

# MISCELLANEOUS MAINTENANCE

# REPAIR AND PREVENTATIVE MAINTENANCE



# MISCELLANEOUS MAINTENANCE

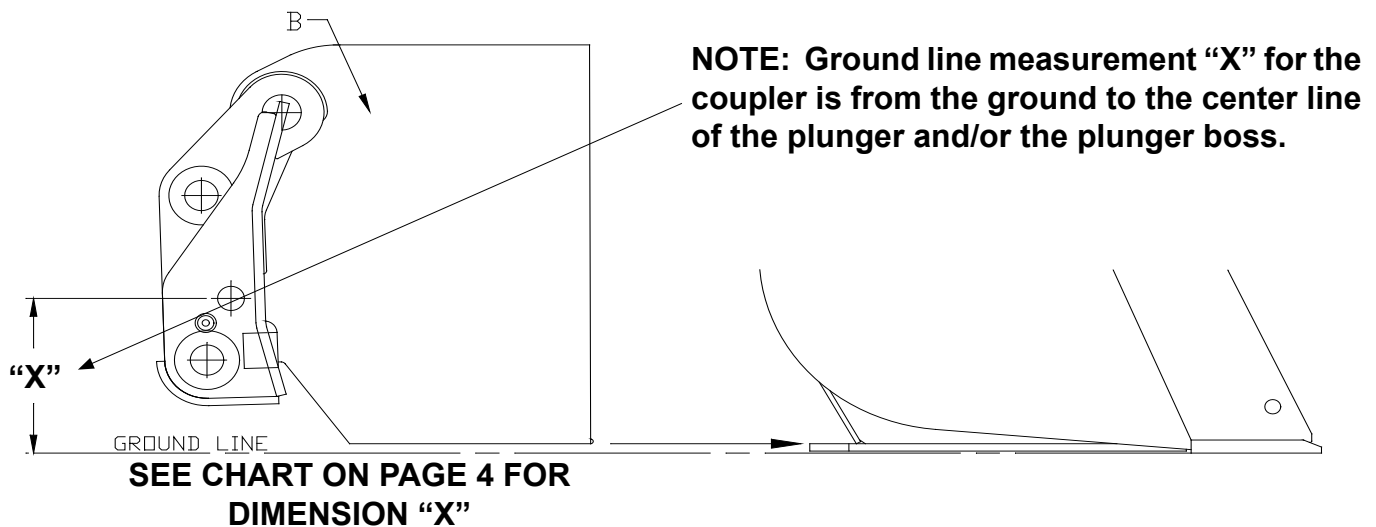
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# MISCELLANEOUS MAINTENANCE

## FIELD PROFILING AND INSTALLATION OF FEMALE BLANK ADAPTERS

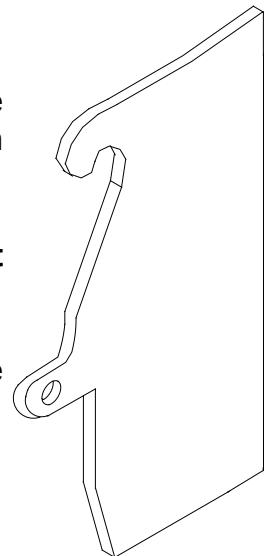
- ▶ Female Adapter Blanks (B) require profiling to fit the attachment. The blanks are designed for a specific JRB® coupler and can only be used with that specific series.
- ▶ Determine the attachment that the adapters will be profiled to be installed on. The attachment should be on a flat surface so that the ground line, “X”, is easily determined.



- ▶ Using the ground line as a base, make a cardboard template of the profile of the attachment. Make sure the entire profile including the ground line configuration is included.

**NOTE: Use a sturdy piece of corrugated cardboard or a similar material that will not stretch or become easily damaged.**

- ▶ Use the template to mark the JRB® Adapter Blank for cutting. Refer to the table on the following page to determine the minimum material to leave on the blank.



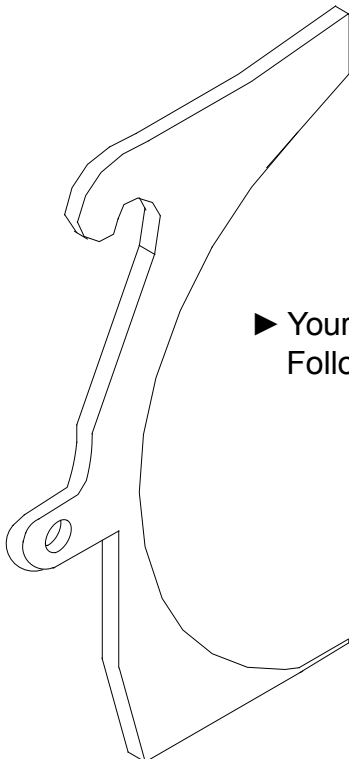
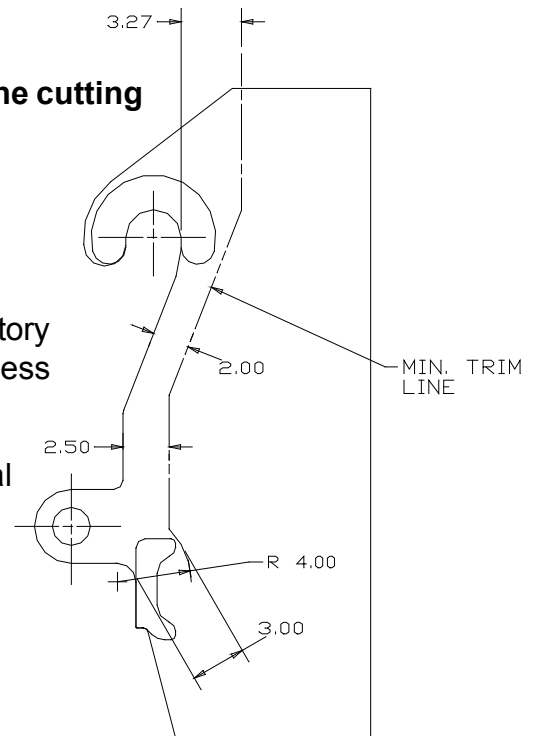
# MISCELLANEOUS MAINTENANCE

## FIELD PROFILING AND INSTALLATION OF FEMALE BLANK ADAPTERS

- ▶ Following the marks from your template, cut the Adapter Blank using the proper size cutting tip for the material thickness.

**NOTE: Double check your template to the attachment and the cutting marks on the Adapter Blanks before cutting.**

- ▶ The drawing to the right shows the minimum trim line for satisfactory results when profiling your JRB® Adapter Blanks. Leaving less material than indicated can result in early failure of the rib.
- ▶ The dimensions shown are minimums. Leaving additional material will increase the durability of the rib.



### NOTICE

**CUTTING TOO MUCH MATERIAL FROM THE JRB ADAPTER BLANK CAN WEAKEN THE RIB AND CAUSE AN EARLY FAILURE. CUTTING TOO LITTLE MATERIAL WILL NOT ALLOW PROPER ROLLBACK AND/OR DUMP OF THE ATTACHMENT.**

- ▶ Your Adapters are now profiled and ready for installation on the attachment. Follow the instructions on the following pages to complete the install.

### WARNING

**USE STANDARD SAFETY PRECAUTIONS AND WEAR PROTECTIVE CLOTHING AND SAFETY DEVICES WHEN WELDING OR CUTTING MATERIAL. SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

# MISCELLANEOUS MAINTENANCE

## GENERAL WELDING INSTRUCTIONS

### WELDING PRE-HEAT CHART

- Identify and “v” out area to be repaired. When complete the area must be ground down.
- Clean and preheat area according to the chart to the right, maintaining that temperature through out the welding process.
- Weld using 7018 or 7016 low hydrogen rod.
- Allow to cool slowly at room temperature.

**DO NOT PLACE IN A COLD AREA TO COOL!**

TYPE OF METAL	PRE-HEAT TEMPERATURE
GR50 <1/2"	70 degrees F
GR50 >1/2"	150 degrees F
GR60 < 1/2"	70 degrees F
GR60 >1/2"	150 degrees F
15B30	450 degrees F
T1	250 degrees F
4140RB	400 degrees F
AR400	350 degrees F
AR425	350 degrees F
AR500	350 degrees F

#### **WARNING**

**ALWAYS WEAR PROTECTIVE EQUIPMENT WHEN WELDING! IF PROPER PROCEDURES ARE NOT FOLLOWED AND PROTECTIVE EQUIPMENT IS NOT USED, SERIOUS INJURY COULD RESULT.**

FOR ADDITIONAL ASSISTANCE REFER TO **ANSI/AWS D14.3-94.**

# MISCELLANEOUS MAINTENANCE

## FIELD INSTALLATION OF FEMALE ADAPTERS

### Reference Figure 1

- Mount coupler on machine using standard mounting pins and check for correct operation.
- Install both female adapters (B) in male master coupler (A) by hooking adapter on top pin and swinging adapter down to coupler. Lock adapters in position with plungers.

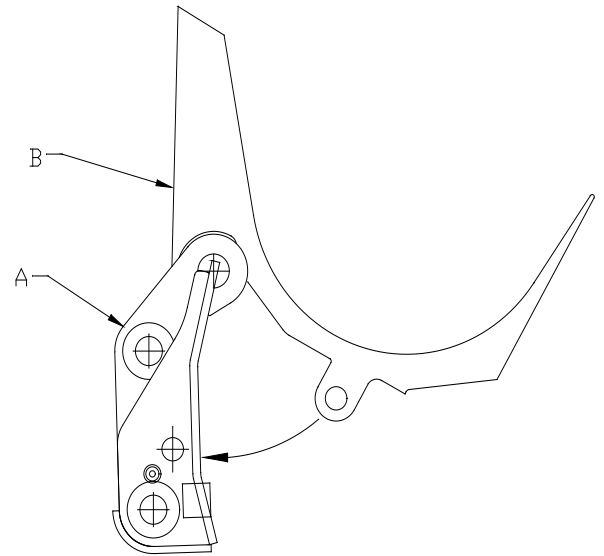


Figure 1

### Reference Figure 2

- Using coupler (A) as a holding fixture, drive the machine to the attachment (C) locating the female adapters (B) on each side of the centerline of the attachment. The centerline of the attachment should line up with the centerline of the male master coupler.

**Note:** In some instances it is necessary to remove existing mounting brackets prior to installing the female adapters. This is required in order to maintain as close a relationship as possible between attachment and machine.

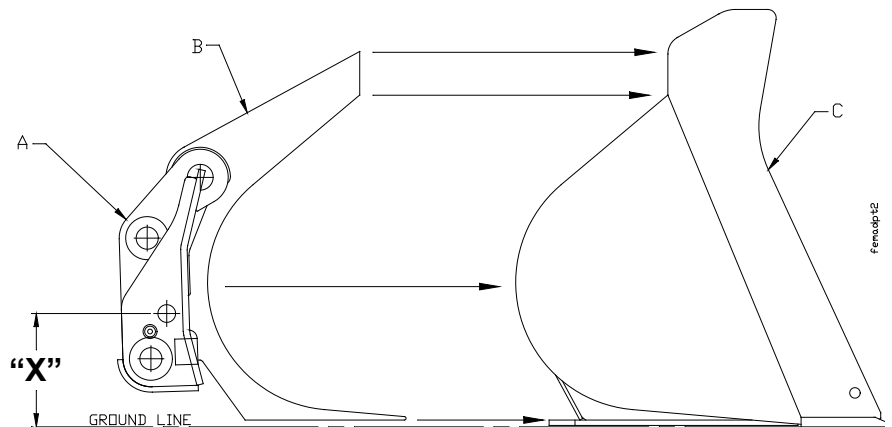


Figure 2

- With centerlines in line, tack weld female adapters to attachment.

**SEE CHART ON NEXT PAGE FOR  
DIMENSION "X"**

- Retract plungers from female adapters and back away from attachment.

# MISCELLANEOUS MAINTENANCE

## FIELD INSTALLATION OF FEMALE ADAPTERS

### Reference Figure 3

- Install two (2) tie bars on female adapters (B) prior to finish welding. One tie bar should be parallel with plunger bores, and the other approximately 6" down from the top of the adapters. Tie bars should be approx. 1" square.
- With tie bars in place, finish welding female adapters to attachment. Weld size should match thickness of mating surface or 3/4", whichever is smaller.
- If attachment requires skid bars, locate them under the attachment and centered on female adapters. Finish weld.

SEE CHART FOR  
DIMENSION "Z"

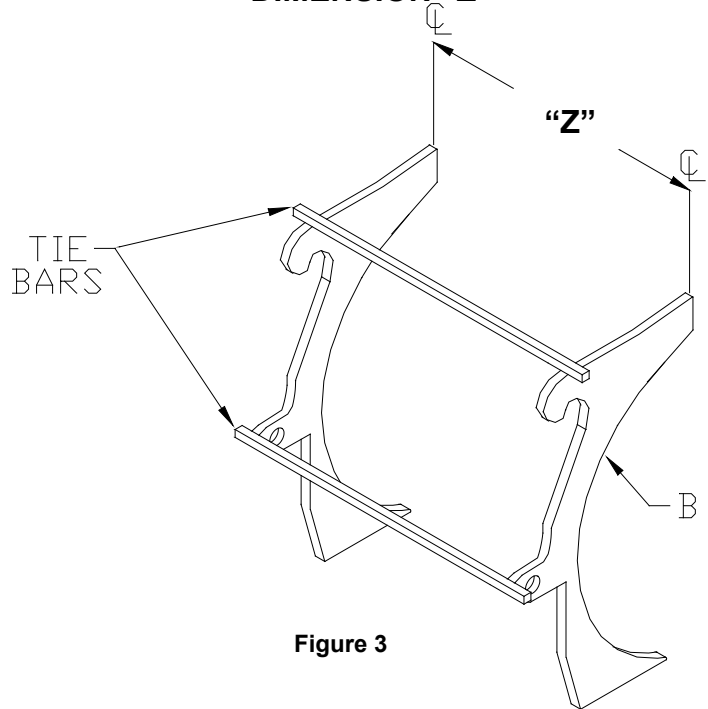


Figure 3

### ADAPTER SERIES DIMENSION CHART

JRB ADAPTER SERIES	"X" Dimension	"Z" Dimension
84	9.00"	24.38"
E	9.75"	38.20"
416	12.85"	30.62
418	16.62"	32.75"
420	14.95"	29.00"
VOLVO	6.45"	39.36"
WB140	5.25"	29.38"
CASE 580K	10.93"	31.38"
IT28	14.44"	22.44"
IT38	8.13"	36.25"

- Remove tie bars after welds have cooled.
- Drive machine back to attachment and check for bore alignment with male master coupler.
- Finish paint weld areas.

# MISCELLANEOUS MAINTENANCE

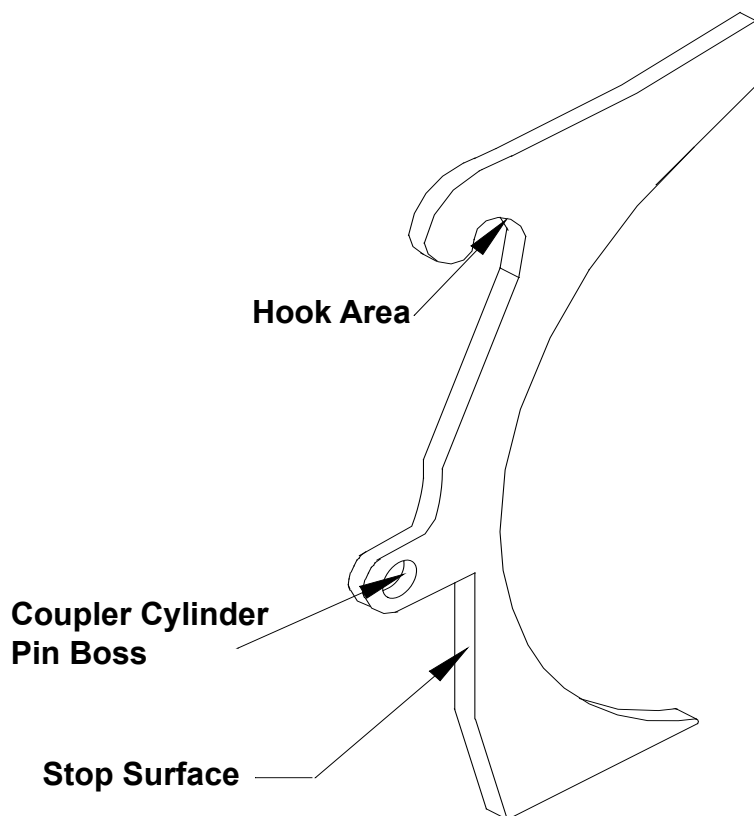
## FEMALE RIB, HOOK REPAIR

Over time the hook area will wear and become loose on the coupler top round bar. This can be caused by poor fit, non JRB Coupler, non JRB Females and/or long time use. Always use JRB Couplers and JRB Females. Correct and proper fit should be checked on a regular basis as poor fit will cause increasingly rapid wear.

Determine correct fit by lowering the attachment to the ground. Check the lower stop surface of the female for positive contact. If there is more than 0.08", hard face the surface. Check the coupler pin boss for wear. The diameter should be 2.06" for most series females. (Check your plunger diameter for correct clearance. This boss should also be repaired if loose. Next, check to determine if there is a gap between the coupler round bar and the top of the hook curve. Measure the gap and hard face this hook surface.

When loose fit and wear is detected, repair should be made as soon as possible. The more wear the more difficult the repair. This repair or hard facing should be accomplished as follows:

The areas being repaired should be free of debris, clean and prepared for welding. Beads of weld with 7018 Low Hydrogen rod applied according to the JRB Welding Instructions, found elsewhere in this manual, should be run along the area being repaired. The weld should be ground smooth and the fit checked. Repeat this process until the correct fit is achieved.





## **MISCELLANEOUS MAINTENANCE**

THE MAINTENANCE AND REPAIR INFORMATION IN THIS SECTION IS VARIED AND DOES NOT ALLOW FOR EVEN A GENERALIZED TIME ESTIMATE. CONTACT JRB CUSTOMER SERVICE FOR MORE INFORMATION AT 1-800-428-2538.

# MISCELLANEOUS MAINTENANCE

## TORQUE CHART FOR BOLTS

	Bolt Size (inches)	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1.00	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	1-7/8	2.00
UNF Standard Grade 8 Bolts	Threads per Inch (fine)	28	24	24	20	20	18	18	16	14	14	12	12	12	12	12	12	12	12
	Foot-Pounds (dry torque)	15	32	51	85	130	184	251	414	654	983	1559	2153	2889	3488	4796	6159	8284	8938
UNC Standard Grade 8 Bolts	Threads per Inch (coarse)	20	18	16	14	13	12	11	10	9	8	7	7	6	6	5.5	5	5	4.5
	Foot-Pounds (dry torque)	14	29	47	78	119	169	230	380	600	900	1430	1975	2650	3200	4400	5650	7600	8200

Standard Metric 5D Bolts	Bolt Size (mm)	6	8	10	12	14	16	18	22	24
	Thread Pitch	1.00	1.00	1.25	1.25	1.25	2.00	2.00	2.50	3.00
	Foot-Pounds (dry torque)	5	10	19	34	55	83	111	182	261
Standard Metric 8G Bolts	Foot-Pounds (dry torque)	6	16	31	54	89	132	182	284	419
Standard Metric 10K Bolts	Foot-Pounds (dry torque)	8	22	40	70	117	175	236	394	570
Standard Metric 12K Bolts	Foot-Pounds (dry torque)	10	27	49	86	137	208	283	464	689

# MISCELLANEOUS MAINTENANCE WARRANTY POLICY

## PALADIN HEAVY CONSTRUCTION LIMITED WARRANTY POLICY

(page 1 of 2)

Paladin Heavy Construction (“Paladin”) warrants its products against faulty design, material, and workmanship for a period of one (1) year from date of delivery or 2,000 hours, whichever comes first. Standard Series Loader Couplers are warranted for three (3) years or 3,000 hours, whichever comes first. Special Interchange Loader Couplers and Excavator Couplers are warranted for a period of one (1) year from date of delivery or 1,000 hours, whichever comes first. Refer to the Product Manual for proper maintenance procedures.

Hydraulic kits and components are warranted for one (1) year from factory delivery date. Cylinders must be returned in their entirety and not have been disassembled to be considered for warranty. After Warranty and Purchased Parts include cylinders, hydraulic valves, seal kits, electrical components and wear parts are warranted for 90 days. Disassembly, modification or welding of cylinders without Paladin’s written authorization voids the warranty on the cylinder and the seals. All valves must be packaged and sealed to prevent contaminants from entering the valve during shipment. Valves improperly packaged will not be considered for warranty. Hydraulic hoses are warranted against failure due to workmanship. Improper installation, ripping or cutting due to unauthorized modifications of Paladin Heavy Construction installation procedures is not warranted. A qualified Paladin dealer or Paladin representative must install hydraulic kits and components for failures to be given warranty consideration.

Paladin will repair or replace, at its sole option, any equipment proven to Paladin’s satisfaction to be of faulty design, material or workmanship. Warranty replacement parts will be shipped second day air. This warranty does not include or cover purchased subassemblies including, but not limited to, teeth, tines (forks), cylinders, blades, etc. Such purchase subassemblies are covered only by the OEM’s warranty, if any, of their respective manufacturers, and not by Paladin.

Dealer labor rate charges on approved warranty repairs shall not exceed 70% of dealer regular hourly rate. Overtime charges need prior written approval. Claims received 30 days past the repair date will not be considered for warranty coverage and shall be null and void.

# MISCELLANEOUS MAINTENANCE

## PALADIN HEAVY CONSTRUCTION LIMITED WARRANTY POLICY

Continued (page 2 of 2)

### LIMITATIONS:

This LIMITED WARRANTY does not cover product, which in the opinion of Paladin, is damaged due to abuse, misuse, misapplication, prohibited operation, improper maintenance, alteration, unauthorized service, contamination by the base machine, or normal wear and tear. This LIMITED WARRANTY is void if the product is modified in any way without the written consent or instruction of Paladin. This LIMITED WARRANTY is null and void if the product is used in a prohibited operation, or unauthorized adjustment/assembly/disassembly has occurred. This LIMITED WARRANTY is the exclusive warranty and is given in lieu of any and all other warranties, whether expressed or implied, arising in any fashion including but not limited to the course of dealing and course of performance, and including but not limited to warranty of merchantability or warranty of fitness for a particular purpose. Dealers or Agents of Paladin have no authority to make any type of representation or warranties on behalf of Paladin beyond those expressly set forth in this document.

Paladin Heavy Construction couplers are manufactured with a patented design to interface with Paladin attachments, OEM attachments and Paladin female adapters (ribs). The use of attachments other than Paladin attachments, OEM attachments and Paladin female adapters (ribs) will void all warranty on the Paladin Heavy Construction coupler. The use of Paladin Heavy Construction adapters on unapproved attachments is not sanctioned. A “home made” or nonstandard attachment outside the specifications for the machine will void the warranty on the Paladin Heavy Construction coupler.

In no event shall Paladin be liable to any party, including but not limited to buyer, for any direct, incidental, consequential, punitive, or special damages, including but not limited to loss of profits, loss of productivity, in any way related to or arising, directly or indirectly, from the product. The liability of Paladin for any and all losses and damages to buyer, its successors and assigns, resulting from any cause whatsoever, including the negligence of Paladin, irrespective of whether such defects are discoverable or latent, shall in no event exceed the purchase price of the product with respect to which such losses or damages are claimed.

Paladin Heavy Construction Group Headquarters  
820 Glaser Parkway  
Akron, OH 44306  
330-734-3000  
800-428-2538 Toll Free  
330-734-3019 Fax

# MISCELLANEOUS MAINTENANCE

## RETURNED GOOD POLICY

### JRB Attachments, LLC.

820 Glaser Parkway  
Akron, OH 44306  
1-800-428-2538

#### RETURNED GOODS POLICY - PARTS/SALES

##### Items shipped in error

JRB Attachments, LLC., will accept returned items, with prior approval of JRB Attachments, LLC. (see RGA Paragraph below), within thirty (30) days after shipment without a restocking charge, freight collect.

##### Items ordered in error

When current parts are incorrectly ordered and returned to JRB Attachments, LLC., the **Customer is responsible for freight costs and a 15% restock fee.**

When current parts are purchased without a serial number and returned, the **Customer is responsible for freight costs and a 15% restock fee.**

When current parts with a 90 day + shelf life are purchased and returned, the **Customer is responsible for freight costs and a 25% restock fee.**

##### Non-current and Special Parts items

JRB Attachments, LLC. will **not** accept returned items, which are special order or used on non-current machines.

##### Service Parts

JRB Attachments, LLC. will accept returned service parts items, which were ordered in error, with prior approval of JRB Attachments, LLC. (see RGA), within thirty (30) days after shipment with a **25% restocking charge, freight prepaid.**

##### RGA - Returned Goods Authorization

**All return items must have the prior approval of JRB Attachments, LLC. and be assigned a RGA (Return Goods Authorization) number by either the JRB Sales or Parts Department and must be returned within (30) days of request.**