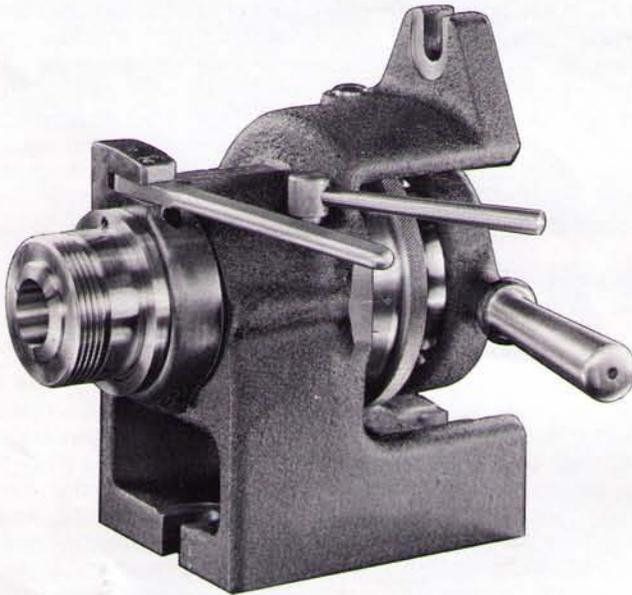
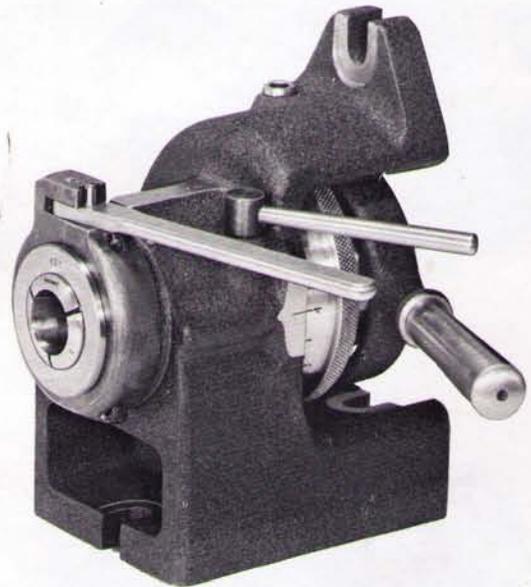




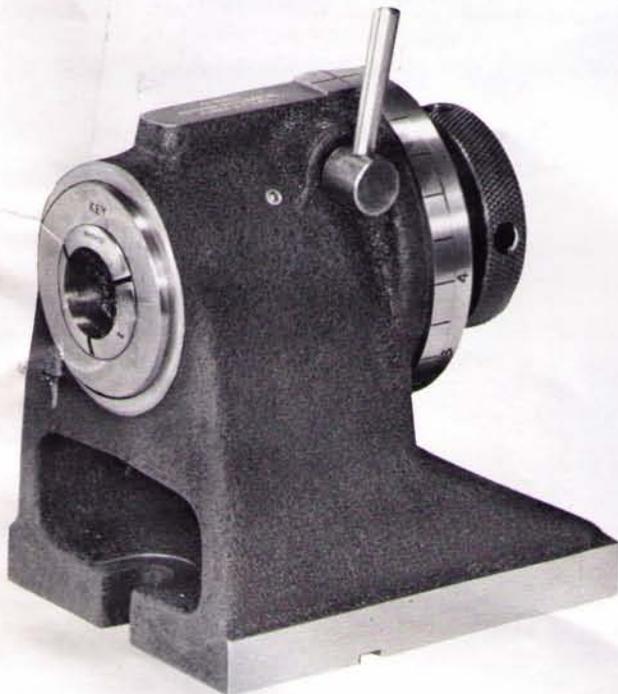
HARDINGE COLLET INDEX FIXTURES



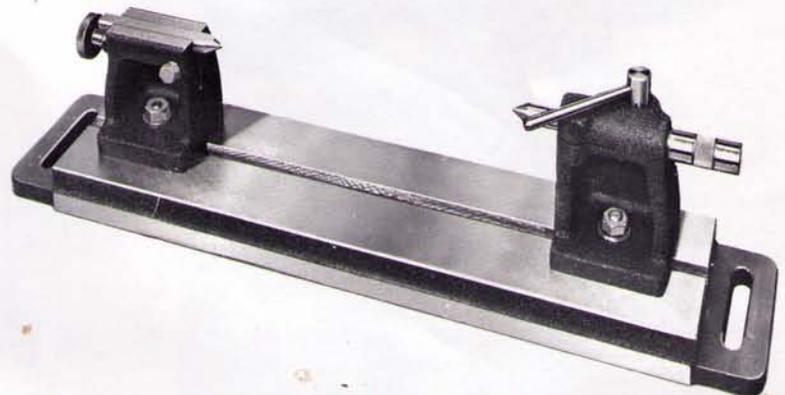
HV-4N Collet Index Fixture



HV-4 Collet Index Fixture

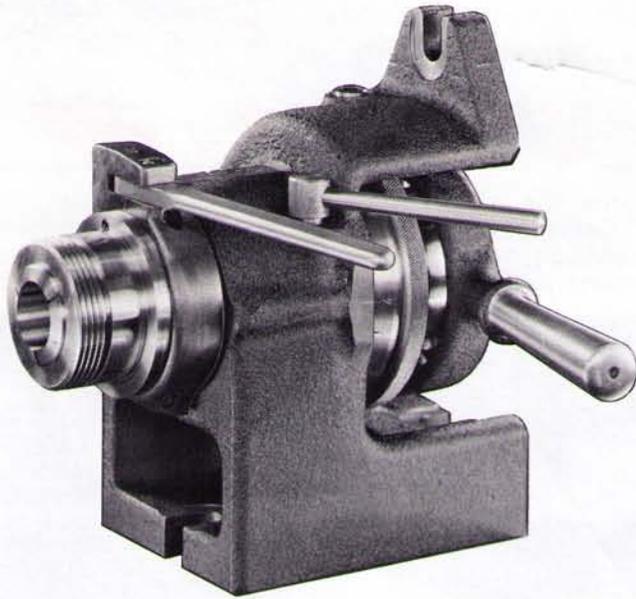


H-4 Collet Index Fixture



**T-4 and L-4 Tailstocks
SB-4 Sub-base**

HORIZONTAL-VERTICAL COLLET INDEX FIXTURES



This unit combines all the features of the Horizontal-Vertical Fixture with the important addition of the threaded nose spindle for the application of step chucks and jaw chucks or special holding fixtures.

The threaded nose feature increases the range of the Hardinge Collet Index Fixture without reducing the operating speed of the fixture. By the use of step chucks, for example, the range is increased from 1-1/16" to 6" for collet type chucking; yet the speed of operation is the same for chucking a 6" diameter as a 1-1/16" diameter part because the lever collet closer with 100 to 1 leverage is used in both instances.

WITH THREADED NOSE SPINDLE
HV-4N Collet Index Fixture, with 24 hole plate
ALSO AVAILABLE

WITH TAPER NOSE SPINDLE
HV-4NX Collet Index Fixture, with 24 hole plate

COLLET INDEX FIXTURE for TOOL ROOMS

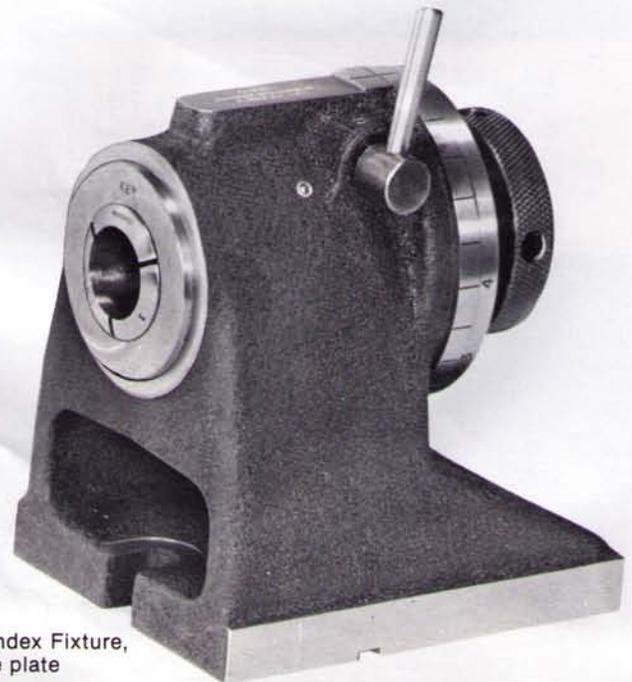
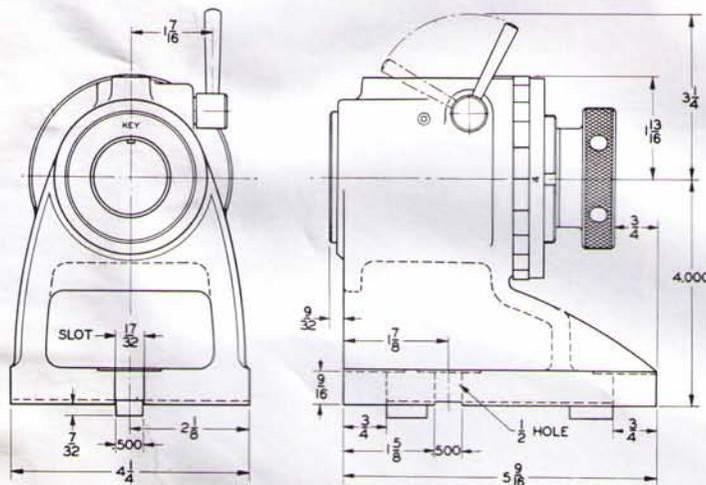
The **Model H-4** Index Fixture is used in tool room, laboratory, inspection and development departments to provide a quick, accurate method of chucking and indexing work.

The hardened and ground spindle takes standard 1-1/16" capacity 5C HARDINGE Collets. Work employing up to the full collet capacity may be passed through the spindle. The spindle has a taper seat in the fixture frame. There is a hardened thrust washer back of the shoulder at the front of the spindle for the usual adjustments.

The index plate is hardened and ground for long life and accuracy. Each hole has an 8° included angle to match the taper of the hardened and ground index pin. This type of fixture is available with a 24 hole plate. The outside diameter of the index plate is marked for ready reference to the zero line for quick indexing.

The index pin is spring backed for quick positive location in the index plate holes.

The two long sides of the base and bottom are accurately ground parallel with the spindle. The 1/2" wide removable keys provide for parallel or right angle setting on sub-base or machine table.

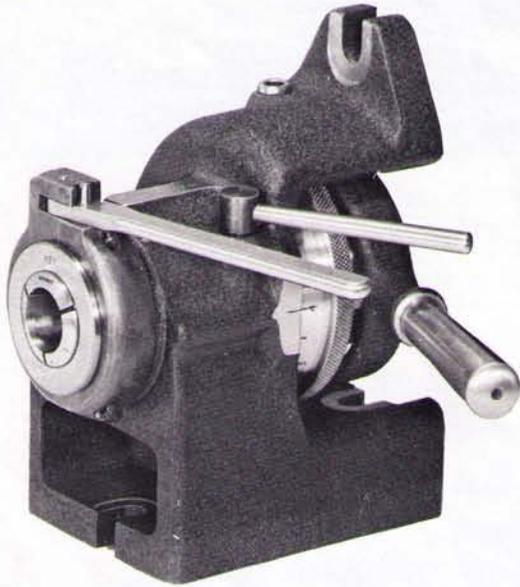


H-4 Collet Index Fixture,
 with 24 hole plate



HORIZONTAL-VERTICAL COLLET INDEX FIXTURES

for PRODUCTION DEPARTMENTS



HORIZONTAL POSITION

Designed for production departments, the Horizontal-Vertical collet index fixture fills the need for a low cost, quick accurate means of holding work and performing indexing operations.

The hardened and ground spindle takes standard 1-1/16" capacity 5C HARDINGE collets. The spindle has a taper seat in the fixture frame. There is a hardened thrust washer back of the shoulder at the front of the spindle for the usual adjustments. Rapid opening and closing of the collet on a production basis is done with the lever collet closer having a leverage ratio of 100 to 1. A ratchet device is provided on the front of the spindle for rapid rotation of the spindle nose. The ratchet lever and index pin lever are located so that they may be operated together with one hand — a time saving feature.

The index pin is spring backed for quick, positive location in the index plate holes.

PRESELECTOR INDEX PLATE

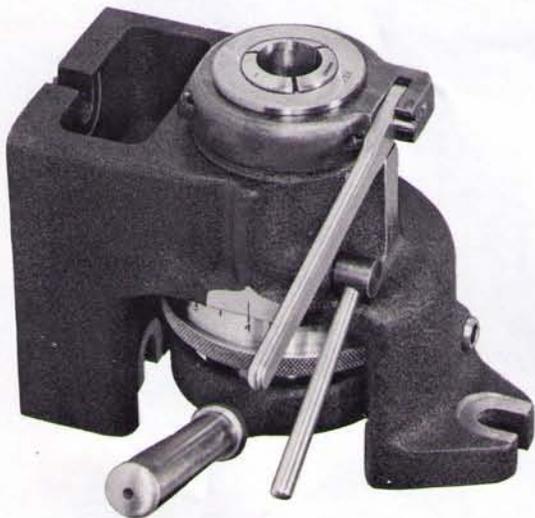
The index plate has a screw in each of the 24 index holes so that holes not required for a particular job can be "blinded." As an example, the screws in the 24 hole plate can be arranged so that the index pin can enter in six holes only, or four only, or any other number divisible into 24, with even and odd spacings. This means that the index plate holes can be arranged for any one job as though the index plate were made for that job only; therefore, *the operator cannot make a mistake when indexing*. The preselector screws in the index plate are tightened securely against a shoulder when certain holes are not in use or against a retaining ring when being used.

The Horizontal-Vertical fixture can be used with the standard Sub-Base and Tailstock.

The horizontal-vertical collet index fixtures are furnished for right hand mounting, as illustrated.

HV-4 Collet Index Fixture, with 24 hole plate

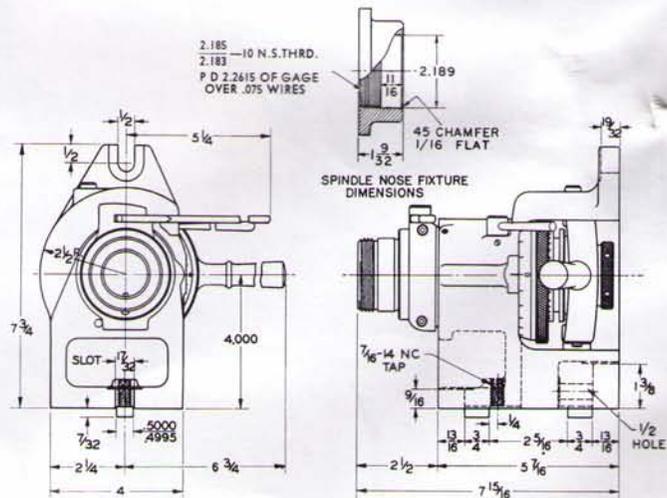
(24 hole plate provides 2, 3, 4, 6, 8, 12 and 24 divisions or 15° Spacings)



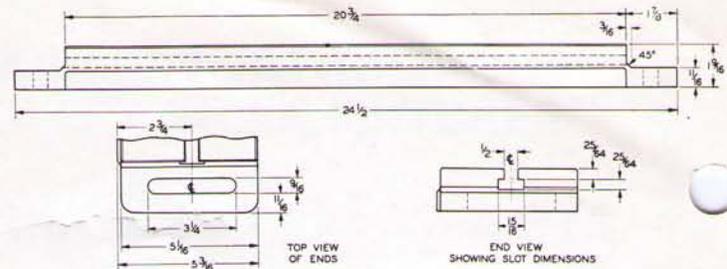
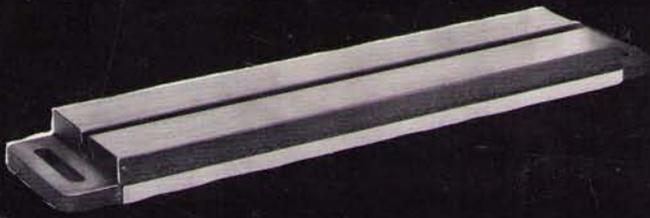
VERTICAL POSITION

HV-4

**HV-4
HV-4N**

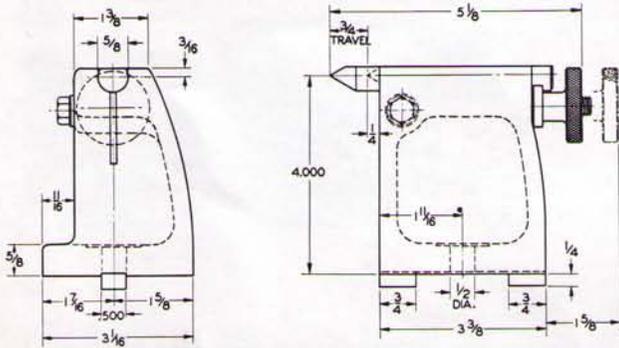


DIMENSIONS SHOWN ARE FOR HV-4N FIXTURE. HV-4 DIMENSIONS ARE IDENTICAL EXCEPT 6 1/16" OVERALL LENGTH



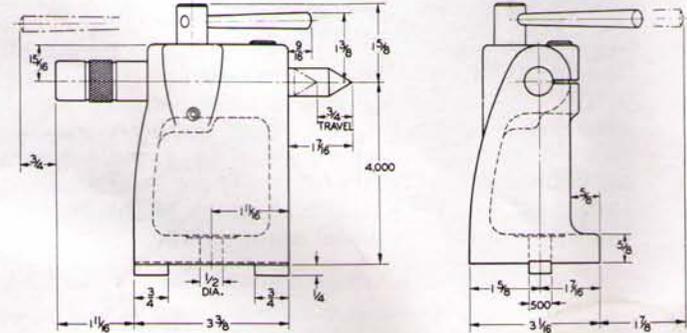
SB-4 SUB-BASE Various combinations of fixtures and the sub-base are shown on page 1 and below. For alignment purposes one side of the sub-base has a ground surface at a right angle to

the top of the sub-base and parallel with the T-slot. Sub-base is furnished with standard 7/16" T-bolts, nuts and washers for various fixture combinations.



T-4 TAILSTOCK The hardened and ground spindle is screw fed and can be locked in any desired position with the hexagon clamp bolt. Removable

keys permit tailstock to be applied direct to any machine table.



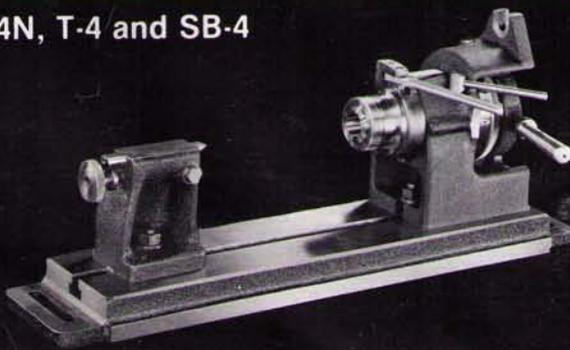
L-4 TAILSTOCK For use with T-4 tailstock and SB-4 sub-base as bench centers. Rapid movement of hardened and ground spindle is obtained with

lever operated pinion and rack. Spring pressure holds the center against the work. A position lock for the spindle is also provided.

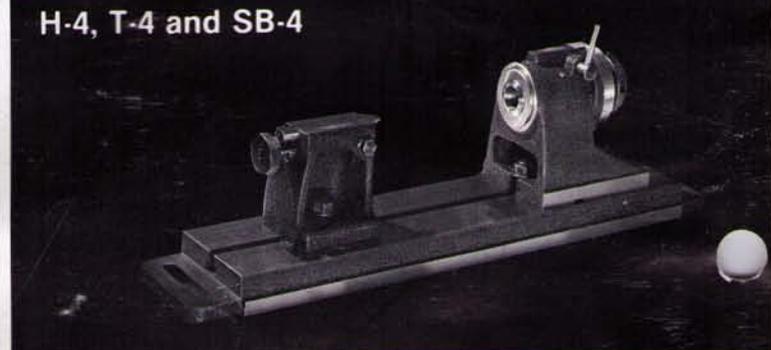
INTERCHANGEABLE USES

Many combinations of Tailstocks, Fixtures and Sub-bases are possible. Some examples are shown below.

HV-4N, T-4 and SB-4



H-4, T-4 and SB-4





PARTS LIST

FOR

**HARDINGE 5C COLLET
INDEX FIXTURES**

MODELS H-4, HV-4, HV-4N, AND HV-4NX

TAILSTOCKS

MODELS L-4 AND T-4

SUB-BASE

MODEL SB-4

TO ORDER REPLACEMENT PARTS

Please provide the following information when ordering replacement parts:

1. List the following:
 - a. Manual Number (PL-35B).
 - b. Page Number.
 - c. Key Number.
 - d. Part Name.
 - e. Part Number.
 - f. Quantity of each part required.
2. Specify how and where to ship.

Hardinge Brothers, Inc.
Elmira, New York 14902-1507
Phone: (607) 734-2281 • FAX: (607) 734-8819

HV-4, HV-4N, & HV-4NX COLLET INDEX FIXTURE
(Illustration on page 4)

KEY	PART NUMBER	PART NAME	QUANTITY PER ASSEMBLY	
	34	HV 0000283 P	SPINDLE (PLAIN)	1
	or	HV 0000283 D	SPINDLE (THREADED)	1
	or	HV 0000283 T	SPINDLE (TAPER)	1
†	35	0100312	SCREW, SOC HD CP 10-32 X 3/4	2
	36	HV 0000264	BASE, FIXTURE	1
	37	HV 0008350	SCREW, SPINDLE LOCK NUT	1
	38	HV 0011409	NUT, SPINDLE LOCK	1
	39	HV 0008320	SCREW, PRESELECTOR	20 or 24
	40	HV 0000275 20	RING, SCREW RETAINING (20 HOLE)	1
	or	HV 0000275 24	RING, SCREW RETAINING (24 HOLE)	1
⊠	41	HV 0000494	RING, ADJUSTING	1
⊠	42	HV 0007367	WASHER, FIBER (1/8)	1
	or	HV 0007367 A	WASHER, FIBER (3/32)	1
⊠	43	HV 0000301 P	SPINDLE, DRAW (PLAIN)	1
	or	HV 0000301	SPINDLE, DRAW (THREADED & TAPER)	1
⊠	44	HV 0011408	CONE, COLLET CLOSER	1
⊠	45	HV 0000496	COLLAR, SHIFTING	1
⊠	46	TL 0006058	BALL, 1/4 STEEL	21
	47	HV 0010919	ROLLER, SHIFTING	2
*		HK 0011906 09	KEY, 5/32 HEX	1

† These components constitute Ratchet Assembly (HV -0000616)

‡ These components constitute Pinion-Handle Assembly (HVA-0006156-A)

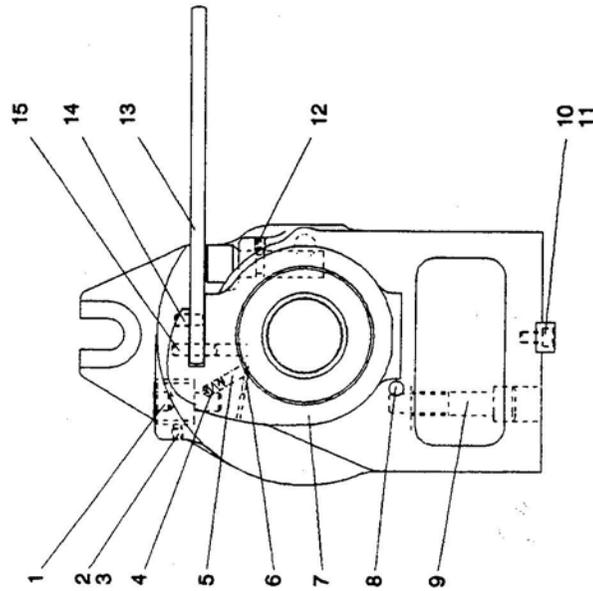
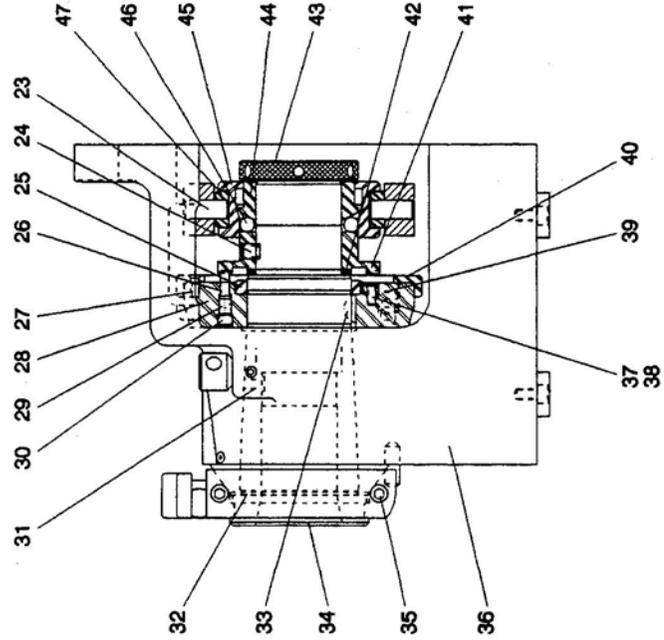
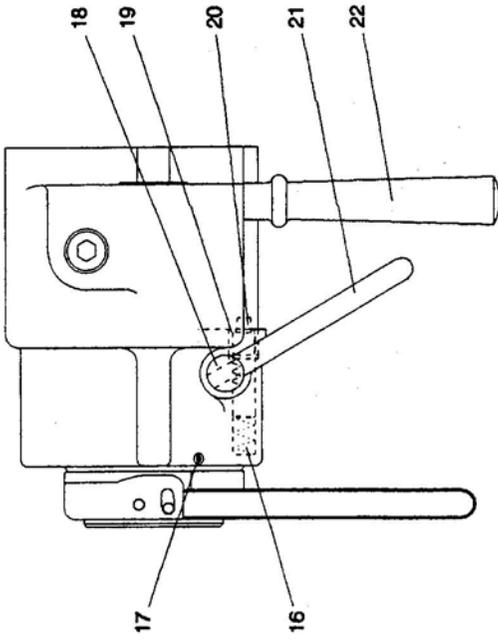
⊠ These components constitute one of the following:
Plain Draw Spindle Assembly (HV -0000301-AP)
Threaded/Taper Draw Spindle Assembly (HV -0000301- A)

* Not Illustrated

HV-4, HV-4N, & HV-4NX COLLET INDEX FIXTURE

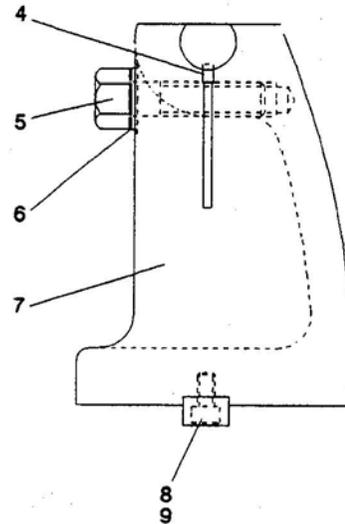
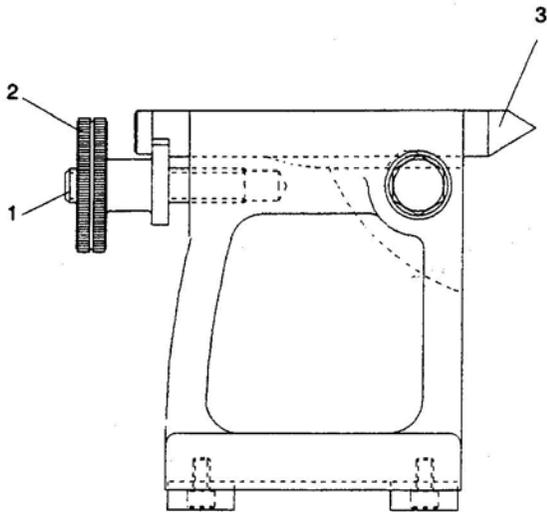
(Parts list beginning on page 2)

T12885



T-4 TAILSTOCK

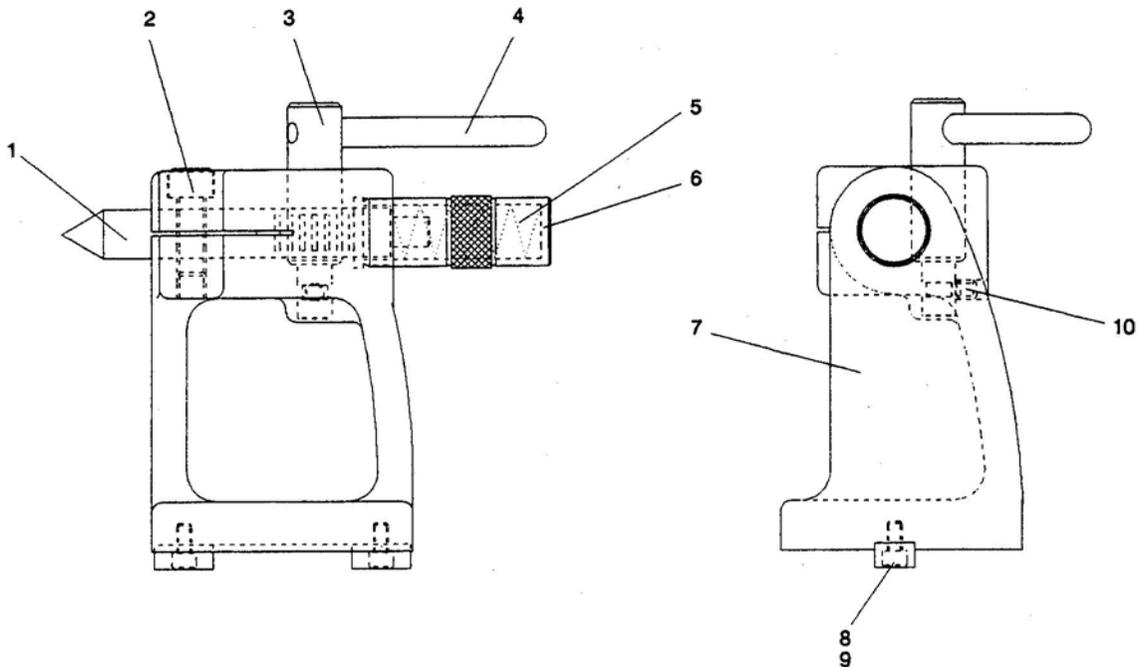
KEY	PART NUMBER	PART NAME	QUANTITY PER ASSEMBLY
	HF 000056	TAILSTOCK, T-4 (SCREW FEED)	
1	0551032	SCREW, SOC SET CP 3/8-16X2	1
2	U 0001321	HANDWHEEL	1
3	HF 0000422	CENTER, TAILSTOCK	1
4	47 0001514 02	KEY, TAILSTOCK	1
5	0151024	HEX HEAD CAP SCREW	1
6	HF 0000622	WASHER, CLAMP BOLT	1
7	HF 0000401	BASE, TAILSTOCK	1
8	HV 0004121	KEY, BASE	2
9	0100306	SCREW, SOC HD CP 10-32 X 3/8	2



T12666

L-4 TAILSTOCK

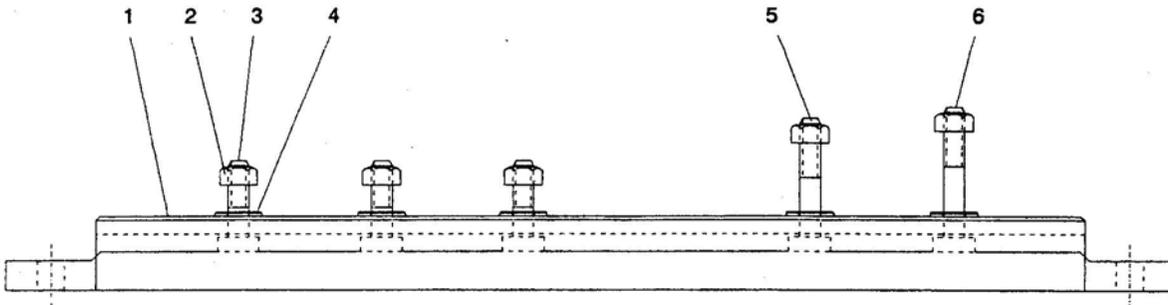
KEY	PART NUMBER	PART NAME	QUANTITY PER ASSEMBLY
	HV 0000056	TAILSTOCK, L-4 (LEVER FEED)	
1	HV 0000422	CENTER, LEVER TAILSTOCK	1
2	0101016	SOC HD CP SCREW 3/8-16 X1	1
3	HVA 0006156 T	PINION, LEVER TAILSTOCK	1
4	HVA 0008761	HANDLE, PINION	1
5	HV 0006539	SPRING, PINION	1
6	HV 0011411	RETAINER, SPRING	1
7	HV 0000401	BASE, LEVER TAILSTOCK	1
8	HV 0004121	KEY, BASE	2
9	0100306	SOC HD CP SCREW 10-32 X 3/8	2
10	N 0590605	HALF DOG NYLOK SET SCREW	1



T12667

SB-4 SUB-BASE ASSEMBLY

KEY	PART NUMBER	PART NAME	QUANTITY PER ASSEMBLY
	HV 0001996 A	SB-4 SUB-BASE ASSEMBLY	
1	HV 0001996	SUB-BASE	1
2	5 0002012 C	NUT, HEX	5
3	HV 0002011 S	BOLT, SHORT	3
4	5 0002068	WASHER	5
5	HV 0002011 M	BOLT, MEDIUM	1
6	HV 0002011 L	BOLT, LONG	1



T12668



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