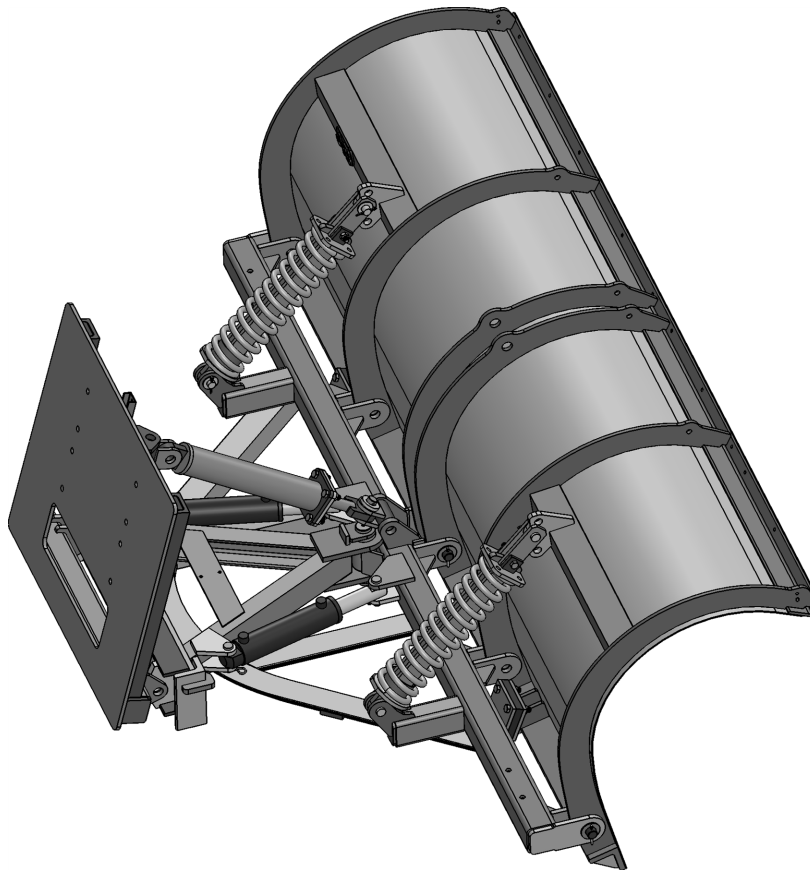


# JRB ROAD WARRIOR EXTERNAL COMPRESSION TRIP PLOW

HENKE MODEL: JRB RW ECT

FOR: Snow Wheel Loaders and Loader Backhoes

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PARTS AND INSTALLATION MANUAL: # 8500402-01

VERSION 010, JUNE 2019

MY SERIAL NUMBER: \_\_\_\_\_



**HENKE MANUFACTURING CORPORATION**

MANUFACTURERS OF SNOW REMOVAL EQUIPMENT FOR OVER 100 YEARS

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JRB\_RW\_ECT\_EFF\_ALL\_8500402\_01\_010

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# Introduction

Thank you for your purchase of a HENKE JRB Road Warrior Plow (JRB RW ECT). This Parts and Installation Manual should be read in its entirety, including the safety section, before installation, operation, or maintenance is performed to minimize installation and operation problems.

In addition to their field-proven standard units, Henke designs and manufactures snow fighting equipment to meet specific customer requirements.

The JRB Road Warrior Plow includes the following features:

## Product Features:

- 10 gauge, Grade 50, rolled plate steel moldboard.
- Plasma-cut moldboard ribs standard.
- Moldboards available in a variety of shapes, including straight Reversible, One Way, and Expressway; and with options such as mailbox cutouts or “Mouse Ears” (discharge ears).
- Multiple hitch and running gear options available.
- “Integral Snow Shield” prevents snow from blowing over top of moldboard.
- Double-acting reversing cylinders with Polypak rod seals.
- Cushion relief valve and hydraulic quick couplers standard.
- Water drainage ports in ribs to prevent water from pooling when plow is stored.
- Wide variety of cutting edges, curb guards, and wear guards available.
- Many other options available, including rubber shields, rod markers, jack stands, etc.

The field hardware required to install your new Henke product is listed in tables in the parts section of this book. Be sure to check that all parts listed in this document were shipped with your Plow (either attached or loose). In the unlikely situation that parts are missing please contact **Henke Manufacturing at (913) 682-9000** or **service@henkemfg.com** before continuing the installation.

# Contact Your Local Dealer For Parts & Service

Henke's Dealer Network is a key component in providing our customers with the quickest most efficient access to Henke's Parts and Technical Service teams. For Parts Replacement, Technical Service, & Customer Support Inquiries, please contact your local Henke dealer first.

Find your dealer using our website Dealer Locator: <http://henkemfg.com/dealer-locator/>

If you do not have a local dealer, contact Henke directly, as listed below.

## Replacement Parts

Henke's Parts team will assist in parts replacement and preventative parts stocking program.

Dealers and individual owners without a local dealer can contact us via email, website, or phone.



[parts@henkemfg.com](mailto:parts@henkemfg.com)



<http://henkemfg.com/parts-and-service/>



888 682-9010 x3

This will direct your inquiry to the entire Parts team, insuring the most prompt attention possible. All inquiries are processed in the order they are received.

<b>NOTE:</b>	<ul style="list-style-type: none"><li>• We can prepare a personalized wear parts recommendation and optionally include your seasonal purchasing summary. Just ask.</li><li>• Call Henke's Technical Service team in the unlikely event that your order is missing parts.</li></ul>
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# Technical Service & Customer Support Inquiries

Henke Technical Service can assist in optimizing your Henke equipment, and increasing up-time by providing technical guidance and support for issues as they occur.

Dealers and individual owners without a local dealer can contact us via email, website, or phone.



[service@henkemfg.com](mailto:service@henkemfg.com)



<http://henkemfg.com/parts-and-service/>



888 682-9010 x6

This will direct your inquiry to the entire Tech Service team, insuring the most prompt attention possible. All inquiries are processed in the order they are received.

We truly appreciate your business.

Henke Parts and Technical Service Teams

## Is This Your Product Manual?

### Important

- We strongly recommend verifying your product's serial number and product manual number and revision with Henke's Parts Department before you order parts.
- Henke prides itself on service and support of all of our products including current, legacy, custom, and standard designs. Therefore, many of Henke products appear similar, but are different enough to justify having separate part manuals.
- Product manuals shown on product pages of the Henke website are only for standard, current production products.
- Product manuals may be updated at anytime.

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# CHAPTER 1: SAFETY

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR  
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# 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	Always wear Safety Glasses, Gloves, and Respirator	Wear Hard Hat, Safety Glasses & Safety Shoes	Never use Drugs or Alcohol when operating equipment	Wear Safety Vest when operating on or near roads

### **WARNING**

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**

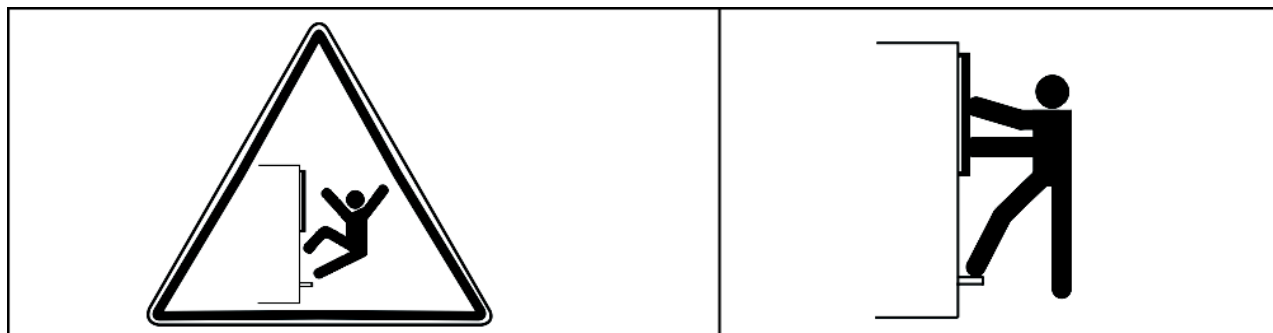
		
Wear Respirator	Chemical, Dust Hazard	Wear face protection - Face Shield or Goggles

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

## 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 ever, 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

		
<p>Plow Thrown Objects Hazard</p>	<p>Inspect Area Remove foreign objects</p>	<p>Do Not let Plow contact solid objects</p>



**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



**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*

# SAFETY

## HIGH PRESSURE OIL LEAK HAZARD

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



**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.

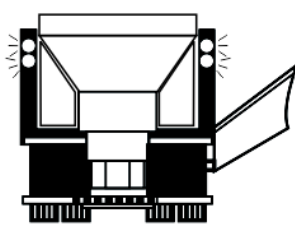


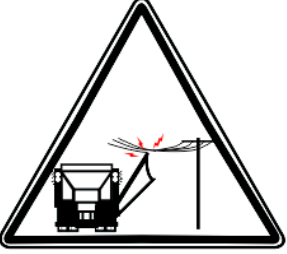
**HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.**

**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

### **WARNING**

**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 motorist and pedestrians of the presence of the equipment
- **DO NOT** leave piled material on roadway. Material can be a hazard to other motorist.

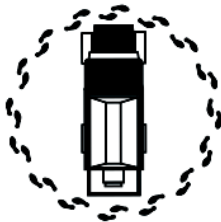
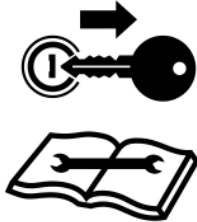

### **TO AVOID SERIOUS INJURY OR DEATH FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES AND UTILITY LINES:**

- **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

## 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 safety prop 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.

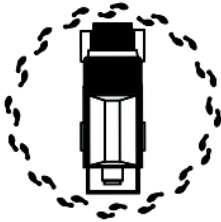
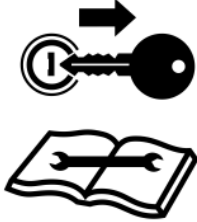

**WEAR SAFETY GLASSES, PROTECTIVE GLOVES and follow SAFETY PROCEDURES when performing service, repairs, and maintenance on the implement:**

- 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, cracked or broken blade

PN P-HM-01

# 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 safety prop 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 DEVICE 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.

### **WARNING**

Operating, servicing and maintaining this equipment can expose you to chemicals including gasoline, diesel fuel, lubricants, petroleum products, engine exhaust, carbon monoxide, and phthalates, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. 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. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). This website, operated by California's Office of Environmental Health Hazard Assessment, provides information about these chemicals and how individuals may be exposed to them. **PN P-HM-02**

# SAFETY

## **PARTS INFORMATION**

### PARTS INFORMATION

HENKE Spreaders use balanced and matched system components for spreaders, conveyors, 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 Spreader performance, void HENKE warranties, and present a safety hazard. Use genuine HENKE parts for economy and safety. (SNPG-7)

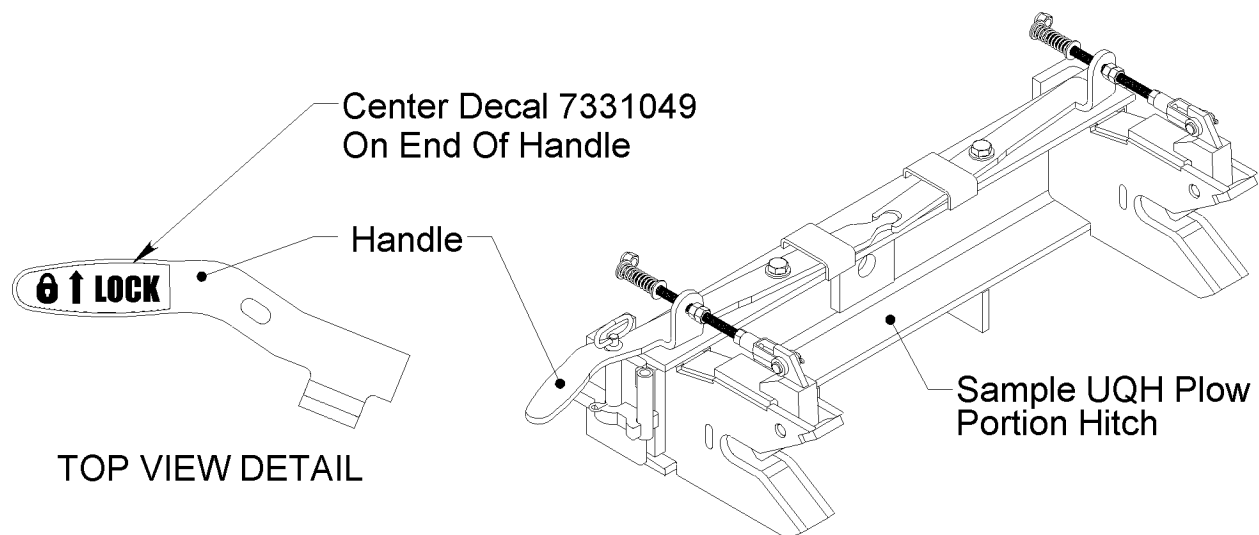
### SEE YOUR HENKE DEALER

Operator's & Parts Manuals




[www.algqr.com/hpm](http://www.algqr.com/hpm)

## Universal Quick Hitch Decal, 7331049



# California Proposition 65 Decal, 7331051



	<ul style="list-style-type: none"><li>Operating, servicing and maintaining this equipment can expose you to chemicals including gasoline, diesel fuel, lubricants, petroleum products, engine exhaust, carbon monoxide, and phthalates, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. 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. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>. This website, operated by California's Office of Environmental Health Hazard Assessment, provides information about these chemicals and how individuals may be exposed to them.</li></ul>
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## CHAPTER 2: PARTS AND ASSEMBLIES

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR MAINTENANCE.

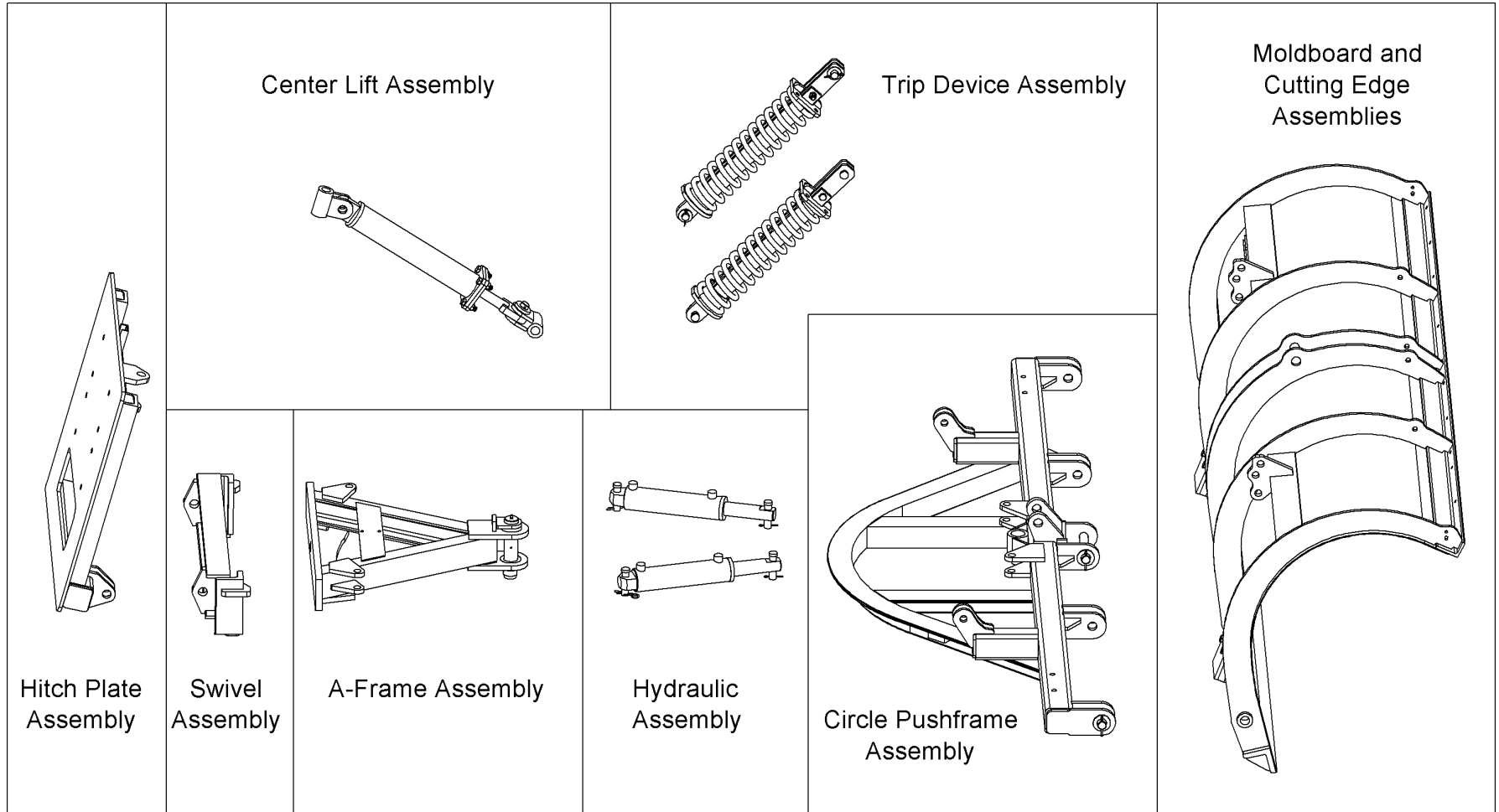
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# LargeAssemblyView - JRB Road Warrior Plow

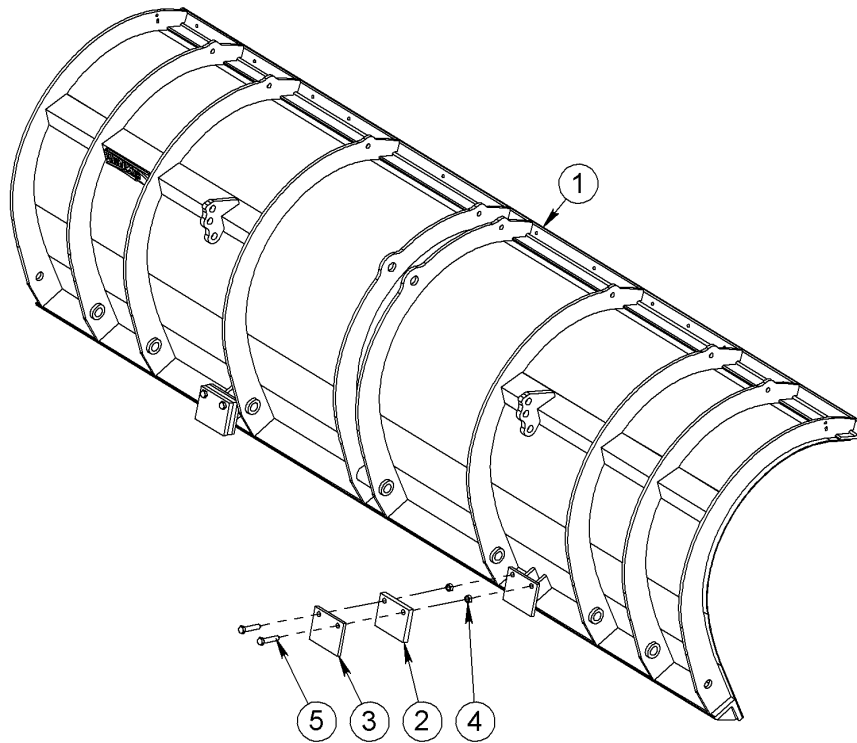
Individual parts views of these large assemblies can be found on the following pages.

Figure 2-1:Large Assembly Breakdown



# Moldboard Assembly

**Figure 2-2:**Moldboard Assembly

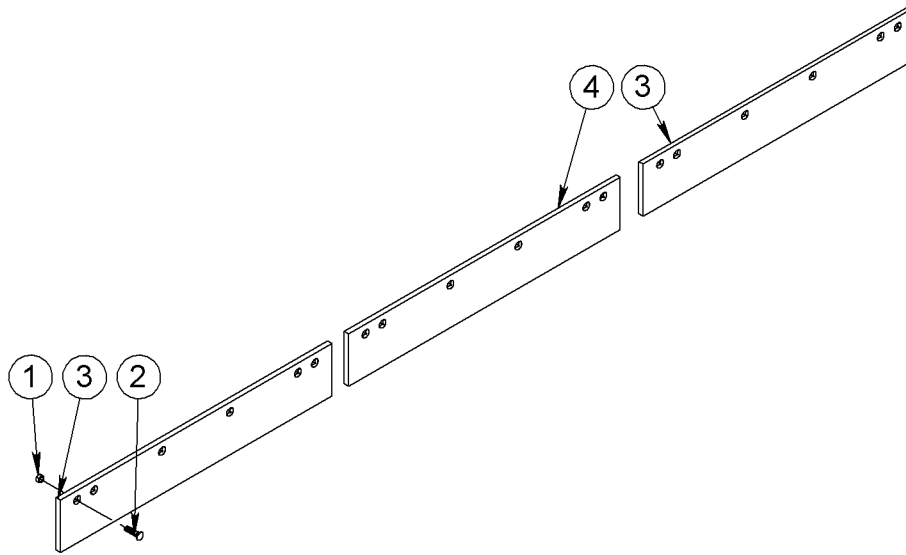


**Table 2-1:**Moldboard, Parts List

Item No.	Qty.	Part No.	Description
1	1	Call Henke	Moldboard, ECT, RMB, All Steel (Shown) (Straight, Funnel, Expressway, All Steel, Poly, Mailbox Cut, and other mold-board options are available)
2	2	1300-3301	Trip Stop Rubber
3	2	1300-3302	Trip Stop Plate
4	4	7030084	Toplock Nut, 5/8-11GR.C(See Separate Cutting Edge Hardware Table <a href="#">page 51</a> )
5	4	7020162	Hex Capscrew, 5/8-11x 3GR.8

# Cutting Edge Assembly

**Figure 2-3: Cutting Edge Assembly**



**Table 2-2:Cutting Edge, Parts List**

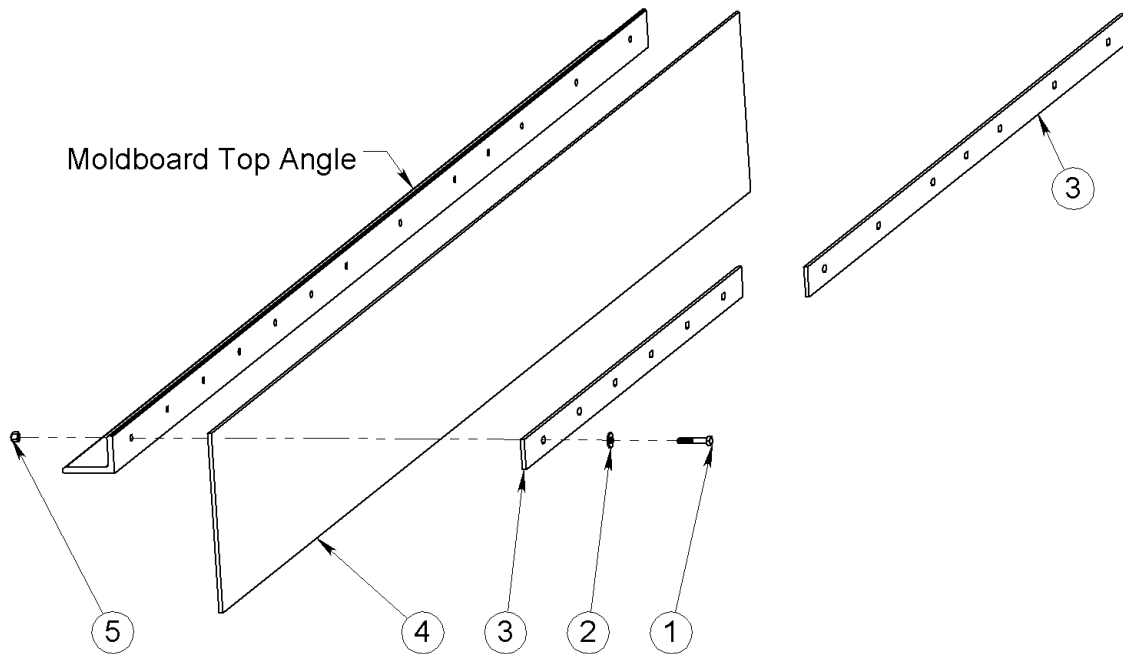
Item No.	Qty.	Part No.	Description
1	Varies	7030084	Toplock Nut, 5/8-11 GR.C
2	Varies	Varies	Plow Bolt, 5/8-11 (See Separate Cutting Edge Hardware Table <a href="#">page 51</a> )
3	1-4	Varies	Cutting Edge (See Separate Cutting Edge Table <a href="#">page 50</a> )
4	0-2	Varies	Quantity and lengths vary depending on plow length, design, and customer preference.
5	0-2	Varies	Optional Wear Shoes and Curb Guards (Not Shown Here) (See Separate Wear Parts Table <a href="#">page 52</a> )

**NOTE:**

- See : [Replacement Wear Parts, Page 49](#)

# Optional Rubber Shield Assembly

**Figure 2-4:Optional Rubber Shield Assembly**

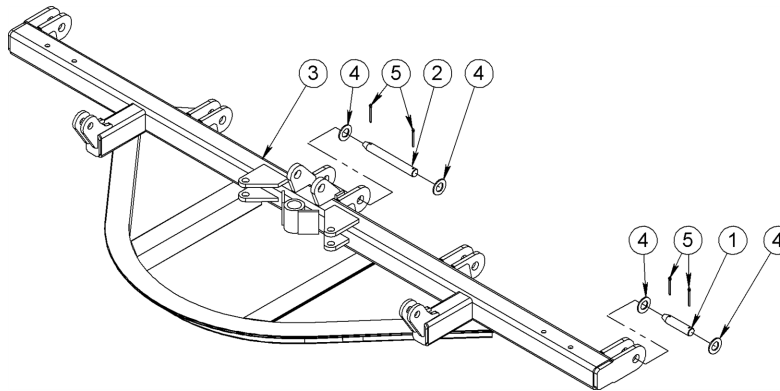


**Table 2-3:Optional Moldboard Assembly, Parts List**

Item No.	Qty.	Part No.	Description
1	Varies	7020034	Hex Capscrew, 3/8-16 x 2 GR.2
2	Varies	7040004	Flat Washer, 3/8 Hardened, USS
3	Varies	Call Henke	(Varies Depending on Moldboard Shape and Size)
4	Sold By The Foot	7160009	Bulk Rubber, Min 2-Ply, .25 x 12"
	1	7160310	Henke Branded Rubber Shield, 0.38 x 12 x 120"
	1	7160311	Henke Branded Rubber Shield, 0.38 x 12 x 132"
	1	7160312	Henke Branded Rubber Shield, 0.38 x 12 x 144"
	-	Call Henke	(More sizes of unbranded and Henke Branded Rubber Shields available.)
5	Varies	7030006	Nylock Nut, 3/8-16

# Pushframe Assembly, JRB RW

**Figure 2-5:**Circle Pushframe Assembly, JRB RW



**Table 2-4:**Pushframe Assembly, Parts List

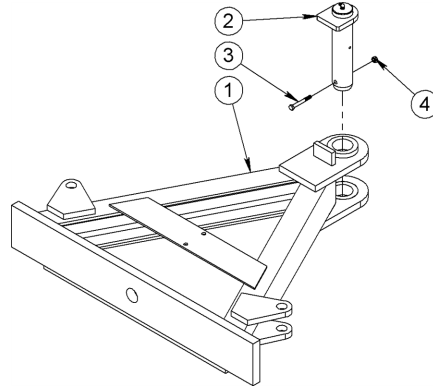
Item No.	Qty.	Part No.	Description
<b>1</b>	4-6 5-7	5200-0212	Pin, 1.25 x 5.64 x 3.69, 2-Hole (For moldboards with dual center rib) Pin, 1.25 x 5.64 x 3.69, 2-Hole (For moldboards with single center rib)
<b>2</b>	1	5200-0229	Pin, 1.25 x 10.39 x 8.44, 2-Hole (Moldboards with double center rib only) (Shown) CPF, Straight Moldboard, Standard Chain Lift, 5 pt connection
<b>3</b>	1	Call Henke	<b>NOTE:</b> The pushframe design changes depending on the following plow options. Call Henke if your option is not listed here. <b>Trip Device:</b> ECT <b>Pushframe Type:</b> Circle Pushframe <b>Moldboard shape:</b> Straight, Funnel, Expressway (Single or double discharge) <b>Plow Lift:</b> Center Lift Canister <b>Moldboard to Pushframe Connection:</b> 5-point or 7-point connection.
<b>4</b>	10-14	7040051	Flat Washer, 1-1/4 SAE
<b>5</b>	10-14	7050099	Cotter Pin, 1/4 x 2.5W

**NOTE:**

- Optional Running Gear Not Shown. See [CHAPTER 4 page 39](#).

# A-Frame Assembly

**Figure 2-6:**A-Frame Assembly, JRB RW



**Table 2-5:**A-Frame Assembly, JRB RW, Parts List

Item No.	Qty.	Part No.	Description
1	1	529-0198	A-Frame Assembly, CPF-IC, JRB
2	1	529-0291	Headed Pin, 7.15" Grip
3	1	7020371	Hex Capscrew, 5/16-18 x 2.5 GR.5
4	1	7030086	Nylock Nut, 5/16-18

# Hitch Plate Assembly

Figure 2-7:Hook Mounting Assembly, Parts View

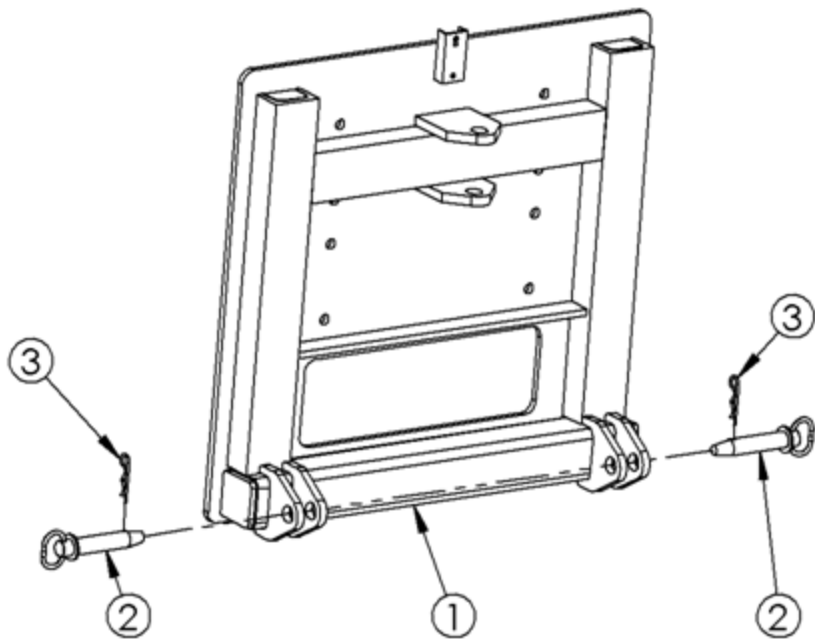


Table 2-6:Hitch Plate Assembly, Parts List

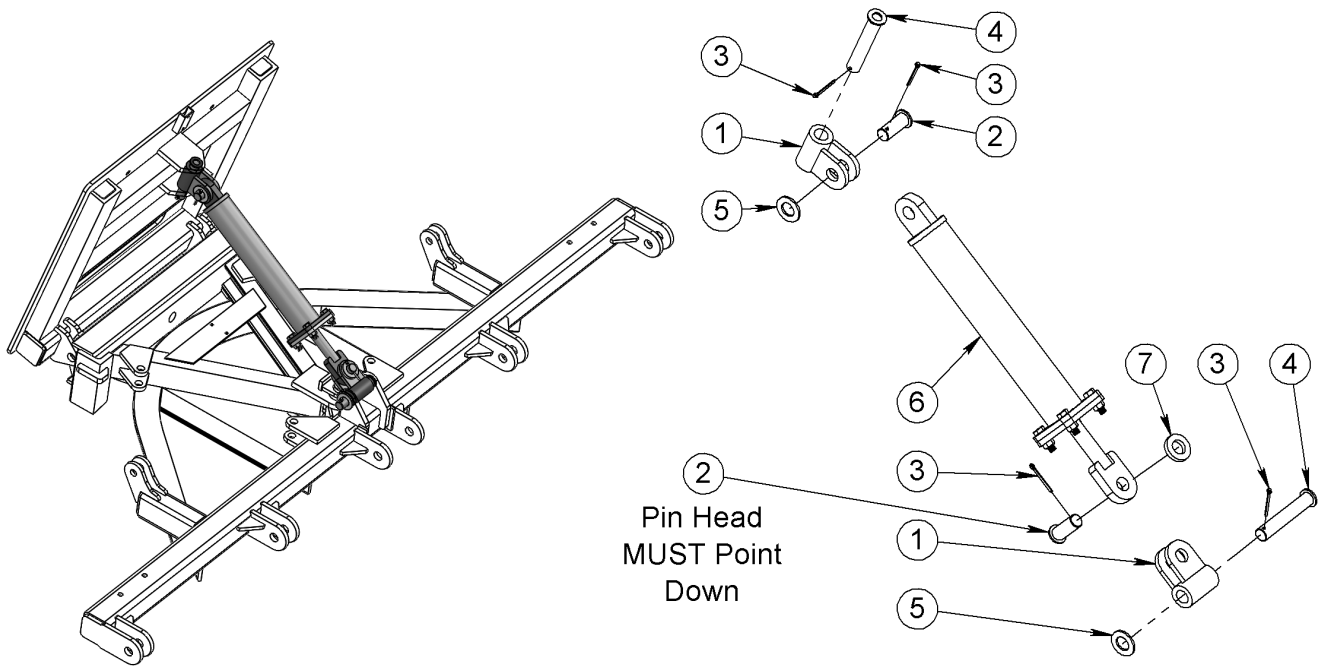
Item No.	Qty.	Part No.	Description
1	1	139-1453	Hook Mounting Assembly
2	2	139-0021	Pin Assembly
3	2	7050081	Hair Pun, #8 .177 x 3.75

NOTE:	<ul style="list-style-type: none"><li>Entire assembly may be ordered as 6178068.</li></ul>
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# Center Lift Attach Assembly

**Figure 2-8:Center Lift Attach Assembly, Parts View**



**Table 2-7:Center Lift Assembly, Parts List**

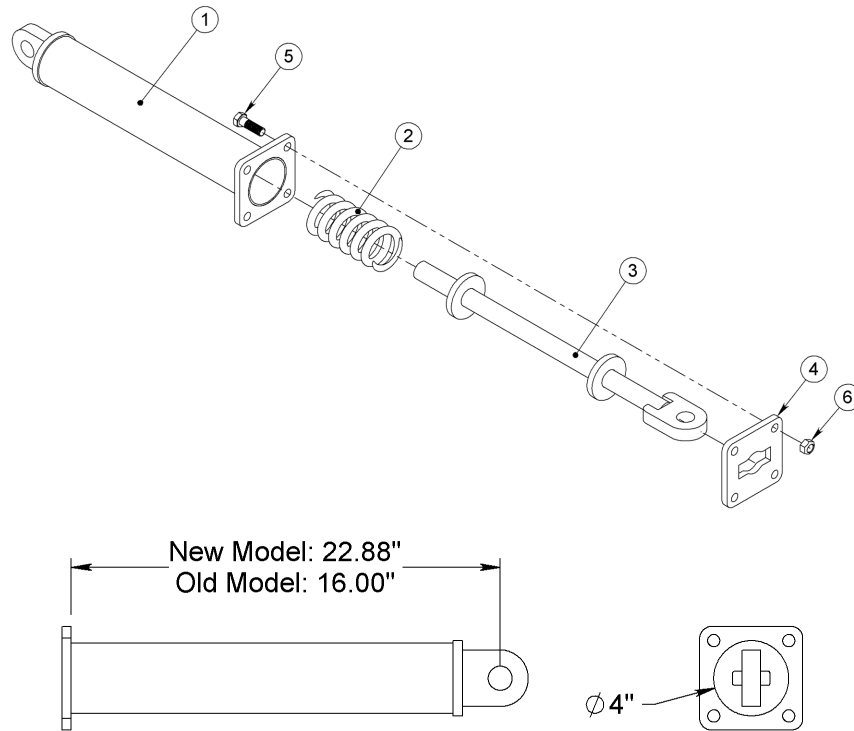
Item No.	Qty.	Part No.	Description
1	2	139-0348	Knuckle
2	1	139-1657	Pin Asy., Short
3	4	7050099	Cotter Pin, 1/4 x 2.5
4	1	139-1656	Pin Asy., Long
5	2	7040051	Flat Washer, 1 1/4 SAE
6	1	149-0215P	Center Lift Spring-Cushion Lift Tube Asy, Painted (See <a href="#">Spring-Cushion Lift Tube Assembly, Page 34</a> )
7	1	5200-0473*	Bushing (Not included in 6098010)

**NOTE:**

- Entire assembly may be ordered as 6098010 + 5200-0473 sold separately.

# Spring-Cushion Lift Tube Assembly

**Figure 2-9:Spring-Cushion Lift Tube Assembly, 149-0215P, Parts View**



**Table 2-8:Spring-Cushion Lift Tube Assembly, 149-0215P, Parts List**

Item No.	Qty.	Part No	Description
1	1	149-0216 139-1454	Outer Tube Assembly (JAN 2008 to present) Outer Tube Assembly (DEC 2007 and earlier)
2	1	7070072	Spring MDPW, 6.75 x 3.38
3	1	149-0217 139-1455	Shaft Assembly (JAN 2008 to Present) Shaft Assembly (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

## **WARNING**

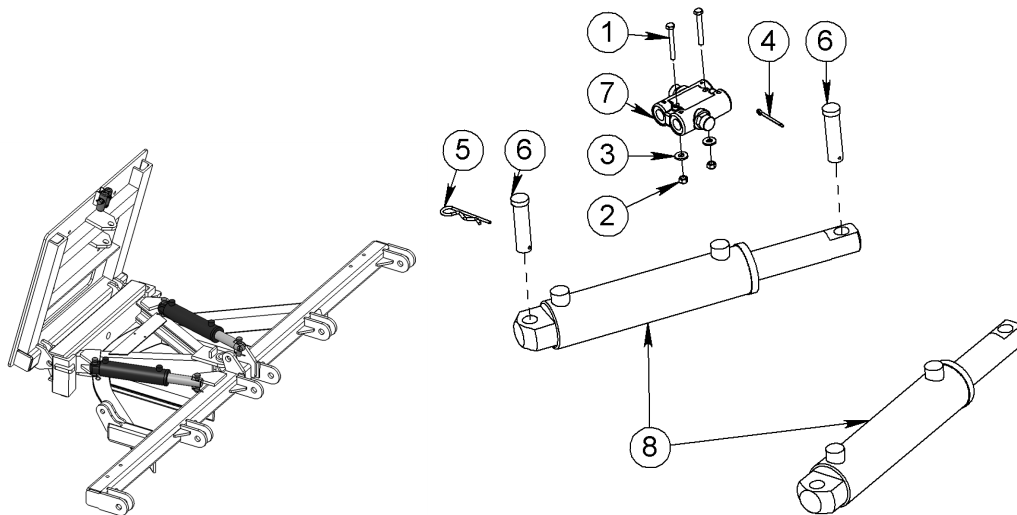
THIS ASSEMBLY CONTAINS PRESTRESSED SPRINGS UNDER COMPRESSION. IMPROPER DISASSEMBLY MAY CAUSE SUDDEN RELEASE OF SPRING ENERGY, WHICH COULD RESULT IN SERIOUS INJURY.

## **NOTE:**

1. Entire assembly may be ordered assembled. Ordering in this manner avoids all dis-assembly and assembly involving pre-stressed springs. See [Table 2-8 page 34](#).
2. Assemblies contain pre-stresses 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 dis-assembly can be accomplished by partially loosening all four nuts until spring compression is fully relieved, then removing nuts.

# Standard Hydraulic Reversing Assembly, CPF

**Figure 2-10:**Hydraulic Reversing Assembly 6071041, Cushion Valve On A-Frame, On Circle



**Table 2-9:** Hydraulic Reversing Assembly 6071041, Cushion Valve On A-Frame On Circle, Parts List

Item No.	Qty.	Part No.	Description
1	2	7020371	Hex Capscrew, 5/16-18 x 2.5
2	2	7030086	Nylock Nut, 5/16-18
3	2	7040003	Flat Washer, 5/16 USS
4	2	7050003	Cotter Pin, 3/16 x 2
5	2	7050081	Hair Pin, #8 .177 x 3.75
6	4	7050146	Clevis Pin, 1 x 3.75
7	1	7080322	Cushion Relief Valve, 2000 psi
8	2	7081726 7080736	Hydraulic Cylinder, 3 x 10 x 2" Dual Acting (Standard) Hydraulic Cylinder, 4 x 10 x 2" Dual Acting (Optional)

**NOTE:**

1. All parts in table are included as part of Hydraulic Assembly 6071041. The remainder of 6071041 can be found on [Table 2-10 page 35](#) and [Table 2-11 page 36](#).
2. Product appearance or style may vary slightly from what is shown here.

**Table 2-10:**Other 6071041 Hydraulic Fittings Not Shown, Parts List

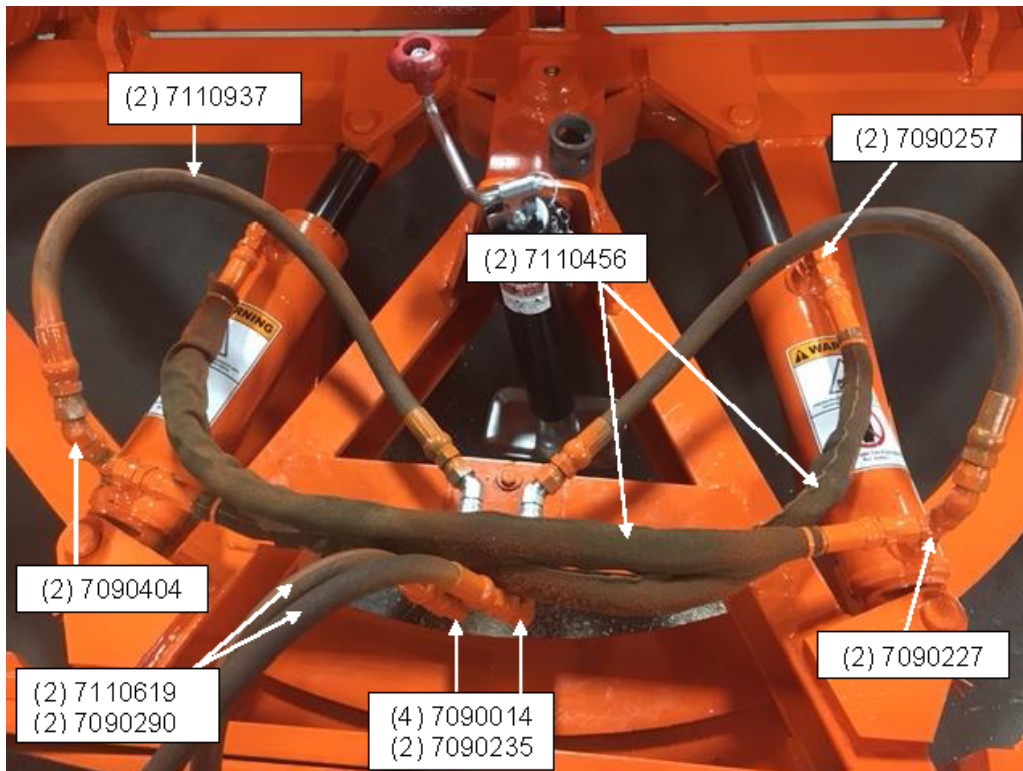
Qty.	Part No.	Description
1	7082152	Hydraulic Hose Kit, See <a href="#">Table 2-11 page 36</a> (Circle Pushframe)
2	7090543	Quick Coupler Male -8 ORB
2	7090544	Quick Coupler Female -8 ORB
1	7090405	Dust Plug IS 7241-A (For 7090544 QC F)
1	7090406	Dust Cap ISO 7241-A (For 7090543 QC M)

**NOTE:**

1. All parts in table are included as part of Hydraulic Assembly. The remainder of assembly can be found in [Table 2-9 page 35](#) and [Table 2-11 page 36](#).

# Hydraulic Components

**Figure 2-11:**Circle Pushframe Hydraulic Hose Kit, No. 7082152



**Table 2-11:**Circle Pushframe Hydraulic Hose Kit, No. 7082152

Qty.	Henke Part No.	Description
2	7110937	Hose Asy., 1/2-2 x 26", -8 JIC F x -8 JIC F 45° Elbow
2	7110456	Hose Asy., 1/2-2 x 36", -8 JIC F e/e Full Nylon Hose Sleeve
2	7110619	Hose Asy., 1/2-2 x 40", -8 JIC F e/e
2	7090257	Elbow, 90°, -08 JIC Male x -08 ORB Adj. Male
2	7090235	Elbow, 90°, -08 JIC Male x -08 JIC Swivel Female
4	7090014	Straight Adapter, -08 JIC Male to -10 ORB Male
2	7090227	Tee, -08 JIC Male, -08 ORB Adj. Male Run
2	7090290	Straight Adapter, -08 JIC Male to -08 ORB Male
2	7090404	Elbow, 45°, -08 JIC Male x -08 JIC Swivel Female

**NOTE:**

- Typically plumbed with cushion valve mounted on A-Frame, included in assembly No. 6071041. Remainder of 6071041 may be found in [Table 2-9 page 35](#).

# CHAPTER 3: TRIP DEVICES

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR  
MAINTENANCE.

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# External Compression Trip (ECT) 6226009

Figure 3-1: External Compression Trip (ECT) Assembly 6226009

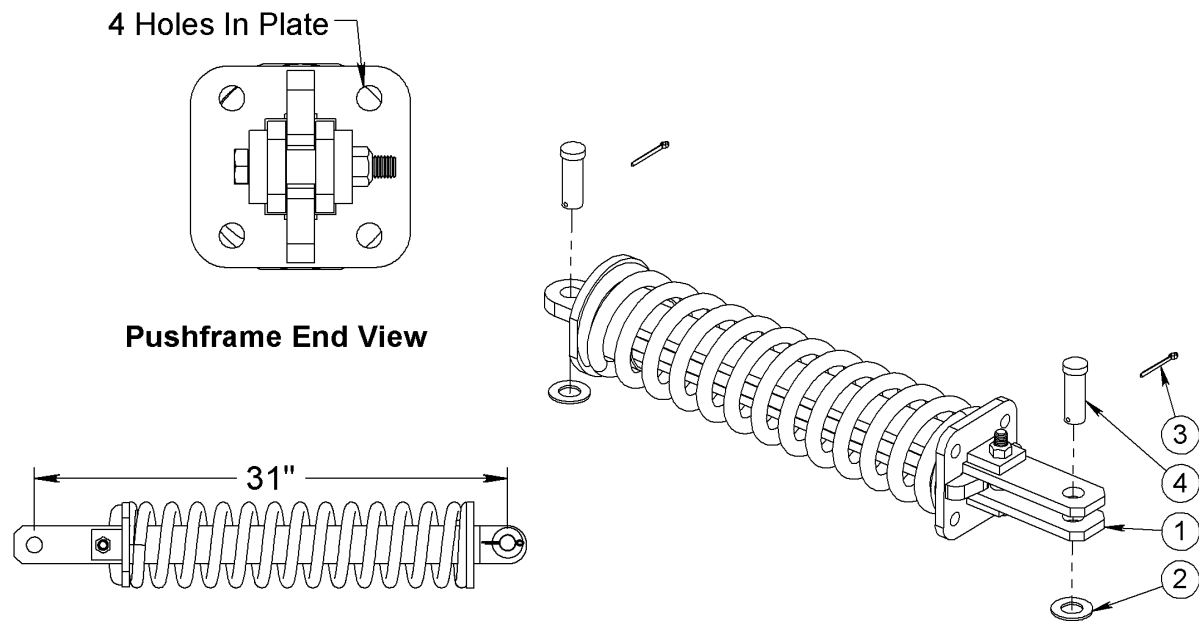



Table 3-1: External Compression Trip (ECT) Assembly 6226009, Parts List

Item No.	Qty.	Part No.	Description
1	1	149-0552	External Compression Trip Without Adjusting Plate
2	2	7040013	Flat Washer, 1" Hardened, SAE
3	2	7050003	Cotter Pin, 3/16 x 2
4	2	7050100	Clevis Pin, 1 x 2.75

**WARNING**

Do NOT disassemble. This assembly contains pre-stressed compressed springs. Impact from sudden release of spring energy COULD result in DEATH OR SERIOUS INJURY.

**NOTE:**

- Quantities given are for one assembly. Two complete assemblies may be required for your product.

# CHAPTER 4: RUNNING GEAR

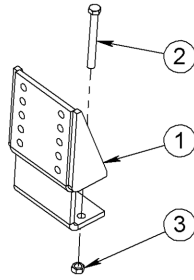
PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR  
MAINTENANCE.

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# Running Gear Bracket Assembly

**Figure 4-1:**Running Gear Bracket Assembly



**Table 4-1:**Running Gear Bracket, Parts List

Item No.	Qty.	Part No.	Description
1	1	199-0066P	Mounting Assembly, standard circle frame - Bolt-On Style

**Table 4-2:**Running Gear Bracket Mounting Hardware #199-0215, Parts List

Item No.	Qty.	Part No.	Description
2	2	7020067	Hex Capscrew, 5/8-11 X 6 GR. 5
3	2	7030084	Toplock Nut, 5/8-11 GR.C

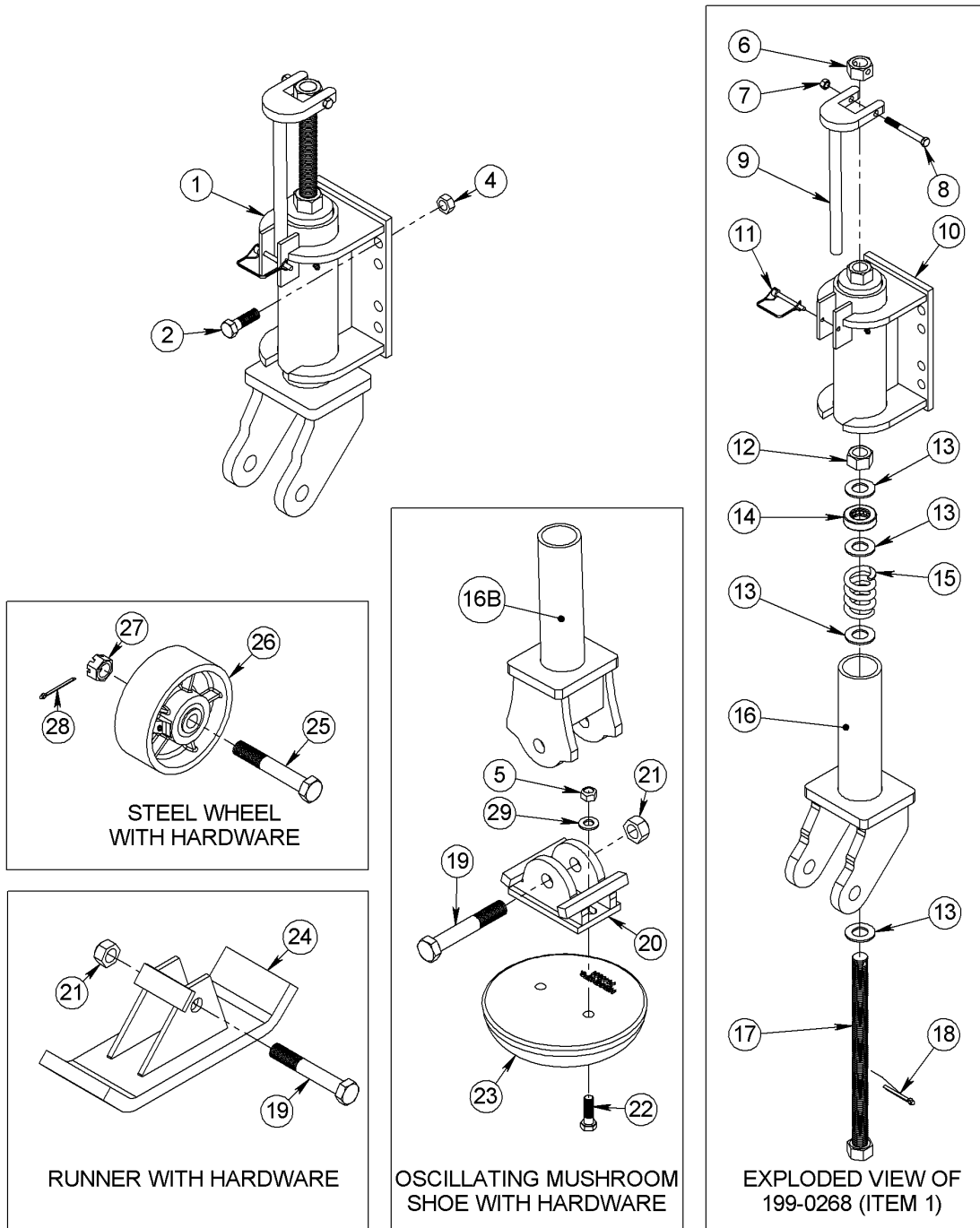
<b>NOTE:</b>	1. Quantities given are for one assembly. Two complete assemblies may be required for your product.
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# Spring Loaded Running Gear

Figure 4-2: Spring Loaded Running Gear



**Table 4-3:Spring Loaded Running Gear, Parts List**

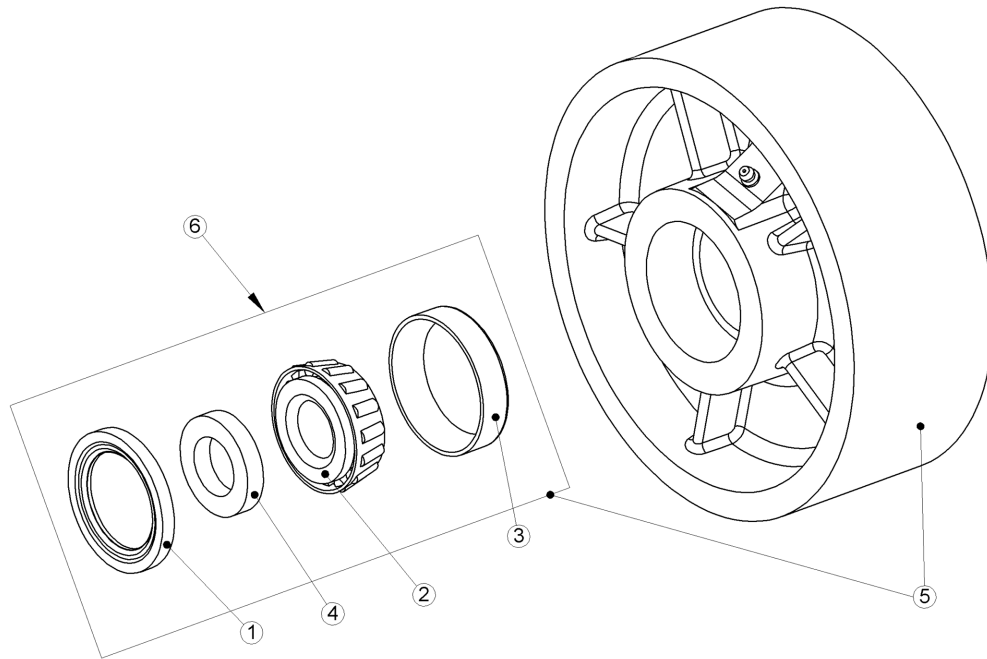
Item No.	Qty.	Part No.	Description
1	1	199-0268P	Spring Loaded Running Gear w/o Mount
2	4	7020060	Hex Capscrew, 5/8-11 x 2 GR. 8
3	1	Reference	Mounting Assembly (See Mounting Bracket Table)
5	4	7030084	Toplock Nut, 5/8-11 GR. C
6	1	1300-2377*	Crank Handle Nut (Comes with purchase of item <a href="#">17</a> )
7	1	7030006*	Nylock Nut, 3/8-16
8	1	7020117*	Hex Capscrew, 3/8-16 x 3.5 GR. 5
9	1	139-1288P*	Crank Handle
10	1	199-0267P*	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	139-1290P*	Inner Tube Assembly
16B	1	199-0364	Inner Tube Assembly for Mushroom Shoe
17	1	139-1291*	Shaft Assembly (If purchased, comes with (1) Item <a href="#">4</a> )
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 or 7020288	Hex Capscrew, 5/8-11 x 2 GR. 8 (7.5" MS) or Hex Capscrew, 5/8-11 x 2.5 GR. 8 (11" MS)
23	1	7140001P 199-0229P	11" Mushroom Shoe 11" Mushroom Shoe, Carbide
24	1	199-0411P 199-0281P	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 assembly. Two complete assemblies may be required for your product.
2. Part Numbers marked with a \* are included in part number 199-0268P (Item 1).

# 8" Steel Wheel Assembly

**Figure 4-3:**Henke 8" Steel Wheel Assembly



**Table 4-4:**Henke 8" Steel Wheel Assembly, Parts List

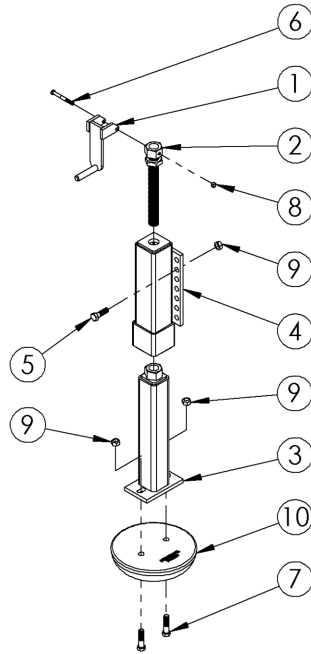
Item No.	Qty.	Part No.	Description
1	2	7140068	Grease Seal
2	2	7140081	Bearing Cone
3	2	7140080	Bearing Cup
4	2	7140082	Spacer
5	1	199-0221P	Steel Wheel Complete (Includes All Items Shown)
6	NA	199-0222P	Steel Wheel Bearing Kit (Includes (2) ea. of 1, 2, 3, & 4)

**NOTE:**

1. Entire assembly may be ordered as 199-0221P.

# Mushroom Shoe Assembly

**Figure 4-4:**Mushroom Shoe Assembly



**Table 4-5:**Mushroom Shoe Assembly, Parts List

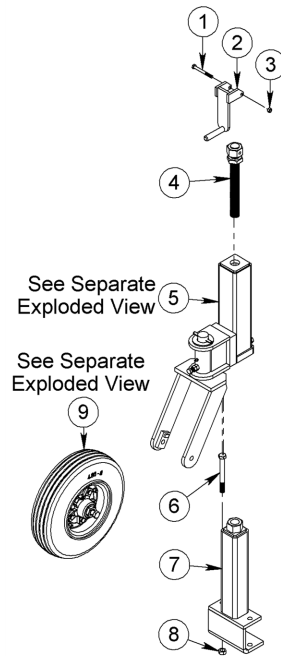
Item No.	Qty.	Part No.	Description
1	1	199-0019P	Crank Assembly, Painted
2	1	199-0041	Acme Screw Assembly
3	1	199-0044P	Inner Tube Assembly, Painted
4	1	199-0376P	Outer Tube Assembly, Painted
5	4	7020060	Hex Capscrew, 5/8-11 X 2 GR. 8 (Mounting Bolts)
6	1	7020117	Hex Capscrew, 3/8-16 X 3.5 GR. 5
7	2	7020288	Hex Capscrew, 5/8-11 X 2.5 GR. 8
8	1	7030006	Nylock Nut, 3/8-16
9	6	7030084	Toplock Nut, 5/8-11 GR. C
10	1	7140001P 199-0229P	11" Mushroom Shoe, Painted 11" Mushroom Shoe, Carbide, Painted

**NOTE:**

1. Quantities given are for one assembly. Two complete assemblies may be required for your product.
2. Entire assembly shown, plus 199-0066P Mounting Bracket, can be ordered together as 199-0046P (Plain Steel), or 199-0442P (Carbide).
3. You may order assembly without mounting hardware or bracket as 199-0441P (Plain Steel) or 199-0230P (Carbide).

# Pneumatic Running Gear

**Figure 4-5:**Pneumatic Running Gear



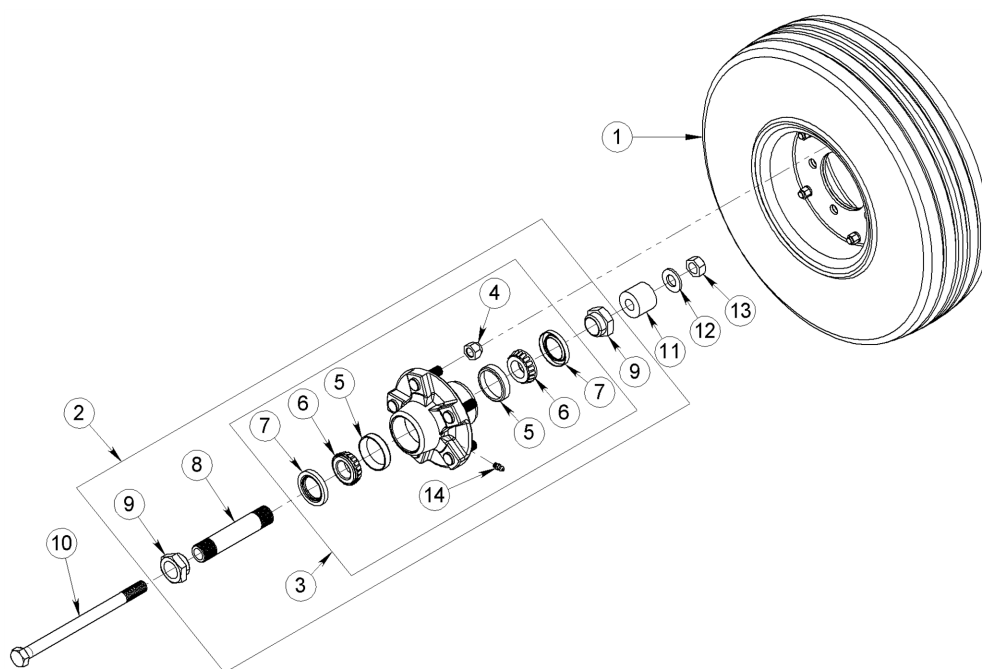
**Table 4-6:**Pneumatic Running Gear, Parts List

Item No.	Qty.	Part No.	Description
1	1	7020117	Hex Capscrew, 3/8-16 x 3.5 GR. 5
2	1	199-0019P	Running Gear Crank Assembly
3	1	7030006	Nylock Nut, 3/8-16
4	1	199-0041	ACME Screw Assembly
5	1	199-0361M 199-0419	Outer Tube & Yoke Assembly, 4.8 x 8 Wheel Asy. Outer Tube & Yoke Assembly, 5.7 x 8 Wheel Asy.
6	2	7020067	Hex Capscrew 5/8-11 x 6 GR. 5
7	1		Inner Tube Assembly
8	2	7030084	Toplock Nut, 5/8-11 GR. C
9	1	199-0294P 199--0420	Pneumatic Hub & 4.8 x 8 Wheel Assembly, 5 - Lug Pneumatic Hub & 5.7 x 8 Wheel Assembly, 5 - Lug
Not Shown	2	199-0064M 199-0421	1 Complete Assembly With Tire and 4.8 x 8 Wheel Included. 1 Complete Assembly With Tire and 5.7 x 8 Wheel Included.
Not Shown	2	199-0063 199-0418	1 Complete Assembly Without Tire or 4.8 x 8 Wheel. 1 Complete Assembly Without Tire or 5.7 x 8 Wheel.

**NOTE:**

- Quantities given are for one assembly. Two complete assemblies may be required for your product.

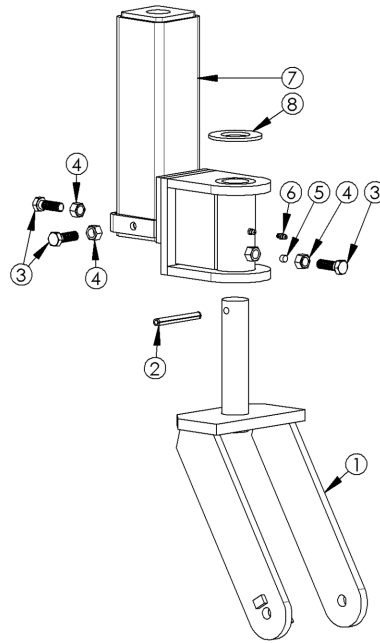
**Figure 4-6:Pneumatic Wheel Kit, 5-Lug Hub**



**Table 4-7:Pneumatic Wheel Kit, 5-Lug Hub, Parts List**

Item No.	Qty.	Part No.	Description
1	1	7140095 7140112	Pneumatic Rim & Tire Assembly, 2 Piece, 5-Lug, 4.8 x 8 Wheel Asy Pneumatic Rim & Tire Assembly, 2 Piece, 5-Lug, 5.7 x 8 Wheel Asy
2	1	199-0295	Hub & Spindle Group Assembly - 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 7020510	Hex Capscrew, 5/8-11 X 8 GR.5 (For 4.8 x 8 Wheel Asy.) Hex Capscrew, 5/8-11 X 9 GR.8 (For 5.7 x 8 Wheel Asy.)
11	1	1900-0317	Axle Spacer (Used with 5.7 x 8 Wheel Asy. ONLY)
12	1	7040006	Flat Washer, Hardened, 5/8 SAE
13	1	7030084	Toplock Nut, 5/8-11 GR.C
14	1	7090111	Grease Fitting, 1/4-28 Straight

**Figure 4-7:Outer Tube & Yoke Assembly**



**Table 4-8:Outer Tube & Yoke Assembly, Parts List**

Item No.	Qty.	Part No.	Description
1	1	199-0062 199-0413	Yoke Assembly - 4.80 x 8 Yoke Assembly - 5.70 x 8
2	1	7050029	Roll Pin, 3/8 x 3.5
3	3	7020130	Hex Capscrew, 1/2-13 x 1.5 GR. 5
4	3	7030009	Nut, 1/2-13 GR. 8
5	1	1900-0075	Damper pad
6	1	7090111	Grease Fitting Straight 1/4-28
7	1	199-0360	Outer Tube Assembly
8	1	7040024	Flat Washer 1 1/2, Hardened, SAE



# CHAPTER 5: REPLACEMENT WEAR PARTS

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR MAINTENANCE.

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# Cutting Edges

**Table 5-1:Cutting Edges**

CARBIDE	3/4" THICK
3FT.X5" TALL	Call Henke
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

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 Henke	Call Henke	7150004
7FT.	Call Henke	Call Henke	7150028
8FT.	7150172	Call Henke	Call Henke
9FT.	Call Henke	Call Henke	7150036
10FT.	7150008	7150090	7150197
11FT.	7150009	7150089	7150031
12FT.	7150010	7150082	7150032

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

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

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

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

RUBBER Notes 5&6	1 1/2" THICK X 10" 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

## NOTE:

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.

# Cutting Edge Hardware

**Table 5-2:Cutting Edge Hardware**


Type	Length	Part No.	Uses/Notes
PLOW BOLTS 5/8-11 GRADE 8	2" 2 1/2" 3" 3 1/2" 4" 4 1/2" 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 wrap around curb guards (Square Holes, Not Counter Sunk)
HEX BOLTS	4" 4 1/2" 5"	7020064 7020128 7020295	FOR: Rubber and Poly Cutting Edges (Use Nylock Nuts Only)
TOPLOCK NUT 5/8-11 GRADE C	N/A	7030084	FOR: Steel or Carbide Cutting Edges
NYLOCK NUT 5/8-11 GRADE 8	N/A	7030095	FOR: Rubber or Poly Cutting Edges

# Curb Guards & Wear Guards

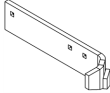
**Table 5-3:Henke Curb Guards & Wear Guards**

## Curb Guards

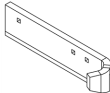
### Wrap-Around Curb Guards, Steel

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

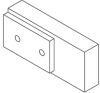
### Wrap-Around Curb Guards, Chrome-Carbide Weld Deposit on Wrap-Around Corner

	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)

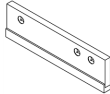
	139-1046	Bolt-On Guard Assembly.
	1300-1633	Optional spacer (Required for Trip Edge Applications)

## Wear Guards

### 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)

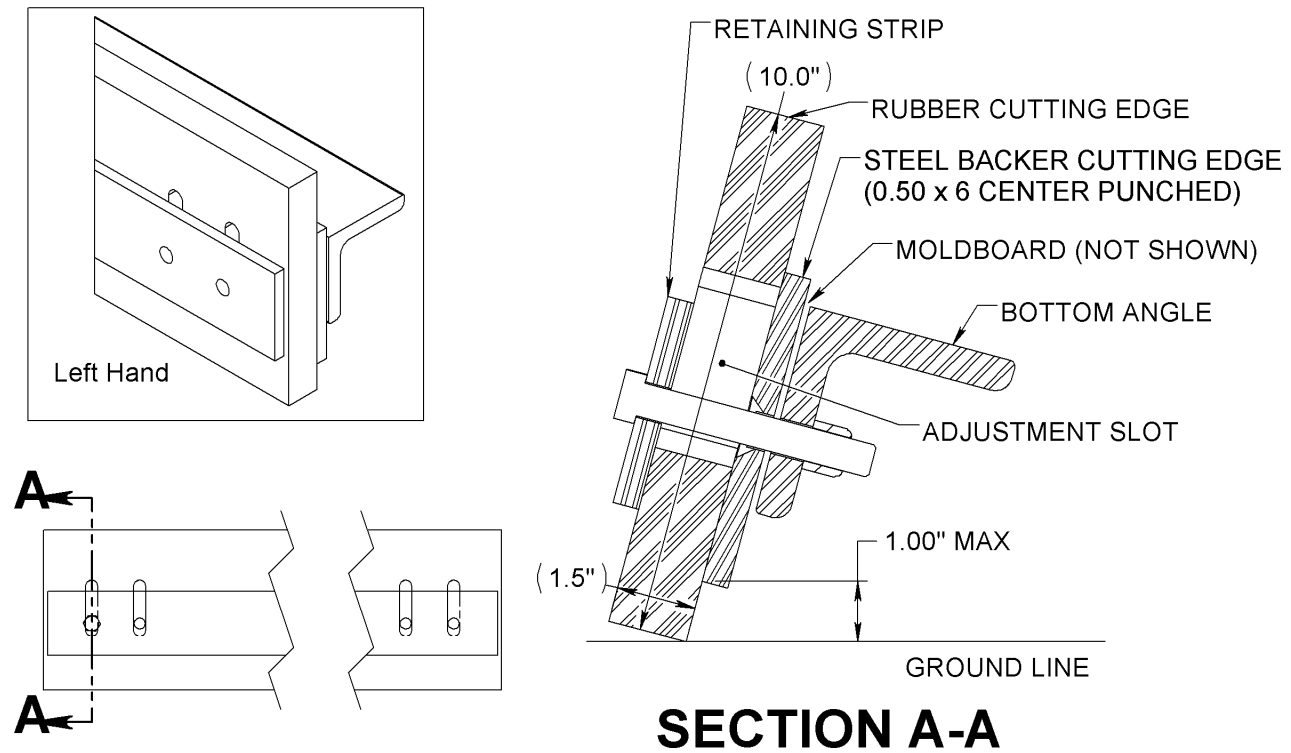
	7140004	Wear shoe for 6" cutting edges, or 8" center-punched edges
	7140002	Wear shoe for 8" cutting edges

### Bottom Angle Saver (Mount behind of Bottom Angle)

	199-0280	Bottom Angle Saver with Carbide Strip
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# Installing A Rubber Cutting Edge

**Figure 5-1:Installing A Rubber Cutting Edge (No Wear Guard)**

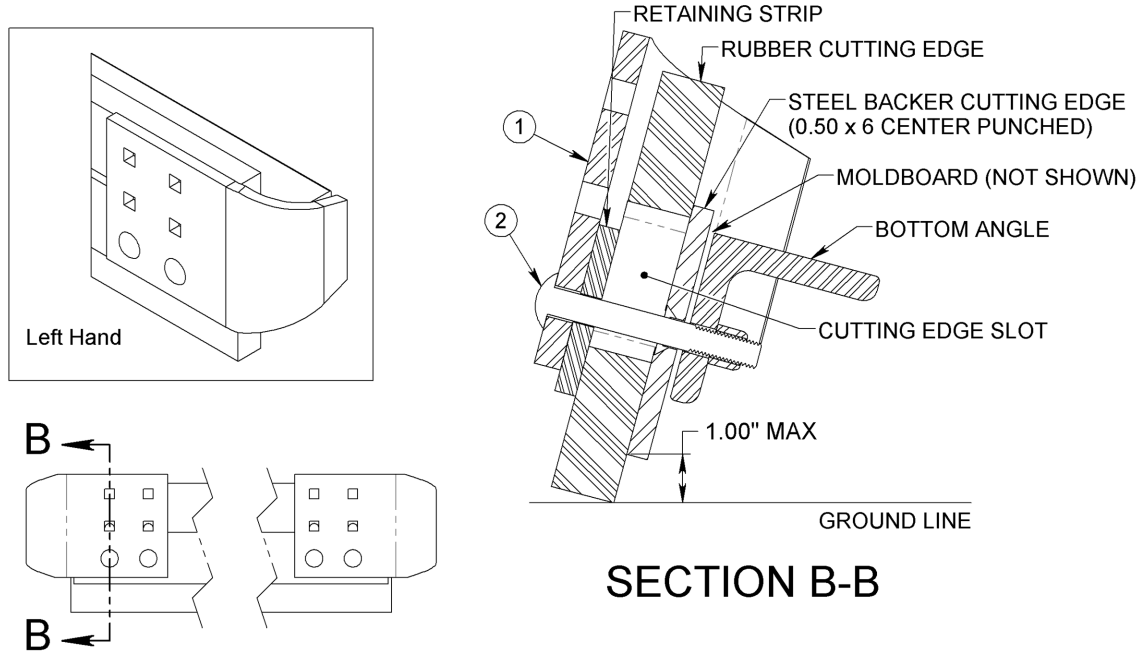


<b>NOTE:</b>	<ul style="list-style-type: none"> <li>• The rubber cutting edge should never extend more than one inch below the Steel Backer, measured vertically.</li> <li>• Adjust the rubber cutting edge by loosening bolts and sliding it down along the adjustment slots until in desired position.</li> <li>• When no more downward adjustment can be made, flip the rubber cutting edge to use its opposite edge.</li> <li>• Adjust the rubber cutting edge down as it wears and before the steel backer touches the ground.</li> </ul>
<b>In The Case Of Vibration Problems:</b>	<p><b>Vibration Problems Can Usually Be Solved With The Following Steps:</b></p> <p>STEP 1:           Ensure the cutting edge is installed per the above diagrams.</p> <p>STEP 2:           Adjust the plow attack angle to be less vertical.</p> <p>STEP 3:           Take a portion of the plow weight off of the cutting edge, using one of these methods.</p> <p>          3.1:       Place a portion of the weight onto running gear.</p> <p>          3.2:       Utilize a hydraulic option, sometimes referred to as "Plow Float", "Plow Balance", or "Blade Saver" systems.</p>

**Table 5-4:Steel Wrap-Around Curb Guard Assembly, For Rubber Cutting Edge**

Item No.	Part No.	Qty. (6086040)	Qty. (6086052)	Description
1	7150117	1	2	8" Wrap Around Curb Guard, Reversible (Left Or Right)
2	7020359	2	4	Carriage Bolt, 5/8-11 x 5 GR.8 (Longer bolts may be needed if additional accessories are used.)

**Figure 5-2:Installing Steel Wrap Around Curb Guard On A Rubber Cutting Edge**



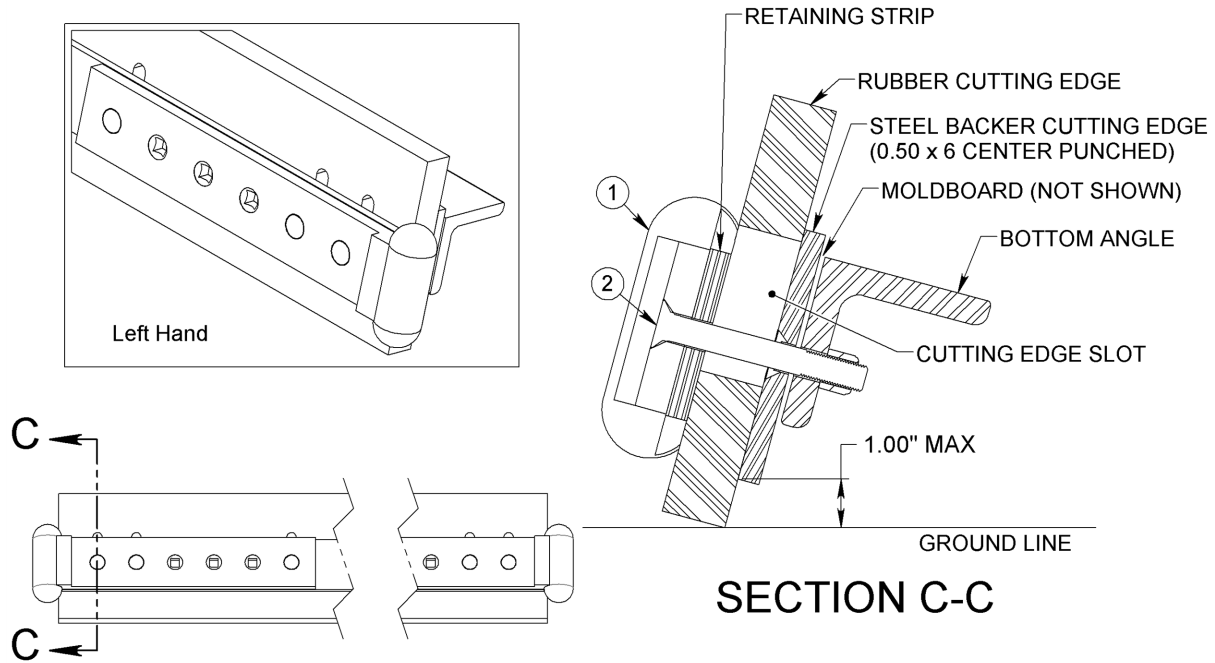
**NOTE:**

- When used with rubber cutting edges, the wrap around curb guard should be installed in the uppermost position (Use the lowest row of square holes).
- The curb guard mounts on top of the retaining strip. Curb guard does not directly contact rubber cutting edge.

**Table 5-5:Carbide Curb Guard Assembly, For Rubber Cutting Edge**

Item No.	Part No.	Description
1	7150190	Curb Guard, Carbide, Reversible (Left Or Right)
2	7150108	Plow Bolt, 5/8-11 x 5 GR.8 (Longer bolts may be needed if additional accessories are used.)

**Figure 5-3:Installing Carbide Curb Guard On A Rubber Cutting Edge**

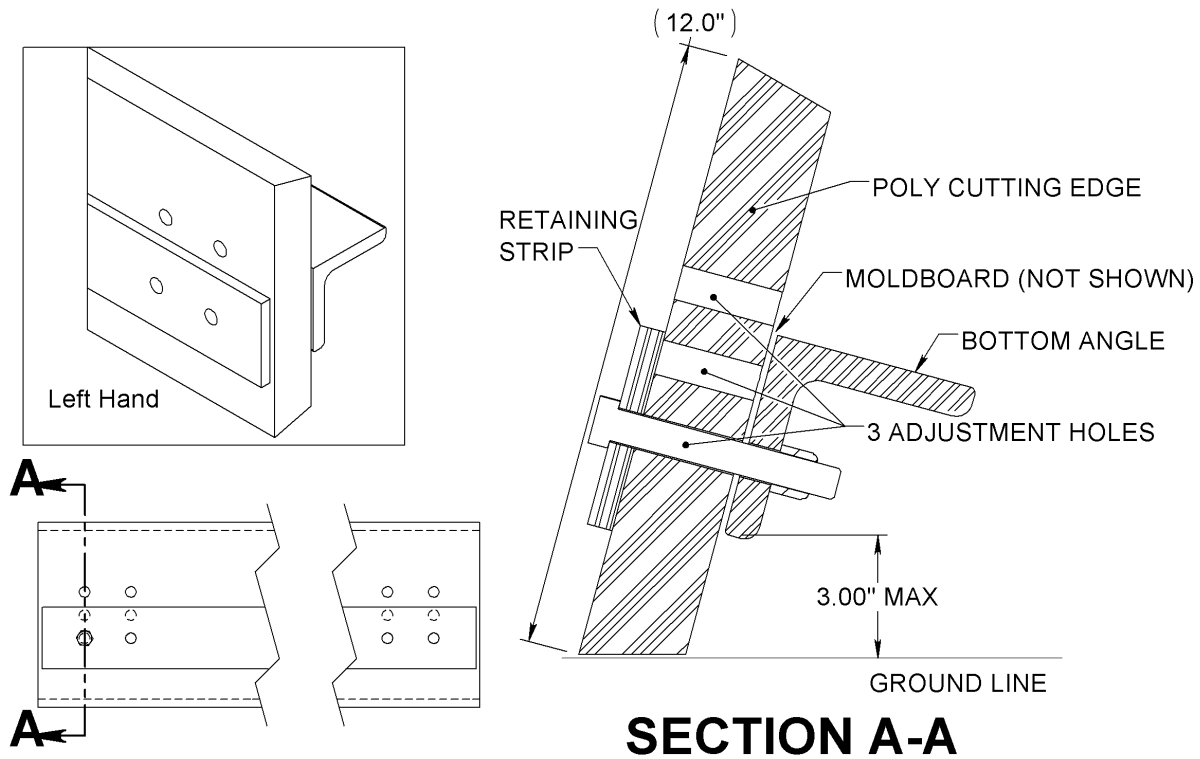


**NOTE:**

- This curb guard can be used on both the left and right.
- The curb guard mounts on top of the retaining strip. Curb guard does not directly contact rubber cutting edge.

# Installing A Poly Cutting Edge

**Figure 5-4:Installing A Poly Cutting Edge (No Wear Guard)**



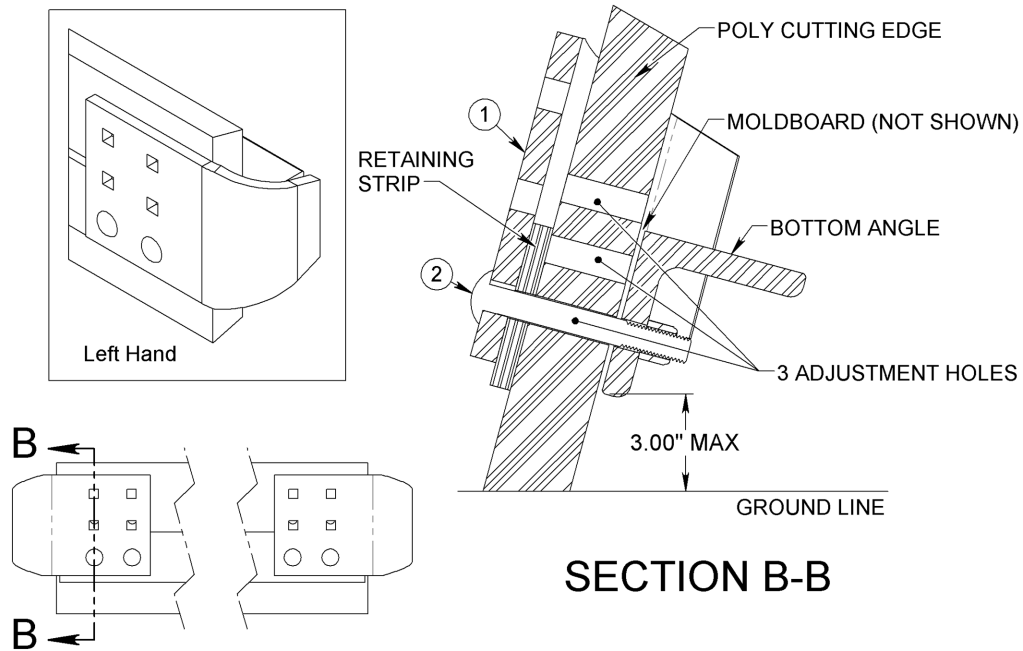
<b>NOTE:</b>	<ul style="list-style-type: none"> <li>• The Poly cutting edge should never extend more than 3 inches below the bottom angle, measured vertically.</li> <li>• Adjust the poly cutting edge by removing bolts and moving the cutting edge down to bolt in the next row of holes (Middle Row, Then Top Row).</li> <li>• When no more downward adjustment can be made, flip the poly cutting edge to use its opposite edge.</li> <li>• Adjust the poly cutting edge down as it wears and before the bottom angle touches the ground.</li> </ul>
<b>In The Case Of Vibration Problems:</b>	<p><b>Vibration Problems Can Usually Be Solved With The Following Steps:</b></p> <p>STEP 1:           Ensure the cutting edge is installed per the above diagrams.</p> <p>STEP 2:           Adjust the plow attack angle to be less vertical.</p> <p>STEP 3:           Take a portion of the plow weight off of the cutting edge, using one of these methods.</p> <p>          3.1:       Place a portion of the weight onto running gear.</p> <p>          3.2:       Utilize a hydraulic option, sometimes referred to as "Plow Float", "Plow Balance", or "Blade Saver" systems.</p>



**Table 5-6:Steel Wrap-Around Curb Guard Assembly, For Poly Cutting Edge**

Item No.	Part No.	Qty. (6086040)	Qty. (6086052)	Description
1	7150117	1	2	8" Wrap Around Curb Guard, Reversible (Left Or Right)
2	7020359	2	4	Carriage Bolt, 5/8-11 x 5 GR.8 (Longer bolts may be needed if additional accessories are used.)

**Figure 5-5:Installing Steel Wrap Around Curb Guard On A Poly Cutting Edge**



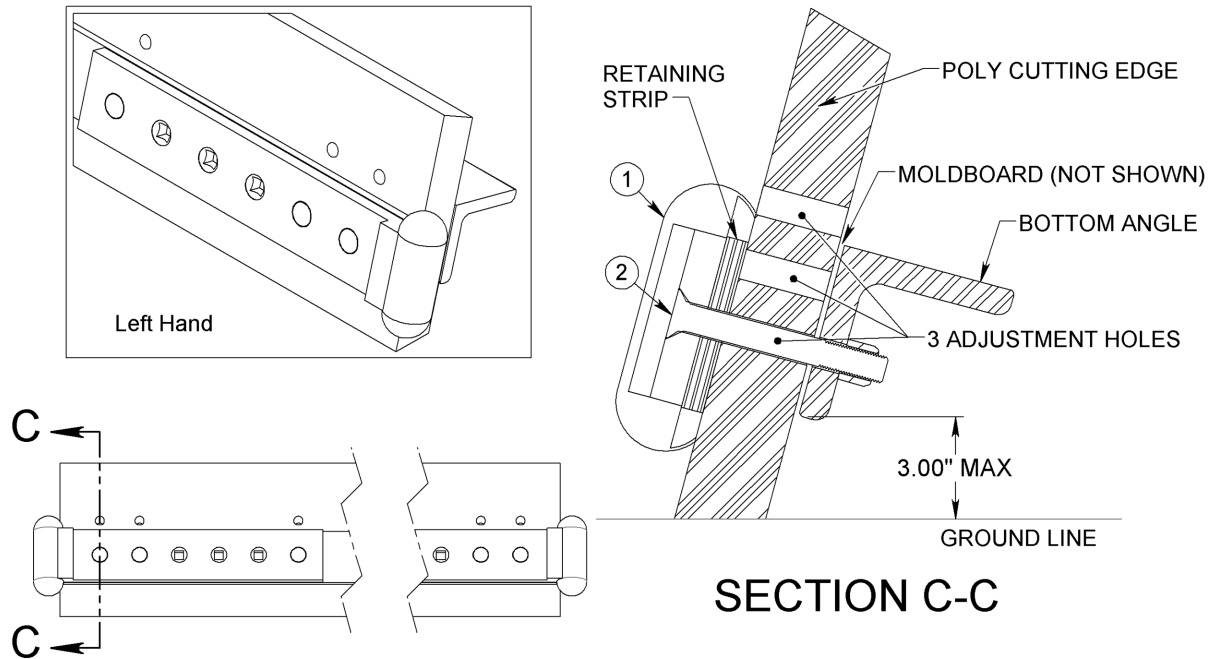
**NOTE:**

- When used with Poly cutting edges, the wrap around curb guard should be installed in the uppermost position (Use the lowest row of square holes).
- The curb guard mounts on top of the retaining strip. Curb guard does not directly contact rubber cutting edge.

**Table 5-7:Carbide Curb Guard Assembly, For Poly Cutting Edge**

Item No.	Part No.	Description
1	7150190	Curb Guard, Carbide, Reversible (Left Or Right)
2	7150108	Plow Bolt, 5/8-11 x 5 GR.8 (Longer bolts may be needed if additional accessories are used.)

**Figure 5-6:Installing Carbide Curb Guard On A Poly Cutting Edge**



**NOTE:**

- This curb guard can be used on both the left and right.
- The curb guard mounts on top of the retaining strip. Curb guard does not directly contact rubber cutting edge.

# CHAPTER 6: MAINTENANCE

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR  
MAINTENANCE.

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## 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!** 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 driver and equipment. **CHECK WELDMENTS FOR CRACKS.**

## CABLE AND SHEAVES

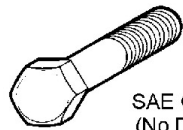
- **CABLE:** Check cable thoroughly for fraying, kinks, and abnormal wear. Make sure cable is properly routed and seated in all sheaves. Verify that cable clamps have proper torque and are in correct orientation and spacing. Cable shall be checked prior to each use or after every 8 hours, whichever comes 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

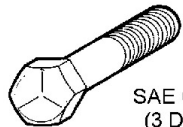
# MAINTENANCE

## TORQUE SPECIFICATIONS - DRY TORQUE

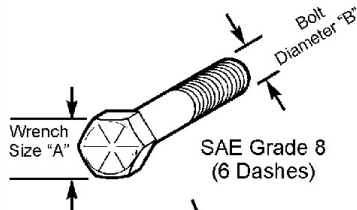
### AMERICAN Bolt Head Markings



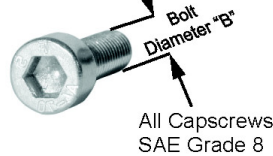
SAE Grade 2  
(No Dashes)



SAE Grade 5  
(3 Dashes)



SAE Grade 8  
(6 Dashes)

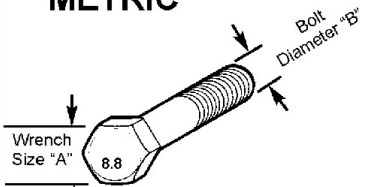


All Capscrews  
SAE Grade 8

Proper torque for American fasteners.  
Recommended Torque in Foot Pounds (Newton Meters).\*

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288 (1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

### METRIC



Numbers appearing on bolt heads  
indicate ASTM class.

Proper torque for Metric fasteners.  
Recommended torque in Foot Pounds (Newton Meters).\*

WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
41	27		821 (1112)		1138 (1542)
46	30	418 (566)	1119 (1516)		1547 (2096)

\*Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque values for lubricated fasteners.

Mnt-B-0005

# CHAPTER 7: WARRANTY & DEALER PROCEDURE

PLEASE READ ENTIRE BOOK BEFORE INSTALLATION, OPERATION, OR  
MAINTENANCE.

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# HENKE LIMITED WARRANTY

## 1.0 LIMITED WARRANTIES

- 1.1 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
  - 1.1.1 Parts manufactured by Henke are warranted to be free from defects in materials and/or workmanship for a period of 12 months from date of purchase when used under normal operating conditions, used in a proper application and have been provided any/all maintenance is performed as recommended.
  - 1.1.2 Any parts or accessories not manufactured by Henke are warranted only to the extent that the manufacturer's warranty may be passed on to the purchaser and such parts and accessories are not subject to Henke's warranty or to any other warranty expressed or implied.
- 1.2 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.
- 1.3 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 superseded by, and equal to the component manufacturer warranty.
- 1.4 Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

## 2.0 REMEDIES AND PROCEDURES.

- 2.1 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.
- 2.2 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.
- 2.3 Purchaser is responsible for returning the goods in question to the Dealer.
  - 2.3.1 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:
  - 2.3.2 Repair or replace the defective goods or part(s) or
  - 2.3.3 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.
  - 2.3.4 The choice of remedy shall belong to Manufacturer.
- 2.4 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.

## 3.0 LIMITATION OF LIABILITY.

- 3.1 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.
- 3.2 MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.3 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. NOT WITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.4 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.

## 4.0 MISCELLANEOUS.

- 4.1 Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Leavenworth County, Kansas.
- 4.2 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.
- 4.3 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.
- 4.4 Applicable law may provide rights and benefits to purchaser in addition to those provided herein.



**5.0 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 Product Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

Dealer: \_\_\_\_\_

**Important**

READ YOUR OPERATOR'S  
MANUAL

HENKE MANUFACTURING  
An Alamo Group Company  
3070 WILSON AVE.  
LEAVENWORTH, KS 66048



(888) 682-9010

# 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 CORPORATION**  
**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 inquiries may be emailed at any time to **parts@henkemfg.com**. Emails are encouraged, as this will direct your inquiry to the entire parts and service team, insuring the most prompt attention possible. All inquiries are processed in the order they are received.

Parts and service assistance is also available, Monday through Friday, from 7:00 am to 4:30 pm, CST, call **(913) 682-9000 x3**, or Toll Free **(888) 682-9010 x3**.

Our web site, **www.henkemfg.com**, is a quick source for parts pricing, and many common parts diagrams. Go to **www.henkemfg.com/parts-and-service/** to submit a quick request ticket for parts.