

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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15 TON POLE JACK

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1. GENERAL

1.01 The pole jack is for use in raising or lowering a pole, pulling a pole or pole butt, straightening a pole, shifting a pole or other similar work where a pole derrick and winch equipped motor vehicle is not available or where the pole location is inaccessible to the derrick equipped vehicle. It should also be used to loosen a pole or pole butt when the pull required is beyond the capacity of the derrick equipment as indicated in the Practices on pole derricks.

2. SAFETY PRECAUTIONS

2.01 When using a pole jack always maintain a secure grip on the lever bar in order to avoid being struck by the bar if released before the full load lifting or lowering stroke has been completed and the load retaining mechanism in the jack has secured the rack bar in the new position.

2.02 Due to its weight, care should be exercised when handling the jack to avoid personal injury or damage to other equipment. When traveling, it should always be carried in the rack provided in the truck body.

2.03 When using a jack be sure that it rests on a secure footing and that the base will not slip when the load is applied.

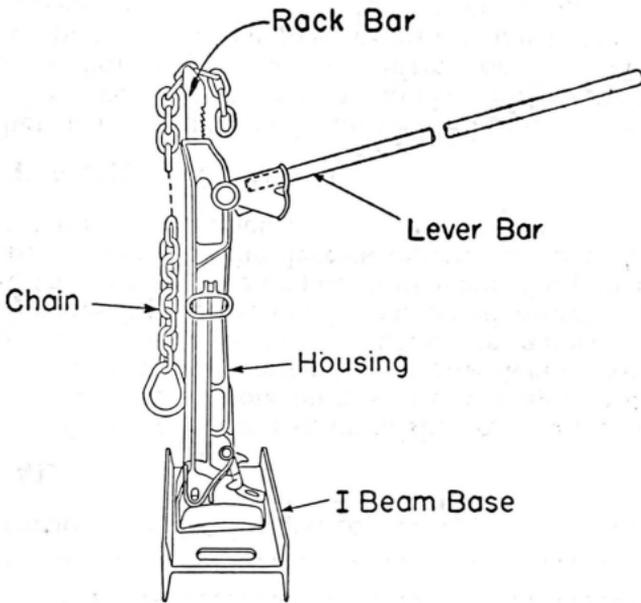
2.04 Where jacks are used in an inclined position to lift a load, the angle of the housing with the base should be limited to about 60° as the angular setting produces abnormal stresses in the jack.

2.05 A jack should not be permitted to stand in the rain nor should it be stored in a damp location as the resultant corrosion may affect its subsequent operation.

2.06 Never use a jack that is not in proper working condition.

3. DESCRIPTION

3.01 A complete 15 Ton Pole Jack consists of a jack, a 5-foot heat-treated steel lever bar, a special I-beam base with a hand hole and an 8-foot length of 5/8-inch steel chain which is fitted with a pear shaped link at one end.

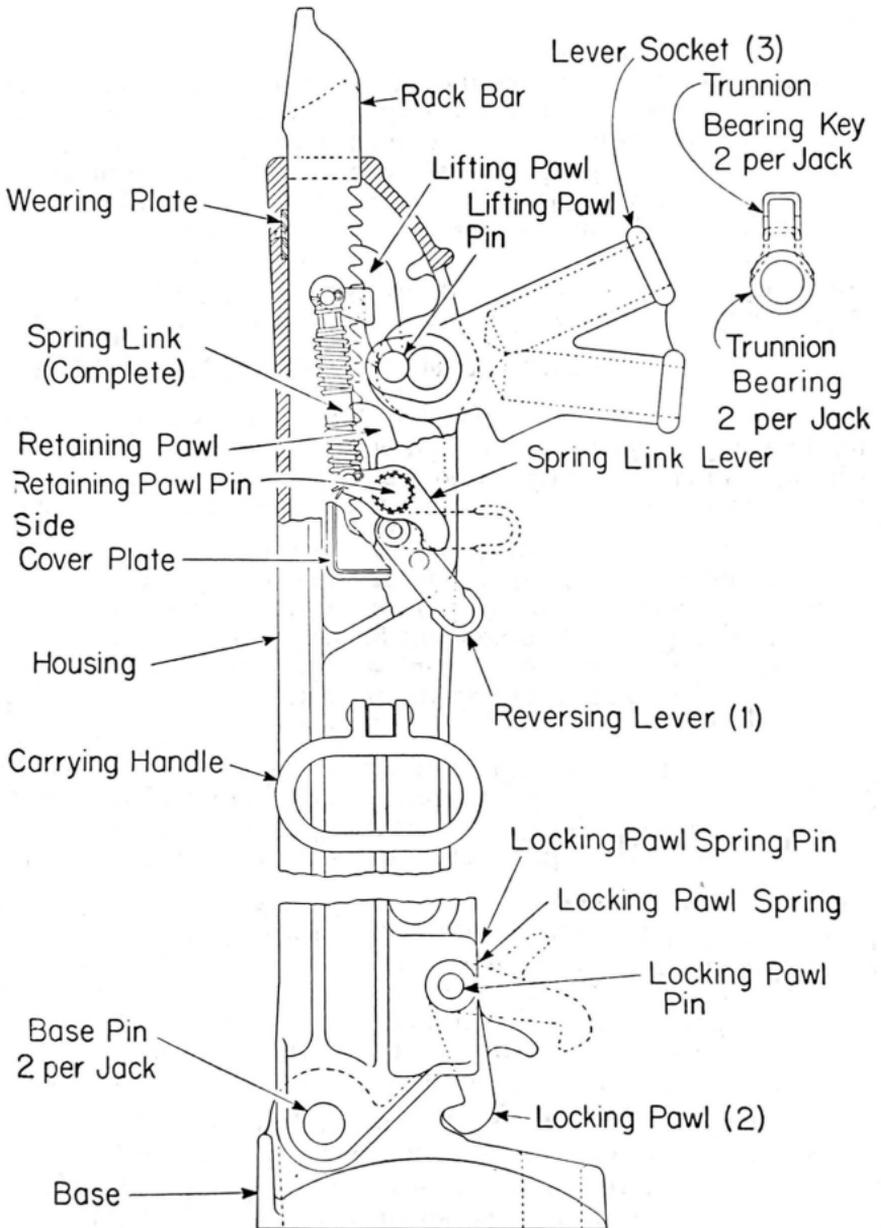


POLE JACK

3.02 A forged steel rack bar which may be extended 22 inches operates within the jack housing. The head of the rack bar is recessed to receive a link of the chain thus allowing the rack bar to grip the chain at any place along its length. The lifting and reversing mechanism is also contained within the housing and a lever socket containing two openings set at an angle to each other permits using the lever bar in the more convenient position when operating the jack. The jack is the single acting type in that the rack bar is moved one single notch by an up and down stroke of the lever bar. The direction

in which the rack bar moves is controlled by a small reversing lever located below and to one side of the lever socket.

I. NAMES OF PARTS



Note: Where a figure is shown after the name of a part, it is used in the text for clarity.

5. OPERATION

5.01 When raising a load vertically, the jack housing should be locked vertically to its base by means of the locking pawl (2). This pawl is automatic in its operation. If the housing is not already in this position, move it over until the locking pawl "snaps" into place.

5.02 To raise the rack bar, move the reversing lever (1) to the "UP" position as indicated by the arrow on the side cover plate. Using the lever bar in the more convenient of the two lever sockets (3) operate the bar through one complete cycle; that is, from uppermost position down and back up, this will cause the rack bar to move up a single notch. Repeat until the desired lift is secured.

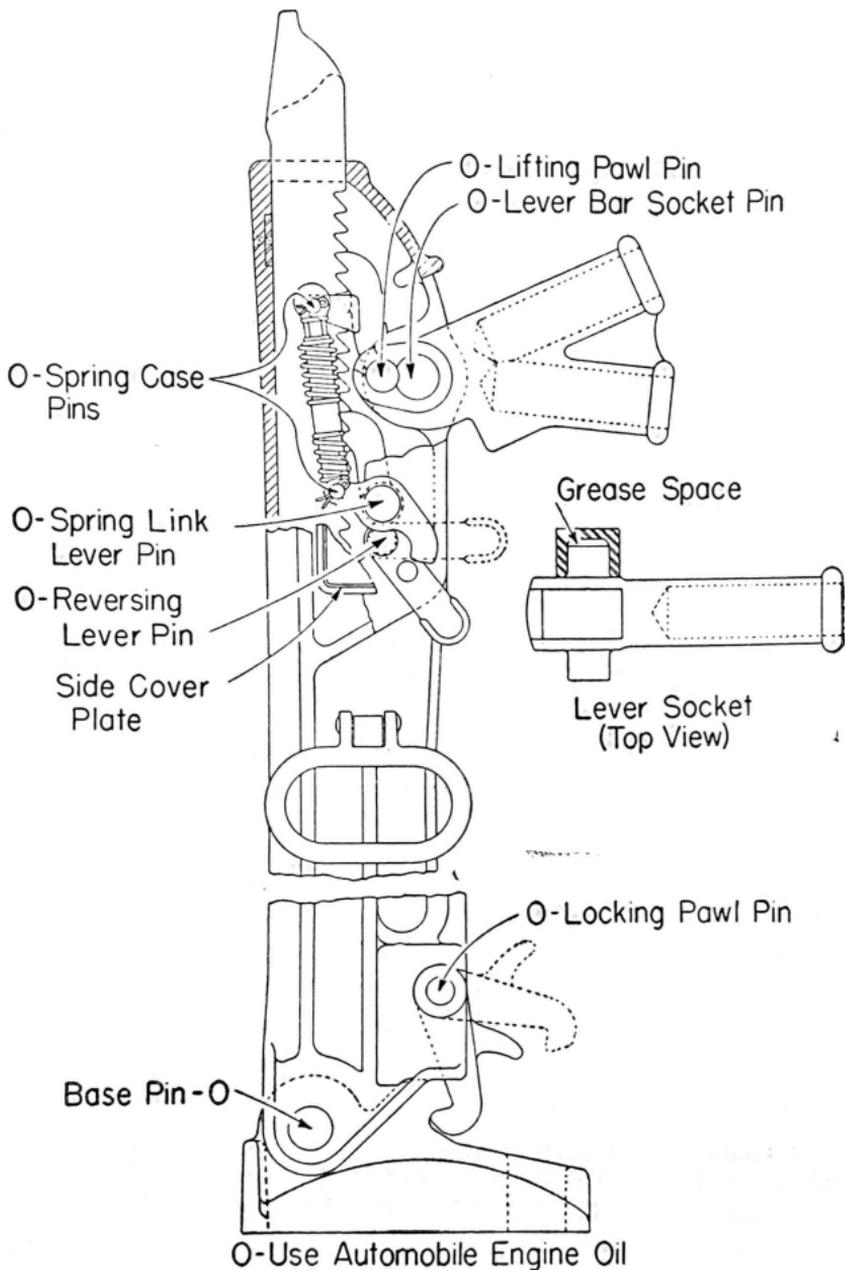
5.03 To lower the rack bar, move the reversing lever (1) to the "DOWN" position as indicated by the arrow on the side cover plate. Operate the lever bar in the same manner as outlined in Paragraph 5.02 until the desired position of the load is secured.

5.04 When it is desired to straighten a pole or to apply the lifting effort of the jack at an angle with its base, this may be done by releasing the locking pawl (2) and inclining the housing to the position desired. A finger grip is provided on the face of the lifting pawl to permit holding it in the released position until the housing is freed from its locked position.

5.05 In general, when using the jack it should be supported by the special I-beam base. This is particularly important when using the jack with the housing inclined at an angle as when straightening a pole.

6. LUBRICATION AND MAINTENANCE

6.01 Lubricate with a good grade of light engine oil all parts indicated by an "O" in the following figure. The jack should be lubricated at least once every sixty days or more frequently if required. The rack bar should be lubricated on the three plain sides with a good grade of graphite grease. **Do not lubricate the toothed side of the bar.** Do not over-lubricate, as excessive lubricant will collect and carry dirt and foreign matter into the operating mechanism. To lubricate the internal mechanism, remove the side cover plate.



6.02 A jack which is used in or around sand or exposed to grit laden air should be cleaned frequently. Use kerosene or its equivalent. A small bristle brush will facilitate

