



AIMCO Manufacturing Safety Manual



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INTRODUCTION

The AIMCO Torque Arm Lifting Device provides a rigid connection between the mounting structure or crane and the end tooling or payload.

The torque arm design utilizes a pneumatic lifting cylinder and a Thompson guide shaft/linear bearing arrangement to protect the cylinder from the affects of offset loading. This design allows off-center loads to be lifted, transferred, and manipulated while maintaining the loads required orientation.

INSTALLATION

Care should be taken when unpacking the equipment. Visually inspect all contents for any damage or loose connections. Notify AIMCO is any damage has occurred during shipping.

STEP #1

Locate the accessory package. The following items will be needed for assembly.

- A. One (1) Compression mounting plate with through holes.
- B. Eight (8) Socket head cap screws.

STEP #2

2.1.

With the torque arm unpacked and resting on a horizontal surface, visually inspect to assure the black blocking valve is threaded into the bottom port of the cylinder. Assure all airline connections to this valve are tight.

2.2.

Prior to lifting the torque arm to the vertical position, it is recommended that the bottom wrist swivel be temporarily tied and secured to the bottom of the torque arm. This will prevent the cylinder and shaft from extending during lifting and attachment of the torque arm. The blocking valve will prevent and dramatic extension of the cylinder, but a small amount is to be expected.



2.3

Lift using a safe lifting device; raise the torque arm into position at the end of the articulated jib boom. Position the torque arm so that the square steel shaft tube rests against the end of the arm nested between the alignment bars.

2.4

Locate the loose compression plate from the accessory box (item A. above). This plate should slip between the back of the cylinder and the front of the square steel shaft tube. Position the plate just below the upper attachment bracket for the cylinder to the tube.

2.5

Using the eight (8) SHCS from the accessory box (item B. above). Secure the torque arm to the end of the articulated arm. Bolt the mounting plates together, compressing the shaft tube to the end of the arm.

2.6

Prior to final tightening, level the torque arm in all directions. Shims may be used to aid in leveling. An unlevelled torque arm may put unnecessary stress on the lifting cylinder and affect performance of the equipment.

2.7

Locate the ½" airline protruding from the end of the secondary arm of the articulated jib boom. This line should be plugged into the top fitting on the blocking valve.

2.8

Carefully remove any securing device used to tie the wrist swivel to the lifting cylinder as instructed in section 2.2 above.

The system is now ready for the addition of any end-effector tooling