

S54701 Rev. B 11/09



Warning! Use of jacks to move heavy loads involves risk of serious injury unless jacks are properly used and maintained by properly qualified, trained and supervised personnel. In no event should jack be operated by anyone who has not read, or is not strictly complying with, the operating and safety procedures and precautions contained in this manual. (Additional copies of this manual are available upon request.)

Special Warning! These are quick release jacks that cannot ratchet down or slowly lower under load. Load drops instantly when lever socket is actuated after quick trip leave has been pulled back. Do not use where raised load cannot be safely dropped.

OPERATING AND SAFETY PROCEDURES AND PRECAUTIONS

Warning! - Use of jacks to move heavy loads involves substantial risk of serious injury unless the jack is properly maintained; great care is taken; and the operator of the jack is properly qualified, trained and supervised in the use of such jacks in the specific application.

Special Warning! These are quick release jacks that cannot ratchet down or slowly lower under load. Load drops instantly when lever socket is actuated after quick trip lever has been pulled back. Do not use where raised load cannot be safely dropped.

Important: Prior to using jack, read and understand jack operating instructions (A), (B) and (C), detailed on this page. Also, read, understand and comply with all operating and safety procedures and precautions on page (3) and (4).

Jack Operating Instructions

(A) RESTRICTIONS:

Track jacks cannot be ratchet lowered and are not for general industrial use. These jacks are only for railroad track work where quick release to drop the load is required to comply with railroad safety rules. **See special warning at top of this page and warning decal on jack.**

(B) TO RAISE, Insert 1-1/2 inch square end of the specified lever bar (lining bar) into full depth of lever socket. Grip the lever firmly and make up and down strokes, exerting a controlled downward force. Complete each stroke and assure pawl engagement prior to each stroke reversal. **See procedure 6 & 10.**

CAUTION: After each down stroke gradually release the downward force on the lever bar taking care that the holding pawl has engaged and the lever is free of load prior to completing the upward stroke. Should the lever be released while under load, it will suddenly "kick up" presenting a personal injury hazard.

(C) To lower, carefully follow quick trip instructions **STEP 1, STEP 2,** and **STEP 3.** See procedure 9 & 10.

CAUTION: Keep fingers and all parts of the human body clear of rack bar teeth and sudden lowering action during quick trip operation. **See special warning at top of this page.**

QUICK TRIP INSTRUCTIONS TO RELEASE (DROP) THE LOAD STEP 1, STEP 2 AND STEP 3 (SEE FIG. 1, 2, & 3):

STEP 1

Raise the lever socket to the extreme up position with one hand. Position the free hand with thumb against housing and thumb guard. Then grasp the lifting pawl quick trip lever with forefinger as shown - **See caution under instruction (C) above.** Pull the lifting pawl hard back out of engagement with the rack bar teeth.

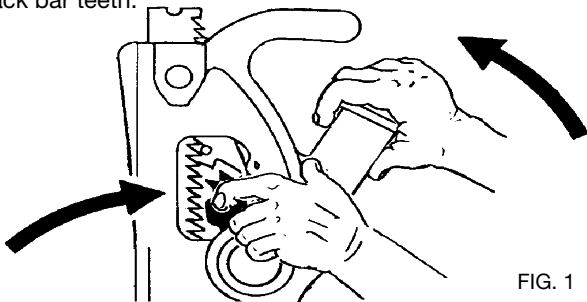


FIG. 1

Reference safety publications:

- **Code of Federal Regulations-Title 29 Occupational Safety and Health Standards** (Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402)
- **Accident Prevention Manual for Industrial Operation/ Engineering and Technology** (National Safety Council, 444 N. Michigan Avenue, Chicago, IL 60611)

STEP 2

Continue to hold the lifting pawl hard. Back out of engagement, as in step 1, and carefully lower the socket until the lifting pawl is securely held in the lock-out position as shown. Then remove hands

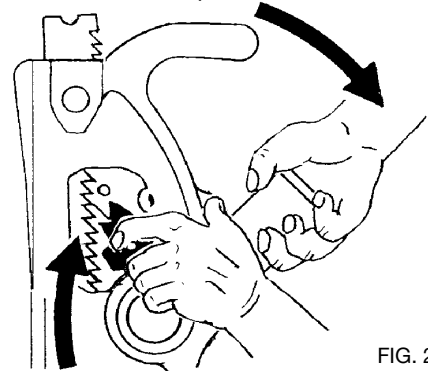


FIG. 2

STEP 3

Carefully insert the 1-1/2" square end of the specified lever bar (lining bar) full depth of socket. Grasp the lever bar with a firm grip, assume a braced position, and exert a sudden controlled downward force to drop the load. **See procedures 6, 9 & 10. Also see special warning at top of this page.**

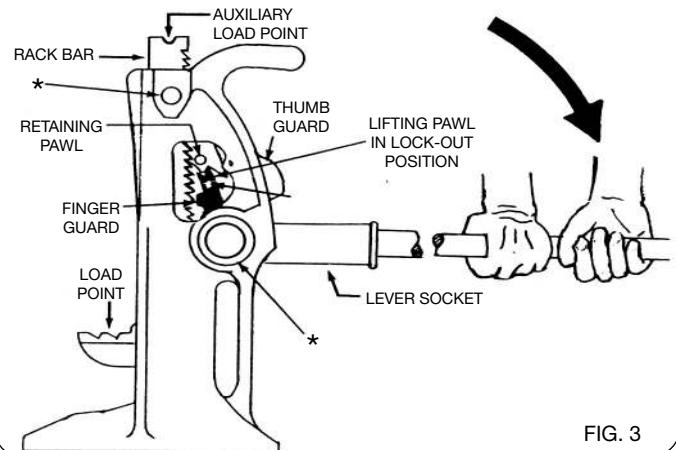


FIG. 3

OPERATING AND SAFETY PROCEDURES AND PRECAUTIONS

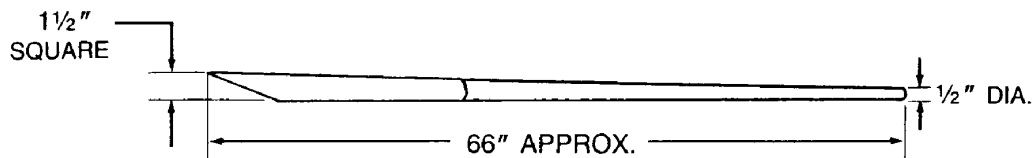
To avoid risk of serious injury:

Do the following before each and every use of the jack:

1. **Assure that the operator is properly trained and qualified**, and is properly supervised and instructed in the safe and proper use of the jack, and all related equipment for the specific application. Assure also that the operator has read and understood: these **“Operating and Safety Procedures and Precautions”**; and the detailed **“Jack Operating Instructions”** on page 2 (**which explain how the ratchet mechanism of the jack operates to lift only and also cover quick trip instructions and detailed procedures required to lower (drop) the load.**
2. **Have the jack first examined carefully by a qualified person** for signs of any cracks, damage, wear or other condition which might cause the jack to malfunction or fail. Then operate the jack without load through at least one full cycle to verify proper functioning of all mechanisms without binding, slippage, or other condition which might affect proper functioning. Then immediately before use assure that all mechanisms are free of dirt, stones or other foreign objects.
3. Determine the maximum weight of the load, the distance it is to be lifted; and then **be sure that neither the load nor the distance to be lifted exceeds the jack's 15 ton rated load capacity and stated maximum lift (travel)**, as cast on housing on the jack.

Do the following in using the jack:

4. **Assure that the lever bar (jack handle) to be used is the lever bar of the correct size and length as detailed below. The lever bar to be used must never exceed the length specified** (nor have more force applied to it than the maximum force of 495 lbs) - **dangerous, and even lethal, overloading and excessive lever bar travel conditions can exist whenever a bar is used which exceeds the maximum specified length, or upon which excessive force is applied. If a lever bar is used which is too short, it may be difficult to control the bar and the load during jack operation - see procedure 6 warning.**



LEVER BAR (LINING BAR) DETAIL

5. Assure that the jack is non a firm foundation, evenly and rigidly supported at the base; properly aligned with the load; and securely seated at both the lifting point and the base so that neither the jack nor the load can slip or shift.
6. Assure that: the lever bar's full arc of travel, and the surrounding work space, are free of all obstructions; and the operator's head and body are positioned to one side of the lever bar, and the area clear of all other persons, so that a sudden movement of the load or release of the lever, will not cause the lever, if it "kicks up", "falls down", or "flies out", to strike anyone or otherwise cause personal injury.

Warning! A sudden shift or release of the load, or release of hand force on the lever bar, can cause the lever bar to "kick up" "fall down" or "fly out" with great and even lethal force. Except for hands on the bar, head and body must be clear of the lever bar arc of travel, and all other personnel positioned away from the load and the jack working space.

7. When using the jack to lift (move) a load follow operating instructions (A) and (B) on page 2 (and refer also to all these operating and safety procedures and precautions.) **see procedure 6 warning.** Immediately after lifting is completed secure the load and remove the lever from the lever socket. **(Caution: to lower the load follow procedure and also see special warning at top of page 2).**
8. Keep fingers and other foreign objects clear of the jack's rack bar and operating mechanisms.
9. Before activating quick trip lever to release (drop) the load be sure all obstructions are removed and visually check to be sure the jack's rack bar and mechanisms are free from foreign objects (refer also to all operating and safety procedures and precautions) then **carefully follow exact procedures as outlined in operating instructions (c) and quick trip instructions: Step 1, Step 2, and Step 3** as shown on page 2. **See Procedure 6 and Procedure 10. Also see special warning at top of Page 2.**

OPERATING AND SAFETY PROCEDURES AND PRECAUTIONS

Do the following in using the jack:

10. If more than one jack is used to move, raise, or release (drop) a load, **make certain all operators are instructed as to signals and other procedures for multiple jack lift and quick release.** Assure all jacks are of identical type and properly positioned so that the load will remain evenly distributed during jacking. (Refer also to all operating and safety procedures and precautions). To extend the jack to move or raise a load, follow operating instructions A and B on Page 2 **and activate all jack levers in unison with precision coordinated strokes taking care to move the load evenly.** To release the load, follow Procedure 9 and **activate quick trip in unison (per Step 3 on Page 2) to simultaneously drop the load.**

CAUTION: Uneven load distribution and uneven lifting or unequal release can cause a sudden surge or shift of load with consequent overloading of jack or inability to hold or control load on lever bar. See Procedure 6 warning. Also see special warning at top of Page 2.

Abide by the following safety rules of things not to do in using the jack:

- **Never** use a jack beyond (or if you do not know) its rated capacity or stated travel.
- **Never** use a jack which appears cracked, worn, bent or otherwise damaged.
- **Never** apply force to extend the jack after stop contact has occurred.
- **Never** continue to lift a load if the jack or the jack's rack bar, or its lever bar, is visibly deflecting or distorting under load, or if any misalignment begins to occur between the jack and the load.
- **Never** abruptly release downward force on the lever bar, and before assured that the retaining pawl is engaged and that the lever bar is free from load. **(See cautions under operating instructions A and B on page 2; and also see procedure 6 warning).**
- **Never** kick, jump or stand on, or straddle the lever bar; nor strike the lever bar with a hammer, nor force the lever bar in a rocking motion; nor use mechanical or other means to increase the force applied to the lever.
- **Never** use lever bar extenders or "cheaters" (see procedure 4) which can cause dangerous or lethal overload and excessive force or travel of lever bar through its arc.
- **Never** allow personnel on the load or any part of a person's body under the load before the lifting is complete and the load has been fully secured (see procedure 7).
- **Never** allow raised load to be supported by jacks only or left without being secured (see procedure 7); and never leave the lever bar in socket after lifting is complete. (Accidental striking of unattended bar projecting from socket risks the jack becoming dislocated or dislodged causing the load to shift or fall).
- **Never** strike jack housing or parts with a hammer or other heavy object to align or set jack. (In addition to causing possible damage to the jack, flying chips or other objects may cause serious injury to anyone in the vicinity who is not wearing protective goggles and clothing).

Maintenance and Lubrication Instructions:

1. Comply with procedure 2 and the inspection and maintenance requirements of jack owner as determined from use experience or as specified by a qualified person of authority.
2. Keep jack mechanisms clean, free of grit and rust, and in good working condition.
3. Keep rack bar lubricated with #2 graphite grease **except on tooth side.**
4. Lubricate periodically at points marked with an (*) asterisk (see Fig. 3 on page 2) with a good grade of SAE 20 wt. oil – **Avoid lubrication of the tooth surface or pawls and rack bar.**
5. Remove jack from service and **immediately replace any parts which appear worn, bent, cracked, rusted or otherwise damaged.** Replacement parts may be obtained from an Enerpac Authorized Service Center (contact Enerpac for referral). Repaired jack should be tested to sustain a 15 ton load (applied at the load point as shown in Fig. 3, page 2). The jack should also be checked in operation to extend full travel, and release per quick trip instructions on page 2.

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