

EQUIPMENT SERVICE ON SITE



Model: RAM XXV ASM
Dynamometer Setup for:
EESE- 114A, 115A, 116A
122A, 123A, 124A

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Installation Instructions

INSTALLATION OVERVIEW: _____

This Instruction details the installation of MAHA designed Above Ground (AG), Below Ground (BG) dynamometers into a pit, or Above Ground (AG) Dynamometer mounted on the floor surface. The pit must be built to the specifications of the Snap-on Pit Diagram for the dynamometer type being installed. The dynamometers weigh 2000 Lb. (900 Kg) and will require a heavy duty lifting device. These instructions will show the lifting points for moving the units with the appropriate lift devices. The instructions will also show the location of the air, electrical and communications connections necessary to make the dynamometer function. It will be necessary to use the concrete anchor bolts supplied and nuts to secure the roller set in the pit.

NOTE: *All electrical connections must be made according to the NEC (National Electrical Code) by a Qualified Electrician operating under a valid permit.
Communication connections will be made by a qualified EquiServ Technician.
Air Supply Connections should be done by a qualified individual.*

PARTS & LIST: _____

DESCRIPTION	QTY
Complete ASM Dynamometer	1

REQUIRED TOOLS: _____

- Hammer Drill
- 3/8" (10mm) Concrete Drill Bit
- Socket Set and Ratchet
- Standard Hand Tools
- Crane or lifting device capable of moving the 2000 Lb. Roller Set
- Steel Cable or Chain for lifting the Roller Set

INSTALLATION INSTRUCTIONS:

! **WARNING!**

THE STEEL CABLES OR CHAIN MUST HAVE SUFFICIENT STRENGTH TO LIFT 2000 LB.

BREAKAGE OF THE CABLE OR CHAIN COULD CAUSE SERIOUS INJURY.

1. Un-crate the dynamometer being careful not to damage the unit.
2. Install the four (4) ring bolts (A) supplied with the Dynamometer, if not already installed, by screwing them into the threaded holes (B) shown in Figure 1.

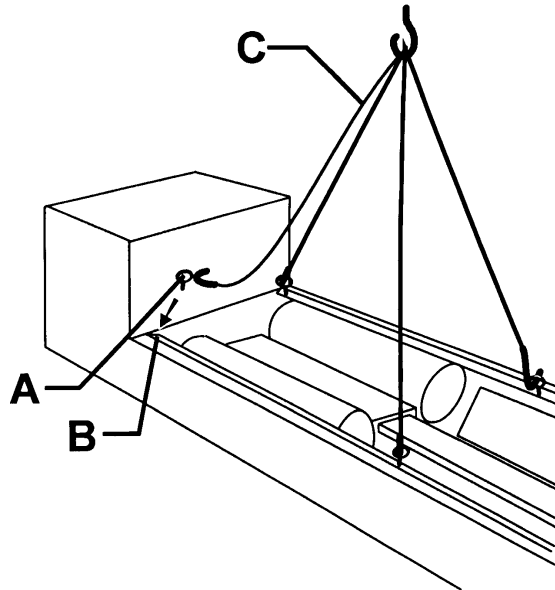


Figure 1

3. Connect the steel cable/chain (C) to the four (4) ring bolts (A), shown in Figure 1. This will enable the crane or other suitable lifting device to move the roller set to the installation site.

NOTE: *The end of the Dynamometer should be flush with the shallow end of the pit wall. A 6" space is allowed on the conduit end of the pit for easier connections.*

4. With great care orient the Roller Set into position over the foundation pit and lower the unit into the pit. If this is an Above Ground dynamometer, and will not be mounted in a pit, then place the dynamometer in the position selected.
5. Using the 3/8" (10mm) concrete drill, mark and drill the four holes in the pit at the four mounting hole positions (see Figure 2 on Page 3). Clean the holes and surrounding area of any concrete dust; insert the anchor bolts. Check the roller set for level both front to back and side to side. Shim the roller set with steel shims if necessary to achieve a level condition ($\pm 1/4$ " off). Install the washers and nuts and tighten securely.

Mounting Holes for Roller Set

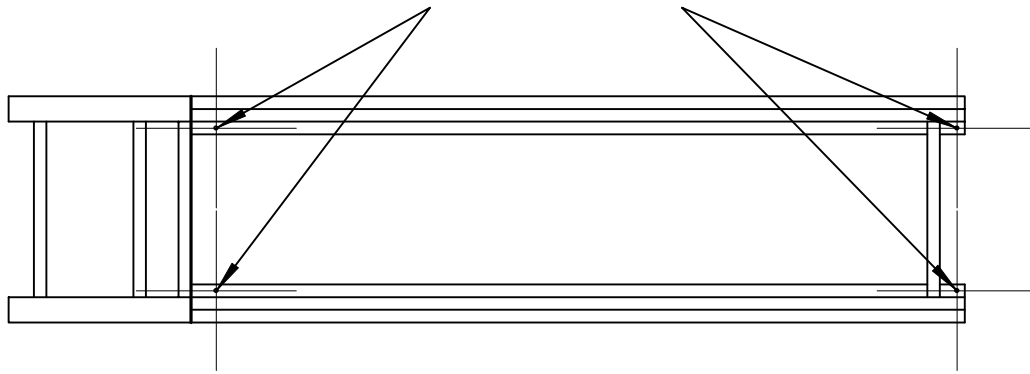


Figure 2

6. Remove the cables and ring bolts from the roller set.

NOTE: *The air supply to the dynamometer must contain a shutoff valve at the source. Turn on the air supply to the dynamometer and check for leaks. The system must be leak free for proper operation.*

7. Route the air supply hose (a flexible high pressure hose is recommended) from the shop air source, through the 2" conduit as indicated in the pit diagrams, to the 1/4" NPT Fitting (C) as shown in Figure 3.

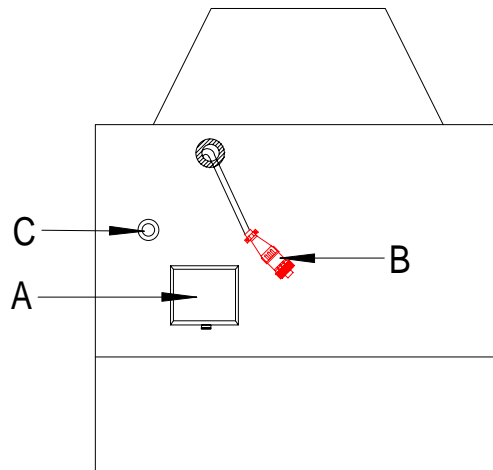


Figure 3, Dynamometer Connections

NOTE: *The Communications Cable and Air Supply Hose on Above Ground installations DO NOT need to be inside conduit and can be disconnected when not in use.*

8. Route the communications cable through the 2" conduit in the concrete pit and plug the cable into the connector on the Dynamometer (B), shown in Figure 4. Connect the other end of the cable to the Host Analyzer.

NOTE: *The wiring to the Junction Box must be in NEC approved piping, using #12 Gauge wire with a disconnect near the Dynamometer.*

NOTE: *For Above Ground installations all wiring must comply with NEC codes, portable (extension) cords can not be used.*

9. Remove the cover of the Electrical Junction Box (A), shown in Figure 4. Inside the Junction Box are three(3) #12 Gauge wires, Green = Ground, and two (2) power wires. The Dynamometer operates on 220 Volt, 20 Amps, Single Phase. From the ¾" conduit in the pit connect the power conductors to the L1 and L2 Black wires. Connect a Ground Wire to the Green Wire.
10. Replace the removed cover.
11. After all connections are completed and tested install the 7"X31" Filler Plate, provided with the Below Ground Dynamometer, over the deep end of the pit. If the installation is an Above Ground in a shallow pit a cover can be obtained from your Service Technician.
12. The System is now ready for calibration by an authorized EquiServ Technician.

INSTALLATION COMPLETE