

The Morehouse hydraulic jack is specially designed and manufactured to have the lowest possible leak rate for generating forces when calibrating load cell systems and other types of load measuring systems. In operation, the force generated by the jack is passed through a standard instrument, to the load measuring system to be calibrated. It is the same jack used in the Morehouse Universal Calibrating Machine, now in use in hundreds of government and industrial standards laboratories.

The cylinder of the ram is carefully ground and honed, and then hard chrome plated. The hard chrome plating protects the cylinder walls from undue wear and corrosion that would ultimately cause excess leak rates. Low friction packing is used throughout the jack to insure a smooth advance of the piston when pressure is applied.

Standard jacks for either compression loading or tension loading are available in a “package”, consisting of a hydraulic ram, a pump, and 5’ of hydraulic hose with quick disconnect couplings at the ram end.

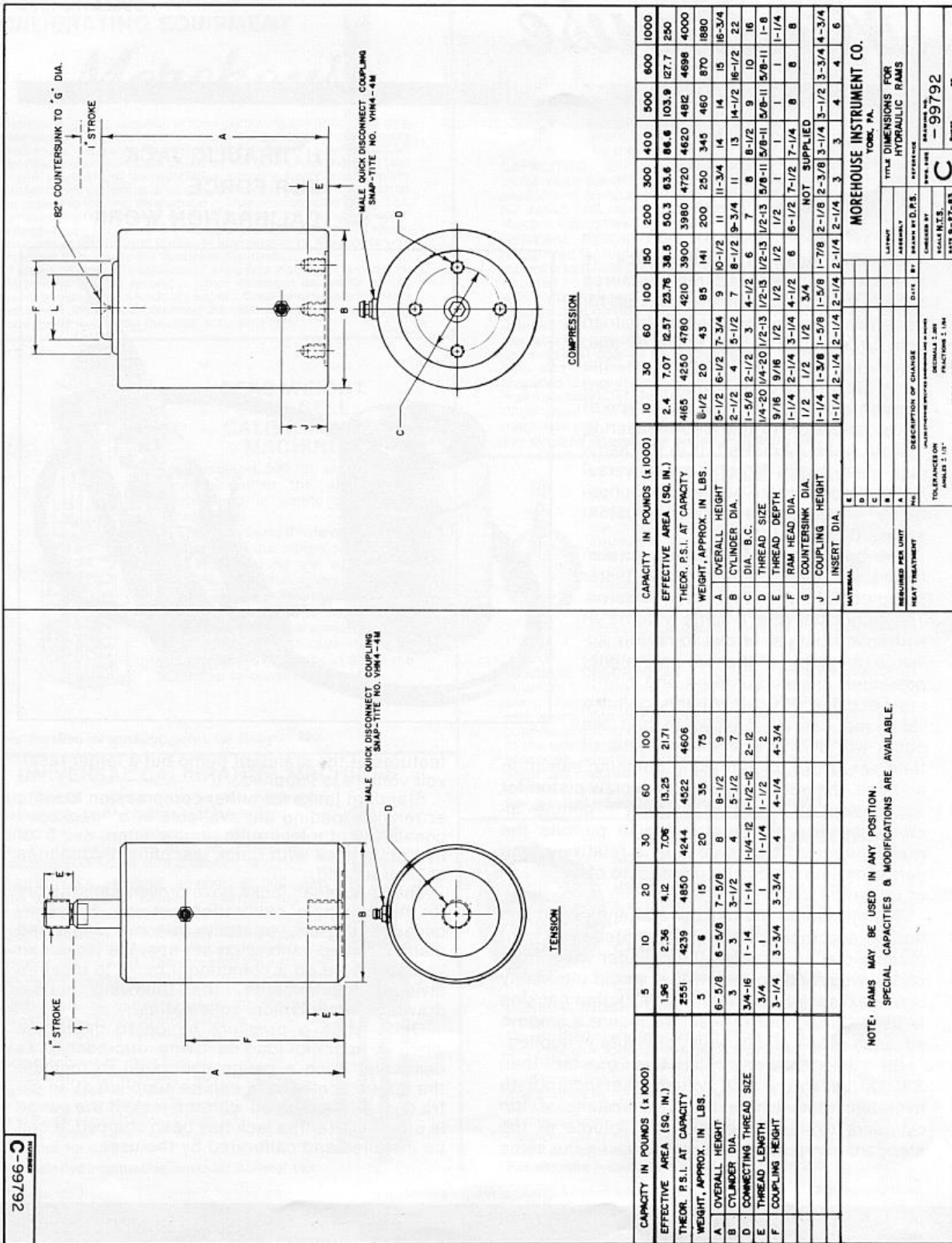
The “package” jacks have proven satisfactory for many single calibration setups. However, because of great variations in some single and many multiple calibration setups, the jacks can be assembled on a component basis to meet individual requirements. The following outline drawings show typical schematics.

Quite often a pressure gauge to determine when a specific load is being approached is desirable. Such a gauge calibrated to indicate the approximate loads can be supplied at an extra cost if it is ordered with the jack. If the gauge is ordered after the jack has been shipped, it can be installed and calibrated by the user.



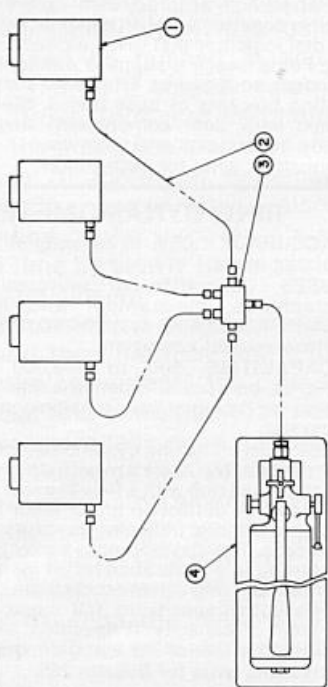
The hand pump is a precision laboratory deadweight type tester pump containing a dual volume piston. The pump delivers a large volume of hydraulic fluid per stroke to rapidly advance the piston of the ram until higher pressures are encountered and pumping becomes difficult. At this point, a valve rod can be pushed in and the pump will deliver a smaller volume of fluid per stroke, thus making pumping easier. In addition, the pump has a vernier screw piston for application of forces in extremely minute increments. The screw piston also permits maintenance of the force over a relatively long period of time by slowly turning it to offset creep of the entire system.

On jacks having capacities greater than 300,000 lbs., and on jack systems that incorporate hydraulic rams where the total volume of the cylinders exceeds the reservoir volume of the standard pump, a special pump having the same features of the standard pump but a larger reservoir volume is supplied.

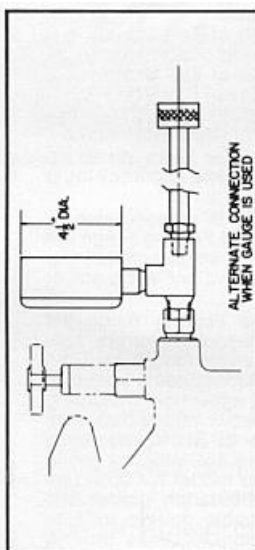




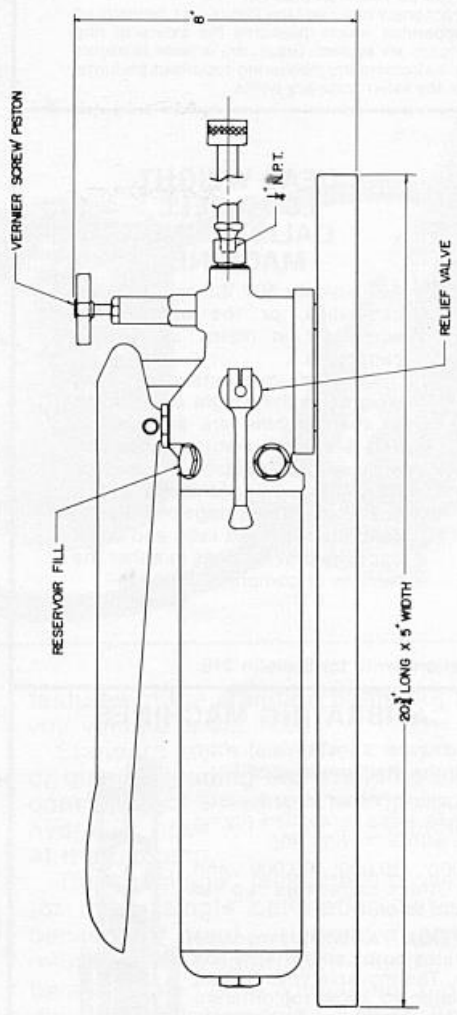
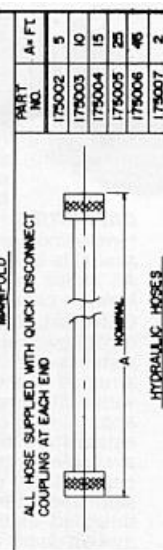
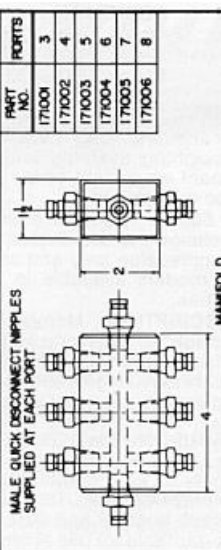
ITEM NO.	NAME
1	COMPRESSION RAM
2	HOSE
3	MANFOLD
4	PUMP



SCHEMATIC OF MULTIPLE SET-UP OF
4 RAMS FOR COMPRESSION LOADING



ALTERNATE CONNECTION
WHEN GAUGE IS USED



MATERIAL		MOREHOUSE INSTRUMENT CO. YORK, PA.	
REQUIRED PER UNIT	DATE	BY	APPROVED
HEAT TREATMENT	12-28-85	J.L.B.	J.L.B.
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED		SCALE C-99347	
DRAWING NO. C-99347		REV. 1	
DATE 12-28-85		BY J.L.B.	
CHECKED BY		APPROVED	
DRAWN BY		TITLE	
CALCULATED BY		CALIBRATING JACK	
DESIGNED BY		ACCESSORIES AND SCHEMATICS	
PARTIAL NO.		LAYOUT	
REVISIONS		DATE	
NO. 1		12-28-85	
DESCRIPTION OF CHANGE		A THIS DWG. SUPERSEDES DWGS. 12-28-85	
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