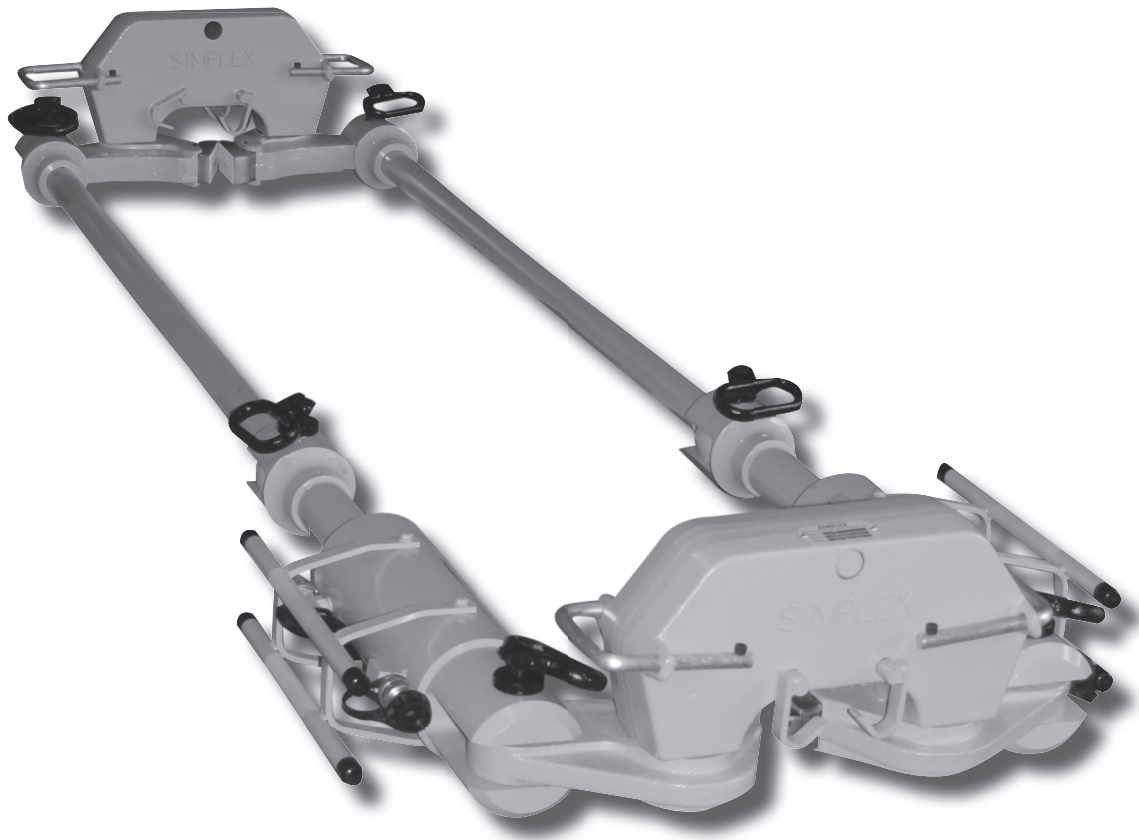


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RP70

IMPORTANT - READ CAREFULLY

This manual contains important information for the correct installation, operation and maintenance of this equipment. All persons involved in the installation, operation and maintenance of this equipment must be thoroughly familiar with the contents of this manual. To safeguard against the possibility of personal injury or property damage, follow the recommendations and instructions of this manual. Keep this manual for reference.

WARRANTY STATEMENT

Enerpac products are warranted to be free of defects in materials and workmanship under normal use for as long as the original purchaser owns them, subject to the guidelines and limitations listed. This warranty does not cover: *normal wear & tear, cosmetic items, abuse, overloading, alterations, improper fluid, or use in a manner for which they are not intended*. If the customer believes a product is defective, the product must be delivered, or shipped freight prepaid, to the nearest Enerpac Authorized Service Center for evaluation and repair.

1.0 RECEIVING INSTRUCTIONS

Important! Make sure to inspect all of the components for shipping damage. If damage is found, notify carrier at once. Shipping damage will not be covered by warranty. The carrier is responsible for all loss associated with shipping damage.

2.0 SAFETY

Make sure to read the instructions, warnings and precautions carefully. Follow any recommended safety precautions to avoid personal injury or damage to the unit. Enerpac cannot be responsible for any damage or injury from unsafe use, lack of maintenance or incorrect operation. In the event any questions or concerns arise, contact Enerpac or a local distributor for clarification.

The stressor's maximum working pressure is 8,860 PSI (611,3 Bar). Make sure that all hydraulics used with this stressor are rated at 8,860 PSI (611,3 Bar) operating pressure.

Read all instructions, warnings, and cautions carefully. Follow all safety precautions to avoid personal injury or property damage during system operation. Enerpac cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact Enerpac when in doubt as to the safety precautions and operations. If you have never been trained on high-pressure hydraulic safety, consult your distributor or service center for a free Enerpac hydraulic safety course.

Failure to comply with the following safety precautions can result in equipment damage and personal injury.

- **CAUTION** is used to indicate correct operating or maintenance procedures and practices to prevent damage or destruction of equipment or other property.
- **WARNING** indicates a potential danger that requires correct procedures or practices to avoid personal injury.
- **DANGER** is only used when your action or lack of action may cause serious injury or even death.

WARNING: Wear proper personal protective gear when operating hydraulic equipment.

DANGER: To avoid personal injury, keep hands and feet away from cylinder and work-piece during operation.

WARNING: Do not exceed equipment ratings. Never set the relief valve to a higher pressure than the maximum rated pressure of the equipment. Higher settings may result in equipment damage and/or personal injury.

CAUTION: Avoid damaging the hydraulic hose. Avoid sharp bends and kinks when routing hydraulic hoses. Using a bent or kinked hose will cause severe back-pressure. Sharp bends and kinks will internally damage the hose leading to premature hose failure. Do not drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.

IMPORTANT: Do not lift hydraulic equipment by the hose or couplers. Use the lifting handles provided on cylinders and bracket assemblies.

CAUTION: Keep hydraulic equipment away from flames and heat. Excessive heat will soften or damage packing and seals, resulting in fluid leaks. Heat also weakens hose materials and packing. For optimum performance, never expose equipment to temperatures of 65° C (150° F) or higher. Protect hoses and cylinders from weld spatter.

DANGER: Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin, causing serious injury. If oil is injected under the skin, see a doctor immediately.

DANGER: Only use hydraulic cylinders in a coupled system. Never use a cylinder with unconnected couplers. If the cylinder becomes extremely overloaded, components can fail catastrophically, causing severe personal injury.

WARNING: Do not remove rail anchors or clips while the stressor is under tension on the rail. If rail movement occurs as anchors or clips are removed, the stressor rail grips could lose their grip on the rail, allowing the stressor to slide rapidly and with extreme force along the rail in either direction. Serious personal injury and property damage could result if stressor strikes persons or objects in its path.

2.1 ADDITIONAL SAFETY PRECAUTIONS

- Never exceed the rated 8,860 PSI (611,3 Bar) input pressure.
- Always inspect all system parts before each use for wear, distortion, cracks or improper fit.
- Never use the RP70 Stressor if leaking oil; replace the leaking component before use.
- Non-Operating personnel should always stand clear of the direction of force (directly in front of or behind the RP70 Stressor) during the pull.
- Always be aware of pulling force & system pressure during the pull by monitoring the tonnage (pressure) gauge while operating the system.
- Always re-apply dust caps to quick couplers when not in use.
- Always release any trapped pressure from stressor by shifting the control valve on the power pack before connecting or disconnecting PTO lines.
- Never disconnect any other hydraulic connections on the stressor to release trapped pressure.
See Troubleshooting Guide for correct procedure to release trapped pressure in the stressor hydraulic circuit.
- Always review and understand proper use of all safety equipment before attempting to operate the stressor.
- During transit, the RP70 Stressor should always be secured and kept away from all electrified lines.
- Always store the RP70 Stressor in a secure position.
- Always ensure that all hydraulic components and couplings are clean. Retract the rams and fit all quick release coupling dust caps after use.
- Before use, perform a Manual Handling Risk Assessment and always follow the assessment guide lines at all times. Use the handles provided.
- Always use a power pack that has been approved by Enerpac and/or was supplied for use with the RP70 Stressor.
- Always consult to the operating manual supplied with the power pack for additional information.
- Always use the correct, clean oil, as defined in the technical specification. The RP70 Stressor and power pack have been filled and tested with clean, new hydraulic oil to this specification. They must be properly maintained and not contain contaminated oil. No liability will be accepted for failure or malfunction of the equipment if this condition is not met.

3.0 TECHNICAL SPECIFICATIONS

- Model: RP70
- Rated Pull Capacity: 70 Tons (63.630kg)
- Rated Push Capacity: 35 Tons (31.815kg)
- Power Source Requirements: Manual, Electric, Air or Intensifier Driven Power
- Pump Set with a Maximum 8,860 PSI (611,3 Bar)

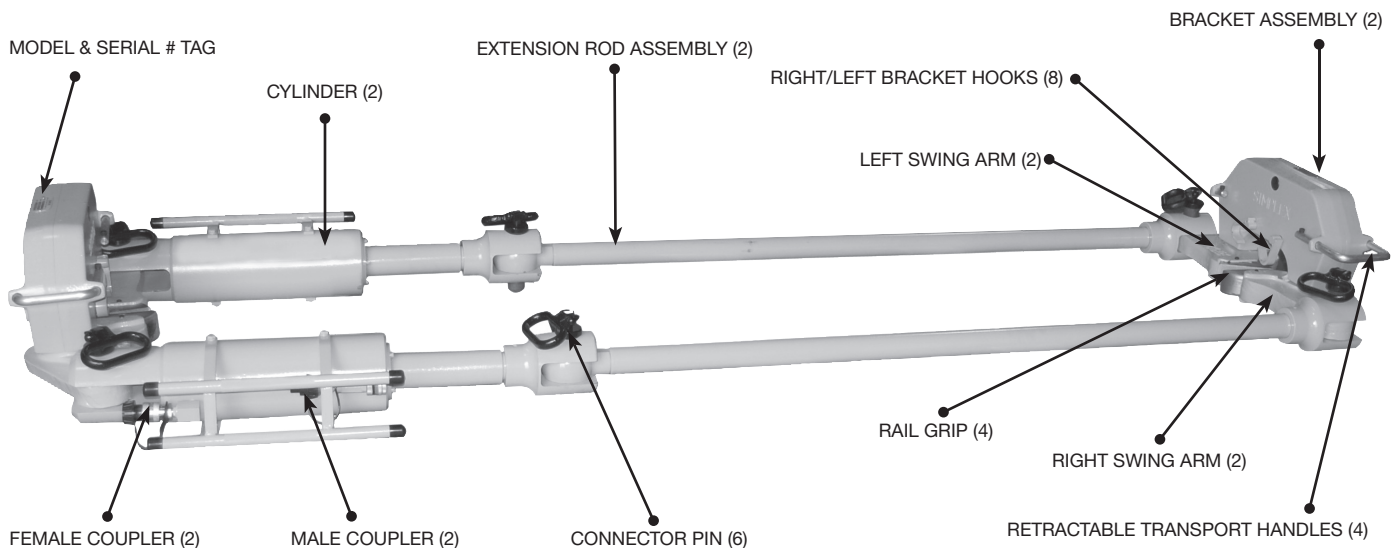


FIGURE 1

3.1 OIL SPECIFICATIONS

Recommended oil is Enerpac Type HF.

Ensure that any hydraulic oil alternatives that are used meet the same specifications.

3.2 OPERATING PRESSURE

The maximum operating pressure of the stressor is; 8,860 PSI (611,3 Bar).

4.0 OPERATING INSTRUCTIONS

The following procedure outlines the correct method for operation. Should any of the inspection criteria fail, do not use the equipment. All work should only be performed by qualified personnel. Always follow local regulations. Observe manual handling regulations.

4.1 INSPECTING STRESSOR COMPONENTS

Carefully inspect all pivot points of the stressor for any unusual wear, contamination or debris. Keep all pivot points clean and apply never-seize lubricant only where specified.

If any damage or unusual wear is noted, **remove immediately from service** to have the stressor inspected by an Enerpac Authorized Service Center. Refer to **FIGURE 2** for component locations.

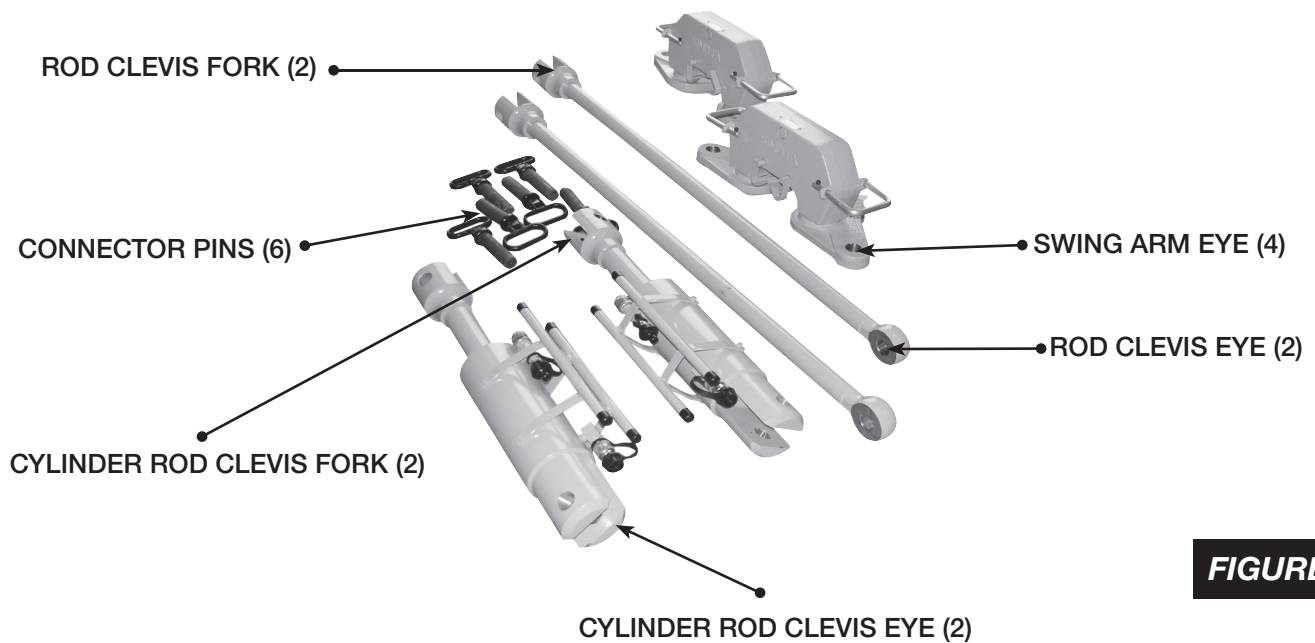
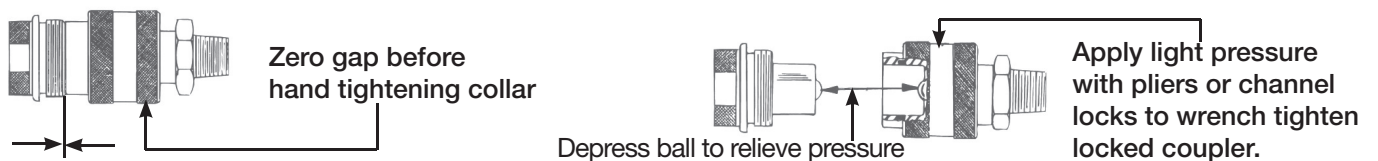


FIGURE 2

4.2 HYDRAULIC CONNECTIONS

All Enerpac cylinders and tools are equipped with quick-disconnect couplings. These couplings ease the assembly of your system and must be assembled by hand. Wrenches or pliers should not be required for this operation. If couplings will not fully turn, you will need to release system pressure at the external power source that may have been built up.

Note: All components, cylinders, intensifiers, pumps and hoses may have built up pressure since their last use. This pressure may be sufficient to prevent proper hand coupling. A simple test is to depress the steel ball in the end of the coupling with a soft tool (wood, aluminum, etc.) If the ball can be easily depressed, coupling may be assembled.



If the ball cannot be depressed by hand, use the Enerpac model CT-604 coupler bleed tool (available from your Authorized Enerpac Distributor) to safely relieve the remaining pressure.

⚠ DANGER: Never attempt to relieve hydraulic pressure by loosening a coupler. Never use force to unseat a coupler check ball that is under hydraulic pressure. Escaping oil could penetrate the skin and cause serious injury.

Threaded connections such as fittings, gauges, etc. must be securely tightened and leak free. **DO NOT** over tighten connections. Connections need only be secure and leak free. Over tightening can cause premature thread failure.

Never disconnect or connect any hydraulic hoses or fittings without first unloading the cylinders. If the system includes a gauge, double check the gauge to assure pressure has been released.

CAUTION: Loose or cross threaded fittings can be potentially dangerous if pressurized. Never hold or stand directly in line with any hydraulic connections while pressurizing. Never grab, touch or in any way come in contact with a hydraulic pressure leak. Escaping oil can penetrate the skin and cause serious injury.

4.3 HOSES

DO NOT DROP HEAVY OBJECTS ON HOSE. A sharp impact may kink wire strands on which the strength of the hose depends. AVOID SHARP KINKS IN HOSE. Never apply pressure when hose is swung in sharp curves or when the hose is visibly kinked.

4.4 BRACKET ASSEMBLIES (Over the Rail Application)

1. Install the swing arm as illustrated in **FIGURES 3&4**. Note that the swing arm is keyed and grip arrow direction must point inward on both bracket assemblies.
2. Check that the swing arms pivot freely in the bracket and that there is no excessive play.
3. Ensure that the teeth on the rail grips are clean. Use a wire brush when required.
4. Check that the rail grips rotate 5° in the swing arms. Do not use if they are seized.
5. Check that all fasteners are secure.
6. Install rail alignment plates in place of rail hooks (**FIGURE 5**). Secure plates with nuts and bolts provided.

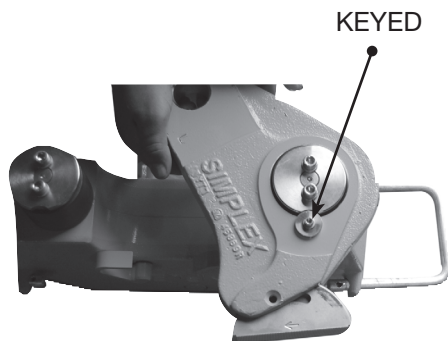


FIGURE 3

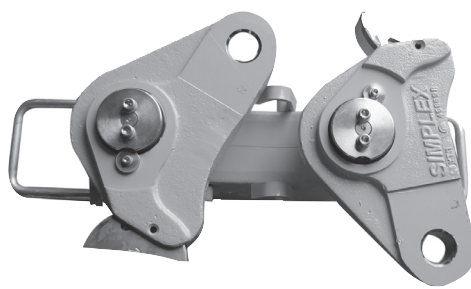


FIGURE 4

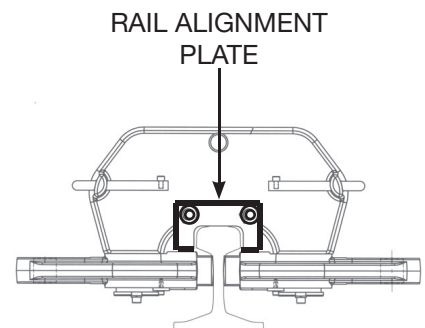


FIGURE 5

4.5 HYDRAULIC CYLINDER ASSEMBLIES

1. Check that the pins in the fork and clevis ends fit easily without excessive play. (**FIGURE 6**)
2. Connect the hose assembly to the hydraulic rams.
3. Operate the external power source in accordance with the Operating Instructions so the hydraulic cylinders are fully extended or retracted. Check that the system is free from leaks.
4. Ensure that the hydraulic ram piston rods are free from damage.
5. Maintain the system pressure for 5 minutes. Check that the system is free from leaks and that the pressure does not lower.
6. Release the pressure, disconnect the hydraulic hoses and replace all dust caps.

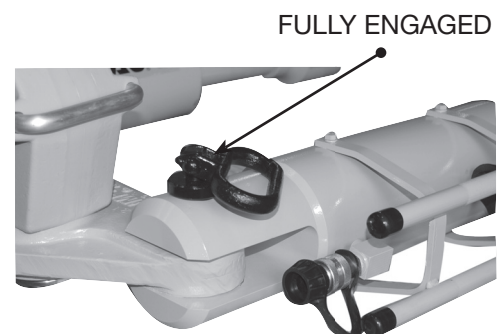


FIGURE 6

4.6 ASSEMBLY OF THE STRESSOR ON THE RAIL (Pulling Over / Under Rail)

1. Position the stressor components by the rail to be welded.
2. Remove all quick release coupling dust caps and connect the Hoses to the hydraulic rams.
3. Operate the external power source in accordance with the operating instructions so that the cylinder rods are fully extended. If partial extension is required, ensure that the cylinder rods are of equal length (**FIGURE 8**).
4. Position the bracket assemblies onto the rail (**when under the rail, use the bracket hooks to keep the bracket assemblies in position for the remaining steps (FIGURE 7)**). Ensure that the grip arrow direction goes inward (**FIGURE 11**). Rotate the swing arms of the bracket assemblies so that they are equally positioned on the web of the rail (**FIGURE 9**).
5. Connect the cylinder clevis fork to one of the bracket swing arm eyes, ensuring that the pins are fully engaged. (**FIGURE 6**).
6. Connect the clevis fork rod assembly to the other bracket swing arm eye, ensuring the pins are fully engaged.
7. Connect cylinder rod clevis fork to clevis eye.
8. Repeat the same process on the other side.
9. Open the swing arms a few degrees and pull the bracket assemblies away from each other to remove any slack in the arms.
10. Ensure that the bracket assemblies are square to the rail (**FIGURE 9**) and pull the bracket assemblies away from each other again to engage the rail grips onto the rail web. Do not operate if rail grips are not square to the rail. (**FIGURE 10**).

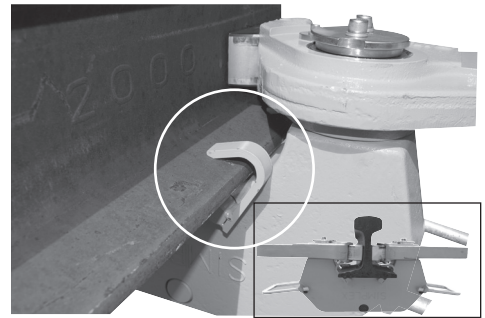


FIGURE 7

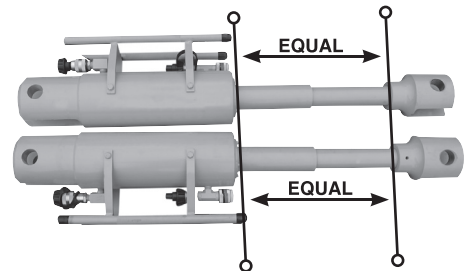


FIGURE 8

4.7 ASSEMBLY OF THE STRESSOR ON THE RAIL (Pushing Over / Under Rail)

1. Position the stressor components by the rail to be welded.
2. Remove all quick release coupling dust caps and connect the hoses to the hydraulic rams.
3. Operate the external power source in accordance with the operating instructions so that the cylinder rods are fully retracted. If partial extension is required, ensure that the cylinder rods are of equal length. (**FIGURE 8**).
4. Position the bracket assemblies onto the rail (**when under the rail, use the bracket hooks to keep the bracket assemblies in position for the remaining steps (FIGURE 7)**). Ensure that the grip arrow direction goes outward (**FIGURE 12**). Rotate the swing arms of the bracket assemblies so that they are equally positioned on the web of the rail (**FIGURE 9**).
5. Connect the hydraulic cylinder ends to one of the bracket assemblies, ensuring that the pins are fully engaged. Connect the other side ensuring the pins are fully engaged.
6. Repeat the same process on the other side.
7. Open the swing arms a few degrees and push the bracket assemblies toward each other to remove any slack in the arms.
8. Ensure that the bracket assemblies are square to the rail and push the bracket assemblies toward each other again to fully engage the rail grips onto the rail web (**FIGURE. 9**). Do not operate if rail grips are not square to the rail (**FIGURE. 10**).



FIGURE 9



FIGURE 10

4.8 OPERATING AND REMOVAL OF THE STRESSOR

1. Operate the external power source in accordance with the operating instructions so that the hydraulic cylinders are fully extended / retracted as desired.
2. Close load lock valve.
3. Operate the external power source until the required gap is obtained.
4. When the operation has been completed, release the load lock valve and extend the hydraulic cylinders until all loads are removed from the assembly.
5. Remove all connector pins.

6. Operate the external power source until the hydraulic cylinders are fully retracted.
7. Disconnect the hoses and refit all quick release coupling dust caps.

Pull Configuration Shown - Arrow indicates inward rail grip orientation.

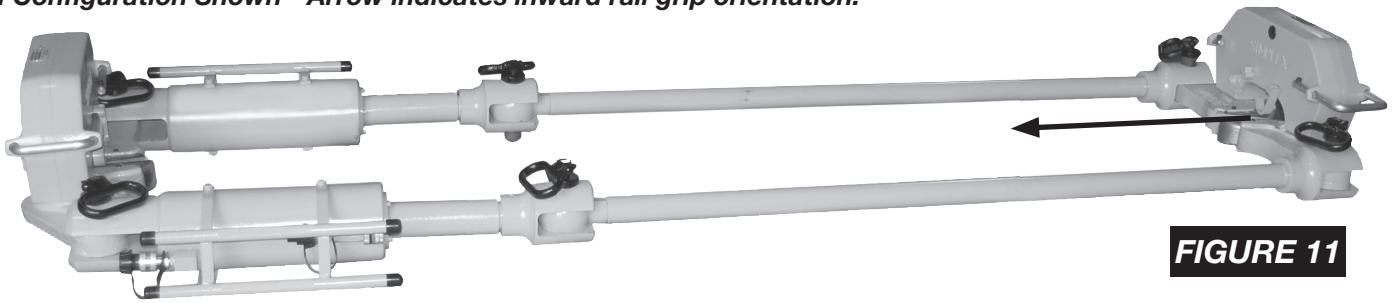


FIGURE 11

Push Configuration Shown - Arrow indicates outward rail grip orientation.

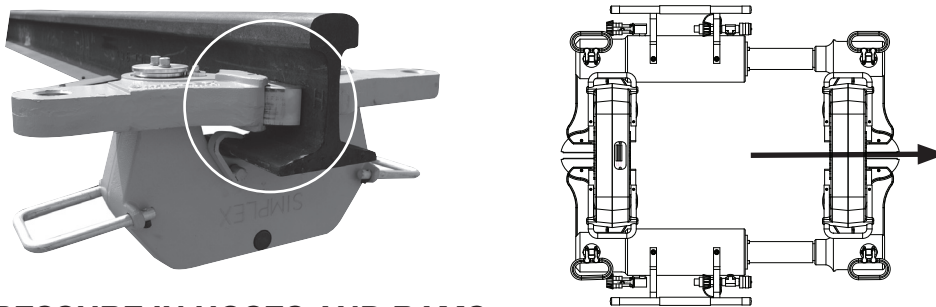


FIGURE 12

4.9 PRESSURE IN HOSES AND RAMS

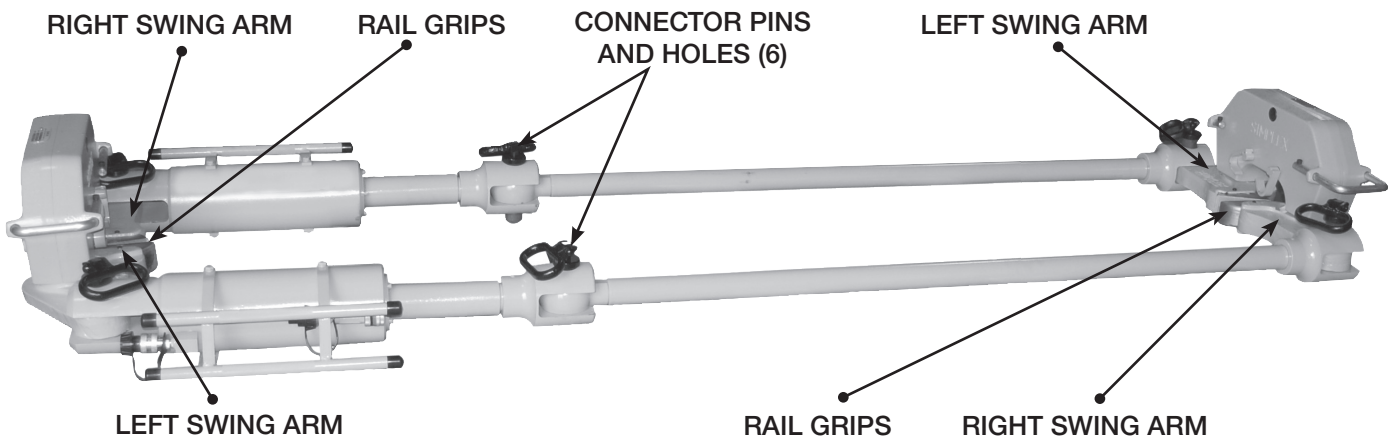
Ensure that the hydraulic hoses are kept out of the sun, as the heat may cause an increase in internal pressure, causing difficulties when connecting. Should a hose or ram uncouple while pressurized, the hose or ram assembly should be returned to the nearest Enerpac Authorized Service Center.

* Refer to Section 4.2 for instructions on releasing trapped pressure.

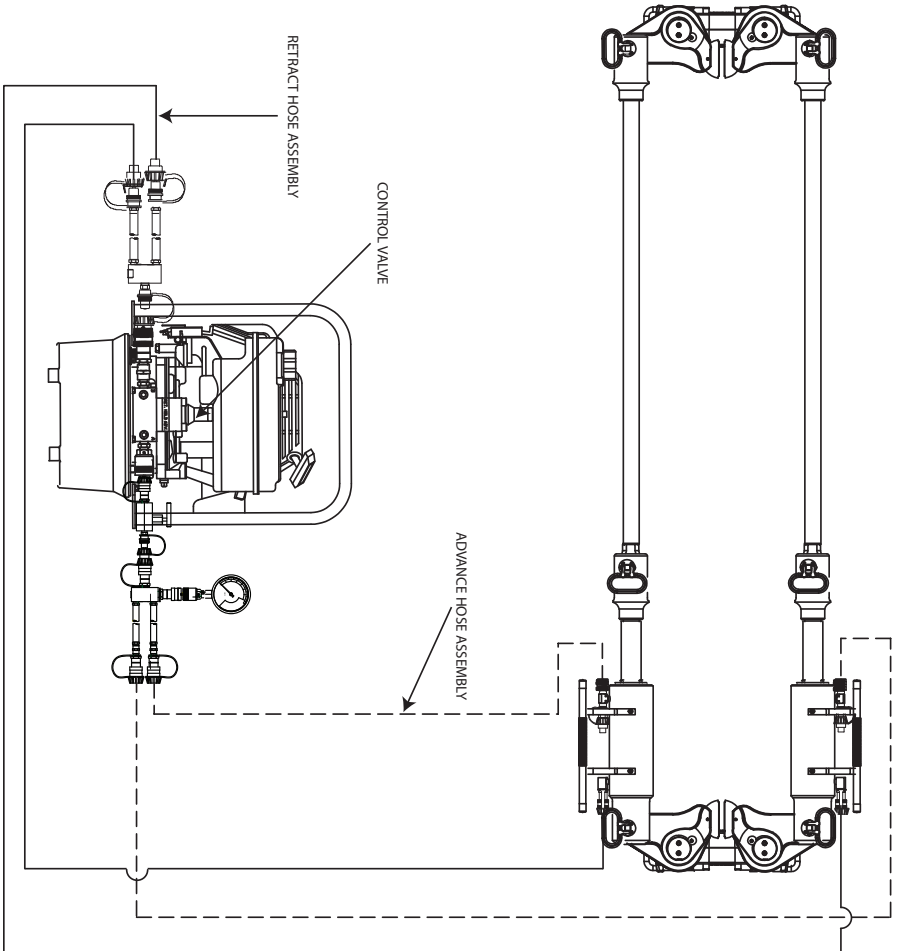
MAINTENANCE AND STORAGE

1. Connector pins and bracket pivot bearings are coated to provide protection from wear and corrosion. Lubrication of these surfaces is not required. Apply oil as a rust preventer to the inside surfaces of swing arms and at holes for connector pins.
2. Keep contact surfaces of swing arms and clamp brackets clean and oiled allowing swing arms to move freely.
3. Inspect and clean grip teeth before each use.
4. Lubricate behind grips with light oil to prevent corrosion.

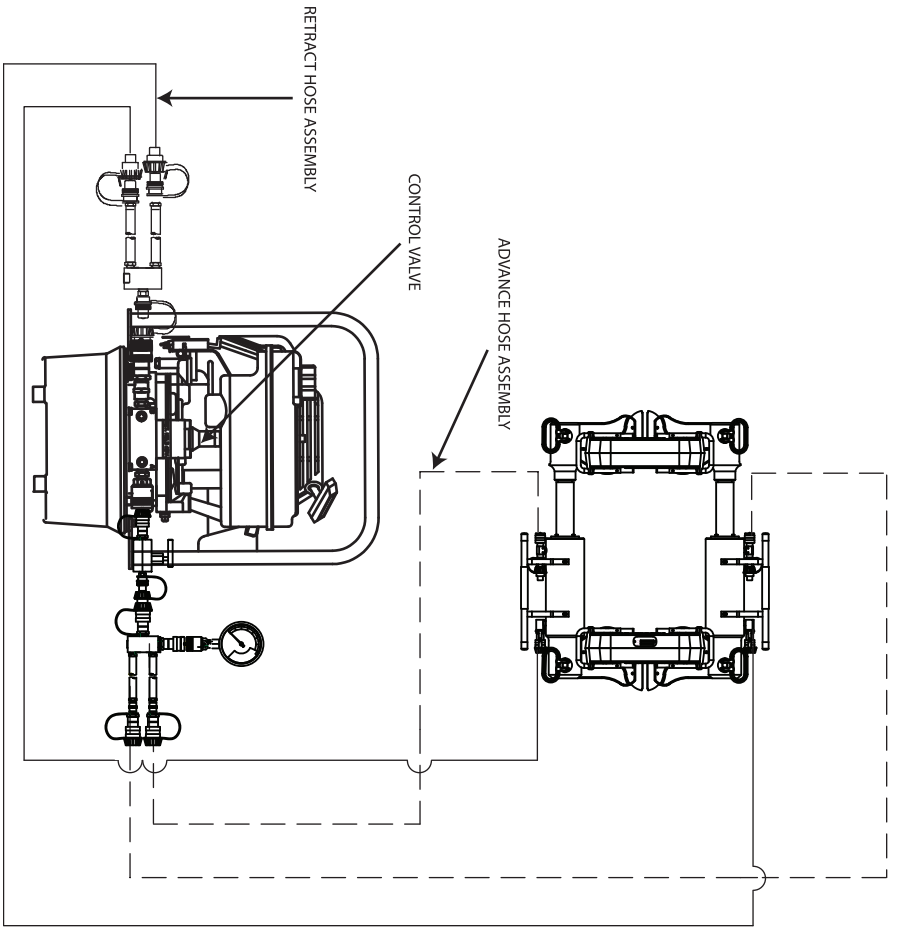
- ARROWS INDICATE LUBRICATION AND CLEANING POINTS -



SETUP WITH POWER SOURCE, HOSES AND GAUGE



PULLING SETUP



PUSHING SETUP

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