

TECHNICAL MANUAL
OPERATOR'S, ORGANIZATIONAL, DIRECT
SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL

FOR
SHAPER, METAL CUTTING,
HORIZONTAL
MODEL CS100
(SOUTH BEND LATHE)
(NSN 3418-00-223-0969)

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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DEPARTMENT OF THE ARMY
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**Operator's, Organizational, Direct Support
and General Support Maintenance Manual
For**

SHAPER, METAL CUTTING, HORIZONTAL

MODEL CS100

(NSN 3418-00-223-0960)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this equipment is issued.

Manufactured by: South Bend Lathe
400 West Sample Street
South Bend, IN 46621
Procured under Contract No. DAAA09-76-C-6387

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

- 1 - Manufacturer's Federal Supply Code Number - 55985
- 2 - Manufacturer's Part Number exactly as listed herein.
- 3 - Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 - Manufacturer's Model Number - Model CS100
- 5 - Manufacturer's Serial Number (End Item)
- 6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.
- 7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

and

- (a) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 55985 followed by a colon manufacturer's Part Number for the repair part.

- (b) Complete Remarks field as follows:

Noun: (nomenclature of repair part)
For: NSN: 3418-00-223-0960
Manufacturer: South Bend Lathe

Model: CS100

Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

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HOW TO RUN A METAL WORKING SHAPER

INTRODUCTION

The shaper is a machine tool used principally for producing a flat or plane surface which may be in a horizontal, a vertical, or an angular plane. In addition, the shaper is used to machine odd and irregular shapes which would be difficult to produce on any other machine.

Shapers are classified in several different ways, for example, the name applied to a given design may indicate the action of the machine when in operation, the type of driving mechanism, or other constructional features. The type of shaper that is most commonly used, in machine shops and tool rooms is sometimes known as a COLUMN SHAPER, because of the vertical column or frame which supports the ram, work table, and driving mechanism. Still another term used to designate the most common type shaper is the CRANK SHAPER. The name relates to the crank-driving mechanism for the ram.

The shaper is a column shaper of the crank-driven type as shown in figure 1. A single-point cutting tool attached to a rigid arm called the RAM moves over the work with a reciprocating (alternate forward and backward) motion. The length of the ram stroke and the number of strokes per minute may be varied as the length of the work and its composition dictates.

The size of the shaper is designated by the maximum length of its stroke given inches. The various parts and adjustment of the shaper are shown in figures 1, 2, 3, 4, and 5.

DESCRIPTION

THE 7" BENCH SHAPER has the built-in accuracy and versatility for rapid machining on small parts. The stroke rate per minute is higher than on larger shapers, permitting greater production on work within its capacity. The ease of setting up work in the bench shaper, its high operating speeds, and the low power consumption of the fractional HP motor, keep posts to a minimum. It is capable of the most exacting work on parts within its capacity.