TM 9-3417-210-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL

MILLING MACHINE, RAM TYPE, SWIVEL HEAD PLAIN TABLE, POWER FEED, 1 1/2 HORSEPOWER 110-VOLT, 60-CYCLE, SINGLE-PHASE

(VAN NORMAN MACHINE COMPANY MODELS IR-3-22 AND IRQ-3-22) (3417-624-4254)

This copy is a reprint which includes current pages from Change 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1967

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By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Amy
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

Active Army

DCSLOG (3)
CNGB (1)
TSG (1)
COE (5)
Dir of Trans (1)
ARADCOM (2)
ARADCOM Rgn (2)
Armies (3) except
7th USA (5);
8th USA (5).
OS Maj Comd (2)
LOGCOMD (2)
WECOM (10)
lnstl (2) except
Ft Monmouth (5)
AVSCOM (2)
USACDCEC (10)
Army Depots (3)
Arsenals (2)
USASA (1)
USATC, Ft Eustis (3)
USACMLES (3)
USAOC&S (3)
Engr FLDMS (2)
QM FLDMS (2)
Ft Knox FLDMS (1O)
Units org under fol TOE
(1 copy each unit):
9-12;
9-57.

NC: None.

USAR: None.

For explanation of abbreviations used, see AR 310-50.

Installation, Operation and Maintenance

Instructions for

Nos. 1R-3,1RQ-3

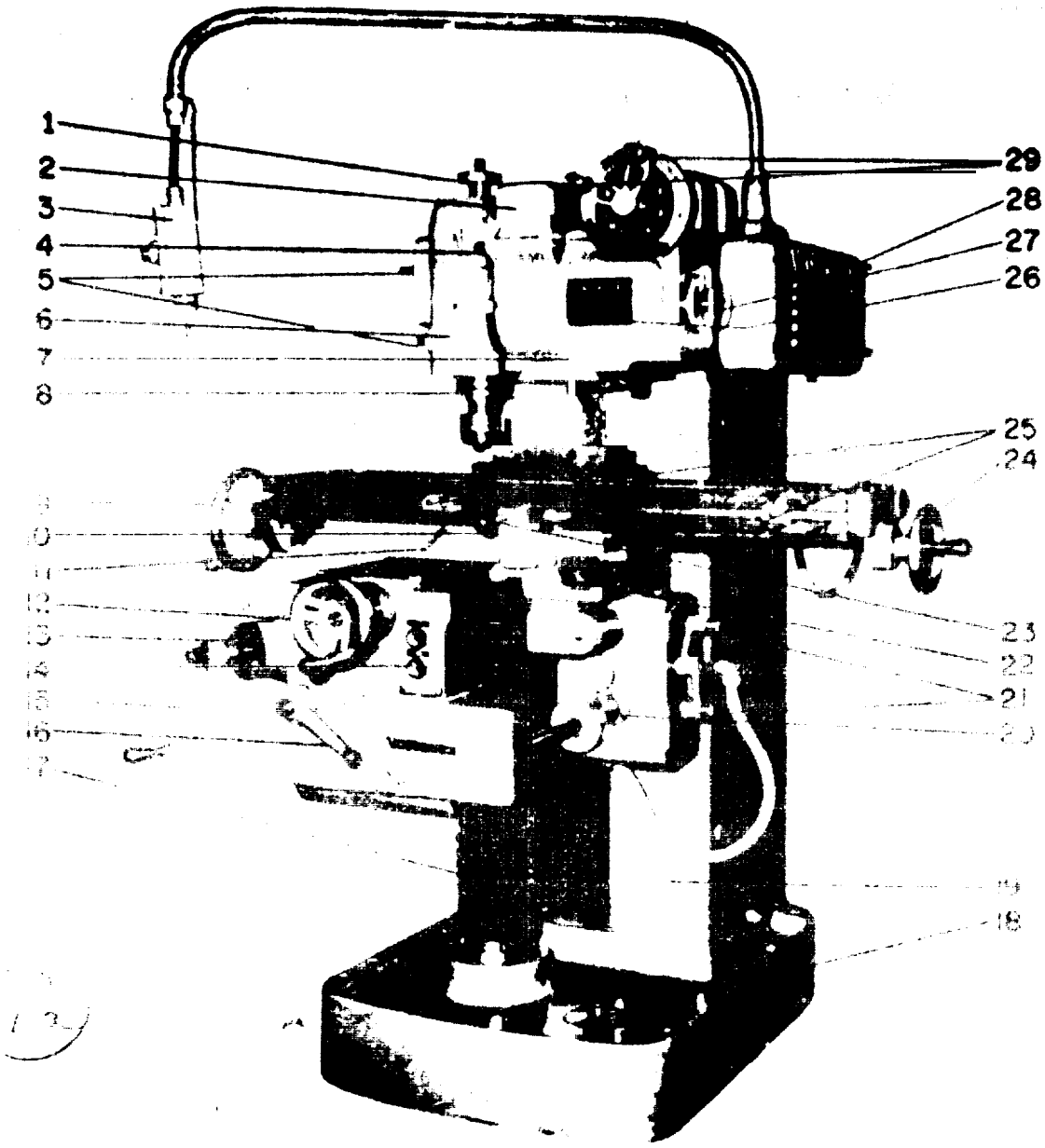
Nos. 1R-3,1RQ-3

The Nos. 1R-3 and 1RQ-3 Van Norman Ram Type Milling Machines are precision tools, built of the best material obtainable and to the highest degree of accuracy. Each machine and its parts are checked many times during construction for both quality and accuracy. With ordinary care and observance of the suggestions in this booklet your Model 1R Van Norman Ram Type Milling Machine will give you many years of satisfactory service.

In the general operation of these models it is important to note that the machine can be used for an exceptionally wide range of milling operations with the minimum of effort on the part of the operator.

In milling operations involved on most jobs where one or a few pieces are required, much time can be saved and the highest degree of accuracy will be assured, by keeping in mind at all times that your machine has as an important part of its design, a spindle which can be instantaneously adjusted to any angle between horizontal and vertical. Also, the spindle cutterhead is adjustable in or out with respect to the column by means of the ram on which it is mounted; thereby providing added range and adaptability to a wide range of milling operations with the minimum of changes in setups.

Before setting up the piece to be milled it is suggested that the operator carefully analyze the operations to be done in order to position the piece for most advantageous use of the horizontal, vertical and angular adjustments of the cutterhead as well as adjustability of the ram unit.



1R-3-22

1. Spindle Draw Bar
2. Overarm
3. Pendant Control
4. Overarm Binder Bolt
5. Cutterhead Clamping Bolts
6. 90 ° Swivel Cutterhead
7. Adjustable Ram
8. #40 N.M.T.B.A. Taper Spindle
9. Table Hand Feed Wheel
10. Directional Table Control
11. Table Binder
12. Crossfeed Handwheel
13. Graduated Dial Vertical
14. Power Positioning Control
15. Knee Elevating Crank
16. Knee Binder
17. Knee Elevating Screw Boot
18. Coolant Tank Cover
19. Heavily Ribbed Cast Column
20. Gear-Mesh Handwheel
21. Feed Selector Knobs
22. One-Shot Lubricator
23. Adjustable Table Traverse Stop
24. Table Hand Wheel
25. Positive Table Stops
26. Spindle Speed Plate
27. Spindle Hand Wheel
28. 3 H.P. Spindle Motor
29. Spindle Speed Selector Knobs

FIGURE 1

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