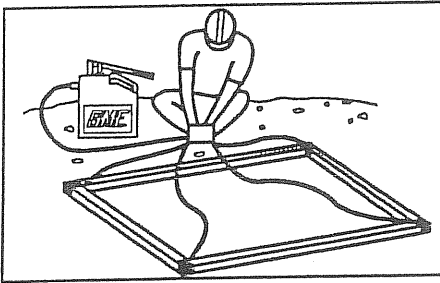




MANHOLE SHORING INSTALLATION & REMOVAL INSTRUCTIONS

1. Select the appropriate hose bridle manifold for the job. (Example: A four-way manifold for a Manhole shore with four hydraulic cylinders.)

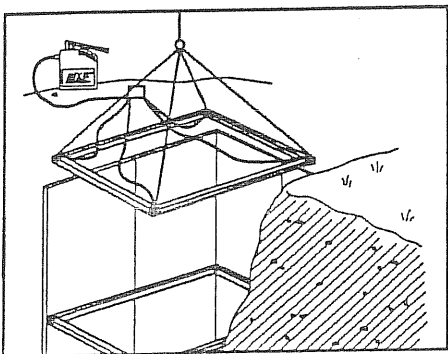


2. Connect the female end of the manifold to the quick disconnect fittings on the cylinders. Care should be taken at this point to make sure that you have a good connection. You should also note which 1/4 turn valve on your manifold is connected to which hydraulic cylinder. **HINT: Gather four colors of tape, one for each cylinder hose. Tape a 2" piece at the top of the hose, just below the 1/4 turn valve. Then take another 2" piece and tape the bottom of the hose, just above the female coupler. This will indicate which 1/4 turn valve, controls which cylinder.**

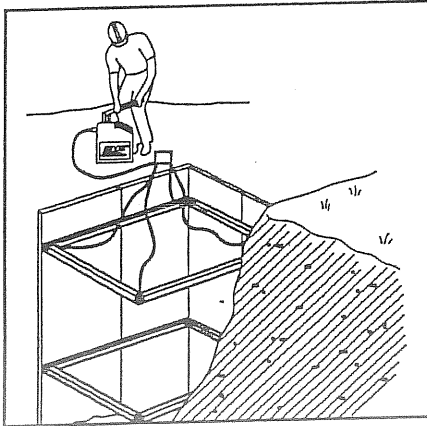
3. It is time to check the manifold for proper valve alignment.
 - A. Inlet valve on manifold should be open and connected to the pump bucket.
 - B. Valves for the cylinder hoses should be open.
 - C. Discharge valve in the middle of the manifold should be closed.
 - D. The return valve on the pump bucket should be closed.

HINT: Valves are open when they are in line with the hoses.

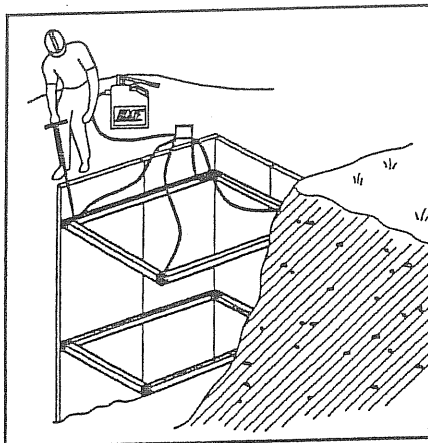
4. Connect the lifting sling to the Manhole Shore lifting eyes, on all four corners.
5. Lower the Manhole Shore into the excavation in its proper position. (Remember to space the Manhole Shore according to the Manufacturer's Tabulated Data.)



6. Manhole Shore should be expanded to the size of a few inches narrower than the excavation. Remember to leave room for sheeting.
7. Position the sheeting around the excavation between the Manhole Shore and the excavation side walls.
8. Expand the Manhole Shore out evenly to the side wall of the excavation. Use the manifold to open and close the appropriate cylinders, which need to be expanded.



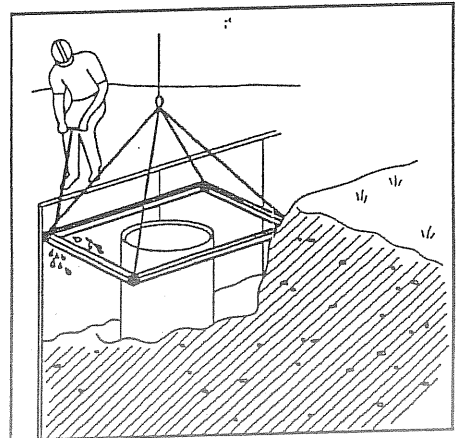
9. Pump the Manhole Shore to approximately 750 PSI, as indicated by the gauge on the pump bucket.
10. After setting the pressure to 750 PSI, allow the system to set for one minute. Then check to see if the pressure gauge is still in the green zone. If it is, proceed to the next step. If it isn't, re-apply pressure until you reach 750 PSI. Then check the gauge again.



11. Using the Manhole Shore release tool, disconnect the hoses from the cylinders.
12. Release the pressure from the pump and manifold assembly by opening the 1/4 turn valve on the pump bucket.
13. Reconnect the manifold assembly to the next Manhole Shore to be installed.

14. Lower the next Manhole Shore into the excavation. If the Manhole Shore is to be positioned below the existing Manhole Shore, care should be taken to insure that the Manhole Shore being installed is narrower than the one in the excavation, to allow passage.
15. Repeat the above steps until all the Manhole Shore units are installed and the excavation is properly shored.

REMOVAL



1. Connect the lifting sling to all four corners on the bottom Manhole Shore.
2. Using the Release Tool, release the pressure in the cylinders. While you are releasing the pressure, pay close attention to the ground that you are standing on for movement of the soil. If there is no movement of the soil, continue to release the pressure until the Manhole Shore is away from the side walls of the trench.
3. Remove the bottom Manhole Shore by passing it through the next existing unit in the trench. Repeat this procedure until all the Manhole Shores are out of the trench.

NOTE: This procedure is to be used along with GME Manufacturer's Tabulated Data to establish minimum spacing requirements.



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