

TYPE HI HYDRAULIC OPERATED (THRUSTOR) BRAKES

INSTRUCTIONS

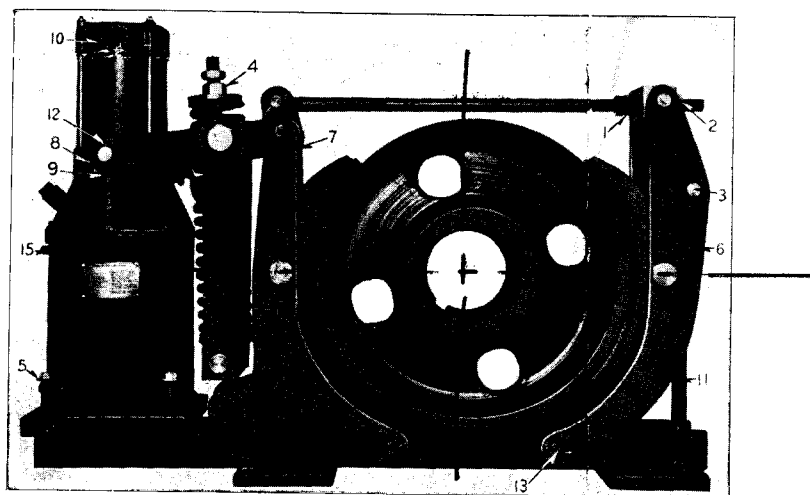


FIG. 1—TYPE HI BRAKE

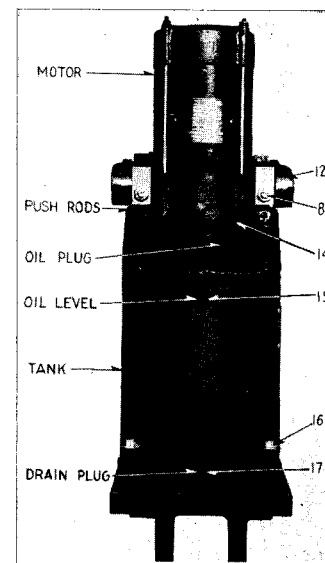


FIG. 2—THE THRUSTOR

DESCRIPTION

These brakes are of the spring-set, shoe type and all brake action is obtained through the operation of the motor operated Hydraulic Operator or Thrustor.

INSTALLATION

The mounting bolts are symmetrical around the shaft center and the brake may be mounted with the Thrustor on either side of the shaft. Horizontal shift from the exact shaft center is permissible with this design of hinged arms and shoes. The brake should be shimmed into its proper position vertically, so that the shoe hinges line up with the shaft center.

Before firmly bolting down base loosen shoe bolts so that shoes will be properly seated to the wheel, then tighten shoe bolts securely.

BRAKE WHEELS

Wheels are supplied with either straight or tapered bore. The tapered bore should be heated in boiling water and seated with light blows and then securely locked in position with nut and lock washer. On straight shafts, the

wheels are bored for a pressed fit and supplied with a taper key.

By backing off nut #2, both arms #6 and #7 can be moved apart leaving ample room for removing the wheel. (Refer to Figure 1.)

OPERATING ADJUSTMENTS

Each brake is carefully adjusted and the rated torque tested before shipment.

The maximum life of lining will be obtained by carefully following directions given on the name plate.

For operating clearance between wheel and shoes, reduce spring pressure through nut #4 and release upper and lower nuts on equalizing rod #11. Place $\frac{3}{64}$ " clearance shim between one of the shoes and wheel, and adjust nuts #1 and #2 until the arm #12 reaches top of stroke. Remove shim and equalize the clearance between shoes by adjusting nuts on equalizing rod #11 at #3.

As the lining wears with use, the above adjustment should be repeated to restore original clearance.

Extreme wear on lining causes arm #12 to rest at bottom of operator stroke (piston at bottom of casing) and with insufficient spring pressure to apply torque to wheel.

Torque is obtained through the spring controlled by nut #4, Fig. 1. The correct amount of spring compression is specified on the name plate attached to brake. The compression is measured from the free length of spring and with shoes against wheel.

Increasing the spring pressure over that specified on name plate may cause unnecessary shoe wear.

Inspection of the various figures show the accessibility of parts; any or all parts can be readily removed. The Hydraulic Operator can be removed horizontally by backing out nut #8, and removing bolts #5, then move arm #12 upward, thus freeing Operator. (Refer to Figure 1.)

LUBRICATION

All pins and moving parts should be kept oiled.

HYDRAULIC OPERATOR (THRUSTOR)

The Hydraulic Operator or Thrustor functions through a motor driven impeller or centrifugal pump creating sufficient pressure beneath the piston actuating the push rods #9, Fig. 1.

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INSTRUCTIONS—Continued

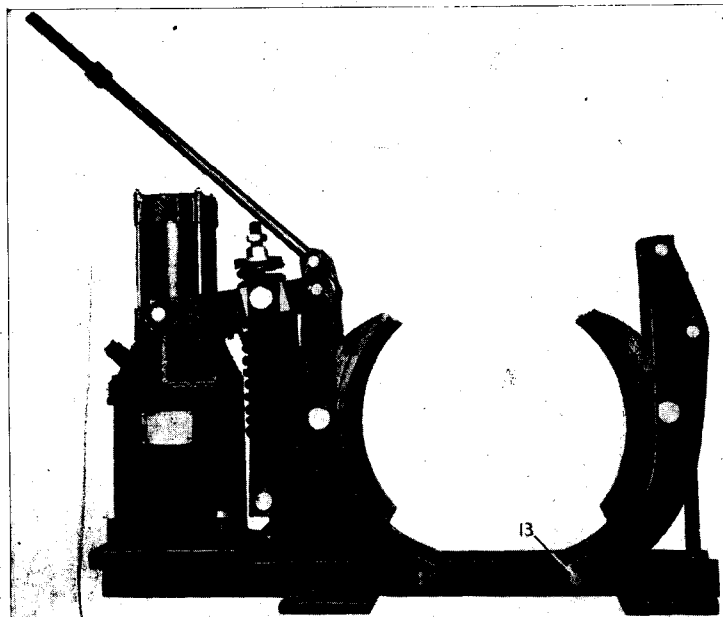


FIG. 3—TYPE HI BRAKE SHOWING CASE OF REMOVING WHEEL

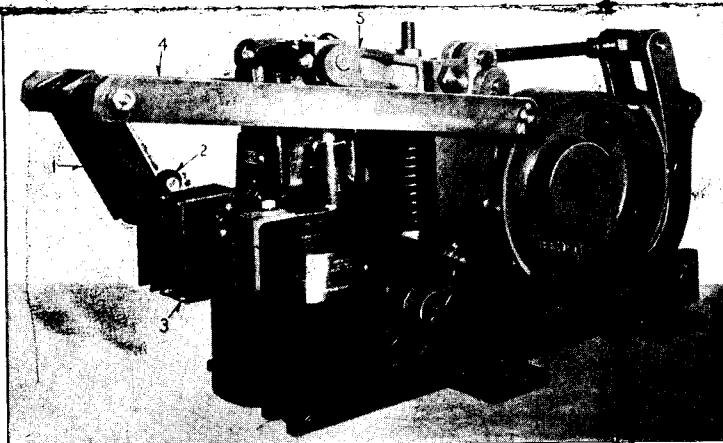


FIG. 4—TYPE HI BRAKE WITH MANUAL RELEASE LEVER AND INTERLOCK SWITCH

ADJUSTMENTS

Should it be necessary to disassemble the Thrustor unit, use every precaution against dirt lodging inside or on parts before reassembling.

The Thrustor should move freely by raising rods #9, Fig. 1.

After assembly, Thrustor should again be filled with the same oil as shipped. (G. E. Transit Oil No. 21.) Fill to overflow plug #15, Fig. 1.

Improper operation will result unless the oil level is maintained. Periodic inspection will eliminate this possibility.

Keeping plugs #14 and #15 in place will prevent contaminating oil with dirt and dust.

When necessary to drain from case, use plug #17. Ball bearing in motor requires regreasing about once a year. Remove dust cap from end of motor shaft and fill approximately $\frac{1}{3}$ full with a good cup grease.

The electrical connections to motor should be through a flexible metal conduit to a fitting on motor provided for such. Do not use a rigid conduit connection to the motor.

TIME DELAY

When the brake has been supplied with a time delay setting, any change in timing is made through filling plug #14. Energize Thrustor, and while in up position, use special wrench shipped with the Thrustor, loosen $\frac{1}{4}$ " lock nut and with a screw driver turn adjusting screw to right to decrease time and to the left to increase time. Be sure lock nut has been tightened after any adjustment. On Thrustors having this adjusting screw and nut on outside of tank cover, the arrows indicate direction of rotation, S slower and F faster.

MANUAL RELEASE

Fig. 4 shows Type HI Brake with a manual release lever and interlock switch. The interlock or limit switch #3 can be either a normally "open" or "closed" bridging type of contact which may be connected into the control circuit to render the equipment inoperative when the brake is held released. Arm #4 is lifted into position shown to release the brake, and link #1 moved back to its seat thus holding the brake released. A slight lift of arms #4 will release link #1 and the brake will set. During normal operations of brake the arms #4 rest on top of Thrustor casing.