



#### **ACAUTION**

The safe operating temperature range for this product is 41° F. - 104 °F.

PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

REV B 07-16-09 p/n 5900034

## **INSTALLATION AND OPERATION MANUAL**

COMMERCIAL GRADE ROLLING BRIDGE JACKS

**MODELS:** 

RJ-45; RJ-45S; RJ-6; RJ-7: RJ-9; RJ-12; RJ-15; RJ-18; RJ-25.





RJ-6 shown

Keep this operation manual near the machine at all times. Make sure that <u>ALL USERS</u> read this manual.

#### SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

#### **BE SAFE**

Your new lift was designed and built with safety in mind. However, your overall safety can be increased by proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.



1645 Lemonwood Dr. Santa Paula, CA. 93060, USA Toll Free 1-800-253-2363 Tel: 1-805-933-9970

Fax: 1-805-933-9160 www.bendpak.com

# 4,500; 6,000; 7,000; 9,000; 12,000; 15,000; 18,000; 25,000 POUND CAPACITY, COMMERCIAL GRADE ROLLING BRIDGE JACKS

This instruction manual has been prepared especially for you.

Your new jack is the product of over 35 years of continuous research, testing and development; it is the most technically advanced lift on the market today.

#### READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.

RECORD HERE THE JACK AND
POWER UNIT INFORMATION WHICH IS
LOCATED ON THE SERIAL NUMBER
DATA PLATES ON THE LIFT AND
ON THE POWER UNIT

| Power Unit Model #      |  |
|-------------------------|--|
| Power Unit Date Of Mfg. |  |
| Power Unit Serial #     |  |



This information is required when calling for parts or warranty issues.

#### PRODUCT WARRANTY

BendPak's Rolling Jack Lifts are covered under warranty for one year on equipment structure, to be free of defects in material and workmanship. Power units, hydraulic cylinders, and all other assembly components such as turnplates, slip plates, cables, chains, valves, switches etc. are covered under warranty for one year against defects in material or workmanship under normal use. BendPak Inc. shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. BendPak Inc. will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manuals) and/or other accompanying instructions supplied;
- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A BENDPAK INC. PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

# WARRANTY IS NOT VALID UNLESS WARRANTY CARD IS RETURNED.

#### **IMPORTANT NOTICE!**

Do not attempt to install this jack if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

# PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

## DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



#### **DANGER!**

Watch for this symbol: It Means: Immediate hazards which will result in severe personal injury or death.



#### **WARNING!**

Watch for this symbol: It Means: Hazards or unsafe practices which could result in severe personal injury or death.



#### **CAUTION!**

Watch for this symbol: It Means: Hazards or unsafe practices which may result in minor personal injury, product or property damage.

#### **OWNER'S RESPONSIBILITY**

To maintain the jack and user safety, the responsibility of the owner is to read and follow these instructions:

- ♦ Follow all installation and operation instructions.
- Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the lift for correct initial function.
- ♦ Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- Allow unit operation only with all parts in place and operating safely.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized or approved replacement parts.
- ♦ Keep all instructions permanently with the unit and all decals on the unit clean and visible.

#### **BEFORE YOU BEGIN**

#### Receiving:

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by your invoice. If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

**NOTIFY THE CARRIER AT ONCE** if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. If the carrier will not do so, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT. File your claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make BendPak responsible for collection of claims or replacement of lost or damaged materials.

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#### **DANGER!**

IT IS THE RESPONSIBILITY OF THE OWNER /
INSTALLER OF THIS ROLLING BRIDGE JACK TO
ENSURE THAT THE LIFT UPON WHICH THE ROLLING
BRIDGE JACK IS INSTALLED HAS BEEN PROPERLY
INSTALLED ACCORDING TO THE MANUFACTURER'S
SPECIFICATIONS.

# INSTALLER / OPERATOR PLEASE READ AND FULLY UNDERSTAND. BY PROCEEDING YOU AGREE TO / CERTIFY THE FOLLOWING.

- ♦ I have visually inspected the lift on which the Rolling Bridge Jack is to be installed and verified the lift to be in good condition and free of defects. I understand that installing a rolling jack on a lift in poor condition could cause lift failure resulting in personal injury or death.
- ♦ I understand that this Rolling Bridge Jack is to be installed **ONLY** on a lift manufactured by BendPak Incorporated and that the capacity of the Rolling Bridge Jack(s) is consistent with the maximum capacity of the lift that it being installed on.
- ♦ I understand that a level floor is required for proper installation and level lifting.
- ♦ I understand that I am responsible if my floor is of questionable slope and that I will be responsible for all charges related to pouring a new level concrete slab if required and any charges.
- ♦ I will assume full responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are to be installed. Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.
- ♦ I understand that BendPak lifts are designed to be installed in indoor locations only. Failure to follow installation instructions may lead to serious personal injury or death to operator or bystander or damage to property or lift.



Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.



Please read entire manual prior to installation.
Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual. For additional copies or further information, contact:

#### BendPak Inc. / Ranger Products

1645 Lemonwood Dr.
Santa Paula, CA. 93060
1-805-933-9970
www.bendpak.com

# INSTALLER / OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps makes installation and operation safer, however, it does not take the place of safe operating practices. Always wear durable work clothing during any installation and/or service activity. Shop aprons or shop coats may also be worn, however loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect technician hands when handling parts. Sturdy leather work shoes with steel toes and oil resistant soles should be used by all service personnel to help prevent injury during typical installation and operation activities.

Eye protection is essential during installation and operation activities. Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing worker protection. Consideration should also be given to the use of hearing

protection if service activity is performed in an enclosed area, or if noise levels are high.



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OR YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.

#### INTRODUCTION

1. Carefully remove the crating and packing materials. **CAUTION!** Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury.

#### **IMPORTANT SAFETY INSTRUCTIONS!**

Read these safety instructions entirely!

#### **IMPORTANT NOTICE!**

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures.

Never attempt to lift components without proper lifting tools such as forklift or cranes.

Stay clear of any moving parts that can fall and cause injury.

- READ AND UNDERSTAND all safety warning procedures before operating jack.
- 2. **KEEP HANDS AND FEET CLEAR**. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- 3. **KEEP WORK AREA CLEAN**. Cluttered work areas invite injuries.
- 4. Consider work area environment. Do not expose equipment to rain. **DO NOT** use in damp or wet locations. Keep area well lighted.
- 5. **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
- 6. **USE LIFT CORRECTLY**. Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
- DO NOT override self-closing lift controls.
- 8. **REMAIN CLEAR** of lift when raising or lowering vehicle.

- 9. **CLEAR AREA** if vehicle is in danger of falling.
- 10. **ALWAYS INSURE** that the safeties are engaged before any attempt is made to work on or near vehicle.
- 11. **DRESS PROPERLY**. Non-skid steel-toe footwear is recommended when operating lift.
- 12. **DANGER!** Shut off and disconnect the air supply when installing the Rolling jack pump and when the Pump is not in use or before breaking any connections in the system.



- 13. **MAINTAIN WITH CARE**. Keep lift clean for better and safer performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.
- 14. **STAY ALERT**. Watch what you are doing. Use common sense. Be aware.
- 15. **CHECK FOR DAMAGED PARTS**. Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
- 16. **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.

#### **TOOLS REQUIRED**

- ♦ Hex-Key / Allen Wrench Set
- ♦ Medium Crescent Wrench
- ♦ Shop Crane or other heavy lifting device

- ♦ Medium Flat Screwdriver
- ♦ Tape Measure: @ 25 Foot
- ♦ Air Fitting (to connect air supply)

#### **IMPORTANT NOTE:**

These instructions must be followed to insure proper installation and operation of your Rolling Bridge Jack. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

#### PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION!

#### STEP 1

( Verifying Lift Installation )



#### **DANGER!**

IT IS THE RESPONSIBILITY OF THE OWNER /
INSTALLER OF THIS ROLLING BRIDGE JACK TO
ENSURE THAT THE LIFT UPON WHICH THE ROLLING
BRIDGE JACK IS INSTALLED HAS BEEN PROPERLY
INSTALLED ACCORDING TO THE MANUFACTURER'S
SPECIFICATIONS.

Before installing your new Rolling Bridge Jack, verify the following aspects of the installation of the lift where Rolling Bridge Jacks are being installed. The aspects of the lift installation that need to be verified should include, but are not limited to;

- 1. LIFT LOCATION / PROPER ALIGNMENT
- 2. OVERHEAD OBSTRUCTIONS.
- CORRECT FLOOR COMPOSITION/ REQUIREMENTS.
- 4. OPERATING TEMPERATURE.
- 5. INDOOR INSTALLATION ONLY.
- 6. OPERATION MANUALS ON HAND.
- 7. OPERATORS PROPERLY TRAINED.



#### OPERATING TEMPERATURE.

Operate Rolling Bridge Jack only between temperatures of 41° -104° F.

#### STEP 2

(Rolling Jack Capacities)



#### DANGER!

The AXLE WEIGHT of the vehicle being raised should not exceed the maximum capacity of the Rolling Bridge Jack. Consult the vehicle manufacturer for specifications.

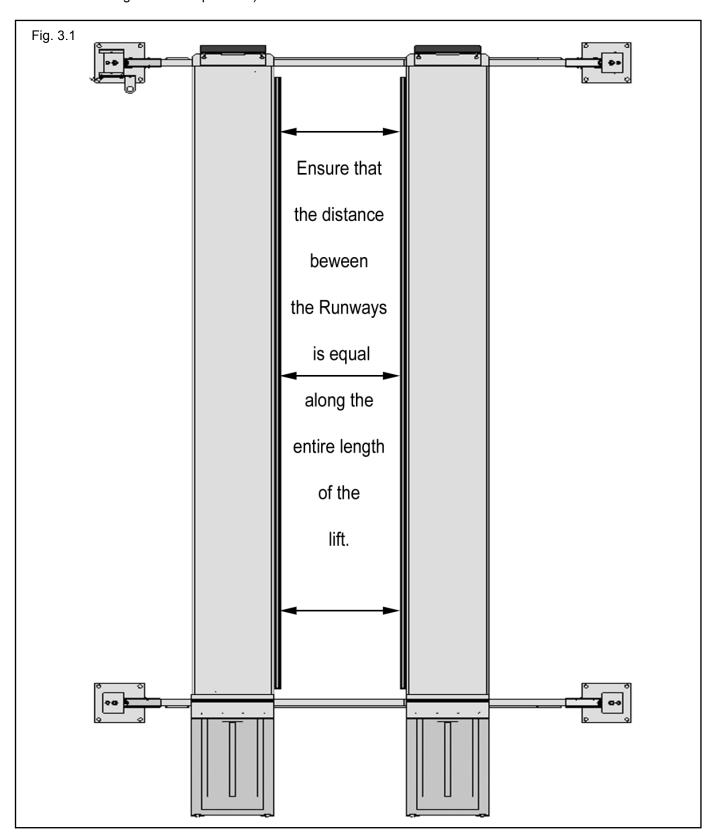
THE MAXIMUM LIFTING CAPACITY OF THESE JACKS ARE DESCRIBED BELOW.

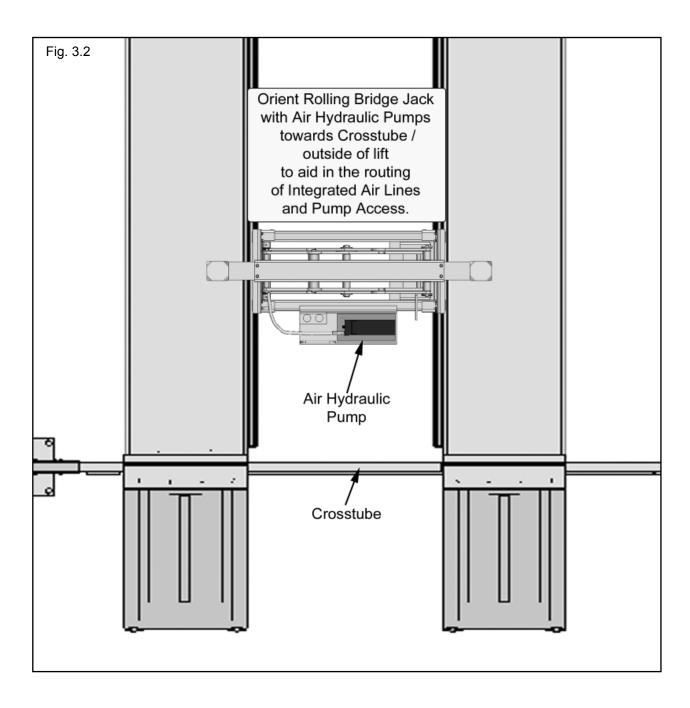
| MODEL   | MAX JACK<br>CAPACITY    | MAX VEHICLE WEIGHT FRONT AXLE | MAX VEHICLE WEIGHT<br>REAR AXLE |
|---------|-------------------------|-------------------------------|---------------------------------|
| RJ-45/S | 4,500 Lbs/ 2,041 Kgs    | 4,500 Lbs/ 2,041 Kgs          | 4,500 Lbs/ 2,041 Kgs            |
| RJ-6    | 6,000 Lbs / 2,721 Kgs   | 6,000 Lbs / 2,721 Kgs         | 6,000 Lbs / 2,721 Kgs           |
| RJ-7    | 7,000 Lbs / 3,175 Kgs   | 7,000 Lbs / 3,175 Kgs         | 7,000 Lbs / 3,175 Kgss          |
| RJ-9    | 9,000 Lbs / 4,082 Kgs   | 9,000 Lbs / 4,082 Kgs         | 9,000 Lbs / 4,082 Kgs           |
| RJ-12   | 12,000 Lbs / 5,443 Kgs  | 12,000 Lbs / 5,443 Kgs        | 12,000 Lbs / 5,443 Kgs          |
| RJ-15   | 15,000 Lbs / 6,804 Kgs  | 15,000 Lbs / 6,804 Kgs        | 15,000 Lbs / 6,804 Kgs          |
| RJ-18   | 18,000 Lbs / 8,165 Kgs  | 18,000 Lbs / 8,165 Kgs        | 18,000 Lbs / 8,165 Kgs          |
| RJ-25   | 25,000 Lbs / 11,340 Kgs | 25,000 Lbs / 11,340 Kgs       | 25,000 Lbs / 11,340 Kgs         |

#### STEP 3

( Adjusting Lift / Jack Orientation )

- 1. Following the manufacturer's instructions in the lift manual. Lower the lift to the ground. (If using a shop crane, you may need to lock the lift on the first Safety Lock to make room for the legs of the Shop Crane.)
- 2. If adjustable, adjust the Runway of the lift to the desired width. Be sure to check the specifications of the lift and the Rolling Bridge Jacks to be sure that the Rolling Bridge Jack can be adjusted to the desired Runway width. (See Fig. 3.1 & 3.2)





#### STEP 4

(Installing Jack on Rails)

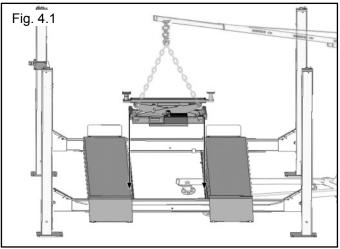


#### **WARNING!**

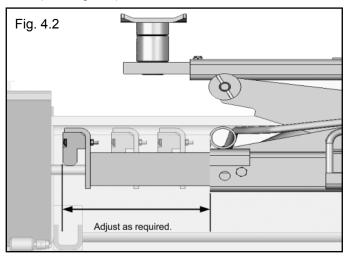
When removing or moving the Rolling Bridge Jack from shipping pallet pay close attention as the Jack may move and can cause injury.

Prior to removing the strapping or bolts make sure the Jack is held securely by a fork lift or some other heavy lifting device.

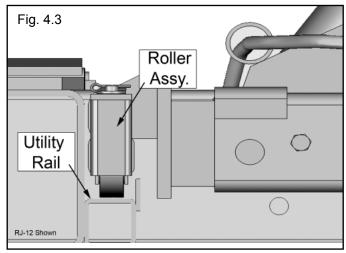
- 1. Lower the Rolling Bridge Jack all the way down.
- 2. Using a shop crane, forklift or other lifting device raise the Rolling Bridge Jack and place it in between the Runways. (See Fig. 4.1)

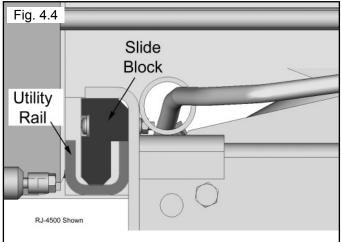


- 3. Lower the Rolling Bridge Jack to just above the Utility rails on the inside of the Runways.
- 4. Adjust the Rolling Bridge Jack arms to the correct width. NOTE: Some models may not have adjustable arms. (See Fig. 4.2)



5. When the desired width is reached. Lower the Rolling Bridge Jack into the Utility Rails. Double check that the Slide Blocks or Rollers are seated properly in the Utility Rails. (See Fig. 4.3 & 4.4)





- 6. Ensure that the Utility Rail Channel is clean of debris, tools etc. For Rolling Jacks with Slide Blocks, lubricate the Utility Rail channel with all purpose grease
- 7. Repeat the process for the other Rolling Bridge Jack if installing in pairs.
- 8. Raise the lift up off the ground so that the Rolling Bridge Jack is off the ground and lower the lift onto the first safety stop.



## ENSURE THAT THE LIFT IS RESTING ON THE SAFETIES BEFORE PROCEEDING.

9. Check the clearance and movement of the Rolling Bridge Jack by sliding the Rolling Bridge Jack forward and rearward on the rails. Check that the Sliding Blocks or Rollers are centered on the Rails at all points along the rail's length. Adjustment of the Rolling Bridge Jack Arms or the Runway width may be necessary to assure proper operation.

#### STEP 5

(Connecting Air Supply)



#### **DANGER!**

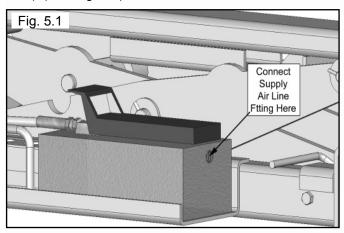
DISCONNECT AND / OR RELEASE THE PRESSURE FROM THE AIR SUPPLY SYSTEM / HOSES BEFORE PERFORMING ANY INSTALLATION OR MAINTENANCE OF THE AIR SUPPLY SYSTEM.

#### **DANGER!**

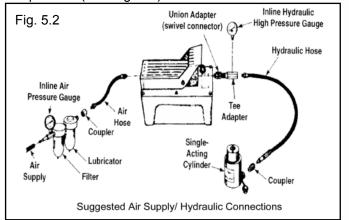
THE AIR SUPPLY SHOULD BE TO 20 CFM (.57 M<sup>3</sup>/MIN.) AND 100 PSI (7 BAR). AIR SUPPLY SHOULD BE REGULATED TO A MAXIMUM OF 125 PSI (8.6 BAR)

Refer to page 17 if installing with the Optional Rolling Bridge Jack Airline Kit.

1. Remove the thread protector from the air inlet of the Pump. Select and install the threaded fittings (not supplied) which are compatible with your air supply fittings. The air supply should be 20 CFM / 57 M<sup>3</sup>/MIN) and 100 PSI (7 BAR) to obtain the rated hydraulic pressure. Air Supply should be regulated to a maximum of 125 PSI (8.6 BAR) (See Fig. 5.1)



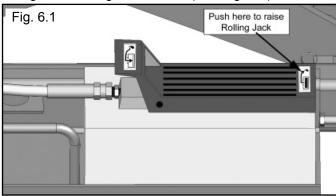
2. An appropriate air line regulator, water separator and lubricator should be installed on the Air Supply line. The absence of these items will void the warranty on pneumatic components. (See Fig. 5.2)



#### STEP 6

(Start Up / Final Adjustments)

- 1. Raise the Jack **WITHOUT** a vehicle to check for proper operation of the Rolling Bridge Jack.
- 2. Depress the Pedal on the lifting end to raise the Jack through the full range of the Jack. (See Fig. 6.1)



Under certain circumstances it may be necessary to prime the Air Hydraulic Pump Unit. Refer to the manual that came with the pump for these instructions.



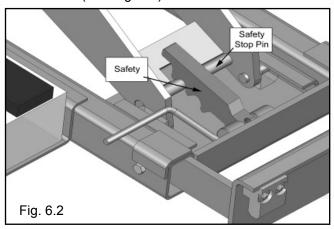
#### DANGER!

VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.

Suspension components used on this Jack are intended to raise and lower the Jack only and are not meant to be load holding devices. Remain clear of elevated Jack unless visual confirmation is made that all primary Safety Locks are fully engaged and the lift is LOWERED onto the Safety Locks.

Refer to installation /operation manual for proper Safety Lock procedures and /or further instruction.

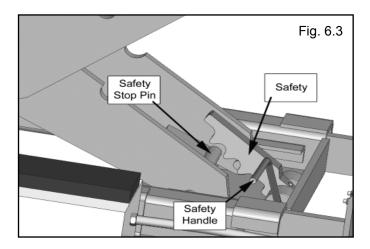
3. Lower the Jack onto the nearest Safety Stop Pin. When the Jack is loaded with a vehicle make sure the Jack is resting on the Safety Stop Pin prior to performing any work on the vehicle. (See Fig. 6.2)



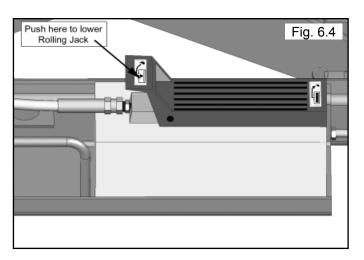
#### To lower the Rolling Bridge Jack;

When lowering the Jack PAY CAREFUL ATTENTION that all personnel and objects are kept clear. ALWAYS keep a visual line of site on the Jack AT ALL TIMES.

- 1. Raise the lift up so that the Safety is off the Safety Stop Pin.
- 2. Flip the Safety Handle up Off the Safety Stop Pin. (See Fig. 6.3)



3. Press the Pedal on the lowering end. Note: the Pedal can lock in the lowering position to facilitate lowering of the Jack. (See Fig. 6.4)



#### POST-INSTALLATION CHECK-OFF

- Check For Hydraulic Leaks
- ♦ Check Oil Level
- ♦ Lubrication of Critical Components
- ♦ Check For Overhead Obstructions
- Runways Level
- ♦ All Screws, Bolts, and Pins Secured
- Surrounding Area Clean
- ♦ Operation, Maintenance and Safety Manuals on Site

#### STEP 7

(Operation)

1. Load the vehicle on the lift, following the manufacturer's instructions.

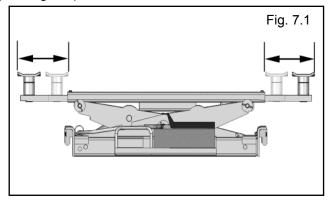
To Raise the Jack:

- 2. Position vehicle tires in the center of each runway.
- 3. Set parking brake or use wheel chock to hold vehicle in position.
- 4. Before raising vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances. Determine the proper lift points on the vehicle by referring to the manufacture's specification or an approved lifting guide.



WARNING!
NEVER USE MORE THAN 5 INCHES OF
LIFT PAD ADAPTER HEIGHT.

- 5. Check and keep clean the Utility Rails channels clean of debris, tools, or other objects that may hinder the movement of the Rolling Jacks.
- 6. Adjust the Rolling Jack Arms so that the lift pads will make contact with the appropriate lifting points on the vehicle as specified by the manufacturer of the vehicle. (See Fig. 7.1)



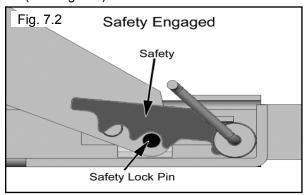
- 7. Raise the Rolling Bridge Jack by pushing on the Raise end of the pedal of Air Hydraulic pump. Keep an eye on the jack as the Lift pads make contact with the vehicle to ensure that proper contact is maintained as the weight of the vehicle is supported by the Jack.
- 8. Stop raising the jack just as the vehicle is raised off the lift runways. Confirm the vehicle is stable and properly seated before lifting the vehicle to the final desired height.



VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.

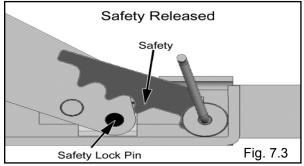
Suspension components used on this Jack are intended to raise and lower Jack only and are not meant to be load holding devices. Remain clear of elevated Jack unless visual confirmation is made that all primary Safety Locks are fully engaged and the lift is LOWERED onto the Safety Locks, Refer to installation /operation manual for proper Safety Lock procedures and /or further instruction.

8. After vehicle is raised to the desired height, lower the lift onto the nearest safety lock. **ALWAYS INSURE ALL SAFETY LOCKS ARE ENGAGED** before entering work area. (See Fig. 7.2)



#### To Lower Jack;

- 1. Before lowering vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances. Insure all tools and equipment have been cleared from under the Jack.
- Raise the Jack off of the Safety Locks by pressing the push button on the Power Unit. Make sure you raise the Jack to allow adequate clearance for the Locks to clear.
- 3. Flip the Safety Handle up to raise the Safety off the Safety Lock Pin. (See Fig. 7.3)



4. Push the Lowering side of the Pedal on the Air Hydraulic Pump until the lift has descended completely.

When lowering the lift **PAY CAREFUL ATTENTION** that all personnel and objects are kept clear. **ALWAYS** keep a visual line of site on the lift **AT ALL TIMES**.

#### **WEEKLY MAINTENANCE**

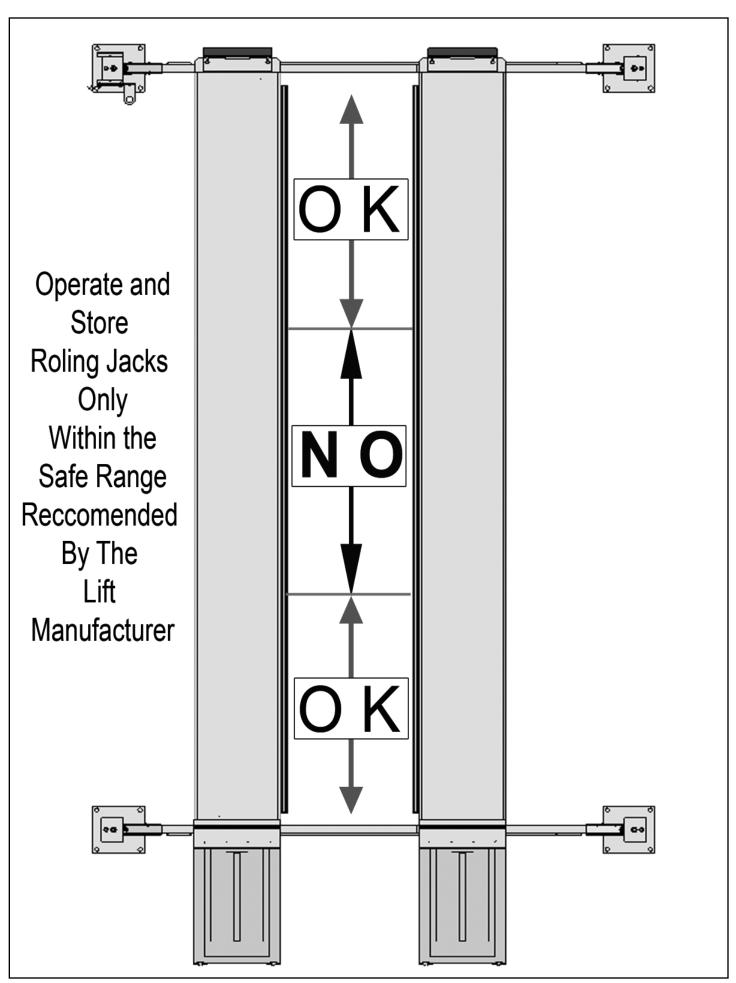
- Lubricate all rollers with general purpose oil or WD-40.
- 2. Check all Hose connections, bolts and pins to insure proper mounting.
- 3. Lubricate Safety lock pivot points with general purpose oil or WD-40.

#### **MONTHLY MAINTENANCE**

- Check Safety Locks to insure they are in good operating condition.
- 2. Make a visual inspection of **ALL MOVING PARTS** and check for excessive signs of wear.
- 4. Replace **ALL FAULTY PARTS** before lift is put back into operation.



- **♦ NEVER EXCEED THE RATED CAPACITY** of lift.
- ◆ DO NOT USE LIFT if any component is found to be defective or worn.
- NEVER OPERATE LIFT with any person or equipment below.
- ◆ ALWAYS STAND CLEAR of lift when lowering or raising.
- ◆ ALWAYS INSURE SAFETY LOCKS ARE ENGAGED before entering work area.
- ♦ NEVER LEAVE LIFT IN ELEVATED CONDITION unless all four safety locks are engaged.



#### Safe Lift Operation

Automotive and truck lifts are critical to the operation and profitability of your business. The safe use of this and other lifts in your shop is critical in preventing employee injuries and damage to customer's vehicles. By operating lifts safely you can insure that your shop is profitable, productive and safe.

Safe operation of automotive lifts requires that only trained employees should be allowed to use the lift.

#### TRAINING SHOULD INCLUDE, BUT NOT LIMITED TO:

- Proper positioning of the vehicle on the runway. (See manufacturers minimize wheel base loading requirements.)
- Use of the operating controls.
- Understanding the lift capacity.
- Proper use of jack stands or other load supporting devices.
- Proper use, understanding and visual identification of safety lock devices and their operation.
- Reviewing the safety rules.
- ♦ Proper housekeeping procedures (lift area should be free of grease, oil, tools, equipment, trash, and other debris).
- A daily inspection of the lift should be completed prior to its use. Safety devices, operating controls, lift arms and other critical parts should be inspected prior to using the lift.
- ♦ All maintenance and repairs of the lift should be completed by following the manufacturer's requirements. Lift repair parts should meet or exceed OEM specifications. Repairs should only be completed by a qualified lift technician.
- The vehicle manufacturer's recommendations should be used for spotting and lifting the vehicle.

#### LIFT OPERATION SAFETY

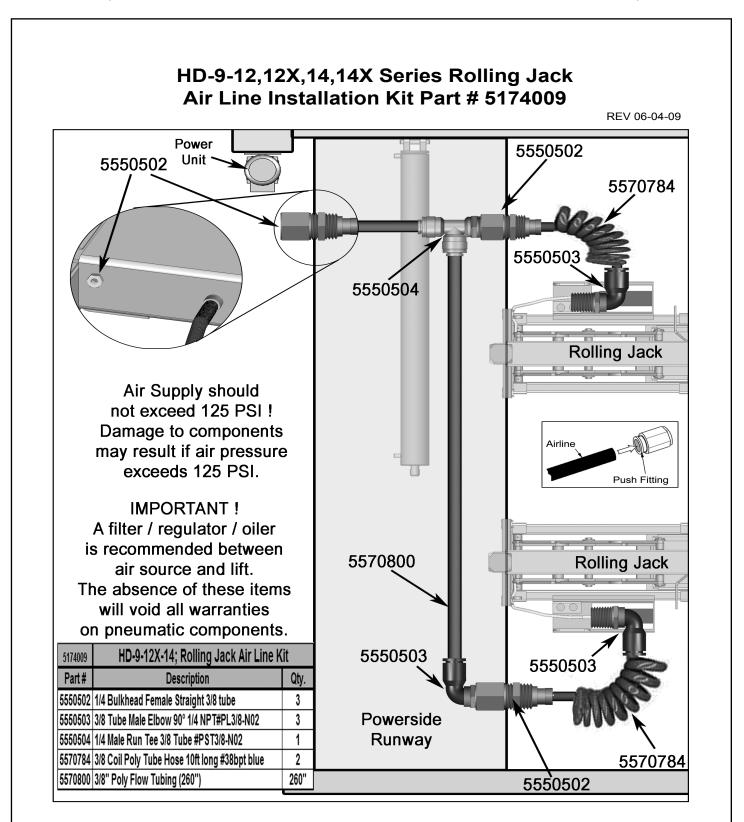
- ♦ It is important that you know the load limit. Be careful that you do not overload the lift. If you are unsure what the load limit is, check the data plate found on one of the lift columns or contact the manufacturer.
- ♦ The center of gravity should be followed closely to what the manufacturer recommends.
- ♦ Always make sure you have proper overhead clearance. Additionally, check that attachments, (vehicle signs, campers, antennas, etc.) are not in the way.
- Be sure that prior to the vehicle being raised, the doors, trunk, and hood are closed securely.
- Prior to being raised, make sure there is no one standing closer than six feet from the lift.
- ♦ After positioning the vehicle on the lift runways, set the emergency brake, make sure the ignition is off, the doors are closed, overhead obstructions are cleared, and the transmission is in neutral.
- ♦ Double check that the automatic chock devices are in position and then when the lift is raised, observe the chocks
- Put pads or adapters in the right position under the contact points that have been recommended.
- ♦ The lift should be raised just until the vehicle's wheels are about one foot off the ground. If contact with the vehicle is uneven or it appears that the vehicle is not sitting secure, carefully lower the lift and readjust.
- Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, undercoating, etc.
- ♦ Pay attention when walking under a vehicle that is up on the hydraulic lift.



- ♦ **DO NOT** leave the controls while the lift is still in motion.
- ♦ **DO NOT** stand directly in front of the vehicle or in the bay when vehicle is being loaded or driven into position.
- ♦ DO NOT Go near vehicle or attempt to work on the vehicle when being raised or lowered.
- ♦ **REMAIN CLEAR** of lift when raising or lowering vehicle.
- DO NOT rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.
- ♦ **DO NOT** lower the vehicle until people, materials, and tools are clear.
- ♦ **ALWAYS INSURE** that the safeties are engaged and lowered on to the safety ladders before any attempt is made to work on or near vehicle.
- Some vehicle maintenance and repair activities may cause the vehicle to shift. Follow the manufacturer's guidelines when performing these operations. The use of jack stands or alternate lift points may be required when completing some repairs.
- READ AND UNDERSTAND all safety warning procedures before operating lift.
- KEEP HANDS AND FEET CLEAR. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- ONLY TRAINED OPERATORS should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
- USE LIFT CORRECTLY. Use lift in the proper manner. Never use lifting adapters other than what is approved by the
  manufacturer.
- ◆ DO NOT override self-closing lift controls.
- ◆ CLEAR AREA if vehicle is on danger of falling.
- ♦ STAY ALERT. Watch what you are doing. Use common sense. Be aware.
- ♦ CHECK FOR DAMAGED PARTS. Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
- NEVER remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
- When the lift is being lowered, make sure everyone is standing at least six feet away.
- ♦ Be sure there are no jacks, tools, equipment, left under the lift before lowering.
- Always lower the vehicle down slowly and smoothly.

#### **Optional Integrated Air Line Kit for Rolling Bridge Jacks**

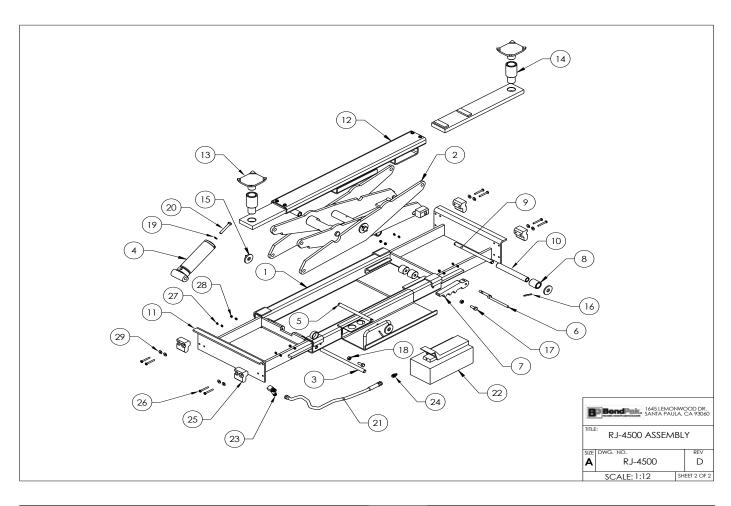
(HD-9-12X-14 Kit shown. Contact Your BendPak Dealer for kits for other lift models.)



#### NOTE:

#### **INSTALLATION FORM**

| Customer Name:   | Customer Name: Date of Installation:   |                         |                                 |  |  |  |  |  |
|--|--|-------------------------|---------------------------------|--|--|--|--|--|
| Company Name:  |  |                         |                                 |  |  |  |  |  |
| Street Address:  |  |                         |                                 |  |  |  |  |  |
| City:  | State:   |                         | Zip:                            |  |  |  |  |  |
| Phone:   |  | Fax:                    |                                 |  |  |  |  |  |
|  | Pre-In   | stall Agreement         |                                 |  |  |  |  |  |
| I, (the undersigned) acting as the owner of the business listed above assume responsibility for any permits required, either state or county mandated, related to the installation and/or operation of this equipment. I assume responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are installed. I will assume all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with, or to have arisen out of the condition and/or drilling of the concrete near or adjacent to the equipment model(s) listed above. If my employee(s) offer assistance of any kind during installation of the above equipment model(s) I hold the manufacturer and installation company harmless of all liability for losses, damages, expenses, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with the installation of the above equipment model(s). |  |                         |                                 |  |  |  |  |  |
| "Automotive Lifts - Safety Requirement responsible for all charges related to ar   | I understand that the lifts above are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC). |                         |                                 |  |  |  |  |  |
| Customer Signature: Print Name: Date:  |  |                         |                                 |  |  |  |  |  |
|  | Post-Inst  | allation Check-Off      |                                 |  |  |  |  |  |
| ☐ Base and Columns Properly Shimme   | ed And Stable  | Lubrication of Critical | Components                      |  |  |  |  |  |
| ☐ Anchor Bolts Tightened   |  | Lift Adapters           |                                 |  |  |  |  |  |
| ☐Runways Properly Attached and Sec   | ured   | Check For Overhead      | Obstructions                    |  |  |  |  |  |
| ☐ Electric Power Supply Confirmed  |  | Runways Level           |                                 |  |  |  |  |  |
| ☐ Cables / Chains Adjusted Properly  |  | All Screws, Bolts, and  | d Pins Secured                  |  |  |  |  |  |
| ☐ Safety Locks Functioning Properly  |  | Surrounding Area and    | d Lift Clean In Appearance      |  |  |  |  |  |
| ☐ Check For Hydraulic Leaks  |  | Proper Operation, Ma    | aintenance and Safety Explained |  |  |  |  |  |
| Oil Level  |  | Operation and Safety    | Manual(s) Left at Site          |  |  |  |  |  |
| I, (the undersigned) confirm that the above installation procedure(s) were completed. I understand that I will be responsible for maintaining this equipment as outlined in the accompanied <i>Installation and Operation Manual</i> and <i>ANSI/ALI ALOIM Safety Requirements for Operation, Inspection and Maintenance</i> . I understand that personal injury and/or damage to property can occur if the above equipment model(s) are not maintained or used improperly and take full responsibility for training my employees on proper use and maintenance of this equipment. I hold the manufacturer and installation company harmless of all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or related to improper use, improper training, or lack of required maintenance. I understand that the warranty does not cover replacement of parts worn or damaged due to normal use or lack of required maintenance  |  |                         |                                 |  |  |  |  |  |
| Customer Signature:  | Print  | Name:                   | Date:                           |  |  |  |  |  |
| Installer Signature:   | Print  | Name:                   | Date:                           |  |  |  |  |  |
| Installer Company Name:  |  |                         |                                 |  |  |  |  |  |
| Street Address:  |  |                         |                                 |  |  |  |  |  |
| City:  |  | State:                  | Zip:                            |  |  |  |  |  |
| Phone:   | Phone: Phone ( Other ):  |                         |                                 |  |  |  |  |  |

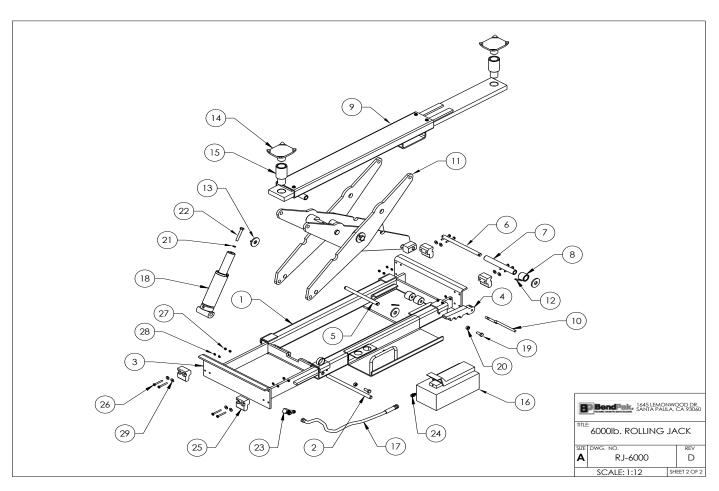


| ITEM NO. | PART NUMBER        | DESCRIPTION  | QTY. | REV     |
|----------|--------------------|--|------|---------|
| 1        | R-175              | RJ-6/9/45 MAIN BODY BASE WELDMENT  | 1    | В       |
| 2        | R-1180             | SCISSOR ASSEMBLY   | 1    | PRE-001 |
| 3        | R-260              | CYLINDER ROD   | 1    | PRE-003 |
| 4        | 700500             | CYLINDER ASSEMBLY Ø2.0 x 4.375   | 1    | В       |
| 5        | R-270              | SMALL SCISSOR PIN  | 1    | PRE-004 |
| 6        | R-345              | SAFETY HANDLE  | 1    | Α       |
| 7        | R-255              | SAFETY RJ-6/9/45   | 1    | PRE-003 |
| 8        | R-1130             | UPPER SPACER   | 2    | PRE-002 |
| 9        | R-275              | MEDIUM SCISSOR PIN   | 1    | PRE-004 |
| 10       | R-280              | UPPER ROLLER PIN   | 1    | PRE-004 |
| 11       | R-1195             | BASE EXTENSION WELDMENT  | 2    | В       |
| 12       | R-1160             | EXTENSION ARM TUBE ASSEMBLY  | 1    | PRE-001 |
| 13       | R-415              | LIFT PAD WELDMENT  | 2    | В       |
| 14       | 800207             | SHORT LIFT PAD EXTENSION (113mm LG.)   | 2    | С       |
| 15       | R-388              | WASHER 18 x 50 x 5W  | 4    |         |
| 16       | R-387              | ROLL PIN Ø5 x 50   | 4    | Α       |
| 17       | HHB M10 x 1.5 x 25 | HEX HEAD BOLT  | 4    |         |
| 18       | HN M10 X 1.5       | HEX NUT  | 4    |         |
| 19       | 10 x 18 x 2.3 LW   | SPRING LOCK WASHER   | 1    |         |
| 20       | HHB M10 x16 x65    | HEX HEAD BOLT  | 1    |         |
| 21       | R-855              | RJ BLUE HIGH PRESSURE HOSE   | 1    | а       |
| 22       | R-850              | RJ AIR/HYDRAULIC PUMP  | 1    | PRE-001 |
| 23       | 90deg LONG .25     | 90° LONG EIBOW<br>MALE 1/4-18 NPT<br>TO 37° MALE FLARE<br>7/16-20 UNF 2B<br>2.42° LONG | 1    |         |
| 24       | .25 JIC375 NPT     | MALE 1/4-20 JIC 37° FLARE<br>TO 3/8-20 NPT<br>STRAIGHT FITTING                         | 1    |         |
| 25       | R-590              | EXTENSION ARM SLIDE BLOCK  | 4    | В       |
| 26       | PHCS M6-1.0 x 50   | PAN HEAD CAP SCREW   | 8    |         |
| 27       | 6 x 12 x 1.5 LW    | SPRING LOCK WASHER   | 8    |         |
| 28       | NYLOCK NUT M6 x 1  | NYLOCK NUT M6 x 1  | 8    |         |
| 29       | 5545339            | WASHER 6mm x 18mm  | 8    |         |

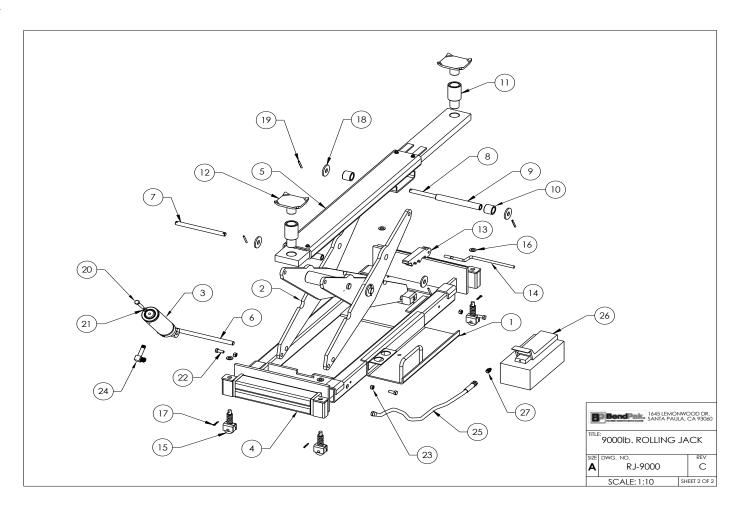
|                      | THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.  |         |            |       | SCALE: -:-                    | SHEET 1 OF 2 |                     |  |
|----------------------|--|---------|------------|-------|-------------------------------|--------------|---------------------|--|
| SIZE:                | PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY PEPPOPULITION IN PART OF 8.2 A WHOLE WITHOUT |         |            | Α     | RJ-4500                       |              | D                   |  |
| MATERIAL:            | 1  |         |            | SIZE  | DWG. NO.                      |              | REV                 |  |
|                      | l -⊕   | =       | <u> </u>   |       | RJ-4500 ASSE                  | MB           | LY                  |  |
| 6.5                  | THIRD AT   | GLE PRO | DJECTION   | TITLE |                               |              |                     |  |
|                      | CHECKED  | AC      | 11/19/2008 | _     |                               |              |                     |  |
| DIMENSIONS ARE IN MM | DRAWN  | JL      | 09/19/2007 | В     | BendPak, 1645 LEM<br>SANTA PA | ONV<br>JULA, | OOD DR.<br>CA 93060 |  |
| DO NOT SCALE DRAWING |  | NAME    | DATE       |       |                               |              |                     |  |

NOTE: UNLESS OTHERWISE SPECIFIED.

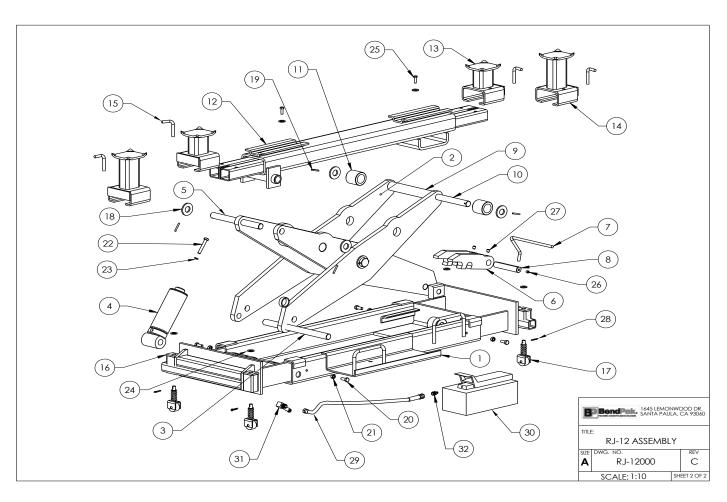
1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. ASSEMBLE ITEMS AS SHOWN



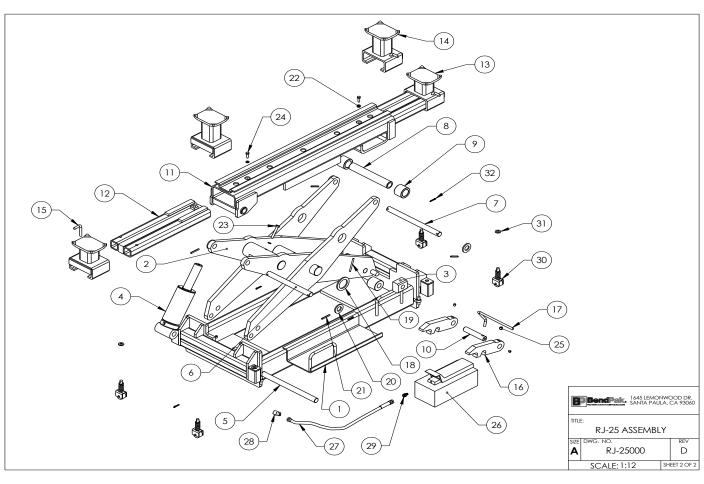
| PART NUMBER R-175 R-260 R-245 R-255 R-270 R-275 R-280 R-285 R-340    | DESCRIPTION RJ-6/9/45 MAIN BODY BASE WELDMENT CYLINDER ROD ARM EXTENSION WELDMENT SAFETY RJ-6/9/45 SMALL SCISSOR PIN MEDIUM SCISSOR PIN UPPER ROLLER PIN | QTY.  1  1  2  1  1  1   | REV<br>B<br>PRE-003<br>B<br>PRE-003<br>PRE-004 |                      |  |   |   |                        |           |  |   |
|--|--|--|--|----------------------|--|---|---|------------------------|-----------|--|---|
| R-260<br>R-245<br>R-255<br>R-270<br>R-275<br>R-280<br>R-285<br>R-340 | CYLINDER ROD  ARM EXTENSION WELDMENT  SAFETY RJ-6/9/45  SMALL SCISSOR PIN  MEDIUM SCISSOR PIN  UPPER ROLLER PIN  |  | PRE-003<br>B<br>PRE-003                        |                      |  |   |   |                        |           |  |   |
| R-245<br>R-255<br>R-270<br>R-275<br>R-280<br>R-285<br>R-340          | ARM EXTENSION WELDMENT SAFETY RJ-6/9/45 SMALL SCISSOR PIN MEDIUM SCISSOR PIN UPPER ROLLER PIN  | 2 1 1 1  | B<br>PRE-003                                   |                      |  |   |   |                        |           |  |   |
| R-255<br>R-270<br>R-275<br>R-280<br>R-285<br>R-340                   | SAFETY RJ-6/9/45<br>SMALL SCISSOR PIN<br>MEDIUM SCISSOR PIN<br>UPPER ROLLER PIN  | 1 1  | PRE-003  | 4                    |  |   |   |                        |           |  |   |
| R-270<br>R-275<br>R-280<br>R-285<br>R-340                            | SMALL SCISSOR PIN<br>MEDIUM SCISSOR PIN<br>UPPER ROLLER PIN  | 1  |  |                      |  |   |   |                        |           |  |   |
| R-275<br>R-280<br>R-285<br>R-340                                     | MEDIUM SCISSOR PIN<br>UPPER ROLLER PIN   | i  |  | 1                    |  |   |   |                        |           |  |   |
| R-280<br>R-285<br>R-340  | UPPER ROLLER PIN   |  | PRE-004  | -                    |  |   |   |                        |           |  |   |
| R-285<br>R-340   |  | 1  | PRE-004  | 1                    |  |   |   |                        |           |  |   |
| R-340  | UPPER SPACER   | 2  | PRE-003  | -                    |  |   |   |                        |           |  |   |
|  | EXTENSION ARM TUBE ASSEMBLY  | 1  | PRE-003  | -                    |  |   |   |                        |           |  |   |
|  | SAFETY HANDLE  | <u> </u>   | A  | -                    |  |   |   |                        |           |  |   |
| R-345  |  | 1  |  | -                    |  |   |   |                        |           |  |   |
|  |  |  |  | -                    |  |   |   |                        |           |  |   |
|  |  |  |  | -                    |  |   |   |                        |           |  |   |
|  |  |  |  |                      |  |   |   |                        |           |  |   |
|  |  |  |  | -                    |  |   |   |                        |           |  |   |
|  |  | _  |  |                      |  |   |   |                        |           |  |   |
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|  |  | 1  |  |                      |  |   |   |                        |           |  |   |
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|  |  |  |  |                      |  |   |   |                        |           |  |   |
|  |  |  |  |                      |  |   |   |                        |           |  |   |
|  |  | 1  | -  |                      |  |   |   |                        |           |  |   |
| HHB M10 x16 x65  | HEX HEAD BOLT  | 1  |  |                      |  |   |   |                        |           |  |   |
| 90deg LONG .25   | 90° LONG ELBOW<br>MALE 1/4-18 NPT<br>TO 37° MALE FLARE<br>7/16-20 UNF 2B<br>2.42" LONG   | 1  | -  |                      |  |   |   |                        |           |  |   |
| .25 JIC375 NPT   | MALE 1/4-20 JIC 37° FLARE<br>TO 3/8-20 NPT<br>STRAIGHT FITTING   | 1  | -  |                      |  |   |   |                        |           |  |   |
| R-590  | EXTENSION ARM SLIDE BLOCK  | 4  | В  | 1                    |  |   |   |                        |           |  |   |
| PHCS M6-1.0 x 50   | PAN HEAD CAP SCREW   | 8  | PRE  | 1                    |  |   |   |                        |           |  |   |
| NYLOCK NUT M6 x 1  | NYLOCK NUT M6 x 1  | 8  |  | 1                    |  |   |   |                        |           |  |   |
| 6 x 12 x 1.5 LW  | SPRING LOCK WASHER   | 8  |  |                      |  |   |   |                        |           |  |   |
| 5545339  | WASHER 6mm x 18mm  | 8  |  | DO NOT SCALE DRAWING |  | NAME  | DATE  |                        |           |  |   |
|  |  |  |  | MATERIAL:            | CHECKED THIRD A  | AC ( NGLE PRO.  | D7/03/2008<br>JECTION   | TITLE: 600             | 00lb. ROL | LING .   |   |
|  | .25 JIC375 NPT  R-590 PHCS M6-1.0 x 50 NYLOCK NUT M6 x 1 6 x 12 x 1.5 LW 5545339  NLESS OTHERWISE SHIPPING INSTRUCTIO                                    | R-387   ROLL PIN Ø5 x 50     R-388   WASHER 18 x 50 x 5W     R-415   LIFT PAD WELDMENT     800207   SHORT LIFT PAD EXTENSION (113mm LG.)     R-850   RJ AIR/HYDRAULIC PUMP     R-855   RJ BLUE HIGH PRESSURE HOSE     700500   CYLINDER ASSEMBLY Ø2.0 x 4.375     HB M10 x 1.5 x 25   HEX HEAD BOLT     HB M10 x 1.5   HEX NUT     10 x 18 x 2.3 LW   SPRING LOCK WASHER     HHB M10 x16 x65   HEX HEAD BOLT     90° LONG ELBOW   MALE 1/4-18 NPT     10 37° MALE FLARE   7/16-20 UNF 2B     2.42" LONG     R-590   EXTENSION ARM SLIDE BLOCK     PHCS M6-1.0 x 50   PAN HEAD CAP SCREW     NYLOCK NUT M6 x 1   NYLOCK NUT M6 x 1     6 x 12 x 1.5 LW   SPRING LOCK WASHER     Contact | R-387  | R-387                | R-387 ROLL PIN Ø5 x 50 4 A R-388 WASHER 18 x 50 x 5W 4 PRE-004 R-415 LIFT PAD WELDMENT 2 B 800207 SHORT LIFT PAD EXTENSION (113mm LG.) 2 C R-850 RJ AIR/HYDRAULIC PUMP 1 PRE-001 R-855 RJ BLUE HIGH PRESSURE HOSE 1 a 700500 CYLINDER ASSEMBLY Ø2.0 x 4.375 1 B HHB M10 x 1.5 x 25 HEX HEAD BOLT 4 - HN M10 X 1.5 x 25 HEX NUT 4 - 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 - HHB M10 x 16 x 65 HEX HEAD BOLT 1 - HHB M10 x 16 x 65 HEX HEAD BOLT 1 -  90° LONG ELBOW MALE 1/4-18 NPT 7/16-20 UNF 2B 2.42" LONG  PHCS M6-1.0 x 50 PAN HEAD CAP SCREW 8 PRE NYLOCK NUT M6 x 1 NYLOCK NUT M6 x 1 8 - 6 x 12 x 1.5 LW SPRING LOCK WASHER 8 -  SHIEPSING LOCK WASHER 8 -  SONOTSCALE DRAWNO  DMESSIONS ARE NAM.  MALESS OTHERWISE SPECIFIED.  SHIEPING INSTRUCTIONS FOR FINAL PACKAGING | R-387 ROLL PIN Ø5 x 50 4 A R-388 WASHER 18 x 50 x 5W 4 PRE-004 R-415 LIFT PAD WELDMENT 2 B 800207 SHORT LIFT PAD EXTENSION (113mm LG.) 2 C R-850 R.J AIR/HYDRAULIC PUMP 1 PRE-001 R-855 R.J BLUE HIGH PRESSURE HOSE 1 G 700500 CYLINDER ASSEMBLY Ø2.0 x 4.375 1 B HHB M10 x 1.5 x 25 HEX HEAD BOLT 4 - HN M10 X 1.5 HEX NUT 4 - 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 - HHB M10 x 16 x 65 HEX HEAD BOLT 1 1 -  90° LONG ELBOW MALE 1/4-18 NPT 7/16-20 UNF 2B 2.42" LONG  R-590 EXTENSION ARM SLIDE BLOCK 4 B PHCS M6-1.0 x 50 PAN HEAD CAP SCREW 8 PRE NYLOCK NUT M6 x 1 NYLOCK NUT M6 x 1 NYLOCK NUT M6 x 1 SPRING LOCK WASHER 8 -  5545339 WASHER 6mm x 18mm  NULESS OTHERWISE SPECIFIED. | R-387 ROLL PIN Ø5 x 50 4 A R-388 WASHER 18 x 50 x 5W 4 PRE-004 R-415 LIFT PAD WELDMENT 2 B 800207 SHORT LIFT PAD EXTENSION (113mm LG.) 2 C R-850 R.J AIR/HYDRAULIC PUMP 1 PRE-001 R-855 R.J BLUE HIGH PRESSURE HOSE 1 0 700500 CYLINDER ASSEMBLY Ø2.0 x 4.375 1 B HHB M10 x 1.5 x 25 HEX HEAD BOLT 4 - HN M10 X 1.5 HEX NUT 4 - 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 - HHB M10 x 16 x 65 HEX HEAD BOLT 1 -  90° LONG ELBOW MALE 1/4-18 NPT 7/16-20 UNF 2B 2.42" LONG  PHCS M6-1.0 x 50 PAN HEAD CAP SCREW 8 PRE NYLOCK NUT M6 x 1 NYLOCK NUT M6 x 1 8 - 6 x 12 x 1.5 LW SPRING LOCK WASHER 8 -  5545339 WASHER 6mm x 18mm 8 -  NULESS OTHERWISE SPECIFIED. | R-387 ROLL PIN Ø5 x 50 | R-387     | R-387 ROLL PIN Ø5 x 50 4 4 PA R-388 WASHER 18 x 50 x 5W 4 PRE-04 R-415 LIFT PAD WELDMENT 2 B 800207 SHORT LIFT PAD EXTENSION (113mm LG.) 2 C R-850 R.J AIR/HYDRAULIC PUMP 1 PRE-001 R-855 R.J BLUE HIGH PRESSURE HOSE 1 C 700500 CYLINDER ASSEMBLY Ø2.0 x 4.375 1 B HHB M10 x 1.5 x 25 HEX NUT 4 HN M10 x 1.5 x 25 HEX NUT 4 HN M10 x 1.5 HEX NUT 4 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 HHB M10 x 16 x 65 HEX HEAD BOLT 1 HHB M10 x 16 x 65 HEX HEAD BOLT 1 HHB M10 x 16 x 65 HEX HEAD BOLT 1 TO 37° MALE 1/4-18 NPT 1 7/16-20 UNF 2B 2.42° LONG  MALE 1/4-20 JIC 37° FLARE 1 3/8-20 UNF 2B 2.42° LONG  R-590 EXTENSION ARM SLIDE BLOCK 4 B PHCS M6-1.0 x 50 PAN HEAD CAP SCREW 8 PRE NYLOCK NUT M6 x 1 NYLOCK NUT M6 x 1 8 6 x 12 x 1.5 LW SPRING LOCK WASHER 8  SS45339 WASHER 6mm x 18mm 8  NAISHAL SS4550 THERWISE SPECIFIED.  NAISHAL SIZE DWG NO. ROLL  NAISH | R-387 ROLL PIN Ø5 x 50 4 A R-388 WASHER 18 x 50 x 5W 4 PRE-004 R-415 LIFT PAD WELDMENT 2 B 800207 SHORT LIFT PAD EXTENSION (113mm LG.) 2 C R-850 RJ AIR/HYDRAULIC PUMP 1 PRE-001 R-855 RJ BLUE HIGH PRESSURE HOSE 1 a 700500 CYLINDER ASSEMBLY Ø2.0 x 4.375 1 B HHB M10 x 1.5 x 25 HEX HEX HEAD BOLT 4 - 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 - 10 x 18 x 2.3 LW SPRING LOCK WASHER 1 - HHB M10 x 16 x 65 HEX HEAD BOLT 1 1 -  90° LONG ELBOW MALE 1/4-18 NPT 7/16-20 UNF 2B 2.42° LONG R-590 EXTENSION ARM SUDE BLOCK 4 B PHCS M6-1.0 x 50 PAN HEAD CAP SCREW 8 PRE NYLOCK NUT M6 x 1 SAFE PRING LOCK WASHER 8 - 5545339 WASHER 6mm x 18mm 8 -  NILESS OTHERWISE SPECIFIED. |

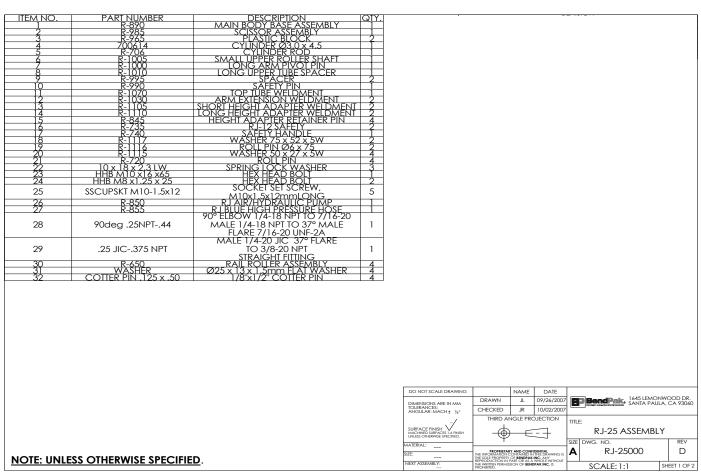


| ITEM NO. | PART NUMBER  | DESCRIPTION  | QTY | ' REV   |  |   |  |                      |            |  |
|----------|--|--|-----|---------|--|---|--|----------------------|------------|--|
| 1        | R-425  | RJ-9 MAIN BODY BASE WELDMENT   | 1   | С       |  |   |  |                      |            |  |
| 2        | R-375  | SCISSOR ASSEMBLY RJ-6/RJ-9   | 1   | PRE-002 |  |   |  |                      |            |  |
| 3        | 700513   | CYLINDER ASSEMBLY Ø2.25 x 4.375  | i   | В       |  |   |  |                      |            |  |
| 4        | R-445  | ARM EXTENSION WELDMENT   | 2   | PRE-001 |  |   |  |                      |            |  |
| 5        | R-470  | EXTENSION ARM TUBE ASSEMBLY  | 1   | PRE-001 |  |   |  |                      |            |  |
| 6        | R-260  | CYLINDER ROD   | 1   | PRE-003 | '  |   |  |                      |            |  |
| 7        | R-270  | SMALL SCISSOR PIN  | 1   | PRE-004 |  |   |  |                      |            |  |
| 8        | R-275  | MEDIUM SCISSOR PIN   | 1   | PRE-004 |  |   |  |                      |            |  |
| 9        | R-280  | UPPER ROLLER PIN   | 1   | PRE-004 |  |   |  |                      |            |  |
| 10       | R-285  | UPPER SPACER   | 2   | PRE-003 |  |   |  |                      |            |  |
| 11       | 800207   | SHORT LIFT PAD EXTENSION (113mm LG.)   | 2   | С       |  |   |  |                      |            |  |
| 12       | R-415  | LIFT PAD WELDMENT  | 2   | В       |  |   |  |                      |            |  |
| 13       | R-255  | SAFETY RJ-6/9/45   | 1   | PRE-003 |  |   |  |                      |            |  |
| 14       | R-460  | SAFETY HANDLE  | 1   | PRE-003 |  |   |  |                      |            |  |
| 15       | R-650  | RAIL ROLLER ASSEMBLY   | 4   | PRE-001 |  |   |  |                      |            |  |
| 16       | WASHER   | Ø25 x 13 x 1.5mm FLAT WASHER   | 4   | 01      |  |   |  |                      |            |  |
| 17       | COTTER PIN .125 x .50  | 1/8"x1/2" COTTER PIN   | 4   | PRE-001 |  |   |  |                      |            |  |
| 18       | R-388  | WASHER 18 x 50 x 5W  | 4   | PRE-004 |  |   |  |                      |            |  |
| 19       | R-387  | ROLL PIN Ø5 x 50   | 4   | Α       |  |   |  |                      |            |  |
| 20       | HHB M10 x16 x65  | HEX HEAD BOLT  | 1   | PRE-001 |  |   |  |                      |            |  |
| 21       | 10 x 18 x 2.3 LW   | SPRING LOCK WASHER   | 1   | PRE-005 |  |   |  |                      |            |  |
| 22       | HHB M10 x 1.5 x 25   | HEX HEAD BOLT  | 4   | PRE-003 |  |   |  |                      |            |  |
| 23       | HN M10 X 1.5   | HEX NUT  | 4   | PRE-002 |  |   |  |                      |            |  |
| 24       | 90deg LONG .25   | 90° LONG ELBOW<br>MALE 1/4-18 NPT<br>TO 37° MALE FLARE<br>7/16-20 UNF 2B<br>2.42" LONG | 1   | PRE-002 |  |   |  |                      |            |  |
| 25       | R-855  | RJ BLUE HIGH PRESSURE HOSE   | 1   | а       |  |   |  |                      |            |  |
| 26       | R-850  | RJ AIR/HYDRAULIC PUMP  | 1   | PRE-001 |  |   |  |                      |            |  |
| 27       | .25 JIC375 NPT   | MALE 1/4-20 JIC 37° FLARE<br>TO 3/8-20 NPT<br>STRAIGHT FITTING                         | 1   | PRE-001 |  |   |  |                      |            |  |
| 1. SEI   | JNLESS OTHERWISE S<br>E SHIPPING INSTRUCTION<br>SEMBLE ITEMS AS SHOW | NS FOR FINAL PACKAGING   | •   | •       | DO NOT SCALE DRAWING  DIMENSIONS ARE IN MM  MATERIAL:  SIZE:  NEXT ASSEMBLY: | PROPRIETAL THE INFORMATION OF THE SOLE PROPERTY BEBROOM FOR AUTO AUTO | NAME DATE  JL 09/26/200  AC 07/03/200  NGLE PROJECTION  IV AND CONFIDENTIAL CONFIDE | 9000II SIZE DWG. NO. | b. ROLLING |  |



| ITEM NO. | PART NUMBER           | DESCRIPTION                          | QTY.     | REV     | · ·                  |  |   |                    |                               |
|----------|-----------------------|--------------------------------------|----------|---------|----------------------|--|---|--------------------|-------------------------------|
| 1        | R-550                 | RJ-12 MAIN BODY BASE WELDMENT        | 1        | C       |                      |  |   |                    | 1                             |
| 2        | R-680                 | RJ-12 SCISSOR ASSEMBLY               | 1        | PRE-001 |                      |  |   |                    |                               |
| 3        | R-706                 | CYLINDER ROD                         | 1        | PRE-004 |                      |  |   |                    |                               |
| 4        | 700524                | CYLINDER ASSEMBLY Ø2.5 x 4.375       | <u> </u> | B       |                      |  |   |                    |                               |
| 5        | R-715                 | UPPER ROLLER SHAFT                   | i i      | PRE-002 |                      |  |   |                    | ]                             |
| 6        | R-735                 | RJ-12 SAFETY                         | 2        | PRE-002 |                      |  |   |                    |                               |
| 7        | R-740                 | SAFETY HANDLE                        | 1        | PRE-003 |                      |  |   |                    |                               |
| 8        | R-730                 | SAFETY PIN                           | i i      | PRE-003 |                      |  |   |                    |                               |
| 9        | R-701                 | LONG UPPER TUBE SPACER               | i        | PRE-002 |                      |  |   |                    |                               |
| 10       | R-710                 | UPPER ARM PIVOT PIN                  | Τ        | PRE-003 |                      |  |   |                    |                               |
| 11       | R-790                 | SPACER                               | 2        | PRE-002 |                      |  |   |                    |                               |
| 12       | R-835                 | TOP TUBE ASSEMBLY                    | 1        | PRE-001 |                      |  |   |                    |                               |
| 13       | R-820                 | SHORT LIFT PAD WELDMENT              | 2        | PRE-002 |                      |  |   |                    |                               |
| 14       | R-825                 | LONG LIFT PAD WELDMENT               | 2        | PRE-002 |                      |  |   |                    |                               |
| 15       | R-845                 | HEIGHT ADAPTER RETAINER PIN          | 4        | PRE-003 |                      |  |   |                    |                               |
| 16       | R-605                 | ARM EXTENSION WELDMENT               | 2        | PRE-001 |                      |  |   |                    |                               |
| 17       | R-650                 | RAIL ROLLER ASSEMBLY                 | 4        | PRE-001 |                      |  |   |                    |                               |
| 18       | R-386                 | 26 x 54 x 5W WASHER                  | 4        | PRE-003 |                      |  |   |                    |                               |
| 19       | R-836                 | ROLL PIN Ø5 x 38                     | 4        | PRE-001 |                      |  |   |                    |                               |
| 20       | HHB M10 x 1.5 x 25    | HEX HEAD BOLT                        | 4        |         |                      |  |   |                    |                               |
| 21       | HN M10 X 1.5          | HEX NUT                              | 4        |         |                      |  |   |                    |                               |
| 22       | HHB M10 x16 x65       | HEX HEAD BOLT                        | 1        |         |                      |  |   |                    |                               |
| 23       | 10 x 18 x 2.3 LW      | SPRING LOCK WASHER                   | 1        |         |                      |  |   |                    |                               |
| 24       | WASHER                | Ø25 x 13 x 1.5mm FLAT WASHER         | 6        |         |                      |  |   |                    |                               |
| 25       | HHB M8 x1.25 x 25     | HEX HEAD BOLT                        | 2        |         |                      |  |   |                    |                               |
| 26       | SSCUPSKT M10-1.5x10   | SOCKET SET SCREW, M10x1.5x10mmLONG   | 1        |         |                      |  |   |                    |                               |
| 27       | SSCUPSKT M10-1.5x12   | SOCKET SET SCREW, M10x1.5x12mmLONG   | 2        |         |                      |  |   |                    |                               |
| 28       | COTTER PIN .125 x .50 | 1/8"x1/2" COTTER PIN                 | 4        |         |                      |  |   |                    |                               |
| 29       | R-855                 | RJ BLUE HIGH PRESSURE HOSE           | 1        | а       |                      |  |   |                    |                               |
| 30       | R-850                 | RJ AIR/HYDRAULIC PUMP                | 1        | PRE-001 |                      |  |   |                    |                               |
|          |                       | 90° LONG ELBOW                       |          |         |                      |  |   |                    |                               |
| 31       | 90deg LONG .25        | MALE 1/4-18 NPT<br>TO 37° MALE FLARE | 1        |         |                      |  |   |                    |                               |
|          |                       | 7/16-20 UNF 2B<br>2.42" LONG         |          |         |                      |  |   |                    |                               |
|          |                       | MALE 1/4-20 JIC 37° FLARE            |          |         |                      |  |   |                    |                               |
| 32       | .25 JIC375 NPT        | TO 3/8-20 NPT<br>STRAIGHT FITTING    | 1        |         |                      |  |   |                    |                               |
|          |                       |                                      |          |         | DO NOT SCALE DRAWING |  | NAME DATE   |                    |                               |
|          |                       |                                      |          |         | DIMENSIONS ARE IN MM | DRAWN  | JL 09/26/2007   | MUNICIPAL SANIA PA | AONWOOD DR.<br>AULA, CA 93060 |
|          |                       |                                      |          |         |                      | CHECKED  | AC 07/03/2008   | 3                  |                               |
|          |                       |                                      |          |         | 」(:)                 | I HIKD A   | NGLE PROJECTION   | RJ-12 ASSEM        | ABI Y                         |
|          |                       |                                      |          |         |                      | —  | <del></del>   | SIZE DWG. NO.      |                               |
|          | UNLESS OTHERWISE      |                                      |          |         | MATERIAL:            |  | RY AND CONFIDENTIAL   | A P. 12000         | C                             |
|          |                       | NS FOR FINAL PACKAGING               |          |         | SIZE:                | THE INFORMATION<br>THE SOLE PROPERT<br>REPRODUCTION IN | CONTAINED IN THIS DRAWING IS<br>Y OF BENDPAK INC. ANY<br>I PART OR AS A WHOLE WITHOUT<br>SSION OF BENDPAK INC. IS | RJ-12000           |                               |
| 2. AS    | SEMBLE ITEMS AS SHOV  | VIN                                  |          |         |                      | THE WRITTEN PERMI                                      | SSION OF BENDPAK INC. IS  | SCALE: 1:1         | SHEET 1 OF 2                  |







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