

PARTS LIST

FOR

K. O. LEE

GRINDER FIXTURES

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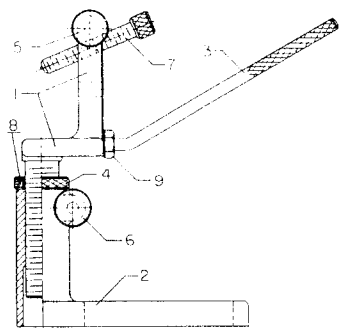
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K. O. LEE COMPANY

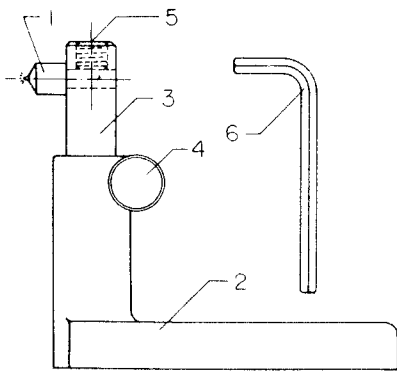
200 SOUTH HARRISON • ABERDEEN, SD 57401 • P. O. BOX 1416
PHONE: 605/225-5820 • TWX: 910-668-0048

B269 Radial Diamond Dresser



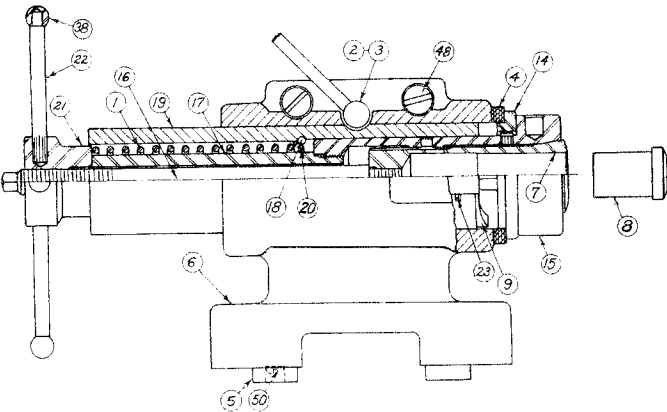
Index No.	Part No.	Quan. Req.	Description
1	B269A	1	Swinging Arm
2	B269B	1	Base
3	A269H	1	Handle
4	A269N	1	Adjusting Nut
5	P117K	1	Knurled Thumb Screw
6	P119K	1	Knurled Thumb Screw
7	P176D	1	Diamond Screw
8	10-24x3/16	1	Flat Point Hdle. Set Screw
9	1/4 USS	1	Hex Nut (H)

B640K Diamond Dresser



Index No.	Part No.	Quan. Req.	Description
1	A173	1	Diamond
2	B269B	1	Base
3	B640KC	1	Column
4	P119K	1	Knurled Thumb Screw
5	7/16x3/8 USS	1	Hex Socket Flat Point Set Screw
6	7/32 Hex	1	Wrench

B647 Tap Grinding Fixture



ACCESSORIES FOR B647 FIXTURE

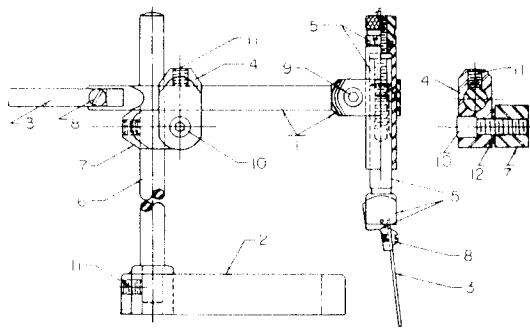
Index No.	Part No.	Quan. Req.	Description
9	B647CAL	1	L. Hand Lift Cam (Taps up to 3/8")
9	B647CBL	1	L. Hand Lift Cam (Taps 3/8" to 1/2")
9	B647CCL	1	L. Hand Lift Cam (Taps over 1/2")
9	B647CSL	1	L. Hand Lift Cam - Spec. for 2 flute Taps
14	B647D	5	and 6 Fluted Index Discs
7	B647E	1	.800" Collet to fit 1" Tap
8	B647F	1	Bushings for B647E Collet to fit 1/16", 3/32" and 1/8" Taps
8	B647P	1	Driver for use in B647 Tap Grinding Fixture when grinding large Taps

NOTE: Either A261G Spring Center or B621 "Quick Release" Spring Center Tail Stock must be used with B647P Driver.

B647 Tap Grinding Fixture

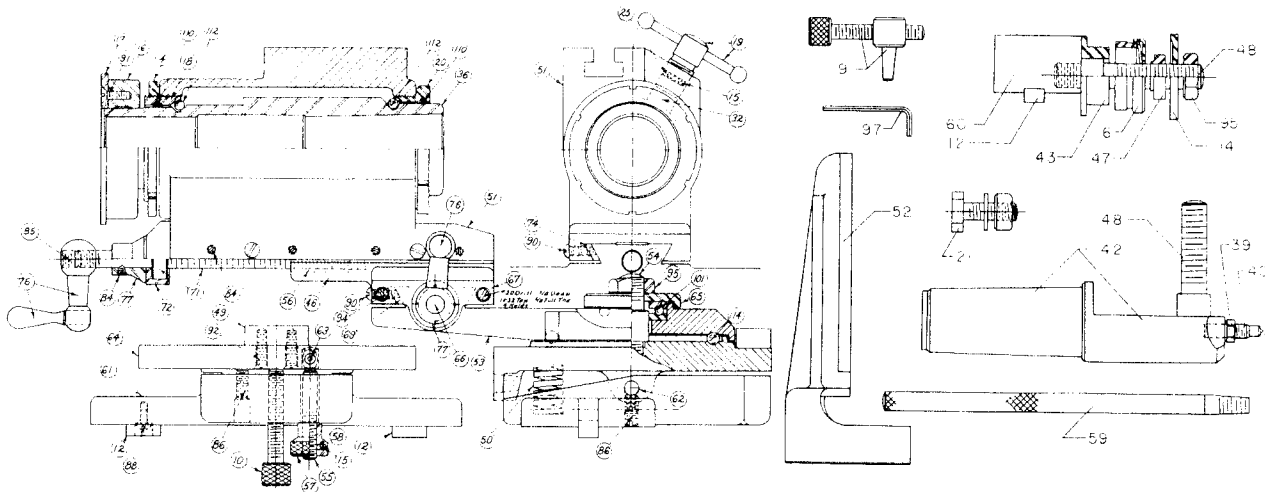
Index No.	Part No.	Quan. Req.	Description
1	A261F	1	Coil Spring
2	A261L	1	Lock Screw Assembly
3	A261LN	1	Lock Nut
4	A261W	1	Fiber Thrust Washer
5	A623	2	T-Slot Block
6	A647B	1	Body
7	B647A	1	1/16" Collet
8	B647B	1	Bushing to take Nos. 9 thru 12; sizes 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" Taps
9	B647CA	1	Rt. Hd. Cam (A) (Taps up to 3/8")
9	B647CB	1	Rt. Hd. Cam (B) (Taps 3/8" to 1/2")
9	B647CC	1	Rt. Hd. Cam (C) (Taps over 1/2")
9	B647CS	1	Rt. Hd. Lift Cam - Spec. for 2 flute Taps
14	B647D2	1	Two Flute Index Disc
14	B647D3	1	Three Flute Index Disc
14	B647D4	1	Four Flute Index Disc
15	B647K	1	Collet Adapter Assembly
16	B647L	1	Draw Bolt
17	B647M	1	Draw Bolt Tube
18	B647R	1	Lock Ring
19	B647S	1	Spindle
20	B647T	1	Thrust Collar
21	B647WH	1	Hub
22	B647WS	4	Spoke for Hub
23	B647Y	1	Retainer Pin for Cam
38	P173CB	4	Ball for Spoke
	A659	2	T-Slot Bolt (3/8"x1 1/8")
48		2	1/4"x7/8" S.A.E. Fill. Hd. Mach. Screw
50		2	6-32x3/8" S.T. Round Head Screw

B840 Universal Tooth Rest



Index No.	Part No.	Quan. Req.	Description
1	B210A	1	Cross Arm
2	B240C	1	Base
3	B210D	2	Blade
4	B840P	1	Swivel Block
5	B910R	1	Rocker Assembly
6	B840S	1	Shaft
7	B840T	1	Swivel Block
8	10-32x $\frac{1}{4}$	2	Round Head Screw (H)
9	$\frac{5}{16}$ x $\frac{3}{4}$ SAE	1	Hex Socket Cap Screw
10	$\frac{5}{16}$ x1 $\frac{1}{4}$ SAE	1	Hex Socket Cap Screw
11	$\frac{7}{16}$ x $\frac{3}{8}$ USS	3	Hex Socket Set Screw Flat Point
12	$\frac{5}{16}$	1	Lock Washer (Lock Burred)

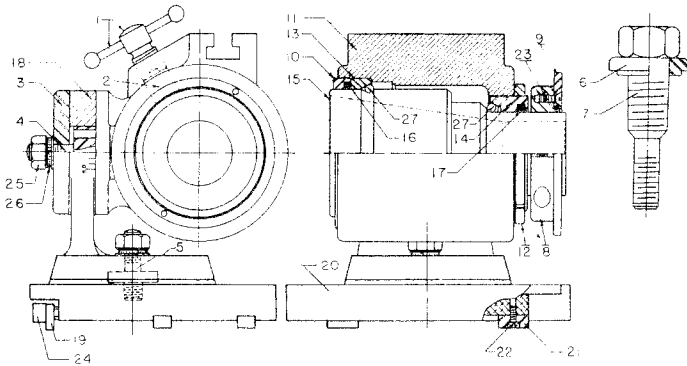
B885 Radial Grinding Fixture



Index No.	Part No.	Quan. Req.	Description
4	A54L	1	Lock Ring
6	A280	1	Friction Collar
6	A281	1	Friction Collar
9	A290A	2	Table Adj. Screw Assembly
10	A290AS	1	Knurled Thumb Screw
12	A623	2	T-Slot Block
14	A624F	1	Keyed Wheel Flange
15	A630BS	1	Compression Spring
16	A612P	1	Index Collar
17	B642R	1	Index Disc
18	A613A	1	Adjusting Race
19	A643D	1	Spindle Lock Assembly
20	A643M	1	Front Race
21	A657	2	T-Slot Bolt ($\frac{3}{8}$ x1 $\frac{5}{8}$)
25	B629P	1	Plug
32	B613DP	1	Lock Pad
36	B613S	1	Spindle
39	B681N	1	Special Nut for Diamond Screw
40	B681S	1	Diamond Screw
42	B685A	1	Cutter and Dia. Holding Arbor
43	B685B1	1	$\frac{7}{8}$ " Cutter Bushing
43	B685B2	1	1" Cutter Bushing
43	B685B3	1	1 $\frac{1}{4}$ " Cutter Bushing
46	B685C	1	Cross Slide
47	B685D	1	Guide Bushing
48	B685E	2	Stud
49	B685F	1	Index Block
50	B685G	2	Spring
51	B685H	1	Housing
52	B685J	1	Centering Gauge
53	B685K	1	Swivel
54	B685KS	1	Swivel Stud
55	B685L	1	Angle Lock Screw

Index No.	Part No.	Quan. Req.	Description
56	B685M	2	Feed Nut
21	A658	1	T-Slot Bolt ($\frac{3}{8}$ x2 $\frac{5}{8}$)
21	A660	1	T-Slot Bolt ($\frac{3}{8}$ x1 $\frac{7}{8}$)
57	B685N	1	Thumb Nut
58	B685NP	1	Plug
59	B685P	1	Handle
60	B685R	1	Raising Block for Cutters
61, 62			
& 64	B685TS	1	Table and Saddle Assembly
63	B685TP	1	Pin
65	B685V	1	Thrust Collar
66	B685W	1	Lower Feed Screw Assembly
67	B685WB	1	Lower Feed Screw Bearing
69	B685WG	1	Gib for Lower Slide
71	B685X	1	Upper Feed Screw Assembly
72	B685XB	1	Upper Feed Screw Bearing
74	B685XG	1	Gib for Upper Slide
76	B685Y	2	Ball Crank
77	B685Z	2	Index Collar
84		22	10-21x $\frac{3}{16}$ " Socket St. Sc. (Hex Type)
85		2	$\frac{3}{8}$ "x $\frac{3}{8}$ " S.A.E. Cone Pt. Bristo Set Sc.
86		4	$\frac{5}{16}$ "x $\frac{5}{16}$ " U.S.S. Headless Set Screw
88		2	6-32x $\frac{3}{8}$ " S. T. Round Head Screw
90		4	8-32x $\frac{1}{2}$ " Round Head Screw
91		2	10-32x $\frac{3}{8}$ " Flat Head Screw
92		2	10-32x $\frac{3}{4}$ " Flat Head Screw
94		4	10-32x $\frac{5}{8}$ " Fill. Head Screw
95		3	$\frac{9}{16}$ " S.A.E. Hex Jam Nut
97		1	$\frac{3}{32}$ " Hex Wrench, Across Flats
101		1	Thrust Bearing (2305-A)
110		15	$\frac{3}{16}$ " Felt
112		53	$\frac{7}{32}$ " Steel Ball (Set)
114		39	$\frac{9}{32}$ " Steel Ball (Set)

ACCESSORIES FOR B885 RADIAL GRINDING FIXTURE



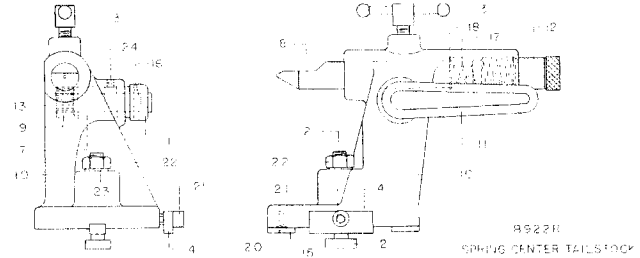
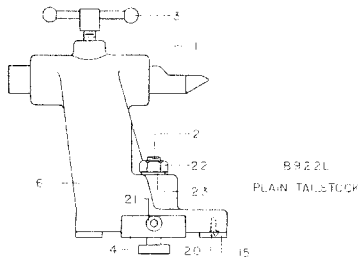
B892 Sensitive Work Head

NO. 50
MILLING MACHINE
TAPER IN SPINDLE

Index No.	Part No.	Quan. Req.	Description
1	A643D	1	Lock Screw Assembly
2	A643DP	1	Lock Pad
3	B620D	1	Back Plate
4	B620G	1	Swivel Stud
5	B620R	1	Base Stud
6	B792BC	1	Collar
7	B792BD	1	Draw Bolt
8	B792C	1	Index Collar
9	B792D	1	Index Disc (24 Div.)
10	B792E	1	Front Lock Ring
11	B792H	1	Housing
12	B792L	1	Lock Ring
13	B792M	1	Front Race
14	B792R	1	Adjusting Race

Index No.	Part No.	Quan. Req.	Description
15	B792S	1	Spindle
16	B792W	1	Front Wiper
17	B792Y	1	Rear Wiper
18	B820S	1	Swivel
19	B822B	1	Clamp Bar Assembly
20	B942B	1	Base
21	B942T	4	T-Slot Block
22	6-32x $\frac{3}{8}$	2	St. Round Head Screw
23	10-32x $\frac{1}{2}$	2	Flat Head Machine Screw (H.B.)
24	$\frac{5}{16}$ x $\frac{3}{4}$ S.A.E.	1	Hex Socket Cap Screw
25	$\frac{3}{8}$ U.S.S.	2	Hex Nut (H)
26	$\frac{3}{8}$ Std.	1	Lock Washer (Lock Burred)
27	$\frac{7}{32}$	76	Chrome Steel Balls (set)

B922 Tailstock Matched Set



Index No.	Part No.	Quan. Req.	Description
1	A250F	1	Center
1	A250FP	1	Special Carbide Center (Available)
2	A658B	2	T-Slot Bolt
3	B675	2	Lock Screw
4	B822B	2	Clamp Bar Assembly
6	B921LH	1	Housing
7	B921RB	1	Bushing
8	B921RC	1	Center
8	B921RCP	1	Special Carbide Center (Available)
9	B921RG	1	Gear
10	B921RH	1	Housing
11	B921RL	1	Lever Arm

Index No.	Part No.	Quan. Req.	Description
12	B921RP	1	Threaded Plunger
13	B921RS	1	Shaft for Gear
15	B942T	4	T-Slot Block
16	B985PP	1	Pin
17	P193	1	Spring
18	RS75	1	Spirolox External
20	No. 6-32x $\frac{3}{8}$	4	S. T. Round Head Screw
21	$\frac{5}{16}$ x $\frac{3}{4}$ SAE	2	Hex Socket Cap Screw
22	$\frac{3}{8}$ U.S.S.	2	Hex Nut (H)
23	$\frac{3}{8}$ L. W.	2	Washer
24	10-32x $\frac{3}{8}$	1	Hex Socket Set Screw

B820 Headstock

Part No.	Description	Part No.	Description
A250F	Center	B820C	Headstock Barrel
B942T	T-Slot Block	B820S	Swivel
B675	Lock Screw	B822B	Clamp Bar Assbly.
B620D	Back Plate	B843B	Base
B620G	Swivel Stud		

B821 Tailstock

Part No.	Description	Part No.	Description
A622S	Spring	B621S	Comp. Spring
B942T	T-Slot Block	B675	Lock Screw
B621C	Center Assbly.	B805W	Washer
B621E	Short Cap	B821B	Body
B621D	Long Cap	B822B	Clamp Bar Assbly.
B621L	Lever		

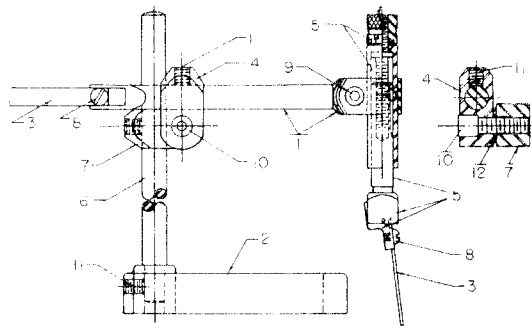


Part No.	Description
A250F	Standard Center for Headstock
A250FP	Special Carbide Center for Headstock



Part No.	Description
B621C	Standard Center for Tailstock
B621CP	Special Carbide Center for Tailstock

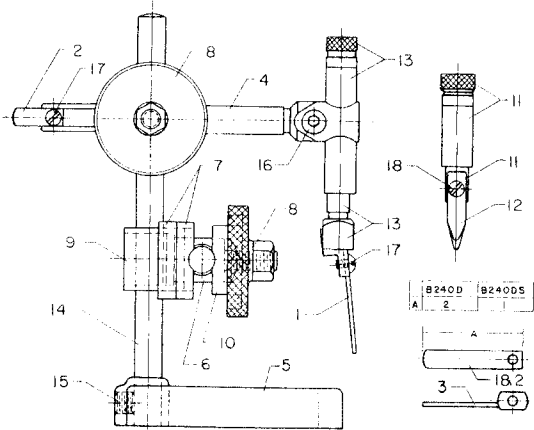
B940 Universal Tooth Rest



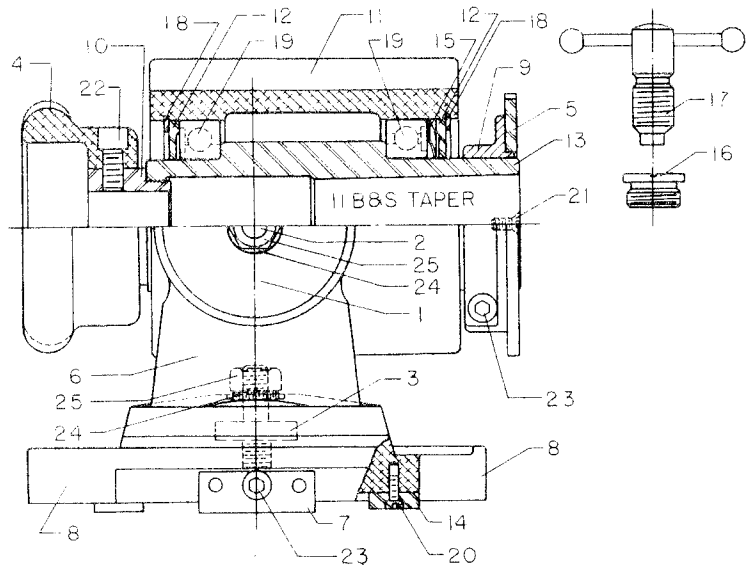
Index No.	Part No.	Quan. Req.	Description
1	B940A	1	Cross Arm
2	B940C	1	Base
3	B240D	1	Blade (3/8"x2")
3	B240DS	1	Blade (3/8"x1")
3	B240DT	1	Blade (3/32" Round)
4	B840P	1	Swivel Block
5	B940R	1	Rocker Assembly
6	B940S	1	Upright Shaft
7	B940T	1	Swivel Block
8	10-32x1/4	2	Round Head Screw (H)
9	5/16x3/4 SAE	1	Hex Socket Cap Screw
10	5/16x1 1/4 SAE	1	Hex Socket Cap Screw
11	7/16x3/8 USS	3	Hex Socket Set Screw, Flat Point
12	3/8 L. W.	1	Wavy Spring Washer

Index No.	Part No.	Quan. Req.	Description
1	B240D	1	Blade (3/8"x2)
2	B240DS	1	Blade (3/8"x1)
3	B240DT	1	Blade (3/32" Round)
4	B940A	1	Cross Arm
5	B940C	1	Base
6	B940GB	1	Body
7	B940GC	2	Collar
8	B940GN	1	Hand Nut
9	B940GS	1	Swivel
10	B940GW	1	Washer
11	B940H	1	Micrometer Tooth Rest
12	B940HF	1	Tooth Rest Blade
13	B940R	1	Rocker Assembly
14	B940S	1	Upright Shaft
15	7/16x3/8 USS	1	Hex Socket Set Screw (Ft. Pt.)
16	5/16x3/4 SAE	1	Hex Socket Cap Screw
17	10-32x1/4	2	Rd. Hd. Mach. Sc. (H)
18	10-32x3/16	1	Rd. Hd. Mach. Sc. (H)

BA940 Universal Tooth Rest



B942 Sensitive Workhead



Index No.	Part No.	Quan. Req.	Description
1	B620D	1	Back Plate
2	B620G	1	Swivel Stud
3	B620R	1	Stud
4	B641H	1	Hand Nut
5	B792D24	1	Index Disc
6	B820S	1	Swivel
7	B822B	1	Clamp Bar Assembly
8	B942B	1	Base
9	B942C	1	Index Collar
10	B942DC	1	Spindle Drive Collar
11	B942H	1	Housing
12	B942R	2	Thrust Ring
13	B942S	1	Spindle
14	B942T	4	T-Slot Block
15	B942W	1	Wavy Spring Washer
16	B943HB	1	Threaded Bushing
17	B943L	1	Lock Screw Assembly
18	RR-315	2	Spirolox Ring—Internal
19	9110PE6151		
20	6-32x3/8	2	Ball Bearing
21	10-32x1/2	4	St. Round Head Screw
22	5/16x3/8 USS	2	Flat Head Machine Screw (H.B.)
23	5/16x3/4 SAE	1	Available in Taper Nos. 10-20-30.
24	3/8 Std.	1	B642T Taper Sleeves. Available sizes: Morse 1, 2, 3 and 4; B & S 5, 7, 8, 9 and 10.
25	3/8 USS	1	B844E Six inch Independent 4-jaw Chuck mounted on No. 11 B & S Arbor.
		2	B944 4" 6-Jaw Adjustru Chuck mtd. on No. 11 B&S Arbor.
		2	B946 4" 3-Jaw Adjustru Chuck mtd. on No. 11 B&S Arbor.

ACCESSORIES FOR B942 SENSITIVE WORK HEAD

Part No.	Description
B792D	Index Discs for B792C, B742C Collar, 4, 6, 8, 20, 24, 28, 30, 32, 34, 36, 38, 40, 42, 44, 48, 52, 54 and 56 Divisions. Special Index Discs with any number divisions will be furnished on request.
B941	Collet Fixture (For B942 only).
B641C	Collets for B641 and B941 Collet Fixture. Available sizes: 3/16" to 1" by 64ths, 1/8" to 3/4" inclusive by 64ths.
B641K	Straight Sleeves. Available sizes: 1 1/16", 1 1/8", 1 3/8", 1 1/4".

Part No.	Description
B642K	No. 11 B & S Adapter with standard Milling Machine Taper Socket for holding B & S Cam Lock Tapers. Available in Taper Nos. 10-20-30.
B642T	Taper Sleeves. Available sizes: Morse 1, 2, 3 and 4; B & S 5, 7, 8, 9 and 10.
B844E	Six inch Independent 4-jaw Chuck mounted on No. 11 B & S Arbor.
B944	4" 6-Jaw Adjustru Chuck mtd. on No. 11 B&S Arbor.
B946	4" 3-Jaw Adjustru Chuck mtd. on No. 11 B&S Arbor.

ABERDEEN, SOUTH DAKOTA

B943, B2043

MOTOR DRIVEN

WORK HEADS

Available Voltages

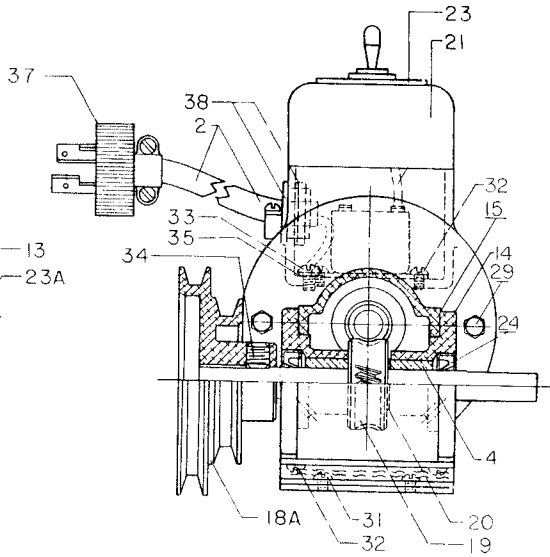
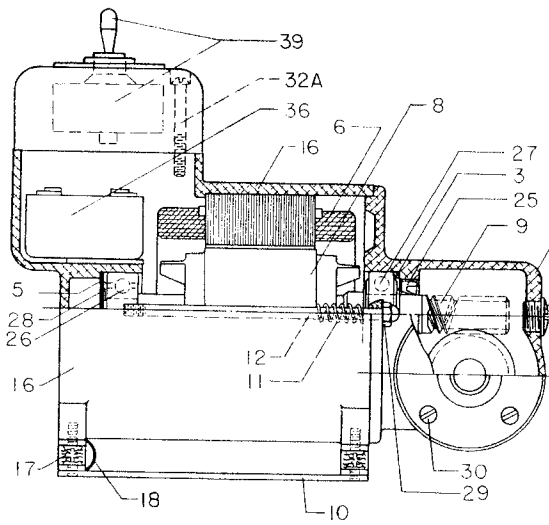
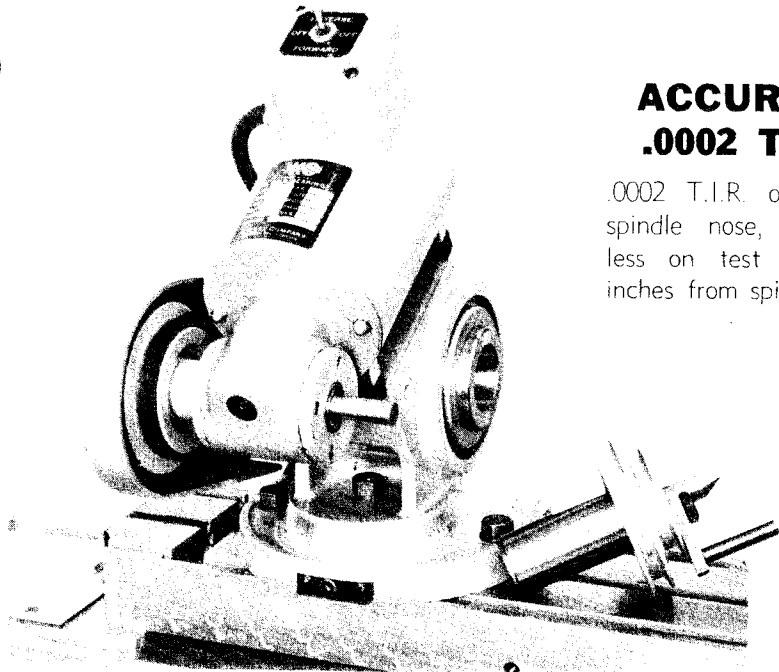
- 115V, 1 Phase, 60 Cycle
- 230V, 1 Phase, 60 Cycle
- 230V, 3 Phase, 60 Cycle
- 440V, 3 Phase, 60 Cycle

PLEASE SPECIFY VOLTAGE

Spindle Speeds 150 and 250 RPM
Other pulley combinations available:
60 RPM to 450 RPM at extra cost

ACCURACY
.0002 T.I.R.

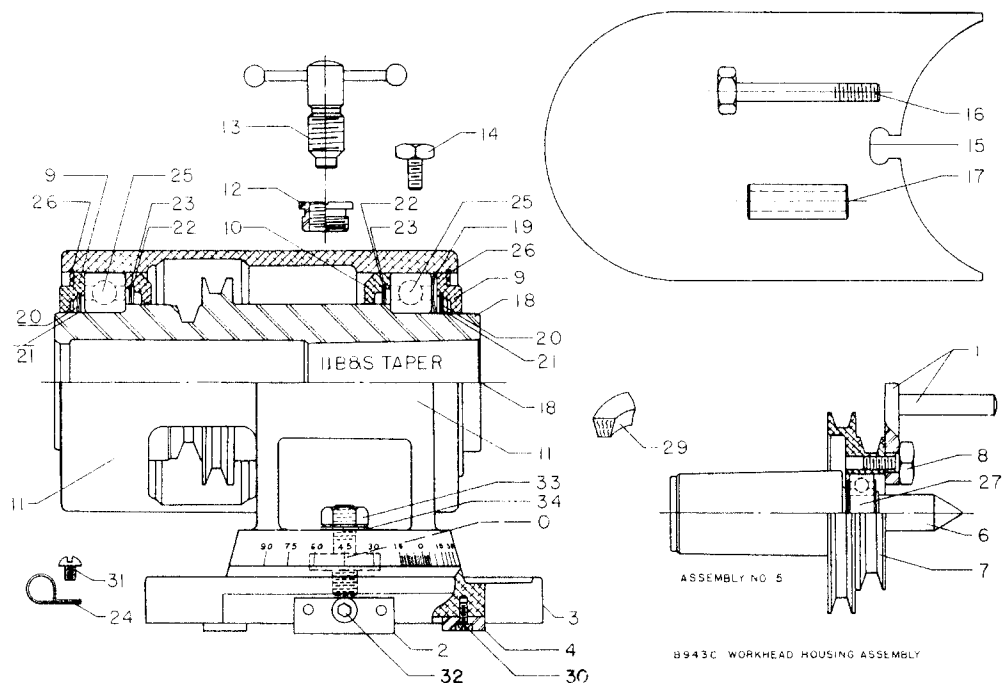
.0002 T.I.R. or less at
spindle nose, .0005 or
less on test arbor six
inches from spindle nose.



Index No.	Part No.	Quan. Req.	Description
2	A638E	1	Power Wire
3	B637W	1	Thrust Ring
4	B893BS	2	Bushing
5	B943AT	1	Thrust Washer
6	B943AF	1	Field (115V, 1 Phase)
6	B943EF	1	Field (230V, 3 Phase)
6	B943GAF	1	Field (440V, 3 Phase)
6	B943KF	1	Field (230V, 1 Phase)
6	B2043MF	1	Field (115V, 1 Phase) (B2043)
8	B943AR	1	Rotor (115V, 1 Phase)
8	B943ER	1	Rotor (230V, 3 Phase)
8	B943GAR	1	Rotor (440V, 3 Phase)
8	B943KR	1	Rotor (230V, 1 Phase)
8	B2043MA	1	Armature (115V, 1 Phase) (B2043)
9	B943MA	1	Armature Shaft
9	B2043MA	1	Armature Shaft (B2043)
10	B943MB	1	Saddle Plate
10	B2043MS	1	Saddle Plate (B2043)
11	B943EP	2	Field Positioner
11	B943MC	2	Spring
12	B943MDL	2	Stud
13	B943ME	1	End Bell
14	B943MF	2	Flange Bushing
15	B943MG	2	Gasket
16	B943MH	1	Motor Housing
17	B943MM	2	Resilient Motor Mount

Index No.	Part No.	Quan. Req.	Description
18	B943MMG	1	Ground Strap
18A	B943MP	1	Motor Pulley
19	B943MW	1	Worm Wheel & Shaft Assembly
19	B2043MW	1	Worm Wheel & Sh. Assem. (B2043)
20	B943MX	1	Thrust Washer
21	B990B	1	Switch Box
23	KO-20	1	Plate
23A	P460S	1	Oil Plug
24	63 x 49	2	Seal ($\frac{1}{2}$ x $1 \frac{5}{16}$)
25	63 x 87	1	Seal ($\frac{5}{8}$ x $1 \frac{1}{8}$ x $\frac{3}{16}$)
26	39KVTD	1	Ball Bearing
27	202KLL3	1	Ball Bearing
28	5Z	1	Spring
29	8-32	2	Acorn Nut (N.P.)
30	6-32 x $\frac{3}{8}$	8	Round Head Machine Screw N.P.
31	8-32 x $\frac{3}{16}$	4	Round Head Machine Screw
32	8-32 x $\frac{3}{8}$	4	Round Head Machine Screw
32A	8-32 x $1 \frac{5}{8}$	2	Round Head Machine Screw H.B.
33	8-32 x $\frac{1}{4}$	1	Round Head Brass Machine Screw
34	$\frac{7}{16}$ x $\frac{7}{16}$ N.C.	1	Hex Socket Flat Point Set Screw
35	$\frac{3}{16}$ Std.	1	Lock Washer
36	91252-45	1	Starting Switch (115V)
36	91252-250	1	Starting Switch (230V)
37	9967	1	Cap
38	6623	1	$\frac{3}{8}$ Romex Connector
39	7612K2	1	Switch

B943C Work Head Housing Assembly



Index No.	Part No.	Quan. Req.	Description
0	B620R	1	Stud
2	B822B	1	Clamp Bar Assembly
3	B942B	1	Base
4	B942T	4	T-Slot Block
5	B943D	1	Dead Center Assembly
9	B943F	2	Outer Bearing Seal
10	B943G	2	Inner Bearing Seal
11	B943H	1	Workhead Housing
12	B943HB	1	Threaded Bushing
13	B943L	1	Lock Screw Assembly
14	B943MR	2	Saddle Hold Down Screw
15	B943PG	1	Belt Guard
16	B943PS	1	Special Screw
17	B943PT	1	Guard Spacer
18	B943S	1	Spindle
19	B943W	1	Wavy Spring Washer
20	B943YA	2	Plya Seal
21	B943YB	2	Cap
22	B943YC	2	Plya Seal
23	B943YD	2	Cap
	2581-043	1	O-Ring (3½ x 3⅝ x ¼)

Index No.	Part No.	Quan. Req.	Description
24	EC8	1	Wire Clamp
25	2MM9112WICRDU	1 pr.	Ball Bearing Duplex
26	RR-375	2	Spirolox Ring—Internal
29	B943VB	1	Belt, Standard Belt
	B943VBL		Belt, Long Belt (for B943MPL)
	B943VBS		Belt, Short Belt (for B943MPL)
	1220	1	V-Belt
30	6-32x¾	4	St. Round Head Screw
31	10-32x¼	1	Round Head Machine Screw (H.B.)
32	⅝x¾ SAE	1	Hex Socket Cap Screw
33	⅝ USS	1	Hex Nut (H)
34	⅝ SAE	1	Washer (H)
B943D DEAD CENTER ASSEMBLY			
1	B643TR	1	Drive Pin Assembly
6	B943DC	1	Dead Center
7	B943DP	1	Dead Center Pulley
8	B943DS	1	Special Screw
27	202KLL3	1	Ball Bearing

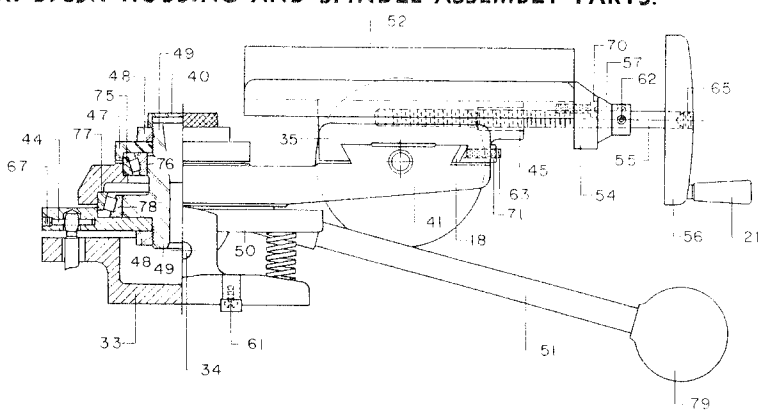
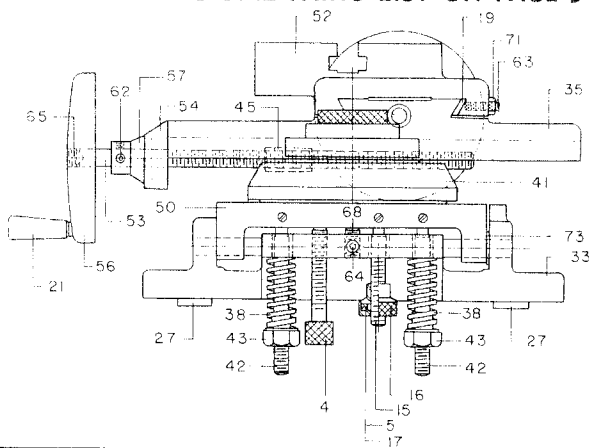
ACCESSORIES FOR B943 MOTOR DRIVEN WORK HEAD

Part No.	Description
B641	Collet Fixture
B641C	Collets for B641 Collet Fixture. Available sizes: ⅝" to 1" by 64ths, ⅜" to ⅝" by 64ths.
B641K	Straight Sleeves. Available sizes: 1⅝", 1⅞", 1⅞", 1⅞".
B641B&S	No. 12 B&S Collet Fixture for B943 Head with No. 12 B&S Spindle.
B641AB&S	No. 12 B&S Adaptor, Collet nosepiece for 5C Collets, used with B641B&S.
B641M	No. 5 M.T. Collet Fixture required for B943 Head with No. 5 Morse Taper Spindle.
B641AM	No. 5 M.T. Adaptor, Collet nosepiece for 5C Collets, used with B641M.
B642TB&S	Taper Sleeves, 12 B&S Outside to 1, 2, 3, 4 Morse I.D.; 5, 7, 9, 10, 11 B&S I.D.
B642TM	Taper Sleeves, 5 Morse Outside to 1, 2, 3, 4 Morse I.D.; 5, 7, 9, 10, 11 B&S I.D.

Part No.	Description
B642K	No. 11 B&S Adaptor with standard Milling Machine Taper Socket for holding B&S Cam Lock Tapers. Available in taper Nos. 10, 20 and 30.
B642T	Taper Sleeves. Available sizes: Morse 1, 2, 3 and 4; Brown and Sharp 5, 7, 8, 9 and 10.
B643T	Center and Drive Plate Assembly can be used as live center and drive plate.
B844E	6" 4-Jaw Independent Chuck mounted on No. 11 B&S Arbor.
B943DF	No. 11 B&S Dead Center with Carbide Tip.
B943DB	No. 12 B&S Dead Center.
B943DM	No. 5 M.T. Dead Center.
B944	4" 6-Jaw Adjustru Chuck.
B946	4" 3-Jaw Adjustru Chuck mounted on A643P No. 11 B&S Arbor.
B981	Collet Fixture Quick Release.

B985 and BA985 Radial Grinding Fixtures

PARTS WITHOUT INDEX NUMBERS ARE SHOWN IN STANDARD EQUIPMENT PHOTO ON PAGE 9.
REFER TO B942 PARTS LIST ON PAGE 5 FOR B985H HOUSING AND SPINDLE ASSEMBLY PARTS.



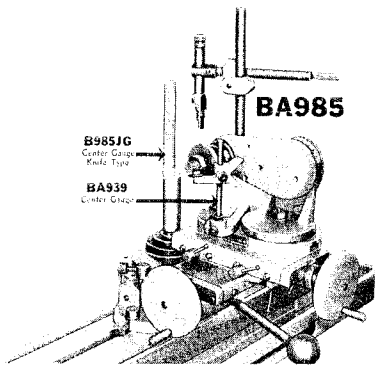
Index No.	Part No.	Quan. Req.	Description
	A280	1	Friction Collar
	A281	1	Friction Collar
	A290A	2	Table Adjusting Screw Assembly
4	A290AS	1	Table Adjusting Screw
5	A630BS	1	Comp. Spring
	A657B	3	T-Slot Bolt
	A660B	1	T-Slot Bolt
	B620D	1	Back Plate
	B620G	1	Swivel Stud
	B684N	1	Nut
	B684S	1	Diamond Screw
	B685B1	1	Cutter Bushing, $\frac{7}{8}$ "
	B685B2	1	Cutter Bushing, 1"
	B685B3	1	Cutter Bushing, $1\frac{1}{4}$ "
15	B685L	1	Lock Screw
16	B685N	1	Thumb Nut
17	B685NP	1	Plug
18	B685WG	1	Gib for Lower Slide
	B685WP	2	Gib Pin
19	B685XG	1	Gib for Upped Slide
21	B685YH	2	Ball Crank Handle
	B820S	1	Swivel
	B840P	1	Swivel Block
	B923EF	1	Keyed Wheel Flange
	B923EN	1	Special Nut
27	B942T	2	T-Slot Block
	B985A	1	Swinging Arm (B985)
	B985AA	1	Swinging Arm (BA985)
	B985AB	1	Swivel Index Bar
	B985AE	1	Diamond Holder
33	B985B	1	Base
34	B985BS	2	Base Stud
35	B985C	1	Cross Slide (B985)
	BA985C	1	Cross Slide (BA985)
	B985D	1	Guide Bushing
	B985E	1	Stud
	B985EA	1	Adjustable Stud (BA985)
38	B985G	4	Spring
	B985J	1	Center Gauge (V-Type)
	B985JG	1	Center Gauge (Knife Type)
	B985JP	1	Cap for Center Gauge
41	B985K	1	Turn Table (B985)
	BA985K	1	Turn Table (BA985)
42	B985L	2	Lock Screw

Index No.	Part No.	Quan. Req.	Description
43	B985LN	2	Lock Screw Nut
44	B985LP	3	Lock Screw Pivot Pin
45	B985M	2	Feed Nut
47	B985PC	1	Pivot Cap
48	B985PN	2	Pivot Cap Nut
49	B985PS	1	Pivot Stud
50	B985S	1	Saddle
51	B985SA	1	Lever Arm
52	B985T	1	Table
53	B985W	1	Feed Screw Assembly
54	B985WB	2	Bearing Block (B985)
	BA985WB	2	Bearing Block (BA985)
55	B985X	1	Feed Screw Assembly (Long)
56	B985YA	2	Hand Wheel
57	B985Z	2	Index Collar
	BA985ZC	2	Thrust Collar (BA985)
	BA985ZH	2	Index Collar (BA985)
	BA985ZW	2	Wavy Spring Washer (BA985)
61	6-32x $\frac{3}{8}$	2	S. T. Round Head Screw
62	10-32x $\frac{3}{4}$	4	Socket Set Screw
63	10-32x $\frac{3}{4}$	9	Socket Set Screw (B985)
	BA985XA	4	Handle (BA985)
	BA985XH	4	Head (BA985)
	BA985XS	4	Screw (BA985)
64	$\frac{1}{4}$ x $\frac{1}{4}$ SAE	1	Socket Set Screw
65	$\frac{3}{8}$ x $\frac{3}{8}$ SAE	2	Socket Set Screw (Cone Point)
67	6-32x $\frac{3}{8}$	3	Headless Set Screw
68	$\frac{5}{16}$ x $\frac{5}{16}$ USS	1	Headless Set Screw
70	10-32x $\frac{5}{8}$	4	Fill Head Machine Screw
71	10-32	9	Hex Nut (HB)
73	$\frac{3}{8}$ L. W.	4	Wavy Spring Washer
75	13836	1	Cup (Timken)
76	13889	1	Cone (Timken)
77	LL510710	1	Cup (Timken)
78	LL510749	1	Cone (Timken)
79	41E	1	Ball
	2x $\frac{1}{8}$	2	S. T. Rd. Head Screw N.P. (BA985)
	$\frac{1}{16}$ x $\frac{7}{16}$ USS	1	Socket Set Screw
	$\frac{5}{16}$ x $\frac{5}{16}$ USS	2	Socket Set Screw (Cup Pt.) (BA985)
	$\frac{3}{16}$ x $1\frac{1}{4}$ USS	1	Hex Socket Cap Screw
	$\frac{3}{8}$ USS	5	Hex Nut (H)
	$\frac{3}{8}$ SAE	3	Washer (H)
	RS75	2	Spirolox (BA985)

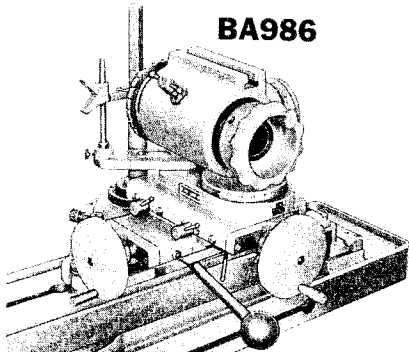
ACCESSORIES FOR B986 AND BA986 RADIAL GRINDING FIXTURES

Part No.	Description
B792D	Index Disks 4, 6, 8, 20, 24, 28, 30, 32, 34, 36, 38, 40, 42, 44, 48, 52, 54 and 56 divisions available.
B941	Collet Fixture.
B641C	Collet for B941 Fixture. Available sizes: $\frac{3}{16}$ " to $\frac{1}{2}$ " by 64ths; $\frac{1}{32}$ " to 1" by 32nds.
B641K	Straight Sleeves. Available sizes: $1\frac{1}{16}$ ", $1\frac{1}{8}$ ", $1\frac{3}{8}$ " and $1\frac{1}{4}$ ".
B642K	No. 11 B & S Adaptor with Standard Milling Machine Taper Socket for holding B & S Cam Lock Tapers. Available in taper Nos. 10, 20 and 30.

Part No.	Description
B642T	Adaptor Sleeves. Available sizes: Morse 1, 2, 3 and 4; B&S 5, 7, 8, 9 and 10.
B844E	6" 4-Jaw Independent Chuck mounted on No. 11 B&S Arbor.
B941	Collet Fixture
B944	Adjustru 4" 6-Jaw Chuck mounted on No. 11 B&S Arbor.
B946	4" 3-Jaw Universal Chuck mounted on No. 11 B&S Arbor.

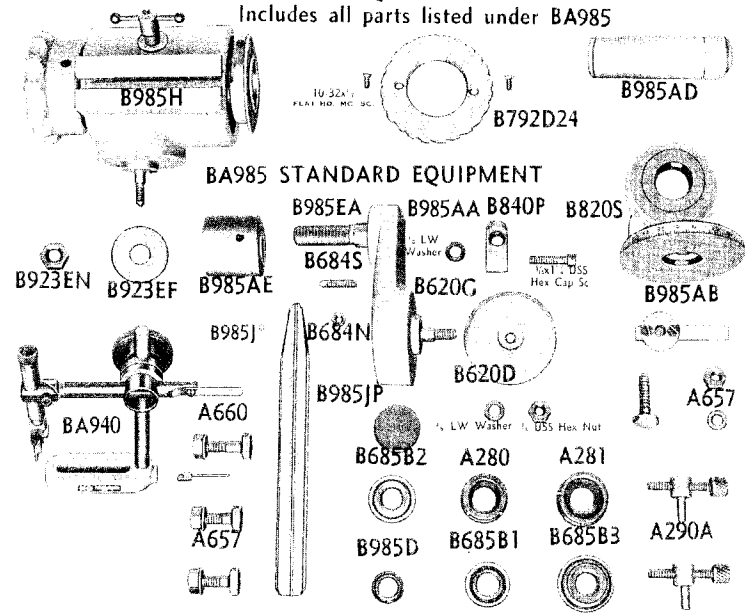


Radial Grinding Fixtures



REFER TO B942 PARTS LIST ON PAGE 5 FOR B985H HOUSING AND SPINDLE ASSEMBLY PARTS.

BA986 STANDARD EQUIPMENT LISTED BELOW
Includes all parts listed under BA985



BA985 Radial Grinding Fixture Standard Equipment

A280 Friction Collar, A281 Friction Collar, A290A Table Adjusting Screw, A657 A660 T-Slot Edts, B620D Back Plate, B620G Swivel Stud, B684N Invt, B684S Diamond Screw, B685B1 3/4" Cutter Bushing, B685B2 1" Cutter Bushing, B685B3 1 1/4" Cutter Bushing, B820S Swivel, B840P Swivel Block, B923EF Keyed Wheel Flange, B923EN Special Nut, BA940 Tooth Rest, B985AA Swinging Arm, B985AB Swivel Index Bar, B985AE Diamond Holder, B985D Guide Bushing, B985EA Stud 3/4" B985J Center Gauge (optional, not std.), B985JP Cap. (BA939 Center Height Gauge, B985JG Center Gauge, Knife Type are shown in BA985 photo upper left.) Net Weight 51 lbs

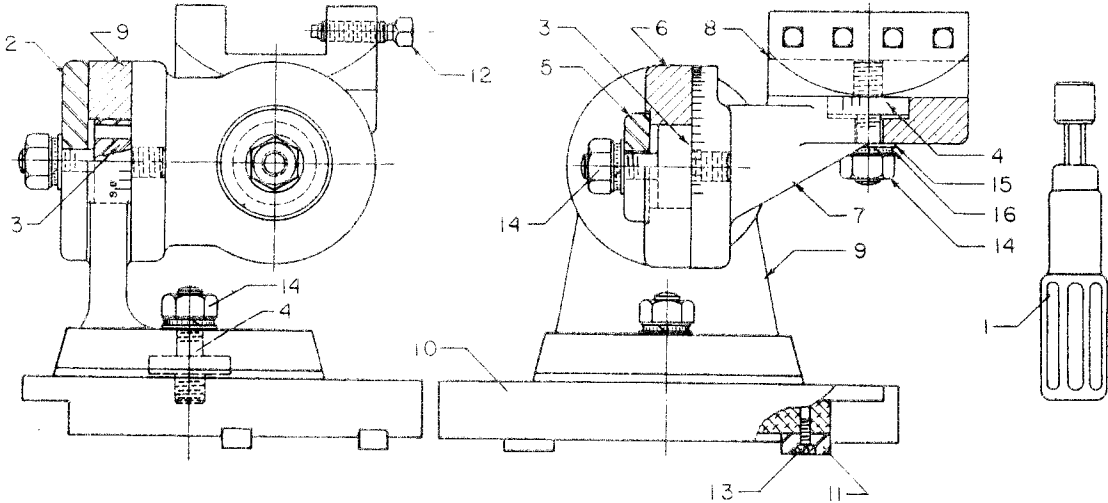
BA986 Radial Grinding Fixture Standard Equipment

Includes all equipment listed for BA985 Model and the following: B792D24 Index Disc, B985AD Diamond Holding Arbor, B985H Housing and Spindle Assembly.

Available Equipment

B792D Index Discs 4, 6, 8, 20, 24, 28, 30, 32, 34, 36, 38, 40, 42, 44, 48, 52, 54, 56 divisions available. B941 Collet Fixture, B641C Collets for B941 Fixture. Available sizes: 3/8" to 1" by 64ths, 1/4" to 3/4" by 64ths. B641K Straight Sleeves. Available sizes: 1 1/2", 1 3/4", 1 7/8" and 1 3/4". B642K No. 11 B & S Adaptor with Standard Milling Machine Taper Socket for holding B & S Cam Lock Tapers. Available in taper Nos. 10, 20 and 30. B642T Adaptor Sleeves. Available sizes: Morse 1, 2, 3 and 4; B & S 5, 7, 8, 9 and 10. B844E 6" 4-Jaw Independent Chuck mounted on No. 11 B & S Arbor. B944 Adjustu 4" 6-Jaw Chuck mounted on No. 11 B & S Arbor. B946 4" 3-Jaw Universal Chuck mounted on No. 11 B & S Arbor.

B989 Universal Work Holding Fixture

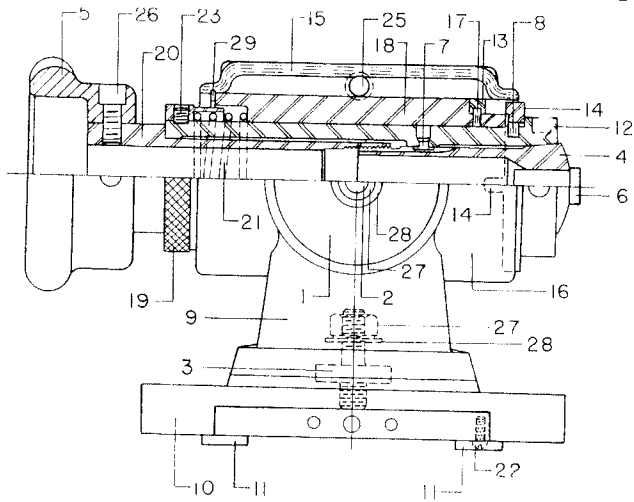


Index No.	Part No.	Quan. Req.	Description
1	A264	1	Socket Wrench
2	B620D	1	Back Plate
3	B620G	2	Swivel Stud
4	B620R	1	Base Stud
5	B789E	1	Special Washer
6	B789S	1	Universal Swivel
7	B789V	1	Vise Swivel
8	B789XB	1	Vise Block (1 1/2")

Index No.	Part No.	Quan. Req.	Description
9	B820S	1	Swivel
10	B942B	1	Base
11	B942T	4	T-Slot Block
12	5/16x2 USS	4	Square Head Cup Point Set Screw
13	6-32x3/8	2	St. Round Head Screw
14	3/8 USS	4	Hex Nut (H)
15	3/8 SAE	4	Washer (H)
16	3/8 Std.	4	Lock Washer (Lock Burred)

ABERDEEN, SOUTH DAKOTA

B947 Tap Grinding Fixture



STANDARD EQUIPMENT

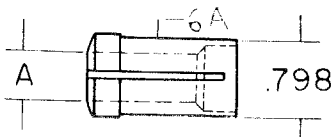
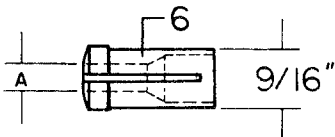
B641C	$\frac{1}{16}$ Collet	B647B $\frac{3}{8}$	Bushing—Tap $\frac{3}{8}$
B647B8	Bushing—Taps 7 and 8	B947C2	Flute 0 to 12 Tap
B647B10	Bushing—Taps 9 and 10	B947C2	Flute 12 and over Tap
B647B12	Bushing—Taps 12	B947C3	to 6 Flute 0 to 12 Tap
B647B $\frac{1}{4}$	Bushing—Tap $\frac{1}{4}$	B947C3	to 6 Flute 12 to $\frac{3}{8}$ Tap
B647B $\frac{5}{16}$	Bushing—Tap $\frac{5}{16}$	B947C3	to 6 Flute $\frac{3}{4}$ and over Tap
B647B $\frac{3}{8}$	Bushing—Tap $\frac{3}{8}$	B947C3	to 6 Flute $\frac{3}{8}$ to $\frac{3}{4}$ Tap
B647B $\frac{7}{16}$	Bushing—Tap $\frac{7}{16}$	B947D2	Index Disc (2 Flute)
B647B $\frac{1}{2}$	Bushing—Tap $\frac{1}{2}$	B947D3	Index Disc (3 Flute)
B647B $\frac{9}{16}$	Bushing—Tap $\frac{9}{16}$	B947D4	Index Disc (4 Flute)

AVAILABLE ACCESSORIES

B641C800	.800" Collet to fit 1" Tap	B947CL2	Flute 0 to 12 Tap
B647F	Bushings for B641C800	B947CL2	Flute 12 and over Tap
	Collet to fit $\frac{1}{16}$ ", $\frac{3}{4}$ " and $\frac{7}{8}$ " Taps	B947CL3	to 6 Flute 0 to 12 Tap
B647B	Bushing Taps 0 to 6 incl.	B947CL3	to 6 Flute 12 to $\frac{3}{8}$ Tap
B647P	Driver for Taps over 1"	B947CL3	to 6 Flute $\frac{3}{8}$ to $\frac{3}{4}$ Tap
A261C	Spring Center, B821 or B922R	B947CL3	to 6 Flute $\frac{3}{4}$ and over Tap
Tail Stock	must be used with B647P.	B947D5	Index Disc (5 Flute)
		B947D6	Index Disc (6 Flute)

Index No.	Part No.	Quan. Req.	Description
1	B620D	1	Back Plate
2	B620G	1	Swivel Stud
3	B620R	1	Base Stud

Index No.	Part No.	Quan. Req.	Description
4	B641C	1	Collet $\frac{1}{16}$ "
4	B641C800		.800" Collet to Fit 1" Tap
5	B641H	1	Hand Nut

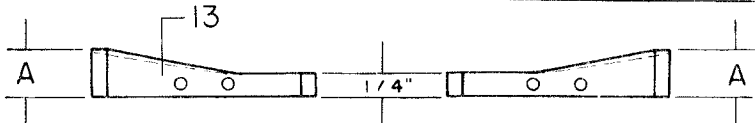


Index No.	Part No.	Quan. Req.	A Size	Description
6	B647B6	1	.140	Bushing—Taps 0 to 6
6	B647B8	1	.168	Bushing—Taps 7 and 8
6	B647B10	1	.194	Bushing—Taps 9 and 10
6	B647B12	1	.220	Bushing—Tap 12
6	B647B $\frac{1}{4}$	1	.255	Bushing—Tap $\frac{1}{4}$
6	B647B $\frac{5}{16}$	1	.318	Bushing—Tap $\frac{5}{16}$
6	B647B $\frac{3}{8}$	1	.381	Bushing—Tap $\frac{3}{8}$

Index No.	Part No.	Quan. Req.	A Size	Description
6	B647B $\frac{7}{16}$	1	.323	Bushing—Tap $\frac{7}{16}$
6	B647B $\frac{1}{2}$	1	.367	Bushing—Tap $\frac{1}{2}$
6	B647B $\frac{9}{16}$	1	.429	Bushing—Tap $\frac{9}{16}$
6	B647B $\frac{5}{8}$	1	.480	Bushing—Tap $\frac{5}{8}$
6A	B647F $\frac{1}{16}$		.542	Bushing for B641C800 Collet
6A	B647F $\frac{3}{4}$		.590	Bushing for B641C800 Collet
6A	B647F $\frac{7}{8}$		.697	Bushing for B641C800 Collet

Index No.	Part No.	Quan. Req.	Description
7	B647KS	1	Key for Collet
8	B647KT	1	Key for Index Disc
9	B820S	1	Swivel

Index No.	Part No.	Quan. Req.	Description
10	B942B	1	Base
11	B942T	4	T-Slot Block
12	B947A	1	Collet Adapter



Right Hand Lift Cam

Index No.	Part No.	Description	A Size
13	B947C2	Flute 0 to 12 Tap	.275
13	B947C2	Flute 12 and over Tap	.355
13	B947C3	to 6 Flute 0 to 12 Tap	.281
13	B947C3	to 6 Flute 12 to $\frac{3}{8}$ Tap	.375
13	B947C3	to 6 Flute $\frac{3}{8}$ to $\frac{3}{4}$ Tap	.468
13	B947C3	to 6 Flute $\frac{3}{4}$ and over Tap	.562

Left Hand Lift Cam

Index No.	Part No.	Description	A Size
13	B947CL2	Flute 0 to 12 Tap	.275
13	B947CL2	Flute 12 and over Tap	.355
13	B947CL3	to 6 Flute 0 to 12 Tap	.281
13	B947CL3	to 6 Flute 12 to $\frac{3}{8}$ Tap	.375
13	B947CL3	to 6 Flute $\frac{3}{8}$ to $\frac{3}{4}$ Tap	.468
13	B947CL3	to 6 Flute $\frac{3}{4}$ and over Tap	.562

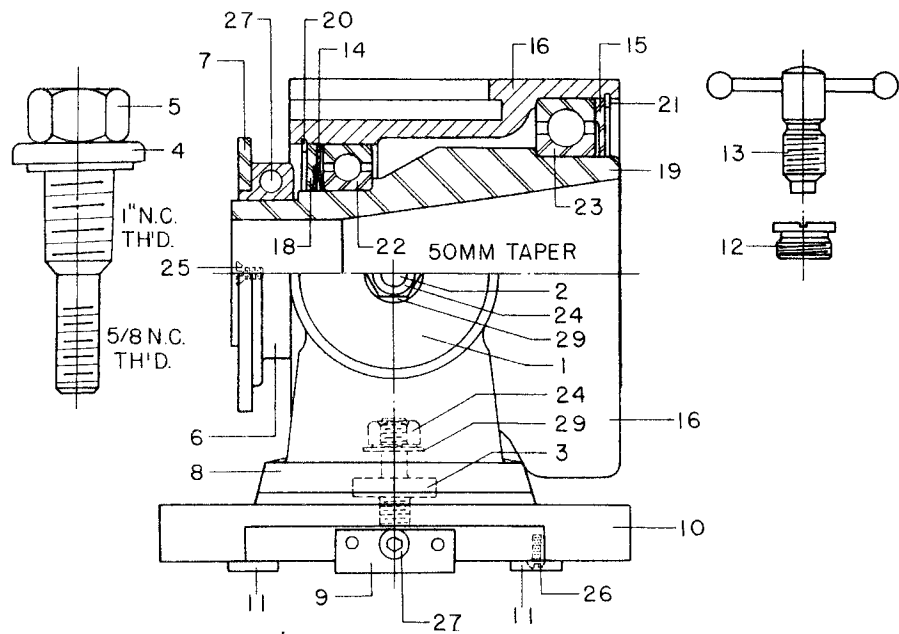


Index No.	Part No.	Quan. Req.	Description
14	B947D2	1	Index Disc (2 Flute)
14	B947D3	1	Index Disc (3 Flute)
14	B947D4	1	Index Disc (4 Flute)
14	B947D5	1	Index Disc (5 Flute)
14	B947D6	1	Index Disc (6 Flute)
15	B947F	1	Felt
16	B947H	1	Housing

Index No.	Part No.	Quan. Req.	Description
17	B947R	2	Cam Retainer Pin
18	B947S	1	Spindle
19	B947T	1	Thrust Collar
20	B947W	1	Draw Tube
21	B947Y	1	Coil Spring
22	6-32x $\frac{3}{8}$	4	S. T. Round Head Screw (N.P.)
23	$\frac{1}{4}$ x $\frac{1}{4}$ SAE	1	Socket Set Screw
25	$\frac{5}{16}$ x1 SAE	1	Hex Socket Cap Screw
26	$\frac{5}{16}$ x $\frac{5}{8}$ USS	1	Hex Socket Cap Screw
27	$\frac{3}{8}$ USS	2	Hex Nut (H)
28	$\frac{3}{8}$ Std.	2	Lock Washer (L.B.)
29	RR-275	1	Spirolox—Internal

B992
Sensitive
Work Head

NO. 50
MILLING MACHINE
TAPER IN SPINDLE



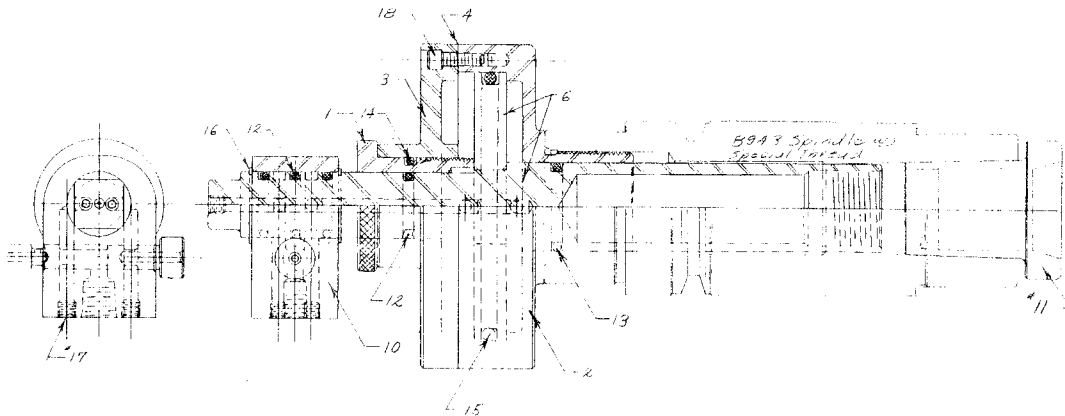
Index No.	Part No.	Quan. Req.	Description
1	B620D	1	Back Plate
2	B620G	1	Swivel Stud
3	B620R	1	Stud
4	B792BC	1	Collar
5	B792BD	1	Draw Bolt
6	B792C	1	Index Collar
7	B792D24	1	Index Disc
8	B820S	1	Swivel
9	B822B	1	Clamp Bar Assembly
10	B942B	1	Base
11	B942T	4	T-Slot Block
12	B943HB	1	Threaded Bushing
13	B943L	1	Lock Screw Assembly
14	B943W	2	Wavy Spring

Index No.	Part No.	Quan. Req.	Description
15	B992A	1	Bearing Shield
16	B992H	1	Housing
18	B992R	1	Thrust Ring
19	B992S	1	Spindle
20	RR-375	1	Spirolox Ring
21	RR-511	1	Spirolox Ring
22	2MM9112	1	Ball Bearing
23	2MM9117	1	Ball Bearing
24	3/8 USS	2	Hex Nut (H)
25	10-32x1/2	2	Flat Head Machine Screw
26	6-32x3/8	4	S. T. Round Head Screw
27	3/8x3/4 SAE	1	Hex Socket Cap Screw
29	3/8 L. W.	2	Wavy Spring
	2x1/8	2	S. T. Round Head Screw

ACCESSORIES FOR B992 SENSITIVE WORK HEAD

Part No.	Description
B792D	Index Discs for B792C, B942C Collar. 4, 6, 8, 20, 24, 28, 30, 32, 34, 36, 38, 40, 42, 44, 48, 52, 54 and 56 Divisions. Special Index Discs with any number divisions will be furnished on request.

Part No.	Description
B792F	50 to 40 Milling machine taper sleeve.
B792G	No. 50 Milling Machine to No. 11 B & S taper Sleeve with B792T drawing sleeve.
B792T	Drawing Sleeve for use with B792G Taper Sleeve.

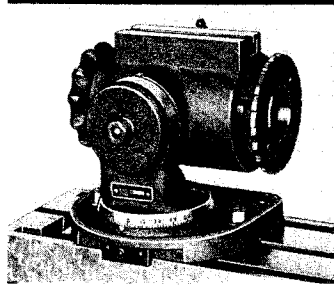


B994
Air Chuck

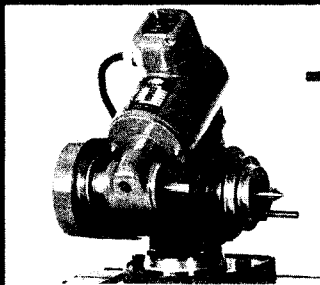
Index No.	Part No.	Quan. Req.	Description
1	B994A	1	Adjustable Stop
2	B994B	1	Body
3	B994C	1	Cover
4	B994G	1	Gasket
5	B994N	1	Name Plate
6	B994P	1	Piston and Draw Sleeve Assembly
10	B994V	1	Valve Block Assembly

Index No.	Part No.	Quan. Req.	Description
11	B641AA	1	Collet Adapter
12	8210	4	O-Ring (3/4 x 1 x 1/8)
13	8216	1	O-Ring (1 1/8 x 1 3/8 x 1/8)
14	8218	1	O-Ring (1 1/4 x 1 1/2 x 1/8)
15	8343	1	O-Ring (3 3/4 x 4 1/8 x 3/16)
16	RS100	2	External Spirolox
17	10-32 x 1/4	2	Socket Set Screw
18	10-32 x 5/8	6	Hex Socket Cap Screw

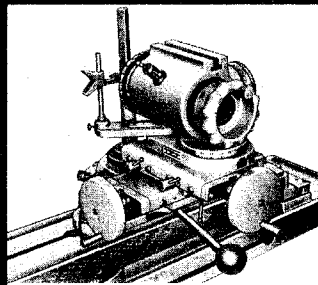
K-O Engineers Make Available More Time-Tested Fixtures Than Any Other Grinder Manufacturer



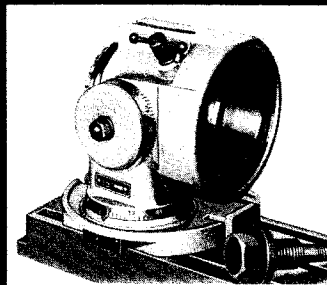
**B942
SENSITIVE WORK HEAD**



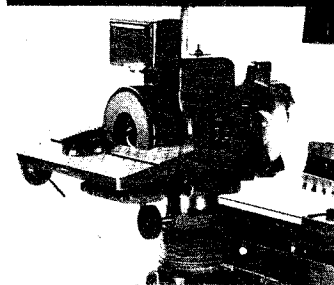
**B943
MOTOR DRIVEN WORK HEAD**



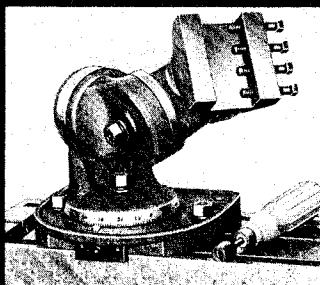
**B986
RADIAL GRINDING FIXTURE**



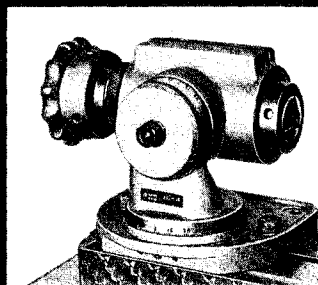
**B992
SENSITIVE WORK HEAD**



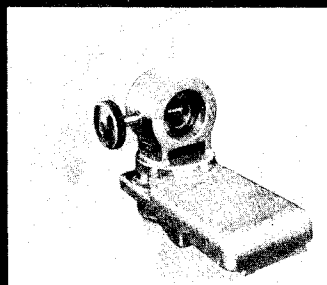
**B945 TILTING
TABLE ATTACHMENT**



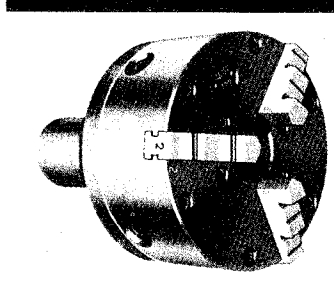
**B989 UNIVERSAL
WORK HOLDING FIXTURE**



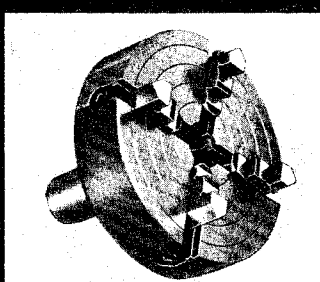
**B947
TAP GRINDING FIXTURE**



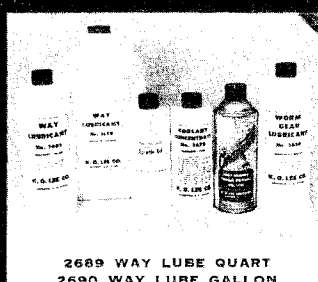
**B979 UNIVERSAL
ANGULAR MOTOR MOUNT**



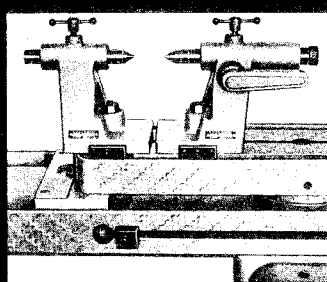
**CHUCKS
B944 4" 6-JAW ADJUSTRU
B946 4" 3-JAW ADJUSTRU**



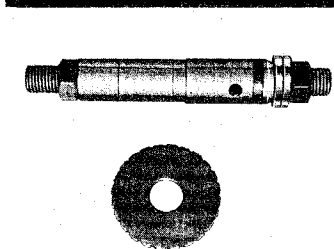
**B844E 6" INDEPENDENT
4-JAW CHUCK
NO. 11 B & S ARBOR**



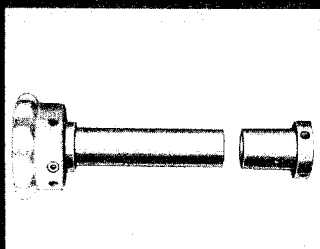
**2689 WAY LUBE QUART
2690 WAY LUBE GALLON
2670 SPINDLE OIL PINT
2679 COOLANT CONCENTRATE PT.
2645 GRAY HAMMER SPRAY CAN
2639 WORM GEAR LUBE QUART**



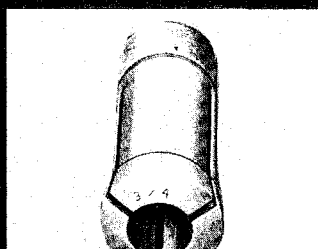
**B922 TAILSTOCKS
(MATCHED SET)**



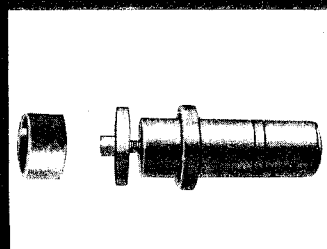
**B948 SERIES CUTTER AND
HOB GRINDING ARBORS**



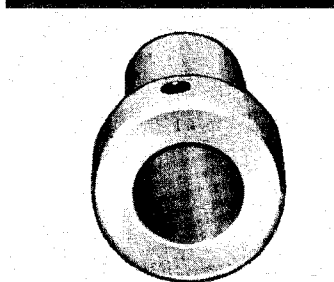
**B641 AND B941
COLLET FIXTURE**



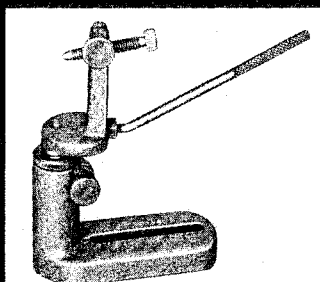
**B641C COLLETS
FOR B641 & B941 FIXTURES**



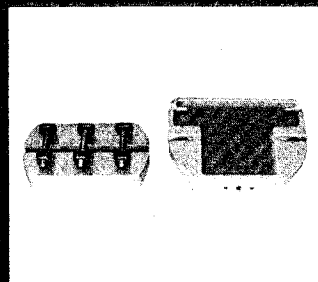
**SHELL END MILL
AND CUTTER ARBOR**



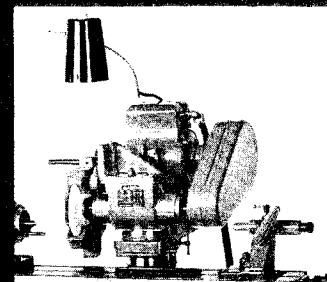
**B641K
STRAIGHT SLEEVES**



**B269
RADIAL DIAMOND DRESSER
WITH P176D DIAMOND SCREW**



**B918
TWO 1" RAISING BLOCKS**



**B955 UNIVERSAL
GRINDING HEAD**