

PARTS CATALOG

FOR

BARDONS & OLIVER

No's. 21A, 21B, & 21C

SADDLE TYPE

UNIVERSAL TURRET LATHE

BARDONS & OLIVER, INC.

BARDONS & OLIVER, INC.

5800 HARPER ROAD

SOLON, OHIO 44139

440-498-5800 FAX 440-498-2001

No. 21
SADDLE TYPE
UNIVERSAL TURRET LATHE

PARTS CATALOG
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WHEN ORDERING REPAIR PARTS:

1. SPECIFY NUMBER OF PIECES WANTED.
2. GIVE SIZE AND SERIAL NUMBER OF MACHINE.*
3. GIVE NUMBER AND NAME OF PART EXACTLY AS SHOWN IN CATALOG.
4. GIVE PURCHASE ORDER NUMBER COVERING ORIGINAL MACHINE.

EXAMPLE:

REQUIRED: WEDGE SHOES FOR THE COLLET CHUCK UNIT.

ORDER:

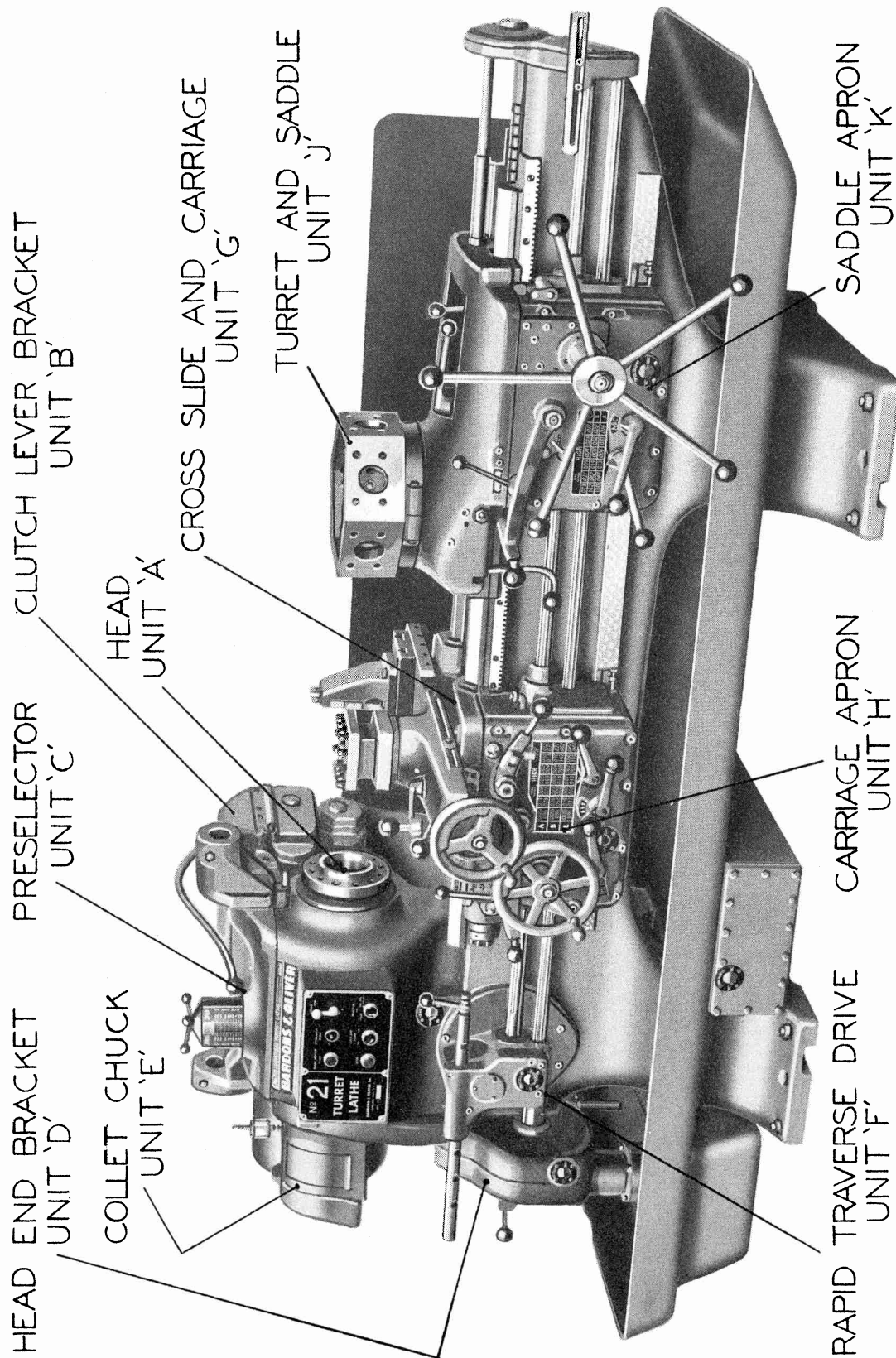
2 - E-22 WEDGE SHOE, DRAWING NUMBER B-45389 FOR NO. 21A
(2-1/2" CAP.) TURRET LATHE. SERIAL NO. 18179.

AS SOME OF THE PARTS ARE FITTED IN ASSEMBLY, THESE PARTS WILL BE SENT FINISHED AS FAR AS POSSIBLE WITH ALLOWANCE FOR FITTING WHERE REQUIRED.

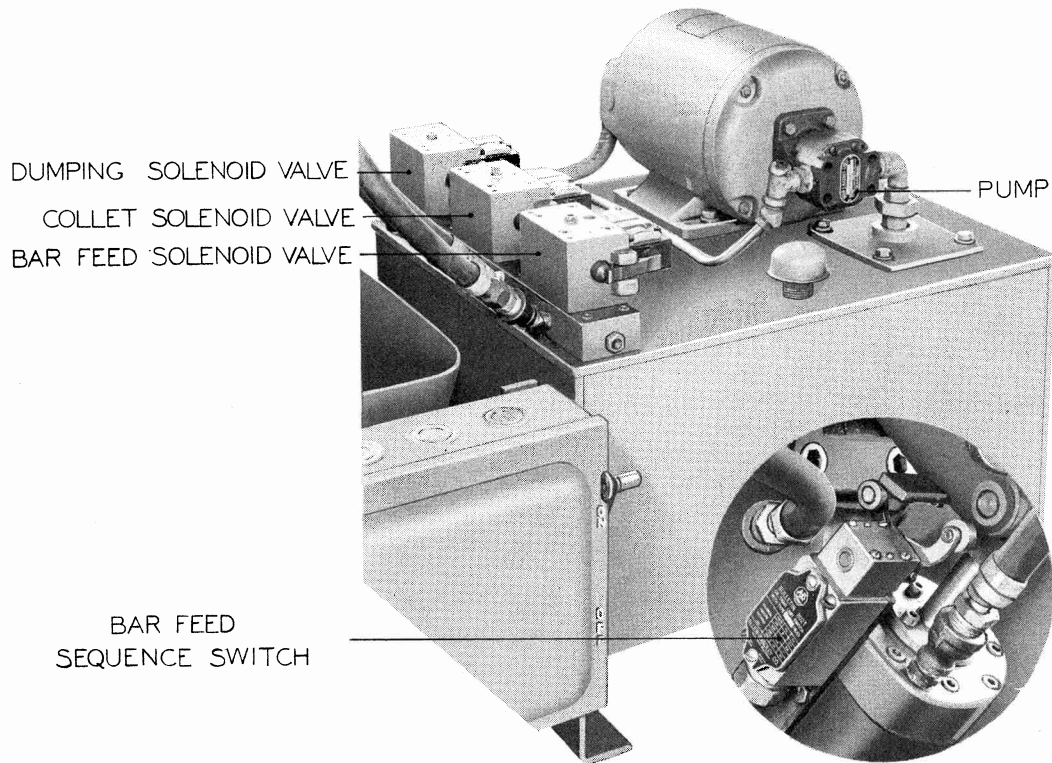
* THE SERIAL NUMBER OF THE MACHINE IS STAMPED ON THE NAME PLATE AND ON THE BED AT THE RIGHT END OF THE RACK.

NOTE: N.S. MEANS ITEMS NOT SHOWN IN THE PHOTOGRAPH.

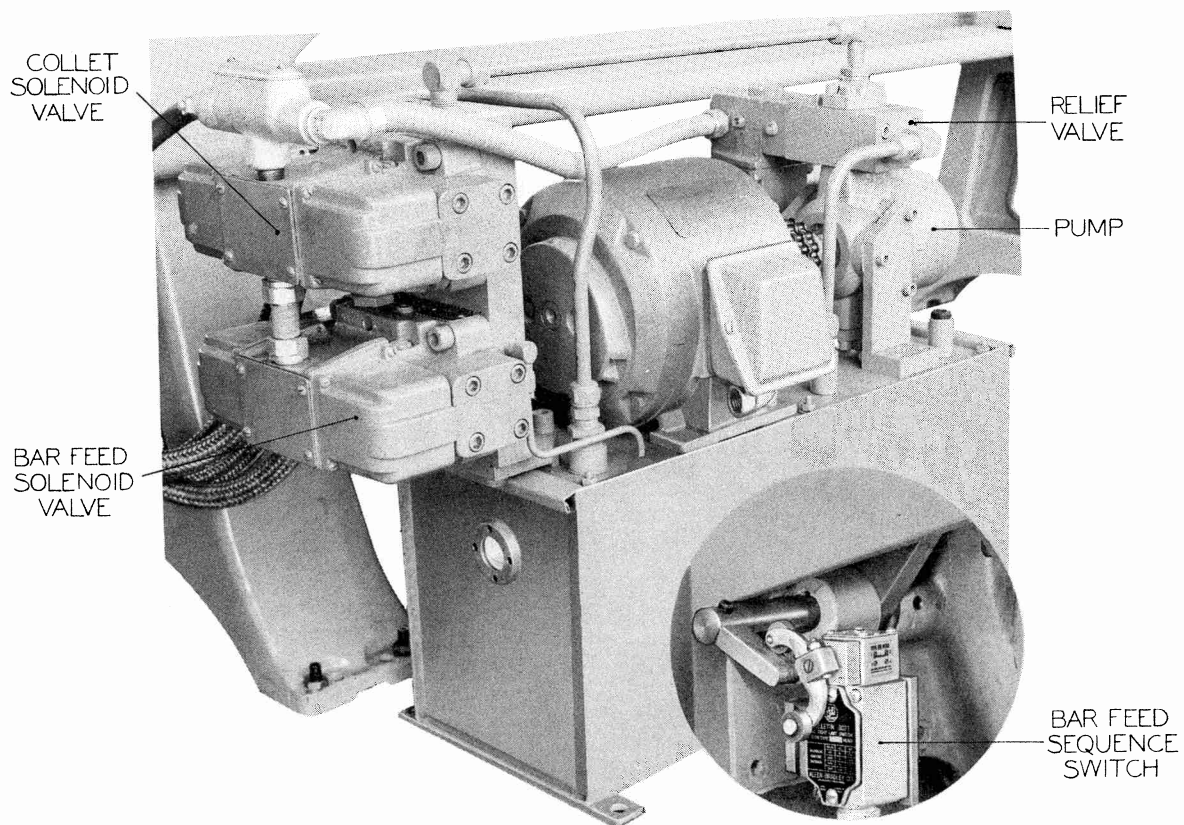
No. 21
SADDLE TYPE
UNIVERSAL TURRET LATHE



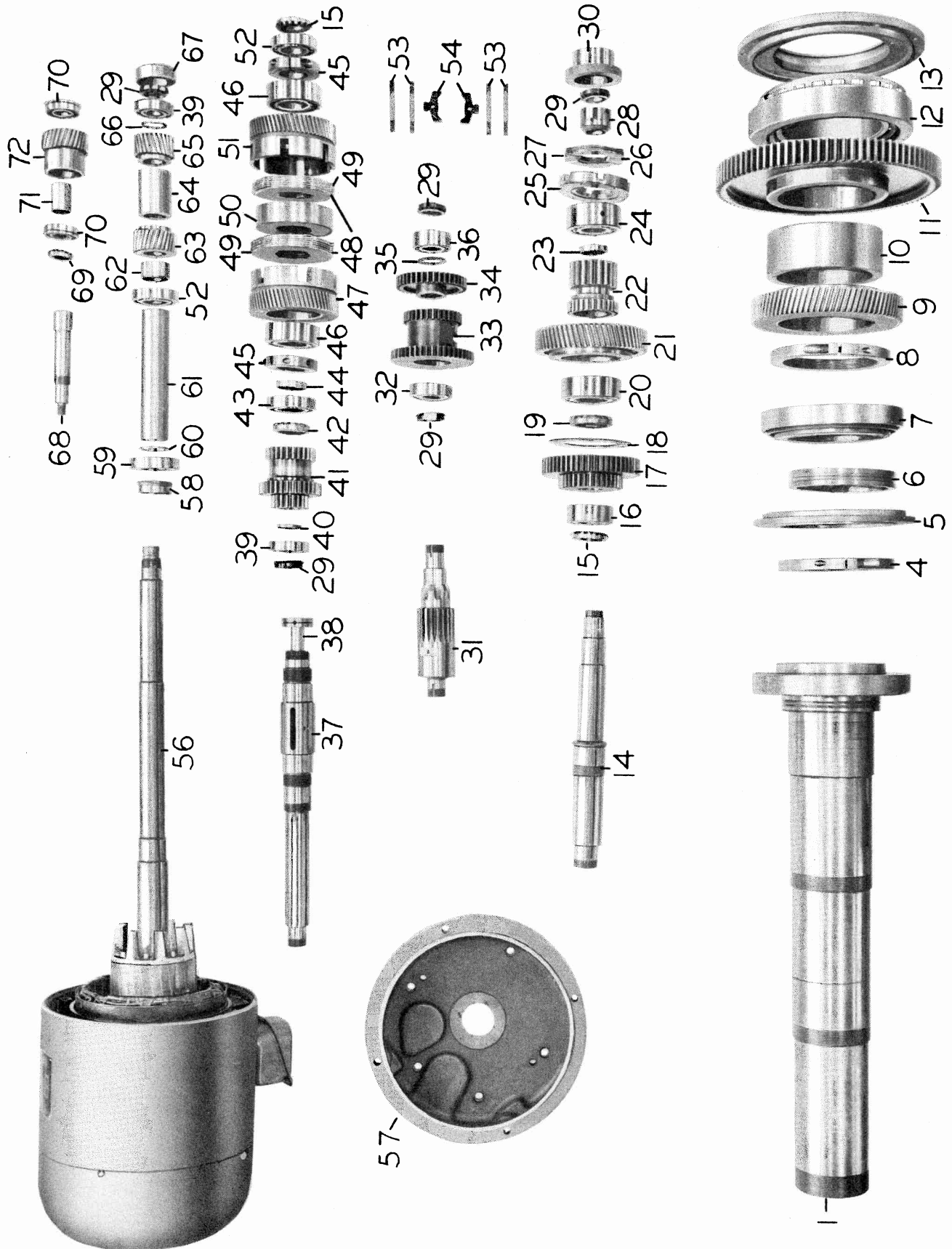
No. 21 A & No. 21 B POWER UNIT



No. 21 C POWER UNIT



HEAD—UNIT 'A'



HEAD—UNIT 'A'

SPINDLE ASSEMBLY

	21A (2½")	21B (3")	21C (4½")
A- 1 Spindle	A-47147	A-47036	A-59953
A- 2 Driving Button	N.S. B-37291	B-37291	B-42420
A- 3 Driving Button Screw	N.S. B-37292	B-37292	B-48435
A- 4 Spindle Adjusting Nut	A-54656	B-38517	A-48323
A- 5 Rear Bearing Closer	A-36279	A-38512	A-62132
A- 6 Bearing Spacer	B-36287	B-38519	B-48319
A- 7 Rear Bearing	672 687	71450 71750	86100 86650
A- 8 Spindle Gear Nut	A-54657	B-38518	A-48322
A- 9 Small Spindle Gear	A-36262	A-38516	A-59955
A-10 Spindle Gear Spacer	B-46881	B-47034	B-59959
A-11 Large Spindle Gear	A-36261	A-38515	A-59954
A-12 Front Bearing	71750 71437	799 792	94113 94700
A-13 Front Bearing Closer	A-45508	A-47035	A-62131

HIGH & LOW TOOTH CLUTCH SHAFT ASSEMBLY

A-14 Clutch Shaft	A-64518	A-44 Bearing Spacer	B-46717
A-15 Lockwasher & Nut	W&N-09	A-45 Adjusting Nut	(2)B-32003
A-16 Ball Bearing	5209-K	A-46 Ball Bearing	(2)5211-K
A-17 2 Cluster Gear 54T & 35T	B-64519	A-47 Forward Clutch Gear	Note 1
A-18 Bearing Retainer	B-64521	A-48 Inner Clutch Disc	(12)B-36219
A-19 Lockwasher & Nut	W&N-12	A-49 Outer Clutch Disc	(12)B-34587
A-20 Ball Bearing	5212-K	A-50 Clutch Spacer	B-31865
A-21 Clutch Gear	A-64522	A-51 Reverse Clutch Gear	A-36221
A-22 Clutch Pinion	A-46887	A-52 Ball Bearing	209-S
A-23 Bearing Spacer	B-46718	A-53 Clutch Key	(4)B-32033
A-24 Ball Bearing	5309	A-54 Clutch Finger	(2)B-39184
A-25 Brake Disc Cup	B-46042	A-55 Clutch Finger Pin	N.S. (2)C-2038
A-26 Inner Clutch Disc	(3)B-34127		
A-27 Outer Clutch Disc	(4)B-34128		
A-28 Brake Coupling	B-46043		
A-29 Lockwasher & Nut	W&N-07		
A-30 Brake Piston	B-46041		

INTERMEDIATE SHAFT ASSEMBLY

A-31 Intermediate Shaft	A-64513
A-32 Ball Bearing	307-S
A-33 2 Cluster Gear 46T & 32T	A-64514
A-34 Gear 39T	A-64516
A-35 Bearing Spacer	B-64517
A-36 Ball Bearing	5207-K

FORWARD & REVERSE CLUTCH SHAFT ASSEMBLY

A-37 Clutch Shaft	A-46694
A-38 Plunger and Spool	B-45519
A-39 Ball Bearing	207-S
A-40 Bearing Spacer	B-46830
A-41 3 Cluster Gear 20T,34T,&27T	A-49578
A-42 Lockwasher & Nut	W&N-10
A-43 Ball Bearing	210-S

MOTOR SHAFT ASSEMBLY

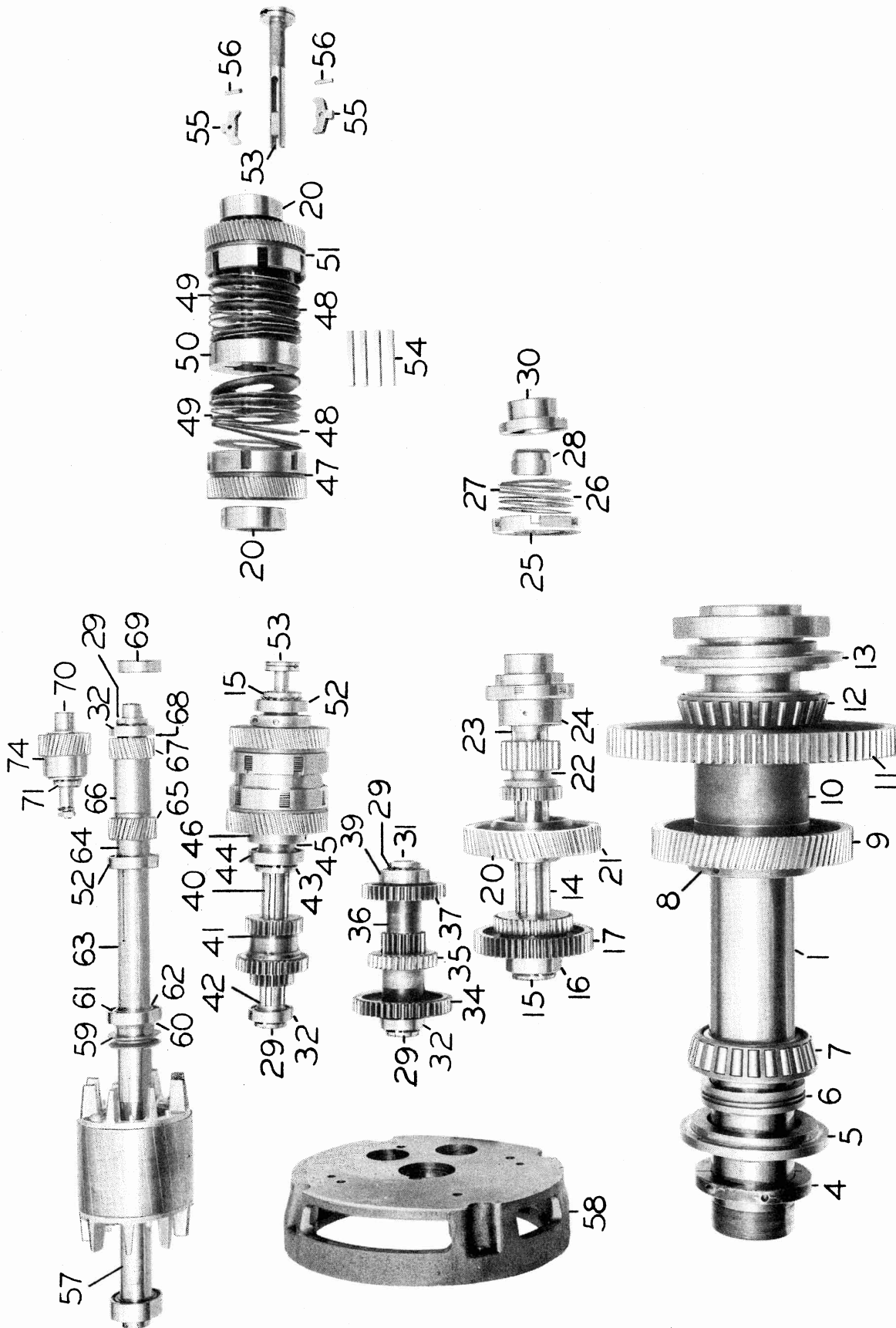
A-56 Motor Shaft	Note 2
A-57 Motor Bracket	Note 3
A-58 Sheave Spacer	B-36285
A-59 Ball Bearing	210-SF
A-60 Bearing Spacer	B-46713
A-61 Bearing Spacer	B-46715
A-62 Spacer	B-46716
A-63 Motor Shaft Gear	Note 4
A-64 Motor Shaft Spacer	B-38402
A-65 Motor Shaft Gear 27T	B-38400
A-66 Spacer	B-45547
A-67 Bearing Spacer	B-46714

IDLER GEAR ASSEMBLY

A-68 Idler Gear Stud	B-49571
A-69 Lockwasher & Nut	W&N-06
A-70 Ball Bearing	(2)206-SG
A-71 Bearing Spacer	B-49573
A-72 Idler Gear 32T	B-49572

Note 1: Specify Speed Range
 Note 2: Specify Complete Motor Data
 Note 3: Specify Complete Motor Data
 Note 4: Specify Speed Range

HEAD—UNIT 'AA'



HEAD—UNIT 'AA'

SPINDLE ASSEMBLY

	21A (2 $\frac{1}{2}$ ")	21B (3")	21C (4 $\frac{1}{2}$ ")
AA- 1 Spindle	A-47147	A-47036	A-59953
AA- 2 Driving Button	N.S.B-37291	B-37291	B-42420
AA- 3 Driving Button Screw	N.S.B-37292	B-37292	B-48435
AA- 4 Spindle Adjusting Nut	A-54656	B-38517	A-48323
AA- 5 Rear Bearing Closer	A-36279	A-38512	A-62132
AA- 6 Bearing Spacer	B-36287	B-38519	B-48319
AA- 7 Rear Bearing	672 687	71450 71750	86100 86650
AA- 8 Spindle Gear Nut	A-54657	B-38518	A-48322
AA- 9 Small Spindle Gear	A-36262	A-38516	A-59955
AA-10 Spindle Gear Spacer	B-46881	B-47034	B-59959
AA-11 Large Spindle Gear	A-36261	A-38515	A-59954
AA-12 Front Bearing	71750 71437	799 792	94113 94700
AA-13 Front Bearing Closer	A-45508	A-47035	A-62131

HIGH & LOW TOOTH CLUTCH SHAFT ASSEMBLY

AA-14 Clutch Shaft	A-46693	AA-45 Bearing Spacer	B-46717
AA-15 Lockwasher & Nut	W&N-09	AA-46 Adjusting Nut	(2)B-32003
AA-16 Ball Bearing	5209-K	AA-47 Forward Clutch Gear	Note 1
AA-17 2 Cluster Gear 54T & 35T	B-49577	AA-48 Inner Clutch Disc	(12)B-36219
AA-18 Bearing Retainer	N.S. B-34664	AA-49 Outer Clutch Disc	(12)B-34587
AA-19 Lockwasher & Nut	N.S. W&N-11	AA-50 Clutch Spacer	B-31865
AA-20 Ball Bearing	(3)5211-K	AA-51 Reverse Clutch Gear	A-36221
AA-21 Clutch Gear	A-46886	AA-52 Ball Bearing	209-S
AA-22 Clutch Pinion	A-46887	AA-53 Plunger & Spool	B-45519
AA-23 Bearing Spacer	B-46718	AA-54 Clutch Key	(4)B-32033
AA-24 Ball Bearing	5309	AA-55 Clutch Finger	(2)B-39184
AA-25 Brake Disc Cup	B-46042	AA-56 Clutch Finger Pin	(2)C-2038
AA-26 Inner Clutch Disc	(3)B-34127		
AA-27 Outer Clutch Disc	(4)B-34128		
AA-28 Brake Coupling	B-46043		
AA-29 Lockwasher & Nut	(3)W&N-07		
AA-30 Brake Piston	B-46041		

INTERMEDIATE SHAFT ASSEMBLY

AA-31 Intermediate Shaft	A-46692
AA-32 Ball Bearing	207-S
AA-33 Bearing Spacer	N.S. B-46719
AA-34 Gear 46T	A-38494
AA-35 Gear 32T	A-46727
AA-36 Gear 20T	B-46722
AA-37 Gear 39T	A-32588
AA-38 Bearing Spacer	N.S. B-46720
AA-39 Ball Bearing	307-S

MOTOR SHAFT ASSEMBLY

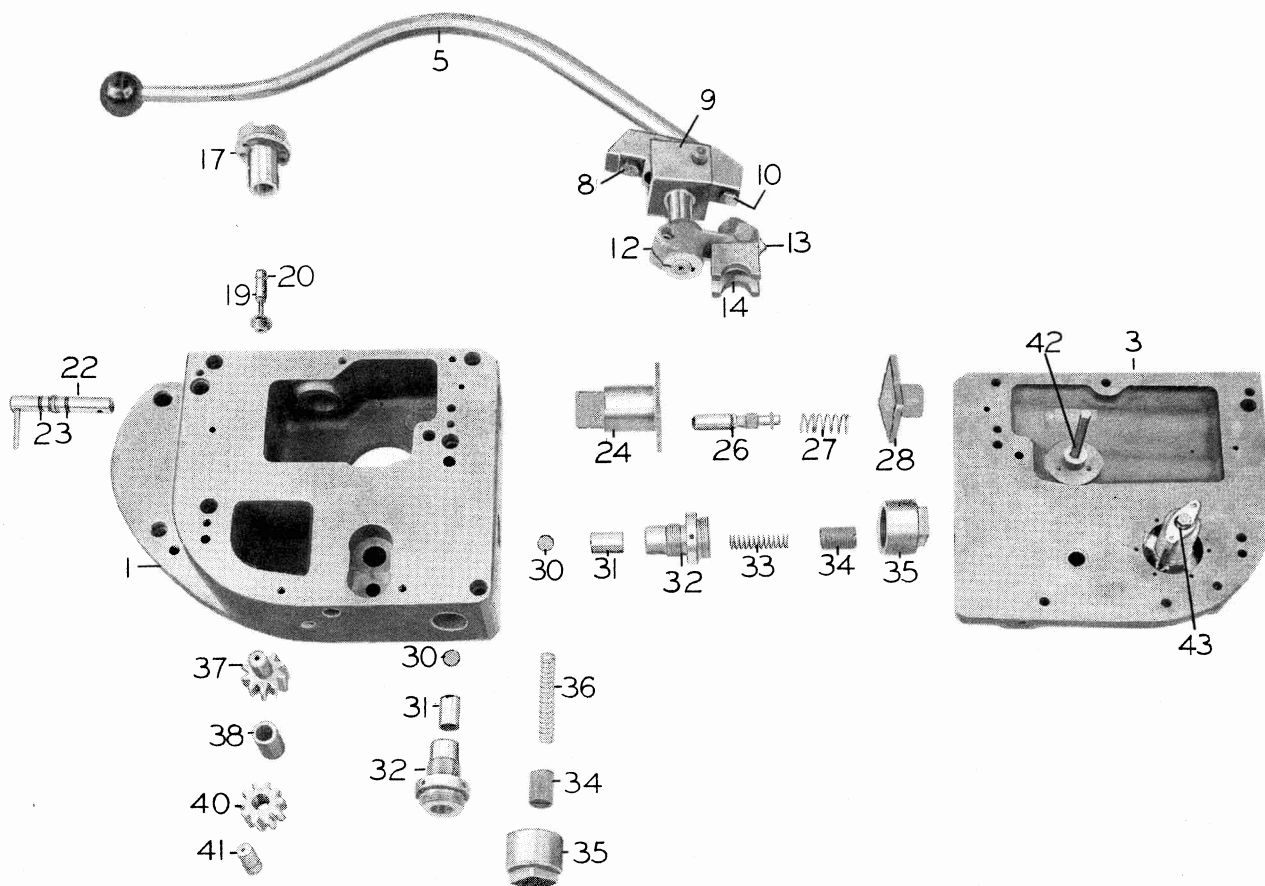
AA-57 Motor Shaft	Note 2
AA-58 Motor Bracket	Note 3
AA-59 Motor Shaft Sheave	B-34366
AA-60 Sheave Spacer	B-36285
AA-61 Ball Bearing	210-SF
AA-62 Bearing Spacer	B-46713
AA-63 Bearing Spacer	B-46715
AA-64 Spacer	B-46716
AA-65 Motor Shaft Gear	Note 4
AA-66 Motor Shaft Spacer	B-38402
AA-67 Motor Shaft Gear 27T	B-38400
AA-68 Spacer	B-45547
AA-69 Bearing Spacer	B-46714

IDLER GEAR ASSEMBLY

AA-40 Clutch Shaft	A-46694	AA-70 Idler Gear Stud	B-49571
AA-41 3 Cluster Gear 20T,34T,&27T	A-49578	AA-71 Lockwasher & Nut	W&N-06
AA-42 Bearing Spacer	B-46830	AA-72 Ball Bearing	N.S.(2)206-SG
AA-43 Lockwasher & Nut	W&N-10	AA-73 Bearing Spacer	N.S. B-49573
AA-44 Ball Bearing	210-S	AA-74 Idler Gear 32T	B-49572

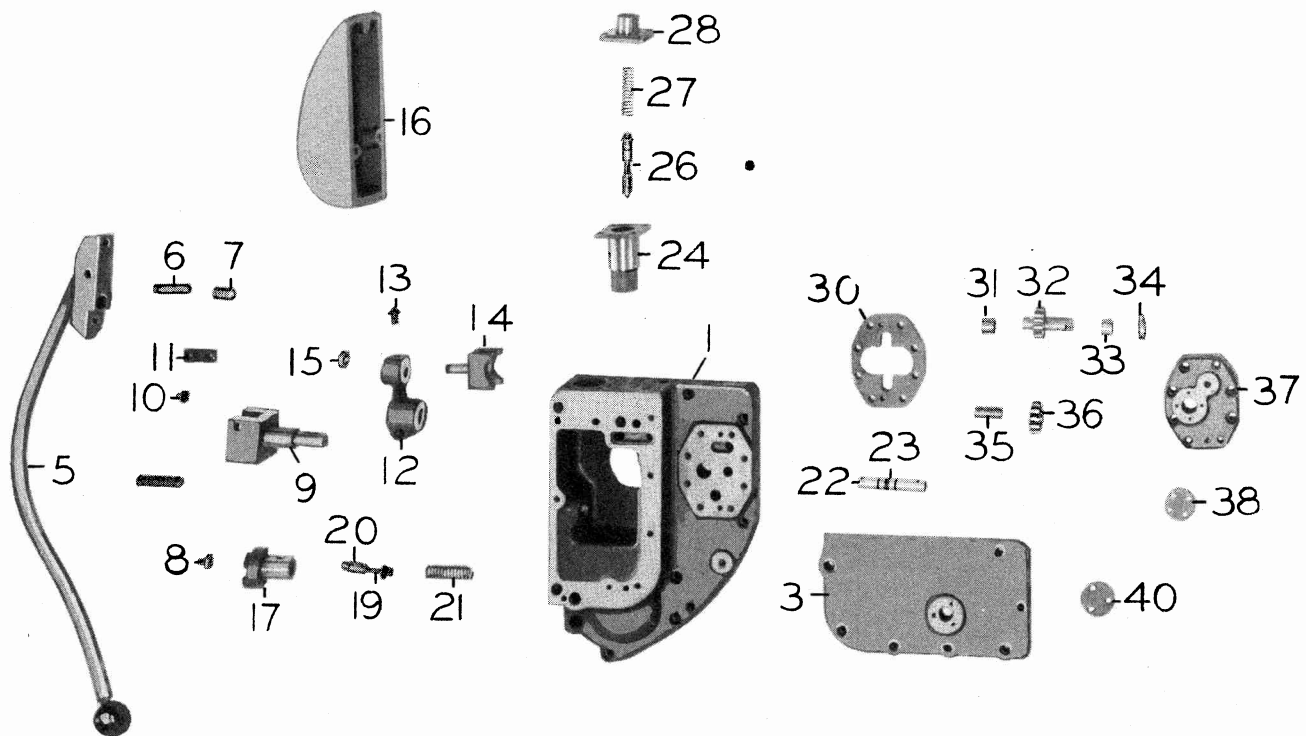
Note 1: Specify Speed Range
 Note 2: Specify Complete Motor Data
 Note 3: Specify Complete Motor Data
 Note 4: Specify Speed Range

CLUTCH LEVER BRACKET—UNIT 'BB'



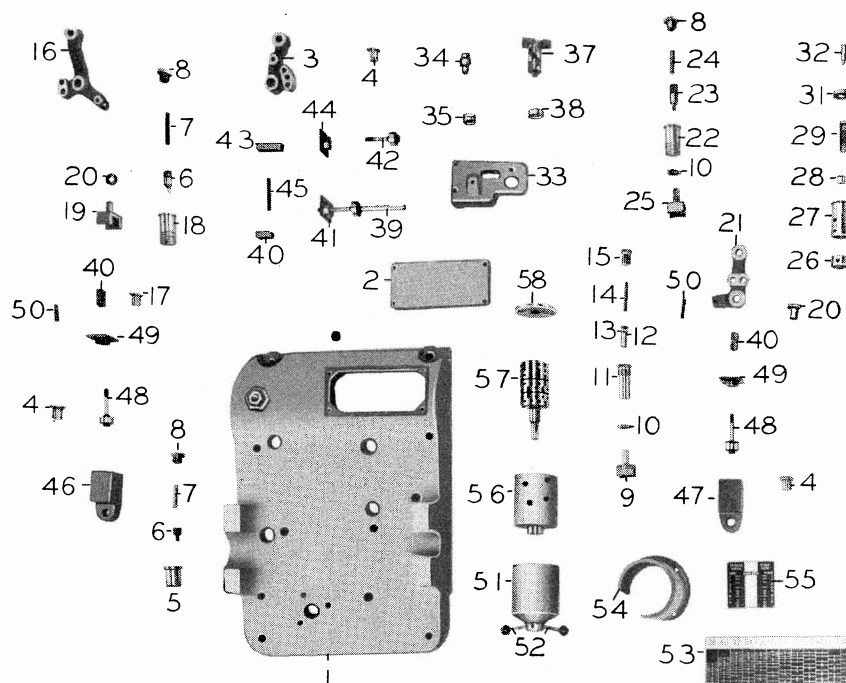
BB-1	Clutch Lever Bracket		A-46889	BB-23	Valve O-Ring	(3)	1820-9
BB-2	Bracket Gasket	N.S.	A-46792	BB-24	Brake Valve Body		A-59522
BB-3	Bracket Cover		A-48720	BB-25	Brake Balve Body Gasket	N.S.	B-48832
BB-4	Bracket Cover Gasket		A-46793	BB-26	Brake Valve		B-59524
BB-5	For. & Rev. Lever & Head		A-47130	BB-27	Brake Valve Spring		B-59673
BB-6	Lever Head Spring	N.S.	B-45756	BB-28	Brake Valve Cover		B-59525
BB-7	Lever Head Plunger	N.S.	B-45592	BB-29	Cover Gasket	N.S.	B-49308
BB-8	Finder Stud		B-44120	BB-30	Steel Ball	(2)	13/16Dia
BB-9	Clutch Lever Fork		B-55545	BB-31	Valve Plunger	(2)	B-62110
BB-10	Lever Lock Stud		B-44119	BB-32	Pressure Reg. Valve Body	(2)	B-62109
BB-11	Brake Lock	N.S.	B-44121	BB-33	Valve Spring		B-48009
BB-12	Clutch Bracket Lever		B-45588	BB-34	Valve Screw	(2)	B-62111
BB-13	Lever Button		B-46030	BB-35	Valve Body Cap	(2)	B-49261
BB-14	Clutch Shifter Rod Fork		B-45593	BB-36	Valve Spring		B-46765
BB-15	Fork Collar	N.S.	B-32590	BB-37	Oil Pump Pinion		B-61239
BB-16	Lever Head Cover	N.S.	A-45587	BB-38	Oil Pump Pinion Bushing		B-40654
BB-17	Valve Body		A-60707	BB-39	Oil Pump Pinion Bushing	N.S.	B-48642
BB-18	Valve Body Gasket	N.S.	B-44803	BB-40	Oil Pump Gear		B-61238
BB-19	Valve Plunger		B-60708	BB-41	Oil Pump Gear Stud		B-46879
BB-20	Valve Plunger O-Ring		1820-7	BB-42	Rev. Shaft Oiler Stud		B-46769
BB-21	Valve Plunger Spring	N.S.	B-40727	BB-43	Oil Filter		
BB-22	Direct & Preselect Valve		B-57799				

CLUTCH LEVER BRACKET—UNIT 'B'



B-1 Clutch Lever Bracket		L-63699	B-23 Valve O-Ring	(3) 1820-9
B-2 Bracket Gasket	N.S.	A-63702	B-24 Brake Valve Body	A-59522
B-3 Bracket Cover		A-63700	B-25 Brake Valve Body Gasket	N.S. B-48832
B-4 Bracket Cover Gasket	N.S.	A-63703	B-26 Brake Valve	B-59524
B-5 For. & Rev. Lever & Head		A-64083	B-27 Brake Valve Spring	B-59673
B-6 Lever Head Spring		B-45756	B-28 Brake Valve Cover	B-59525
B-7 Lever Head Plunger		B-45592	B-29 Cover Gasket	N.S. B-49308
B-8 Finder Stud		B-44120	B-30 Pump Block	B-63732
B-9 Clutch Lever Fork		B-55545	B-31 Pump Pinion Bushing	B-63756
B-10 Lever Lock Stud		B-44119	B-32 Oil Pump Pinion	B-63755
B-11 Brake Lock		B-44121	B-33 Pump Pinion Bushing	B-63757
B-12 Clutch Bracket Lever		B-45588	B-34 Oil Seal	60098
B-13 Lever Button		B-46030	B-35 Oil Pump Gear Stud	B-63758
B-14 Clutch Shifter Rod Fork		B-45593	B-36 Oil Pump Gear	B-62135
B-15 Fork Collar		B-32590	B-37 Pump Cover	B-63733
B-16 Lever Head Cover		A-45587	B-38 Pump Pinion Cover	B-63759
B-17 Valve Body		A-60707	B-39 Cover Gasket	N.S. B-63760
B-18 Valve Body Gasket	N.S.	B-44803	B-40 Rev. Shaft Cover	B-45269
B-19 Valve Plunger		B-60708	B-41 Cover Gasket	N.S. B-45270
B-20 Valve Plunger O-Ring		1820-7	B-42 Rev. Shaft Stop	N.S. B-63851
B-21 Valve Plunger Spring		B-40727	B-43 Oval Seal	N.S. 1866-1
B-22 Direct & Preselect Valve		B-57799		

PRESELECTOR—UNIT 'C'



Double Cylinder Unit

C-1 Housing	L-64149	C-33 Double Cylinder	A-40571
C-2 Housing Cover	B-45559	C-34 Mounting Stud	B-45548
C-3 Gear Shift Lever (3 Position)	A-64072	C-35 Stud Collar	B-40620
C-4 Lever Bushing (3)	B-40617	C-36 Stud Collar	N.S. B-45537
C-5 Lever Detent Cylinder	B-64073	C-37 Positioning Valve	B-40564
C-6 Lever Detent (2)	B-64077	C-38 Valve Collar	B-40563
C-7 Lever Detent Spring (2)	B-40214	C-39 Double End Piston	B-40570
C-8 Spring Retainer (3)	B-64076	C-40 Piston Rod Head (3)	B-40566
C-9 Tri-Cluster Fork	B-64678	C-41 Cylinder Closer	B-40749
C-10 Fork Washer (2)	C-1071	C-42 Single End Piston	B-40569
C-11 Fork Detent Body	B-66885	C-43 Piston Rod Head	B-40565
C-12 Fork Detent	B-64664	C-44 Cylinder Closer	B-67178
C-13 Fork Detent O-Ring	1820-11	C-45 Head Pin	B-40622
C-14 Fork Detent Spring	B-51760		
C-15 Spring Retainer	B-64665		

Single Cylinder Units

C-46 Two Gear Fork Cylinder	B-62187
C-47 Clutch Pinion Fork Cylinder	B-62186
C-48 Piston (2)	B-40561
C-49 Cylinder Closer (2)	B-40568
C-50 Head Pin (2)	B-40621

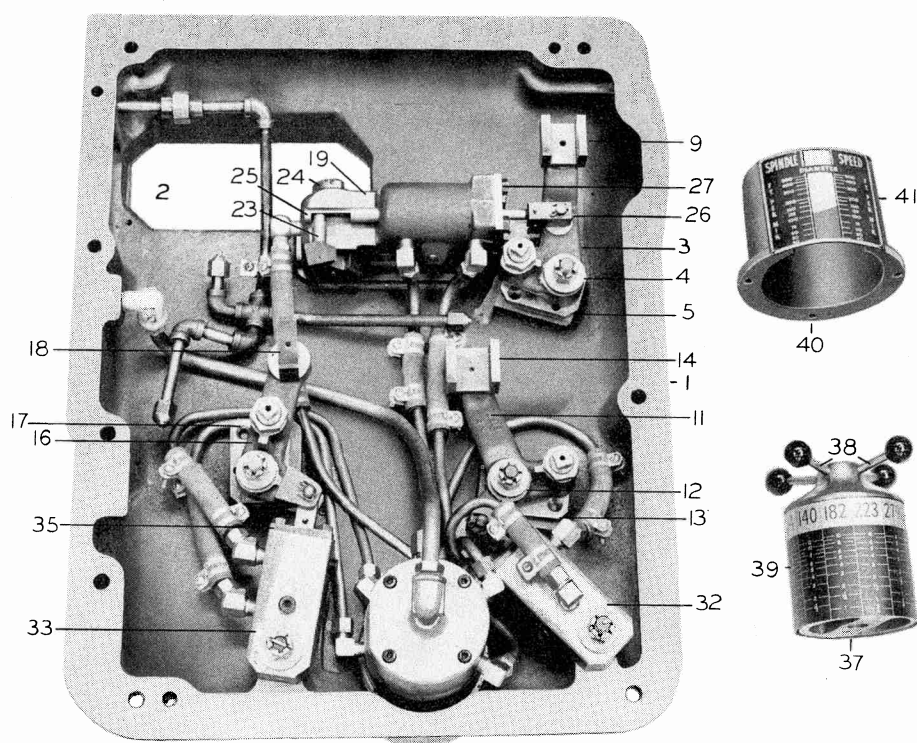
Master Valve Unit

C-51 Dial Drum	B-45539
C-52 Dial Drum Spoke (4)	B-45562
C-53 Dial Drum Chart Plate	Note 1
C-54 Dial Drum Guard	A-45509
C-55 Dial Drum Guard Plate	Note 2
C-56 Valve Housing	A-40576
C-57 Valve Drum	A-50547
C-58 Valve Cover	B-40575

C-30 Spring Washer N.S.
C-31 Valve Cap
C-32 Valve Stem

Note 1 : Specify Speed Range.
Note 2 : Specify Single or Two Speed.

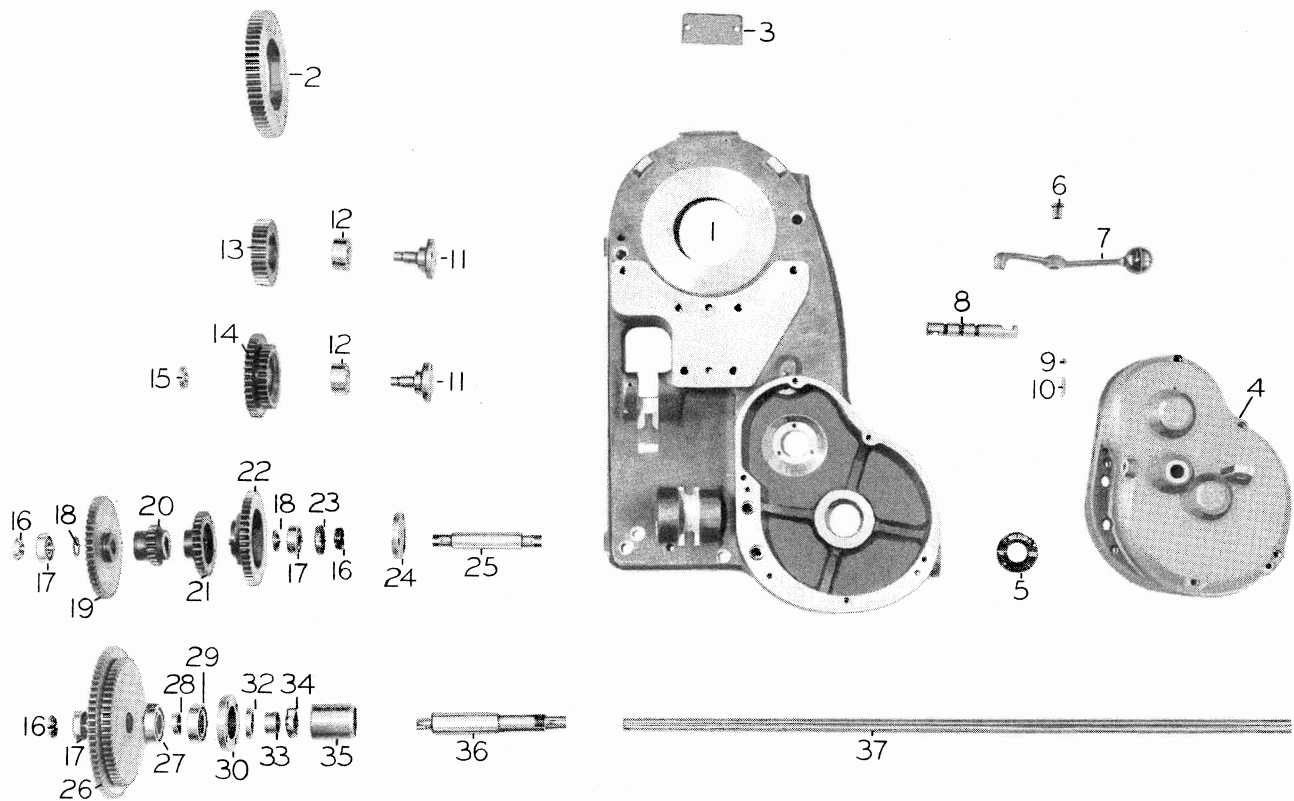
PRESELECTOR—UNIT 'CC'



CC-1 Housing	L-63698	CC-24 Valve Collar	B-40563
CC-2 Housing Cover	B-45559	CC-25 Double End Piston	B-40570
CC-3 Gear Shift Lever (3 Position)	B-57839	CC-26 Piston Rod Head	(3) B-40566
CC-4 Lever Bushing	(3) B-40617	CC-27 Cylinder Closer	B-40749
CC-5 Detent Plate	B-51614	CC-28 Single End Piston	B-40569
CC-6 Detent	(3) B-51615	CC-29 Piston Rod Head	B-40565
CC-7 Detent Spring	(3) B-52816	CC-30 Cylinder Closer	B-40567
CC-8 Spring Retainer	(3) B-57801	CC-31 Head Pin	B-40622
CC-9 Tri-Cluster Fork	B-45640		
CC-10 Fork Washer	(3) C-1071	Single Cylinder Units	
CC-11 Gear Shift Lever	B-57838	CC-32 Two Gear Fork Cylinder	B-62187
CC-12 Lever Bushing	(2) B-40618	CC-33 Clutch Pinion Fork Cylinder	B-62186
CC-13 Detent Plate	B-51613	CC-34 Piston	(2) B-40561
CC-14 Two Gear Fork	B-46783	CC-35 Cylinder Closer	(2) B-40568
CC-15 Fork Washer	(2) B-32590	CC-36 Head Pin	(2) B-40621
CC-16 Gear Shift Lever	B-57837		
CC-17 Detent Plate	B-51612	Master Valve Unit	
CC-18 Clutch Pinion Fork	B-40547	CC-37 Dial Drum	B-45539
Double Cylinder Unit		CC-38 Dial Drum Spoke	(4) B-45562
CC-19 Double Cylinder	A-40571	CC-39 Dial Drum Chart Plate	Note 1
CC-20 Mounting Stud	B-45548	CC-40 Dial Drum Guard	A-45509
CC-21 Stud Collar	B-40620	CC-41 Dial Drum Guard Plate	Note 2
CC-22 Stud Collar	N.S. B-45537	CC-42 Valve Housing	A-40576
CC-23 Positioning Valve	B-40564	CC-43 Valve Drum	A-50547
		CC-44 Valve Cover	B-40575

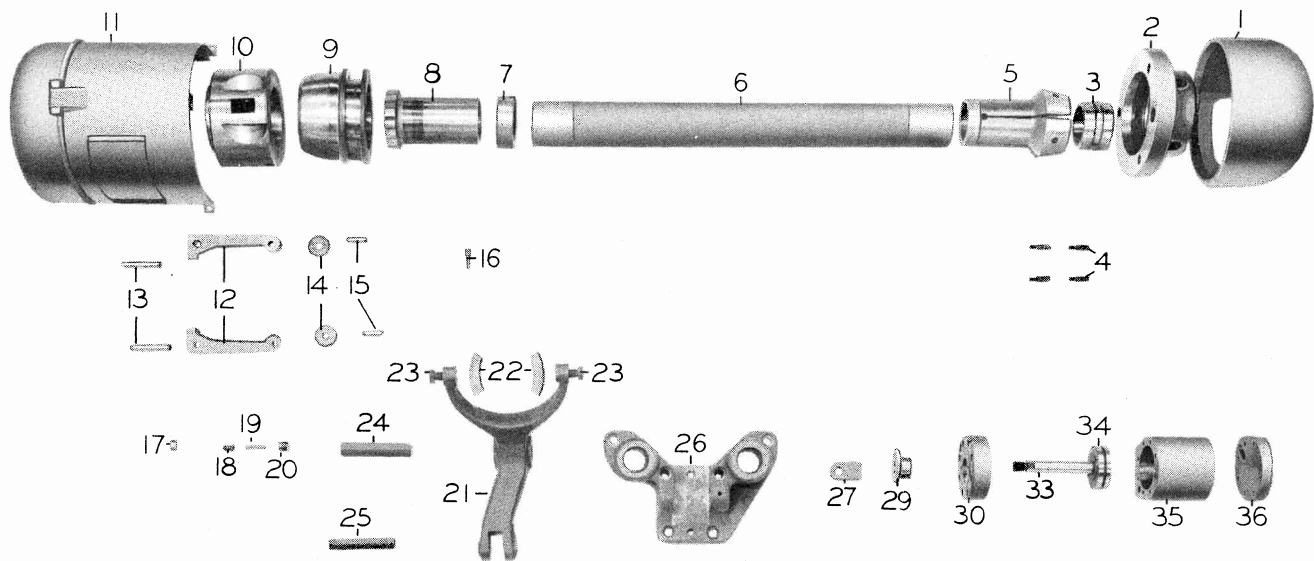
Note 1 : Specify Speed Range.
 Note 2 : Specify Single or Two Speed.

HEAD END BRACKET—UNIT 'D'



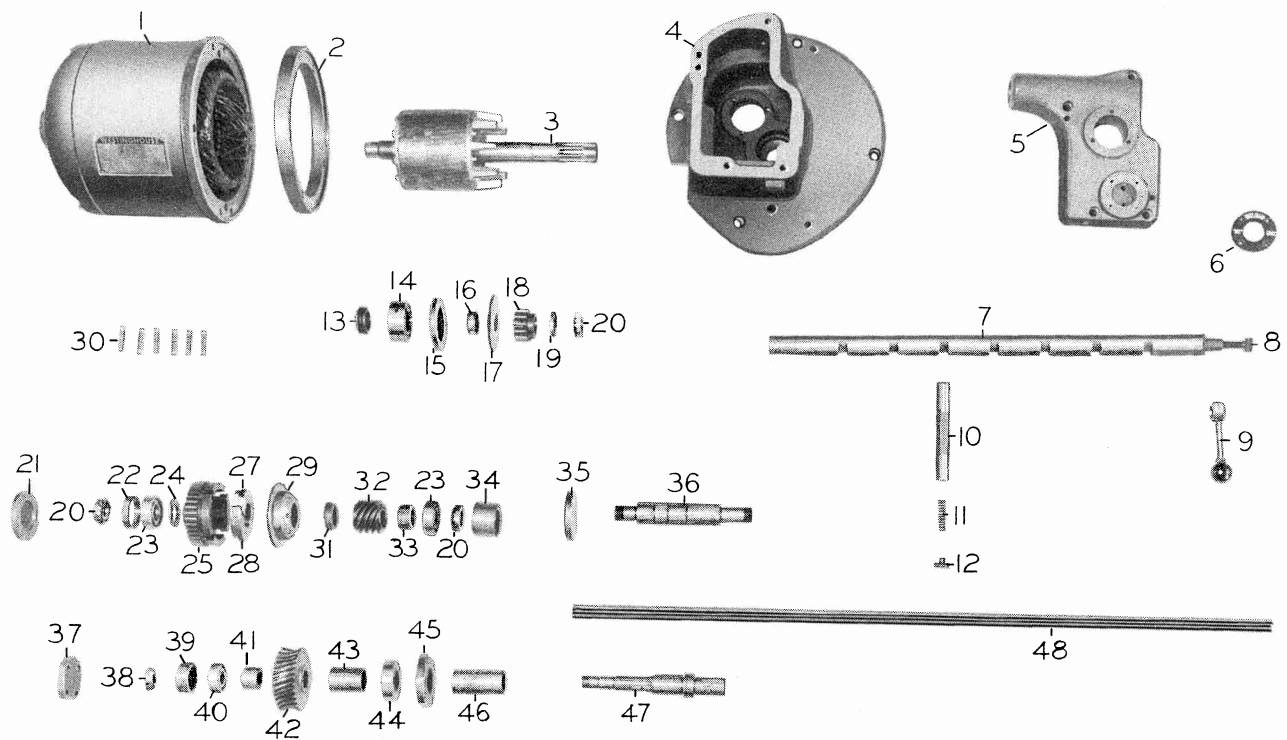
D-1 Head End Bracket	L-63489	D-20 Gear 18T	B-48687
D-2 Spindle Gear	B-63495	D-21 Gear 30T	B-48689
D-3 Bracket Top Cover	B-34412	D-22 Gear 45T	B-63491
D-4 Bracket Cover	A-63490	D-23 Spacer	B-45344
D-5 Oil Gage Assembly		D-24 Closer	B-45343
D-6 Lever Stud	B-45377	D-25 Shaft	B-45340
D-7 Shift Lever	A-45331	D-26 3 Cluster Gear 41T, 72T & 60T	B-49584
D-8 Shift Rod	B-45350	D-27 Ball Bearing	206-S
D-9 Detent Ball	5/16Dia.	D-28 Spacer	B-47181
D-10 Detent Spring	B-45765	D-29 Ball Bearing	206-SF
D-11 Stud	(2) B-48098	D-30 Bearing Closer	B-63562
D-12 Ball Bearing	(2) 5304	D-31 Closer Gasket	N.S. B-63563
D-13 Gear 31T	B-63492	D-32 Oil Seal	60449
D-14 2 Cluster Gear 40T & 30T	B-63493	D-33 Spacer	B-63560
D-15 Spacer	B-63494	D-34 Lockwasher & Nut	W&N-06
D-16 Lockwasher & Nut	W&N-04	D-35 Coupling	B-63561
D-17 Ball Bearing	(3) 204-S	D-36 Shaft	A-47178
D-18 Spacer	(2) B-45000	D-37 Feed Shaft	B-45342
D-19 Gear 48T	B-48690		

COLLET CHUCK—UNIT 'E'



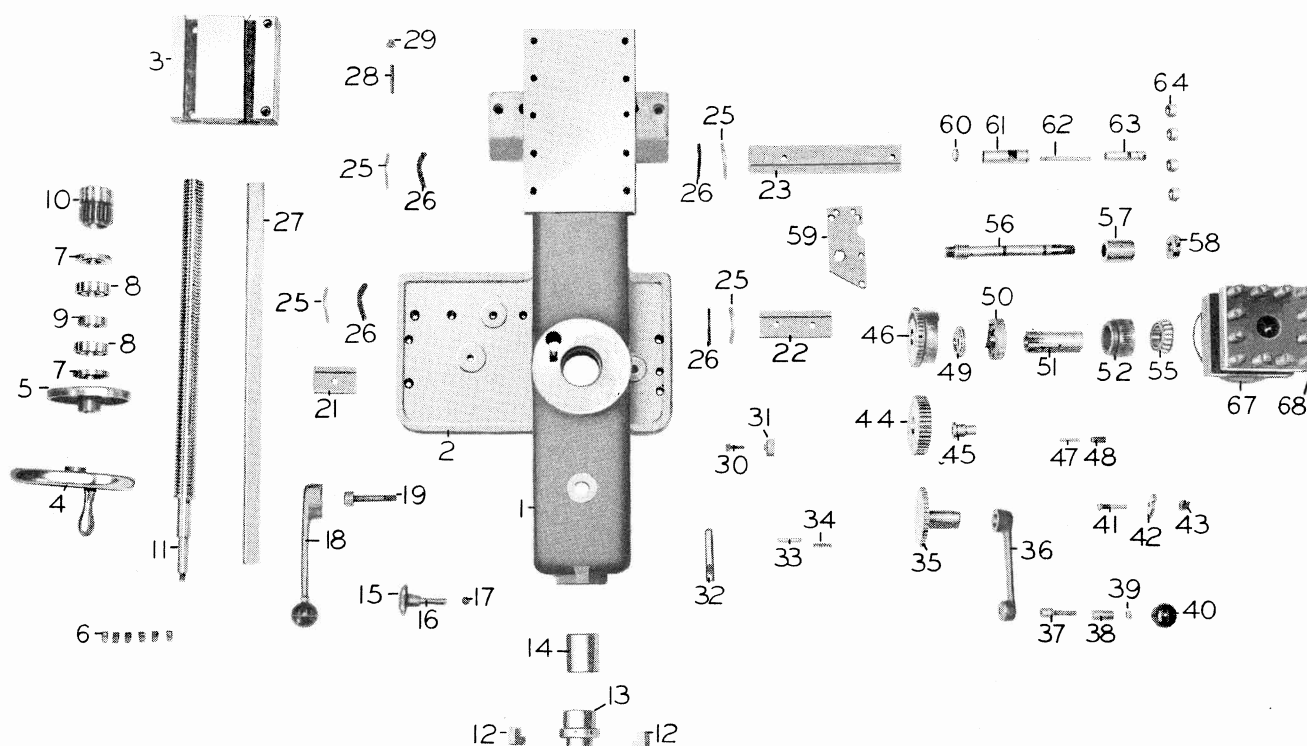
	21A (2 $\frac{1}{2}$ ")	21B (3")	21C (4 $\frac{1}{2}$ ")
E-1 Collet Hood Guard	A-37660	A-48094	A-59957
E-2 Collet Hood	A-37661	A-48093	A-48394
E-3 Collet Pads	A-37569	A-49563	A-48396
E-4 Collet Pad Screw	(4) C-2114	C-2231	C-2355
E-5 Collet	A-46092	A-44578	A-48395
E-6 Plunger	B-47045	B-47038	B-59958
E-7 Abutment Ring	B-46977	B-48065	B-48392
E-8 Adjusting Sleeve	A-46959	A-47039	A-48390
E-9 Wedge	A-63506	A-63501	A-63499
E-10 Finger Holder	A-46956	A-47040	A-48389
E-11 Rear Spindle Guard Ass'm.	A-63508	A-63508	A-63500
E-12 Finger	(2) B-46970	B-46970	B-47766
E-13 Finger Pivot Pin	(2) B-45414	B-45414	B-47769
E-14 Finger Roller	(2) B-46969	B-46969	B-47767
E-15 Roller Pin	(2) B-45431	B-45431	B-47768
E-16 Collet Hood Guard Pin	B-32580	B-32580	B-32580
E-17 Finger Holder Friction	B-44275	B-44275	B-44275
E-18 Detent	B-46705	B-46705	B-47765
E-19 Detent Spring	B-46707	B-46707	B-46707
E-20 Detent Plug	B-46706	B-46706	B-46706
E-21 Yoke	A-67120	A-67121	A-63503
E-22 Wedge Shoe	(2) B-45389	B-45389	B-59981
E-23 Wedge Shoe Stud	(2) B-63510	B-42434	B-47759
E-24 Yoke Pivot Pin	B-63511	B-63511	B-63502
E-25 Cylinder Pivot Pin	B-63512	B-63512	B-63512
E-26 Yoke Pivot Bracket	A-63507	A-63507	A-63498
E-27 Link	B-63678	B-63678	B-63678
E-28 Link Pin	N.S. B-41994	B-41994	B-41994
E-29 Cylinder Closer	B-63679	B-63679	B-63679
E-30 Cylinder Head	A-63673	A-63673	A-63673
E-31 Cylinder Head Gasket	N.S. B-63685	B-63685	B-63685
E-32 Hat Seal	N.S. 2432	2432	2432
E-33 Piston Rod	B-63675	B-63675	B-63675
E-34 Piston Rod O-Ring	1866-10	1866-10	1866-10
E-35 Cylinder	A-63672	A-63672	A-63672
E-36 Cylinder Head	A-63674	A-63674	A-63674
E-37 Cylinder Head Gasket	N.S. B-63701	B-63701	B-63701

RAPID TRAVERSE DRIVE—UNIT 'F'



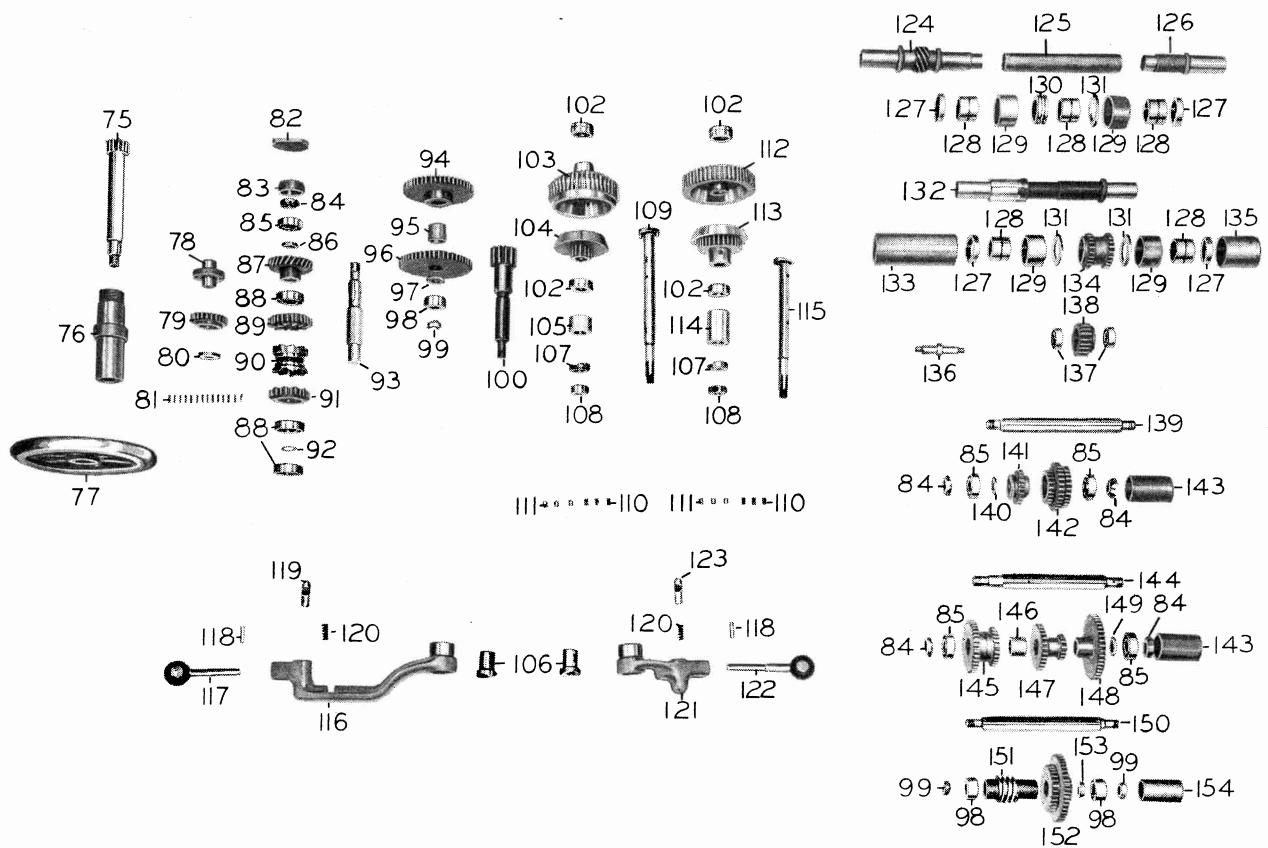
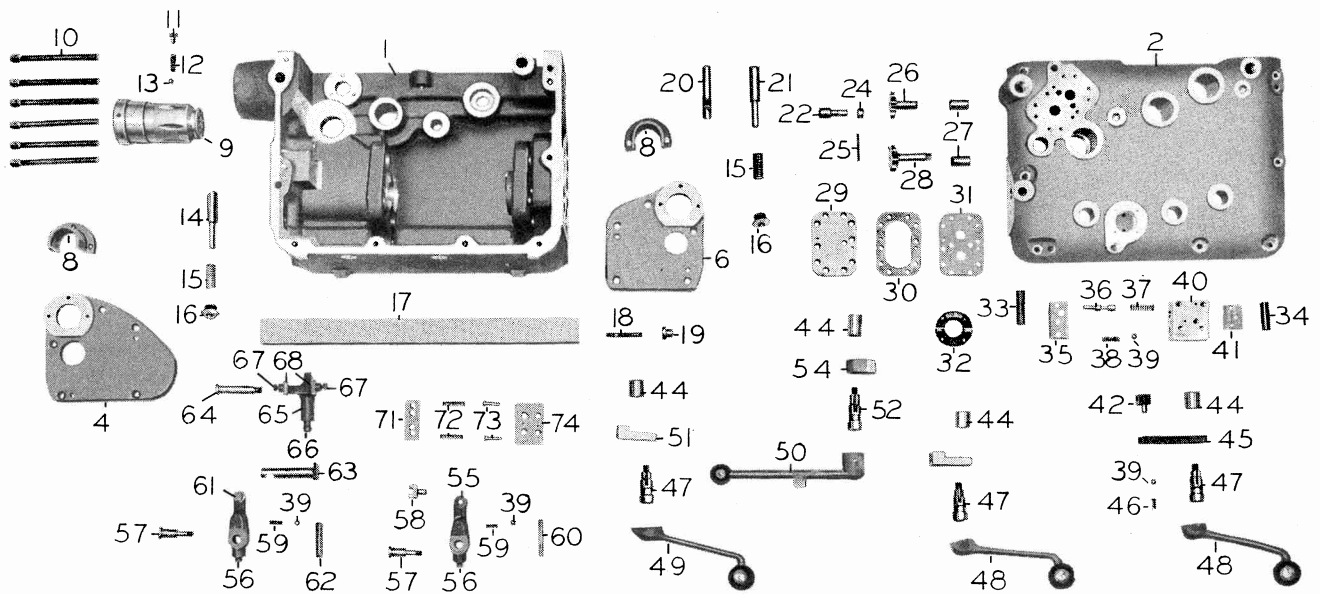
F-1 Motor	To Suit	F-26 Bushing	N.S. (2) B-46409
F-2 Adapter (when required)	A-57336	F-27 Steel Clutch Plate	(4) B-46407
F-3 Motor Shaft	A-57334	F-28 Bronze Clutch Plate	(5) B-46408
F-4 Motor Bracket	A-63214	F-29 Clutch Cover	B-46385
F-5 Cover	A-46382	F-30 Clutch Spring	(6) B-49839
F-6 Oil Gage Assembly		F-31 Spacer	B-48815
F-7 Stop Rod	A-49447	F-32 Worm	B-48813
F-8 Stop Rod Screw	B-36694	F-33 Gear Spacer	B-46399
F-9 Stop Rod Lever	B-47891	F-34 Bearing Spacer	B-46400
F-10 Stop Rod Plunger	B-46412	F-35 Cover	B-46393
F-11 Plunger Spring	C-1557	F-36 Clutch Shaft	A-46389
F-12 Screw Plug	B-31740	F-37 Cover	B-46395
F-13 Oil Thrower	B-46404	F-38 Lockwasher & Nut	W&N-04
F-14 Ball Bearing	5206-K	F-39 Bearing Spacer	B-46401
F-15 Bearing Closer	B-46391	F-40 Ball Bearing	204-S
F-16 Bearing Spacer	B-46396	F-41 Gear Spacer	B-46402
F-17 Oil Slinger	B-46406	F-42 Worm Gear	B-48814
F-18 Gear 18T	B-46383	F-43 Gear Spacer	B-46403
F-19 Spacer	B-48697	F-44 Ball Bearing	206-SF
F-20 Lockwasher & Nut	W&N-05	F-45 Bearing Closer	B-46392
F-21 Cover	B-52919	F-46 Shaft Coupling	B-46618
F-22 Bearing Spacer	B-46397	F-47 Shaft	B-46617
F-23 Ball Bearing	(2) 205-S	F-48 Feed Shaft	B-45478
F-24 Shaft Washer	B-46398	F-49 Motor Bracket Gasket	N.S. A-49469
F-25 Clutch Gear	A-46384	F-50 Cover Gaskets	N.S. (4) B-49470

CROSS SLIDE AND CARRIAGE—UNIT 'G'



G-1 Cross Slide	L-63363	G-35 Gear 40T	B-45084
G-2 Carriage	L-63364	G-36 Binder Lever	B-45080
G-3 Tool Block	A-45629	G-37 Lever Shaft	B-45427
G-4 Handwheel	A-10450	G-38 Lever Bushing	B-42146
G-5 Cross Feed Dial	B-42856	G-39 Lever Collar	B-42148
G-6 Dial Clip	(6) B-31937	G-40 Lever Ball	B-42149
G-7 Bearing Spacer	(2) B-36377	G-41 Pivot Screw	B-46471
G-8 Thrust Bearing	(2) 7305	G-42 Tumbler	B-51796
G-9 Bearing Spacer	B-36378	G-43 Lock Bolt Lever	B-46476
G-10 Feed Screw Gear	A-63377	G-44 Gear 40T	B-48799
G-11 Feed Screw	A-63374	G-45 Bushing	B-48798
G-12 Clamp	(2) A-63376	G-46 Cam	A-56165
G-13 Compensating Nut	A-63365	G-47 Index Plunger Spring	B-31931
G-14 Feed Screw Nut	B-63367	G-48 Index Plunger	B-39914
G-15 Binder Screw Knob	B-47915	G-49 Thrust Bearing	51107
G-16 Binder Screw	B-47912	G-50 Indexing Plate	B-45086
G-17 Binder Shoe	C-2275	G-51 Center Sleeve	B-46474
G-18 Clamp Lever	B-47487	G-52 Locating Ring	B-46475
G-19 Clamp Stud	B-63372	G-53 Locating Ring Detent	N.S. B-45453
G-20 Clamp Washer	N.S. B-46179	G-54 Detent Spring	N.S. B-45767
G-21 Clamp Cap	B-63370	G-55 Timken Bearing	13685
G-22 Front Cap	B-63368	G-56 Center Stud	A-56166
G-23 Front Cap	B-63369	G-57 Stud Spacer	B-56168
G-24 Rear Cap	N.S. A-63375	G-58 Center Stud Nut	B-46666
G-25 Wiper Cover	(4) B-45464	G-59 Plate	A-56167
G-26 Wiper	(4) B-45465	G-60 Lock Bolt Sleeve Screw	B-34175
G-27 Cross Slide Gib	A-63366	G-61 Lock Bolt Sleeve	B-46478
G-28 Gib Adj. Stud	B-37754	G-62 Lock Bolt Spring	B-45768
G-29 Gib Adj. Nut	B-40580	G-63 Lock Bolt	B-46477
G-30 Tee Bolt	B-34400	G-64 Lock Bolt Bushing	(4) B-39902
G-31 Trip Dog	B-45448	G-65 Rear Cap Gib	N.S.(2) B-63371
G-32 Trip Pin	B-45426	G-66 Gib Screw	N.S.(2) B-31890
G-33 Tumbler Plunger	B-39016	G-67 Square Turret	A-58498
G-34 Plunger Spring	B-46707	G-68 Sq. Hd. Set Screw	C-2041

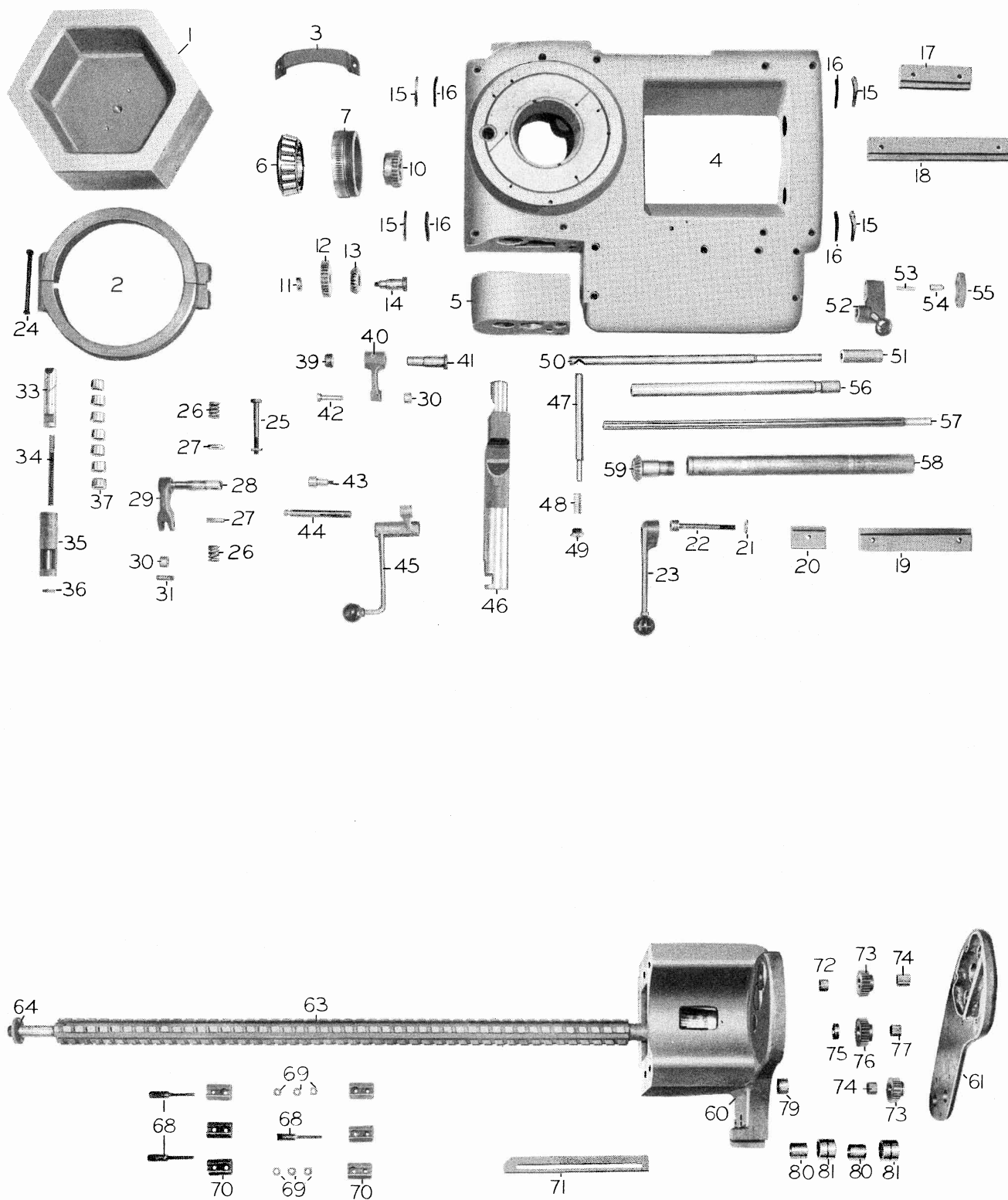
CARRIAGE APRON—UNIT 'H'



CARRIAGE APRON—UNIT 'H'

H-1	Carriage Apron		L-63582	H-80	Washer		B-63597
H-2	Carriage Apron Cover		A-63583	H-81	Needle Bearing	(28)	C-407-Q
H-3	Cover Gasket	N.S.	A-63626	H-82	Bearing Closer		B-46672
H-4	Left End Cover		A-63585	H-83	Bearing Spacer		B-46675
H-5	Cover Gasket	N.S.	A-63625	H-84	Lockwasher and Nut	(5)	W&N-04
H-6	Right End Cover		A-63584	H-85	Ball Bearing	(5)	204-S
H-7	Cover Gasket	N.S.	A-63624	H-86	Spacer		B-46671
H-8	Guard	(2)	B-63589	H-87	Gear 25T		B-46427
H-9	Stop Screw Roll		A-45497	H-88	Ball Bearing	(3)	205-S
H-10	Stop Screw	(6)	B-31815	H-89	Clutch Gear 27T		A-46430
H-11	Detent Screw		B-38812	H-90	Tooth Clutch		A-46658
H-12	Detent Spring		B-34684	H-91	Clutch Gear 29T		A-46429
H-13	Steel Ball		3/8 Dia.	H-92	Bearing Spacer		B-45006
H-14	Knockout		B-45495	H-93	Shaft		B-46670
H-15	Knockout Spring	(2)	B-31760	H-94	Gear 48T		B-44982
H-16	Knockout Rod Plug	(2)	B-31750	H-95	Spacer		B-45153
H-17	Taper Gib		B-45179	H-96	Gear 50T		B-44981
H-18	Gib Adj. Stud		C-862	H-97	Spacer		B-46669
H-19	Gib Adj. Nut		C-849	H-98	Ball Bearing	(3)	5203-SB
H-20	Trip Pin		B-45426	H-99	Lockwasher and Nut	(3)	W&N-03
H-21	Knockout		B-45494	H-100	Pinion Shaft		B-45132
H-22	Lubricating Valve		B-63606	H-101	Pinion Shaft Bushing	N.S.	B-63593
H-23	Valve O-Ring	N.S. (3)	1820-7	H-102	Thrust Bearing	(4)	4B8
H-24	Valve Collar		B-63614	H-103	Worm Gear 45T&40T		B-45120
H-25	Lever Pin		C-2268	H-104	Friction, Gear 15T, & Bushing		B-45142
H-26	Pump Gear		B-63610	H-105	Bushing		B-63615
H-27	Bronze Bushing	(2)	B-63731	H-106	Feed Lever Cam	(2)	B-48858
H-28	Pump Gear		B-63609	H-107	Feed Lever Cam	(2)	B-48859
H-29	Pump Cover		B-63590	H-108	Friction Bolt Nut	(2)	B-48860
H-30	Pump Plate (Inside)		B-63591	H-109	Friction Bolt		A-63623
H-31	Pump Plate (Back)		B-63592	H-110	Friction Spring	(6)	B-38192
H-32	Oil Gage Assembly			H-111	Friction Plug	(6)	B-38193
H-33	Hard Pin		5/8x2 1/2	H-112	Clutch Gear 50T & Bushing		B-46668
H-34	Hard Pin		5/8x2	H-113	Friction, Gear 30T & Bushing		B-46661
H-35	Top Plate		B-63602	H-114	Bushing		B-63595
H-36	Manifold Valve		B-63607	H-115	Friction Bolt		A-63622
H-37	Valve Spring		B-50357	H-116	Longitudinal Feed Lever		A-63588
H-38	Spring		B-63616	H-117	Lever Handle		B-39217
H-39	Steel Ball	(3)	5/16 Dia.	H-118	Lever Pin	(2)	5/16x1 1/4
H-40	Lubricating Manifold		B-63608	H-119	Lever Plunger		B-47164
H-41	Bottom Plate		B-63604	H-120	Plunger Spring	(2)	B-31917
H-42	Shifter Block		B-45178	H-121	Cross Feed Lever		A-46657
H-43	Snap Ring	N.S. (2)	3/8	H-122	Lever Handle		B-44089
H-44	Bushing	(4)	B-63594	H-123	Lever Plunger		B-46900
H-45	Lever		B-45493	H-124	Rap. Trav. Feed Shaft		A-63620
H-46	Detent Spring		B-45761	H-125	Extension		B-63619
H-47	Lever Stud	(3)	B-45498	H-126	End Shaft		B-63618
H-48	Lever	(2)	A-45496	H-127	Oil Seal	(4)	60388
H-49	Lever		A-45624	H-128	Roller Bearing	(5)	M0-20
H-50	Rapid Traverse Lever		A-63586	H-129	Bearing Sleeve	(4)	B-45002
H-51	Lever	(2)	B-45488	H-130	Thrust Bearing		7-B
H-52	Lever Stud		B-48289	H-131	Bearing Spacer	(3)	B-63600
H-53	Lever Stud O-Ring	N.S. (4)	1820-13	H-132	Hollow Feed Shaft		A-63621
H-54	Lever		B-63603	H-133	L.H. Spacer		B-63599
H-55	Lever		B-45121	H-134	Feed Shaft Gear		B-36556
H-56	Shift Pin	(2)	B-45487	H-135	R.H. Spacer		B-63598
H-57	Lever Stud	(2)	B-46684	H-136	Idler Stud		B-45137
H-58	Shifter Block		B-45043	H-137	Ball Bearing	(2)	203-S
H-59	Detent Spring	(2)	B-45762	H-138	Idler Gear 22T		B-45147
H-60	Detent Plate		B-45499	H-139	Spline Shaft		B-67083
H-61	Lever		B-45122	H-140	Spacer		B-67082
H-62	Detent Plate		B-45486	H-141	Gear 23T		B-45138
H-63	Gear Shift Rod		B-48659	H-142	3 Cluster Gear		B-31833
H-64	Yoke Stud		B-63613	H-143	Bearing Sleeve	(2)	B-44997
H-65	Yoke Lever		A-63587	H-144	Spline Shaft		B-45127
H-66	Yoke Lever Pin		B-63605	H-145	2 Cluster Gear 35T&25T		B-45500
H-67	Yoke Shoe Stud	(2)	B-45030	H-146	Spacer		B-31922
H-68	Yoke Shoe	(2)	B-44966	H-147	2 Cluster Gear		B-31831
H-69	Yoke Stud Spacer	N.S.	B-46681	H-148	Gear 43T		B-45124
H-70	Stud Lockwasher and Nut	N.S.	W&N-01	H-149	Spacer		B-45000
H-71	Plate		B-63612	H-150	Spline Shaft		B-45129
H-72	Balance Spring	(2)	B-32049	H-151	Worm		B-44979
H-73	Balance Pin	(2)	B-63601	H-152	3 Cluster Gear		B-44978
H-74	Yoke Balancer		B-63611	H-153	Sleeve		B-34218
H-75	Pinion Shaft		B-46677	H-154	Bearing Sleeve		B-44996
H-76	Sleeve		B-46655	H-155	Spray Head	N.S. (3)	B-45696
H-77	Hand Wheel		B-46678	H-156	Apron-Carriage Gasket	N.S.	B-46928
H-78	Idler Stud		B-63596	H-157	C.A. Cover-Carriage Gasket	N.S.	B-63617
H-79	Idler Gear 24T		B-46673				

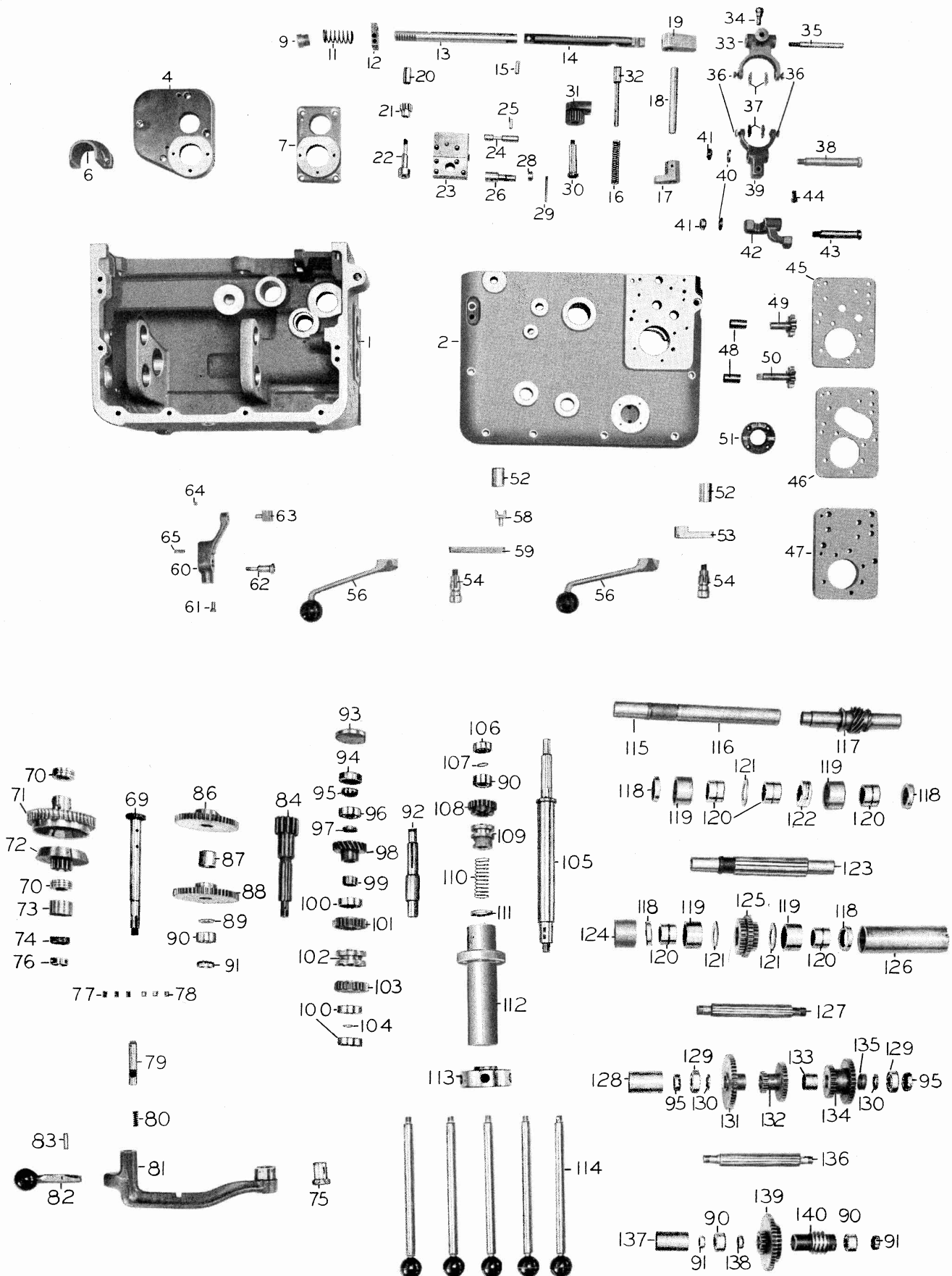
TURRET AND SADDLE—UNIT 'J'



TURRET AND SADDLE—UNIT 'J'

J-1 Hexagon Turret	A-63461	J-43 Lever Stud	B-44927
J-2 Turret Clamp	A-44899	J-44 Control Handle Pivot	B-44926
J-3 Clamp Guard	A-44903	J-45 Control Handle	A-46415
J-4 Saddle	L-63459	J-46 Control Bar	A-49465
J-5 Control Lever Bracket	A-44900	J-47 Knock Out Pin	B-44925
J-6 Timken Bearing	665	J-48 Knock Out Rod Spring	B-31760
J-7 Turret Locating Ring	A-46378	J-49 Knock Out Rod Plug	B-31750
J-8 Locat. Ring Pin	N.S.(2) B-37915	J-50 Stop Rod	B-47471
J-9 Pin Spring	N.S.(2) B-38464	J-51 Stop Rod Sleeve	B-47472
J-10 Turret Index Gear	B-44929	J-52 Stop Lever	B-47470
J-11 Nut	B-44931	J-53 Detent Spring	B-47474
J-12 Index Gear	B-44930	J-54 Detent Pin	B-47473
J-13 Turret Bevel Gear	B-44933	J-55 Detent Plate	B-47475
J-14 Index Gear Stud	B-44932	J-56 Index Tube	B-47478
J-15 Wiper Cover	(4) B-45464	J-57 Index Rod	B-63209
J-16 Wiper	(4) B-45465	J-58 Index Tube	B-47477
J-17 Front and Rear Cap	(2) B-63471	J-59 Bevel Gear	B-47476
J-18 Rear Cap (Long)	B-63472	J-60 Tail End Bracket	A-63206
J-19 Front Cap (Long)	B-63473	J-61 Bracket Cover	A-63207
J-20 Clamp Cap	B-63370	J-62 Saddle Back Cover	N.S. A-63462
J-21 Washer	B-46179	J-63 Carrier Shaft	A-60919
J-22 Binder Stud	B-63470	J-64 Carrier Shaft Washer	B-47972
J-23 Binder Handle	B-45459	J-65 Carrier Shaft Nut	N.S. B-61401
J-24 Clamp Ring Bolt	C-2298	J-66 Friction Spring	N.S.(2) B-38192
J-25 Clamp Bolt	B-44920	J-67 Friction Plug	N.S.(2) B-38193
J-26 Clamp Spring	(2) B-33520	J-68 Stop Screw	(12) B-51642
J-27 Clamp Plate	(2) B-33688	J-69 Shoe	(6) B-44949
J-28 Clamp Spreader	B-48683	J-70 Stop Dog	(6) B-44909
J-29 Clamp Lever	B-48684	J-71 Adj. Trip Bar	B-45608
J-30 Roller	(2) B-44912	J-72 Bushing	1-1049-1
J-31 Roller Pin	B-44921	J-73 Gear 24T	(2) B-44941
J-32 Snap Ring	N.S.(3) 7/16	J-74 Bushing	(2) B-63213
J-33 Lock Bolt	A-63468	J-75 Collar	B-63211
J-34 Lock Bolt Spring	B-44917	J-76 Gear 27T	B-44942
J-35 Lock Bolt Sleeve	B-63465	J-77 Bushing	1-1049-3
J-36 Sleeve Screw	B-63467	J-78 Gear Stud	N.S. B-63208
J-37 Lock Bolt Bushing	(7) B-63463	J-79 Bushing	B-63212
J-38 Bushing Spacer	N.S.(7) B-63464	J-80 Brg. Inner Race	(2) B-45607
J-39 Spacer	B-44911	J-81 Roller Bearing	(2) MO-20
J-40 Lock Bolt Lever	B-63460	J-82 Stop Lever Screw	N.S. B-62976
J-41 Lever Stud	B-44910	J-83 Bracket Cover Gasket	N.S. A-48708
J-42 Lever Pin	B-63469	J-84 Clamp Shim	N.S. B-60115

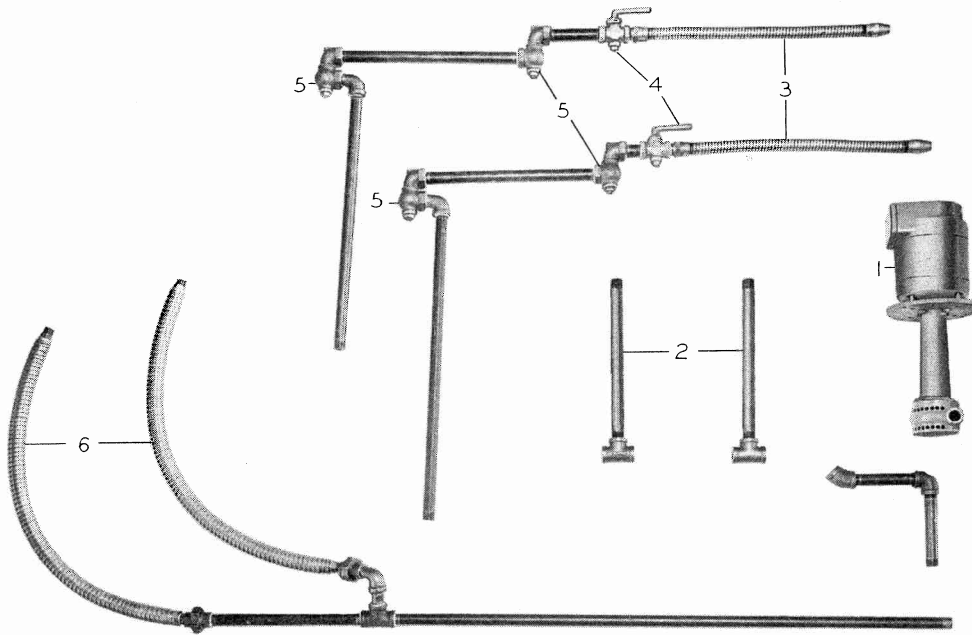
SADDLE APRON—UNIT 'K'



SADDLE APRON—UNIT 'K'

K-1 Saddle Apron		L-63660	K-73 Bushing	B-63615
K-2 Saddle Apron Cover		A-63641	K-74 Feed Lever Cam	B-48859
K-3 Cover to Apron Gasket	N.S.	A-63708	K-75 Feed Lever Cam	B-48858
K-4 Left End Cover		A-63638	K-76 Friction Bolt Nut	B-48860
K-5 Left End Cover Gasket	N.S.	B-63705	K-77 Friction Spring	(3) B-38192
K-6 Guard	(2)	B-63589	K-78 Friction Plug	(3) B-38193
K-7 Right End Cover		A-63637	K-79 Plunger	B-44975
K-8 Right End Cover Gasket	N.S.	B-63706	K-80 Feed Lever Spring	B-31917
K-9 Spring Retainer		B-63646	K-81 Power Feed Lever	A-63640
K-10 Sleeve	N.S.	B-64127	K-82 Feed Lever Handle	B-39217
K-11 Spring		B-47642	K-83 Pin	5/16x1 1/8
K-12 Block		B-64128	K-84 Pinion Shaft	B-45132
K-13 Left End Shift Rod		B-63650	K-85 Pinion Shaft Bushing	N.S. B-63593
K-14 Right End Shift Rod		B-63653	K-86 Gear 48T	B-44982
K-15 Shift Rod Pin		B-64104	K-87 Spacer	B-45153
K-16 Knock Out Spring		B-46850	K-88 Gear 50T	B-44981
K-17 Lever		B-64123	K-89 Spacer	B-46669
K-18 Shaft		B-64150	K-90 Ball Bearing	(4) 5203-SB
K-19 Lever		B-64122	K-91 Lockwasher and Nut	(3) W&N-03
K-20 Bushing		B-63645	K-92 Shaft	B-46814
K-21 Gear		B-64108	K-93 Bearing Closer	B-46672
K-22 Lever Stud		B-63649	K-94 Spacer	B-46675
K-23 Valve Block		A-63658	K-95 Lockwasher and Nut	(3) W&N-04
K-24 Valve Piston		B-63704	K-96 Ball Bearing	7204
K-25 Pin		1/4x1 1/8	K-97 Spacer	B-46671
K-26 Valve		B-63651	K-98 Gear 22T	B-46439
K-27 Valve O-Ring	N.S.(2)	1820-7	K-99 Spacer	B-46823
K-28 Collar		B-63614	K-100 Ball Bearing	(3) 205-S
K-29 Pin		3/16x2	K-101 Clutch Gear 27T	A-46441
K-30 Lever Stud		B-63669	K-102 Tooth Clutch	A-46805
K-31 Lever Gear		B-63648	K-103 Clutch Gear 29T	A-46440
K-32 Clutch Rod		B-63652	K-104 Bearing Spacer	B-63644
K-33 Yoke		B-63635	K-105 Turnstile Shaft	A-46803
K-34 Pivot Pin		B-63605	K-106 Ball Bearing	203-S
K-35 Stud		B-46812	K-107 Spacer	B-46825
K-36 Yoke Shoe Stud	(4)	B-45030	K-108 Clutch Gear	B-46815
K-37 Yoke Shoe	(4)	B-44966	K-109 Tooth Clutch	B-46816
K-38 Stud		B-63643	K-110 Turnstile Spring	B-46826
K-39 Yoke		B-46807	K-111 Turnstile Collar	B-46824
K-40 Spacer	(2)	B-46681	K-112 Turnstile Sleeve	A-63639
K-41 Lockwasher and Nut	(2)	W&N-01	K-113 Turnstile Hub	B-13951
K-42 Lever		B-46808	K-114 Turnstile Handle	(5) B-60843
K-43 Stud		B-63642	K-115 Left End Shaft	B-63618
K-44 Button		B-46821	K-116 Extension	B-63619
K-45 Pump Plate		B-63631	K-117 R.T. Feed Shaft	A-63657
K-46 Pump Filler Plate		B-63632	K-118 Oil Seal	(4) 60388
K-47 Pump Cover		A-63636	K-119 Bearing Sleeve	B-45002
K-48 Bushing	(2)	B-63731	K-120 Thrust Bearing	(5) M0-20
K-49 Pump Gear		B-63610	K-121 Spacer	(3) B-63600
K-50 Pump Gear		B-63609	K-122 Thrust Bearing	7B
K-51 Oil Gage Assembly			K-123 Hollow Feed Shaft	A-63656
K-52 Bushing	(2)	B-63594	K-124 Left End Spacer	B-63655
K-53 Lever		B-45488	K-125 3 Cluster Gear	B-31835
K-54 Lever Stud	(2)	B-45498	K-126 Right End Spacer	B-63654
K-55 Lever Stud O-Ring	N.S.(2)	1820-13	K-127 Spline Shaft	B-44972
K-56 Lever	(2)	A-45613	K-128 Bearing Spacer	B-44997
K-57 Rap. Trav. Lever	N.S.	B-63633	K-129 Ball Bearing	204-S
K-58 Shifter Block		B-45178	K-130 Spacer	(2) B-45000
K-59 Lever		B-45493	K-131 Gear 43T	B-45124
K-60 Lever		B-44963	K-132 2 Cluster Gear 16T and 30T	B-31831
K-61 Shift Pin		B-45487	K-133 Spacer	B-31922
K-62 Lever Stud		B-46684	K-134 2 Cluster Gear 25T and 35T	B-38826
K-63 Shifter Block		B-45043	K-135 Spacer	B-45001
K-64 Steel Ball	(3)	5/16 Dia.	K-136 Spline Shaft	B-44973
K-65 Detent Spring		B-45762	K-137 Bearing Spacer	B-44996
K-66 Gib	N.S.	B-45010	K-138 Sleeve	B-34218
K-67 Gib Adj. Nut	N.S.	C-849	K-139 3 Cluster Gear	B-44978
K-68 Gib Adj. Stud	N.S.	C-862	K-140 Worm	B-44979
K-69 Friction Bolt		A-46804	K-141 Spray Head	N.S.(2) B-45696
K-70 Thrust Bearing	(2)	4B8	K-142 Detent Plate	N.S. B-46846
K-71 Worm Gear		B-44965	K-143 Apron to Saddle Gasket	N.S. B-47057
K-72 Friction, Gear and Bushing		B-45142	K-144 Cover to Saddle	N.S. B-63707

COOLANT PUMP & PIPING—UNIT 'L'



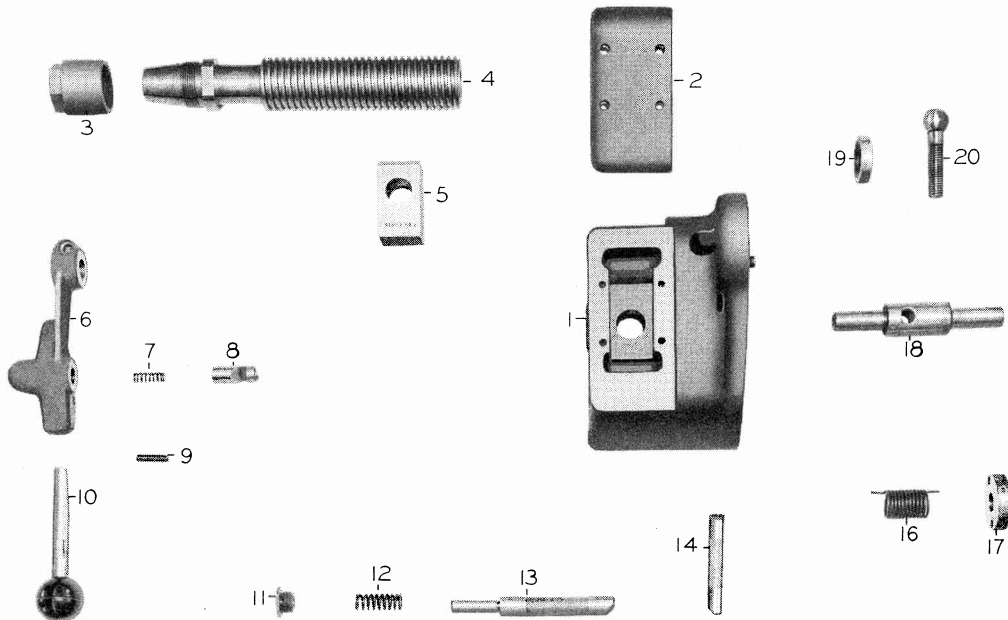
L-1 Coolant Pump
L-2 Pipe Support
L-3 Flexible Coolant Line

1-P3
(2) B-45711
(2)

L-4 Stop Cock
L-5 Swing Joint
L-6 Flexible Hose

(2) 1/2
(4) 1/2
(2) 1/2

CARRIAGE THREAD CHASING ATTACHMENT—UNIT 'M'



M-1 Bracket
M-2 Cover
M-3 Leader Nut
M-4 Leader (Specify threads to be cut.)
M-5 Follower (Specify threads to be cut.)
M-6 Lever
M-7 Lever Spring
M-8 Lever Plunger
M-9 Handle Pin
M-10 Lever Handle

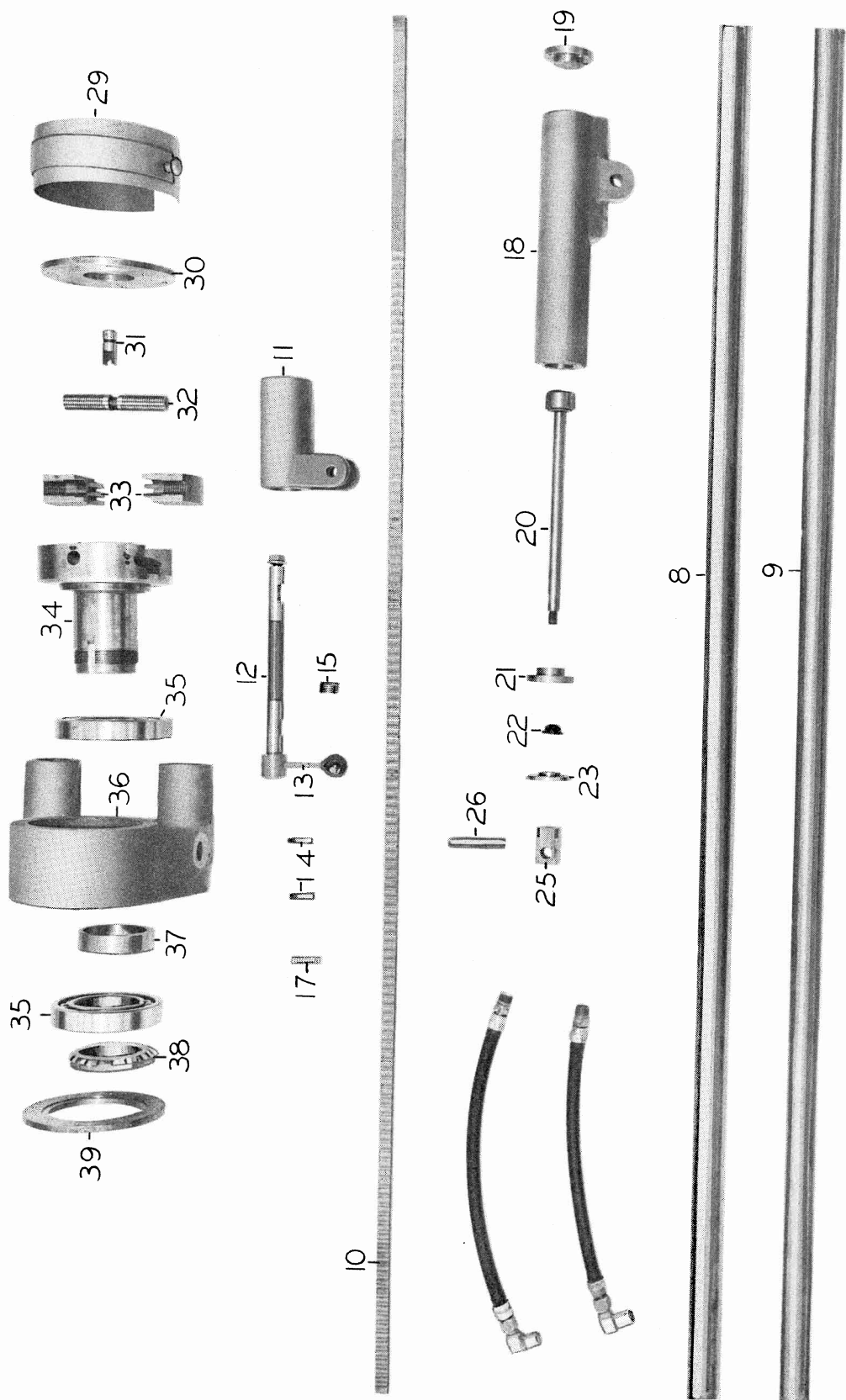
A-46241
B-46242
B-32079
A-46243
B-31917
B-47165
C-1079
B-44089

M-11 Knock Out Plug
M-12 Knock Out Spring
M-13 Knock Out Rod
M-14 Knock Out Rod
M-15 Knock Out Rod
M-16 Lever Spring
M-17 Shaft Cover
M-18 Lever Shaft
M-19 Oil Seal
M-20 Ball and Stud

B-31750
B-31760
B-46249
B-45554
B-45553
B-46486
B-46487
B-46488
60388
B-46247

N.S.

BAR FEED — UNIT 'N'



BAR FEED—UNIT 'N'

		21A (2½")	21B (3")	21C (4½") MRC	21C (4½") TIMKEN
N-1	Rear Bar Stand	N.S. A-36748	A-36748	None	None
N-2	Stand Head	N.S. A-36750	A-38601	None	None
N-3	Support Tube	N.S. B-36807	B-38603	None	None
N-4	Front Stand	N.S. A-45235	A-47071	None	None
N-5	Lever	N.S. A-46990	A-47072	None	None
N-6	Lever Pin	N.S. B-45246	B-45246	None	None
N-7	Drip Trough	A-45684	A-45684	None	None
N-8	Ratchet Support Bar	B-45243	B-45243	None	None
N-9	Support Bar	B-45244	B-45244	None	None
N-10	Ratchet	B-45240	B-45240	A-55884	A-55884
N-11	Ratchet Pusher	A-62812	A-62812	A-48566	A-48566
N-12	Latch	A-45239	A-45239	B-48568	B-48568
N-13	Latch Lever	B-45241	B-45241	B-48562	B-48562
N-14	Stop Pin	(2) B-46997	B-46997	None	None
N-15	Spring	B-45256	B-45256	None	None
N-16	Shoe	N.S. C-882	C-882	None	None
N-17	Spring	B-43666	B-43666	None	None
N-18	Cylinder	A-63730	A-63730	A-53071	A-53071
N-19	Blind End Cylinder Cover	B-46996	B-46996	B-53072	B-53072
N-20	Piston Rod	B-46993	B-46993	B-65989	B-65989
N-21	Rod End Cylinder Cover	B-53164	B-53164	B-65990	B-65990
N-22	Hat Seal	SC-6623	SC-6623	None	None
N-23	Seal Closer	B-53163	B-53163	None	None
N-24	Cylinder Gaskets	N.S.(2) B-47203	B-47203	None	None
N-25	Piston Rod Connector	B-46994	B-46994	B-48579	B-48579
N-26	Connector Pin	B-45245	B-45245	B-47692	B-47692
N-27	Pin Snap Ring	N.S.(2) 5/8	5/8	None	None
N-28	Cylinder Mounting Pin	N.S. B-63729	B-63729	None	None
N-29	Chuck Guard	A-36800	A-38599	A-48559	A-61660
N-30	Chuck Plate	B-36795	B-38594	None	None
N-31	Center Plug	B-61952	B-61952	None	None
N-32	Chuck Screw	B-63182	B-63182	None	None
N-33	Chuck Jaws	(1 Pr.) B-63184	B-63185	None	None
N-34	Revolving Head	A-63183	A-63186	A-48563	A-61657
N-35	Ball Bearing	(2) 217MF	217MF	130KR	81962/81590
N-36	Sliding Head	A-45236	A-47073	A-55883	A-61659
N-37	Bearing Spacer	B-36798	B-47074	B-48586	None
N-38	Lockwasher & Nut	W&N-17	W&N-19	W&N-30	A-61658
N-39	Rear Bearing Closer	B-36797	A-38597	B-48570	B-61656
N-40	Front Bearing Closer	N.S. B-36796	A-38596	B-48569	B-61654
N-41	Bed	N.S. None	None	L-48587	L-48587
N-42	Pan	N.S. None	None	A-48567	A-48567
N-43	Leg	N.S.(2) None	None	A-48561	A-48561
N-44	Sliding Head Cap	N.S.(2) None	None	A-48565	A-48565
N-45	Pawl	N.S. None	None	B-48575	B-48575
N-46	Pawl Spring	N.S. None	None	B-47474	B-47474
N-47	Cylinder Support Stud	N.S.(2) None	None	B-48574	B-48574
N-48	Latch Shaft Collar	N.S. None	None	B-48584	B-48584
N-49	Revolving Head Screw	N.S.(6) None	None	B-48582	B-48582
N-50	Rev. Head Screw Bush.	N.S.(6) None	None	B-59359	B-59359
N-51	Ratchet Cap	N.S. None	None	A-55884	A-55884
N-52	Ratchet Cap	N.S. None	None	A-55885	A-55885
N-53	Block	N.S. None	None	B-55887	B-55887
N-54	Revolving Head Ring	N.S. None	None	None	B-61655
N-55	Stop	N.S. None	None	B-63359	B-63359
N-56	Pipe Support	N.S. None	None	B-48635	B-48635

