

MOREHOUSE INSTRUMENT COMPANY, INC.
60,000 LBS CAPACITY AIRCRAFT SCALE FORCE CALIBRATION PRESS
PART NO. 654000

GENERAL SPECIFICATION

1.0 Scope: This specification describes a Force Calibration Press for the application of compression loads to 60,000 lbs. The calibration press is designed to calibrate aircraft wheel platform scales with dimensions up to 38.5 inches by 38 inches by 4 5/8 inches. The press includes a frame assembly with a motorized adjustable crosshead, force application system, and mounting adaptors.

2.0 Compatibility: This Force Calibration Press is designed to calibrate aircraft wheel platform scales with capacities to 60,000 lbs. using specific sizes of standard load cells.

3.0 Design Requirements: The Force Calibration Press consists of a frame assembly with a motorized adjustable crosshead, a hydraulic force application system consisting of a hydraulic jack with a hand pump, and mounting adaptors. The Calibration Press is designed to apply a force through a standard load cell that is fastened to the hydraulic jack. (Load cells not included.)

4.0 Performance & Product Characteristics:

4.1 Functional Requirements: The Calibration Press is a floor mounted unit. (Optional legs with leveling feet to raise the platen, working area, to approximately 29 inches from the floor are available. Contact Morehouse Instrument Co. for details.) It will be used for the calibration of aircraft wheel load scales from 1,000 to 60,000 lbs. using a standard Air Force force calibration kit.

4.2 Capacity: The Calibration Press has a working (rated) capacity of 60,000 lbs.

4.3 Overload: The Calibration Press is has been proof loaded 25% above the working capacity of 60,000 lbs. However, the working (rated) capacity of 60,000 lbs. should not be exceeded.

5.0 Details of Components:

5.1 Frame Assembly: The frame assembly consists of a mounting base with a platen, threaded tension tie bars, and a moveable crosshead. The useable area of the platen is 40 inches long by 42 inches wide. The platen is drilled with a 1 inch diameter center hole. The moveable crosshead adjustment range permits the hydraulic jack ram to be positioned between not less than 6 inches and 24 inches from the top of the platen. The crosshead is adjusted using the hand crank on the top beam. (An optional electric motor to control the crosshead adjustment is available. This motor makes adjustment of the crosshead very easy. The motor operates on 115 volt, 60 cycle, single phase power. Contact Morehouse Instrument Co. for details.)

5.2 Hydraulic Force Application System: The hydraulic force application system consists of a 60,000 lbs. capacity Morehouse hydraulic jack that is mounted on the moveable crosshead. The jack is used to apply a vertical force between the adjustable crosshead and the platen where the scale being calibrated is placed.

5.2.1 Hydraulic Jack: The hydraulic jack has a working capacity of 60,000 lbs. It is specially designed to have the lowest possible leak rate so it is suitable for force calibration work. The jack ram is provided with threaded adaptors for

fastening the load cell standards to the jack ram. The jack ram has a vertical stroke of one inch and will fully retract when hydraulic pressure is released.

5.2.2 Hand Pump: The hydraulic jack is activated by a two-speed hand pump that has a vernier screw piston. The pump is connected to the jack with a hydraulic hose that has a quick disconnect on one end.

5.2.3 Mounting Adaptors: The Calibration Press is provided with the following adaptors:

Compression Pad (6 inch diameter by 1 ½ inch thick)

Compression Block (8 inch by 10 inch by 1 inch)