

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL
BORING MACHINE, ENGINE CYLINDER,
PORTABLE, 3 1/2 TO 7 1/2 BORE DIAMETER,
18 INCH DEPTH OF BORE, 110-VOLT, 60-CYCLE,
SINGLE-PHASE
(CEDAR RAPIDS ENGINEERING COMPANY MODEL FL)
(4910-223-9734)

This reprint includes all changes in effect at the time of publication; change 1.
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OPERATOR'S MANUAL
BORING MACHINE, ENGINE CYLINDER, PORTABLE, 3½ TO 7½ BORE
DIAMETER, 18-INCH DEPTH OF BORE, 110-VOLT, 60-CYCLE, SINGLE-PHASE
(CEDAR RAPIDS ENGINEERING COMPANY MODEL FL)
(4910-223-9734)

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CAUTION

READ COMPLETELY BEFORE ATTEMPTING TO OPERATE MACHINE

SPEED AND FEED COMBINATIONS

Speed Control Lever Position	Motor Shift Lever Position	Boring Head rpm	Travel Inches/min. Feed Plunger Position			
			1	2	3	4
Up	Down	83	.127	.249	.393	.564
Up	Up	142	.217	.426	.670	.966
Down	Down	297	.455	.891	1.400	2.000
Down	Up	505	.772	1.515	2.380	3.380

OPERATING PROCEDURE:

1. Place speed control in neutral or horizontal position.
2. Start motor.
3. Move motor shift lever to selected position. (See table.)
4. Select feed plunger position. (See table.)
5. Move feed control lever to down position.
6. Push speed control lever down or up. (See table.)

Allow time for the feed plunger to engage. If the feedscrew does not start turning, move the feed plunger slightly up or down to allow the key to engage.

NEVER MOVE FEED CONTROL LEVER TO "UP" POSITION WITHOUT FIRST DISENGAGING HANDWHEEL.

(Pull handwheel out to disengage - push in to engage for hand feed.)

When boring cylinders larger than 6-3/4", parallel bars (available as extra equipment) must be used. Centering fingers and boring tool must be watched during retraction so they will not strike the base of the machine. Remove centering fingers immediately after centering so that during the remainder of the boring operation only the tool bit will have to be kept in the correct position.

BELT TENSION: On heavy rough boring cuts it will be necessary to turn the belt tightner knob in a clockwise direction to increase tension on the belt. On light finish cuts it may be necessary to release the tension on the belt to eliminate any shadow patterns in the finished bore.

The stop rod is a device for measuring and controlling the travel of the boring head. However, it is not advisable to leave the machine unattended as it reaches the end of the boring stroke.

