SMD Operations Procedures Manual

8.1 OPERATION OF 12T COIL COLLARING PRESS , P/N 25-1925.01-5

Text Pages 1 through 4
Attachment(s) 1, 2

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Revision No. 00

Approved: Signature on File (Division Head) 10/27/05 (Date)

Preparer(s): J. Cozzolino

8.1 Operation of Collaring Press

1.0 Purpose and Scope

1.1 To provide details on various operations aspects of the Collaring Press located in Building 902. Areas addressed are safety precautions, preparation, and operation.

1.2 This information is provided for any person who will operate the controls of the Collaring Press.

2.0 Responsibilities

2.1 Authorized operators (Operators) of the Press will perform the tasks described here.

2.2 The Operator shall complete the magnet traveler associated with the cold mass being collared.

2.3 The Operator shall complete any magnet fabrication procedures that require operator input.

3.0 Prerequisites

3.1 Training

3.1.1 Operators shall be instructed by the Cognizant Engineer or his designee before using this procedure.

3.1.2 Operator shall be a "Responsible Employee" as defined by SBMS ES&H Standard 1.5.1, "Lockout/Tagout Requirements".

3.2 Manpower

3.2.1 Two technicians are required to operate this collaring process. One of the technicians will operate the pump controls. Both participate in simultaneous key insertion.

4.0 Precautions

4.1 Wear eye protection with splash guards. Operation involves working near hydraulic oil and metal parts under high forces and pressures.

4.2 Exercise caution while pulling the collared coil assembly in and out of the press. Watch for pinch points at the upper and lower contact rails.

4.3 Be aware of the location and function of the hydraulic selector switch (three-position control lever) located on top of the pump tank next to its motor. Make sure that both technicians know how to release all cylinder pressure by turning it to its neutral position.

4.4 Check that the work area is clear of unnecessary objects and material.

4.5 Check that the work area is clear of unauthorized personnel.

5.0 Procedure

5.1 Detailed step-by-step instructions for coil collaring are documented as part of the applicable Magnet Assembly Procedure (MAP) and/or traveler. Refer to the MAP and/or traveler for the type of coil being collared.

5.2 This section provides additional details on start-up, operation, shut-down, safety feature testing, and maintenance of the Collaring Press that may not be documented on the Specifications.

5.3 Preparation

5.3.1 IMPORTANT!! Make certain that the Enerpac V-152 relief valves on the press have been set and locked to limit the pressure to a maximum of 4000 psi for the main cylinder circuit and 1000 psi for the return cylinder circuit. Once locked, the relief valves must be tagged appropriately with their handles removed.

5.3.2 Connect all quick-connect hydraulic power and drain hoses from the pump to the press. Refer to the attached schematics, 25-1925.16-3 and 25-1925.17-3. Wipe up any spillage of hydraulic oil from the fittings and nearby areas.

5.3.3 IMPORTANT. Make certain that all four main cylinder isolation valves are OPEN.

5.4 Operation

5.4.1 Set the three-position control lever on the Enerpac pump to NEUTRAL (middle setting). Plug the unit into a suitable 208v power outlet

5.4.2 Using a die table and steel delivery tray (at least .06 inch thick flat stock), slide the collared coil assembly onto the lower press bed and center it longitudinally. ***Centering is very important in order to avoid uneven***

loading which can easily damage the coils. Uneven loading may also damage the press. Make certain that all four main cylinder isolation valves are OPEN.

5.4.3 The main cylinder isolation valves are located under each of the four main cylinders. Using these valves, the end cylinders may be shut off only if a very short item is to be pressed. These valves can also be closed off at any pressure during the pressing sequence to help balance the press, if it is determined to be necessary. They are to be used with care so as not to create an uneven loading condition.

5.4.4 Turn on the pump motor by pressing the push button switch located on the left side of pump cart.

5.4.5 Move the three position control lever to the RIGHT (counter-clockwise). That will fill the main cylinders and start to close the press against the collars.

5.4.6 Once the press jaws are closed against the collars, the resistance will cause the pressure to rise to a minimum pressure of approximately 600 psi. This value can be reduced if necessary by opening the dump valve in the system. To further increase pressure from this point, turn the adjustable relief valve clockwise until desired main cylinder pressure is attained. This valve is located next to the three-position control lever on the pump

5.4.7 Raise the pressure in small increments by turning the relief valve on the pump SLOWLY. Once the collaring keys are installed, pressure is reduced by turning the adjustable relief valve knob counter-clockwise until the pressure is backed off to minimum amount (around 600psi.)

5.4.8 Separate the press platens by removing all pressure to the main cylinders. This is accomplished by swinging the control lever to the left, past the neutral position to activate the two small tension cylinders located on the sides of the press. This drains the main cylinders and returns the press platens to the open position.

5.4.9 This sequence can be repeated as many times as necessary to obtain the objective, then simply push the stop button located on left side of the pump cart and unplug the pump before leaving press area.

6.0 Documentation

6.1 Magnet Travelers.

6.2 Various MAPs requiring operator input.

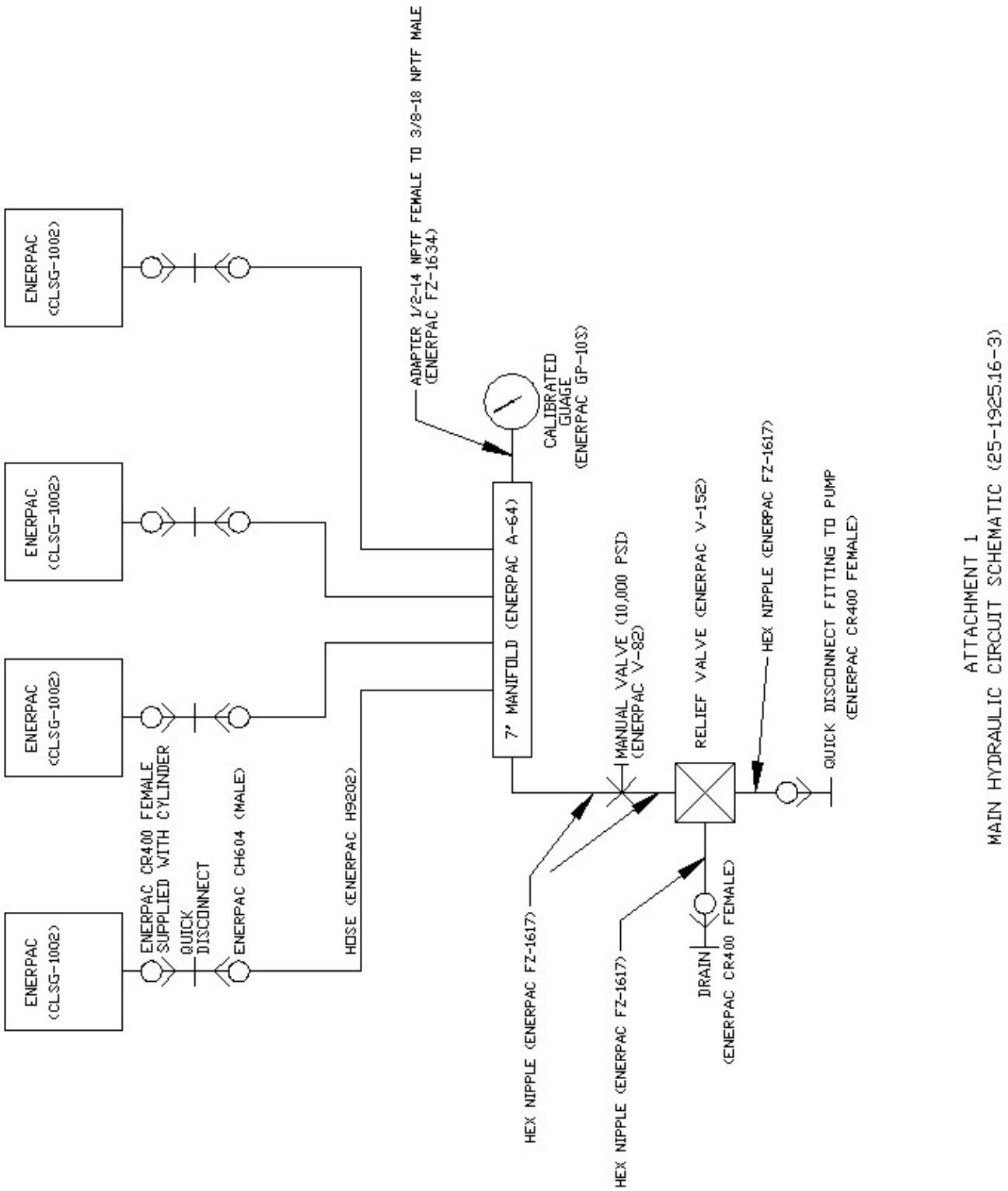
6.3 12T Magnet Collaring Press, Assembly Drawing No. 25-1925.01-5.

7.0 References

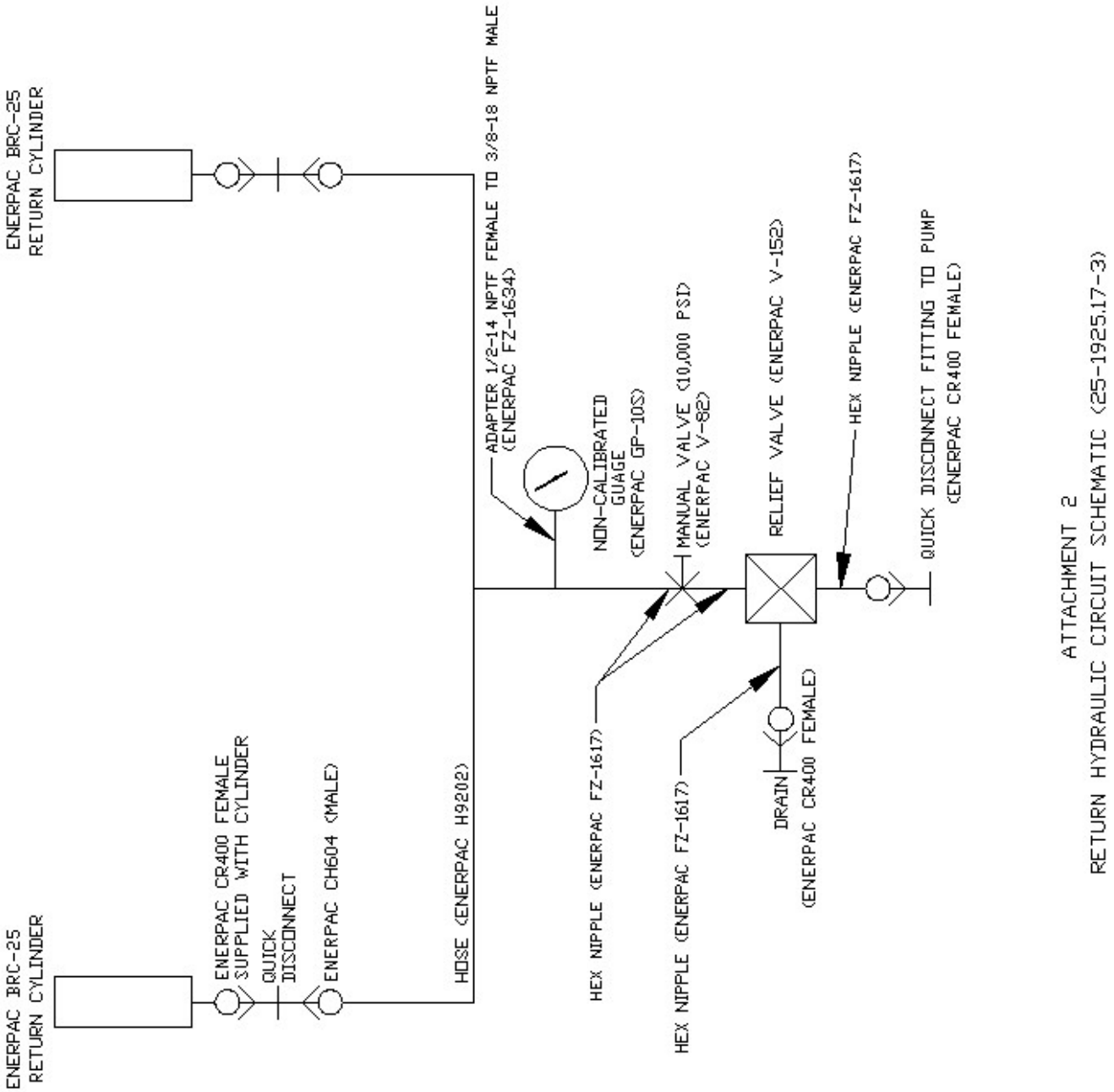
7.1 SBMS ES&H Standard 1.5.1, "Lockout/Tagout Requirements"

8.0 Attachments

8.1 Attachment 1 – Main hydraulic circuit schematic.
8.2 Attachment 2 – Return hydraulic circuit schematic.



ATTACHMENT 1
MAIN HYDRAULIC CIRCUIT SCHEMATIC (25-1925.16-3)



ATTACHMENT 2

RETURN HYDRAULIC CIRCUIT SCHEMATIC (25-1925.17-3)