search for leak.
- **KEEP** hands and body **AWAY** from pin holes and nozzles ejecting hydraulic fluid.
- Injected Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury. PN HP01

SAFETY

TRANSPORTING HAZARDS

			
Use reflectors and Flashing Lights	Loss of Control Speeding and Stopping Hazard	Engage Transport Pins on Plow	Plow contacting overhead electrical lines



TO AVOID SERIOUS INJURY AND DEATH WHEN OPERATING OR TRANSPORTING EQUIPMENT:

- **KEEP** transport speed to the posted speed limit to maintain control of equipment.
- **REDUCE SPEED** on inclines, on turns and in poor plowing conditions.
- **DO NOT TOW** with trucks or other vehicles use a flatbed vehicle to transport.
- **FOLLOW** all local traffic regulations.

BEFORE TRANSPORTING OR TOWING IMPLEMENT:

- Ensure equipment has been stowed in transport position and secured with safety latches or chains.

VEHICLE INSPECTION:

- **CHECK** steering and braking for proper operation and in good condition.
- **CHECK** that transport pins are engaged.
- **CHECK** reflectors and warning lights for proper operation and visibility behind unit.
- **ROUTINELY** inspect the equipment's headlights, brake lights, backup lights, and turn signal lights for operational condition.
- Always turn on all safety lights and flashers when you operate the implement.
- **CHECK** that your driving vision is not impaired by cab while seated in vehicle seat.
- **ADJUST** your operating position, mirrors, and implement transport for clear vision for traveling and traffic conditions.

DETERMINE STOPPING CHARACTERISTICS OF VEHICLE AND IMPLEMENT FOR TRANSPORTING OR OPERATING:

- With added weight and severe weather conditions stopping distances may increase.
- Only operate at speeds that you can properly control equipment.

DETERMINE MAXIMUM TURNING SPEED BEFORE OPERATING ON ROADS OR UNEVEN GROUND:

- **TEST** equipment in slowly increasing speed on turns to determine it can be operated at higher speeds.
- **USE REDUCED** turning speeds on sharp turns to avoid equipment turning over.
- Center of gravity may have shifted with equipment installation.

WHEN OPERATING OR TRANSPORTING EQUIPMENT:

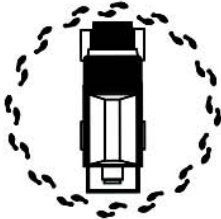
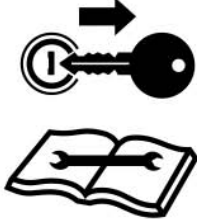

- Always **WEAR SEAT BELT** when operating or transporting spreader.
- **USE** low speeds to avoid overturn while operating or transporting.
- **USE** low speeds and gradual steering on curves, hills, rough or uneven surfaces and on wet roads.
- Use extreme caution when operating the equipment in traffic.
- Use all equipped warning signals to alert motorists and pedestrians of the presence of the equipment
- **DO NOT** leave piled material on roadway. Material can be a hazard to other motorists.

TO AVOID SERIOUS INJURY OR DEATH FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES AND UTILITY LINES:

- **INSPECT** area for overhead power lines, obstructions, cables and utility lines, municipal, or other type structure.
- **KEEP** Plow 10 feet or greater distance from all power lines and overhead obstructions.
- **DO NOT** allow Plow to contact with any utility, municipal, or type of structures and obstructions. **P-TH-01**

SAFETY

HAZARDS WITH MAINTENANCE OF IMPLEMENT

		
Periodically inspect all moving parts and tighten all fasteners	Stop engine and remove key before conducting maintenance	Secure body with blocks before doing any maintenance



AVOID SERIOUS INJURY OR DEATH FROM COMPONENT FAILURE BY KEEPING IMPLEMENT IN GOOD OPERATING CONDITION BY PERFORMING PROPER SERVICE, REPAIRS, AND MAINTENANCE.

BEFORE PERFORMING SERVICE, REPAIRS, AND MAINTENANCE ON THE IMPLEMENT:

SECURE EQUIPMENT FOR SERVICE

BLOCK OUT POTENTIAL ENERGY HAZARDS; Rotating Parts, Raised Components, Hydraulic Pressure.

- **STOP ENGINE**, engage parking brake, and allow all moving parts to stop and remove key before dismounting from vehicle seat.
- Securely block up raised equipment. Use large blocks on soft or wet soil.
- **PUSH** and **PULL** Remote Hydraulic Cylinder lever to relieve hydraulic pressure.
- **DISCONNECT IMPLEMENT** Hydraulic **HOSES** from vehicle.

WEAR SAFETY GLASSES, PROTECTIVE GLOVES and follow SAFETY PROCEDURES when performing service, repairs, and maintenance on the implement:

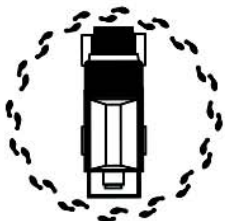
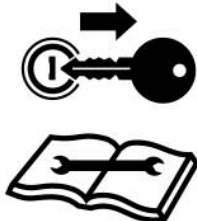

- Always **WEAR** protective **GLOVES** when handling chemicals or worn component with sharp edges.
- Always **WEAR GLOVES** and **SAFETY GLASSES** when servicing components.
- **AVOID CONTACT** with hot hydraulic oil or chemicals.
- **SECURELY** support or **BLOCK UP** raised implement, framework, and lifted components before working underneath equipment.
- **STOP** any implement movements and **SHUT-OFF VEHICLE** engine before doing any work procedures.
- **USE** step ladder or raised stands to reach high equipment areas inaccessible from ground.
- **ENSURE** good footing by standing on solid flat surfaces when getting on implement to perform work.
- **FOLLOW** manufacturer's instructions in handling oils, solvents, cleansers, and other chemical agents.
- **DO NOT** change any factory-set hydraulic calibrations to avoid component or equipment failures.
- **DO NOT** modify or alter implement, functions or components.
- **DO NOT WELD** or straighten broken, cracked or broken blade

PN P-HM-01

SAFETY

SAFETY

HAZARDS WITH MAINTENANCE OF IMPLEMENT CONTINUED

		
Periodically inspect all moving parts and tighten all fasteners	Stop engine and remove key before conducting maintenance	Secure body with blocks before doing any maintenance

WARNING

AVOID SERIOUS INJURY OR DEATH FROM COMPONENT FAILURE BY KEEPING IMPLEMENT IN GOOD OPERATING CONDITION BY PERFORMING PROPER SERVICE, REPAIRS AND MAINTENANCE.

PERFORM SERVICE, REPAIRS, LUBRICATION AND MAINTENANCE OUTLINED IN IMPLEMENT MAINTENANCE SECTION:

- **INSPECT** before each use for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys and washers on pins, and all moving parts for wear.
- **REPLACE** Blade or any worn or broken parts with authorized service parts.
- **LUBRICATE** unit as specified by lubrication schedule.
- Ensure all fluid levels are properly filled.
- **NEVER** lubricate, adjust or remove material while it is running or in motion.
- **TORQUE** all bolts and nuts as specified.
- Check tire conditions.
- Never remove debris or unclog jams from spring pressurized pinch points by hand.
- Avoid contact with recently used equipment that may still be hot.
- Ensure the scheduled maintenance is up to date.
- Do Not modify or alter equipment/plow.
- Do Not leave snow plow unattended while snow plow wing is in an unsecured raised position.
- Do Not crawl or walk under unsecured raised equipment.

SAFETY SHIELDS, GUARDS AND SAFETY DEVICES INSPECTION:

- **KEEP** all Steel Guards, Bands, and Skid Shoes in place and in good condition.
- Maintain Safety Signs and Decals in good readable condition.
- **REPLACE** any missing, broken or worn safety shields, guards and safety devices.
- Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. **PN P-HM-02**

SAFETY

PARTS INFORMATION

HENKE Snow Plows use balanced and matched system components for plows, hitches, and other components. These parts are made and tested to HENKE specifications. Non-genuine or "will fit" parts do not consistently meet these specifications. The use of non-genuine or "will fit" parts may reduce Snow Plow performance, void HENKE warranties, and present a safety hazard. Use genuine HENKE parts for economy and safety. (SNPG-6)

SEE YOUR HENKE DEALER

Operator's & Parts Manuals



www.algqr.com/hpm

SAFETY

DECALS

JRB-PLOW

Use the following decals from sheet 7332006-010.

Henke Part No.	Qty.	Description
7331004	1	Secure body with blocks
7331005	1	Stop Engine Stay clear of moving parts
7331006	2	Do not use hands to check for oil leaks High Pressure oil leak-injection
7331007	1	Read and understand operator's manual If you cannot read English get assistance
7331009	2	Read Manual before disassembling spring
7331010	2	Keep Clear, Pinch Point
7331011	1	Keep Push Frame parallel to ground
7331012	1	Raise plow before backing

(NOTE: Some decals on sheet 7332006-010 are not needed on this product. Discard decals not needed.)

Other Attachments and Decals

7330012	1	Serial Number Tag
7300047	1	Product Manual Canister

Instructions:

Follow these instructions to position the above items to your Henke product for safety and professional appearance. Apply on clean surfaces only. They should be properly applied and kept in good condition. If a decal is worn out, torn, or otherwise defaced, call us for an immediate replacement at 1-913-682-9000, or 1-888-682-9010.

DECALS

1. Position 7331007, 7331005, 7331004, 7331011, and 7331012 at the far LEFT edge of the Moldboard as shown.



DECALS

2. Position 7331006 (Qty. 2) on Hydraulic Cylinders as shown.
3. Position 7331010 (Qty. 2) as shown.



DECALS

4. Position 7331009 just outboard of Spring Joint on Moldboard, below Angle Support.
5. Position Product Manual Canister as shown.



In Season Maintenance

Snow removal equipment must be cared for and maintained regularly. Daily or pre-route inspection and maintenance are necessary. Failure to do so may affect efficiency and safety.

A visual inspection must be carried out after every 8 hours of operation. Look for damaged components, bends, cracked welds or hydraulic leaks. **REPAIR IMMEDIATELY!** It is recommended to re-torque all bolts after the first 8 hours of use and to regularly check for loosened or missing fasteners. Replace any damaged or missing fasteners immediately.

Because of the environment in which snow equipment is expected to operate, hydraulic lines, fasteners, wearable or replaceable items and warning decals may become damaged by snow, ice and road debris. These items must be inspected daily and replaced if necessary to avoid equipment damage or personal injury.

Lubrication of moving parts is of the utmost importance. Exposure to snow, ice, salt and road debris will wash away lubrication quickly and it may be necessary to inspect and reapply lubrication more than once a day.

END OF SEASON MAINTENANCE

GROUND ENGAGING COMPONENTS

- **CUTTING EDGES & GUARDS:** Replace any broken cutting edges, unevenly or excessively worn cutting edges, and broken or worn wear guards.
- **RUNNING GEAR:** Replace broken, worn, or missing running gear shoes, and any damaged adjuster leg components. Grease internal threads and sliding members (it's best to disassemble and grease directly; zerks aren't as effective at greasing these areas).
- **HARDWARE:** Replace missing or broken bolts. Proper torque is important! Use grade 8 plow bolts for steel cutting edges.

HYDRAULICS

- **HOSES:** Plug or cap any QC fittings or any open hose ends. Inspect hoses for any leaks or potential leaks. Secure hoses with hose clamps.
- **CYLINDERS:** Check for leaks, and any chrome rod dents or scratches. Apply a light coat of oil or grease on exposed rod surfaces.

FRAME AND MOLDBOARD

- **JOINTS:** Check pins, bushings, and pivot bolts for wear. Make sure all keepers are in place. Make sure shear bolts and pins are same as original equipment (usually grade 2). Some drivers don't like replacing shear pins and will install grade 8 replacements to avoid replacing during a storm. These items are designed to shear to protect the driver and the equipment. **CHECK WELDMENTS FOR CRACKS.**

CABLE AND SHEAVES (IF APPLICABLE)

- **CABLE:** Check cable thoroughly for fraying, kinks, and abnormal wear. Make sure cable is properly routed and seated in all sheaves. Verify that cable clamps have the proper torque and are in the correct orientation and spacing. Cable shall be checked prior to each use or after every 8 hours, whichever comes first.
- **SHEAVES:** Verify that sheave, bushings and retaining pins are in good condition and adequately greased. Make sure that sheaves, bushings and pins do not have any abnormal wear and rotate without restriction.

REPLACE WORN OR BROKEN PARTS FOUND BY ABOVE INSPECTIONS

Reversible Plow Set Up and Operation

WARNING! It is important that the snowplow be operated with the Circle Pushframe (Item 1, Figure 2) parallel to the ground. If the pushframe is not parallel to the ground, problems can occur with the plow reversing properly, and with the plow tripping properly when it encounters an obstacle. This also helps provide the proper moldboard layback angle and proper plowing position, which will allow proper operation of the plow trip mechanism, and optimal overall plow performance.

WARNING! Do not operate the snowplow with the loader arms in "FLOAT" mode. When the plow is operated with the loader arms in "float" mode, the circle pushframe is typically not parallel with the ground.

Operation in a significant out-of-level position can damage the plow swivel stops, trip mechanism, and structural members.

For new truck hitch installations, follow the mounting instructions to achieve the proper mount height, and resulting plow attaching height. (plow pin attaching height is approx. 14" for most plows, with the plow cutting edge resting on the ground.)

For pinning or coupling plows to existing hitches, select the proper mounting hole height for parallel operation, and install the hitch pin to secure the plow to the hitch. For some plows, the swivel plate can be flipped if additional up or down attaching distance is needed. If the above adjusting options do not provide reasonably parallel operation for your plow, mounting ears may need to be removed, repositioned, and reattached.

Attach plow lifting chain to the truck hitch lift arm, by first moving the lift arm parallel to the ground. Attach chain from plow frame to the lift arm by inserting the 7/16" chain link in the top center slot of the arm end plate. Raise plow and check for proper 10" ground clearance at the cutting edge. Adjust chain if necessary to accomplish 10" clearance. (For Hustling hitch designs, no lift chain is used, and ground clearance of 8-10" is acceptable)

Runner shoe adjustment (if equipped). Raise plow, retract running gear. Lower plow so the cutting edge is touching the ground. Lower running gear until full contact with the ground is made. Plow performs best when the weight of the plow is evenly distributed between the cutting edge and the runner shoes.

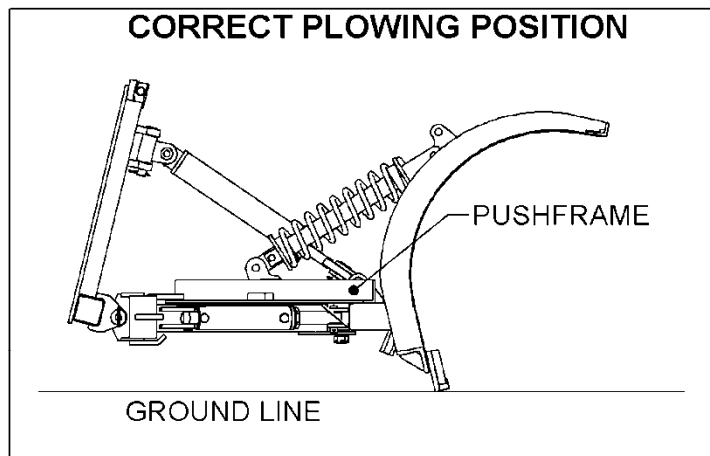
Follow your organization's procedure for walk around safety and vehicle checks before operating. Include the snow plow in this procedure to check for loose, missing, or excessively worn components. Check for cracks or breaks in the components and structure. Check for proper markers, reflectors and safety decals, if any. Replace any items as needed before operating.

Drive prudently for the road conditions. In good plowing conditions, reversible plows can generally be operated safely and with good results up to 30 mph; expressway and one way plows up to 40 mph.

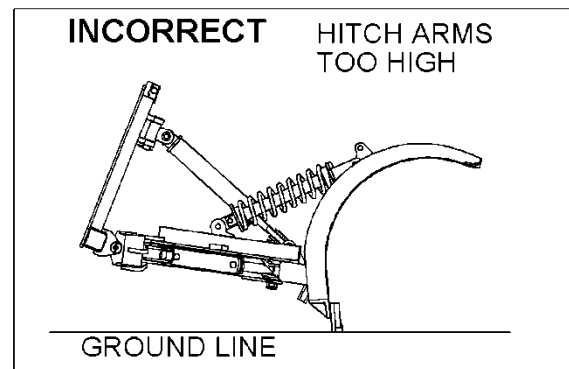
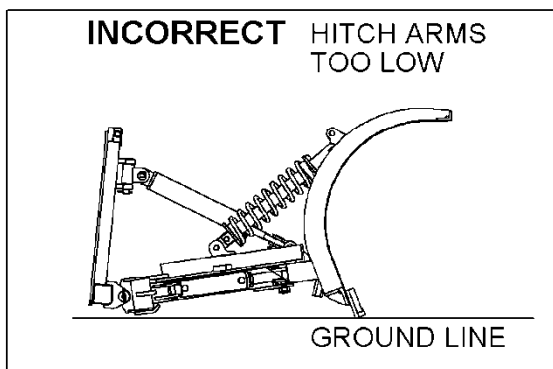
ALWAYS OPERATE PLOW WITH PUSHFRAME PARALLEL TO THE GROUND

This position will allow the plow to be reversed from side to side without damage to the plow components. This also allows the proper moldboard layback angle and proper plowing position. Use lift and tilt functions to accomplish this setting. This can be done by:

1. Raise the plow off the ground.
2. Fully reverse the plow to one side.
3. While lowering the plow using the lift function, adjust tilt so the push frame stays parallel to the ground. **STOP WHEN CUTTING EDGE CONTACTS THE GROUND.**



PUSHFRAME MUST REMAIN
PARALLEL TO THE GROUND
WHILE PLOWING.



DO NOT OPERATE IN "FLOAT" POSITION

**FIGURE 1-2 – Operating Plow with Pushframe Parallel
to Ground**

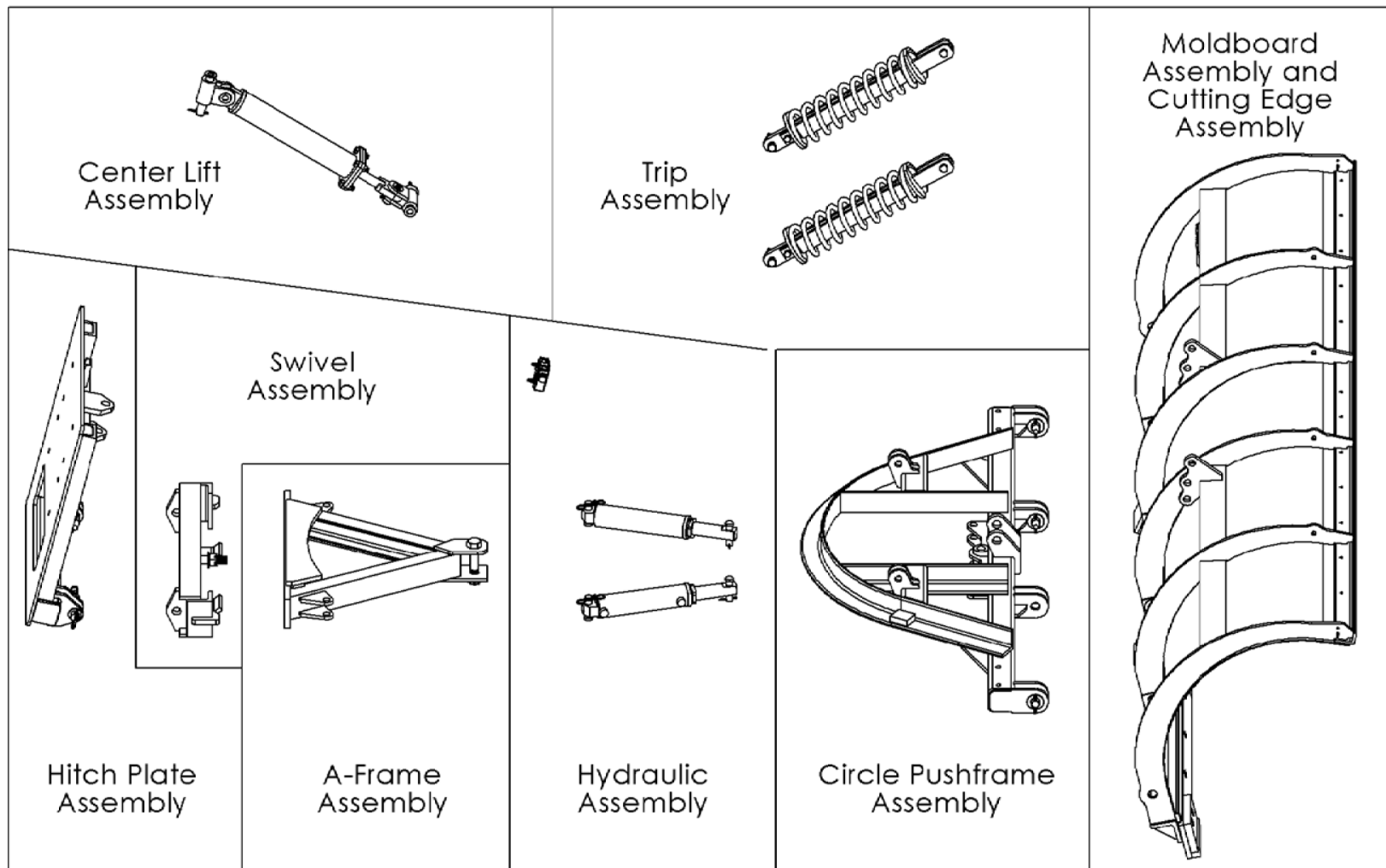


FIGURE 2-1 – JRB WL & LB – Large Assembly View
(Parts Views of the above large assemblies can be found on the following pages.)

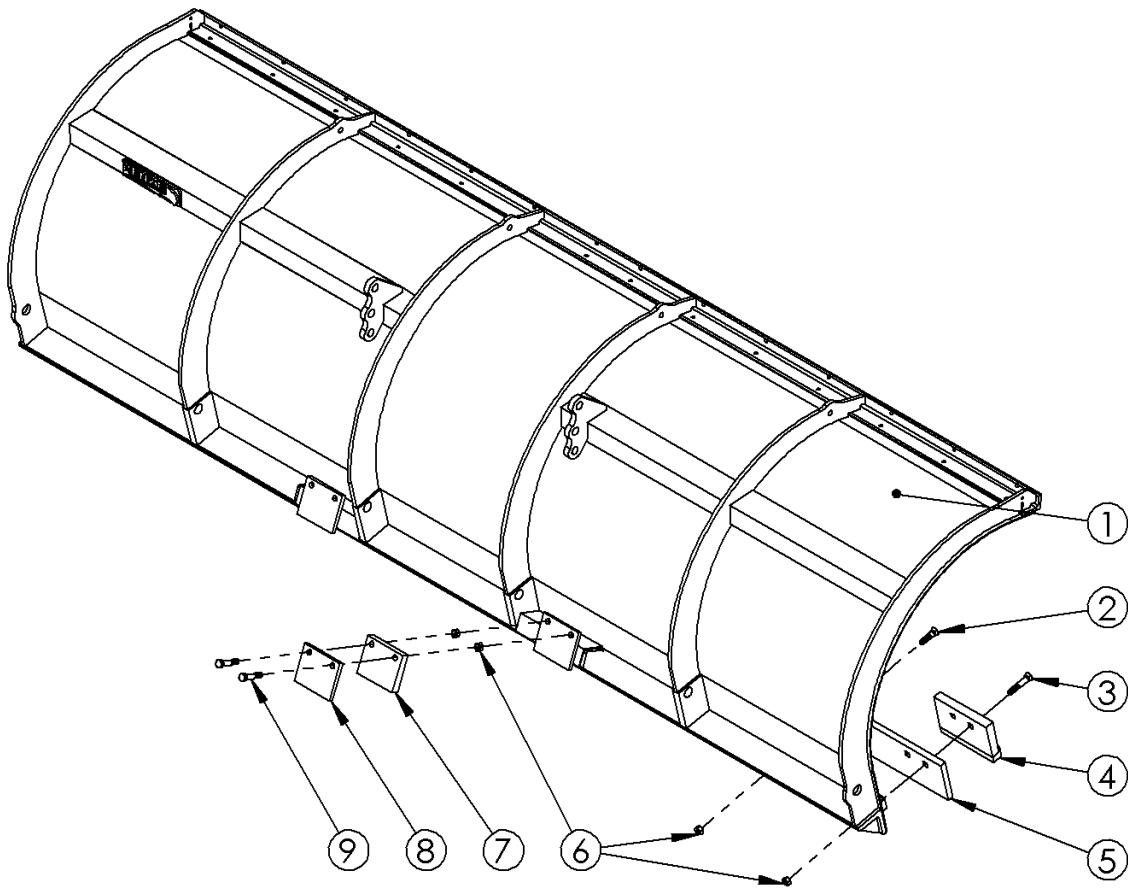


FIGURE 2-2 – Moldboard and Cutting Edge Assembly

**TABLE 2-1 – Moldboard and Cutting Edge Assembly,
Parts List**

Item No.	Qty.	Part No.	Description
1	1	139-1615	Moldboard Weldment – WL40R10
		139-1616	Moldboard Weldment – WL40R11
		139-1617	Moldboard Weldment – WL40R12
		139-1631	Moldboard Weldment – LB30R10
2	Varies	7150003	Plow Bolt, 5/8-11 x 2.5 GR. C
3	4	7150103	Plow Bolt, 5/8-11 x 3.5 GR. 8
4	2	7140106	Carbide Wear Guard (Old Number 7140005)
5	Varies	7150073	Cutting Edge, Steel, .75 x 6 x 36"
		7150072	Cutting Edge, Steel, .75 x 6 x 48"
6	Varies	7030084	Toplock Nut, 5/8-11 GR. C
7	2	1300-3301	Moldboard Trip Stop – Rubber
8	2	1300-3302	Moldboard Trip Stop Plate
9	4	7020162	Hex Capscrew, 5/8-11 x 3.0 GR. 8

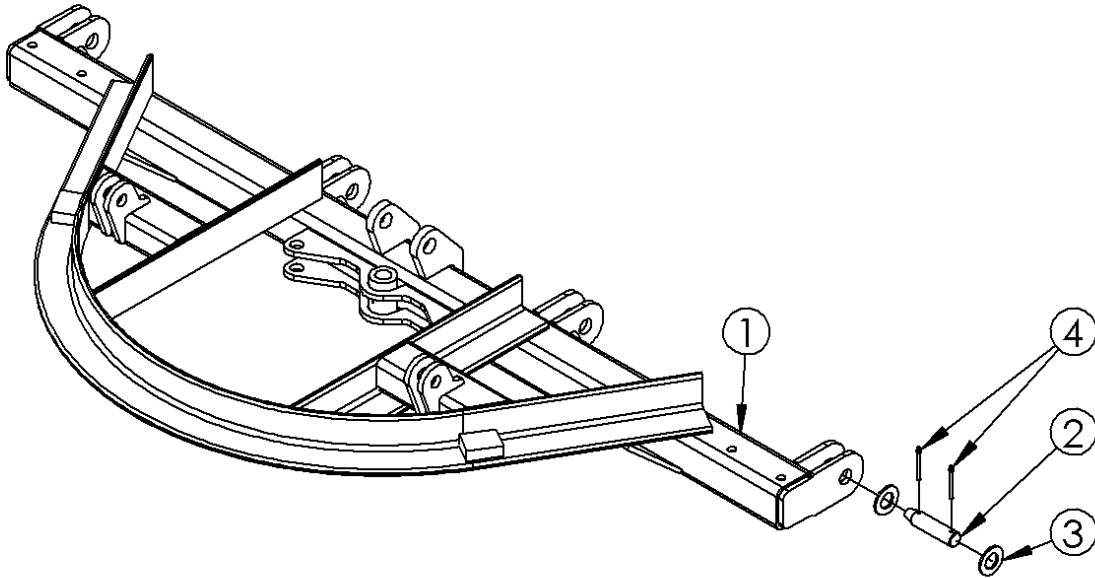


FIGURE 2-3 – Circle Pushframe Assembly

TABLE 2-2 – Circle Pushframe Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	1	Call Henke	Circle Pushframe Assy. – ECT - Industrial
2	4	1300-2936	Pin, 1.25 x 5.06 x 3.11
3	8	7040051	Flat Washer, 1 1/4 SAE
4	8	7050099	Cotter Pin, 1/4 x 2.5

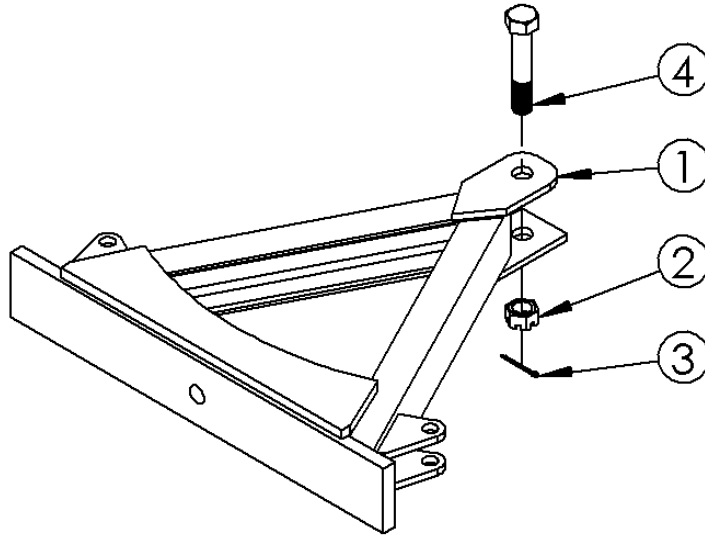


FIGURE 2-4 – A-Frame Assembly

TABLE 2-3 – A-Frame Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	1	139-0973	A-Frame Weldment
2	1	7030023	Slotted Nut, 1 1/4 -7
3	1	7050043	Cotter Pin, 3/16 x 2.5
4	1	1300-0053	Pivot Bolt

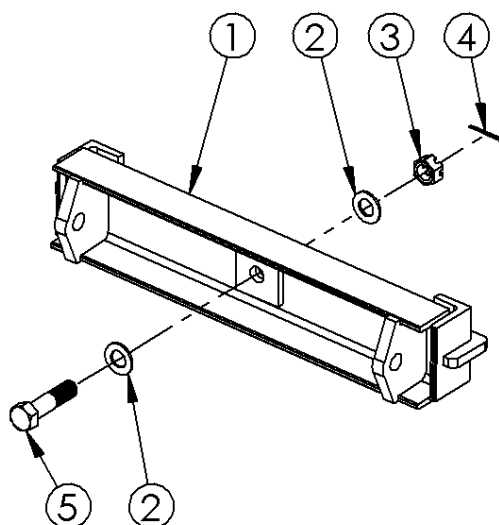


FIGURE 2-5 – Swivel Plate Assembly

TABLE 2-4 – Swivel Plate Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	1	139-1452	Swivel Plate Assembly
2	2	7040014	Flat Washer, 1 1/4 Hardened, SAE
3	1	7030023	Slotted Nut, 1 1/4 -7
4	1	7050043	Cotter Pin, 3/16 x 2.5
5	1	1300-0372	Swivel Bolt

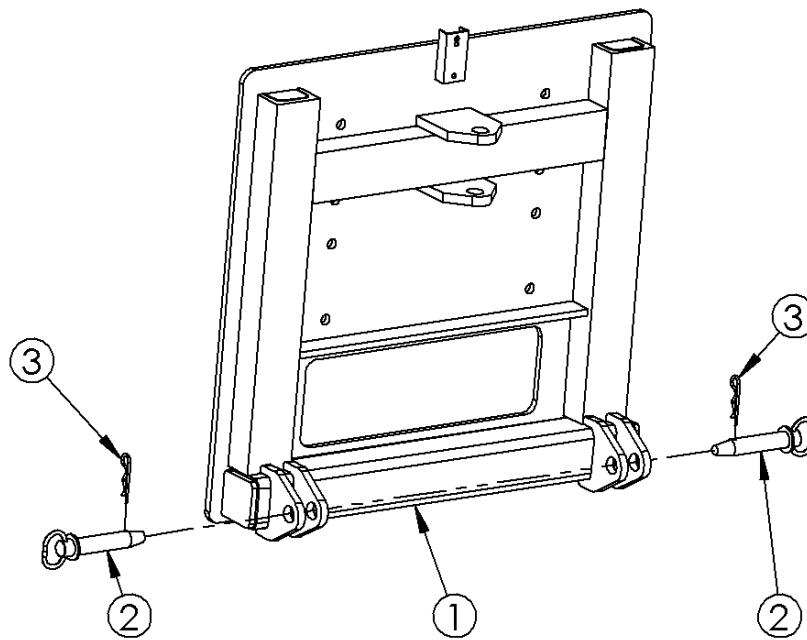


FIGURE 2-6 – JRB Hook Mounting Assembly

TABLE 2-5 – JRB Hook Mounting Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	1	139-1453	JRB Hook Mounting Assy.
2	2	139-0021	Pin Assembly
3	2	7050081	Hair Pin, #8 .177 x 3.75

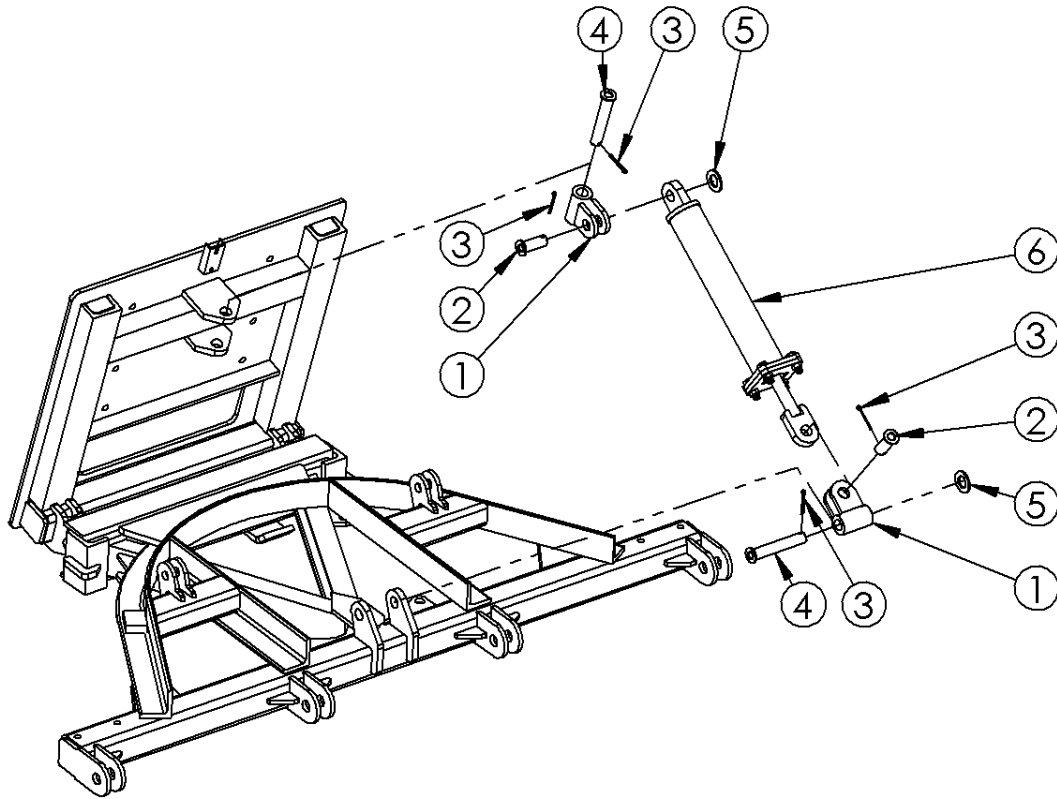


FIGURE 2-7 – Center Lift Assembly

TABLE 2-6 – Center Lift Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	2	139-0348	Knuckle Assembly
2	2	139-1657	Pin Assy., Short
3	4	7050099	Cotter Pin, 1/4 x 2.5
4	2	139-1656	Pin Assy., Long
5	2	7040051	Flat Washer, 1 1/4 SAE
6	2	139-1460P	Center Lift Spring-Cushion Lift Tube Assy, Painted (Orders Shipped 12/2007 and earlier.)
		149-0215P	Center Lift Spring-Cushion Lift Tube Assy, Painted (Orders Shipped 01/2008 and later.)
		See Figure 4	(See Spring-Cushion Lift Tube Figure for more details)

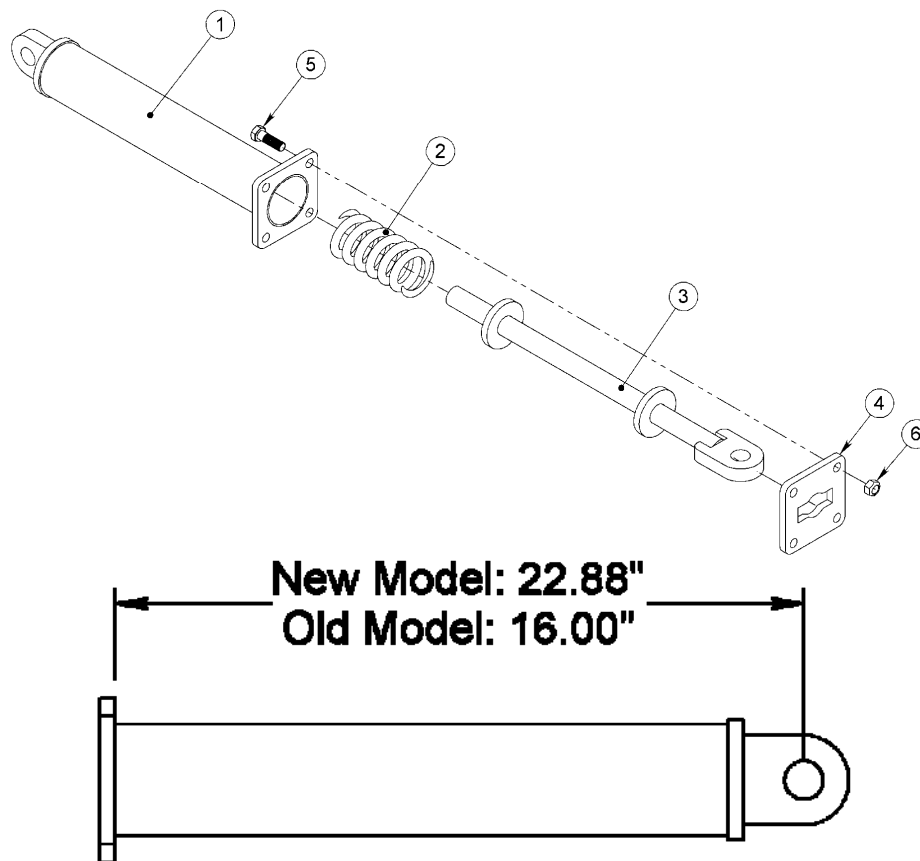


FIGURE 2-8 – Spring-Cushion Lift Tube Assembly

TABLE 2-7 – Spring-Cushioned Lift Tube Assembly, Parts List

Entire assembly shown may be ordered as:

1. New Model: 149-0215P (Contains 149-0216 and 149-0217).
2. Old Model: 139-1460P (Contains 139-1454 and 139-1455).

Item No.	Qty.	Part No	Description
1	1	149-0216	Outer Tube Assembly, JRB (JAN 2008 to present)
		139-1454	Outer Tube Assembly, JRB (DEC 2007 and earlier)
2	1	7070072	Spring MDPW, 6.75 x 3.38
3	1	149-0217	Shaft Assembly, JRB (JAN 2008 to Present)
		139-1455	Shaft Assembly, JRB (DEC 2007 and earlier)
4	1	1300-2602	Cap Plate
5	4	7020060	Hex Capscrew, 5/8-11 x 2.0 GR. 8
6	4	7030084	Toplock Nut, 5/8-11 GR. C

NOTE:

1. Assemblies contain pre-stressed spring (Item 2) under compression. However, spring is only slightly compressed and the bolts (Item 5) are long enough to allow the spring to return to its “free” length (unstressed) before the nuts come off of the bolts. Safe disassembly can be accomplished by partially loosening all four nuts until spring compression is fully relieved, then removing nuts.

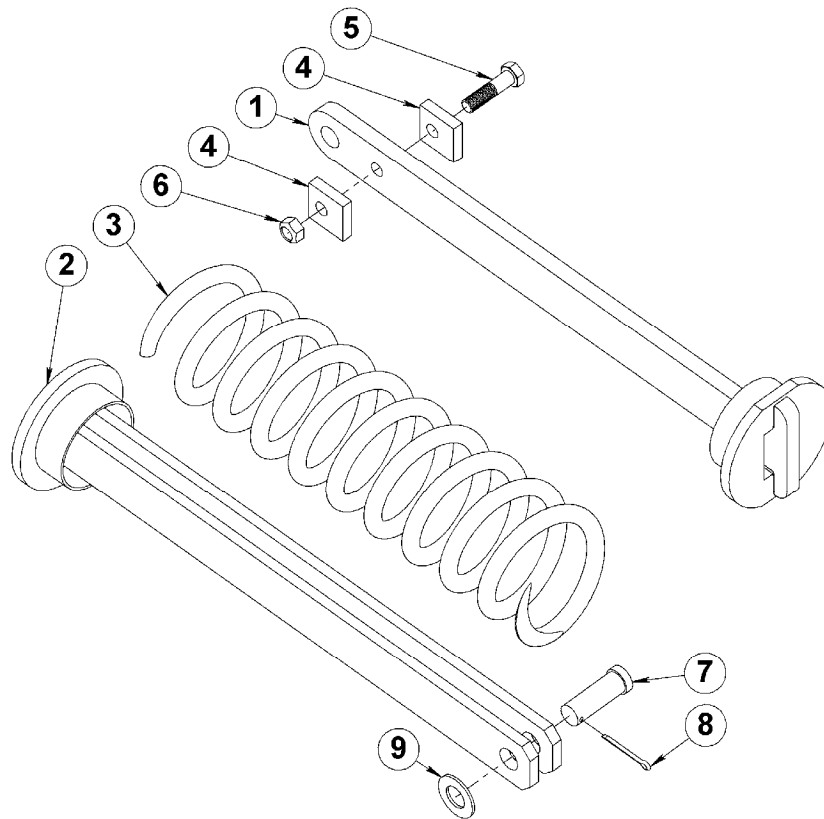


FIGURE 3-1 – External Compression Trip Assembly

TABLE 3-1 – External Compression Trip (ECT) Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	1	139-1596	ECT Weldment, Circle Pushframe End
2	1	139-1597	ECT Weldment, Moldboard End
3	1	7070025	Spring
4	2	1300-1543	Spring Compression Block
5	1	7020288	Bolt, 5/8-11 x 2.5 GR. 8
6	1	7030084	Toplock Nut, 5/8-11 GR. 8
7	2	7050100	Clevis Pin, 1 x 2.75
8	2	7050003	Cotter Pin, 3/16 x 2"
9	2	7040013	Flat Washer, 1" Hardened, SAE

NOTE: Entire assembly shown, less items 7 thru 9, may be ordered as **139-1598**. Ordering in this manner avoids all disassembly and assembly involving prestressed springs.

Warning:

THIS ASSEMBLY CONTAINS PRESTRESSED SPRINGS UNDER COMPRESSION. IMPROPER DISASSEMBLY MAY CAUSE SUDDEN RELEASE OF SPRING ENERGY, WHICH COULD RESULT IN SERIOUS INJURY.

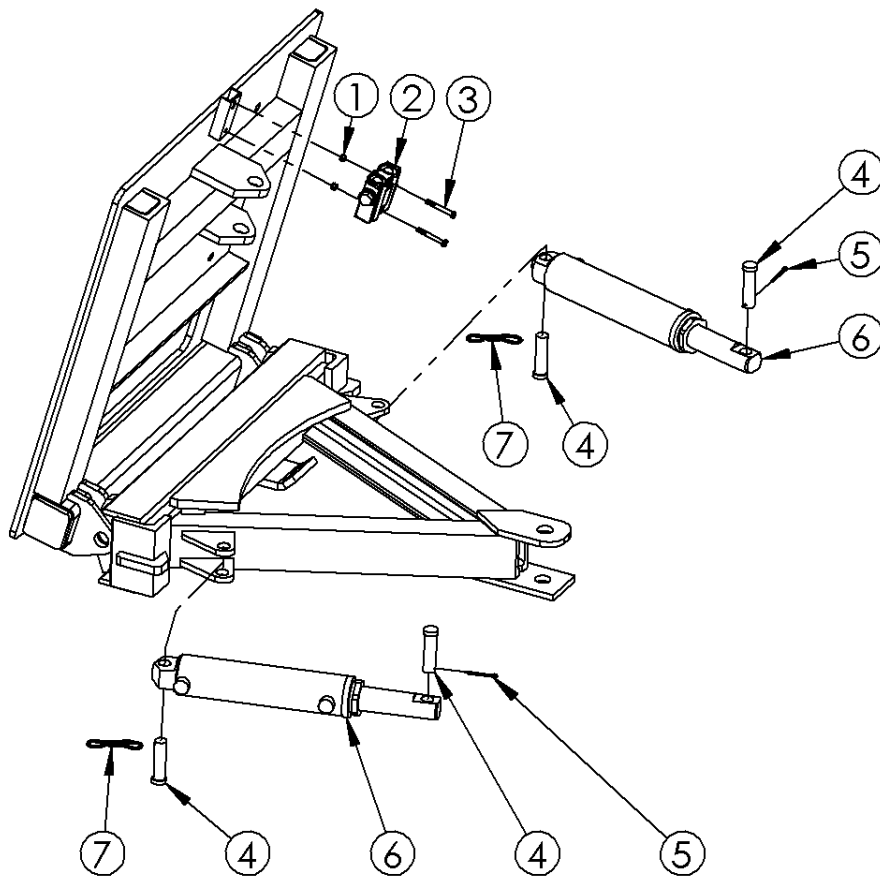


FIGURE 4-1 – Hydraulic Assembly

TABLE 4-1 – Hydraulic Assembly, Parts List

Item No.	Qty.	Part No.	Description
1	2	7030086	Nylock Nut, 5/16-18
2	1	7080322	Cushion Relief Valve, 2000 psi
3	2	7020371	Hex Capscrew, 5/16-18 x 2.5 GR. 5
4	4	7050082	Clevis Pin, 1.0 x 3.5
5	2	7050003	Cotter Pin, 3/16 x 2.0
6	2	7081226	Hydraulic Cylinder, 3 x 10 x 2" Dual-Acting (For 10', 11', and 12' Plows ONLY)
		7080236	Hydraulic Cylinder, 4 x 10 x 2" Dual-Acting (For 14' and 16' Plows ONLY)
7	2	7050123	Bow-Tie Cotter, .177 x 4.50

TABLE 4-2 – Hydraulic Hoses and Fittings, Parts List

Qty.	Part No.	Description
1	1300-0276	Cushion Valve Plate
1	7080322	Cushion Relief Valve, 2000 PSI (Standard for Most Plows)
	7080133	Cushion Relief Valve, 2500 PSI (Standard for 48R & Expressway Plows)
3	7090415	Clamp Base 3/8 2-Hose
2	7090554	Dust Plug for 7090552
2	7090552	Quick Coupler
2	7110694	Hose Assy., 1/2-2 x 48", -8 JIC F -8 NPT M
2	7090284	Elbow, 45, -08 JIC Male to -10 ORB Adj. Male
2	7090502	Elbow, 90, -06 JIC Male to -10 ORB Adj. Male
1	7110570 *	Hose Assy., 3/8 x 28", -6 JIC F e/e
3	7110571 *	Hose Assy., 3/8 x 44", -6 JIC F e/e
2	7110572 *	Hose Assy., 3/8 x 36", -6 JIC F e/e
2	7090388 *	Elbow, 90°, -6 JIC M x -8 ORB Adj. Male
2	7090373 *	Straight Adapter, -6 JIC M x -8 ORB Male
2	7090387 *	Tee, -6 JIC Male
3	7090416 *	Clamp Pair, 3/8 2-Hose
3	7090417 *	Clamp Cover Plate, 3/8 2-Hose
3	7020011 *	Bolt, 5/16-18 x 1.25", Zinc Plated
2	1300-3107 *	NHS-125 Nylon Sleeve, Cut to 18"

* NOTE 1: INCLUDED IN 7080421 STANDARD HYDRAULIC KIT

NOTE 2: Two (2) extra (4 total) 7090373 come in 7080421.

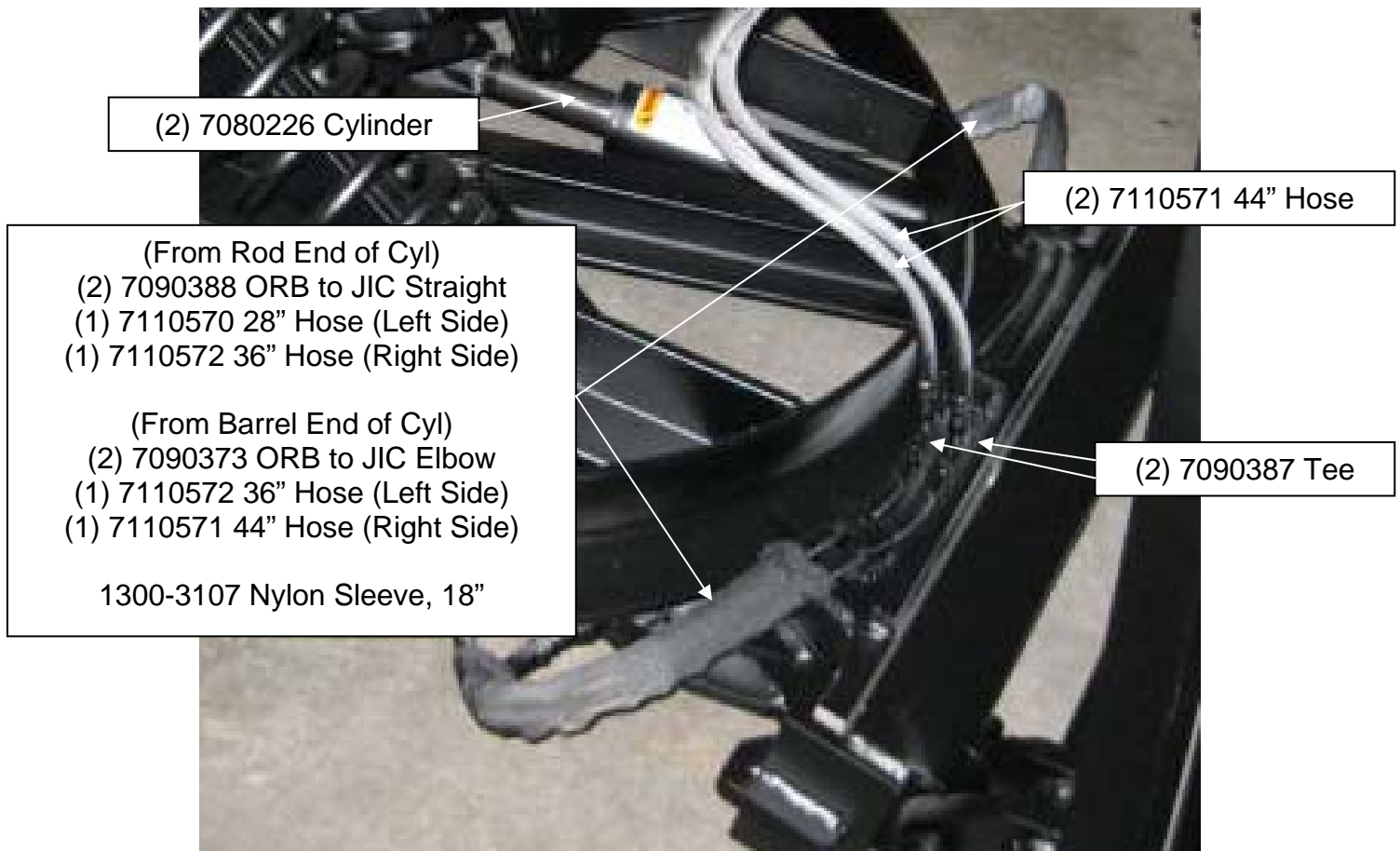
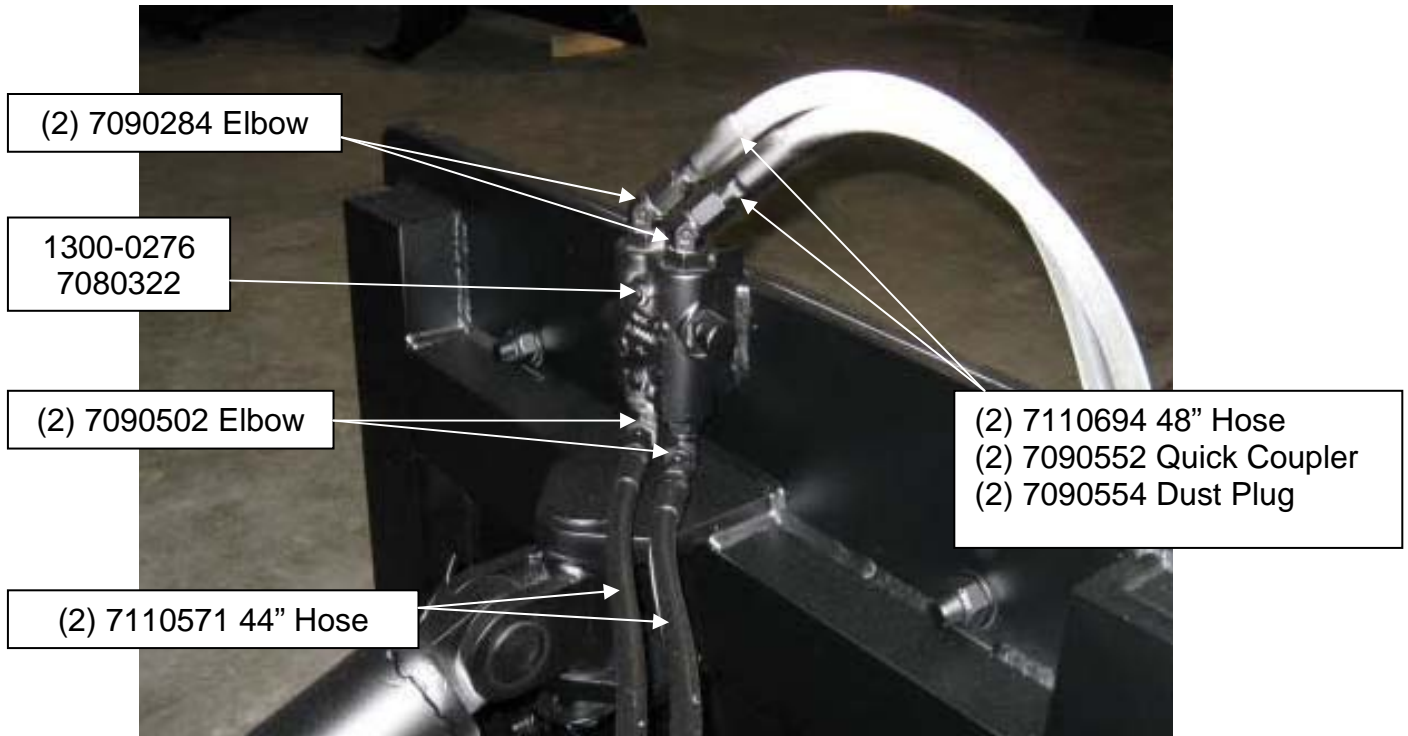


FIGURE 4-2 – Hydraulic Hoses & Fittings

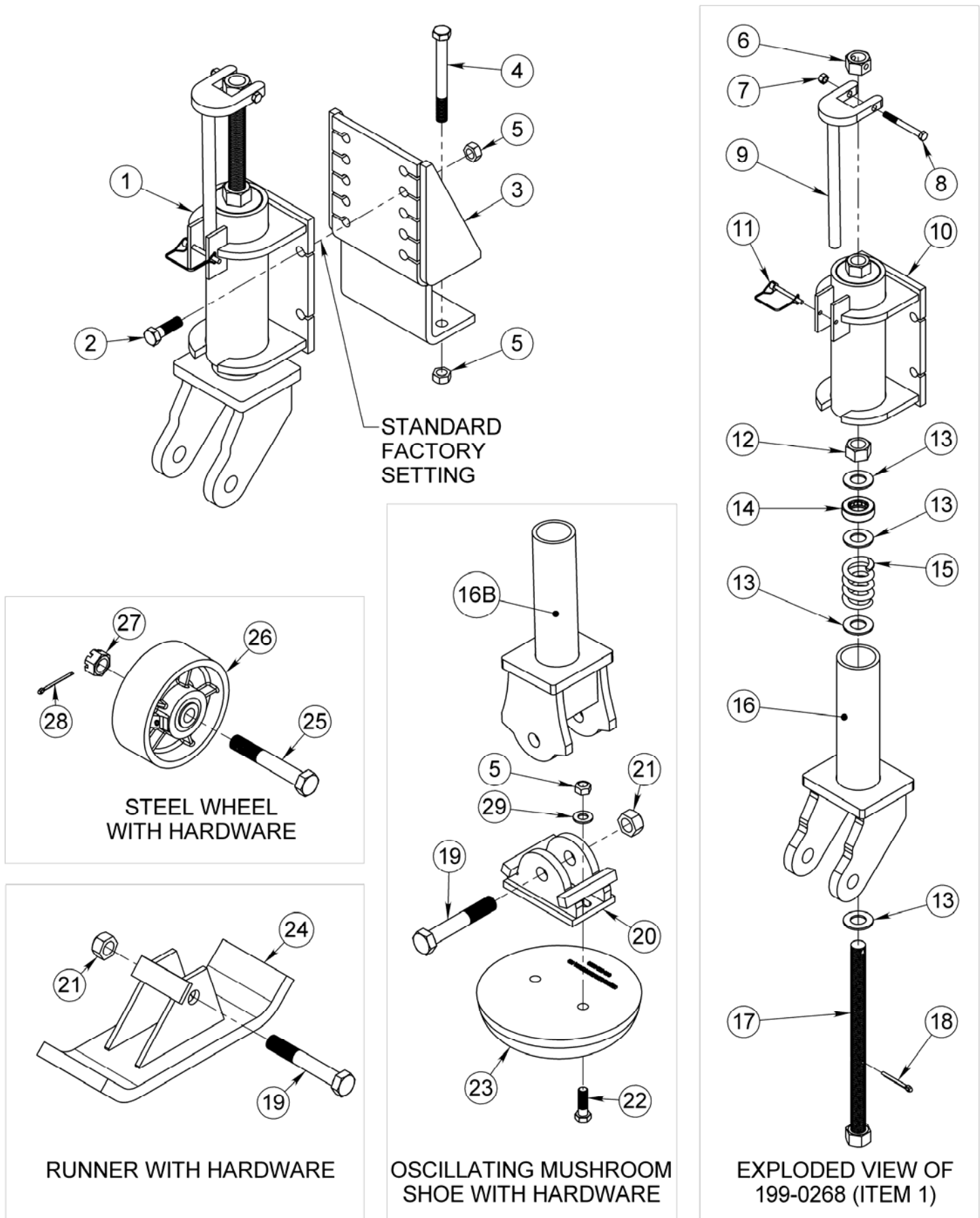


FIGURE 5-1 – Exploded Views: Spring Loaded Running

TABLE 5-1 – Spring Loaded Running Gear, Parts List

Item No.	Qty.	Part No.	Description
1	1	199-0268	Spring Loaded Running Gear w/o Mount
2	4	7020060	Hex Capscrew, 5/8-11 x 2 GR. 8
3	1	199-0066	Mounting Assembly
4	2	7020067	Hex Capscrew, 5/8-11 x 6 GR. 5
5	6	7030084	Toplock Nut, 5/8-11 GR. C
6	1	1300-2377*	Crank Handle Nut
7	1	7030006*	Nylock Nut, 3/8-16
8	1	7020117*	Hex Capscrew, 3/8-16 x 3.5 GR. 5
9	1	139-1288*	Crank Handle
10	1	199-0267*	Outer Tube Assembly
11	1	7050096*	Safety Snap Pin, 1/4 x 2.25
12	1	7030016*	Nut, 1-8 GR. 8
13	4	7040013*	Flat Washer, 1", SAE Thru-Hard
14	1	7010050*	Bearing
15	1	7070013*	Spring
16	1	139-1290*	Inner Tube Assembly
16B	1	199-0364	Inner Tube Assembly for Mushroom Shoe
17	1	139-1291*	Shaft Assembly
18	1	7050041*	Cotter Pin, 1/4 x 2
19	1	7020100	Hex Capscrew, 1-8 x 6.5 GR. 5
20	1	199-0365	Mushroom Shoe Adaptor
21	1	7030049	Toplock Nut, 1-8 GR. C
22	2	7020060 <u>or</u> 7020288	Hex Capscrew, 5/8-11 x 2 GR. 8 (7.5" MS) <u>or</u> Hex Capscrew, 5/8-11 x 2.5 GR. 8 (11" MS)
23	1	7140001	11" Mushroom Shoe
24	1	199-0411 199-0281	1 x 6 Hitop Runner 1 x 6 Hitop Runner w/ Carbide
25	1	1300-2373	Shoe Bolt
26	1	199-0221	Steel Wheel, 3 x 8, Complete
27	1	7030018	Slotted Nut, 1-8
28	1	7050043	Cotter Pin, 3/16 x 2.5
29	2	7040006	Flat Washer, 5/8" Hardened, SAE

NOTE:

1. Quantities given are for one running gear assembly. Two complete assemblies are required per plow.
2. Part Numbers marked with a * are included in assembly 199-0268 (Item 1).

FIGURE 5-2 – Henke 8” Steel Wheel Assembly, Parts List

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	7140068	Grease Seal
2	2	7140080	Bearing Cup
3	2	7140081	Bearing Cone
4	2	7140082	Spacer
5	1	199-0221	Steel Wheel Complete (Includes All Items Shown)
6	NA	199-0222	Steel Wheel Bearing Kit (Includes (2) ea. of 1, 2, 3, & 4)

NOTE: Entire Wheel Assembly (including bearings, seals, & spacers) May Be Ordered As 199-0221

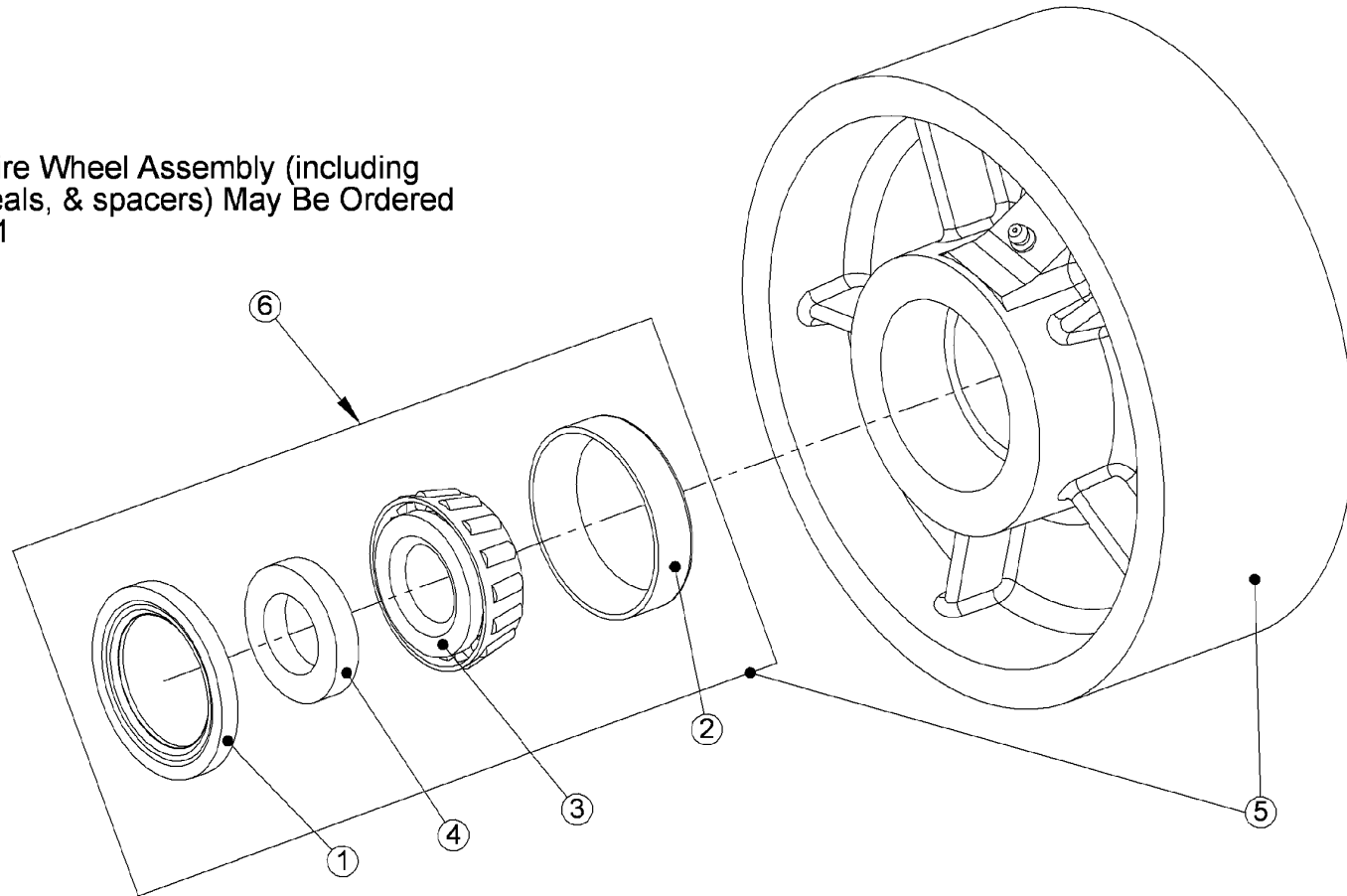
**FIGURE 5-2 – Henke 8” Steel Wheel Assembly**

TABLE 5-3 – Mushroom Shoe Assembly, Parts list

Item No.	Qty.	Part No.	Description
1	1	199-0376	Outer Tube Assembly
2	1	199-0044	Inner Tube Assembly
3	1	7140001	Mushroom Shoe, 11"
4	1	199-0041	Acme Screw Assembly
5	4	7020060	Hex Capscrew, 5/8-11 X 2 GR. 8
6	2	7020288	Hex Capscrew, 5/8-11 X 2.5 GR. 8
7	8	7030084	Toplock Nut, 5/8-11 GR. C
8	1	199-0019	Crank Assembly
9	1	7020117	Hex Capscrew, 3/8-16 X 3.5 GR. 5
10	1	7030006	Nylock Nut, 3/8-16
11	1	199-0066	Mounting Assembly
12	2	70020067	Hex Capscrew, 5/8-11 X 6 GR. 5

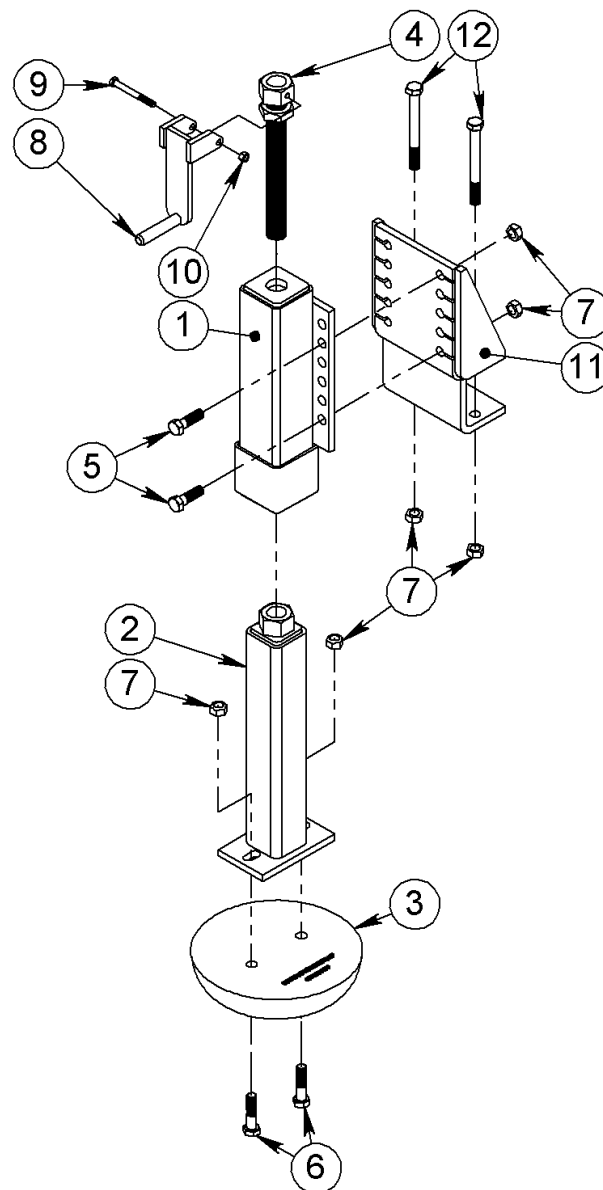


FIGURE 5-3 – Mushroom Shoe Assembly

TABLE 5-4 – Pneumatic Running Gear, Parts List

Item No.	Qty.	Part No.	Description
1	1	7020117	Hex Capscrew, 3/8-16 x 3.5 GR. 5
2	1	199-0019	Running Gear Crank Assembly
3	1	7030006	Nylock Nut, 3/8-16
4	1	199-0041	ACME Screw Assembly
5	1	199-0361	Outer Tube & Yoke Assembly
6	2	7020067	Hex Capscrew 5/8-11 x 6 GR. 5
7	1	199-0362	Inner Tube Assembly
8	2	7030084	Toplock Nut, 5/8-11 GR. C
9	1	199-0294	Pneumatic Hub & Wheel Assembly, 5 - Lug

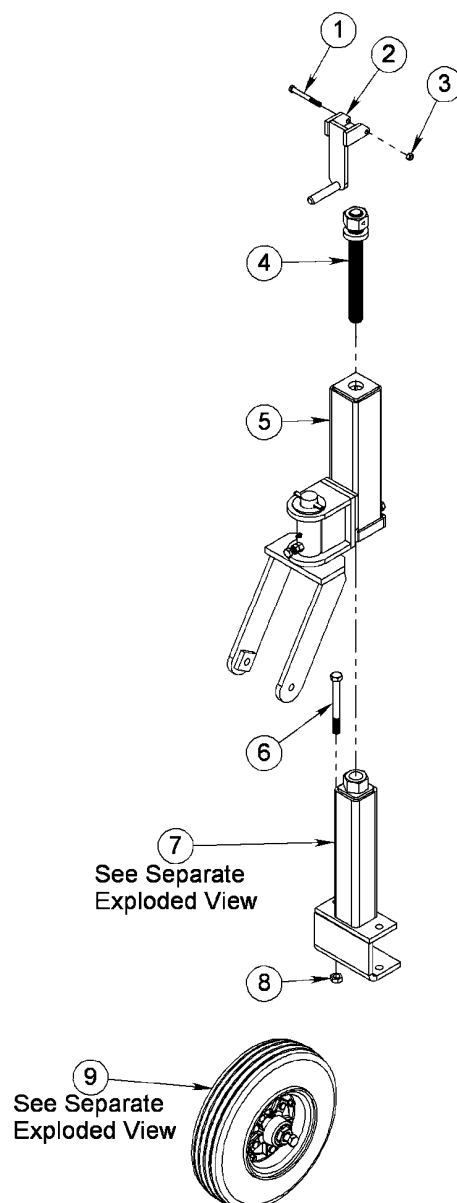


FIGURE 5-4 – Pneumatic Running Gear

TABLE 5-5 – Pneumatic wheel Kit 5-Lug Hub, Parts List

Item No.	Qty.	Part No.	Description
1	1	7140095	Pneumatic Rim & Tire Assy, 2 Piece, 5-Lug
2	1	199-0295	Hub & Spindle Group Assy – 5-Lug
3	1	199-0296	Hub Group Assembly
4	5	7030039	Lug Nut, 1/2-20
5	2	7010023	Bearing Cup
6	2	7010003	Bearing Cone
7	2	7140067	Grease Seal
8	1	1900-0070	Spindle
9	2	1900-0154	Spindle Nut
10	1	7020070	Hex Capscrew, 5/8-11 x 8 GR. 5
11	1	7040006	Flat Washer, Hardened, 5/8 SAE
12	1	7030084	Toplock Nut, 5/8-11 GR. C
13	1	7090111	Grease Fitting, 1/4-28 Straight

NOTE: Entire assembly shown may be ordered as **199-0294**.

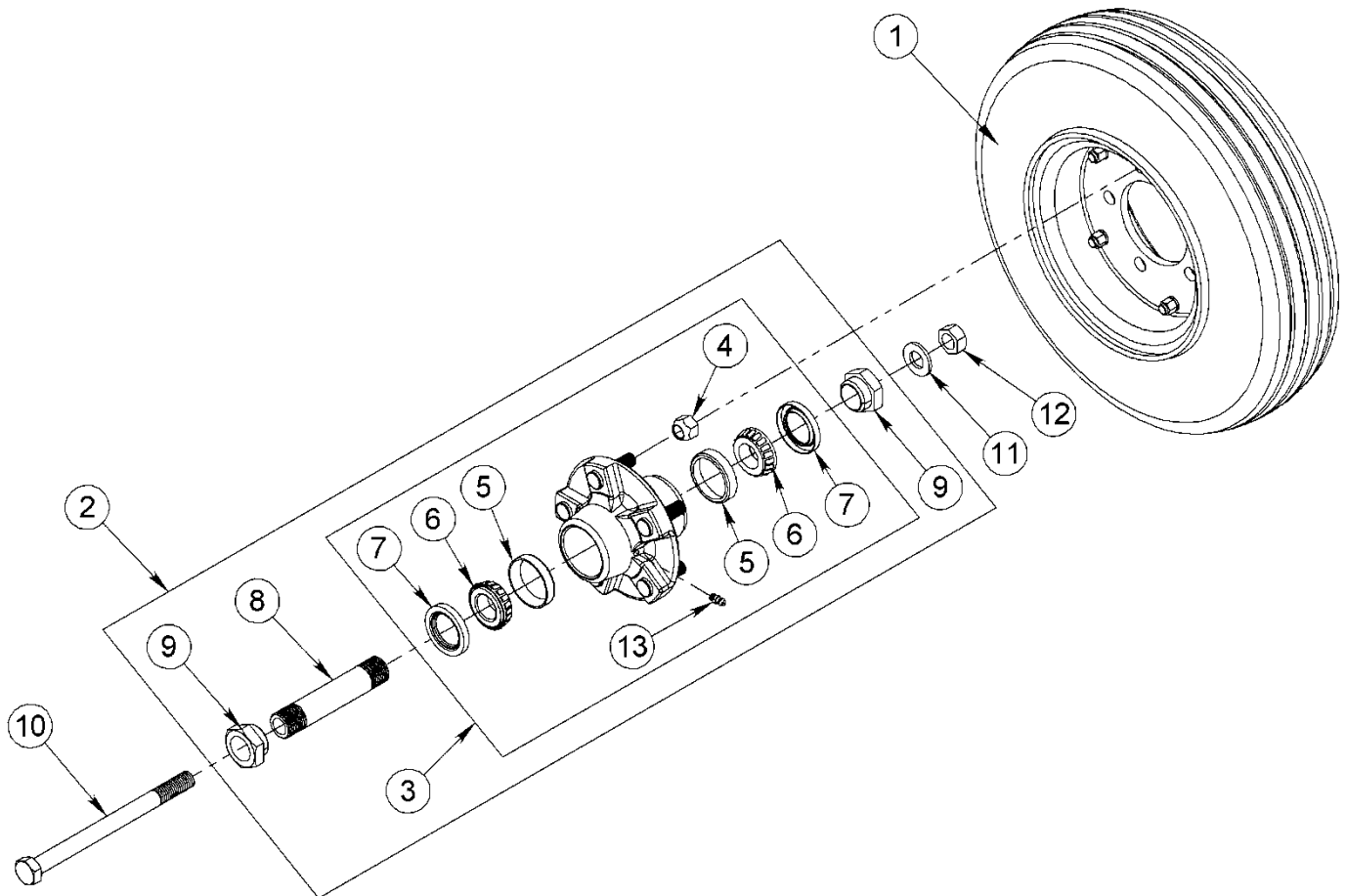


FIGURE 5-5 – Pneumatic wheel Kit 5-Lug Hub

**TABLE 5-6 – Outer Tube & Yoke Assy,
Parts List**

Item No.	Qty.	Part No.	Description
1	1	199-0060	Outer Tube Assembly
2	1	199-0062	Yoke Assembly
3	1	7040024	Flat Washer, 1-1/2 Hardened, SAE
4	1	7050029	Roll Pin, 3/8 x 3.5
5	1	1900-0075	Damper Pad
6	1	7090085	Grease Zerk, 1/8 NPT
7	3	7020120	Hex Capscrew, 1/2-13 x 1.5 GR. 5
8	3	7030009	Nut, 1/2-13 GR. 8

NOTE: Entire assembly shown may be ordered as **199-0061**.

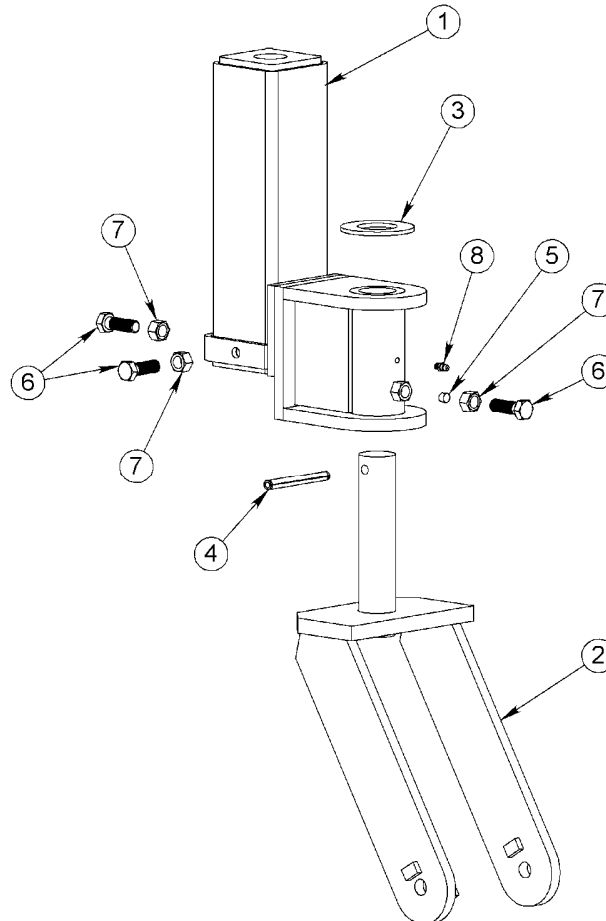


FIGURE 5-6 – Exploded View: Outer Tube & Yoke Assembly

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TABLE 6-1 – Henke Standard Cutting Edges

6" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
2FT.	Call	7150119	7150189
3FT.	7150153	7150120	7150073
4FT.	7150154	7150129	7150072
5FT.	7150007	7150184	7150026
6FT.	Call	Call	7150004
7FT.	Call	Call	7150028
8FT.	7150172	Call	Call
9FT.	Call	Call	7150036
10FT.	7150008	7150090	7150197
11FT.	7150009	7150089	7150031
12FT.	7150010	7150082	7150032

CP 6" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
3FT.	7150186	Call	Call
4FT.	7150187	Call	Call

CP 10" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
10FT.	Call	Call	7150050

CARBIDE	3/4" THICK
3FT.X5" TALL	Call
3FT.X6" TALL	7150035
3FT.X8" TALL	7150163
4FT.X5" TALL	7150123
4FT.X6" TALL	7150025
4FT.X8" TALL	7150164
5FT.X8" TALL	7150097
6FT.X6" TALL	7150124

8" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
2FT.	7150039	7150077	Call
3FT.	7150037	7150078	Call
4FT.	7150038	7150079	Call
5FT.	7150011	Call	7150054
6FT.	7150005	7150081	7150055
8FT.	7150012	Call	7150042
9FT.	7150013	7150045	7150046
10FT.	7150014	7150043	7150047
11FT.	7150015	7150040	7150048
12FT.	7150016	7150044	7150049

CP 8" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
3FT.	7150021	Call	Call
4FT.	7150022	Call	Call
10FT.	7150017	Call	7150171
11FT.	7150018	7150169	Call
12FT.	7150019	7150056	Call

RUBBER Notes 5&6	1 1/2" THICK X10" Tall CP	RETAINING STRIP
8FT.	3500-0008	3500-0026
9FT.	3500-0009	1300-2223
10FT.	3500-0010	1300-0394
11FT.	3500-0011	1300-0395
12FT.	3500-0012	1300-0396
14FT.	3500-0014	1300-0401
16FT.	3500-0016	1300-0402

SNOW BASKET	1" THICK X10" Tall CP
8FT.	7150052
9FT.	7150053
10FT.	7150088

NOTES:

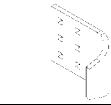
1. For Cutting Edges Not Listed Call Henke Manufacturing at 1-888-682-9010.
2. Except as noted, all cutting edges have 1.5" gauge line (distance from top edge to center of holes)
3. "CP" = Center Punched
4. All edges shown are punched for 5/8" bolts.
5. For rubber cutting edges, 6" tall center punched steel edges, Items 7150186 & 7150187 may be used to provide proper support behind the rubber edge.
6. Henke's rubber cutting edges feature a minimum tensile strength of 2000 psi and a maximum DIN rating of 150, and last much longer in service than lower quality rubber cutting edges available from some other suppliers.
7. Polyurethane cutting edges also available - call for price and availability.

TABLE 6-2 – Henke Standard Cutting Edge Hardware

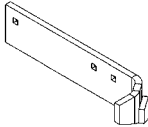
TYPE	LENGTH	PART NO.	USES/NOTES
PLOWBOLTS 5/8-11 GRADE 8	2" 2 ½" 3" 3 ½" 4" 4 ½" 5" 6"	7150001 7150003 7150002 7150103 7150105 7150106 7150108 7150107	FOR STANDARD CUTTING EDGES AND WEAR GUARDS
CARRIAGE BOLTS 5/8-11 GRADE 8	3" 4" 5" 6"	7020280 7020287 7020359 7020363	FOR SOME WRAPAROUND CURB GUARDS (SQUARE HOLES, NOT COUNTER SUNK)
HEX BOLTS	4" 4 ½" 5"	7020064 7020128 7020295	RUBBER AND POLY CUTTING EDGES (USE NYLOCK NUTS ONLY)
TOPLOCK NUT 5/8-11 GRADE C	N/A	7030084	USE WITH STEEL OR CARBIDE CUTTING EDGES
NYLOCK NUT 5/8-11 GRADE 8	N/A	7030095	USE WITH RUBBER OR POLY CUTTING EDGES

TABLE 6-3 – Henke Standard Curb Guards & Wear Guards

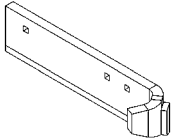
Wrap-Around Curb Guards, Steel

	7150122	6", Left
	7150121	6", Right
	7150117	8", Reversible

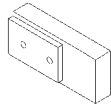
Wrap-Around Curb Guards, Chrome-Carbide Weld Deposit on Wrap-Around Corner

	7150125	6", Left
	7150126	6", Right
	7150115	8", Left
	7150118	8", Right

Wrap-Around Curb Guard + Wear Guard, Chrome-Carbide Weld Deposit on Wrap-Around Corner + on Bottom Wear Edge


	7150113	6", Left
	7150114	6", Right
	7150130	8", Left
	7150131	8", Right

Bolt-On Curb Guards (Bolts to Outside of End Rib)


	139-1046	Bolt-On Guard Assy.
	1300-1633	Optional spacer (Required for Tripedge applications)

Henke Wear Guards and Wear Shoes

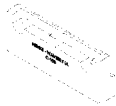
Wear Guards, Standard Length (9"), with Chrome-Carbide Weld Deposit (Mount in front of cutting edge)

	7140106	6", Reversible
	7140107	8", Reversible


Wear Guards, Long Length (21"), with Chrome-Carbide Weld Deposit (Mount in front of cutting edge)

	7140108	6", Reversible
	7140008	8", Reversible

Cast Wear Shoes (Mount behind cutting edge)w

	7140004	Wear shoe for 6" cutting edges, or 8" center-punched edges
	7140002	Wear shoe for 8" cutting edges

Bottom Angle Saver (Mount behind of Bottom Angle)

	199-0280	Bottom Angle Saver with Carbide Strip
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HENKE

LIMITED WARRANTY

1. LIMITED WARRANTIES

- 1.01. Henke warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for twelve months to the original commercial or industrial purchaser
- 1.02. Manufacturer will repair or replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.
- 1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This warranty does not include normal wear items such as cutting edges, wear guards, scarifier teeth, etc. or improper installation. HMC warranty for any purchased components, such as hydraulic cylinders will be superceded by, and equal to the component manufacturer warranty.
- 1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

- 2.01. Warranty claims must be filled within 30 days of repair work during the one year warranty period and will be honored only if the completed warranty registration form has been returned. Henke reserves the right to require proof of purchase of original Henke replacement parts. If warranty is approved any allowed shipping expenses will be based on and will not exceed standard base shipping charges.
- 2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.
- 2.03. Purchaser is responsible for returning the goods in question to the Dealer.
- 2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:
 - (a) Repair or replace the defective goods or part(s) or
 - (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

- 2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

- 3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

- 4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Leavenworth County, Kansas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Henke Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION:

READ YOUR OPERATOR'S MANUAL

HENKE MANUFACTURING

An Alamo Group Company

3070 Wilson

Leavenworth, KS 66048

888-682-0300



Dealer Warranty Procedure

For units delivered within the past 12 months, report any warranty problems needing repair to our Product Support Department. Please have information ready regarding:

1. Henke unit model and serial number,
2. Model of equipment Henke unit is attached to (prime mover)
3. Description of the problem and any helpful information by the end user. (Photos are always helpful).

Measurements or photos may be requested by Henke engineering for any issues regarding prime mover proximity and clearance, or any other unique considerations of fit and adaptability. These may be necessary for a proper repair recommendation and procedure.

Henke will respond with a written labor hour allowance for Henke participation on a faxed claim form and will ship any required replacement parts. If necessary, a repair procedure will be included on the claim form. A parts invoice will be generated to confirm shipment of the replacement parts.

If defective parts are needed for analysis, Henke will request their return. Any such returned items are to be labeled with the **claim number** and returned to:

Henke Manufacturing Corp.
ATTN: Product Support
3070 Wilson Ave.
Leavenworth, KS. 66048
RGA# _____

The dealer should perform repairs as agreed on a dealer warranty repair order. Return the claim form with a copy of the dealer warranty repair order and service report. Credit as agreed will be issued to the dealer upon receipt of the dealer warranty repair order invoice (Pro-forma invoice), and upon receipt, inspection and warranty confirmation of the returned parts if any.

Parts & Service Assistance

Parts and service assistance is available, Monday through Friday, from **8:00 am to 5:00 pm, CST. Call 913-682-9000.**

Our web site, **www.henkemfg.com**, is a quick source for parts pricing, and many common parts diagrams.

Parts purchase orders may be faxed in at any time to **913-682-0300**. Faxed orders are encouraged, as they help insure order accuracy and follow up. Include any special instructions, such as drop ship addresses on your order.