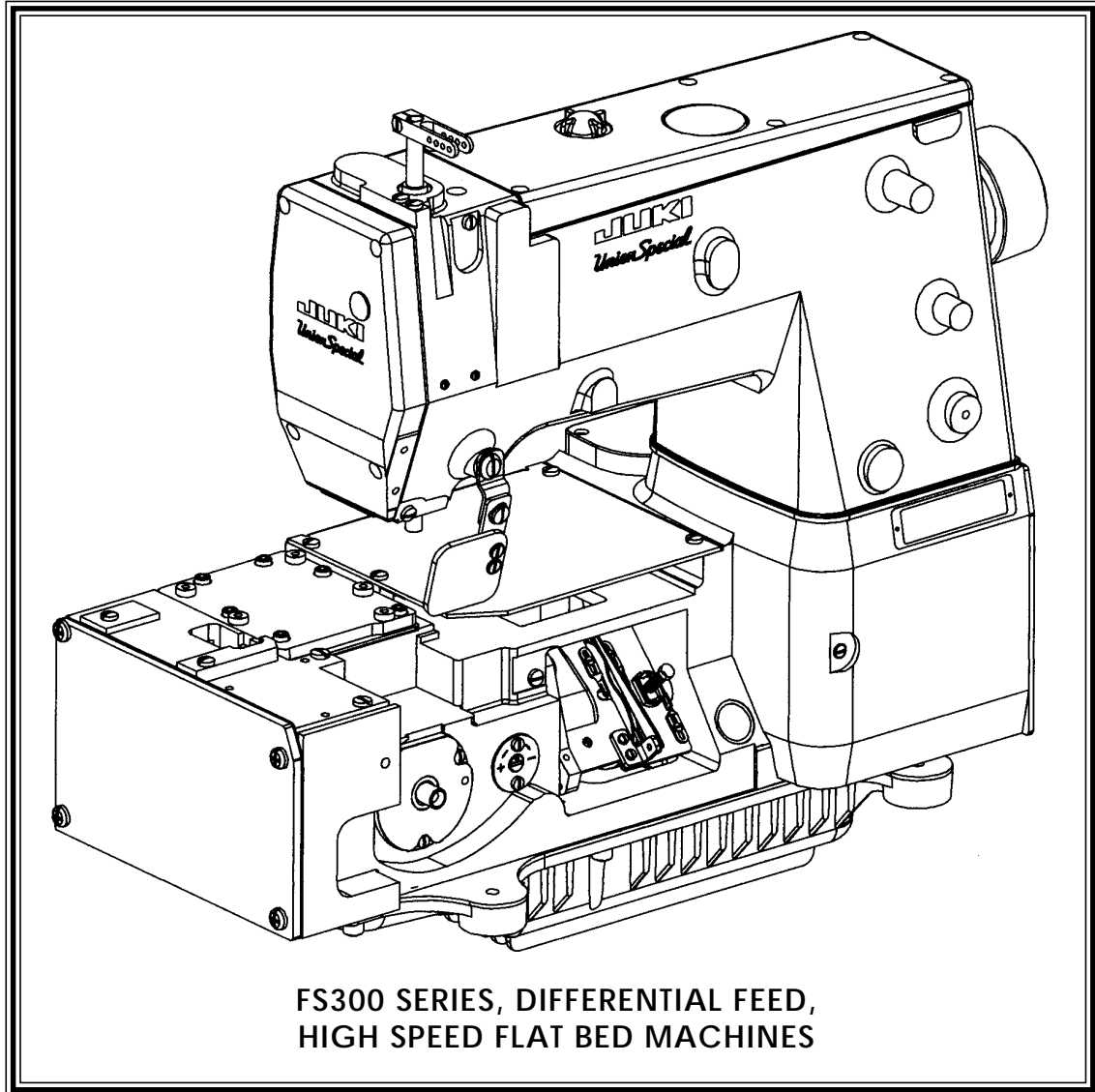




JUKI

Union Special

ILLUSTRATED PARTS MANUAL



FS300 SERIES, DIFFERENTIAL FEED,
HIGH SPEED FLAT BED MACHINES

MANUAL NO. PT9805
FOR STYLES
FS311S01-1MZ3

Manual No. PT9805 Illustrated Parts List for FS300 Series Machines

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By

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Printed in U.S.A. May 2001

PREFACE

This parts manual has been prepared to assist you in locating individual parts or assemblies on FS300 Series machines. It can be used in conjunction with Union Special Engineer's Manual EN9424.

It is the desire of Union Special that each machine run at its optimum performance. Parts listed in this manual are designed specifically for your machine and are manufactured with utmost precision to assure long lasting service.

This manual has been comprised on the basis of available information. Changes in design and/or improvements may incorporate a slight modification of configuration in illustrations or part numbers.

On the following pages are illustrations and terminology used in describing the parts used on FS300 Series machines.



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SAFETY RULES

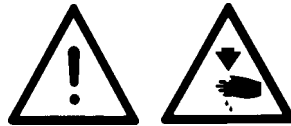
1. Before putting the machines described in this manual into service, carefully read the instructions. The starting of each machine is only permitted after taking notice of the instructions and by qualified operators.

IMPORTANT! Before putting the machine into service, also read the safety rules and instructions from the motor supplier.

2. Observe the national safety rules valid for your country.
3. The sewing machines described in this instruction manual are prohibited from being put into service until it has been ascertained that the sewing units which these sewing machines will be built into, have conformed with the EC Council Directives (89/392/EEC, Annex II B).

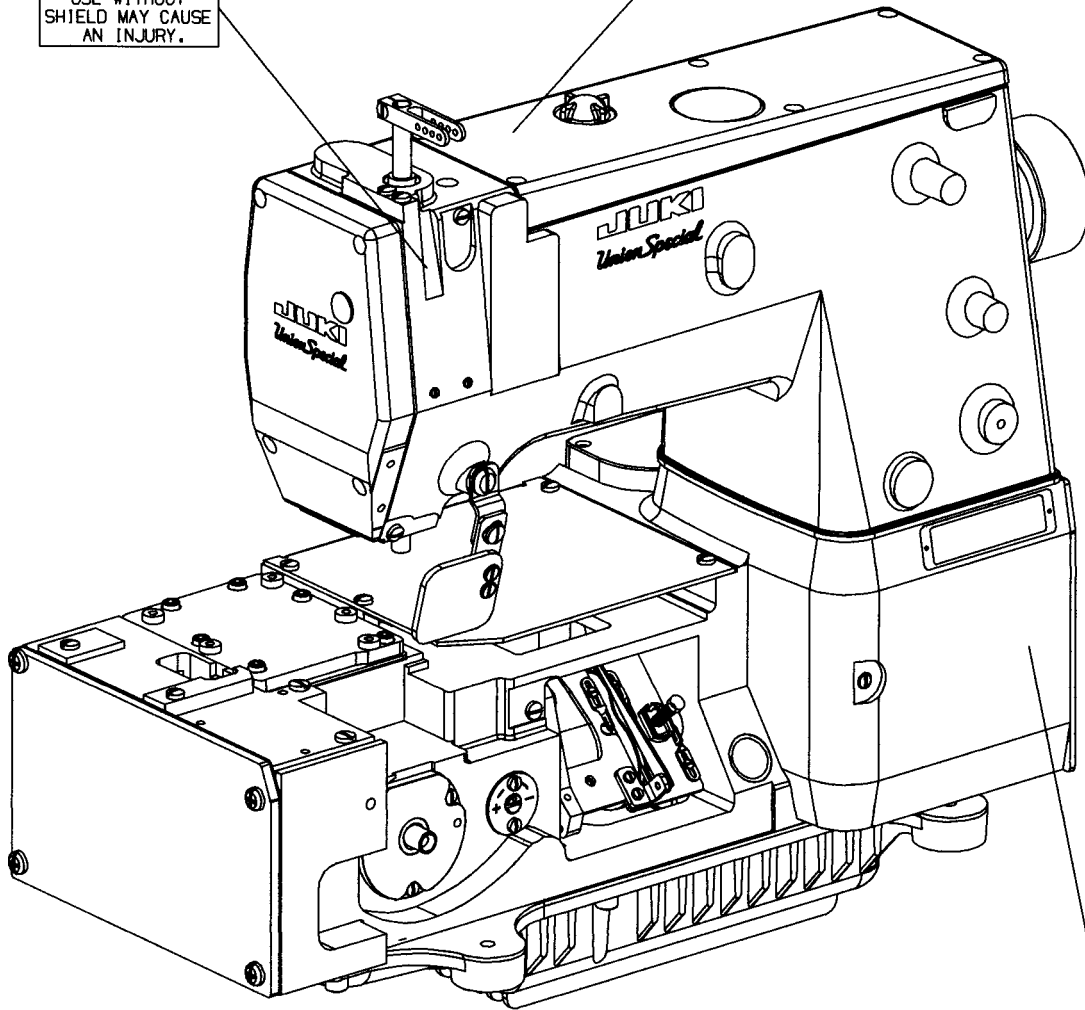
Each machine is only allowed to be used as foreseen. The foreseen use of the particular machine is described in paragraph "STYLES OF MACHINES" of this instruction manual. Another use, going beyond the description, is not as foreseen.

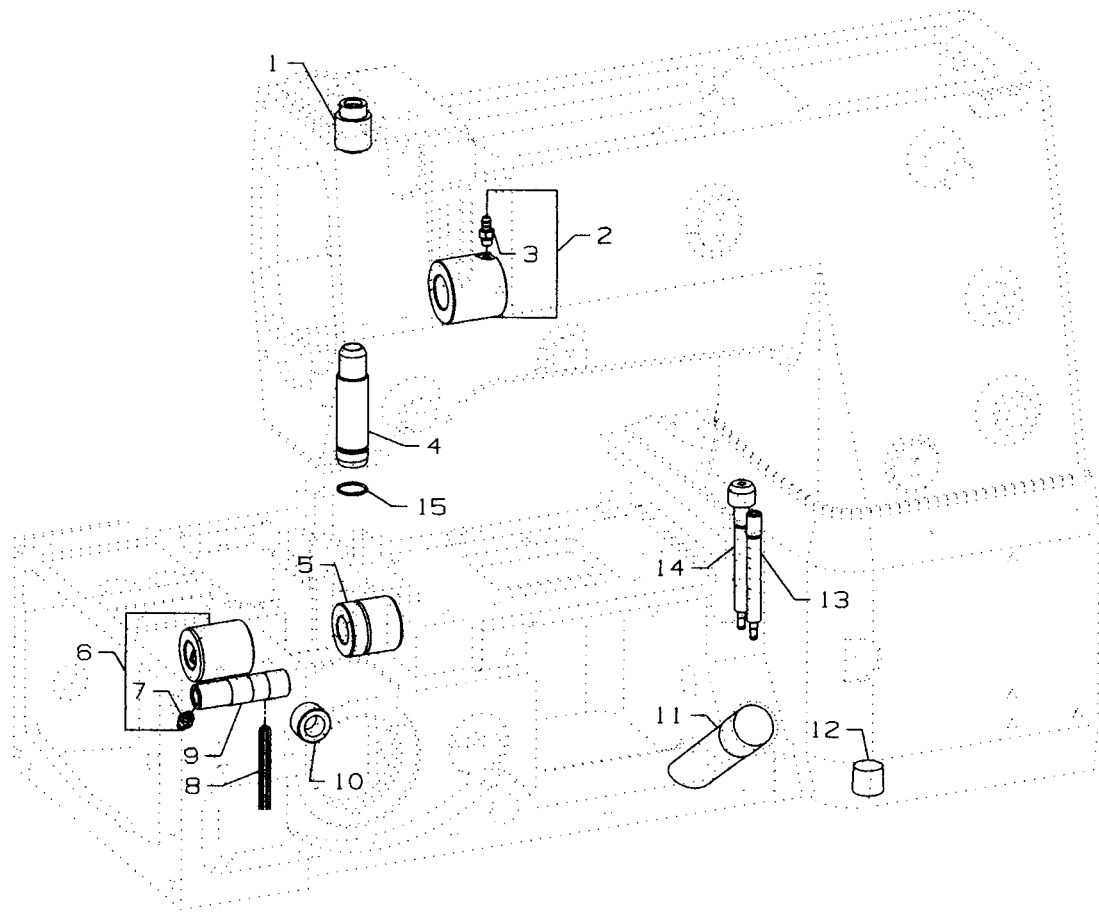
4. All safety devices must be in position when the machine is ready for work or in operation. Operation of the machine without the appertaining safety devices is prohibited.
5. Wear safety glasses.
6. In case of machine conversions and changes all valid safety rules must be considered. Conversions and changes are made at your own risk.
7. The warning hints in the instructions are marked with one of these two symbols:



8. When doing the following the machine has to be disconnected from the power supply by turning off the main switch or by pulling out the main plug:
 - 8.1 When threading needle(s), looper, spreader etc.
 - 8.2 When replacing any parts such as needle(s), presser foot, throat plate, looper, spreader, feed dog, needle guard, folder, fabric guide etc.
 - 8.3 When leaving the workplace and when the workplace is unattended.
 - 8.4 When doing maintenance work.
 - 8.5 When using clutch motors without actuation lock, wait until the motor is stopped totally.
9. Maintenance, repair and conversion work (see item 8) must be done only by trained technicians or special skilled personnel under consideration of the instructions.
10. Any work on the electrical equipment must be done by an electrician or under direction and supervision of special skilled personnel.
11. Work on parts and equipment under electrical power is not permitted. Permissible exceptions are described in the applicable sections of standard sheet DIN VDE 0105.
12. Before doing maintenance and repair work on the pneumatic equipment, the machine has to be disconnected from the compressed air supply. In case of existing residual air pressure, after disconnecting from compressed air supply (i.e. pneumatic equipment with air tank), the pressure has to be removed by bleeding.

SAFETY LABELS

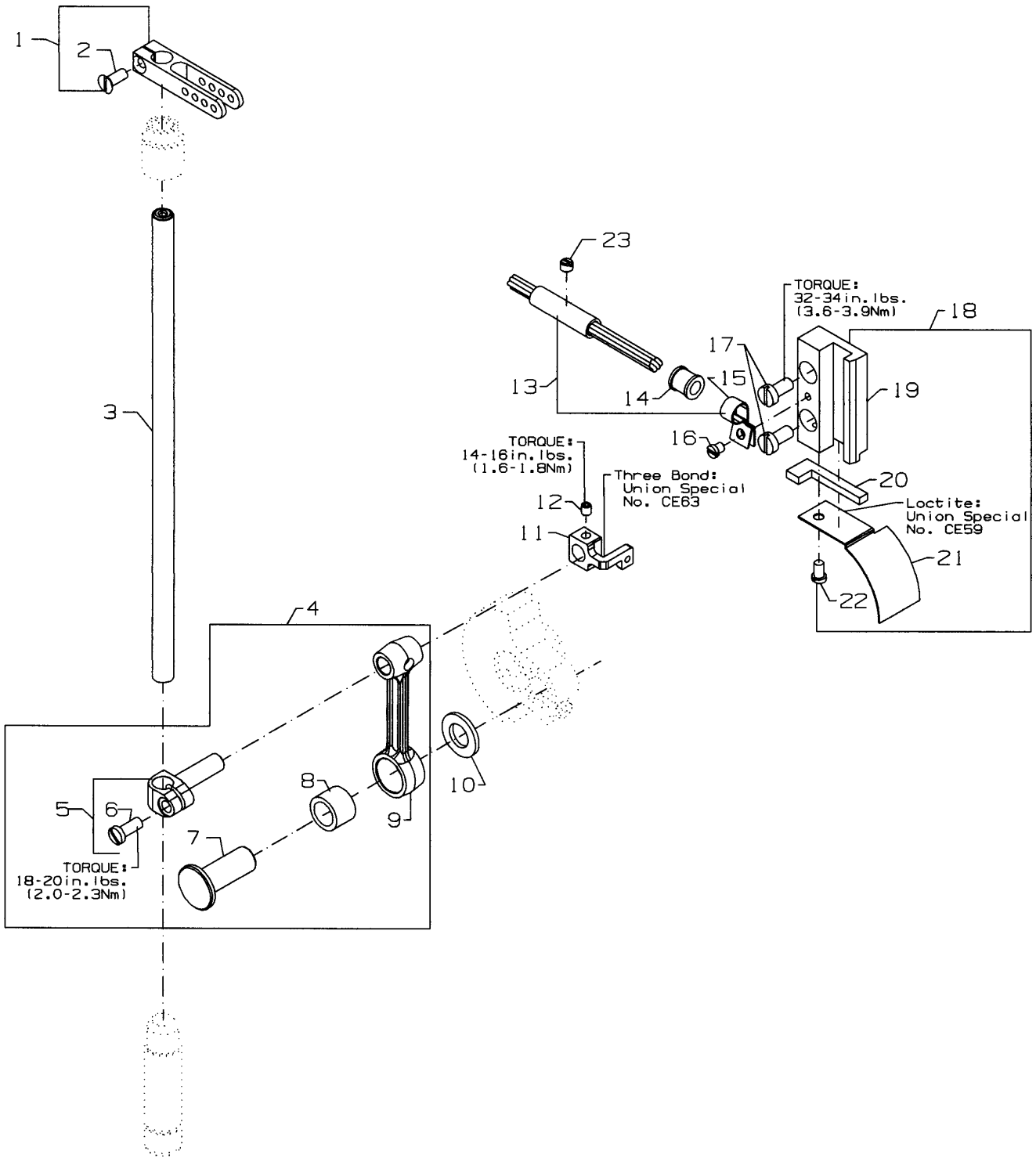




BUSHINGS

Ref. No.	Part No.	Description	Amt. Req.
1.	50654B	Bushing, for needle bar, upper	1
2.	50344AS	Bushing, front	1
3.	SQ1110401MZ	Fitting	1
4.	50654C	Bushing, for needle bar, lower	1
5.	50344BF	Bushing, for lower mainshaft, right	1
6.	50344BE	Bushing, for lower mainshaft, left	1
7.	SQ1110401MZ	Fitting	1
8.	WO3	Yarn, See Chart	1
9.	50368AB	Bushing, for needle lever, See Chart	1
10.	50344E	Bushing	1
11.	50393GE	Oil Sight Gauge	1
12.	22571L	Screw, for drain plug	1
13.	50393FU	Fitting, oil tube	1
14.	50393EY	Fitting, filter	1
15.	660-1019	"O"Ring	1

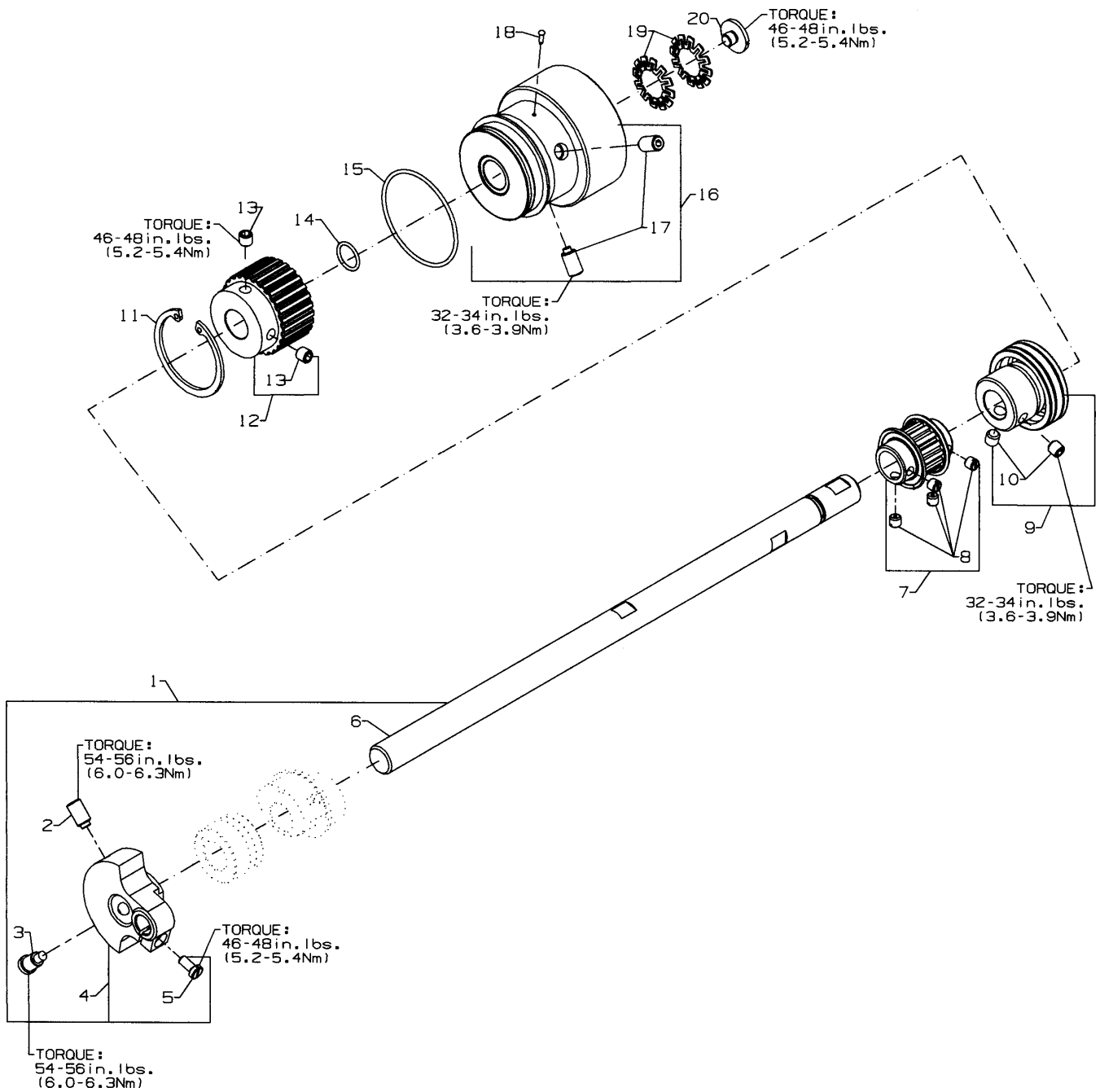




NEEDLE BAR

Ref. No.	Part No.	Description	Amt. Req.
1.	K74233	Needle Bar Eyelet	1
2.	18C1419	Screw	1
3.	K74234	Needle Bar	1
4.	50345W	Connecting Rod Assembly	1
5.	50355AM	Needle Bar Clamp	1
6.	SS7111120TP	Screw	1
7.	50352	Pivot Pin	1
8.	661-259B	Needle Bearing Cage	1
9.	50355AN	Connecting Rod	1
10.	50351A	Washer	1
11.	50354F	Slide Block	1
-	CE63	Three Bond Adhesive, (not shown), for slide block	-
12.	SS8110422TP	Screw	1
13.	29476TC	Oil Tube Assembly	1
14.	50393JZ	Oil Tube	1
15.	50393JW	Hose Clamp	1
16.	SS6090440SP	Screw, for oil tube assembly	1
17.	SS6121010SP	Screw	2
18.	29476VN	Slide Block Guide and Cover Assembly	1
19.	50338	Guide, for slide block	1
20.	666-328	Felt, for slide block	1
-	CE59	Loctite Adhesive, (not shown), for felt	-
21.	50338A	Cover, for guide	1
22.	SS6090620SP	Screw	1
23.	SS8120410SP	Screw	1



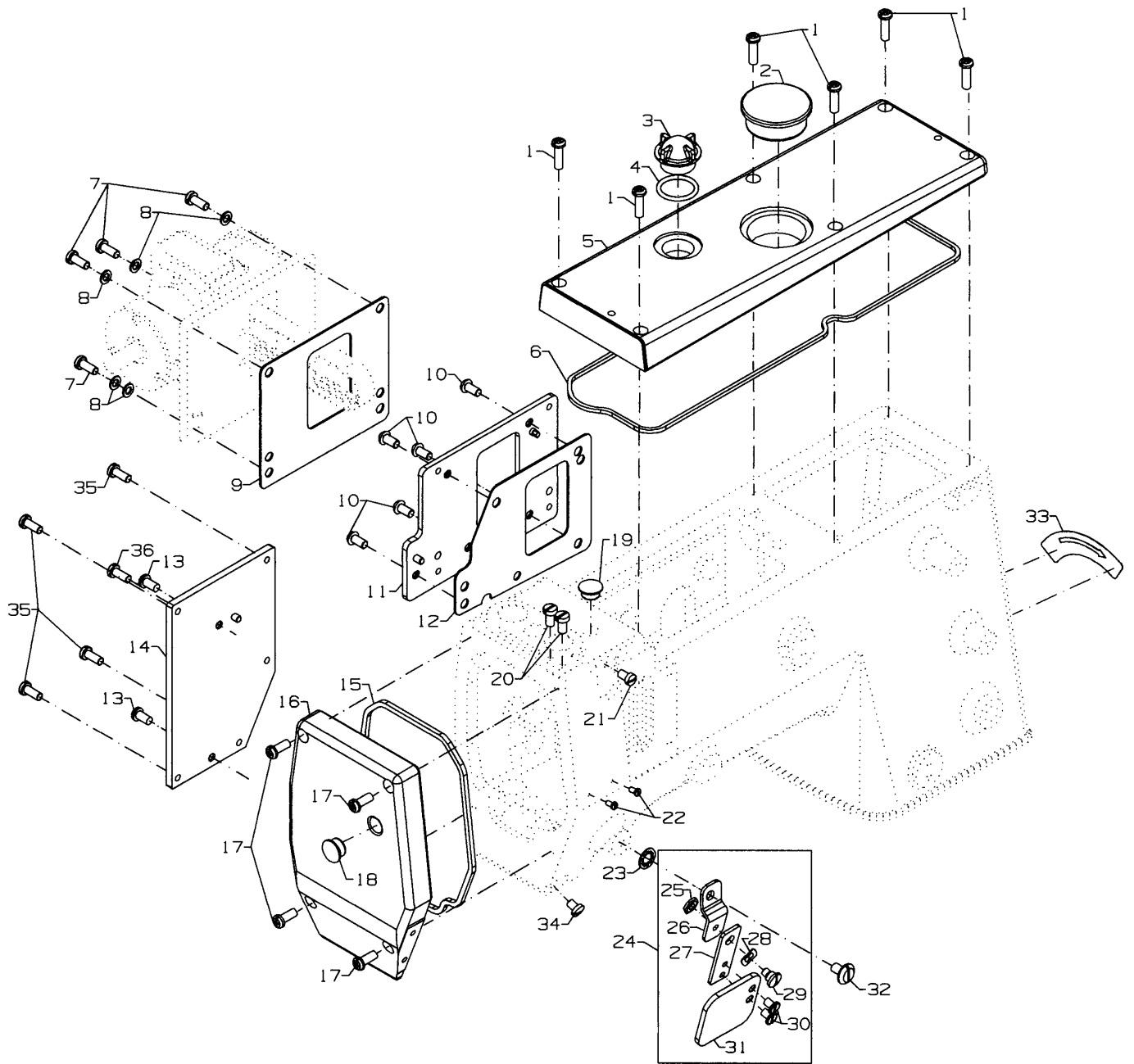


UPPER MAIN SHAFT

Ref. No.	Part No.	Description	Amt. Req.
1.	K74549	Upper Needle Drive Assembly	1
2.	SS8681412TP	Screw, for counter weight	1
3.	SS7681410TP	Screw, for counter weight	1
4.	50391	Counter Weight	1
5.	SS7111120TP	Screw, for counter weight	1
6.	K74446	Upper Main Shaft	1
7.	50642A	Puller Sprocket	1
8.	22894T	Screw	4
9.	50335BD	Bearing Adapter Assembly	1
10.	SS8660612TP	Screw, for bearing adapter	2
11.	661-262	Retaining Ring	1
12.	50342BE	Sprocket, for upper main shaft	1
13.	SS8661012TP	Set Screw, for sprocket	2
14.	660-1122	"O" Ring	1
15.	660-1087	"O" Ring.....	1
16.	K74402	Handwheel	1
17.	SS8681412TP	Set Screw, for handwheel	2
18.	660-1043	Tack Pin, for handwheel	1
19.	661-261	Load Ring, for lower main shaft	2
20.	SS7660520SP	Screw, for handwheel preload	1

REF. NO.	DESCRIPTION	PART NUMBER		SERIAL NO. PREFIX
		OLD	NEW	
1	U.M.S. ASSEMBLY	50322BC	K74549	CF
6	U.M.S.	50322AF	K74446	CF
14	"O"RING	NONE	660-1122	CF

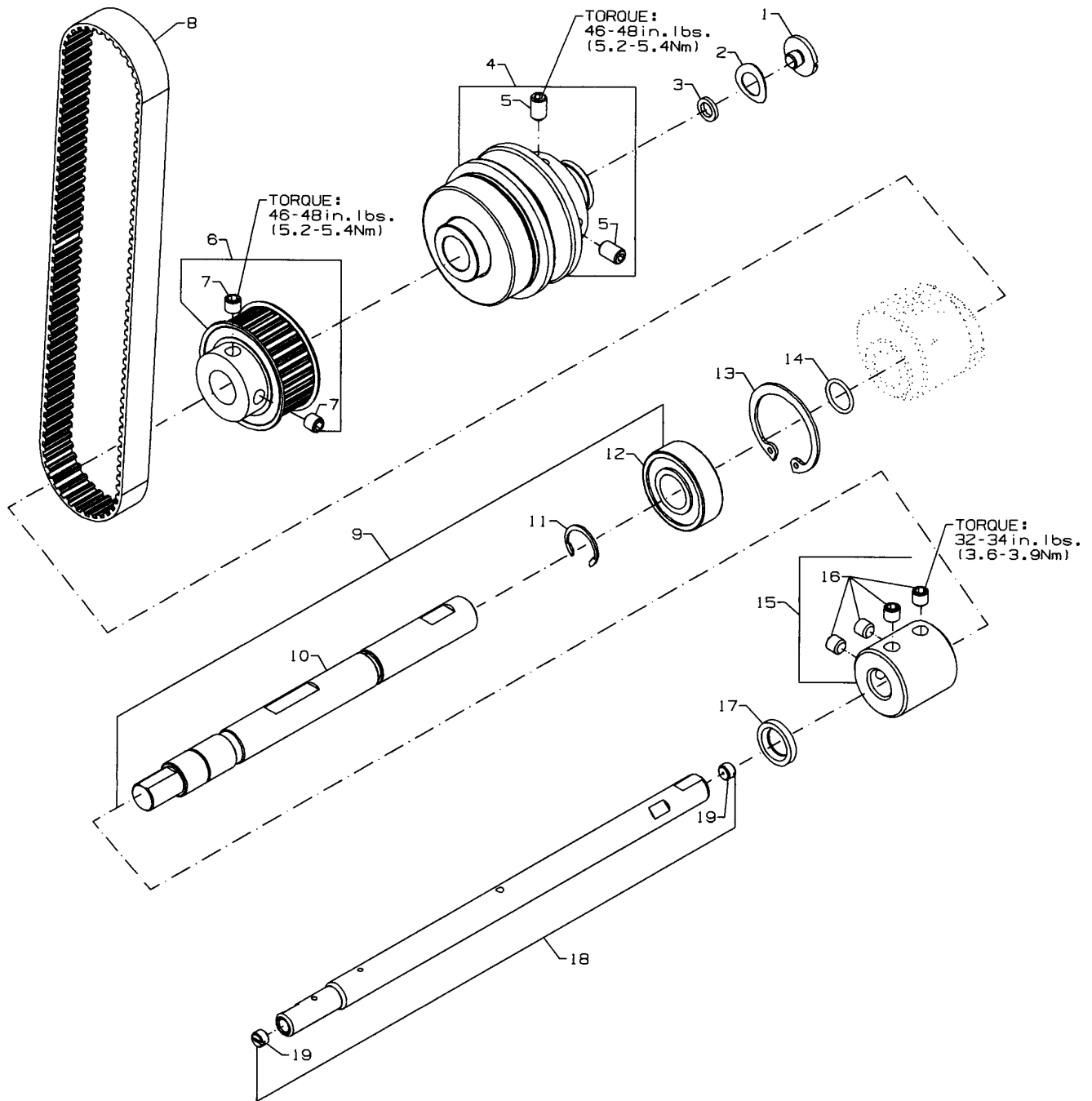




COVERS, UPPER ARM

Ref. No.	Part No.	Description	Amt. Req.
1.	SS4121615SP	Screw, for top cover	6
2.	50393EU	Plug, for top cover	1
3.	B3530555000	Oil Sight Gauge, top	1
4.	660-212	"O" Ring, for oil sight gauge	1
5.	K74235	Top Cover	1
6.	50382FZ	Quad Ring, for top cover	1
7.	22569M	Screw	4
8.	WP0480856SP	Washer	5
9.	50684B	Gasket	1
10.	SS6121050SP	Screw	5
11.	50662A	Adapter plate, for Puller Drive Housing	1
12.	50684C	Gasket	1
13.	SS4120915SP	Screw	2
14.	K74239	Adapter plate	1
15.	50382FY	Quad Ring, for head cover	1
16.	50382FX	Head Cover	1
17.	SS4121215SP	Screw, for head cover	4
18.	TA1100604RO	Plug, for head cover	1
19.	TA1050504RO	Plug, for bed	1
20.	SS6120940SP	Screw	3
21.	SS7120710SP	Screw	1
22.	605A	Screw	2
23.	652C16	Washer, for 99682XCB	1
24.	99682XCB	Protection Shield Assembly	1
25.	NS6620320SP	Nut	1
26.	50383AE	Bracket Holder	1
27.	50383AD	Bracket	1
28.	WZ0641510KP	Spring Washer	1
29.	SD0640323TP	Shoulder Screw	1
30.	SS6110610TP	Counter Sunk Head Screw	2
31.	99682XC3	Protection Shield	1
32.	22517B	Screw, for 99682XCB	1
33.	LA452	Label, direction of rotation	1
34.	SS7120640SP	Screw	1
35.	22569M	Screw	4
36.	22569C	Screw	1



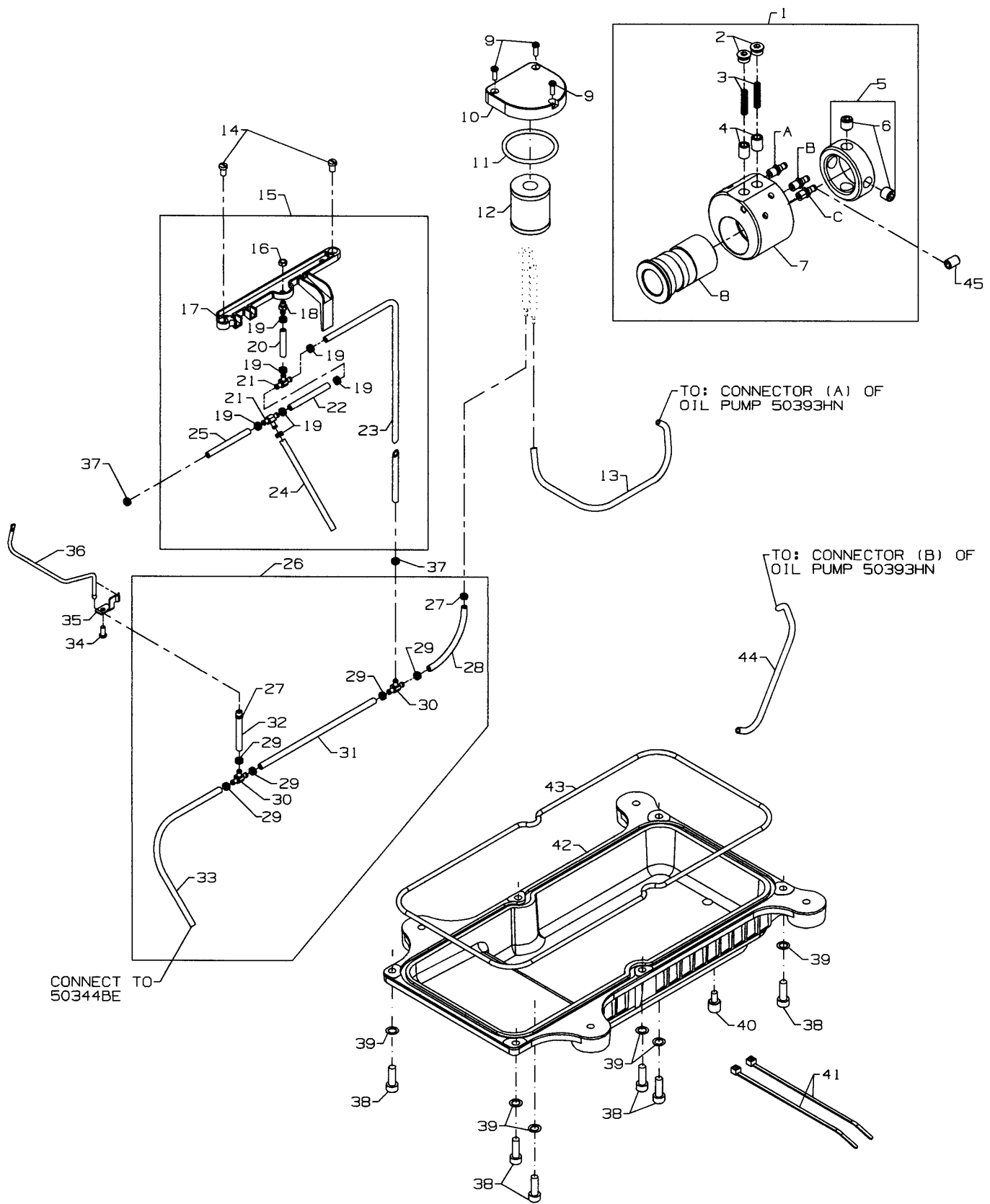


LOWER MAIN SHAFT

Ref. No.	Part No.	Description	Amt. Req.
1.	SS7660520SP	Shoulder Screw, for lower main shaft, right	1
2.	660-1062	Spring Washer	1
3.	50374	Spacer, for pulley assembly	1
4.	50321G	Pulley Assembly	1
5.	SS8661012TP	Set Screw	2
6.	50342AX	Sprocket, for lower main shaft	1
7.	SS8660612TP	Screw	2
8.	50342BS	Timing Belt	1
9.	K74593	Mainshaft Assembly, lower, right	1
10.	K74447	Lower Main Shaft, right	1
11.	50335BB	Retaining Ring	1
12.	50322AL	Ball Bearing, for lower main shaft	1
13.	50335AK	Retaining Ring, for ball bearing	1
14.	660-1122	"O" Ring	1
15.	50333A	Coupling, for lower main shafts	1
16.	SS8660612TP	Screw	4
17.	660-934	Oil Seal	1
18.	K74244	Lower Main Shaft, left for plain feed	1
19.	SS8660410SP	Screw	2

REF. NO.	DESCRIPTION	PART NUMBER		SERIAL NO. PREFIX
		OLD	NEW	
9	L.M.S. ASSEMBLY	29476UH	K74593	CF
10	L.M.S., RIGHT	50322AG	K74447	CF
14	"O"RING	NONE	660-1122	CF

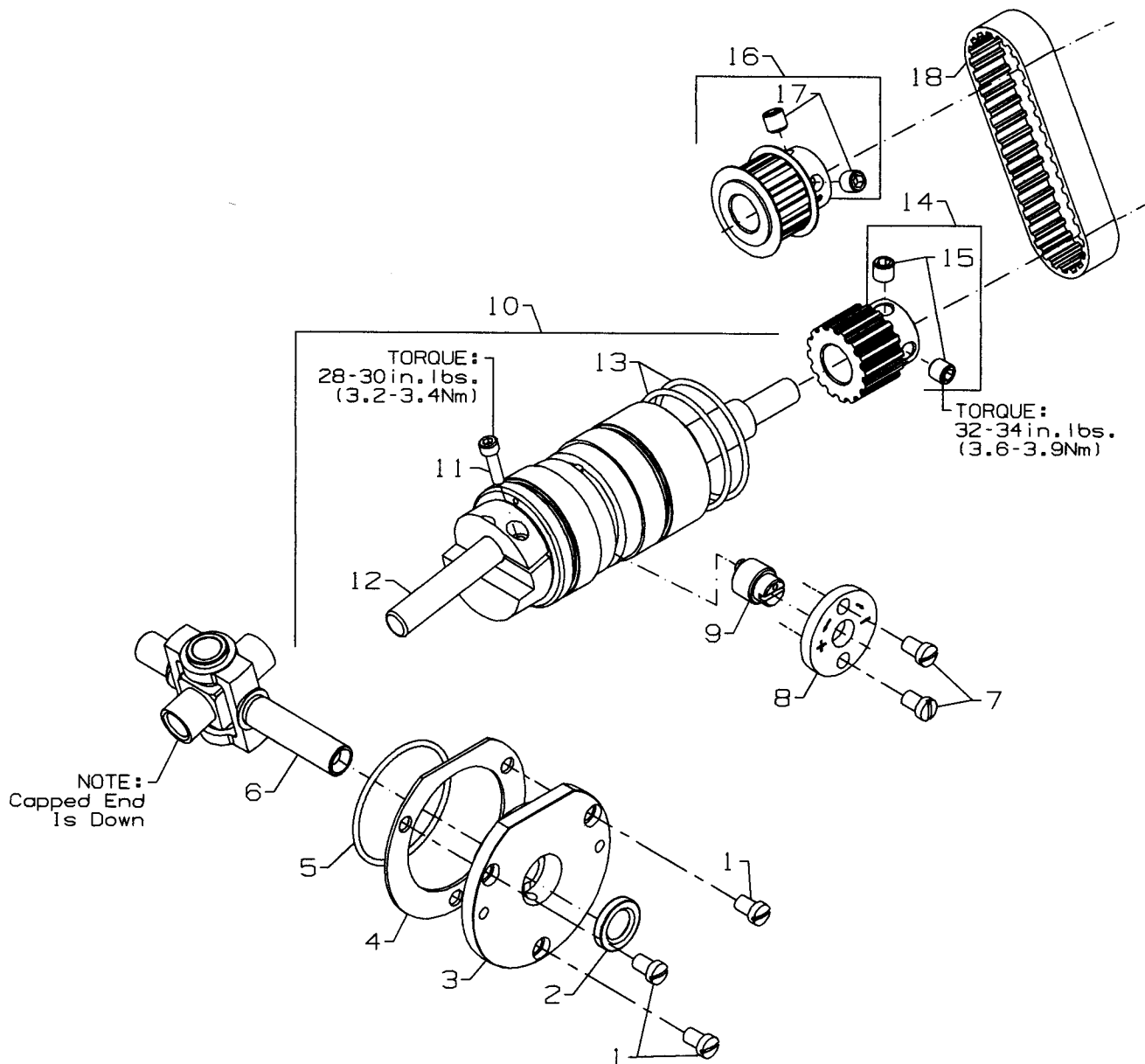




LUBRICATION, OIL TUBING & OIL PUMP

Ref. No.	Part No.	Description	Amt. Req.
1.	50393HN	Oil Pump Assembly, 2-stage	1
2.	SS8660612TP	Screw	2
3.	50332S	Spring, for plunger.....	2
4.	34393D	Plunger	2
5.	50393EX	Collar, for oil pump	1
6.	SS8660612TP	Screw	2
7.	50393GB	Oil Pump Housing, 2 Stage.....	1
8.	50393GD	Oil Pump Housing, 2 Stage.....	1
9.	SS4091015SP	Screw, for oil filter cover.....	3
10.	50393FR	Cover, for oil filter.....	1
11.	50384	"O" Ring, for oil filter cover.....	1
12.	11843208	Oil Filter.....	1
13.	50393FV	Oil Tube, for supply (1)	1
14.	SS7120710SP	Screw, for front upper tube	2
15.	29476XV	Oil Supply Assembly, upper	1
16.	NS6110310SP	Nut	1
17.	50393KC	Oil Gutter	1
18.	SQ1110402MZ	Fitting	1
19.	50393KM	Tube Retaining, spring	7
20.	50393-27	Oil Tube	1
21.	13765607	"T" Connector	2
22.	50393-47	Oil Tube	1
23.	50393-407	Oil Tube	1
24.	50393-89	Oil Tube	1
25.	50393-51	Oil Tube	1
26.	29476UT	Oil Supply Assembly, lower	1
27.	50393KH	Tube Retaining, spring	2
28.	50393-70	Oil Tube	1
29.	50393KM	Tube Retaining, spring	5
30.	13765607	"T" Connector	2
31.	50393-140	Oil Tube	1
32.	50393-40	Oil Tube	1
33.	50393-170	Oil Tube	1
34.	SS4090815SP	Screw, for oil tube holder	1
35.	50393FS	Oil Tube Holder	1
36.	50393KF	Oil Tube	1
37.	50393KM	Tube Retaining, spring	3
38.	SS6151812TP	Screw, for oil pan	6
39.	WS0631510KP	Spring Washer	6
40.	22571E	Screw, for oil drain plug	1
41.	RM2871B	Cable Tie	2
42.	50393EB	Oil Pan	1
43.	50384A	"O" Ring	1
44.	50393FT	Oil Tube, for suction	1
45.	50393KN	Pump Cap For Inlet "C"	1



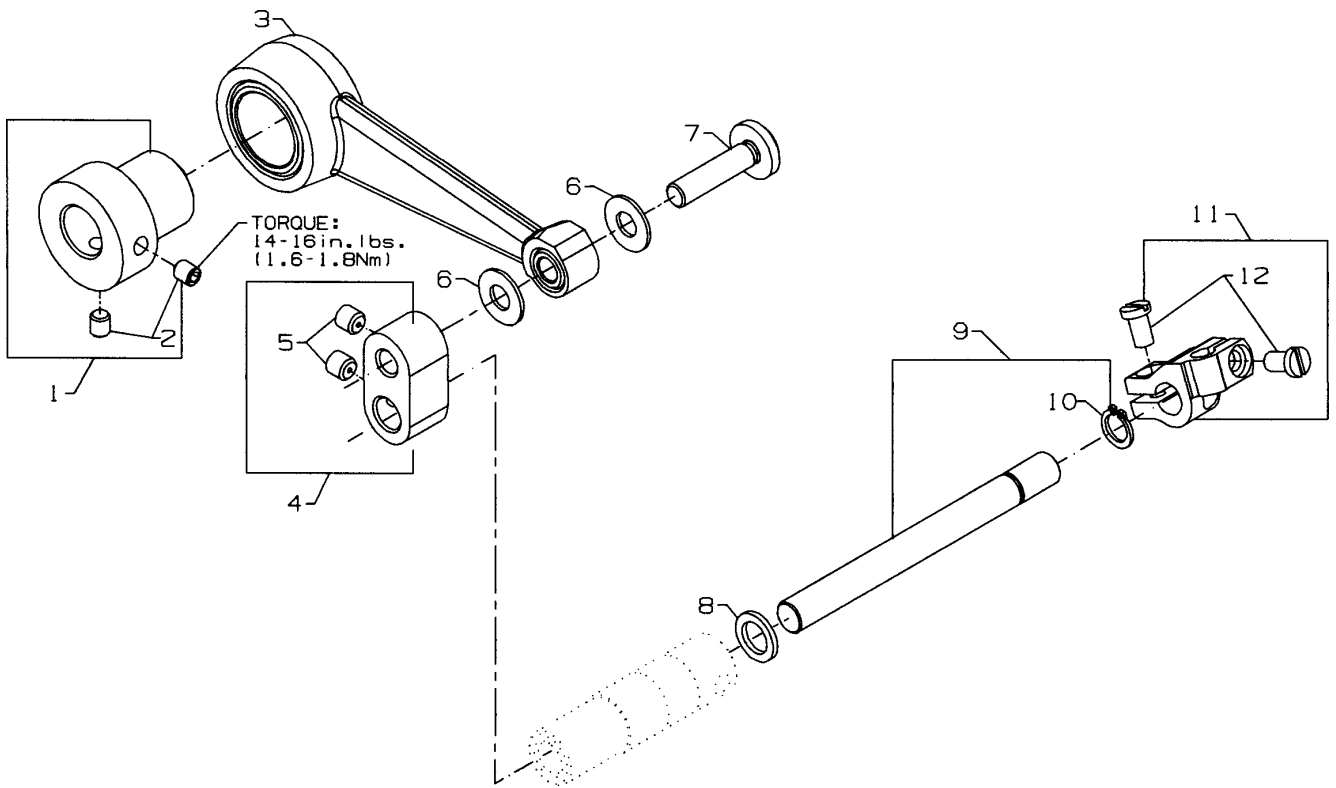


LOOPER DRIVE

Ref. No.	Part No.	Description	Amt. Req.
1.	SS7120710SP	Screw, for bearing housing	3
-	CE63	Three Bond Adhesive, (not shown), for screw	-
2.	660-893	Oil Seal, looper	1
3.	50344AM	Bearing Housing Assembly, for looper drive	1
4.	50384M	Gasket, for Bearing Housing Assembly	1
5.	660-1113	"O" Ring, for bearing housing assembly	1
6.	50313J	Looper Rocker Assembly	1
7.	SS7120910SP	Screw, for retaining plate	2
8.	50314J	Eccentric Retaining Plate	1
9.	50314E	Looper Avoid Adjusting Eccentric	1
10.	50642	Looper Drive Assembly	1
11.	22653J8	Screw	1
12.	667J33	Crank Pin	1
13.	660-979	"O" Ring	2
14.	50342BJ	Sprocket, for looper driven	1
15.	SS8660612TP	Screw	2
16.	50342BK	Sprocket, for looper drive	1
17.	SS8660612TP	Screw	2
18.	50342BY	Looper Drive Belt	1

REF. NO.	DESCRIPTION	PART NUMBER		SERIAL NO. PREFIX
		OLD	NEW	
8	GUIDE PLATE	50314F	50314J	DC

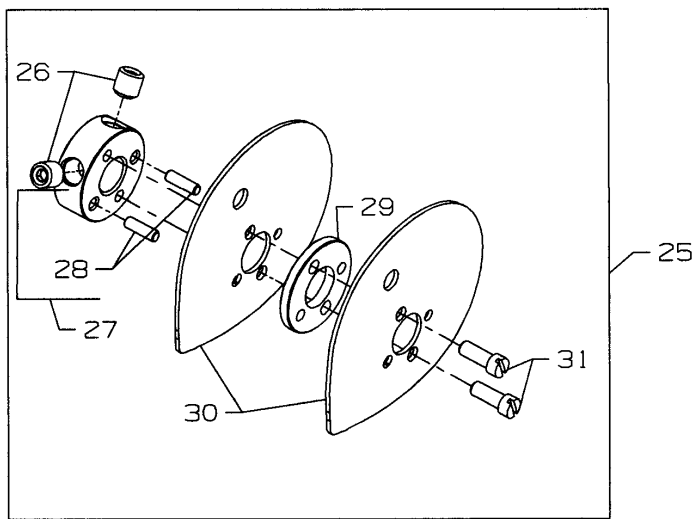
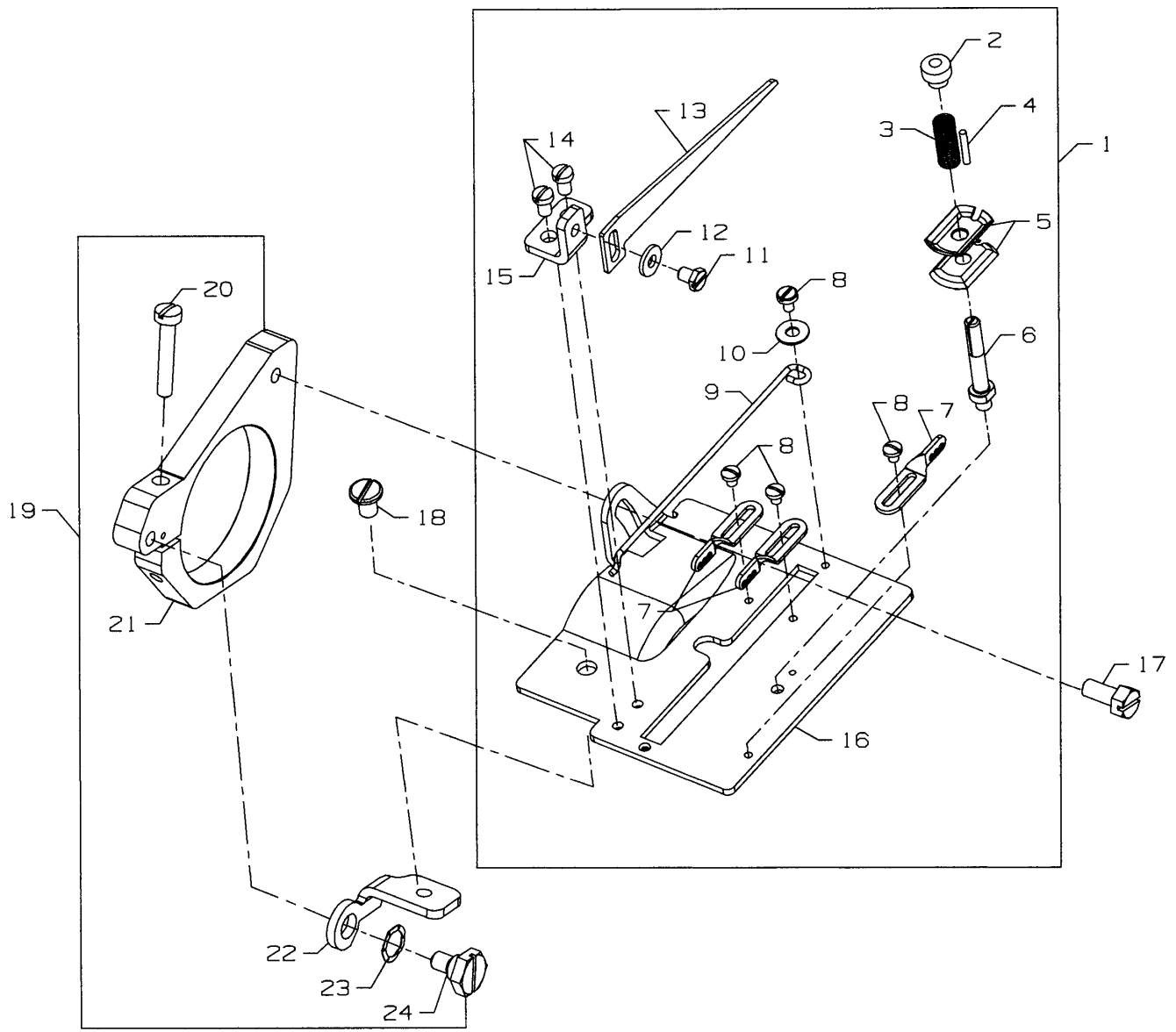




NEEDLE GUARD

Ref. No.	Part No.	Description	Amt. Req.
1.	50373DA	Needle Guard Eccentric	1
2.	SS8110422TP	Screw, for needle guard eccentric	2
3.	50368W	Connecting Rod Assembly, for needle guard	1
4.	50668	Pivot Link	1
5.	SS8110422TP	Screw	2
6.	50368E	Washer	2
7.	50368A	Pivot Pin	1
8.	50374	Washer	1
9.	50622C	Shaft, for needle guard	1
10.	RC0560711KP	Retaining Ring	2
11.	50625	Rear Needle Guard holder	1
12.	SS6090620SP	Screw	2

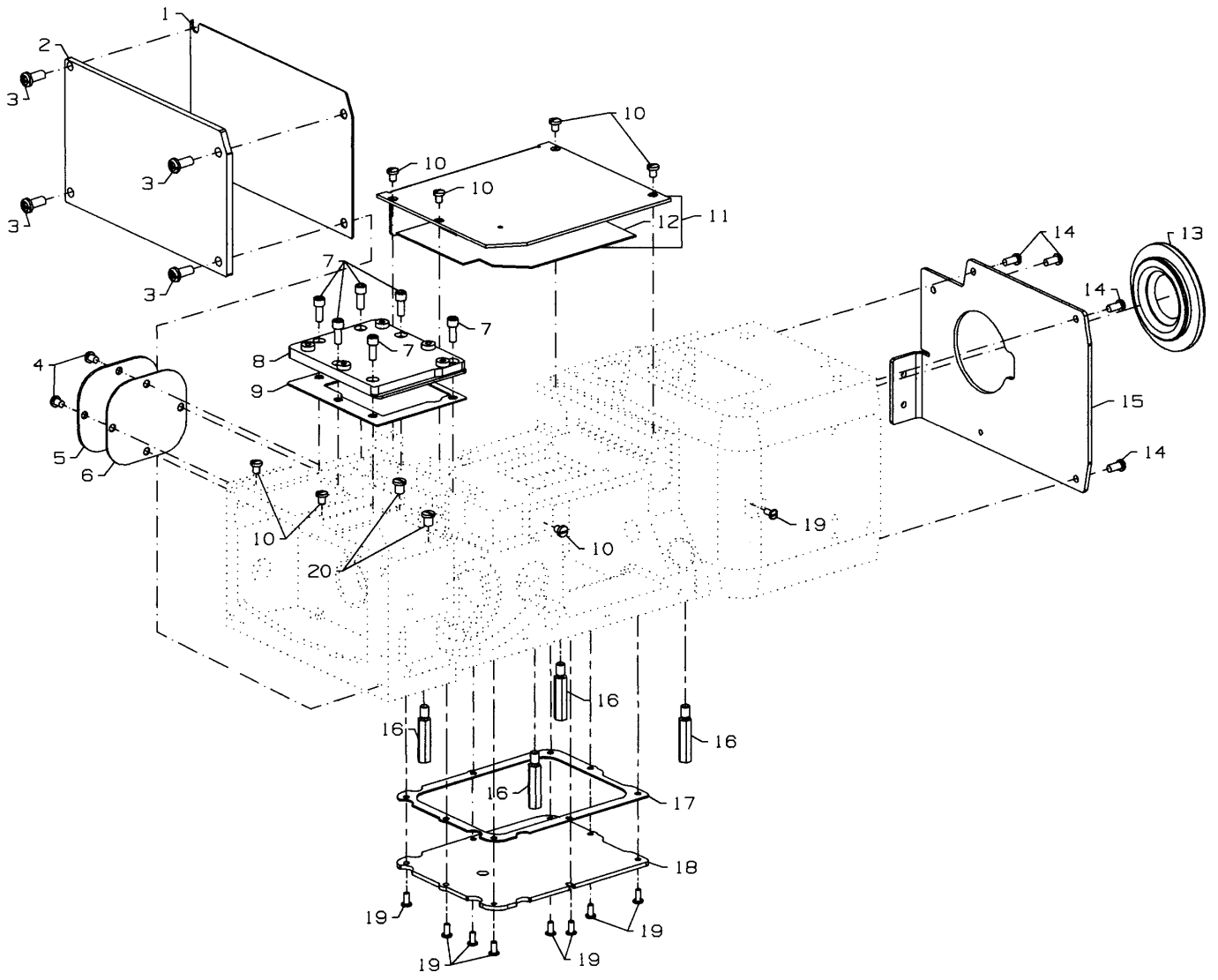




LOOPER THREAD TAKE-UP

Ref. No.	Part No.	Description	Amt. Req.
1.	K74440	Cast-Off Plate Assembly	1
2.	51959D	Knurled Nut	1
3.	51959K	Tension Spring	1
4.	51959L	Roll Pin	1
5.	51959B	Tension Disc	2
6.	51492	Tension Post	1
7.	50358H	Take-up Eyelet	3
8.	SS6060440TP	Screw	4
9.	50304H	Strike-Off Wire	1
10.	WP0330501SP	Washer	1
11.	SS9080410SP	Screw	1
12.	41358	Washer	2
13.	50604	Retaining Finger	1
14.	SS7080520SP	Screw	2
15.	50383E	Mounting Bracket	1
16.	50357W	Cast-Off Plate	1
17.	SS9111010SP	Screw, for collar bracket	1
18.	SS6110610TP	Screw, for cast-off holder	1
19.	29476UK	Cast-Off Plate Holder Assembly	1
20.	SS7092110TP	Screw, for collar bracket	1
21.	50383F	Take-up Collar Bracket	1
22.	50304K	Cast-Off Plate Holder	1
23.	50386J	Washer	1
24.	SD0630275SP	Shoulder Screw, for cast-off plate holder	1
25.	50623	Take-up Assembly	1
26.	22894C	Set Screw	2
27.	50323B	Take-up Hub	1
28.	22-348	Pin	2
29.	50377R	Spacer	1
30.	50623A	Disc, for take-up	2
31.	77B	Screw, for take-up disc	2

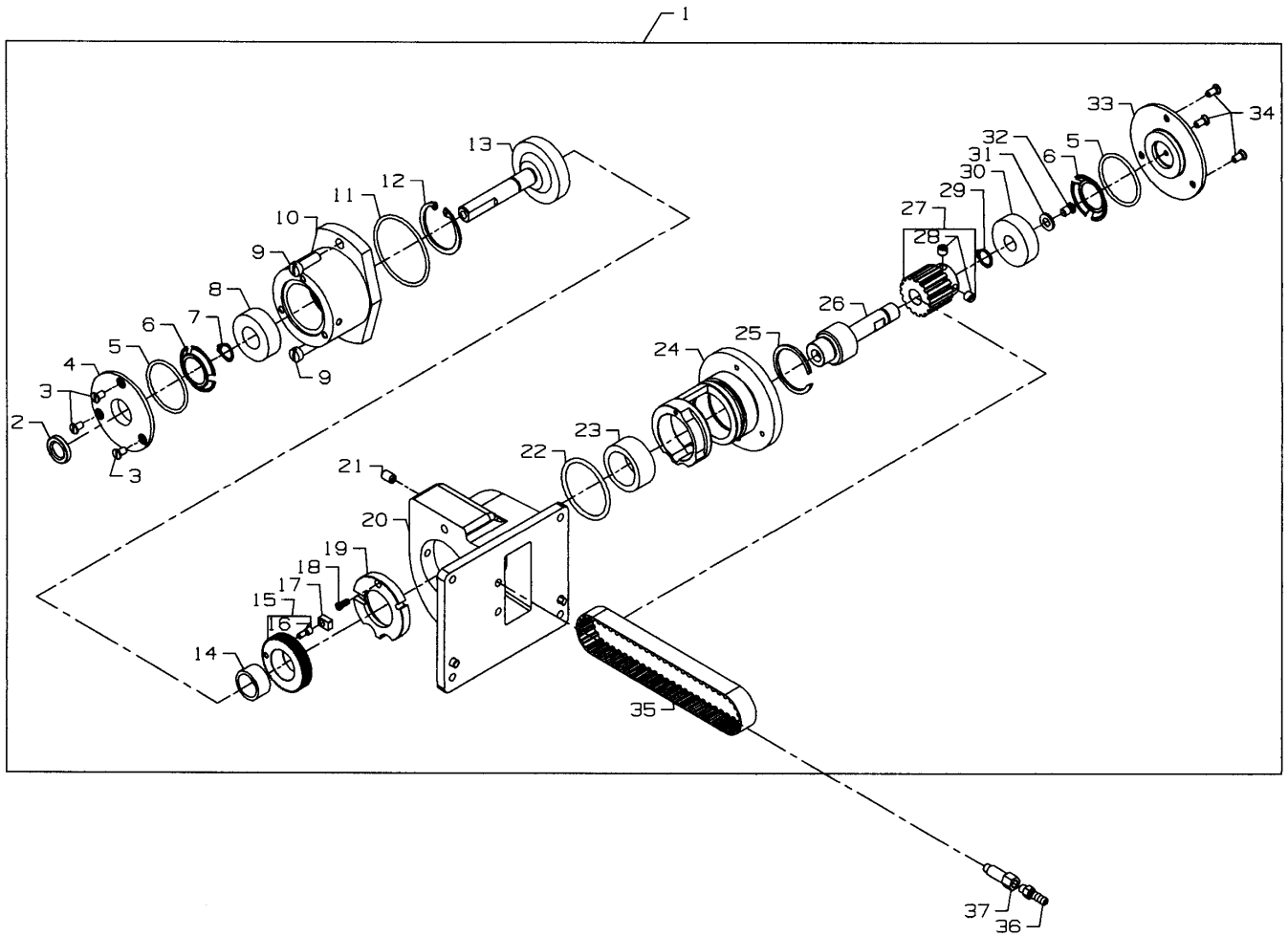




COVERS, LOWER BED

Ref. No.	Part No.	Description	Amt. Req.
1.	K74261	Gasket, for left end cover	1
2.	K74214	Left End Cover	1
3.	SS4151415SP	Screw	4
4.	SS4120615SP	Screw, for cover	2
5.	50382CL	Cover, rear, for feed chamber,	1
6.	50382CR	Gasket	1
-	CE63	Three Bond Adhesive, (not shown), for screw	-
7.	SS6121212TP	Screw, for cover	6
8.	50382CP	Cover, for feed chamber	1
9.	K74246	Gasket	1
10.	SS7120640SP	Screw	6
11.	K74312	Cloth Plate, right	1
12.	50303B	Acoustic Pad	1
13.	50393HU	Plug, right end , non-synchronizer	1
14.	SS4121015SP	Screw	4
15.	K74247	Cover, for drive belt	1
16.	22841U	Machine Support Stud	4
17.	50383G	Gasket, for chamber cover	1
18.	50382CG	Dry Chamber Cover	1
19.	SS7090850SP	Screw	8
20.	SS7150740SP	Screw	2

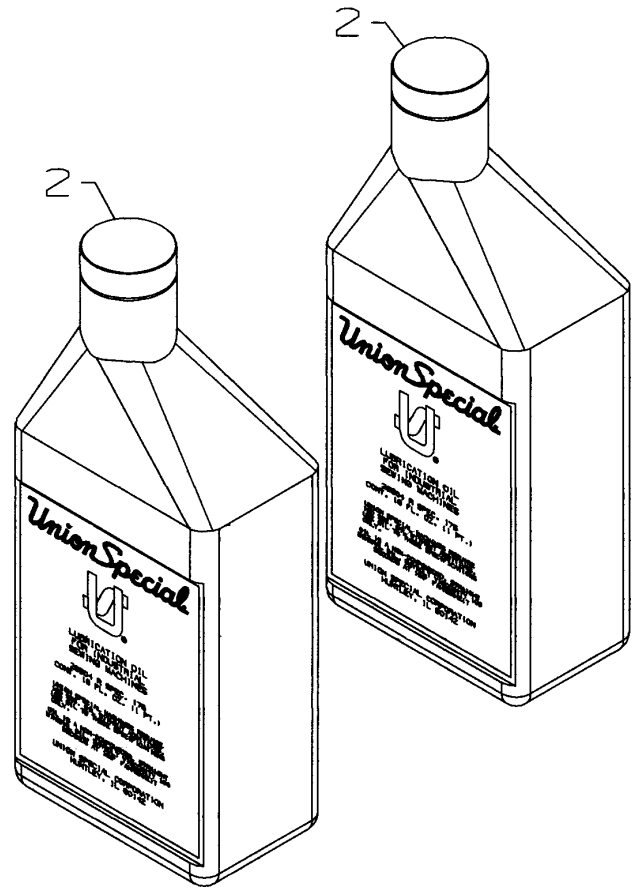
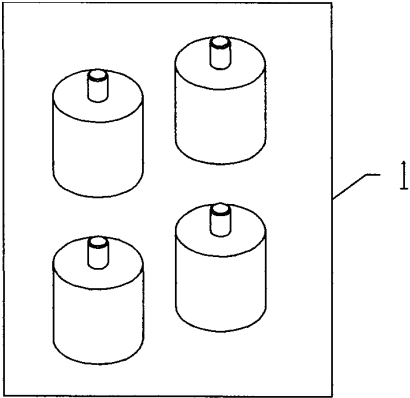




PULLER DRIVE ASSEMBLY

Ref. No.	Part No.	Description	Amt. Req.
1.	29476XW	Puller Drive Assembly	1
2.	660-893	Lip Seal	1
3.	22564J	Screw	3
4.	C50082AP	Cover	1
5.	660-886A	"O" Ring	2
6.	660-914	Finger Spring	2
7.	660-918	Retaining Ring	1
8.	660-890	Bearing	1
9.	136	Screw	2
10.	50677A	Bearing Housing	1
11.	660-886B	"O" Ring	1
12.	660-891B	Snap Ring	1
13.	C50078L	Internal Gear	1
14.	660-889	Bearing	1
15.	C50078M	Internal Gear	1
16.	C50078K	Pin	1
17.	C50078J	Slide Block	1
18.	22593	Screw	1
19.	C50078N	Guide Ring	1
20.	50677	Puller Drive Housing	1
21.	22894J	Screw	1
22.	660-886C	"O" Ring	1
23.	660-892C	Bearing	1
24.	C50078P	Eccentric Housing	1
25.	661-70A	Snap Ring	1
26.	C50022L	Eccentric Drive Shaft	1
27.	C50042AC16	Sprocket	1
28.	98	Screw	2
29.	660-891C	Snap Ring	1
30.	660-888	Bearing	1
31.	59451F	Washer	1
32.	22574D	Screw	1
33.	C50082AR	Cover	1
34.	22524	Screw	3
35.	C50042AF	Timing Belt	1
36.	671F19A	Barb Fitting	1
37.	671F64	Extension Fitting	1





ACCESSORIES

Ref. No.	Part No.	Description	Amt. Req.
1.	35095B	Isolator	4
2.	28604R	Oil, (1 pint)	2



NUMERICAL INDEX OF PARTS

<u>Part No.</u>	<u>Page No.</u>	<u>Part No.</u>	<u>Page No.</u>	<u>Part No.</u>	<u>Page No.</u>	<u>Part No.</u>	<u>Page No.</u>	<u>Part No.</u>	<u>Page No.</u>
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13765607	17	50352	9	50393KC	17	671F19A	27	SS6090620SP	9
18C1419	9	50354F	9	50393KF	17	671F64	27	SS6090620SP	21
22-348	23	50355AM	9	50393KH	17	77B	23	SS6110610TP	13
22517B	13	50355AN	9	50393KM	17	98	27	SS6110610TP	23
22524	27	50357W	23	50393KN	17	99682XC3	13	SS6120940SP	13
22564J	27	50358H	23	50604	23	99682XCB	13	SS6121010SP	9
22569M	13	50368A	21	50622C	21	B3530555000	13	SS6121050SP	13
22571E	17	50368AB	7	50623	23	C50022L	27	SS6121212TP	25
22571L	7	50368E	21	50623A	23	C50042AC16	27	SS6151812TP	17
22574D	27	50368W	21	50625	21	C50042AF	27	SS7080520SP	23
22593	27	50373DA	21	50642	19	C50078J	27	SS7090850SP	25
22653J8	19	50374	15, 21	50642A	11	C50078K	27	SS7092110TP	23
22841U	25	50377R	23	50654B	7	C50078L	27	SS7111120TP	9
22894C	23	50382CG	25	50654C	7	C50078M	27	SS7111120TP	11
22894J	27	50382CL	25	50662A	13	C50078N	27	SS7120640SP	13
22894T	11	50382CP	25	50668	21	C50078P	27	SS7120640SP	25
28604R	29	50382CR	25	50677	27	C50082AP	27	SS7120710SP	13
29476TC	9	50382FX	13	50677A	27	C50082AR	27	SS7120710SP	17
29476UK	23	50382FY	13	50684B	13	CE59	9	SS7120710SP	19
29476UT	17	50382FZ	13	50684C	13	CE63	9, 19, 25	SS7120910SP	19
29476VN	9	50383AD	13	51492	23	K74214	25	SS7150740SP	25
29476XV	17	50383AE	13	51959B	23	K74233	9	SS7660520SP	11
29476XW	27	50383E	23	51959D	23	K74234	9	SS7660520SP	15
34393D	17	50383F	23	51959K	23	K74235	13	SS7681410TP	11
35095B	29	50383G	25	51959L	23	K74239	13	SS8110422TP	9
41358	23	50384	17	59451F	27	K74244	15	SS8110422TP	21
50303B	25	50384A	17	605A	13	K74246	25	SS8120410SP	9
50304H	23	50384M	19	652C16	13	K74247	25	SS8660410SP	15
50304K	23	50386J	23	660-1019	7	K74261	25	SS8660612TP	11
50313J	19	50391	11	660-1043	11	K74312	25	SS8660612TP	15
50314E	19	50393-140	17	660-1062	15	K74402	11	SS8660612TP	17
50314J	19	50393-170	17	660-1087	11	K74440	23	SS8660612TP	19
50321G	15	50393-27	17	660-1113	19	K74446	11	SS8661012TP	11
50322AL	15	50393-40	17	660-1122	11, 15	K74447	15	SS8661012TP	15
50323B	23	50393-407	17	660-212	13	K 7 4 5 4 9	11	SS8681412TP	11
50332S	17	50393-47	17	660-886A	27	K 7 4 5 9 3	15	SS9080410SP	23
50333A	15	50393-51	17	660-886B	27	L A 4 5 2	13	SS9111010SP	23
50335AK	15	50393-70	17	660-886C	27	NS6110310SP	17	TA1050504RO	13
50335BB	15	50393-89	17	660-888	27	NS6620320SP	13	TA1100604RO	13
50335BD	11	50393EB	17	660-889	27	RC0560711KP	21	WO3	7
50338	9	50393EU	13	660-890	27	RM2871B	17	WP0330501SP	23
50338A	9	50393EX	17	660-891B	27	SD0630275SP	23	WP0480856SP	13
50342AX	15	50393EY	7	660-891C	27	SD0640323TP	13	WS0631510KP	17
50342BE	11	50393FR	17	660-892C	27	SQ1110401MZ	7	WZ0641510KP	13
50342BJ	19	50393FS	17	660-893	19, 27	SQ1110402MZ	17		
50342BK	19	50393FT	17	660-914	27	SS4090815SP	17		
50342BS	15	50393FU	7	660-918	27	SS4091015SP	17		
50342BY	19	50393FV	17	660-934	15	SS4120615SP	25		
50344AM	19	50393GB	17	660-979	19	SS4120915SP	13		
50344AS	7	50393GD	17	661-259B	9	SS4121015SP	25		
50344BE	7	50393GE	7	661-261	11	SS4121215SP	13		
50344BF	7	50393HHN	17	661-262	11	SS4121615SP	13		
50344E	7	50393HU	25	661-70A	27	SS4151415SP	25		





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