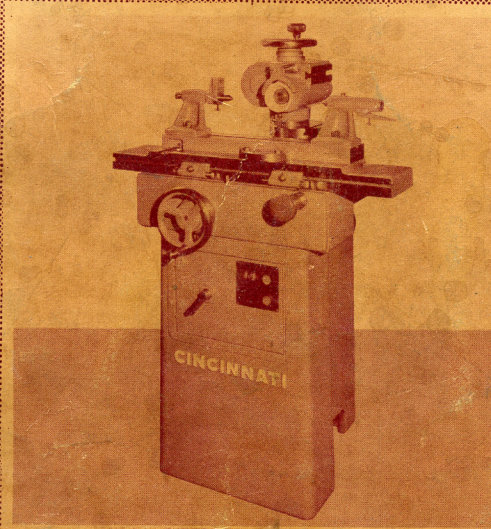


SERVICE MANUAL AND PARTS LIST CATALOG



No. 1 CUTTER and TOOL GRINDER



Identification No. 6D-LD
Publication No. M-1891-1

WHEN ORDERING REPAIR PARTS

1. Give complete Serial Number of Machine.
2. Give Part Number and Name.
3. Give Amount Required.

UNLESS THE ABOVE DATA IS INCLUDED WE CANNOT FILL YOUR ORDER

This Booklet should be Filed in Tool Crib and issued by Tool Check only

THE CINCINNATI MILLING MACHINE CO.
CINCINNATI 9, OHIO, U. S. A.

SERVICE MANUAL and PARTS LIST CATALOG

FOR

Cincinnati

**No. 1 CUTTER
and TOOL GRINDER**

MODEL LO



THIS catalog has been compiled to expedite the ordering of repair parts for your CINCINNATI No. 1 Cutter and Tool Grinder as well as to present the correct methods of servicing to those responsible for keeping the machine running.

Due to continual improvements in design, it is possible that some information or the appearance of component parts to be found in this catalog may vary slightly from the machine delivered to you. This merely indicates that the mechanism has been improved to better fulfill your requirements.

THE CINCINNATI MILLING MACHINE CO.

CINCINNATI 9, OHIO, U. S. A.

**This catalog to be used only for machines
whose serial number begins with 6D.**

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PATENT NOTICE — The machines and attachments illustrated and described in this book are manufactured under and protected by issued and pending United States and Foreign Patents.

The design and specifications of the machines illustrated and described herein are subject to change without notice.

CONVERSION CHART

(Based on 25.4mm = 1")

Inches into Millimeters

Inches	M/M	Inches	M/M	Inches	M/M	Inches	M/M	Inches	M/M
1/64	.0156	0.3969	49/64	.7656	19.4469	34	863.600	82	2082.80
1/32	.0313	0.7937	25/32	.7813	19.8437	35	889.000	83	2108.20
3/64	.0469	1.1906	51/64	.7969	20.2406	36	914.400	84	2133.60
1/16	.0625	1.5875	13/16	.8125	20.6375	37	939.800	85	2159.00
5/64	.0781	1.9844	53/64	.8281	21.0344	38	965.200	86	2184.40
3/32	.0938	2.3812	27/32	.8438	21.4312	39	990.600	87	2209.80
7/64	.1094	2.7781	55/64	.8594	21.8281	40	1016.00	88	2235.20
1/8	.1250	3.1750	7/8	.8750	22.2250	41	1041.40	89	2260.60
9/64	.1406	3.5719	57/64	.8906	22.6219	42	1066.80	90	2286.00
5/32	.1563	3.9687	29/32	.9063	23.0187	43	1092.20	91	2311.40
11/64	.1719	4.3656	59/64	.9219	23.4156	44	1117.60	92	2336.80
3/16	.1875	4.7625	15/16	.9375	23.8125	45	1143.00	93	2362.20
13/64	.2031	5.1594	61/64	.9531	24.2094	46	1168.40	94	2387.60
7/32	.2188	5.5562	31/32	.9688	24.6062	47	1193.80	95	2413.00
15/64	.2344	5.9531	63/64	.9844	25.0031	48	1219.20	96	2438.40
1/4	.2500	6.3500	1		25.4000	49	1244.60	97	2463.80
17/64	.2656	6.7469	2		50.800	50	1270.00	98	2489.20
9/32	.2813	7.1437	3		76.200	51	1295.40	99	2514.60
19/64	.2969	7.5406	4		101.600	52	1320.80	100	2540.00
5/16	.3125	7.9375	5		127.000	53	1346.20	101	2565.40
21/64	.3281	8.3344	6		152.400	54	1371.60	102	2590.80
11/32	.3438	8.7312	7		177.800	55	1397.00	103	2616.20
23/64	.3594	9.1281	8		203.200	56	1422.00	104	2641.60
3/8	.3750	9.5250	9		228.600	57	1447.80	105	2667.00
25/64	.3906	9.9219	10		254.000	58	1473.20	106	2692.40
13/32	.4063	10.3187	11		279.400	59	1498.60	107	2717.80
27/64	.4219	10.7156	12		304.800	60	1524.00	108	2743.20
7/16	.4375	11.1125	13		330.200	61	1549.40	109	2768.60
29/64	.4531	11.5094	14		355.600	62	1574.80	110	2794.00
15/32	.4688	11.9062	15		381.000	63	1600.20	111	2819.40
31/64	.4844	12.3031	16		406.400	64	1625.60	112	2844.80
1/2	.5000	12.7000	17		431.800	65	1651.00	113	2870.20
33/64	.5156	13.0969	18		457.200	66	1676.40	114	2895.60
17/32	.5313	13.4937	19		482.600	67	1701.80	115	2921.00
35/64	.5469	13.8906	20		508.000	68	1727.20	116	2946.40
9/16	.5625	14.2875	21		533.400	69	1752.60	117	2971.80
37/64	.5781	14.6844	22		558.800	70	1778.00	118	2997.20
19/32	.5938	15.0812	23		584.200	71	1803.40	119	3022.60
39/64	.6094	15.4781	24		609.600	72	1828.80	120	3048.00
5/8	.6250	15.8750	25		635.000	73	1854.20	121	3073.40
41/64	.6406	16.2719	26		660.400	74	1879.60	122	3098.80
21/32	.6563	16.6687	27		685.800	75	1905.00	123	3124.20
43/64	.6719	17.0656	28		711.200	76	1930.40	124	3149.60
11/16	.6875	17.4625	29		736.600	77	1955.80	125	3175.00
45/64	.7031	17.8594	30		762.000	78	1981.20	126	3200.40
23/32	.7188	18.2562	31		787.400	79	2006.60	127	3225.80
47/64	.7344	18.6531	32		812.800	80	2032.00	128	3251.20
3/4	.7500	19.0500	33		838.200	81	2057.40	129	3276.60

0.001" = .0254 mm

0.001 mm = 0.00004"

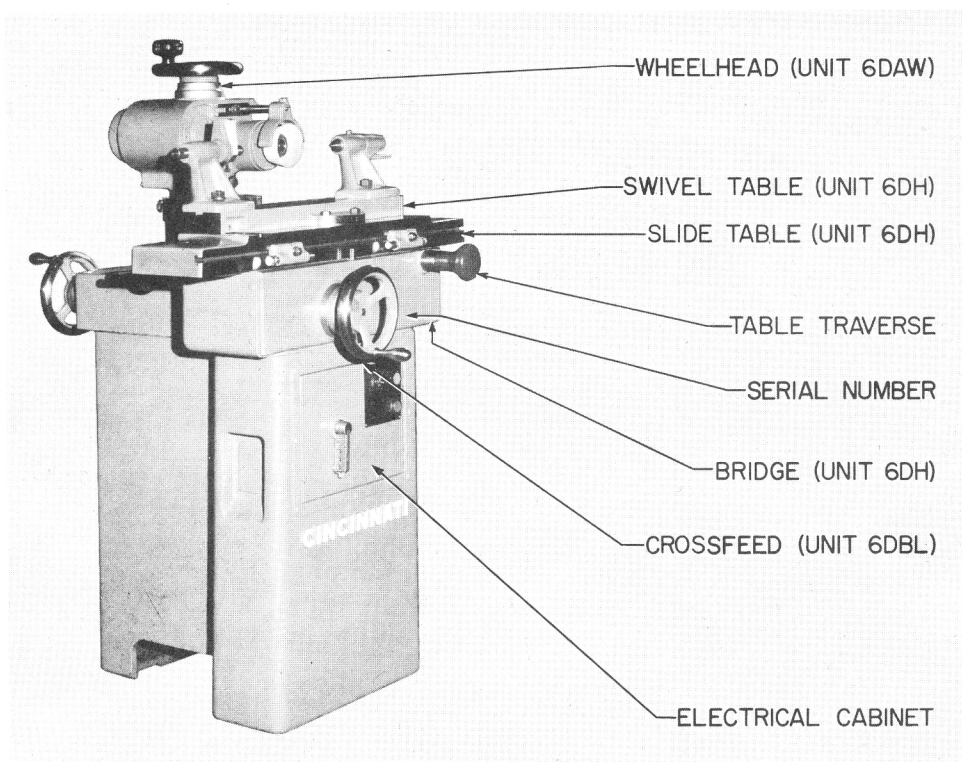


FIGURE 4A
Left Front View

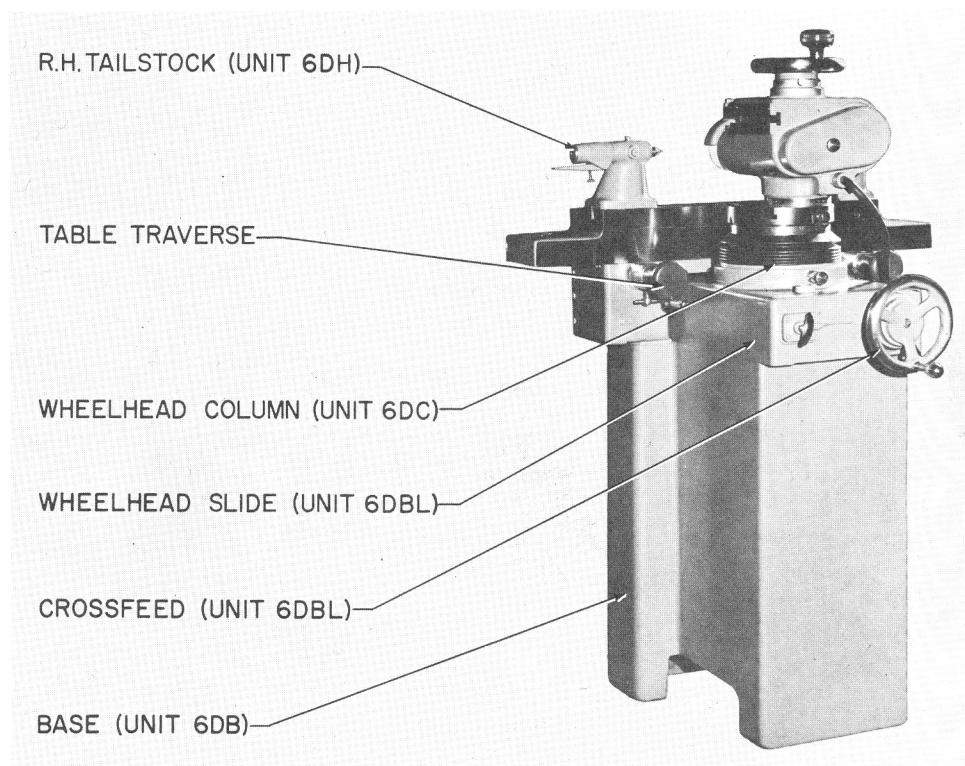


FIGURE 4B
Right Rear View

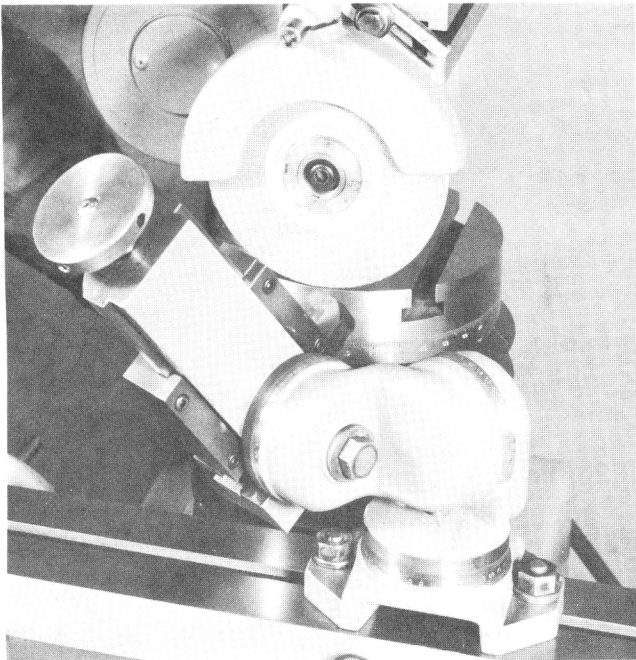


FIGURE 5A
Surface Grinding Attachment
(6DBU)

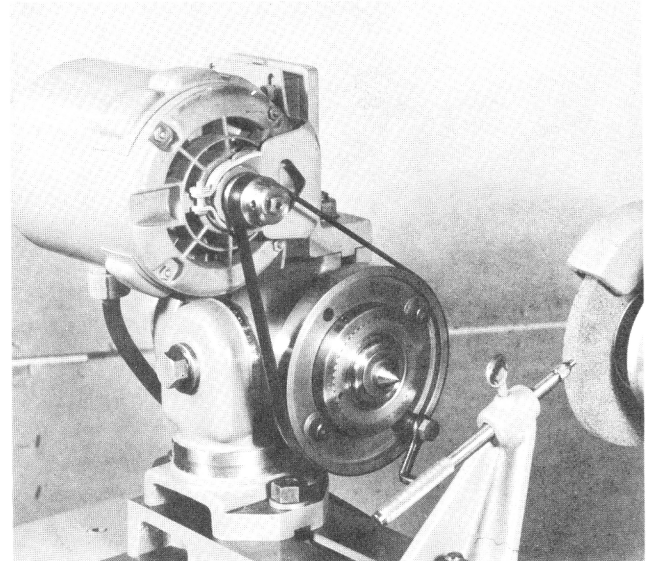


FIGURE 5B
Cylindrical Grinding Attachment
(6DBT)

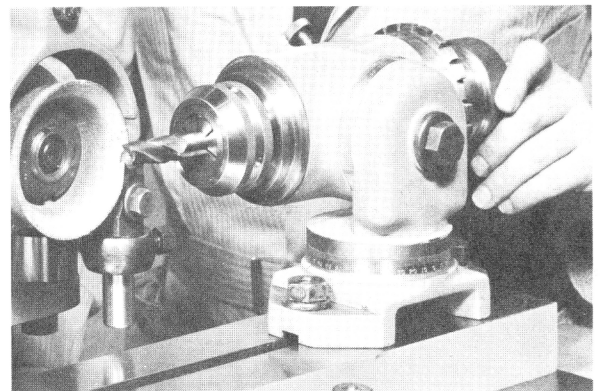


FIGURE 5C
Workhead (6DGC) -- End Mill
Grinding (6DJU) -- Index (6DJF)

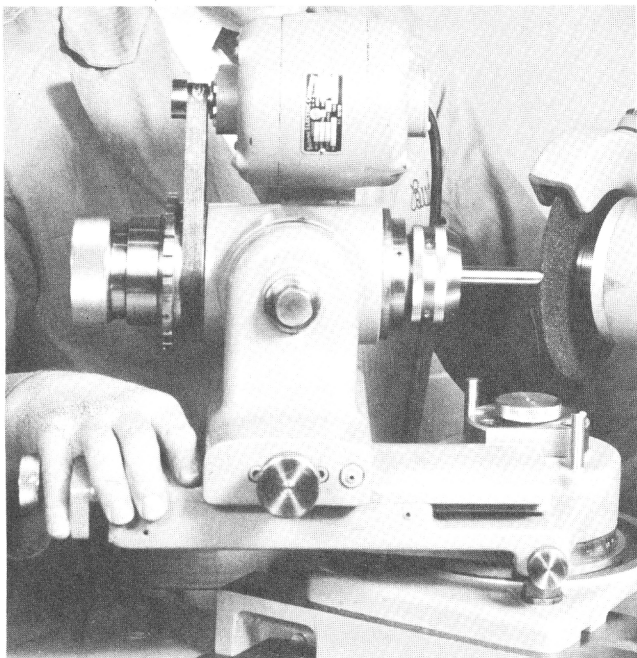


FIGURE 5D
Radius Grinding Attachment with
Motor Drive (6DGB)

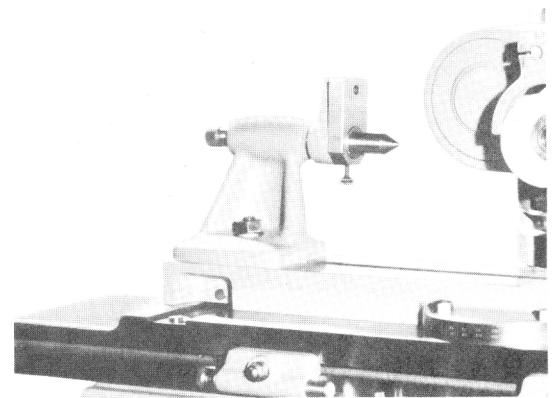


FIGURE 5E
Left Hand Tailstock (6DH)

DIMENSIONAL DRAWING

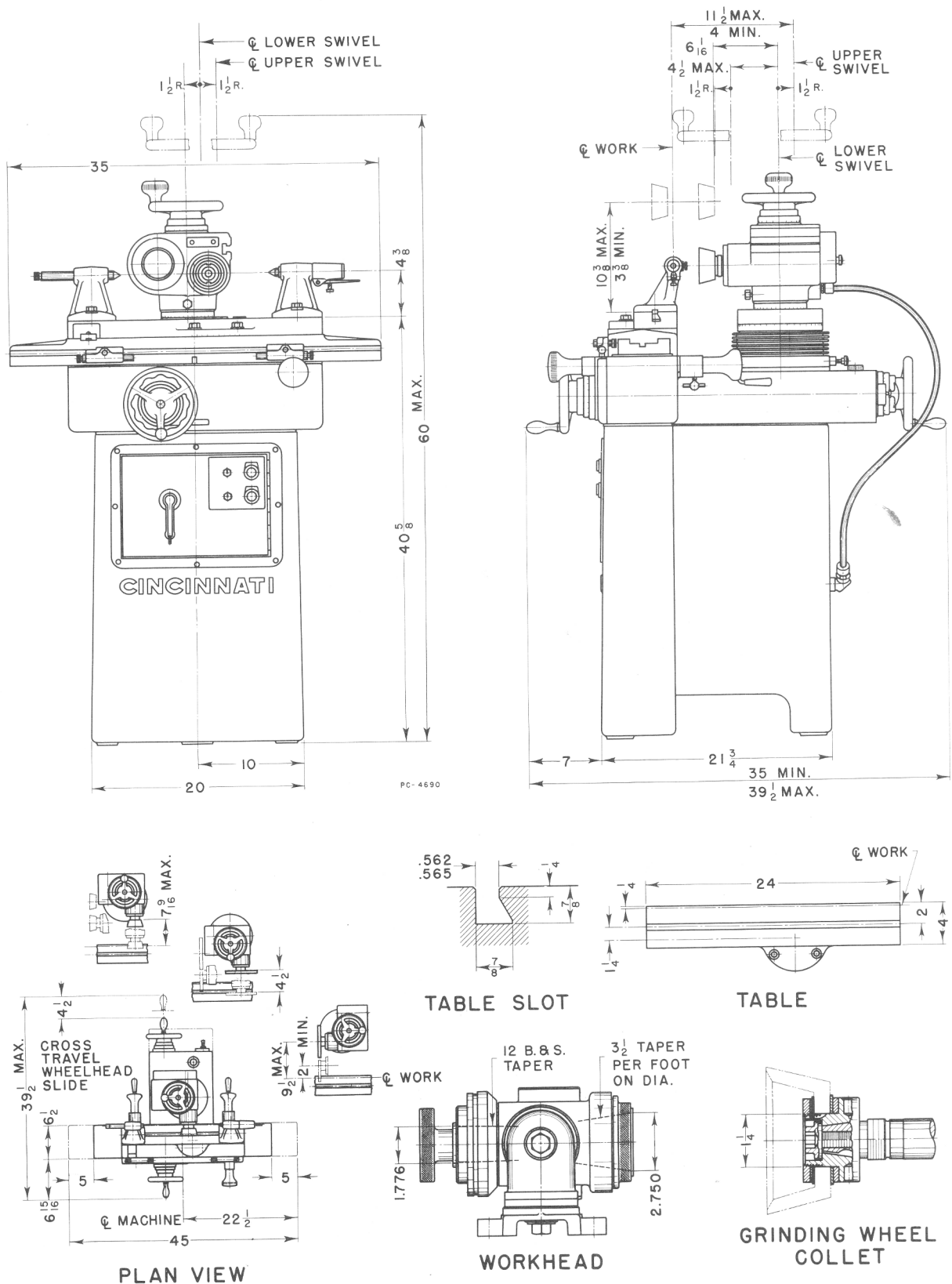


FIGURE 6A

SPECIFICATIONS

CAPACITY

Swing over Table.....	8" diameter
Length between Right and Left-Hand Tailstocks.....	15"
Length between Tailstock and Workhead.....	11½"
Face Mills on Workhead.....	8" diameter
Formed Cutters (using 6" Wheel).....	5½" diameter

TAPER HOLE IN WORKHEAD { One End.....
SPINDLE { Other End.....

No. 50 Series National
Standard
Modified No. 12 B. & S. or No. 5
Morse

TABLE

Slots (Number).....	One- $\frac{.562}{.565}$
Working Surface.....	4" x 24"

RANGE

Longitudinal Movement of Table.....	10"
Table Swivels.....	180°
Swivel Table Adjustment (Taper per Ft.).....	Toward Wheelhead2" Away from Wheelhead1½"
Table Graduations in Center.....	90°
Cross Movement of Wheelhead Slide.....	4½"
Cross Range Gained by Wheelhead Eccentricity.....	3"
Total Cross Range of Wheelhead.....	7½"
Vertical Movement of Grinding Wheel Spindle.....	7"
Swivel Movement of Grinding Wheel Spindle.....	360°
Centerline of Spindle to Top of Table (vert.).....	Max10⅜" Min3⅜"
Centerline of Spindle to Work Center (vert.).....	Above6" Below1"
Centerline of Spindle to Work Center (horiz.).....	Max9½" Min2"
Centerline of Spindle to Backside of Table (horiz.).....	Max9¼" Min1¾"

GRINDING WHEEL SPINDLE SPEEDS (two).....

Grinding Wheel Speeds { 6" Dia. Wheel.....	6260 and
{ 3½" Dia. Wheel.....	3730 rpm
	5860 fpm
	5740 fpm

FLOOR SPACE FOR OPERATING.....

39½" x 45"

NET WEIGHT (approximately).....

950 pounds

LUBRICATION DIAGRAMS

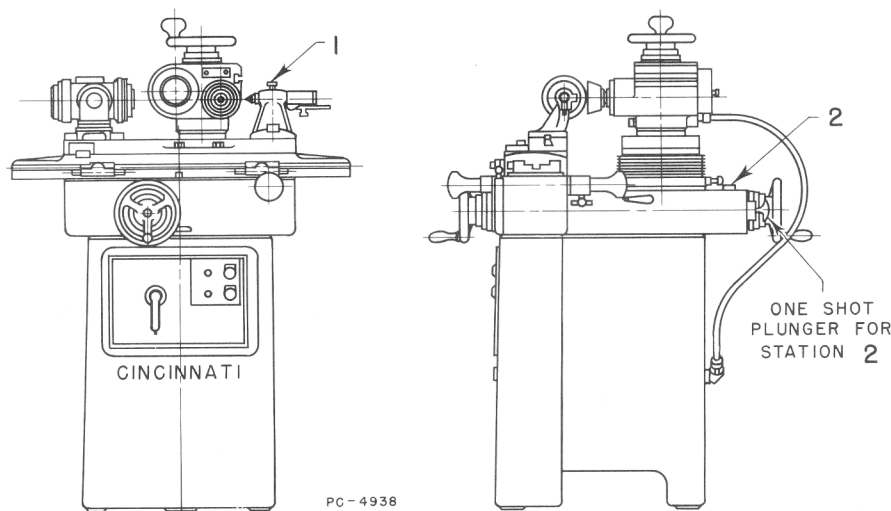


FIGURE 7A

LUBRICATION INSTRUCTIONS and SPECIFICATIONS

Thoroughly oil all moving parts as they are installed, then lubricate all principal points as listed below before starting motor. Periodic and thorough lubrication with correct lubricant, as specified, will help to maintain the long life and accuracy built into each machine. The intervals listed are based on a normal 8 hour day.

PURCHASE LUBRICANTS FROM RELIABLE DEALERS

Interval	Station No. and Part Lubricated		Lubrication Instructions		Lubricant Specifications
Daily (8 hours)	1	R. H. Tailstock	A few drops of oil.		CMMCo. No. P-55 Rust and oxidation inhibited paraffin base oil. Viscosity 200 to 220 SSU at 100° F.
	2	Wheelhead slide ways, cross-feed nut and screw	Cap. 1 qt.	Maintain level near top of filler screen. Pull out plunger and allow to return itself — 3 times, twice daily.	

The wheelhead spindle is prepacked and no attempt should be made to lubricate it. Drive motors are equipped with sealed bearings.

The sliding table rides on precision ball bearings between hardened steel ways. The balls and ways should be cleaned and dried occasionally, but should never be oiled or greased as lubricants pick up grinding grit. After cleaning, dust the balls lightly with colloidal graphite.

Wheelhead slide ways should be cleaned periodically and oiled lightly before reassembly.

Elevating screw and nut operate in a sealed oil reservoir. Fill reservoir with 1/2 gallon of new oil (CMMCo. P-55) only if column is ever dismantled. Pack sides of column and housing with grease before assembling.

See page 48 for a list of oil companies whose oils have been tested and approved by The Cincinnati Milling Machine Co.

ADJUSTMENTS

To Adjust Workhead Spindle Bearings

(See Page 32)

The workhead spindle revolves on two tapered roller bearings. These bearings should be so adjusted that there is no end play from hand pressure on either end of spindle. In case these bearings become loose or run hot, they should be adjusted as follows:

1. Loosen set screws (6DGC-32), tap bearing adjusting lock (38) to loosen and remove it from adjusting nut (37) and adjusting spacer (15).
2. While holding spindle, tighten adjusting nut (37) with a spanner wrench until all end play is gone but spindle turns freely. The pitch of adjusting nut is such that a peripheral movement of one serration produces a spindle longitudinal movement of 0.001".
3. Replace bearing adjusting lock and tighten set screw.

Wheelhead Spindle (No Adjustment Required)

The wheelhead spindle runs in two 100 lb. preloaded precision ball bearings and is assembled at the factory to produce a true running spindle. If the spindle bearings become worn or damaged in any way, it will be to your advantage to order a rebuilt spindle from us. When it arrives, return your old spindle and you will be allowed credit for any usable parts while you get the accuracy of a guaranteed spindle. Order part number 143619F per page 17.

See instructions under "To Remove and Replace Grinding Wheel Spindle" on page 10.

AMERICAN STANDARDS ASSOCIATION MAXIMUM PERIPHERAL SPEEDS FOR GRINDING WHEELS

The following table gives the maximum peripheral speeds approved by the American Standards Association for certain standard wheels. These are safe speeds that should not be exceeded. (If the wheel

manufacturer's speed printed on the wheel is less than that shown in the table, it should be exceeded. However, upon request, the manufacturer will produce a wheel that can withstand higher speeds.)

Classification Number	Types of Wheels	Vitrified and Silicate Bonds			Organic Bonds		
		Low Strength	Medium Strength	High Strength	Low Strength	Medium Strength	High Strength
1	Type 4 — Straight Wheels	FPM	FPM	FPM	FPM	FPM	FPM
	Type 1 — Straight Wheels	5,500	6,000	6,500	6,500	8,000	9,500
	Type 12 — Dish Wheels						
	Type 13 — Saucer Wheels						
2	Types 5 and 7 — Recessed Wheels	5,500	5,000	6,500	6,500	8,000	9,500
3	Type 2 — Cylinder Wheels	4,500	5,500	6,000	6,000	8,000	9,500
4	Dovetail Wheels Type 11 — Flaring Cups	4,500	5,500	6,000	6,000	8,000	9,500
5	Type 6 — Deep Recessed Cup Wheels	4,500	5,000	5,500	6,000	7,500	9,000

To figure the peripheral speed of a grinding wheel use the formula:

$$\text{Surface speed of wheel (ft./min.)} = \text{spindle rpm} \times \frac{3.1416 \times \text{wheel diam.}}{12}$$

INSTALLATION

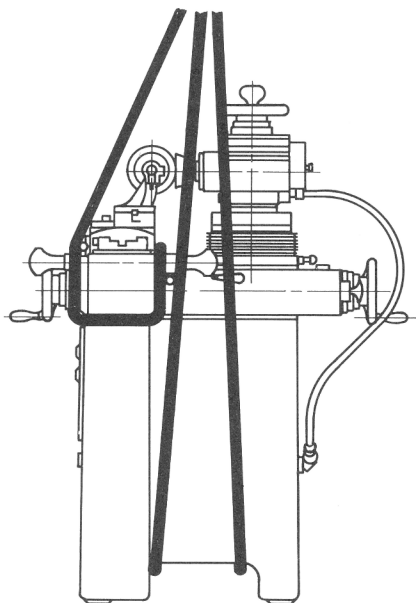
Foundation

Special foundations for Cincinnati No. 1 Cutter and Tool Grinders are not required. Any substantial floor, wood or concrete, fairly flat and sufficiently sturdy to hold the machine's weight (approximately 1000 lbs.) will be satisfactory. Select a zone free from extraneous vibration as such movement will be transmitted through machine and result in a poor finish on tool being sharpened.

Lifting Machine (Figure 10A)

The machine should be lifted with one or two rope slings arranged around it as shown in lifting diagram. Pass the sling under machine back over crane hook, across front of wheelhead slide, under each end of bridge and back up to crane hook. **NEVER** try to lift this machine with a loop around wheelhead slide.

Before lifting machine, make certain that wheelhead slide is fully forward, wheelhead is down, sliding table is centrally located and all are clamped.

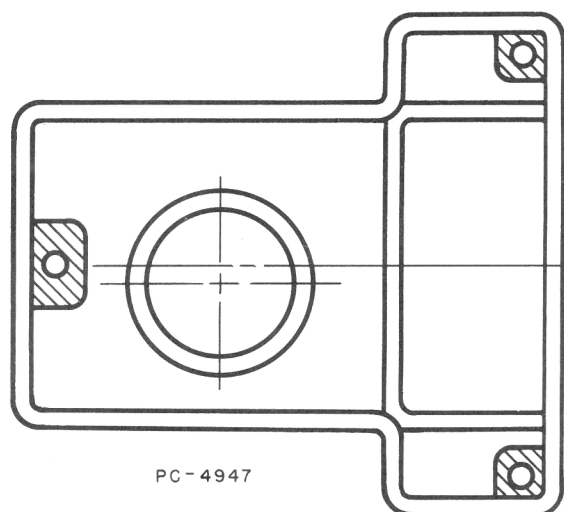


Lifting Diagram

FIGURE 10A

Leveling Machine (Figure 9A)

For leveling machine tools, a sensitive, graduated tube spirit level reading to 10 seconds per graduation (0.0005" per foot) and provided with screw adjustment is required. A carpenter's level or the bulb in a machinists' square is not good enough. The table must be clean and free of burrs. Place 3" square pieces of shim stock under bearing pads, illustrated in Figure 10B, until machine is level in all directions.



Area on Underside in Contact With Floor

FIGURE 10B

Cleaning

The machine should never be cleaned with the blast from an air hose, as it will drive grit and dirt into ways and bearings. Use only lint-free rags for plain surfaces and a stiff bristle brush for corners. Prevent formation of permanent stain by periodic cleaning. If machine is to remain idle for a long time, wipe a thin coating of oil over all exposed, unpainted surfaces to prevent rusting.

It is good preventive maintenance to periodically remove slide table and clean balls and ways. Also remove the wheelhead slide occasionally — clean the ways and recoil. Regardless of guards the grinding grit in the air around a machine that is dry grinding will settle in the oil film and form a lapping compound to hasten wear. **DO NOT** oil or grease the balls under table. Dusting them lightly with colloidal graphite will lubricate the balls in retainer — if you feel you have to lubricate them.

DISMANTLING

To Remove Grinding Wheel Spindle

(6DAW-50, page 16)

1. Remove spindle drive cover (6DAW-41, page 14) and belt (44).
2. Remove spindle lock screw (6DAW-62, page 16), lock nut (61) and grinding wheel collet (55) with grinding wheel.
3. Remove spindle lock screw (72) and two set screws (68, 69) from bottom of wheelhead. Slide ball bearing spindle (50) with its bearing retainer sleeve (64) toward rear out of wheelhead housing.

Remove driven pulley flange (75) with attached driven pulleys (73, 74).

Ship this assembly back to factory for credit and install new factory guaranteed spindle. Make certain that driver and driven pulleys are in line when assembling.

To Remove Wheelhead Motor

(6DAW-21, page 14)

1. Remove set screws (6DAW-20) and (19) from underside of wheelhead at each end. Remove bearing retainer (27), lock nut (26) and bearing (24).
Insert a $\frac{1}{4}$ "-20 threaded rod, mounted with a sliding weight and having a nut at its outer end, into a hole of front end bell (23) and hammer out end bell.
2. Remove spindle drive cover (41) belt (44), spindle lock screw (42) and lift off driver pulley flange (32) with its attached driver pulleys (33, 34). Slip motor shaft (39) with motor armature and rear bearing (37) out front of wheelhead.
3. Disconnect all electrical connections, remove center screws (19, 20) and slip stator (21) out of wheelhead.

To Remove Wheelhead and Column Housing (6DAW-10, page 14; 6DC-15, page 20)

1. Elevate wheelhead approximately 6". Remove two set screws (6DAW-4-5, page 14) and lift off handwheel (3) with elevating dial (7). Pick out Hy-pro key (6DC-23, page 20) from elevating shaft (6DC-24).

Remove screw and locking plug (70-71, page 16) Lift wheelhead housing (10, page 14) straight up off wheelhead trunion. Assembled wheelhead weighs approximately 90 lbs.

3. Unscrew two set screws (6DBL-9-10, page 22) and remove handwheel (6DBL-1) with its dial. Remove three screws, take off main bearing housing (4) and pull out crossfeed shaft (7).
4. Unscrew six screws from housing ring (6DC-5, page 20), make certain dust guard (1) is loose and hold up ring and dust guard. Remove four screws (6) and raise column housing (15), enough to slip two blocks under flange. Insert an eyebolt through holes on opposite sides of flange and secure with nuts. Attach eyebolts to a crane,

rotate housing so key cover (17) faces forward and raise housing.

Before removing, hold down screws, mark column housing and column slide at two points so they can be correctly aligned when reassembling. With wheelhead and column swivel dials set at 0, tram front face of wheelhead to table before fully tightening screws (6, page 20) through column housing flange.

To Remove Crossfeed Screw (6DBL-21) and Wheelhead Slide (6DBL-16) (See page 22)

1. Unscrew two set screws (6DBL-9-10) and slide off handwheel (1) with its dial. Remove plain bearing housing (4) and slip out crossfeed shaft (7).
2. Unscrew two set screws (6DBL-67-68, page 26) and slide off handwheel (66) with its dial. Unscrew lock nut (59), and remove bearing housing (61). Put handwheel back onto crossfeed screw extension (6DBL-25, page 22) and turn crossfeed screw out of engagement with wheelhead slide.
3. Proceed as per instructions above under to Remove Wheelhead and Column Housing.
4. Push wheelhead slide toward back of base and lift straight up. Drive out taper pin (6DBL-17) and remove cross screw nut (18).

To Remove Slide Table (6DH-12, page 24)

Unscrew nuts (6DH-25) and remove right and left hand table dogs (27). Release dust guard (6DH-74, page 26) from each end of table and fasten guard to cover (78) to hold it in position. Remove end plate (6DH-31, page 24) from one end of table, push table toward opposite side, and slide off ball track.

To Remove Bridge (6DH-52, page 26)

1. Proceed as per instructions above, under To Remove Slide Table. Remove covers (6DH-78, page 26) and dust guards (74) from each end of bridge. Proceed as per instructions above, paragraphs 1 and 2 under To Remove Crossfeed Screw.
2. Remove 2 cap screws (53) from each end of bridge and pick it up off base after tapping ends of bridge up with locating pins (55).

KEY NUMBER INDEX

UNIT NAME	DRAWING NAME	KEY NOS.	PAGE NOS.	KEY NUMBER OF OTHER UNITS
WHEELHEAD (Unit 6DAW)	Wheelhead Housing	1-42	15	6DM-21
	Grinding Wheels and Spindles	45-79	17	6DN-76
	Blade Supports	80-115	19	
WHEELHEAD COLUMN (Unit 6DC)	Column Housing and Elevating Screw	1-43	21	
WHEELHEAD SLIDE (Unit 6DBL)	Wheelhead Slide and Crossfeed Shaft	1-38	23	
BRIDGE-TABLE (Unit 6DH)	Slide and Swivel Tables	1-32	25	
	Bridge and Hand Control Shafts	33-81	27	6DBL-56 thru 69
	R.H. Control With and Without Slow Feed	82-124	29	
	Tailstocks and Truing Fixture	125-163	31	
WORKHEAD (Unit 6DGC)	Workhead	1-40	33	
BASE (Unit 6DAB)	Base	3, 4, 5	35	
SURFACE GRINDING ATTACHMENT (Unit 6DBU)	Surface Grinding Attachment	1-23	35	1DN-1, 2, 6 thru 12
	Surface Grinding Attachment	24-33	37	
CYLINDRICAL GRINDING ATTACHMENT (Unit 6DBT)	Cylindrical Grinding Attachment	1-23	37	6DM-3
END MILL GRINDING ATTACHMENT (Unit 6DJU)	End Mill Grinding Attachment	1-57	39	6DM-7
INTERNAL GRINDING ATTACHMENT (Unit 6DBP)	Internal Grinding Attachment	1-36	41	
RADIUS GRINDING ATTACHMENT (Unit 6DGB)	Radius Grinding Attachment	1-71	43	
GEAR CUTTER GRINDING ATTACHMENT (Unit 6DBV)	Gear Cutter Grinding Attachment	1-39	45	
WORKHEAD INDEXING ATTACHMENT (Unit 6DJF)	Raising Block, Draw-In-Bolt, Index Plate	1-31	47	

HOW TO ORDER REPAIR PARTS

You will receive quicker and better service when ordering repair parts if you will adhere to the following instructions when ordering such replacements.

These four requirements are essential:

1. State amount wanted.
2. Give catalog key number, part number and name of part. If ordering parts by part number, please advise where the number was obtained. (See paragraph A, below.)
3. *Give complete serial number of machine. (This number will be found stamped on face of bridge to left of cross screw. See Figure 4A)*
4. Specify how and where to ship. (See paragraph B, below.)

Paragraph A

When ordering parts by number, kindly advise how the number was obtained, namely:

Number stamped on part.

Prior Invoice.

Parts List Catalog. (Give identification and publication numbers on front cover.)

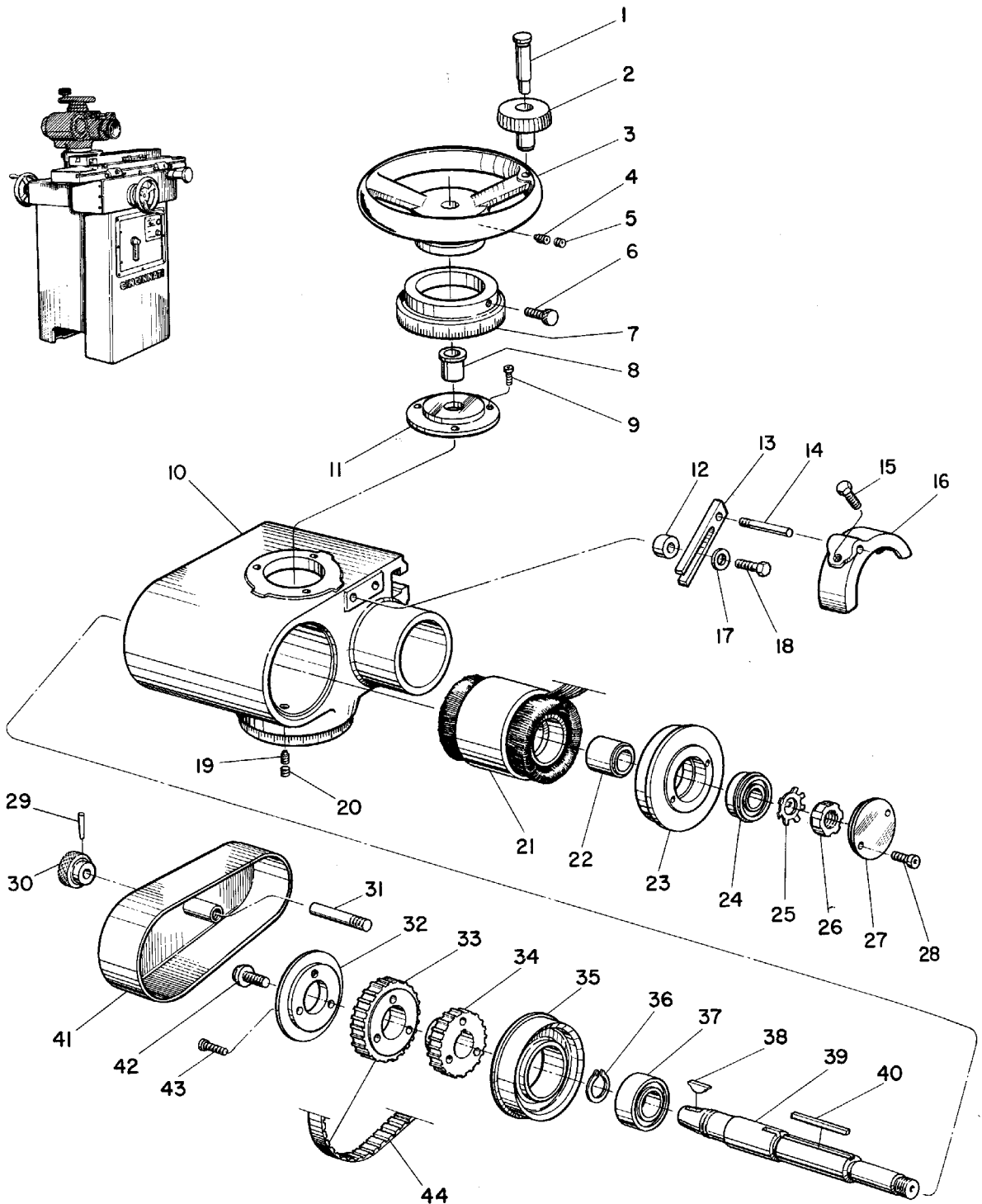
Paragraph B

Do not say, "Ship quickest way." Be definite and state agency desired, that is—Air Mail, Parcel Post (Special Delivery), Parcel Post (Regular), Express, Motor Freight, Rail Freight, etc.

Specify each individual piece that is required in the order. If only certain parts of a unit are required, never use the word "complete"; it always raises a question as to how much of a unit to supply.

However, in some cases, due to the nature of the part, it will be necessary, and less costly to you, for us to supply additional related pieces, especially if part wanted is obsolete.

WHEELHEAD HOUSING



6 FFF
19 FFF

CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

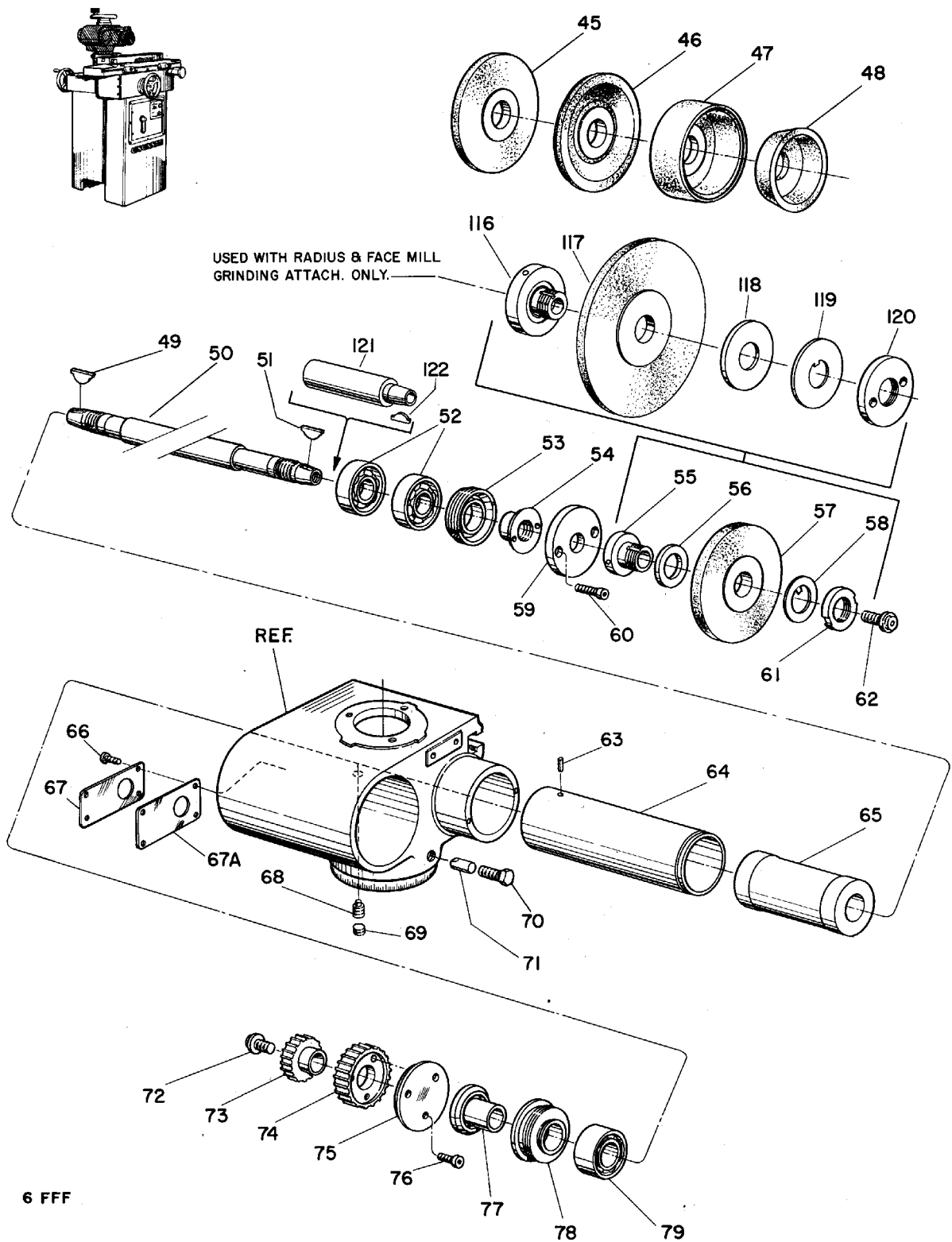
WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

WHEELHEAD – UNIT 6DAW

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DAW-1	145384	Pin	1	6DAW-22		Spacer - Shaft	1
6DAW-2	148618	Knob - Handwheel	1		143636	For Louis Allis Motor	
6DAW-3	143610	Handwheel	1		157550	For G. E. Motor	
6DAW-4	2301	Screw	1	6DAW-23	143611	Bell - Front End	1
6DAW-5	3234	Screw	1		95705	Bearing - Ball	1
6DAW-6	77200	Screw - Thumb	1	6DAW-25	95704	Washer	1
6DAW-7		Dial - Elevating		6DAW-26	95703	Nut - Lock	1
	143640	English	1	6DAW-27	143628	Retainer - Bearing	1
	153087	Metric	1	6DAW-28	2369	Screw - Cap, Button Head	2
6DAW-8	143625	Flange - Bearing	1	6DAW-29	140	Pin - Taper	1
6DAW-9	3396	Screw	3	6DAW-30	126873	Knob - Knurled	1
6DAW-10	143600	Housing - Wheelhead	1	6DAW-31	143622	Stud - Gear Cover	1
6DAW-11	143624	Housing - Flange Bearing	1	6DAW-32	143736	Flange - Driver Pulley (60 cycle)	1
6DAW-12	143726	Spacer - Wheel Guard	1		161815	Flange - Driver Pulley (50 cycle)	1
6DAW-13	143762	Arm - Wheel Guard	1	6DAW-33	143631	Pulley - Driver (High Speed) (60 cycle)	1
6DAW-14		Stud	1		161813	Pulley - Driver (High Speed) (50 cycle)	1
	143763	Wheel Guard - Std.		6DAW-34	143630	Pulley - Driver (Low Speed) (60 cycle)	1
	158506	Wheel Guard with Extension			161814	Pulley - Driver (Low Speed) (50 cycle)	1
6DAW-15	49	Screw - Hex Head	1	6DAW-35	143612	Bell - Rear End	1
6DAW-16		Guard		6DAW-36	137926	Ring - Truarc	1
	62269	Disc Wheel	1	6DAW-37	79812	Bearing - Ball	1
	62270	Cup Wheel	1	6DAW-38	3279	Key	1
	69492	Cup Wheel	1	6DAW-39	143620	Shaft - Motor	1
	65376	8" Wheel	1	6DAW-40		Key (Supplied by Louis Allis)	
6DAW-17	3441	Washer	1		1632	For G. E. Motor	1
6DAW-18	1062	Screw	1	6DAW-41	143632	Cover - Spindle Drive	1
6DAW-19	2355	Screw	1	6DAW-42	143627	Screw - Spindle Lock	1
6DAW-20	2343	Screw	1	6DAW-43	3200	Screw	3
6DM -21	147966	Motor - Grinding Wheel, 1/2 H. P., 3600/3000 RPM, Louis Allis Frame 410, G. E. Frame 2414.	1	6DAW-44	143633	Belt - Timing	1

**State serial number of machine when ordering parts by name.

GRINDING WHEELS & SPINDLE



CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

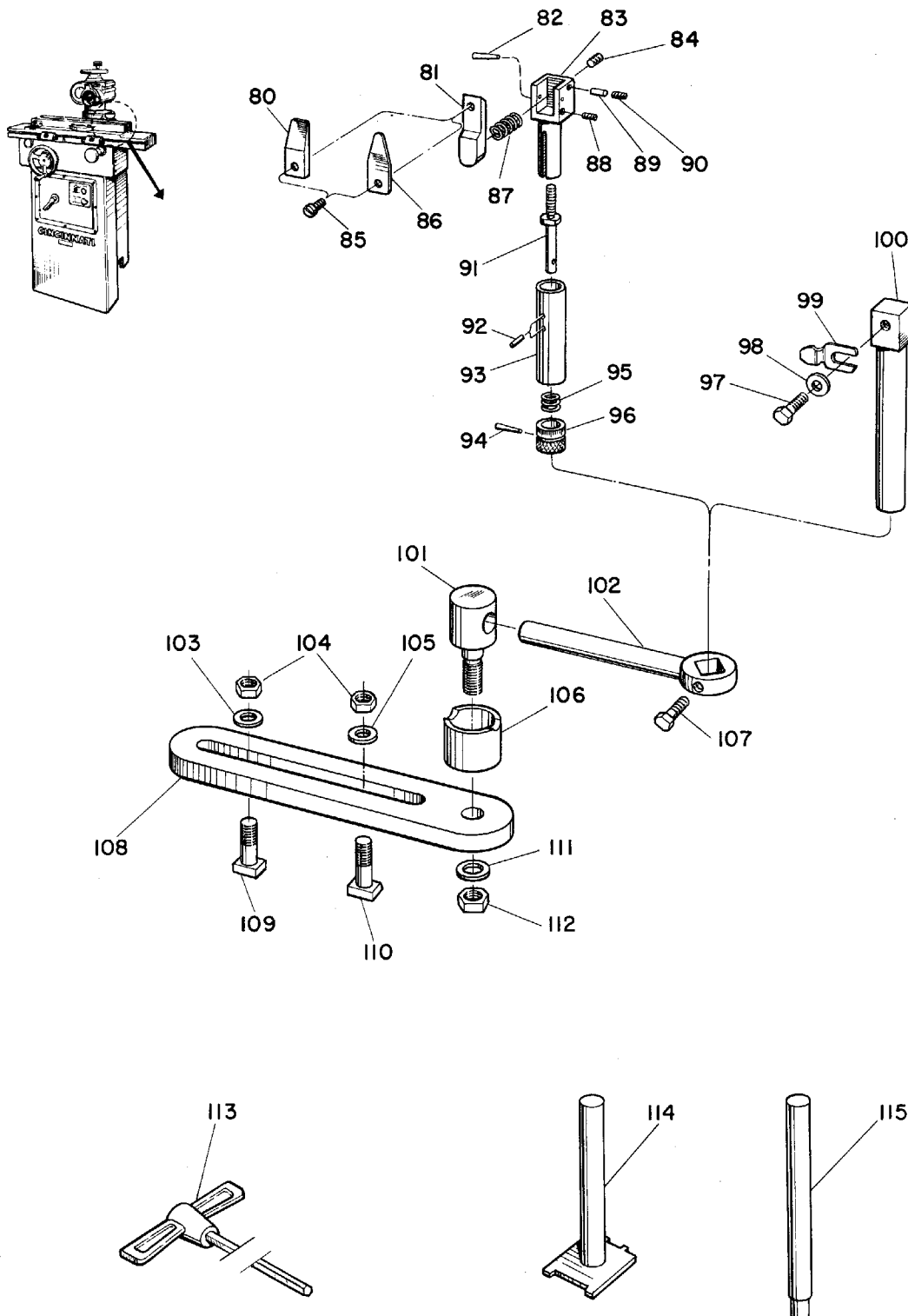
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WHEELHEAD - UNIT 6DAW (Continued)

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DAW-45	67782	Wheel - 6 x 1/8 x 1-1/4" - Straight - B/P 1Y	1	6DAW-66	143696	Screw	4
6DAW-46	60481	Wheel - 6 x 3/4 x 1-1/4" - Dish - B/P 12Y - 155	1	6DAW-67	143692	Plate - Electrical Cover	1
6DAW-47	62277	Wheel - 5 x 1-1/2 x 1-1/4" - Straight - Cup - B/P 6Y - 112	1	6DAW-67A	160026	Gasket	1
6DAW-48	67783	Wheel - 3-1/2 x 1-1/2 x 1-1/4" - Flaring Cup - B/P 11Y - 120	1	6DAW-68	2355	Screw	1
6DAW-49	3279	Key	1	6DAW-69	2343	Screw	1
*6DAW-50	143619	Spindle - Ball Bearing	1	6DAW-70	741	Screw	1
6DAW-51	3279	Key	1	6DAW-71	143669	Plug - Locking	1
6DAW-52	141156	Bearing - Ball	2	6DAW-72	143627	Screw - Spindle Lock	1
6DAW-53	67780	Nut - Left - Retainer	1	6DAW-73	143634	Pulley - Driven (High Speed) (60 cycle)	1
6DAW-54	67793	Nut - Dust Guard, Right Hand	1	6DAW-74	143635	Pulley - Driven (High Speed) (50 cycle)	1
6DAW-55	143691	Collet - Grinding Wheel	1	6DAW-75	143737	Pulley - Driven (Low Speed) (60 cycle)	1
6DAW-56	67784	Collar - Spacer	1	6DAW-76	161816	Pulley - Driven (Low Speed) (50 cycle)	1
		1/8" Thick (For 1/4" or 3/8" thick - at hole - wheels)		6DAW-77	143737	Flange - Driven Pulley (60 cycle)	1
	67785	3/8" Thick (For 1/8" or thinner - at hole - wheels)		6DAW-78	161818	Flange - Driven Pulley (50 cycle)	1
6DAW-57	60479	Wheel - Gr. 6 x 1/2 x 1-1/4" hole - Straight - B/P 1Y	1	6DAW-79	3200	Screw	3
6DAW-58	67786	Washer - Locking 1-1/4"	1	6DAW-77	143623	Nut - Dust Guard	1
6DAW-59	143626	Guard - Dust	1	6DAW-78	67612	Nut - Right - Retainer	1
6DAW-60	3396	Screw	2	6DAW-79	77724	Bearing - Ball	1
6DAW-61	67789	Nut - Collet	1	6DAW-116	157752	Collet	1
6DAW-62		Screw - Spindle Lock		6DAW-117	65613	Wheel - 8 x 3/8 x 1-1/4" - Straight - B/P 1Y	1
	143627	Without Spindle Extension	1	6DAW-118		Collar Spacing	1
	156171	With 2" Spindle Extension	1		157754	1/8" (For 1/4" or 3/8" thick - at hole - wheels)	
	156174	With 4" Spindle Extension	1		157755	3/8" (For 1/8" or thinner - at hole - wheels)	
6DAW-63	140	Pin - Taper	1	6DAW-119	157753	Washer - Lock	1
6DAW-64	143621	Sleeve - Bearing Retainer	1	6DAW-120	157756	Nut - Collet	1
6DAW-65	143618	Sleeve	1	6DAW-121		Extension - Spindle	1
					156172	2"	
					156173	4"	
				6DAW-122	3279	Key	1

*A factory guaranteed assembled, preloaded spindle can be obtained by ordering part number 143619F (Spindle - Ball Bearing Assembly) This assembly consists of the following key numbers: 6DAW-50, 51, 52, 53, 54, 63, 64, 65, 72, 77, 78, 79.

BLADE SUPPORTS



27KKK

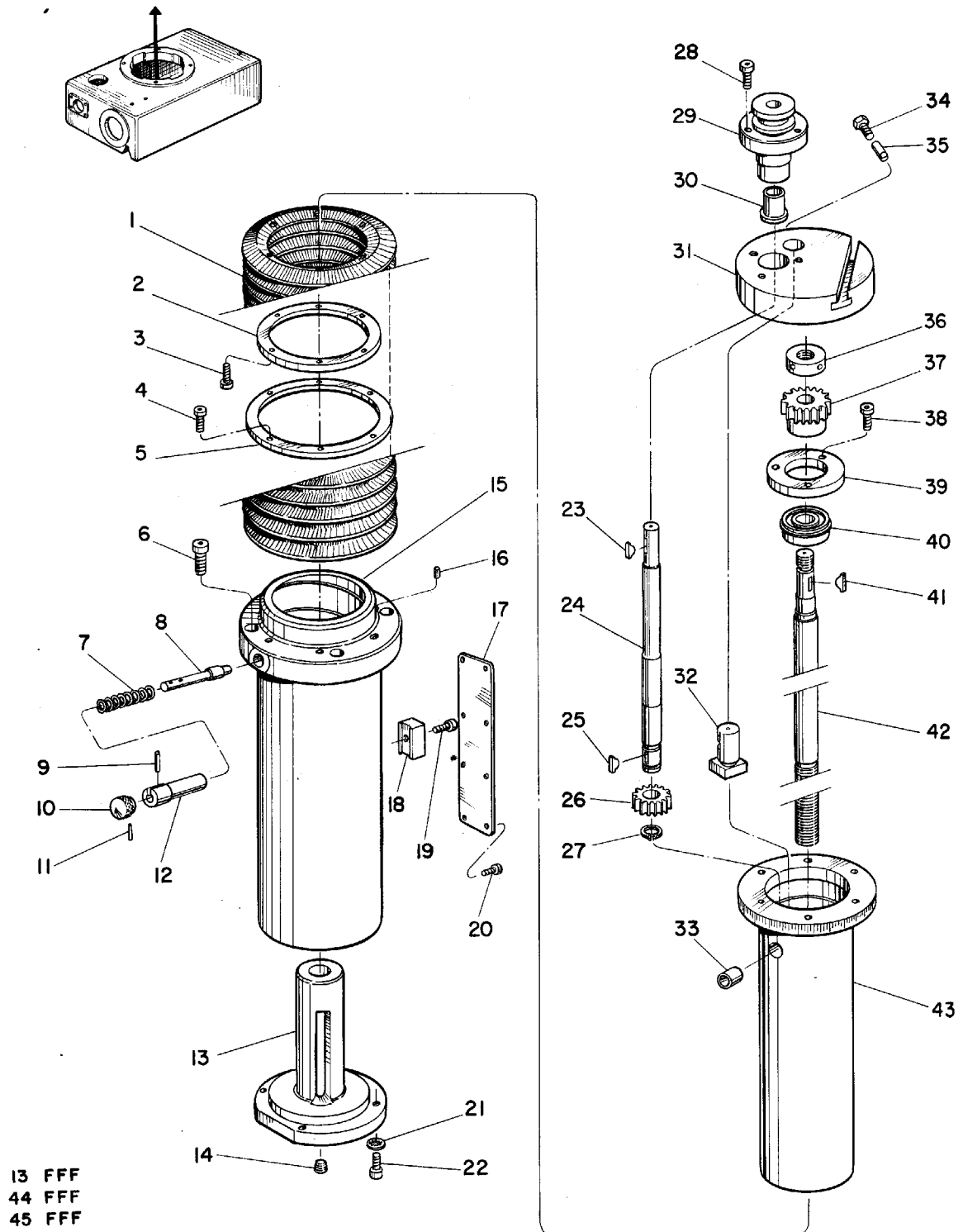
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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WHEELHEAD - UNIT 6DAW (Concluded)

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DAW-80	64894	Blade - Square Top	1	6DAW-98	3441	Washer	1
6DAW-81	64899	Block - Swivel Blade Holder	1	6DAW-99	65624	Blade - Plain Support	1
6DAW-82	141	Pin	1	6DAW-100	64903	Support - Blade, Plain	1
6DAW-83	64901	Support - Blade, Adjustable	1	6DAW-101	26243	Bolt - Eye, For Clamp	1
6DAW-84	1879	Screw	1	6DAW-102	31436	Extension	1
6DAW-85	1650	Screw	1	6DAW-103	3442	Washer	1
6DAW-86	65657	Blade - Round Top	1	6DAW-104	3479	Nut	2
6DAW-87	727	Spring	1	6DAW-105	3442	Washer	1
6DAW-88	2332	Screw	1	6DAW-106	23291	Ring - For Clamp	1
6DAW-89	1994	Plug	1	6DAW-107	489	Screw	1
6DAW-90	2279	Screw	1	6DAW-108	22684	Plate - Extension	1
6DAW-91	64897	Screw - Adjusting	1	6DAW-109	3311	Bolt - Tee	1
6DAW-92	1401	Pin	2	6DAW-110	150033	Bolt - Wedge	1
6DAW-93	67906	Sleeve - Blade Support	1	6DAW-111	3442	Washer	1
6DAW-94	140	Pin - Taper	1	6DAW-112	3479	Nut	1
6DAW-95	253	Spring	1	6DAW-113	143765	Wrench - Spindle Locking	1
6DAW-96	64900	Dial - Graduated	1	6DAW-114	157757	Wrench - Collet	1
6DAW-97	49	Screw	1	6DAW-115	62281	Wrench - Spindle Pin	1

COLUMN HOUSING & ELEVATING SCREW



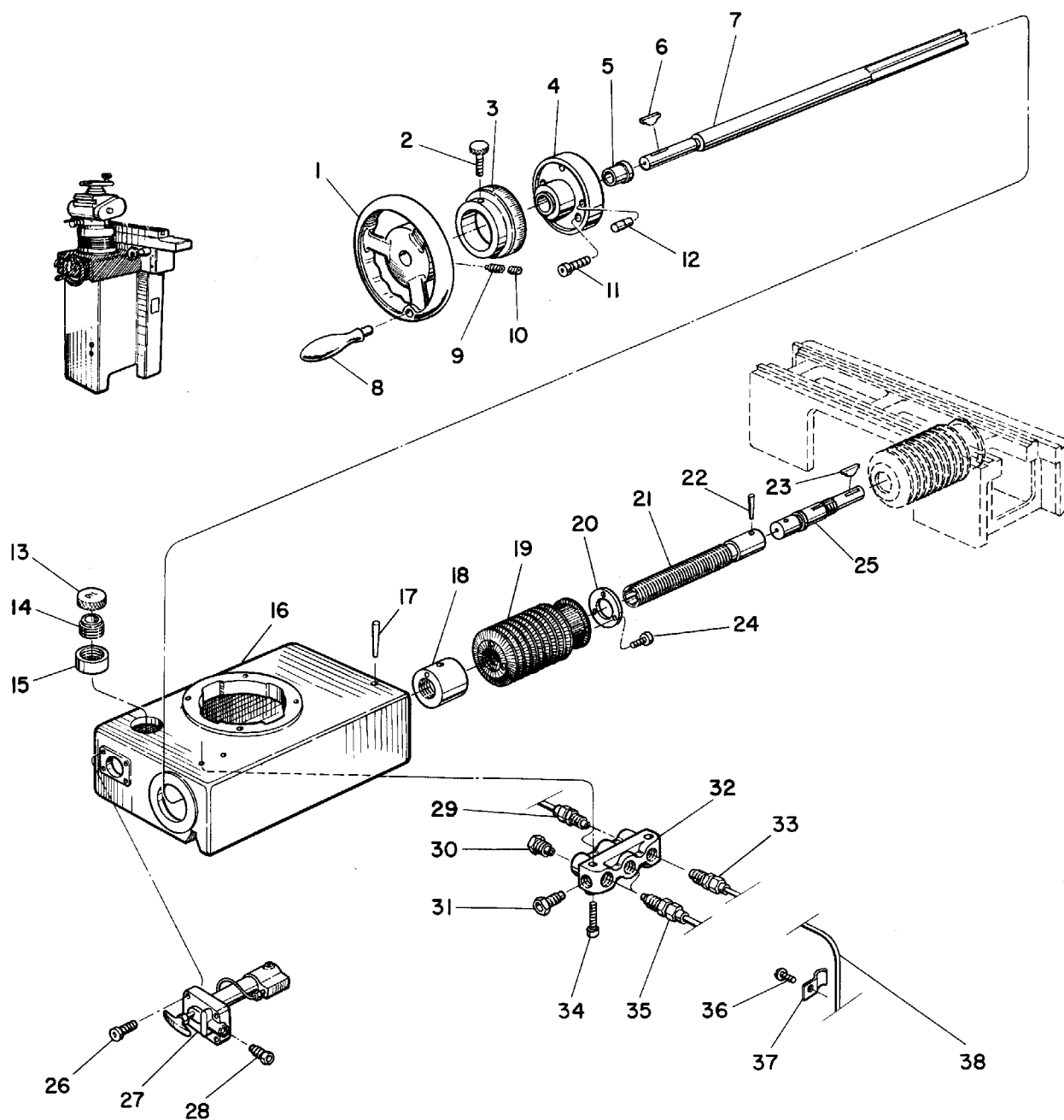
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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WHEELHEAD COLUMN - UNIT 6DC

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DC-1	143656	Guard - Dust	1	6DC-23	3280	Key	1
6DC-2	143658	Ring - Column	1	6DC-24	143617	Shaft - Elevating	1
6DC-3	2369	Screw	6	6DC-25	3279	Key	1
6DC-4	2369	Screw	6	6DC-26	143659	Spur - Gear	1
6DC-5	143657	Ring - Housing	1	6DC-27	240852	Ring - Truarc	1
6DC-6	3343	Screw	4	6DC-28	3399	Screw	3
6DC-7	3954	Spring	1	6DC-29	143616	Trunnion - Wheelhead	1
6DC-8	143664	Plunger - Shot Pin	1	6DC-30	143661	Flange - Bearing	1
6DC-9	3270	Pin - Straight	1	6DC-31	143605	Plate - Lower Swivel	1
6DC-10	126873	Knob - Knurled	1	6DC-32	143668	Clamp - Lower Swivel Plate	1
6DC-11	140	Pin - Taper	1	6DC-33	143665	Bushing - Shot Pin	1
6DC-12	143663	Housing - Shot Pin	1	6DC-34	741	Screw	1
6DC-13	143604	Nut - Elevating	1	6DC-35	143751	Pin - Lower Swivel	1
6DC-14	76644	Plug	1	6DC-36	100151	Nut - Lock	1
6DC-15	143603	Housing - Column	1	6DC-37	143660	Spur - Gear	1
6DC-16	3306	Plug - Felt	1	6DC-38	3266	Screw	3
6DC-17	143666	Cover - Key	1	6DC-39	143662	Retainer - Bearing	1
6DC-18	150034	Key	1	6DC-40	95630	Bearing - Ball	1
6DC-19	3399	Screw	1	6DC-41	3279	Key	1
6DC-20	3203	Screw	8	6DC-42	143670	Screw - Elevating	1
6DC-21	3267	Washer	4	6DC-43	160048	Column	1
6DC-22	3251	Screw	4				

WHEELHEAD SLIDE & CROSSFEED SHAFT



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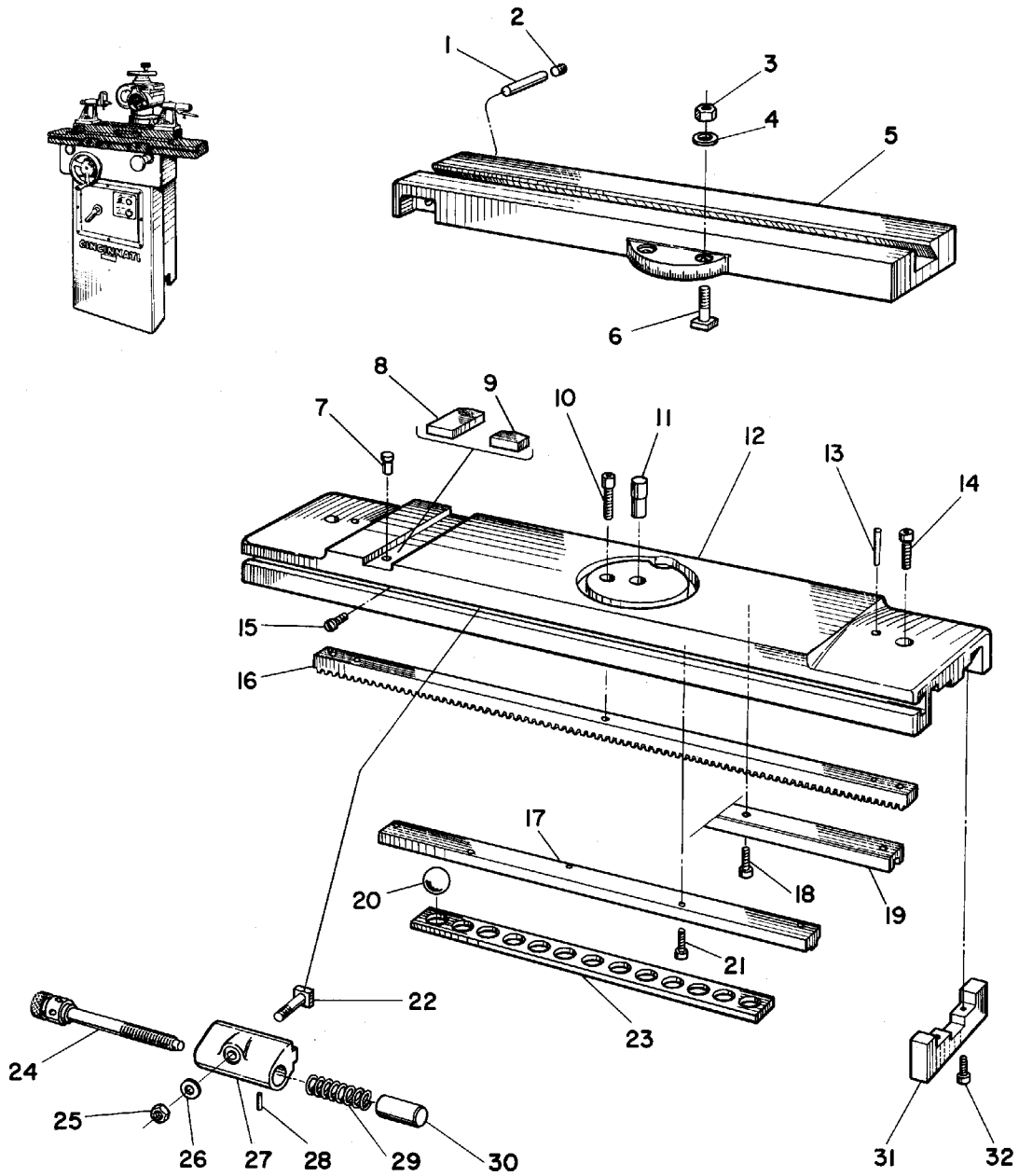
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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WHEELHEAD SLIDE – UNIT 6DBL

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBL-1	143610	Handwheel	1	6DBL-26	3396	Screw	4
6DBL-2	77200	Screw - Thumb	1	6DBL-27	143760	Pump - Lubricator	1
6DBL-3		Dial - Crossfeed, Rear		6DBL-28		Fitting	
	143690	English	1		214300	Bushing - Compression	2
	153086	Metric	1		214304	Sleeve - Compression	2
6DBL-4	143676	Housing - Plain Bearing	1	6DBL-29		Fitting	
6DBL-5	143678	Bearing - Flange	1		214294	Nut - Compression	2
6DBL-6	3280	Key	1		214304	Sleeve - Compression	2
6DBL-7	143674	Shaft - Crossfeed	1		220004	Plug - Drip	2
6DBL-8	3502	Handle	1	6DBL-30		Fitting	
6DBL-9	3234	Screw	1		214300	Bushing - Compression	1
6DBL-10	2301	Screw	1		214304	Sleeve - Compression	1
6DBL-11	2320	Screw	3	6DBL-31	77411	Plug - Closure	2
6DBL-12	143768	Pin - Handwheel Support	2	6DBL-32	143766	Junction - Bar	1
6DBL-13	3986	Cap	1	6DBL-33		Fitting	
6DBL-14	3912	Nipple	1		220003	Plug - Drip	1
6DBL-15	143694	Plug - Oil Hole	1		214304	Sleeve - Compression	1
6DBL-16	143607	Slide - Wheelhead	1		214294	Nut - Compression	1
6DBL-17	1894	Pin - Taper	1	6DBL-34	3397	Screw	2
6DBL-18	143672	Nut - Crossfeed Screw	1	6DBL-35		Fitting	
6DBL-19	143671	Guard - Dust	1		77196	Plug - Drip	2
6DBL-20	143677	Retainer - Dust Guard	1		214304	Sleeve - Compression	2
6DBL-21	143673	Screw - Crossfeed	1		214294	Nut - Compression	2
6DBL-22	739	Pin - Taper	1	6DBL-36	2209	Screw	6
6DBL-23	3280	Key	1	6DBL-37	220002	Clip - Tubing	6
6DBL-24	3218	Screw	3	6DBL-38	143764	Tubing - Oil	1
6DBL-25	143679	Extension - Crossfeed Screw	1				

SLIDE & SWIVEL TABLES



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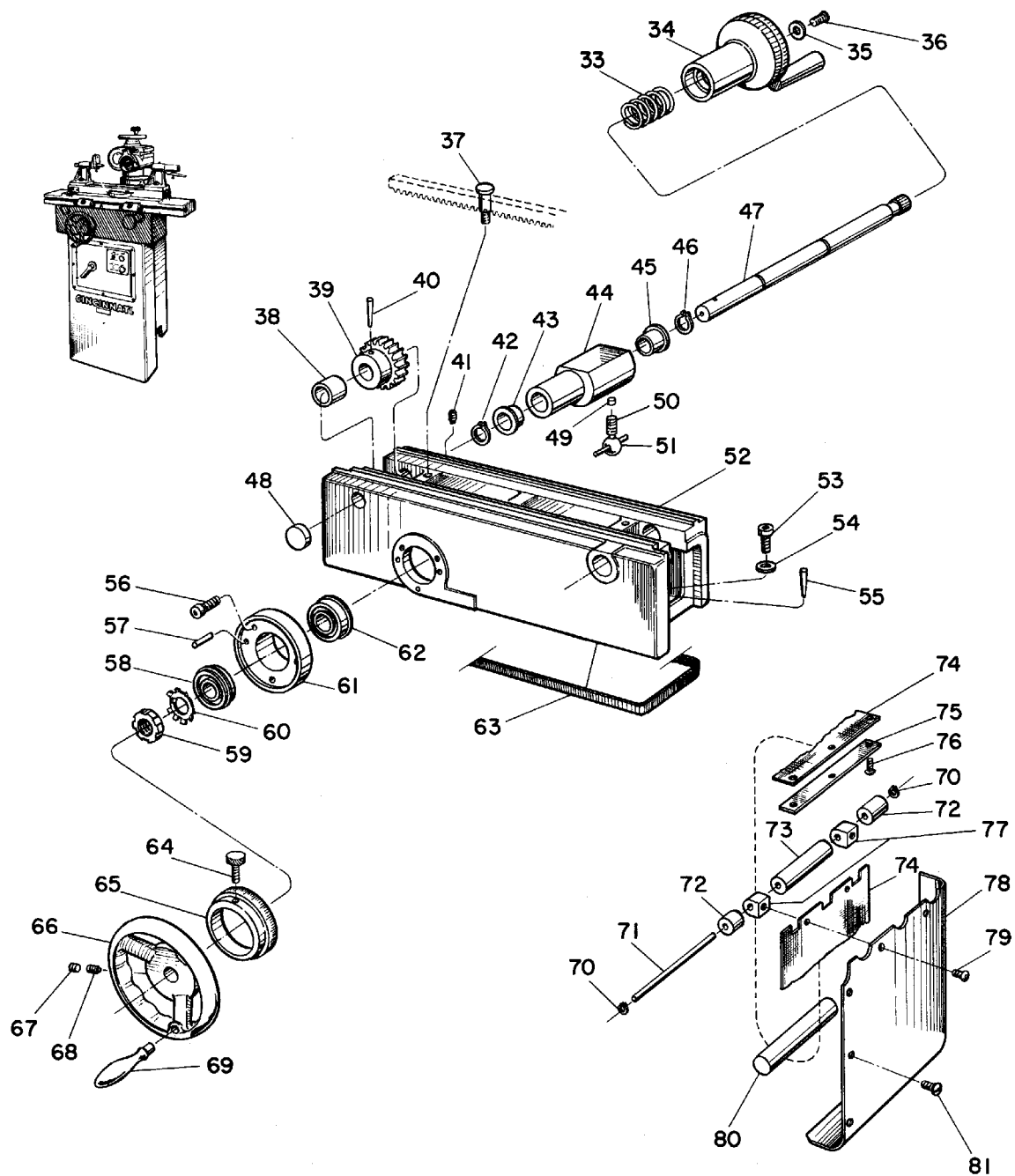
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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BRIDGE-TABLE - UNIT 6DH

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DH-1	143689	Pin - Adjusting	1	6DH-16	143682	Rack - Table Slide	1
6DH-2	1910	Screw	1	6DH-17	143684	Rail - Ball	1
6DH-3	3479	Nut	2	6DH-18	124975	Screw - Socket Head	5
6DH-4	3442	Washer	2	6DH-19	143683	Track - Ball	1
6DH-5	143609	Table - Swivel	1	6DH-20	68489	Ball - 3/4" Diameter	26
6DH-6	143770	Bolt - Tee	2	6DH-21	124975	Screw - Socket Head	5
6DH-7	143702	Pin - Locating	1	6DH-22	200159	Bolt - Tee	2
6DH-8		Set - Block		6DH-23	143648	Cage - Ball	2
	143688	English	1	6DH-24	67041	Screw - Thumb	2
	158481	Metric	1	6DH-25	664	Nut	2
6DH-9		Set - Block		6DH-26	125	Washer	2
	143687	English	1	6DH-27		Dog - Table	
	158480	Metric	1		143613	Right Hand	1
6DH-10	2300	Screw	1		143614	Left Hand	1
6DH-11	1430	Pin	1	6DH-28	3383	Pin	2
6DH-12	160049	Table - Slide	1	6DH-29	1740	Spring	2
6DH-13	158657	Pin - Taper	2	6DH-30	64963	Plunger - Table Dog	2
6DH-14	2300	Screw	2	6DH-31	143685	Plate - End	2
6DH-15	2274	Screw	2	6DH-32	3266	Screw	4

BRIDGE & HAND CONTROL SHAFT



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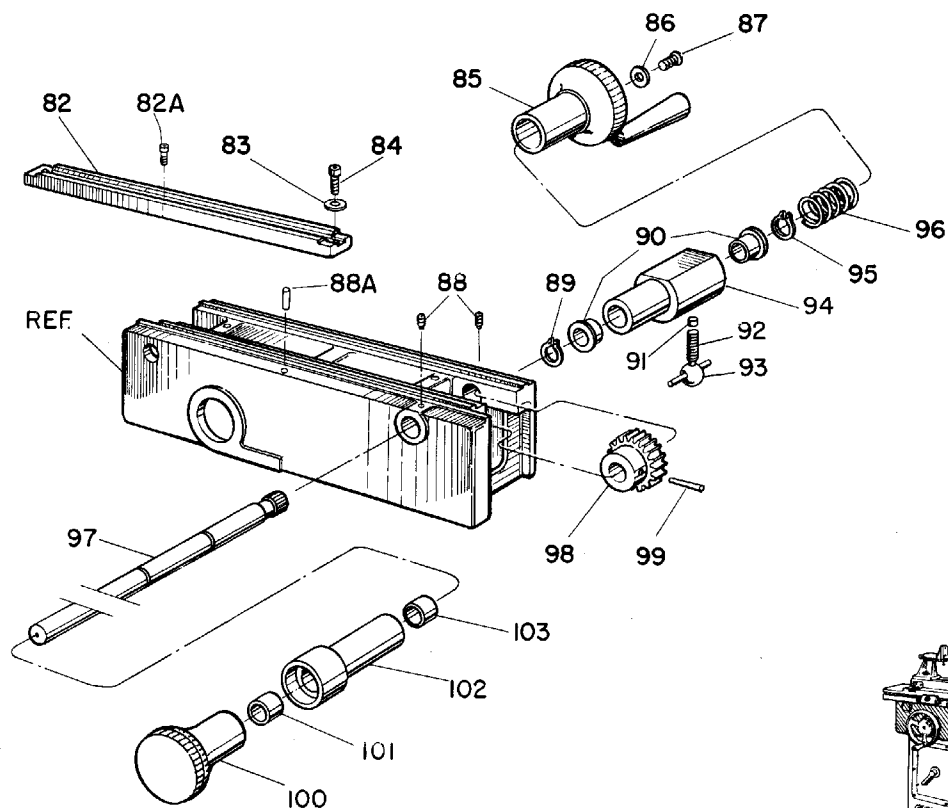
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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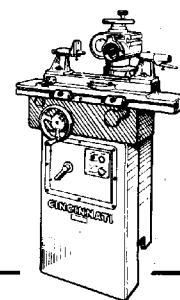
BRIDGE-TABLE - UNIT 6DH (Continued)

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DH -33	222029	Spring	1	6DBL-60	3805	Washer - Lock	1
6DH -34	148617	Knob - Shaft Hand Feed	1	6DBL-61	143681	Housing - Bearing	1
6DH -35	116018	Washer	1	6DBL-62	95630	Bearing - Ball	1
6DH -36	254024	Screw	1	6DH -63	143698	Gasket	1
6DH -37	143649	Stud - Safety	4	6DBL-64	77200	Screw - Thumb	1
6DH -38	143773	Bearing - Oilite, Plain	1	6DBL-65		Dial - Crossfeed, Front	
6DH -39	143644	Gear - Spur	1		143675	English	1
6DH -40	642	Pin - Taper	1		153088	Metric	1
6DH -41	2343	Screw	1	6DBL-66	143610	Handwheel	1
6DH -42	240852	Ring - Truarc	1	6DBL-67	2301	Screw	1
6DH -43	143774	Bearing - Oilite, Flange	1	6DBL-68	3234	Screw	1
6DH -44	143775	Housing - Rear	1	6DBL-69	3502	Handle	1
6DH -45	143774	Bearing - Oilite, Flange	1	6DH -70	143695	Ring - Truarc	4
6DH -46	240852	Ring - Truarc	1	6DH -71	143653	Shaft - Roller	2
6DH -47	143772	Shaft - Hand Control, Left Hand	1	6DH -72	143651	Guard - Roller	4
6DH -48	3551	Plug	1	6DH -73	143654	Guard - Roller	2
6DH -49	2268	Plug	1	6DH -74	150037	Guard - Dust	2
6DH -50	3536	Screw - Clamp	1	6DH -75	143686	Plate	2
6DH -51	143699	Handle	1	6DH -76	143629	Screw - Button Head	6
6DH -52	161704	Bridge	1	6DH -77	145313	Bracket - Roller	4
6DH -53	3248	Screw	4	6DH -78		Cover	
6DH -54	3257	Washer	4		161701	Right Hand	1
6DH -55	83800	Pin - Taper	2		161702	Left Hand	1
6DBL-56	2320	Screw	3	6DH -79	143629	Screw - Button Head	4
6DBL-57	1383	Pin	2	6DH -80	150035	Weight - Guard	2
6DBL-58	95630	Bearing - Ball	1	6DH -81	143696	Screw - Self Tapping	10
6DBL-59	3806	Nut - Lock	1				

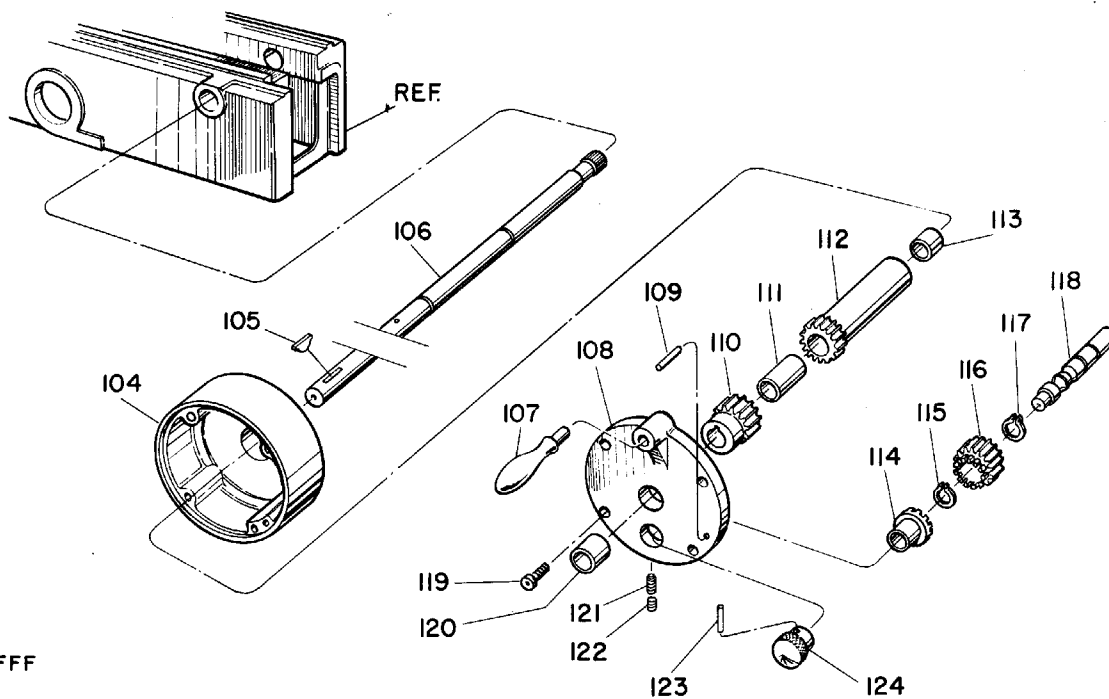
RIGHT HAND CONTROL - WITHOUT SLOW FEED



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RIGHT HAND CONTROL - WITH SLOW FEED



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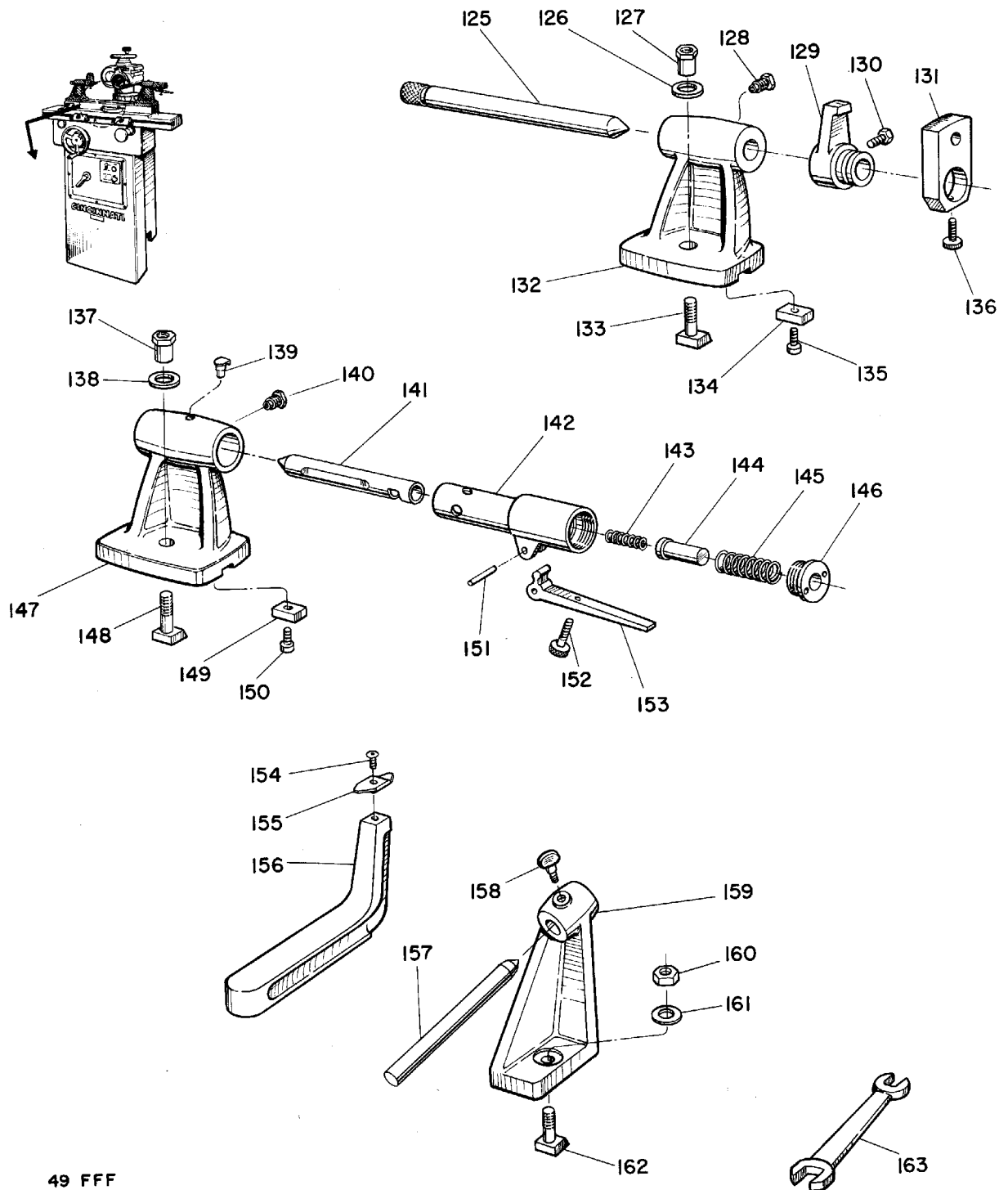
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

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BRIDGE-TABLE – UNIT 6DH (Continued)

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DH-82	143647	Track - Ball.	2	6DH-103	143701	Bushing - Plain (w/o Slow Hand Feed) . .	1
6DH-82A	124975	Screw	6	6DH-104	150029	Housing - Differential Gear (With Slow Hand Feed)	1
6DH-83	2196	Washer.	4	6DH-105	3279	Key.	1
6DH-84	2321	Screw	4	6DH-106	150027	Shaft - Hand Control	1
6DH-85	148617	Knob - Shaft, Hand Feed	1	6DH-107	3502	Handle	1
6DH-86	116018	Washer.	1	6DH-108	150030	Cover - Housing	1
6DH-87	254024	Screw	1	6DH-109	3543	Pin	1
6DH-88	2343	Screw	2	6DH-110	150025	Gear - Spur	1
6DH-88A	1900	Pin.	1	6DH-111	143725	Bushing - Shaft	1
6DH-89	240852	Ring - Truarc	1	6DH-112	150028	Gear - Spur	1
6DH-90	143774	Bearing - Oilite Flange	2	6DH-113	143701	Bushing - Plain	1
6DH-91	2268	Plug	1	6DH-114	150023	Gear - Clutch	1
6DH-92	3536	Screw - Clamp	1	6DH-115	236956	Ring - Truarc	1
6DH-93	143699	Handle	1	6DH-116	150022	Gear - Spur	1
6DH-94	143775	Housing - Rear	1	6DH-117	236956	Ring - Truarc	1
6DH-95	240852	Ring - Truarc	1	6DH-118	150024	Shaft - Clutch	1
6DH-96	222029	Spring	1	6DH-119	2320	Screw	4
6DH-97	143771	Shaft - Hand Control, Right Hand (w/o Slow Hand Feed)	1	6DH-120	150026	Bushing - Shaft	1
6DH-98	143644	Gear - Spur (with or w/o Slow Hand Feed)	1	6DH-121	143785	Plunger - Spring	1
6DH-99	642	Pin - Taper	1	6DH-122	2354	Screw	1
6DH-100	148616	Knob - Hand (w/o Slow Hand Feed)	1	6DH-123	140	Pin - Taper	1
6DH-101	143701	Bushing - Plain (w/o Slow Hand Feed) . .	1	6DH-124	126873	Knob - Knurled	1
6DH-102	143776	Housing - Front (w/o Slow Hand Feed) . .	1				

TAILSTOCK & TRUING FIXTURE



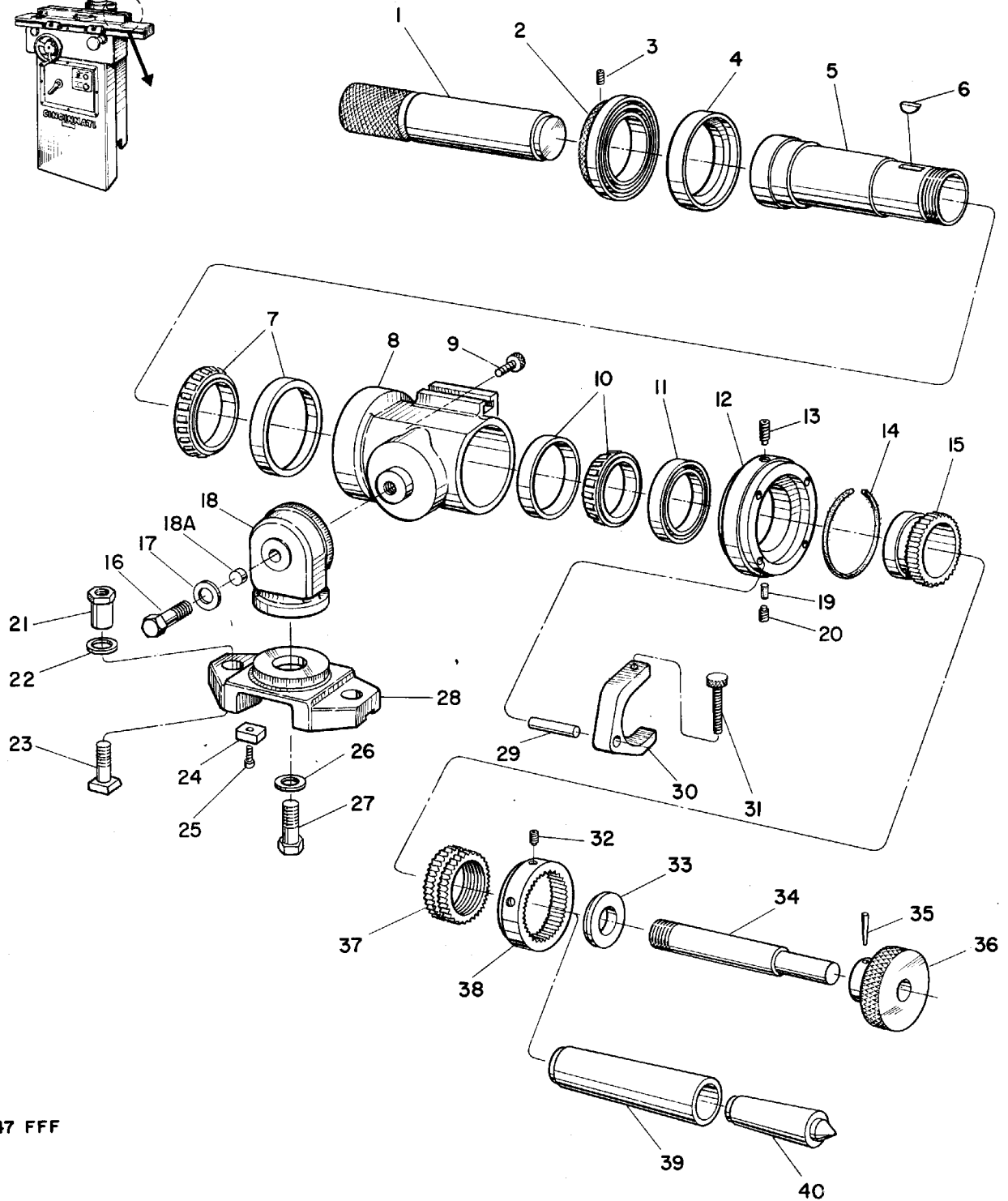
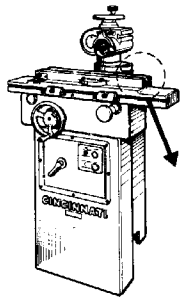
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

BRIDGE-TABLE – UNIT 6DH (Concluded)

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DH-125	64099	Center - Tailstock, Left Hand	1	6DH-145	143747	Spring	1
6DH-126	148448	Washer	1	6DH-146	143748	Retainer Cap - Spring	1
6DH-127	148447	Nut	1	6DH-147	160032	Bracket - Tailstock, Right Hand	1
6DH-128	143741	Screw - Lock	1	6DH-148	150033	Bolt - Wedge	1
6DH-129	65471	Plate - Clearance Set Dial	1	6DH-149	3312	Tongue	2
6DH-130	489	Screw	1	6DH-150	3218	Screw	2
6DH-131	65470	Body - Clearance	1	6DH-151	3542	Pin	1
6DH-132	160031	Bracket - Tailstock, Left Hand	1	6DH-152	2255	Screw - Thumb	1
6DH-133	150033	Bolt - Wedge	1	6DH-153	143740	Lever - Tailstock, Right Hand	1
6DH-134	3312	Tongue	2	6DH-154	143629	Screw - Button Head	1
6DH-135	3218	Screw	2	6DH-155	65815	Plate - Centering Gage	1
6DH-136	2255	Screw - Thumb	1	6DH-156	143769	Bracket - Centering Gage	1
6DH-137	148447	Nut	1	6DH-157	155111	Carbon Diamond and Rod	1
6DH-138	148448	Washer	1	6DH-158	62	Screw	1
6DH-139	44980	Cup - Oil	1	6DH-159	31381	Bracket - Diamond	1
6DH-140	143741	Screw - Lock	1	6DH-160	3479	Nut	1
6DH-141	143744	Center - Tailstock, Right Hand	1	6DH-161	3442	Washer	1
6DH-142	143746	Housing - Tailstock, Right Hand	1	6DH-162	150033	Bolt - Wedge	1
6DH-143	150021	Spring	1	6DH-163	19476	Wrench - Double End	1
6DH-144	143749	Plunger - Spring	1				

WORKHEAD



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CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

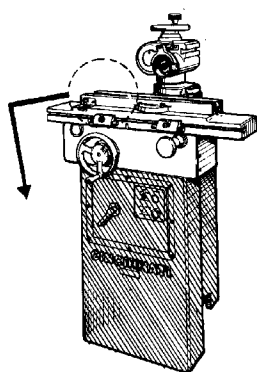
WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

WORKHEAD – UNIT 6DGC

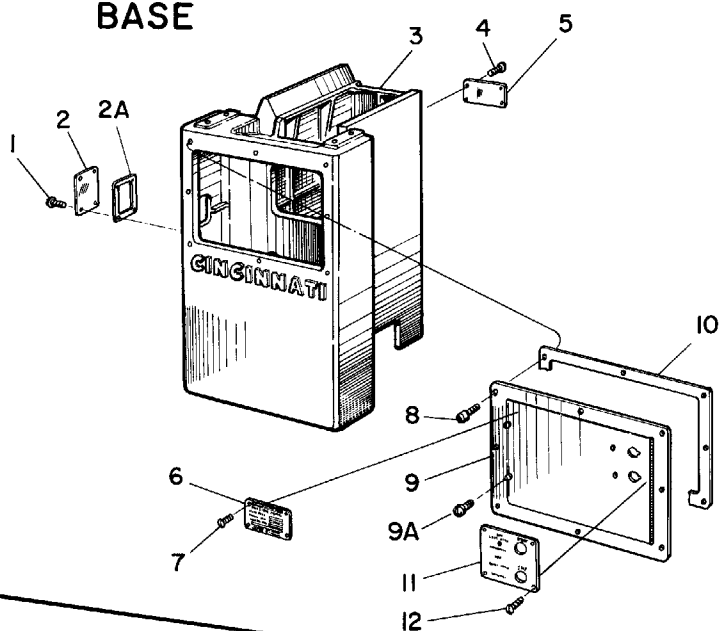
Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DGC-1	64854	Rod - Collet Extracting	1	6DGC-24	3312	Tongue	2
6DGC-2	143738	Cap - Dust	1	6DGC-25	3218	Screw	2
6DGC-3	1215	Screw	1	6DGC-26	1041	Washer	1
6DGC-4	143714	Ring - Dust	1	6DGC-27	183	Screw	1
6DGC-5		Spindle - Workhead		6DGC-28	143705	Plate - Workhead	1
	143707	B & S 12 Taper	1	6DGC-29	62687	Pin - Dog Setting	1
	148490	National Standard #5 Morse Taper	1	6DGC-30	62656	Dog - Setting	1
6DGC-6	3279	Key	1	6DGC-31	24896	Screw - Setting Dog	1
6DGC-7	148445	Bearing	1	6DGC-32	3228	Screw	1
6DGC-8	143703	Head - Work	1	6DGC-33	62465	Collar - Draw-In Bolt	1
6DGC-9	67401	Screw - Thumb	1	6DGC-34	143708	Bolt - Draw-In	1
6DGC-10	238669	Bearing - Rear	1	6DGC-35	642	Pin - Taper	1
6DGC-11	143715	Ring - Dust	1	6DGC-36	62464	Knob - Draw-In Bolt	1
6DGC-12	143706	Dial - Cutter Setting	1	6DGC-37	143711	Nut - Bearing Adjusting	1
6DGC-13	254453	Screw	1	6DGC-38	143710	Locknut - Bearing Adjusting	1
6DGC-14	143735	Wick - Felt	1	6DGC-39		Collet	
6DGC-15	143709	Spacer - Bearing Adjusting	1		23052	B & S 12 to 7 Taper	1
6DGC-16	111	Screw	1		7487	B & S 12 to 9 Taper	1
6DGC-17	1040	Washer	1		7488	B & S 12 to 10 Taper	1
6DGC-18	160041	Support - Workhead	1		139687	Morse #5 Taper to #2 Morse	1
6DGC-18A	3271	Plug - Felt	1		139688	Morse #5 Taper to #3 Morse	1
6DGC-19	1936	Plug	1		139689	Morse #5 Taper to #4 Morse	1
6DGC-20	1917	Screw	1	6DGC-40		Center - Workhead	
6DGC-21	148447	Nut	2		69049	B & S 12 Taper	1
6DGC-22	148448	Washer	2		96789	Morse #5 Taper	1
6DGC-23	150033	Bolt - Wedge	2				

3

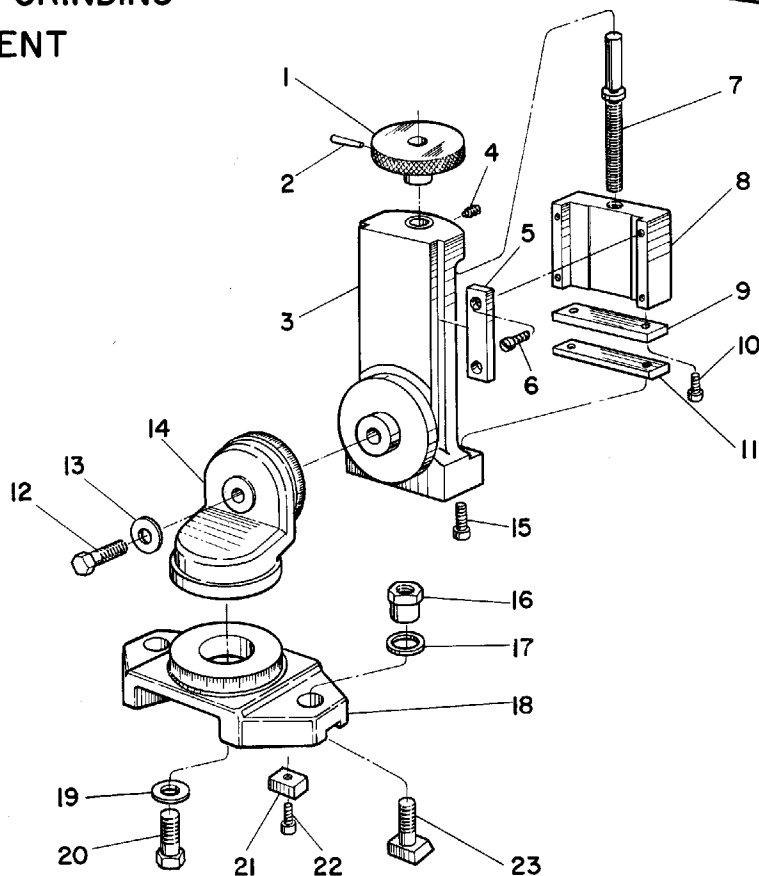
BASE



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SURFACE GRINDING ATTACHMENT



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CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

BASE - UNIT 6DAB

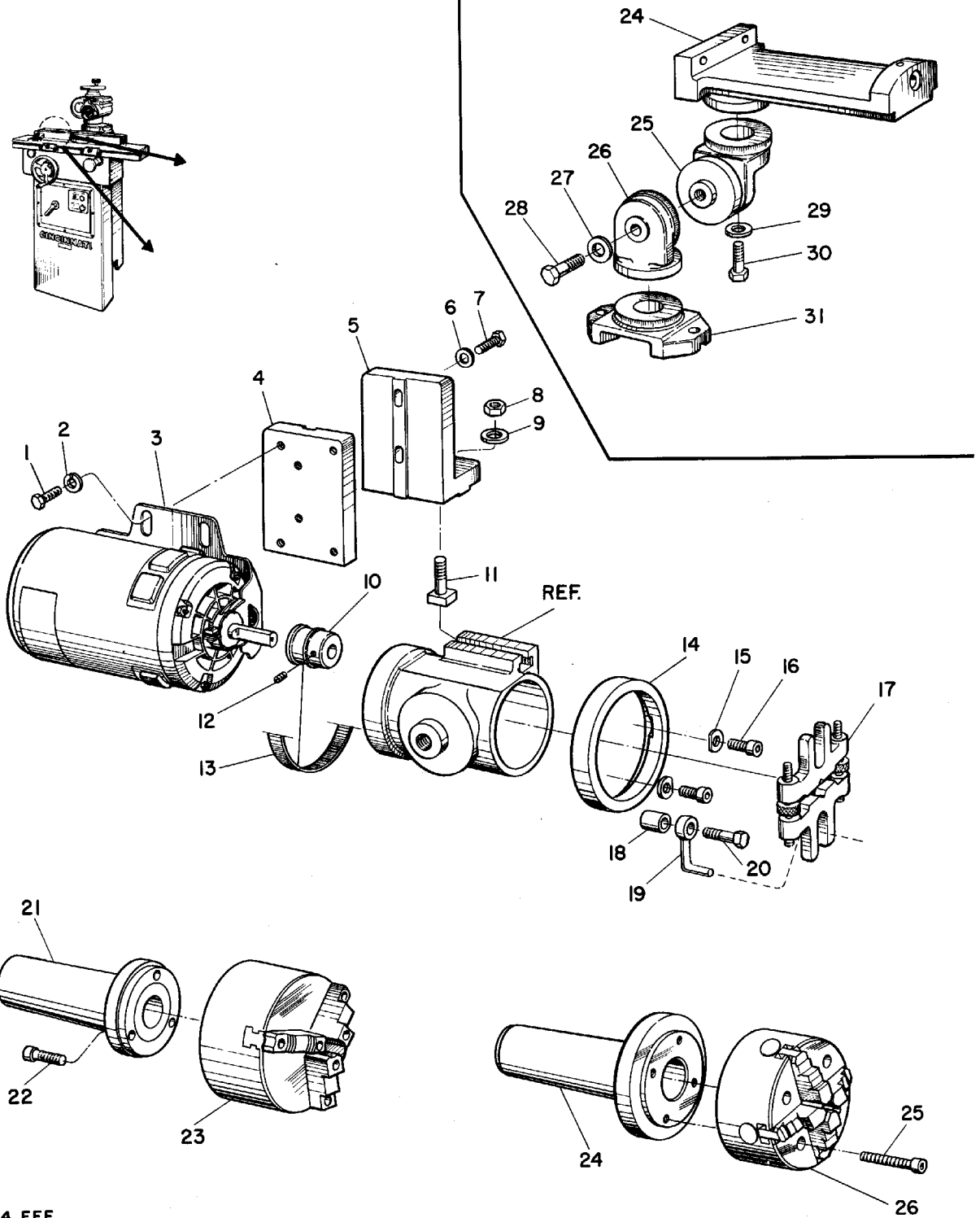
Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DN -1	143696	Screw - Self - Tapping	4	6DN -7	3178	Screw	4
6DN -2	160010	Plate - Outlet Mounting	1	6DN -8	143696	Screw - Self Tapping	8
6DN -2A	160011	Gasket - Mounting Plate	1	6DN -9	143757	Door and Frame, Electrical Panel	1
6DAB-3	143606	Base	1	6DN -9A	120004	Screw	2
6DAB-4	2209	Screw	4	6DN -10	150020	Gasket	1
6DAB-5	70645	Plate - Patent	1	6DN -11	143759	Plate - Direction	1
6DN -6	4180	Plate - Electrical Control	1	6DN -12	150036	Screw	4

SURFACE GRINDING ATTACHMENT - UNIT 6DBU

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBU-1	102480	Knob - Hand	1	6DBU-13	1040	Washer	1
6DBU-2	141	Pin - Taper	1	6DBU-14	143753	Support - Surface Grinding Attachment	1
6DBU-3	143754	Body - Surface Grinding Attachment	1	6DBU-15	3266	Screw	1
6DBU-4	2332	Screw	1	6DBU-16	148447	Nut	2
6DBU-5	62494	Clamp - Vise Body Slide	2	6DBU-17	148448	Washer	2
6DBU-6	3218	Screw	4	6DBU-18	143705	Plate - Workhead	1
6DBU-7	62493	Screw - Vise Body Slide	1	6DBU-19	1040	Washer	1
6DBU-8	62491	Slide - Vise Body	1	6DBU-20	183	Screw	1
6DBU-9	7319	Jaw - Housing	1	6DBU-21	3312	Tongue	2
6DBU-10	3218	Screw	2	6DBU-22	3218	Screw	2
6DBU-11	62492	Jaw - Body	1	6DBU-23	150033	Bolt - Wedge	2
6DBU-12	111	Bolt	1				

CYLINDRICAL GRINDING ATTACHMENT

SURFACE GRINDING ATTACHMENT



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CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

SURFACE GRINDING ATTACHMENT – UNIT 6DBU (Concluded)

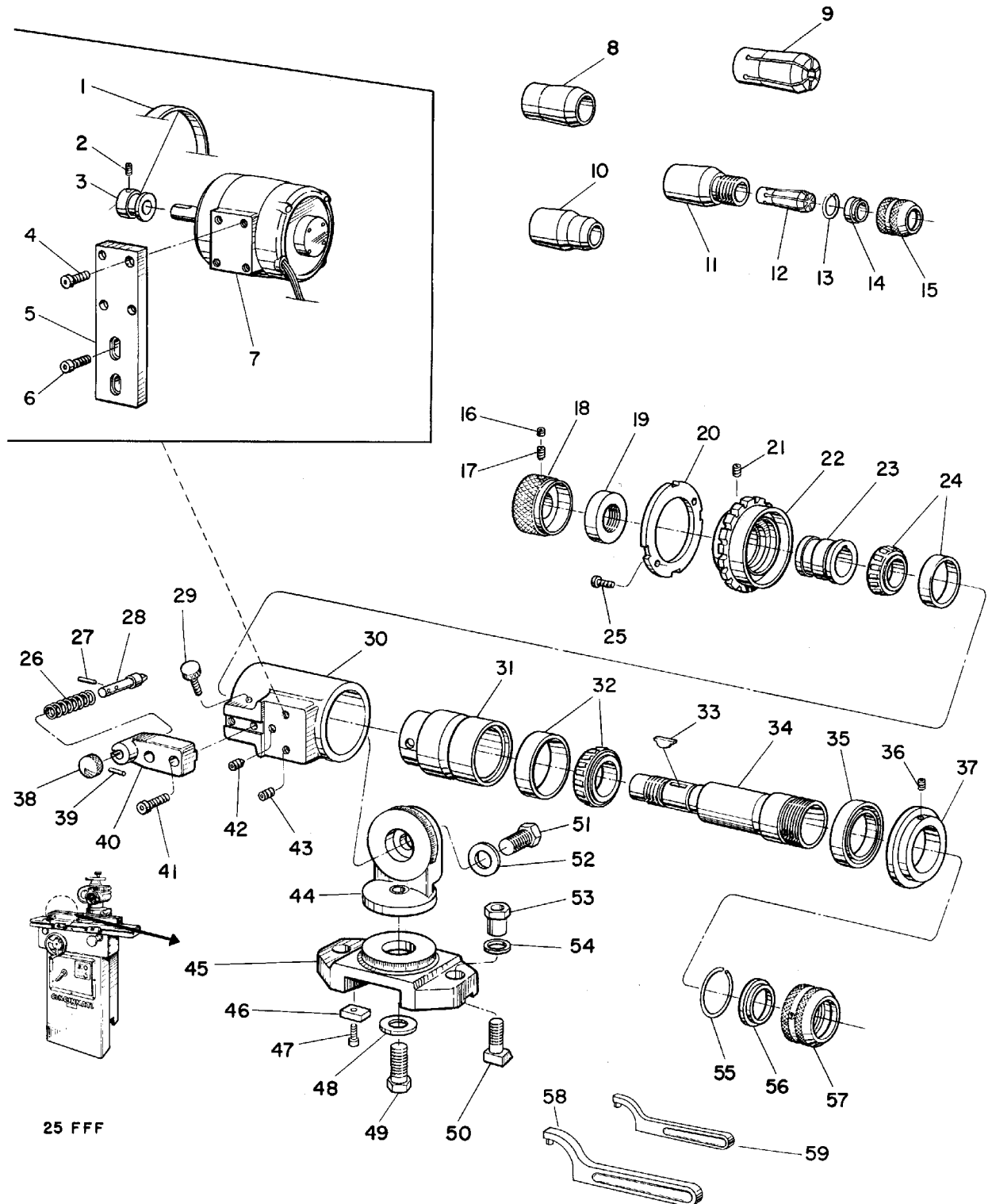
Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBU-24	143754	Body - Surface Grinding Attachment . . .	1	6DBU-28	111	Bolt (Universal Surface Grinding Attachment Only)	1
6DBU-25	143753	Support - Surface Grinding Attachment . .	1	6DBU-29	1040	Washer	1
6DBU-26	160041	Support - Workhead (Universal Surface Grinding Attachment Only)	1	6DBU-30	183	Screw	1
6DBU-27	1040	Washer (Universal Surface Grinding Attachment Only)	1	6DBU-31	143705	Plate - Workhead	1

CYLINDRICAL GRINDING ATTACHMENT – UNIT 6DBT

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBT-1	103317	Screw	4	6DBT-16	3399	Screw	2
6DBT-2	2196	Washer	4	6DBT-17	26147	Dog - Balance	1
6DM -3	-----	*Motor - 1800 RPM, 115 V, 3 Phase Totally Inclosed	1	6DBT-18	62462	Spacer - Dog Carrier	1
6DBT-4	150039	Plate - Motor Support	1	6DBT-19	7494	Dog - Carrier	1
6DBT-5	150040	Bracket - Support	1	6DBT-20	3464	Screw	1
6DBT-6	3441	Washer	2	6DBT-21	157769A	Flange - 4", 3 Jaw Chuck No. 5 Morse	1
6DBT-7	641	Screw	2		157770B	No. 12 B & S	1
6DBT-8	3479	Nut	1	6DBT-22	2321	Screw	3
6DBT-9	3442	Washer	1	6DBT-23	157768	Chuck - 4", 3 Reversible Jaw	1
6DBT-10	148442	Pulley - Driver	1	6DBT-24	160039	Flange - 4", 4 Jaw Chuck No. 5 Morse Taper	1
6DBT-11	3315	Bolt - Tee	1		160040	No. 12 B & S Taper	1
6DBT-12	2332	Screw	2	6DBT-25	2324	Screw	4
6DBT-13	150032	Belt - Flat	1	6DBT-26	160038	Chuck - 4" Individual 4 Jaw	1
6DBT-14	148441	Pulley - Driven	1				
6DBT-15	143793	Washer	2				

*State serial number of machine when ordering parts by name.

END MILL GRINDING ATTACHMENT



CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

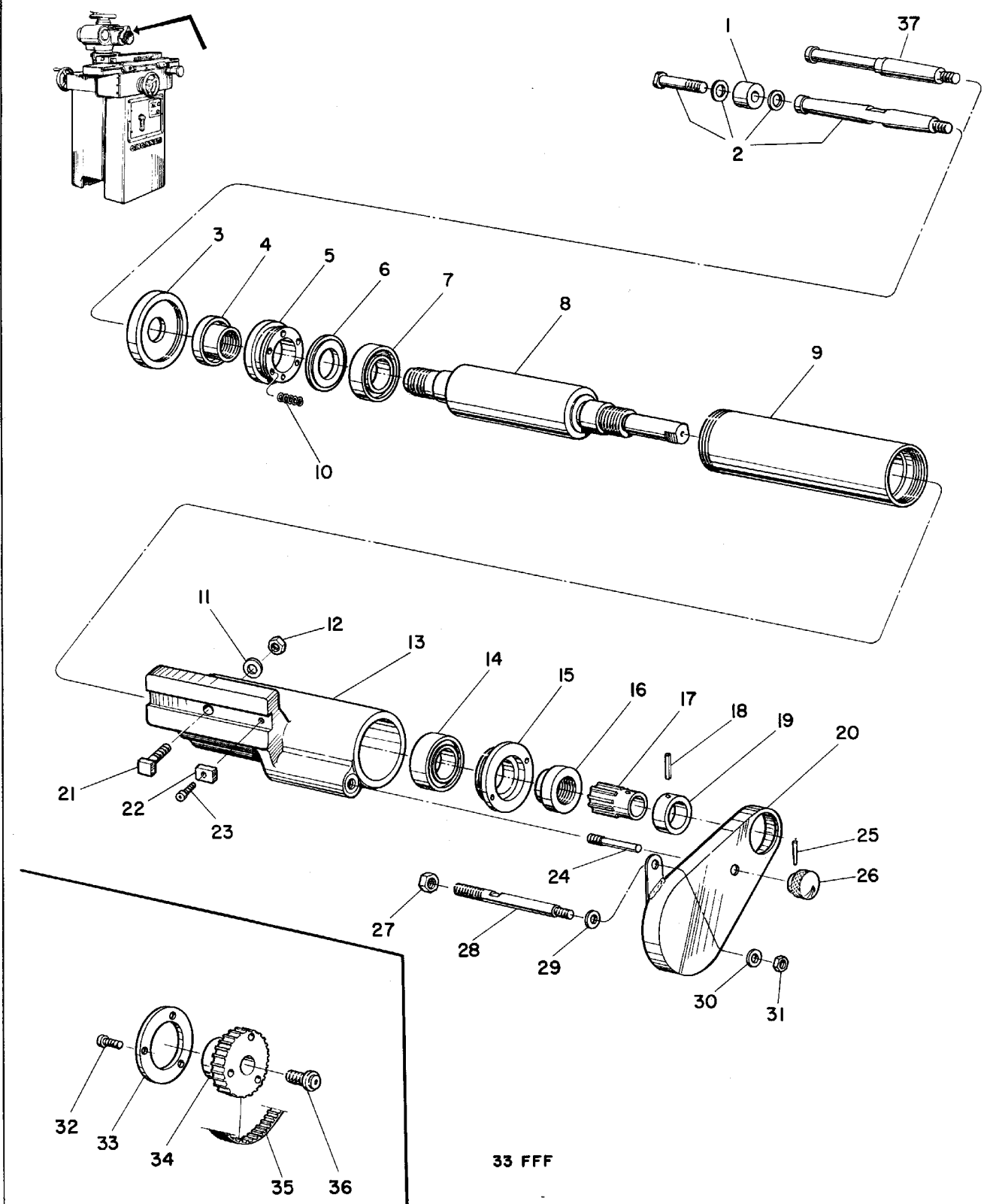
WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

END MILL GRINDING ATTACHMENT – UNIT 6DJU

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DJU-1	148434	Belt - Felt	1	6DJU-13	101694	Spring	1
6DJU-2	2332	Screw	1	6DJU-14	101695	Washer - Spindle Nose Nut	1
6DJU-3	148433	Pulley - Drive	1	6DJU-15	106822	Nut - Small Collet	1
6DJU-4	148437	Screw - Socket Head Cap	4	6DJU-16	2333	Screw	1
6DJU-5	148432	Bracket	1	6DJU-17	3228	Screw	1
6DJU-6	3399	Screw	2	6DJU-18	148430	Knob - Hand	1
6DM -7	137-193-A	Motor - End Mill Grinding Attachment, Bodine, 1/4 H. P., 1800 RPM, 115 V., Single Phase, Totally Inclosed	1	6DJU-19	4245	Nut - Lock	1
6DJU-8		Collet		6DJU-20		Plate	
	158153	No. 5 B & S.	1		148425	2 Position	1
	158152	No. 7 B & S.	1		148426	3 Positions	1
	106222	No. 9 B & S.	1		148427	4 Positions	1
	158151	No. 2 Morse	1		148428	6 Positions	1
	158150	No. 3 Morse	1		148429	8 Positions	1
	106219	No. 4 Morse	1	6DJU-21	1917	Screw	1
6DJU-9		Collet		6DJU-22	143799	Plate - Index 24 Slots	1
	128937	5/8" Hole	1	6DJU-23	143798	Bushing	1
	128938	3/4" Hole	1	6DJU-24	148436	Bearing - Roller	1
	128939	7/8" Hole	1	6DJU-25	3198	Screw	2
	128940	1" Hole	1	6DJU-26	3954	Spring	1
	128941	1-1/8" Hole	1	6DJU-27	3270	Pin	1
	128942	1-1/4" Hole	1	6DJU-28	143789	Pin - Index Lock	1
	132108	13 mm Hole	1	6DJU-29	150041	Screw - Thumb	1
	156224	16 mm Hole	1	6DJU-30	143794	Houseing	1
	157030	32 mm Hole	1	6DJU-31	148446	Sleeve	1
6DJU-10		Collet		6DJU-32	148435	Bearing - Roller	1
	158152	No. 7 B & S.	1	6DJU-33	3279	Key	1
	158153	No. 5 B & S.	1	6DJU-34	143797	Spindle - End Mill Grinding Attachment	1
	158151	No. 2 Morse	1	6DJU-35	143795	Ring - Dust	1
6DJU-11	128929	Adapter - Small Collet	1	6DJU-36	101782	Screw	1
6DJU-12		Collet		6DJU-37	143796	Cap - Dust	1
	128930	1/8" Hole	1	6DJU-38	126873	Knob - Knurled	1
	128931	3/16" Hole	1	6DJU-39	140	Pin - Taper	1
	128932	1/4" Hole	1	6DJU-40	148431	Bracket - Index Pin	1
	128933	5/16" Hole	1	6DJU-41	2321	Screw	2
	128934	3/8" Hole	1	6DJU-42	2051T	Screw	1
	128935	7/16" Hole	1	6DJU-43	1911	Screw (Without Motor Drive)	2
	128936	1/2" Hole	1	6DJU-44	160041	Support - Workhead	1
	156220	5 mm Hole	1	6DJU-45	143705	Plate - Workhead	1
	132107	7 mm Hole	1	6DJU-46	3312	Tongue	2
	153222	8 mm Hole	1	6DJU-47	3218	Screw	2
	153223	10 mm Hole	1	6DJU-48	1040	Washer	1
	156218	3 mm Hole	1	6DJU-49	183	Screw	1
	156219	4 mm Hole	1	6DJU-50	150033	Bolt - Wedge	2
	156221	6 mm Hole	1	6DJU-51	111	Bolt - Hex	1
	157026	20 mm Hole	1	6DJU-52	1040	Washer	1
	157027	24 mm Hole	1	6DJU-53	148447	Nut	2
	157028	25 mm Hole	1	6DJU-54	148448	Washer	2
	157029	30 mm Hole	1	6DJU-55	101671	Spring	1
	157031	14 mm Hole	1	6DJU-56	101674	Washer	1
	157032	15 mm Hole	1	6DJU-57	101668	Nut - Spindle Nose	1
	157033	18 mm Hole	1	6DJU-58	101758	Wrench - Spanner, (2-1/2" diam.)	1
	157034	22 mm Hole	1	6DJU-59	101759	Wrench - Spanner, (1-1/2" diam.)	1
	157035	26 mm Hole	1				
	157036	28 mm Hole	1				

Parts 6DJU-1 through 43 can be used with radius grinding attachment - page 43.

INTERNAL GRINDING ATTACHMENT



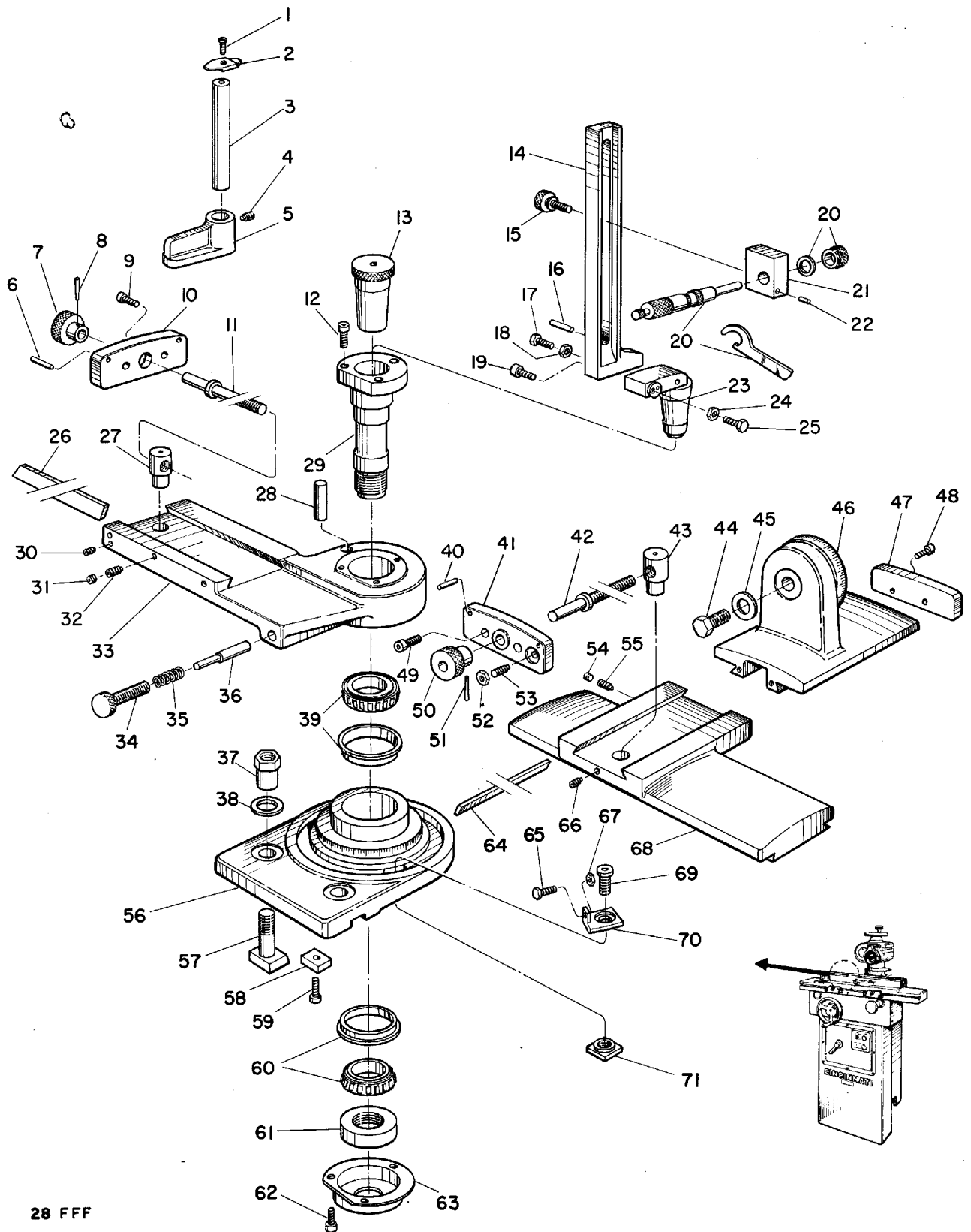
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

INTERNAL GRINDING ATTACHMENT – UNIT 6DBP

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBP-1	158180	Wheel Grinding		6DBP-18	148454	Pin - Spring	1
	158179	1" Outside Diameter	1	6DBP-19	148452	Flange - Driven Pulley	1
	158178	3/4" Outside Diameter	1	6DBP-20	148467	Guard	1
6DBP-2	148463	5/8" Outside Diameter	1	6DBP-21	3311	Bolt - Tee	1
6DBP-3	148456	Quill - Removable Spindle (Type 1)	1	6DBP-22	3312	Tongue	2
6DBP-4	148461	Cap - Dust	1	6DBP-23	3218	Screw	2
6DBP-5	148610	Nut - Retainer, Inner Front	1	6DBP-24	143622	Stud - Cover	1
6DBP-6	148609	Nut - Retainer, Outer Front	1	6DBP-25	140	Pin - Taper	1
6DBP-7	148457	Ring - Loading	1	6DBP-26	126873	Knob - Knurled	1
6DBP-8	150042	Bearing - Ball	1	6DBP-27	3473	Nut	1
6DBP-9	148472	Spindle	1	6DBP-28	148468	Stud - Guard Support	1
6DBP-10	156134	Sleeve	1	6DBP-29	936	Washer	1
6DBP-11	3442	Spring - Loading	6	6DBP-30	936	Washer	1
6DBP-12	3479	Washer	1	6DBP-31	3472	Nut	1
6DBP-13	150043	Nut	1	6DBP-32	3199	Screw	3
6DBP-14	148457	Body - Internal Grinding Attachment	1	6DBP-33	148465	Flange - Driven Pulley	1
6DBP-15	148520	Bearing - Ball	1	6DBP-34	148464	Pulley - Driven	1
6DBP-16	148519	Nut - Retainer, Rear	1	6DBP-35	143633	Belt - Timing	1
6DBP-17	148453	Nut - Retainer, Inner Rear	1	6DBP-36	143627	Screw - Spindle Lock	1
		Pulley - Driven	1	6DBP-37	158177	Quill - Removable Spindle (Type 2)	1

RADIUS GRINDING ATTACHMENT



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CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

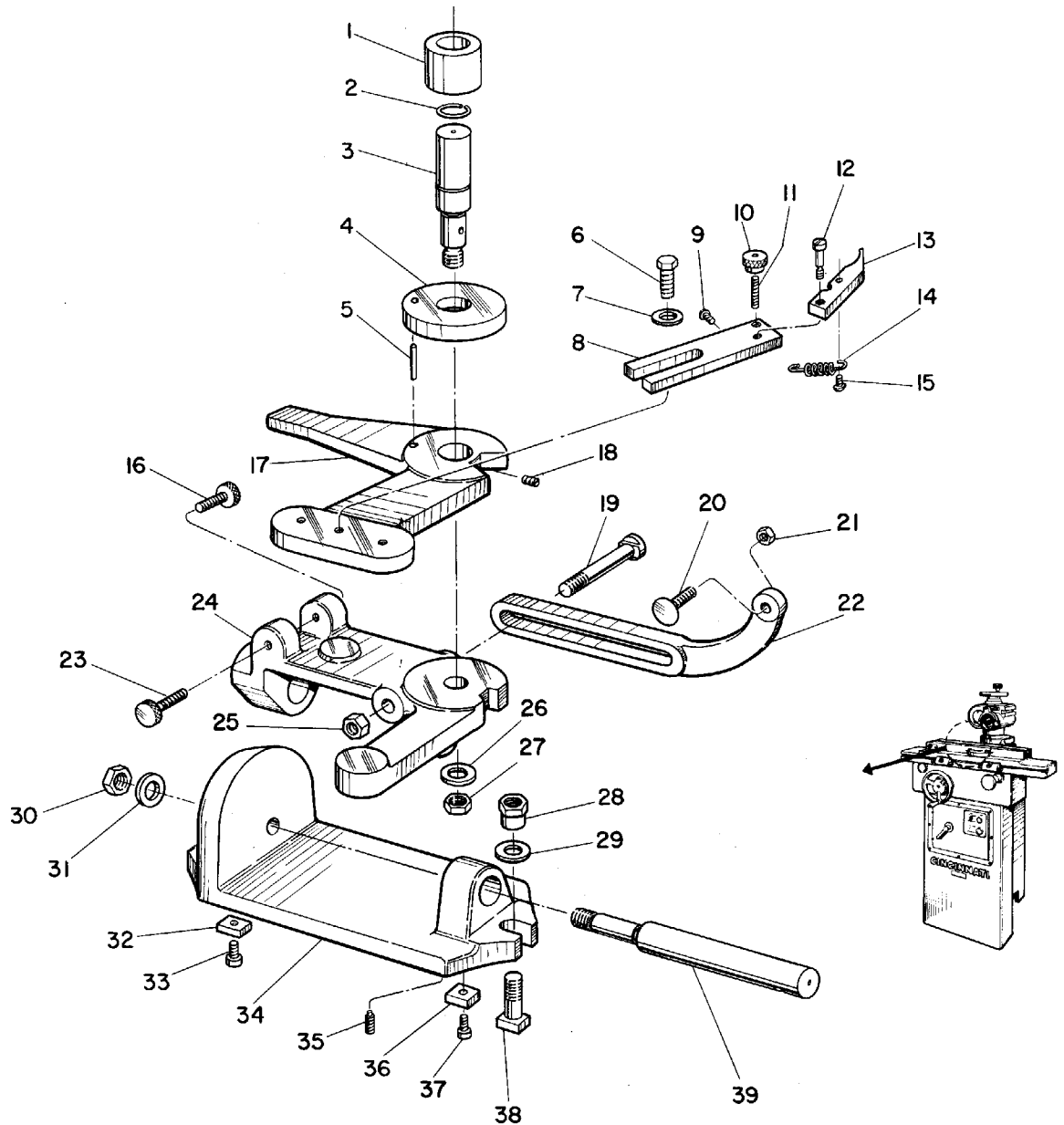
RADIUS GRINDING ATTACHMENT – UNIT 6DGB

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DGB-1	3460	Screw	1	6DGB-37	148447	Nut	2
6DGB-2	65815	Plate - Centering Gage	1	6DGB-38	148448	Washer	2
6DGB-3	148496	Stem - Tooth Rest Gage	1	6DGB-39	148477	Bearing - Roller	1
6DGB-4	2332	Screw	1	6DGB-40	3539	Pin	2
6DGB-5	107231	Base - Tooth Rest Gage	1	6DGB-41	148495	Cover - Support, Front	1
6DGB-6	3539	Pin	2	6DGB-42	148492	Screw - Lateral	1
6DGB-7	148489	Knob - Knurled	1	6DGB-43	148482	Nut	1
6DGB-8	140	Pin - Taper	1	6DGB-44	111	Screw	1
6DGB-9	3218	Screw	2	6DGB-45	1040	Washer	1
6DGB-10	148488	Cover - Slide	1	6DGB-46	148491	Support - Workhead	1
6DGB-11	148487	Screw - Longitudinal	1	6DGB-47	148494	Cover - Support, Rear	1
6DGB-12	3399	Screw	3	6DGB-48	3218	Screw	2
6DGB-13	148479	Plug - Swivel Shaft	1	6DGB-49	3218	Screw	2
6DGB-14	128609	Support - Radius Gage	1	6DGB-50	148489	Knob - Knurled	1
6DGB-15	878	Screw - Thumb	1	6DGB-51	140	Pin - Taper	1
6DGB-16	3540	Pin	2	6DGB-52	3472	Nut	1
6DGB-17	3378	Screw	1	6DGB-53	3230	Screw	1
6DGB-18	3472	Nut	1	6DGB-54	2332	Screw	3
6DGB-19	3396	Screw	2	6DGB-55	3229	Screw	3
6DGB-20		Micrometer - Barrel (Wrench Supplied)		6DGB-56	148475	Base - Radius Grinding Attachment	1
	117099	English	1	6DGB-57	150033	Bolt - Wedge	2
	117094	Metric	1	6DGB-58	3312	Tongue	2
6DGB-21	128608	Holder - Micrometer	1	6DGB-59	3218	Screw	2
6DGB-22	3540	Pin	1	6DGB-60	148476	Bearing - Roller	1
6DGB-23	127303	Base - Radius Gage	1	6DGB-61	4243	Nut - Lock	1
6DGB-24	3472	Nut	1	6DGB-62	3203	Screw	3
6DGB-25	3378	Screw	1	6DGB-63	148480	Cap - Dust	1
6DGB-26	148486	Gib - Swivel	1	6DGB-64	148493	Gib - Slide	1
6DGB-27	148482	Nut	1	6DGB-65	101132	Screw - Adjusting Dog	1
6DGB-28	119113	Pin	2	6DGB-66	2332	Screw	2
6DGB-29	148478	Shaft - Swivel	1	6DGB-67	3472	Nut	2
6DGB-30	2332	Screw	2	6DGB-68	148485	Slide	1
6DGB-31	2332	Screw	3	6DGB-69	103135	Screw - For Dog	2
6DGB-32	3229	Screw	3	6DGB-70		Dog	
6DGB-33	148481	Swivel - Radius Grinding Attachment	1		103131	Left	1
6DGB-34	148484	Screw - Lock	1		103130	Right	1
6DGB-35	94245	Spring	1	6DGB-71	103136	Nut - Dog Screw	2
6DGB-36	148483	Pin - Lock	1				

For small end mill head parts see page 39.

GEAR CUTTER GRINDING ATTACHMENT

G



24 FFF

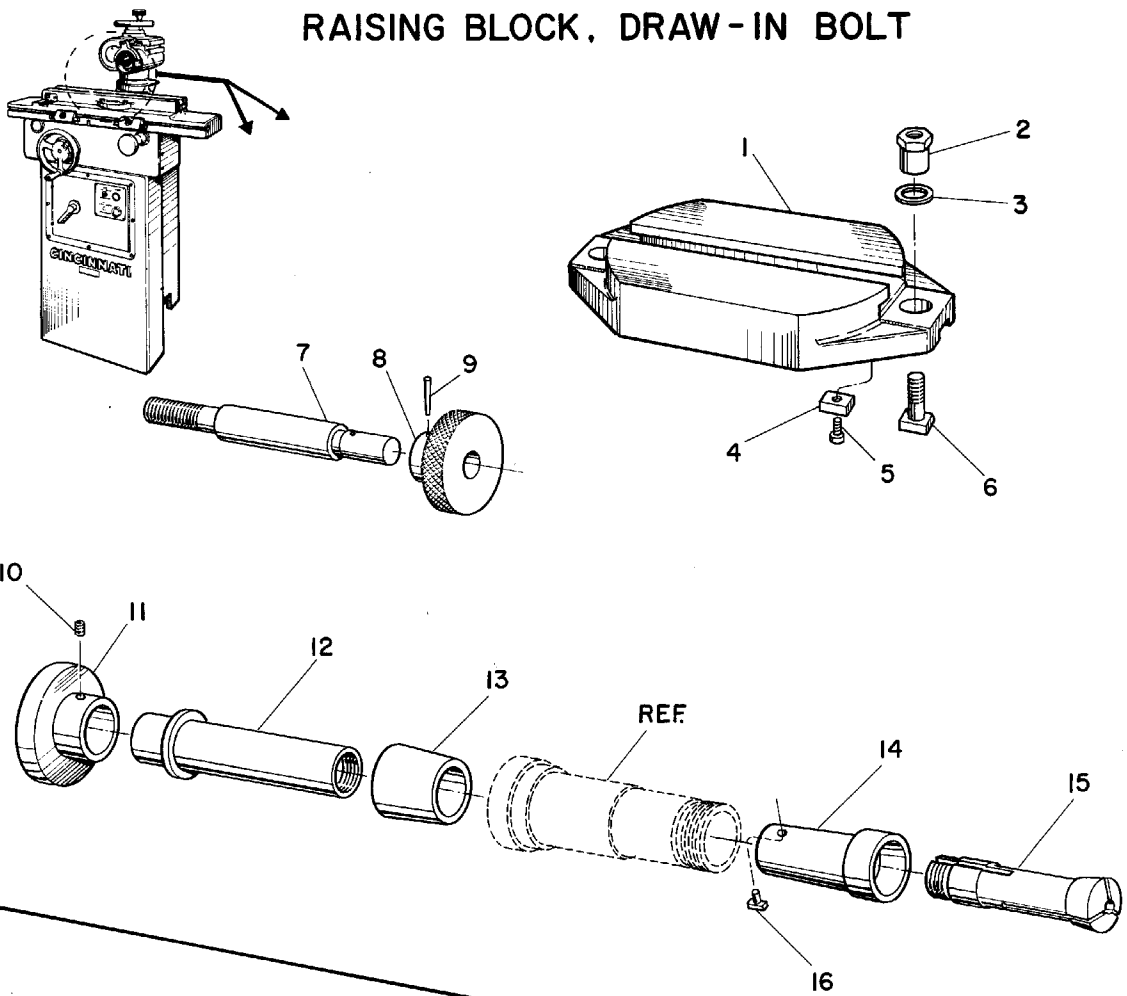
CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

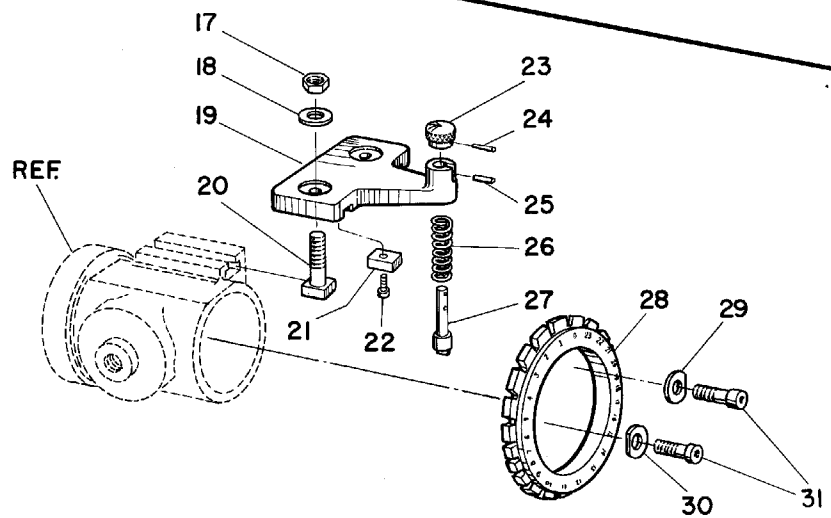
GEAR CUTTER GRINDING ATTACHMENT - UNIT 6DBV

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DBV-1		Bushing - Cutter		6DBV-15	3459	Screw	1
	62513	2" Diameter, English.	1	6DBV-16	62522	Screw - Thumb Adjusting	1
	62512	1-3/4" Diameter, English.	1	6DBV-17	62540	Plate - Cutter, Supporting.	1
	62511	1-1/2" Diameter, English.	1	6DBV-18	2314	Screw	1
	62510	1-1/4" Diameter, English.	1	6DBV-19	64960	Bolt - Centering Gage	1
	62509	1" Diameter, English.	1	6DBV-20	66796	Pin - Centering Gage	1
	62518	45 mm Diameter, Metric	1	6DBV-21	3473	Nut	1
	62517	40 mm Diameter, Metric	1	6DBV-22	120005	Bracket - Centering Gage	1
	62516	32 mm Diameter, Metric	1	6DBV-23	62522	Screw - Thumb Adjusting	1
	62515	27 mm Diameter, Metric	1	6DBV-24	64957	Bracket	1
6DBV-2	71090	Ring - Spring Locking.	1	6DBV-25	3479	Nut	1
6DBV-3		Stud - Cutter		6DBV-26	3442	Washer	1
	62507	7/8" Diameter, English.	1	6DBV-27	3474	Nut	1
	62514	22 mm Diameter, Metric	1	6DBV-28	148447	Nut	2
6DBV-4	64958	Collar - Cutter, Stud	1	6DBV-29	148448	Washer	2
6DBV-5	3542	Pin	1	6DBV-30	3479	Nut	1
6DBV-6	641	Screw	1	6DBV-31	3442	Washer	1
6DBV-7	3441	Washer	1	6DBV-32	3312	Tongue	1
6DBV-8	67496	Holder - Pawl	1	6DBV-33	3218	Screw	1
6DBV-9	3459	Screw	1	6DBV-34	143791	Base - Gear Cutter Grinder	1
6DBV-10	67495	Knob - Holder Stud	1	6DBV-35	3230	Screw	1
6DBV-11	67494	Stud - Holder.	1	6DBV-36	3312	Tongue	1
6DBV-12	62521	Screw - Fillister Head	1	6DBV-37	3218	Screw	1
6DBV-13	67497	Pawl	1	6DBV-38	150033	Bolt - Wedge	1
6DBV-14	251	Spring	1	6DBV-39	143792	Shaft - Rocker	1

RAISING BLOCK, DRAW-IN BOLT



INDEX PLATE



23 FFF
34 FFF

CINCINNATI NO. 1 CUTTER AND TOOL GRINDER

WHEN ORDERING PARTS, give key number, part name and part number. Be sure to give complete serial number for your machine. For complete instructions, see Page 13, "How to Order Repair Parts."

WORKHEAD INDEXING ATTACHMENT – UNIT 6DJF

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
6DJF-1	150047	Block - Raising 2"	1		147931	39/64" Hole	1
6DJF-2	148447	Nut	2		147932	5/8" Hole	1
6DJF-3	148448	Washer	2		147933	41/64" Hole	1
6DJF-4	3312	Tongue	2		147934	21/32" Hole	1
6DJF-5	3218	Screw	2		147935	43/64" Hole	1
6DJF-6	150033	Bolt - Wedge	2		147936	11/16" Hole	1
6DJF-7	150046	Bolt - Draw-In (For #50 Taper)	1		147937	45/64" Hole	1
6DJF-8	62464	Knob - Draw-In (For #50 Taper)	1		147938	23/32" Hole	1
6DJF-9	642	Pin (For #50 Taper)	1		147939	47/64" Hole	1
6DJF-10	1879	Screw	1		147940	3/4" Hole	1
6DJF-11	139877	Handwheel - For #6 Hendy	1		147941	49/64" Hole	1
6DJF-12		Bar - Draw-In, For #6 Hendy	1		147942	25/32" Hole	1
	150045FA	No. 12 B & S Taper, Workhead Spindle	1		147943	51/64" Hole	1
	150045FB	No. 5 Morse Taper, Workhead Spindle	1		147944	13/64" Hole	1
6DJF-13	139878	Sleeve - Centering, For #6 Hendy	1		147945	53/64" Hole	1
6DJF-14		Collet - Adapter	1		147946	27/32" Hole	1
	139880	No. 12 B & S Taper, Workhead Spindle	1		147947	55/64" Hole	1
	139881	No. 5 Morse Taper, Workhead Spindle	1		147948	7/8" Hole	1
6DJF-15		Collet - Spring, For #6 Hendy	1		147949	57/64" Hole	1
	147900	1/8" Hole	1		147950	29/32" Hole	1
	147901	9/64" Hole	1		147951	59/64" Hole	1
	147902	5/32" Hole	1		147952	15/16" Hole	1
	147903	11/64" Hole	1		147953	61/64" Hole	1
	147904	3/16" Hole	1		147954	31/32" Hole	1
	147905	13/64" Hole	1		147955	63/64" Hole	1
	147906	7/32" Hole	1		147956	1" Hole	1
	147907	15/64" Hole	1		147957	1-1/64" Hole	1
	147908	1/4" Hole	1		147958	1-1/32" Hole	1
	147909	17/64" Hole	1		147959	1-3/64" Hole	1
	147910	9/32" Hole	1		147960	1-1/16" Hole	1
	147911	19/64" Hole	1		147961	1-5/64" Hole	1
	147912	5/16" Hole	1		147962	1-3/32" Hole	1
	147913	21/64" Hole	1		147963	1-7/64" Hole	1
	147914	11/32" Hole	1		147964	1-1/8" Hole	1
	147915	23/64" Hole	1	6DJF-16	139879	Key - In Collet	1
	147916	3/8" Hole	1	6DJF-17	3479	Nut	1
	147917	25/64" Hole	1	6DJF-18	3442	Washer	1
	147918	13/32" Hole	1	6DJF-19	143788	Bracket - Index Pin	1
	147919	27/64" Hole	1	6DJF-20	3311	Bolt - Tee	1
	147920	7/16" Hole	1	6DJF-21	3312	Tongue	1
	147921	29/64" Hole	1	6DJF-22	3218	Screw	1
	147922	15/32" Hole	1	6DJF-23	126873	Knob - Knurled	1
	147923	31/64" Hole	1	6DJF-24	140	Pin - Taper	1
	147924	1/2" Hole	1	6DJF-25	3270	Pin	1
	147925	33/64" Hole	1	6DJF-26	3954	Spring	1
	147926	17/32" Hole	1	6DJF-27	143789	Pin - Index Lock	1
	147927	31/64" Hole	1	6DJF-28	143790	Plate - Index 24 Slots	1
	147928	9/16" Hole	1	6DJF-29	143793	Washer	1
	147929	37/64" Hole	1	6DJF-30	143793	Washer	1
	147930	19/32" Hole	1	6DJF-31	3399	Screw	2

CMM. Co. RECOMMENDED LUBRICANTS

The following lubricants have been tested by The Cincinnati Milling Machine Co., and are recommended for use in their machines:

CMMCo. No. P-55

Source	Product
Cities Service Oil Co.....	Pacemaker #2
Cities Service Oil Co.....	Pacemaker #200-T
Esso Standard Oil Co.....	Esstic 45
Gulf Oil Co.....	Crest "B" & Harmony "B"
Mid-Continent Oil Co.....	DX-Cherokee Oil ("M" R & O)
The Pennzoil Co.....	Pennzoil Turbine Oil Medium
Richfield Oil Co.....	Eagle Oil R & O X-Light
Shell Oil Co.....	Tellus 29
Sinclair Refining Co.....	Duro 200
Socony-Mobil Oil Co.....	D.T.E. Medium
Standard Oil Co. (Calif.).....	Calol O.C. Turbine Oil 11
Standard Oil Co. (Ind.).....	STANOIL Industrial Oil #21
Standard Oil Co. (Ohio).....	Sohivis 47
Standard Oil Co. (Ohio).....	Limax 47
Sun Oil Co.....	Sunvis 921
Swan-Finch Oil Corp.....	Safco Dytac B
Swan-Finch Oil Corp.....	Saf-Drive B-10
Texas Oil Co.....	Regal Oil "B" (R & O Type)
Tidewater Assoc. Oil Co.....	Tycol Aturbrio 58