M & M STEEL, INC.

Packing List:

1 each machine top with weights, pivoting bracket, and bolts attached

1 each machine base with bolts attached

4 each 2” x 2” tube steel legs with diagonal braces attached

1 each 2” round bar with bolt

1 each 1” round bar with weights attached

2 each wall mount Ladder Extension Brackets

1 each floor mount Ladder Raise Bracket

1 bag containing 6 each 3/8” wedge anchors

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Thank you for your purchase of the "Molitor Machine" and Ladder Prop Brackets. Please read the following assembly instructions completely before attempting to assemble this machine. Whenever you see this symbol: ***Caution*** it indicates a dangerous or hazardous step in the assembly of this machine.

Assembly Instructions

1. Due to the movements encountered during the use of the machine it is recommended that this machine be set up on some type of rubber mat such as weight lifting mats.

2. The base of the machine is numbered on the small 1 ½" tube steel at each corner of the machine. The 2" x 2" tube steel uprights are numbered on the inside, at the bottom of each tube.

3. To start assembly, first remove the bolts provided from the base of the machine.

4. Stand the corresponding upright in each corner on the base of the machine. The number inside the upright and on the 1 ½" steel tube on the base should face each other.

5. Replace the bolt through the upright and the base of the machine. Do not tighten the bolt at this time.

6. Loosen the bolt on the shorter diagonal brace and pivot the brace into position. Replace the bolt through the diagonal brace at the base of the machine. Loosen the bolt on the longer diagonal brace and pivot the brace into position. Replace the bolt through the diagonal brace at the base of the machine. Do not tighten the bolt at this time.

Caution Be careful to control the braces after loosening the bolt so the braces do not pivot and fall, causing **injury** or damage to the machine.

7. Repeat this sequence at each of the three remaining uprights of the machine.

***Caution* A fork lift or mechanical lifting device must be used to set the top of the machine. <u>Do not</u> attempt to set the top of the machine by hand.**

8. Remove the bolts from the top of the machine.

9. Lift the top of the machine and position it over the base of the machine. Lower the top of the machine on to the 2" x 2" tube steel uprights. The uprights and diagonal braces at the base should be bolted, but not tightened, to allow the uprights to be adjusted while lowering the top.

10. Replace the bolts through the uprights at the top of the machine. Do not tighten at this time.

11. Loosen the bolts at the upper diagonal braces and rotate into position. Replace the bolt through the diagonal brace at the top of the machine.

***Caution* At this time the bolts through the diagonal braces and the upright can be loosened or removed and replaced, <u>one at a time</u>, to allow removal of the padding used for shipping purposes.**

12. Starting at one corner of the base, use a square to position the upright perpendicular to the base of the machine and tighten the bolts at that upright. Repeat this procedure at each corner of the machine.

Caution All bolts in the machine must be tightened before proceeding beyond this point.

13. The holes in the pivot bar and the 2" solid round bar are size on size for the ½" bolts provided. It will be necessary to use a hammer and a a punch to remove and replace the bolts in the pivot bar and 2" bar. Be careful not to damage the threads of the bolt.

14. Place the 2” solid round steel bar inside the 4” pipe that is welded to the base.

15. Remove the bolt from the end of the pivot bar attached to the top of the machine. Place the 1” steel round bar between the end tabs and replace the bolt and washers and tighten to a snug condition only. Do not over tighten.

16. Remove the bolt from the end tabs on the 2” steel round bar. Rotate the pivot bar and place the 1” steel round bar between the tabs on the 2” steel round bar. Replace the bolt and washers and tighten to a snug condition. Do not over tighten.

***Caution* Check all bolts on the machine at this time to assure that all bolts have been tightened.**

***Caution* The bolts on this machine must be checked for tightness after every 50 candidates have used the machine.**

***Caution* The bolts that attach the 1 inch round bar, with the weights, to the pivoting bar and the 2 inch round bar should be tightened snug to the welded tabs. It is important that these two bolts not be over tightened, causing the welded tabs to bend.**

These two bolts are shear points and should be checked after every 10 candidates, and should be replaced anytime signs of wear or deflection are noted in the bolts or welded tabs. A good rule of thumb is to replace the bolts after every 50 candidates, but they must be replaced after 100 candidates.

All of the bolts used in this machine are Grade 8 hardened steel bolts with SAE flat washers and nylock nuts to secure them. All bolts should only be replaced with the same.

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The wall mount Ladder Extension Brackets were designed for use with the aluminum ladder utilized during validation of the testing process, and are designed so that the fly section of the ladder is to the inside, against the wall.

The wall mount Ladder Extension Brackets are designed to be permanently mounted to a wall. Concrete wedge anchors are provided to mount the brackets to a precast wall.

If the brackets are to be mounted to a wood wall it is recommended that 3/8" lag bolts be utilized. ***Caution* The bolts must be secured into framing members or backing material, not just the siding of a wood frame wall.**

If the brackets are to be mounted to a masonry wall, first you must determine if the cells of the block are grouted or not. If the cells are grouted, the brackets can be mounted using the 3/8" wedge anchors provided.
***Caution* If cells of the block are not grouted, you must check with local authorities for acceptable methods of mounting the Ladder Extension Brackets.**

It is recommended that the first bracket be located approximately three feet above the floor and the second bracket be mounted within two feet of the top of the ladder when it is not extended.

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The floor mount Ladder Raise Prop was designed to be used with the aluminum ladder utilized during the validation of the resting process.

The floor mount Ladder Raise Prop is provided with a six inch wide base that is four feet three inches long. The bracket can be mounted to a concrete floor using the 3/8" wedge anchors provided. It is essential that the bracket be securely fastened to the ground before any candidate is allowed to utilize the prop.

Assembly Instructions:

To permanently mount the bracket to a concrete floor:

1. Pick the location at which the prop is to be located.

2. Drill two 3/8" holes thirty one and one half inches apart.

3. Set the prop into position and place the wedge anchors into the holes.

4. Tighten the anchors to secure the prop to the floor.

Caution **This prop must be securely fastened to the ground to insure the safety of the candidates and the evaluators.**