

1.0 IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. Shipping damage is **not** covered by warranty. If shipping damage is found, notify carrier at once. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

SAFETY FIRST

2.0 SAFETY ISSUES



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 distribution or service center for a free Enerpac Hydraulic safety course.

Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.

A **CAUTION** is used to indicate correct operating or maintenance procedures and practices to prevent damage to, or destruction of equipment or other property.

A **WARNING** indicates a potential danger that requires correct procedures or practices to avoid personal injury.

A **DANGER** is only used when your action or lack of action may cause serious injury or even death.



CAUTION: Wear proper anti-static protection gear (i.e., anti-static wristband) to avoid a discharge of static electricity to the Control- or Power-board of the Z-Class Pump.



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



WARNING: Stay clear of loads supported by hydraulics. A cylinder, when used as a load lifting device, should never be used as a load holding device. After the load has been raised or lowered, it must always be blocked mechanically.



WARNING: USE ONLY RIGID PIECES TO HOLD LOADS. Carefully select steel or wood blocks that are capable of supporting the load. Never use a hydraulic cylinder as a shim or spacer in any lifting or pressing application.



DANGER: To avoid personal injury keep hands and feet away from cylinder and workpiece during operation.



WARNING: Do not exceed equipment ratings. Never attempt to lift a load weighing more than the capacity of the cylinder. Overloading causes equipment failure and possible personal injury. The cylinders are designed for a max. pressure of 700 bar [10,000 psi]. Do not connect a jack or cylinder to a pump with a higher pressure rating.



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



WARNING: The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.



CAUTION: Avoid damaging 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 hoses or swivel couplers. Use the carrying handle or other means of safe transport.



CAUTION: Keep hydraulic equipment away from flames and heat. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not 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.



WARNING: 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: BE SURE SETUP IS STABLE BEFORE LIFTING LOAD. Cylinders should be placed on a flat surface that can support the load. Where applicable, use a cylinder base for added stability. Do not weld or otherwise modify the cylinder to attach a base or other support.



Avoid situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinders and plungers. In addition, the load may slip or fall, causing potentially dangerous results.



Distribute the load evenly across the entire saddle surface. Always use a saddle to protect the plunger.



IMPORTANT: Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the Authorized ENERPAC Service Center in your area. To protect your warranty, use only ENERPAC oil.



WARNING: Immediately replace worn or damaged parts with genuine ENERPAC parts. Standard grade parts will break causing personal injury and property damage. ENERPAC parts are designed to fit properly and withstand high loads.

3.0 INSTALLATION AND DOWNLOAD INSTRUCTIONS



CAUTION: Wear proper anti-static protection gear (i.e., anti-static wristband) to avoid a discharge of static electricity to the Control- or Power Board of the Z-Class Pump.

- 3.1 If the Bootloader software has already been installed on your computer, skip the following step #3.2.
- 3.2 Installing the Bootloader software:
 - 3.2.1 In case your computer is connected to a local area network, please make sure that you have sufficient rights to install new software on your computer. Contact your administrator if the installation fails.
 - 3.2.2 Follow the steps listed below:
 - a. Download the DC9651222.exe bootloader file from the following website: vault.enerpac.com.
 - b. Save the file to a folder on your computer.
 - c. Open the Bootloader program by double-clicking on the saved file.
 - d. Click "Select" on the program screen".
 - e. Select the required control firmware with an .a43 file extension.

- 3.3 Open the shroud of the pump by removing the top five screws (ZU) or six screws (ZE) that hold the two shroud-halves together.
- 3.4 Now remove the two bottom screws on the shroud-half that contains the Control-board.
- 3.5 Carefully take the shroud-half off the pump without damaging the flat ribbon cable that connects the Control-board to the Power-board. Do **NOT** disconnect this flat ribbon cable.
- 3.6 Connect the Bootloader-cable with the 3-pin AMP plug to the referring 3-pin terminal on the Control-board as shown in photos 1 and 2.

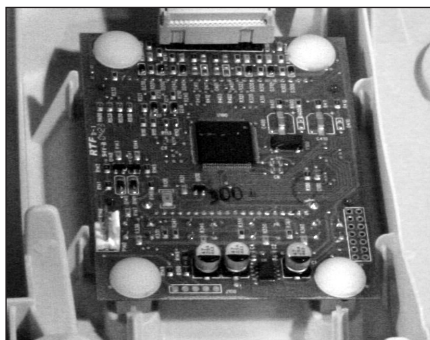


Photo 1

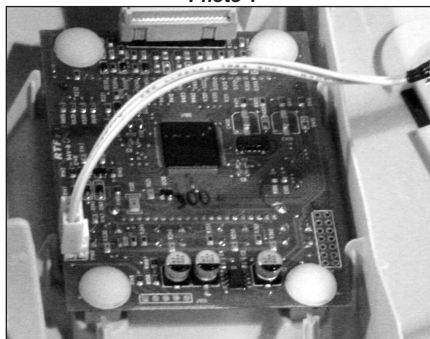


Photo 2, Bootloader cable connected

- 3.7 Connect the DB9 plug of the Bootloader-cable to USB on your computer.
- 3.8 Power-up your computer and the pump. Once your computer has finished the boot-sequence you can start the Bootloader runversion. Enter the path and filename of the latest Z-class software as stored on your computer and click on "Download".

- 3.9 The Bootloader will set up the communication with USB and then start to download the new Z-class software to the Control-board. During this operation, the LCD-screen on the Control-board will completely switch off. Once the download is completed successfully the Bootload will indicate accordingly and the LCD-screen of the Control-board will display: "FIRMWARE X.n" for approximately two seconds. (with X.n being the release number of the Z-class Firmware, which you have just downloaded onto the Control-board of your Z-class pump!)
- 3.10 Switch off the pump and disconnect the Bootloader-cable from the Control-board.
- 3.11 Re-assemble the pump and test the new functionality.
- 3.12 Verify the correct firmware number, voltage, and motor phase appear on the LCD when the pump turns on. If any values do not match the pump, please contact an Enerpac Technical Service representative for guidance.

