

CATALOG NO.

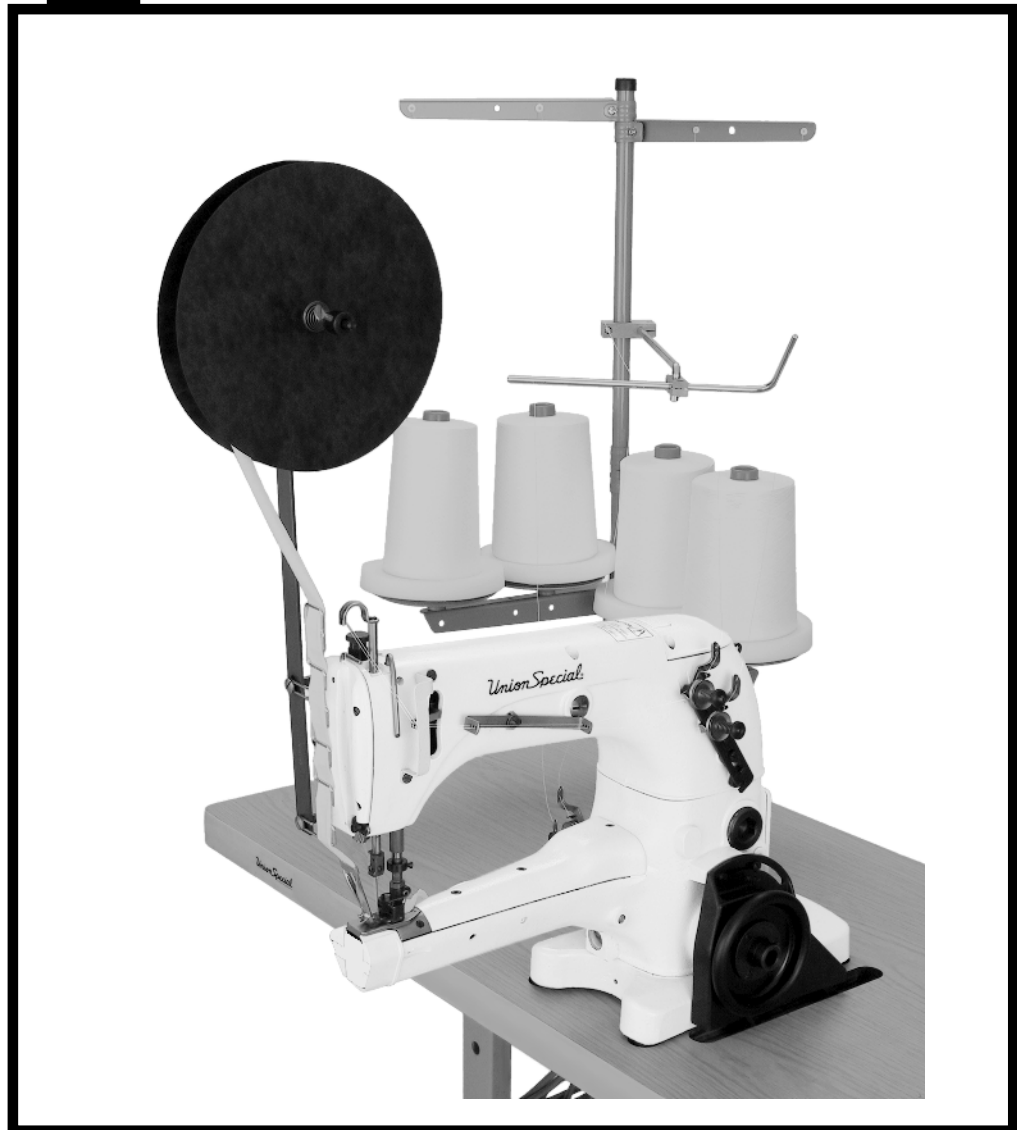
PT0203

First Edition

ADJUSTING INSTRUCTIONS AND ILLUSTRATED PARTS LIST

STYLES

31200AQ64
31200AQ64Z6



Union Special[®]
INDUSTRIAL SEWING EQUIPMENT

DESCRIPTION OF MACHINE

31200AQ64

High Speed, Feed Up The Arm, Plain Feed, Two needle, two looper, Side Wheel Cylinder Bed Machine specifically designed for Taping Shoulders and Collar Seams on Knitwear.

Equipped with top tape reel and Presser Foot with folder for a precut 3/4" (19mm) tape to finish 3/8" (9.5mm). Seam Spec. 401SSag-3. 6.4mm (16ga) needle spacing only. 4500 R.P.M. Maximum speed.

31200AQ64Z6

Same as 31200AQ64 except without presser foot.

NEEDLETYPE:

128 GJS: Short, double groove, struck groove, thin ball point, spotted, tapered blade reinforcement, chromium plated - sizes 070 / 027, 075 / 029, 080 / 032, 090 / 036.

SETTINGTHENEEDLES:

Before readjusting the machine insert two new needles type 128GJS as far as they will go into the needle bar head. The long groove must show to the operator. Tighten set screws securely.

SETTINGOFTHENEEDLEBAR:

To set the needle bar for the correct needle space in line of feed use the assembled needle guard, as the step of the needle guard is the same as the needle space. The needles should slightly touch the needle guard. After the setting, check that the needles are in the center of the stitch holes.

LOOPERADJUSTMENT:

Insert the rear looper in the rear looper holder and be sure that the screw rests on the looper flat. The looper gauge is 13/64"(5.16mm) measured from the center line of the left needle to the looper point with the looper at the extreme left of its travel. Use of looper gauge 21225 - 13/64" is of advantage. For adjusting the looper gauge loosen the clamp screw of the rear looper holder and move holder on the looper shaft to obtain proper setting.

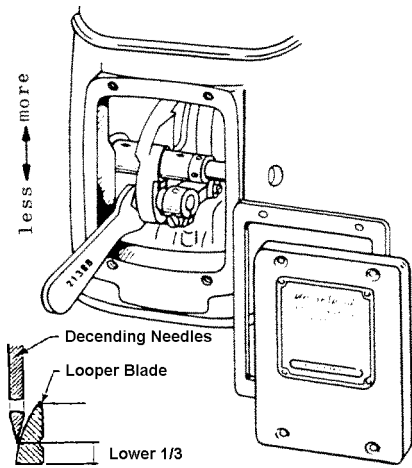
NEEDLEBARHEIGHT:

Set the needle bar so that the tops of the needle eyes are about 5/64"(2mm) below the looper points when the points are flush with the right side of the needles on their travel to the right. Watch that the needle bar does not turn during this adjustment.

LOOPERTONEEDLESET:

After setting the needle bar to the correct height, set the loopers front to back to touch but not deflect the needles at loop taking time





LOOPER AVOID MOTION:

The amount of looper avoid has been set at the factory to approximately .080" (2.0mm). If it becomes necessary to adjust the amount of avoid it is recommended as a starting point, to have the points of the decending needles contact the lower 1/3 of the back of the looper blade.

After changing the looper avoid motion check the adjustment with respect to the needle.

After setting the rear looper insert the front looper. The adjustment of both loopers is the same.

To adjust the looper avoid motion remove cover plate No.31182N at the rear of the machine. Loosen the nut with wrench No. 21388 (see sketch). To increase the avoid motion the connection link must be moved downwards and to reduce it upwards. Tighten the nut and replace the cover plate No. 31182N with the gasket.

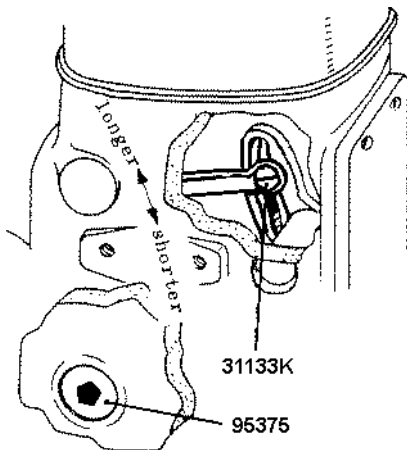
NEEDLEGUARD:

Set the rear guard horizontally so that it barely contacts the needles when at its extreme forward position. It should be set vertically as low as possible, yet have its guarding surface in contact with the needle until the points of the loopers moving to the right are even with the right side of needles.

NOTE: Any time you change stitch length you must reset the guard.

FEEDDOGSETTING:

The feed dog height is set correctly when the tips of the teeth project $\pm 3/64"$ (1.2mm) above the throat plate at its highest position. The height adjustment is made by loosening the set screws No. 22894W and turning the eccentric stud No. 31139A. After this adjustment tighten set screw. At maximum stitch length adjust feed dog to have equal clearance at both ends of the slots. Loosen screw on feed dog and move front to back to obtain proper setting.



STITCHLENGTHADJUSTMENT:

The mechanism for setting the stitch length is located in the cylinder (see sketch).

This mechanism is accessible after removing the right plug screw No. 95375 above the handwheel. Loosen the ball screw No. 31133K. Moving downwards results in a shorter, and upwards in a longer stitch length.

NOTE: Any time you change stitch length you must reset the guard.

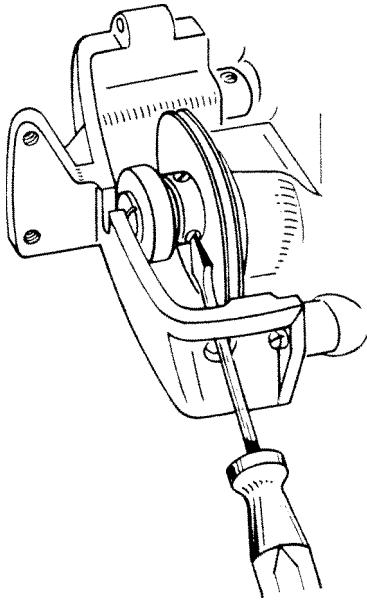
PRESSERFOOT:

The presser foot must rest flat on the throat plate and feed dog.

With the presser foot raised the stop collar on the presser bar is set correctly when the needle shank or the needle bar head does not contact the presser foot when the needle bar is at the bottom of its stroke.

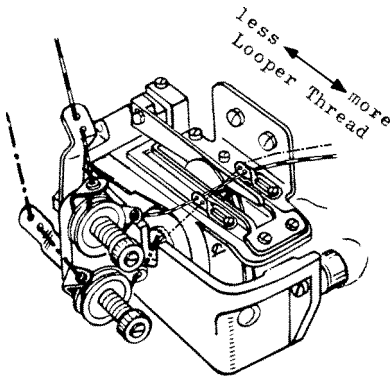
The pressure regulating screw is the knurled screw located on top of the machine arm next to the needle bar. Set the pressure of the presser foot spring so that there is just enough pressure for proper feeding of the fabric.





LOOPER THREAD TAKE-UP:

The double disc take-up must be set into the middle of the cast-off plate slot. It is located on the left side of the crank shaft and is adjustable with two set screws (see sketch). The looper thread cam should be set so that the looper thread casts off the high lobe of the cam as the point of the needle is 1/64" below the under side of the looper as the looper moves to the left.



THREAD GUIDES OF THE CAST-OFF PLATE:

On the right and left side of the double disc take-up on the cast-off plate there are adjustable thread eyelets. These eyelets must be set as close as possible to the double disc take-up. Adjusting these eyelets toward the operator results in more looper thread in the system, and when moving them in the opposite direction less looper thread will be drawn.

LOOPER THREAD RETAINING FINGER:

The looper thread retainer No. 31104 is adjustably mounted on the cast-off plate support. It should be set laterally so that it is midway between the two discs of the take-up. The height of the retainer affects the control of the looper thread as the looper moves to the right. More looper thread is given to the stitch when the retainer is raised. However, if the retainer is raised too high, the looper thread may be wiped under the looper blade causing triangle skips or pulled down stitches. This can be checked by observing the action of the looper thread as the looper moves to the right.

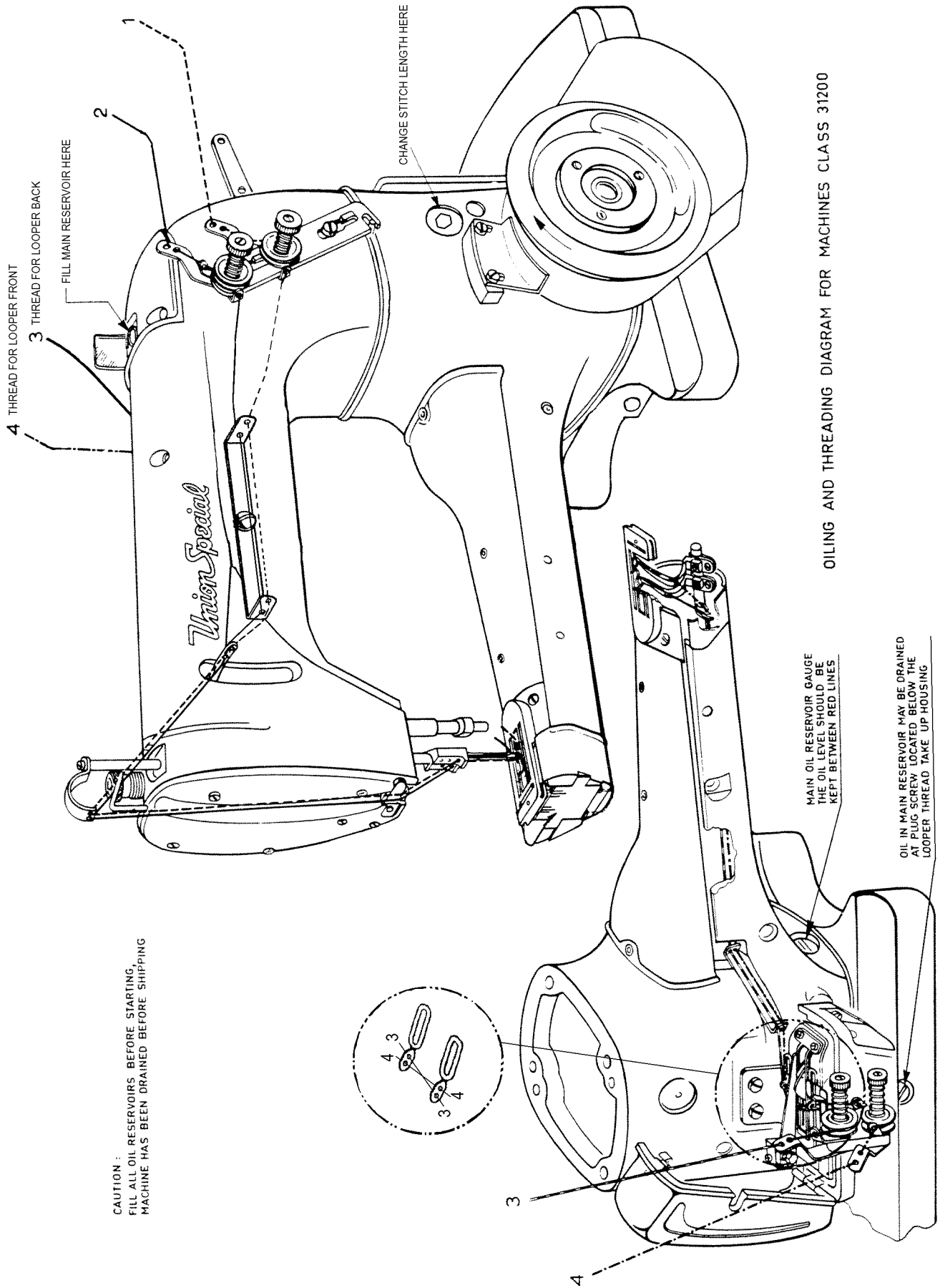
NEEDLE THREAD CONTROL:

The frame eyelet No. G52758 located on the left side of the needle lever stud can be adjusted to get the required amount of needle thread. Raising the left side of the frame eyelet puts less thread in the stitch. Needle thread strike off should be set flush with bottom of thread holes in needle thread eyelet when needles are at bottom of stroke.

THREAD TENSION:

The tension of the needle threads and looper threads should be sufficient to produce uniform stitches.





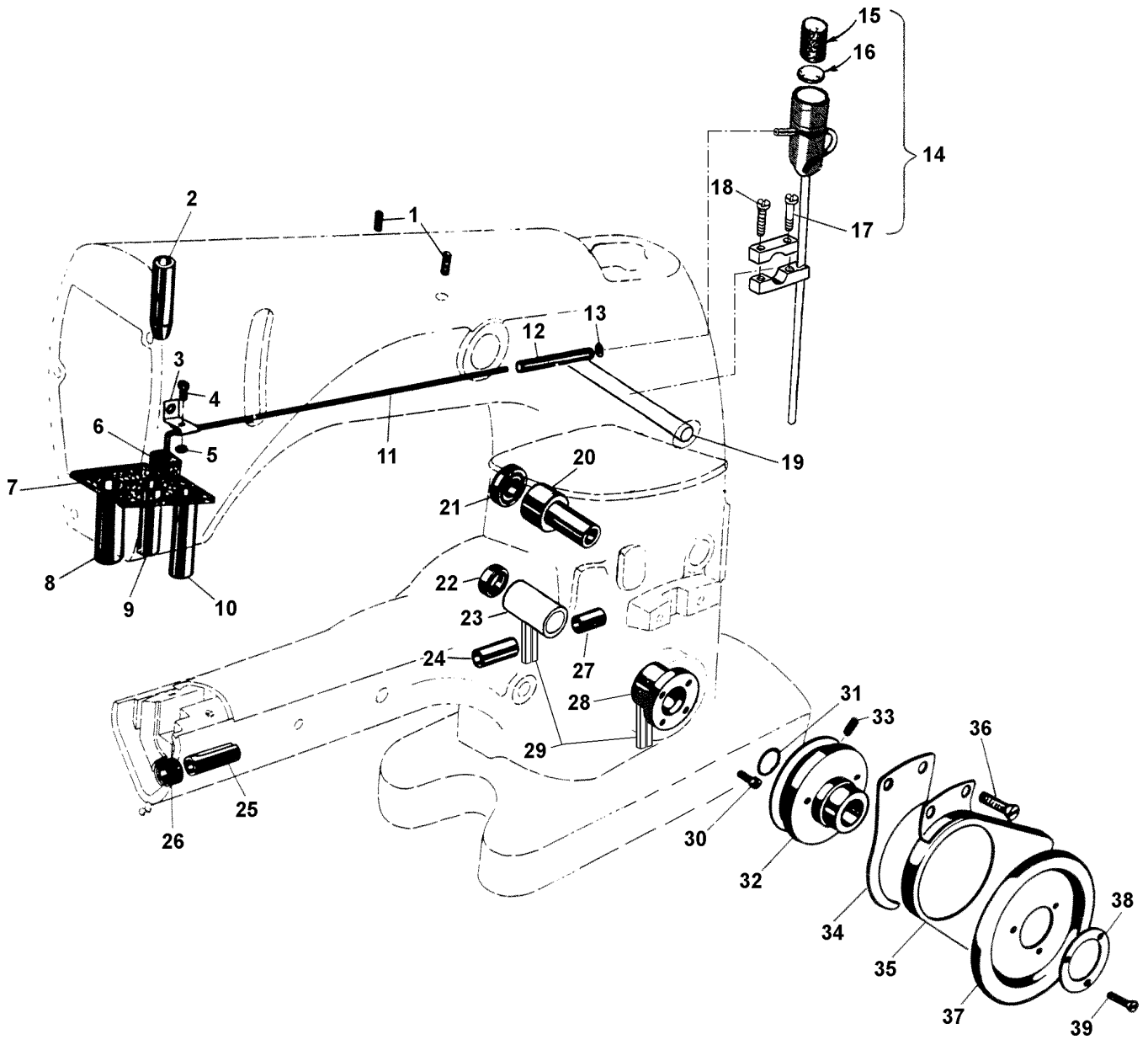
OILING AND THREADING DIAGRAM FOR MACHINES CLASS 31200

CAUTION :
 FILL ALL OIL RESERVOIRS BEFORE STARTING.
 MACHINE HAS BEEN DRAINED BEFORE SHIPPING

MAIN OIL RESERVOIR GAUGE
 THE OIL LEVEL SHOULD BE
 KEPT BETWEEN RED LINES

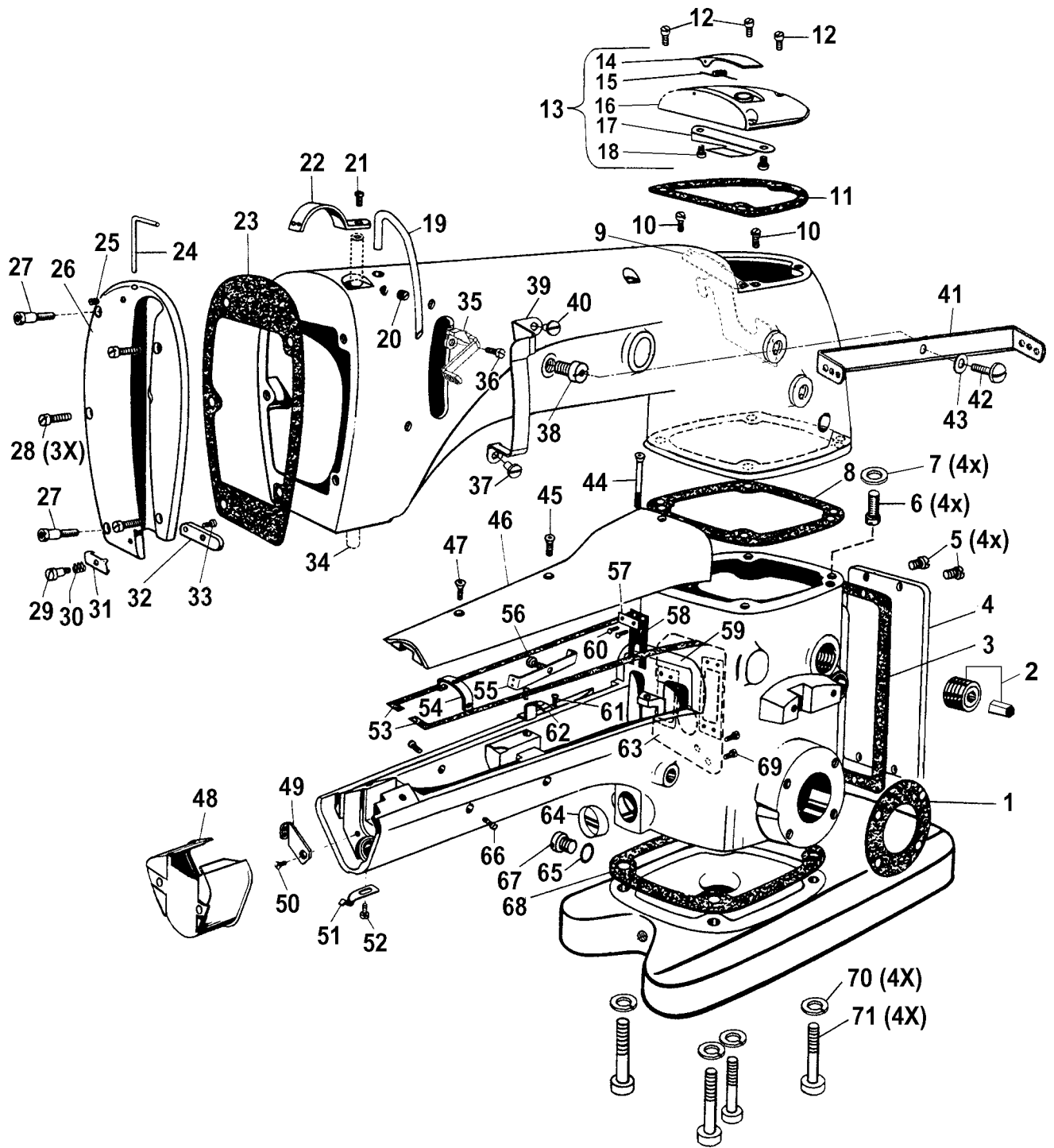
OIL IN MAIN RESERVOIR MAY BE DRAINED
 AT PLUG SCREW LOCATED BELOW THE
 LOOPER THREAD TAKE UP HOUSING





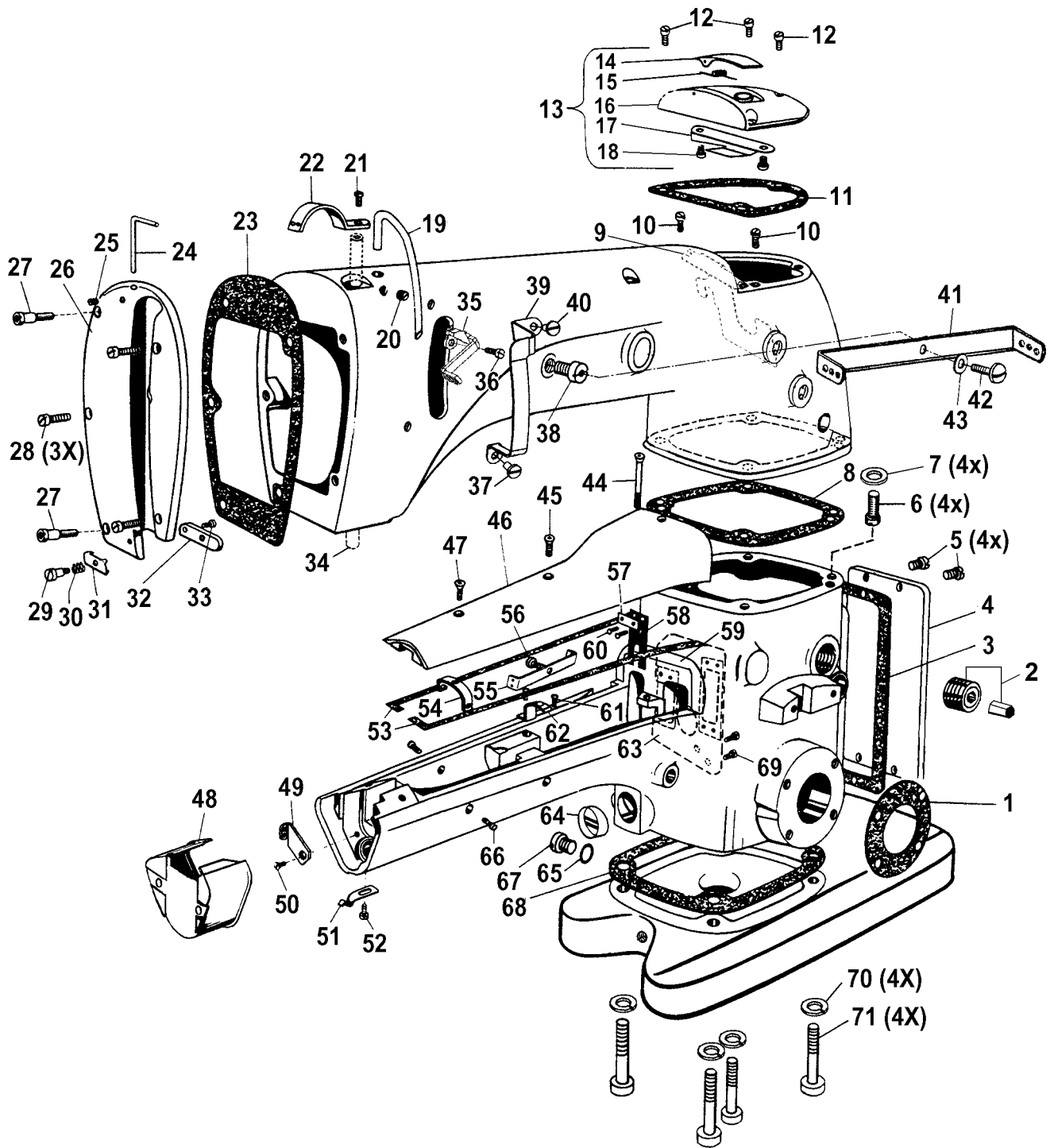
Ref. No.	Part No.	Description	Amt. Req.
1	719	Screw	2
2	34354	Needle Bar Bushing, Upper	1
3	31194A	Oil Tube Clamp	1
4	87U	Screw	1
5	43443Q	Nut	1
6	666-214	Felt Lint Filter	1
7	31194B	Felt	1
8	80262I	Bushing For Presser Guide Bar	1
9	31154	Needle Bar Bushing, Lower	1
10	31155	Bushing For Presser Bar	1
11	31194	Oil Siphon Tube	1
12	51294Z	Oil Tube Connection	1
13	21212	Oil Siphon Connection Locking Ring	1
14	53394Q	Oil siphon Assembly	1
15	666-201	Felt Plug	1
16	666-209	Siphon Cup Disc, Felt	1
17	22729B	Screw	1
18	22729AB	Screw	1
19	21657X	Bushing	1
20	31142C	Bushing	1
21	999-1	Gasket	1
22	999-35	Gasket	1
23	31190B	Crankshaft Bushing	1
24	31140A	Bushing For Looper Bar	1
25	31140	Bushing For Looper Bar	1
26	999-36	Gasket	1
27	31140B	Bushing For Looper Bar	1
28	31291	Crankshaft Bushing Housing, Including Bushing	1
29	15430L	Felt	1
30	22569B	Screw	4
31	660-202	"O" Ring	1
32	31121A	Pulley	1
33	22894G	Screw	2
34	31175C	Cloth Guard	1
35	G56375	Belt Guard	1
36	22581	Screw	2
37	61321J	Handwheel	1
38	61321L	Washer	1
39	22574	Screw	3





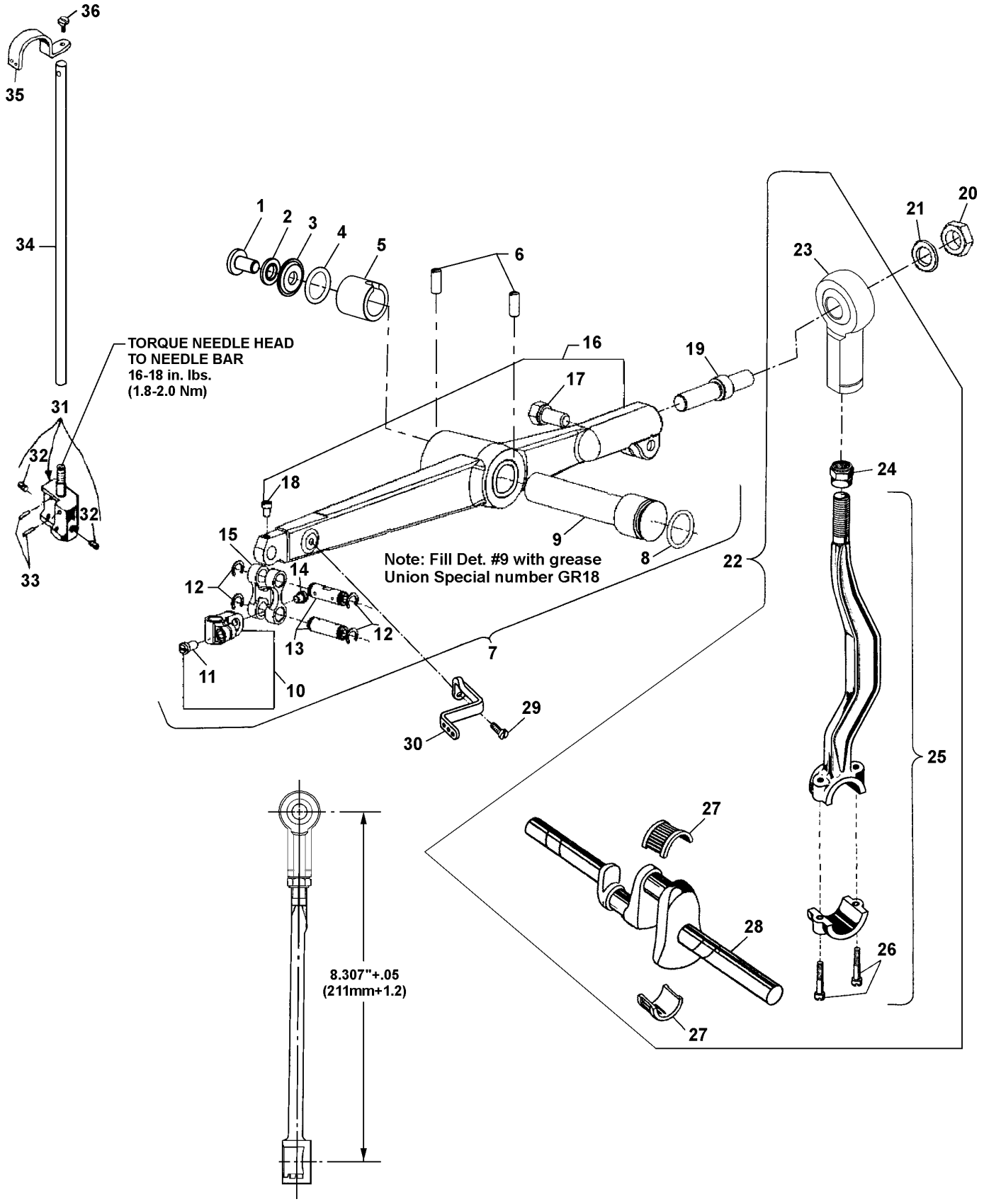
Ref. No.	Part No.	Description	Amt. Req.
1	31184A	Gasket	1
2	95375	Plug Screw	1
-	-----	Adaptor for 95375	1
3	31284B	Gasket	1
4	31282G	Cover	1
5	22839C	Screw	4
6	22652E14	Screw	4
7	35876U	Washer	4
8	33784B	Gasket	1
9	31284F	Baffle Plate	1
10	90	Screw	2
11	31284C	Gasket	1
12	22541B	Screw	3
13	31282D	Chamber Cover	1
14	39582L	Oil Cap	1
15	52882AC	Oil Cap Torsion Spring	1
16	50-789	Oil Cap Hinge Pin	1
17	52882AA	Drip Plate	1
18	90	Screw	2
19	31158B	Needle Thread Leading Wire	1
20	95	Screw	1
21	22768	Screw	1
22	31158A	Needle Bar Thread Eyelet	1
23	31284E	Gasket	1
24	31270	Pull-off Wire	1
25	22565	Screw	1
26	31282E	Head Cover	1
27	52782C	Screw	2
28	22569	Screw	3
29	57WD	Nipper Spring Screw	1
30	57WC	Nipper Spring	1
31	G57WB	Nipper Spring Plate	1
32	43296	Needle Thread Nipper Bore	1
33	605	Screw	1
34	31117	Needle Bar	1
35	33758D	Needle Lever Thread Eyelet	1
36	22768	Screw	1





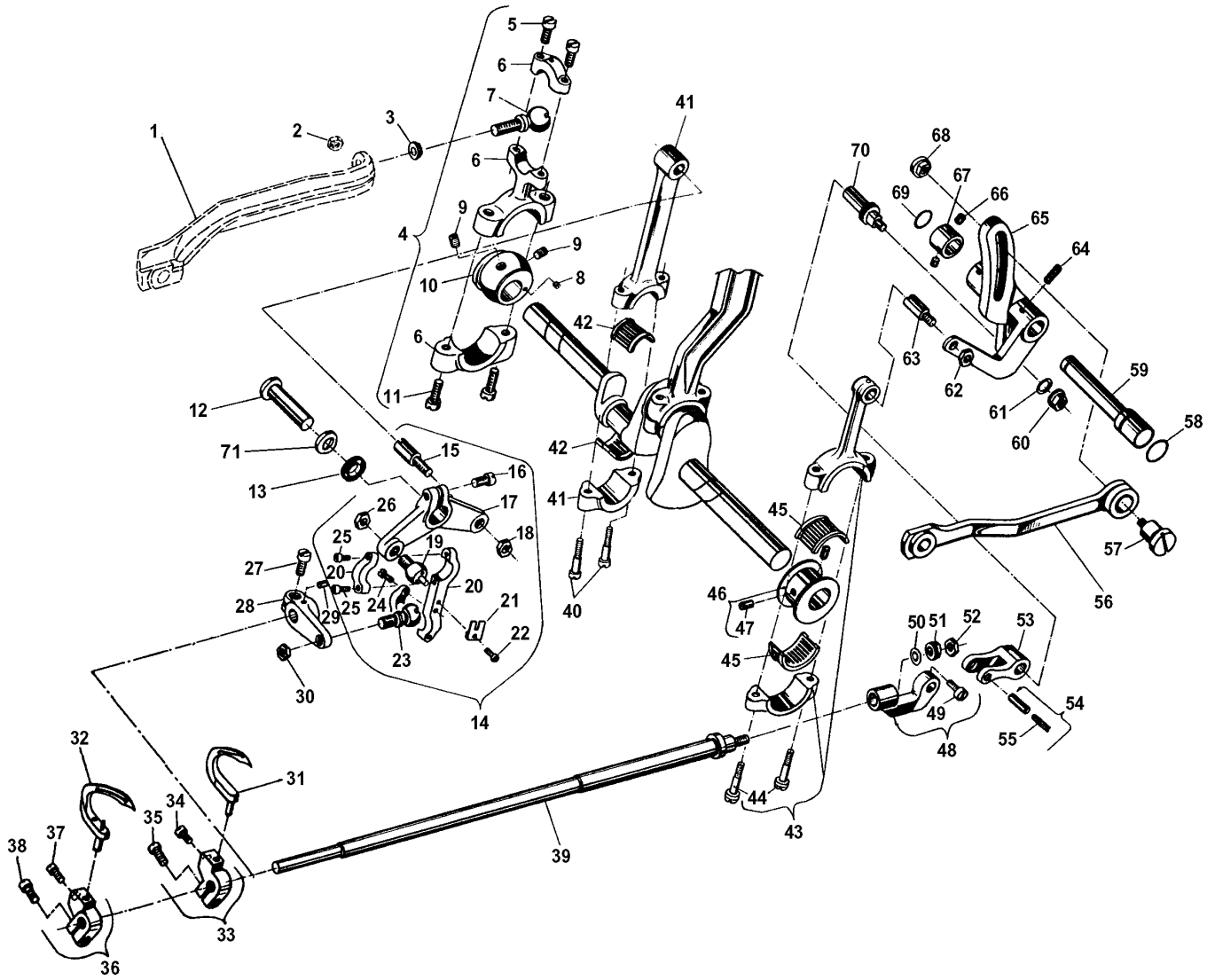
Ref. No.	Part No.	Description	Amt. Req.
37	22585A	Screw	1
38	22889H	Screw	1
39	31295	Needle Lever Eyelet Guard	1
40	22585A	Screw	1
41	G52758	Thread Eyelet	1
42	22848	Screw	1
43	20	Washer	1
44	99287	Screw	1
45	99287B	Screw	1
46	31182	Cylinder Cover	1
47	99287C	Screw	1
48	31279F	Cylinder End Cover	1
49	31258E	Thread Eyelet, Front	1
50	77K	Screw	1
51	31263	Latch Spring	1
52	77L	Screw	1
53	31184R	Gasket	2
54	31182B	Support For Cylinder Cover, Front	1
55	31258D	Thread Eyelet, Rear	1
56	94	Screw	1
57	31182K3	Holding-plate	1
58	31182SK4	Splash-leather	1
59	33784	Gasket	1
60	96402	Rivet	2
61	22524	Screw	1
62	31182C	Support for Cylinder Cover, Rear	1
63	31262B	Baffle Plate	1
64	G50-434	Lucite Oil Gauge	1
65	41394A	Gasket	1
66	99242	Screw	2
67	22733B	Oil Drain Screw	1
68	31284D	Gasket	1
69	22585A	Screw	3
70	40C149	Washer	4
71	22652E24	Screw	4





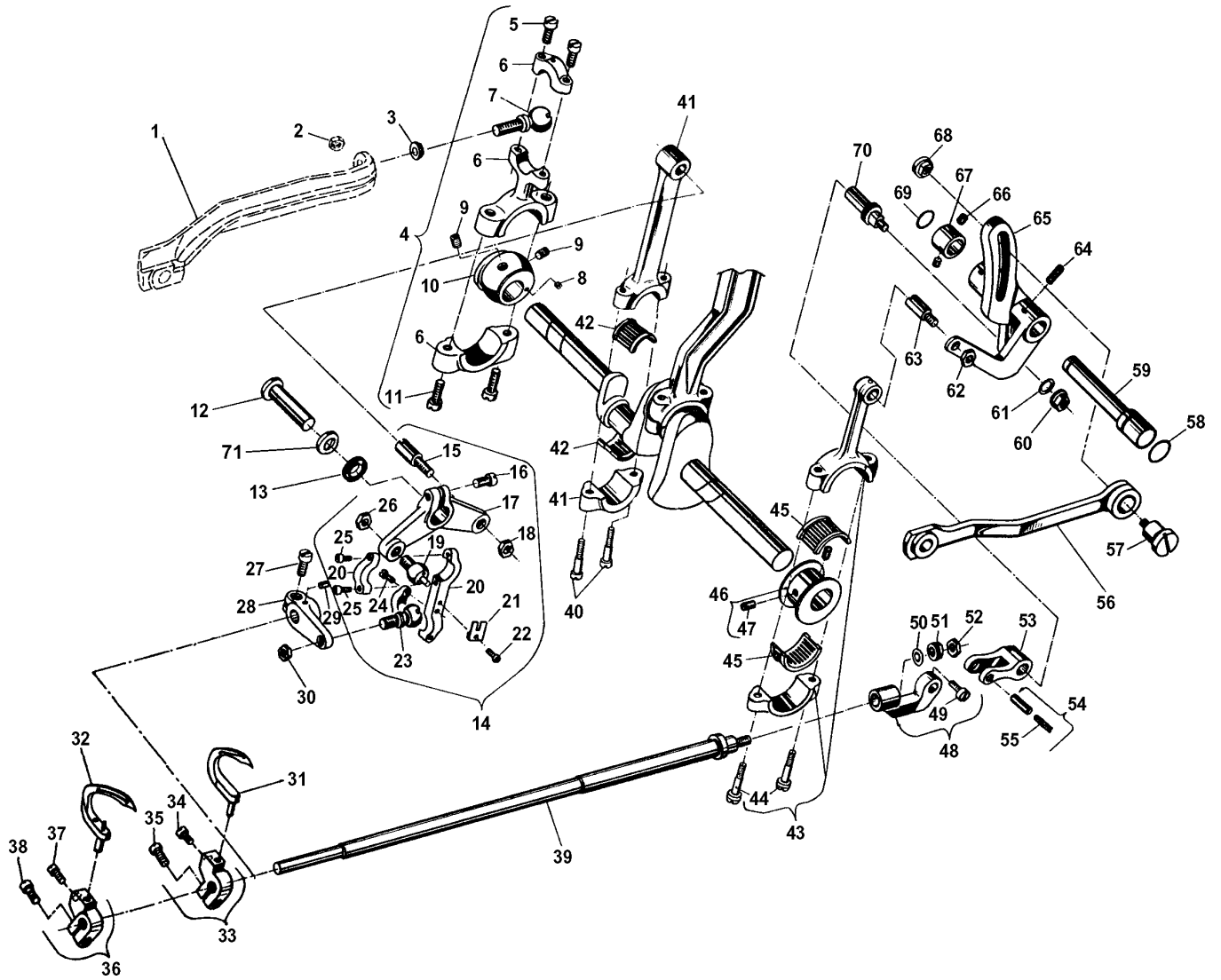
Ref. No.	Part No.	Description	Amt. Req.
1	22586R	Screw	1
2	51250V	Gasket	1
3	51250D	Washer	1
4	660-212	"O"Ring	1
5	34350	Bushing	1
6	719	Screw	2
7	29476ZL	Needle Lever Assembly	1
8	660-212	"O"Ring	1
9	51250E	Needle Lever Stud	1
10	51254K	Needle Bar Connection	1
11	22562A	Screw	1
12	660-215	Retaining Ring	4
13	52336A	Link Pin	2
14	22564	Screw	1
15	56354D	Needle Bar Link	1
16	31215B	Needle Lever	1
17	BP108	Screw	1
18	77	Screw	1
19	31247	Pin, for needle lever	1
20	21233FB	Nut, for 31247	1
21	61256G	Washer	1
22	29476ZK	Needle Lever Rod Assembly	1
23	29066Z	Bearing	1
24	80630C	Nut, left thread	1
25	31116H	Needle Lever Rod Assembly	1
26	22559C	Screw	2
27	999-39W	Needle Bearing	1
28	31222	Crankshaft	1
29	22768	Screw	1
30	33758D	Needle Lever Thread Eyelet	1
31	31218A16	Needle Holder	1
32	22565C	Screw	2
33	96654	Pin	2
34	31117	Needle Bar	1
35	31158A	Needle Bar Thread Eyelet	1
36	22768	Screw	1





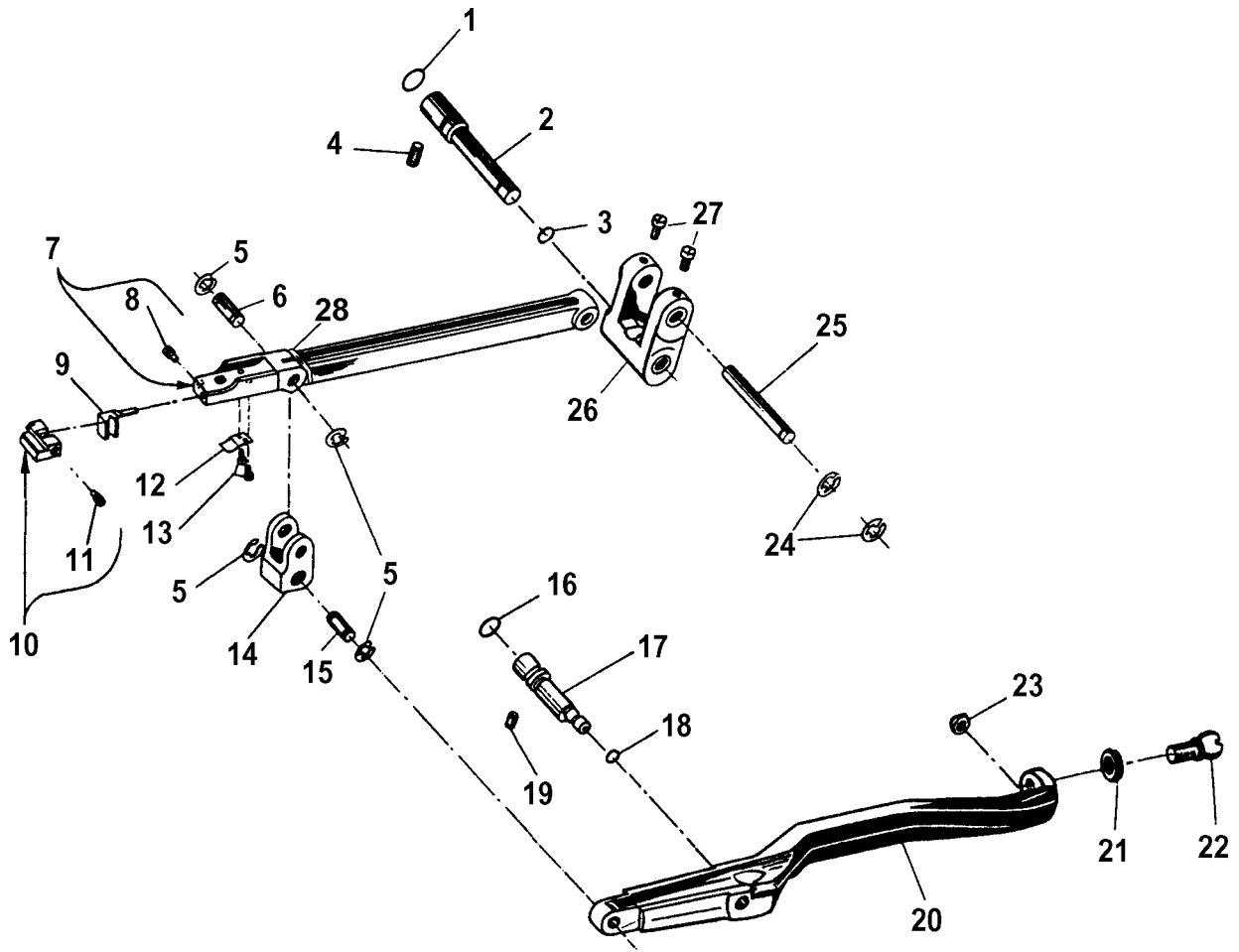
Ref. No.	Part No.	Description	Amt. Req.
1	31139C	Feed Rocker Arm	1
2	258	Nut	1
3	31146	Washer	1
4	G29476X	Feed Lift Connection Assembly For Style 31200Q	1
5	22729C	Screw	2
6	31139B	Bearing	1
7	35746C	Ball Screw	1
8	28B	Screw	1
9	22894C	Screw	2
10	31206	Eccentric	1
11	22559C	Screw	2
12	31142A	Bar For Looper Avoid Lever	1
13	999-1	Gasket	1
14	31244	Looper Drive Lever And Link Assembly	1
15	31142B	Link Pin	1
16	22517	Screw	1
17	31242	Looper Drive Lever	1
18	12538	Nut	1
19	31144C	Ball Screw	1
20	31144B	Bearing	1
21	31144E	Guide Fork	1
22	77B	Screw	1
23	31144D	Ball Screw	1
24	22729	Screw	4
25	G97A	Screw	1
26	18	Nut	1
27	22517	Screw	1
28	31144G	Looper Drive Lever	1
29	22733	Screw	1
30	12538	Nut	1
31	31209	Looper Rear For Class 31200Q	1
32	31207	Looper Front For Class 31200Q	1
33	31248A	Looper Holder, Rear	1
34	22564D	Screw	1
35	22562A	Clamp Screw	1
36	31248	Looper Holder, Front	1
37	22564D	Screw	1
38	22562A	Clamp Screw	1





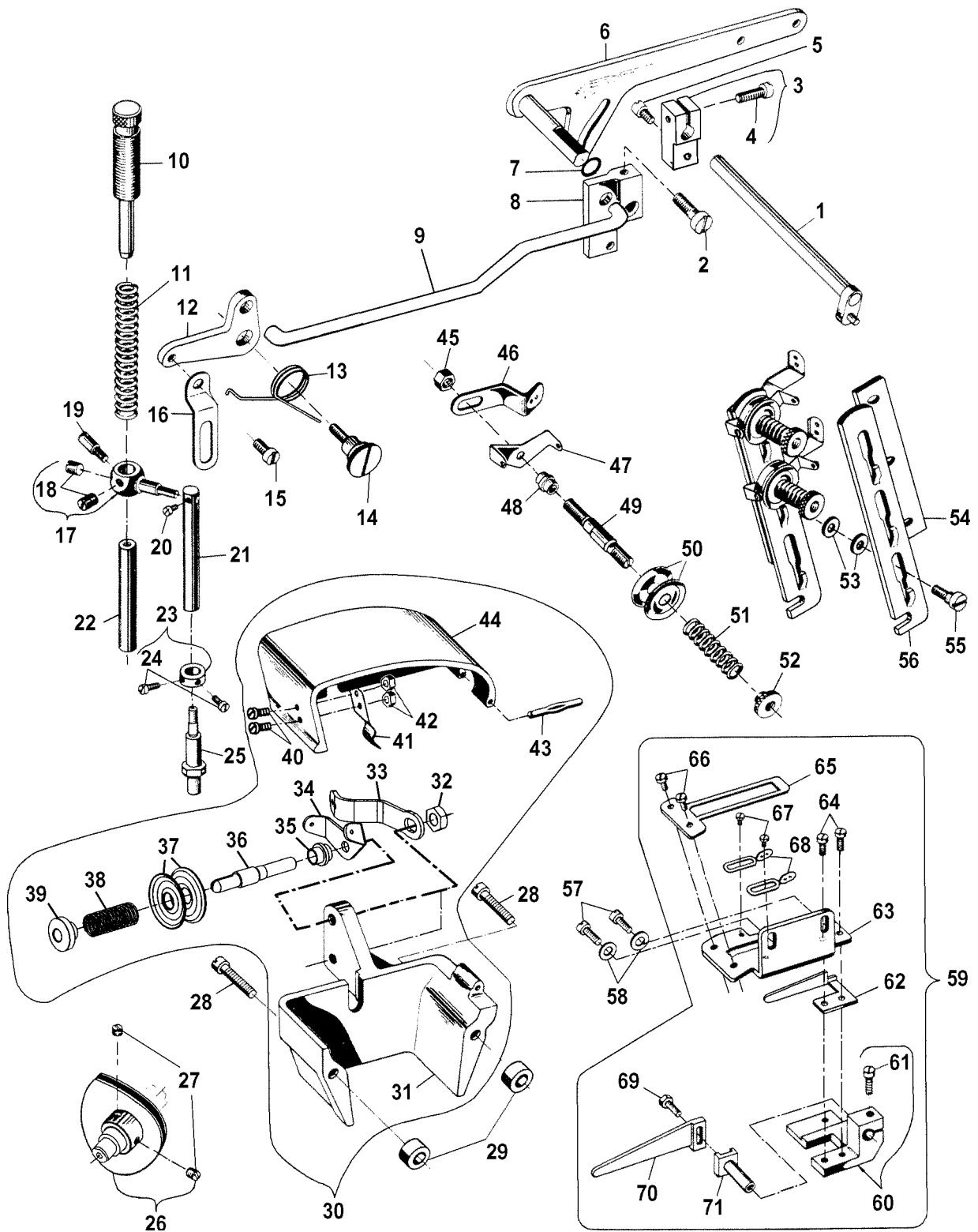
Ref. No.	Part No.	Description	Amt. Req.
39	31244A	Looper Rocker Shaft	1
40	75A	Screw	2
41	31116F	Looper Drive Lever Connection	1
42	999-38	Needle Bearing	1
43	31116C	Feed Drive And Looper Avoid Connection Assembly	1
44	22559C	Screw	2
45	999-40	Needle Bearing	1
46	31106	Eccentric	1
47	22894C	Screw	2
48	31144J	Looper Avoid Link	1
49	77	Screw	1
50	39543P	Washer	1
51	18	Nut	1
52	12538	Nut	1
53	G12055P	Looper Avoid Drive Link	1
54	51054A	Link Pin	1
55	666-149	Oil Wick	1
56	31133H	Connection Rod	1
57	31133K	Shoulder Screw	1
58	999-32	"O"Ring	1
59	31142P	Bar, For 31142Q	1
60	18	Nut	1
61	21657E	Washer	1
62	12538	Nut	1
63	31142M	Link Pin	1
64	22894W	Screw	1
65	31142Q	Feed Drive And Looper Avoid Drive Lever	1
66	88	Screw	2
67	482C	Collar	1
68	31133M	Adjusting Nut	1
69	999-30	"O"Ring	1
70	31142E	Stud For Looper Avoid Link	1
71	31275A	Washer	1





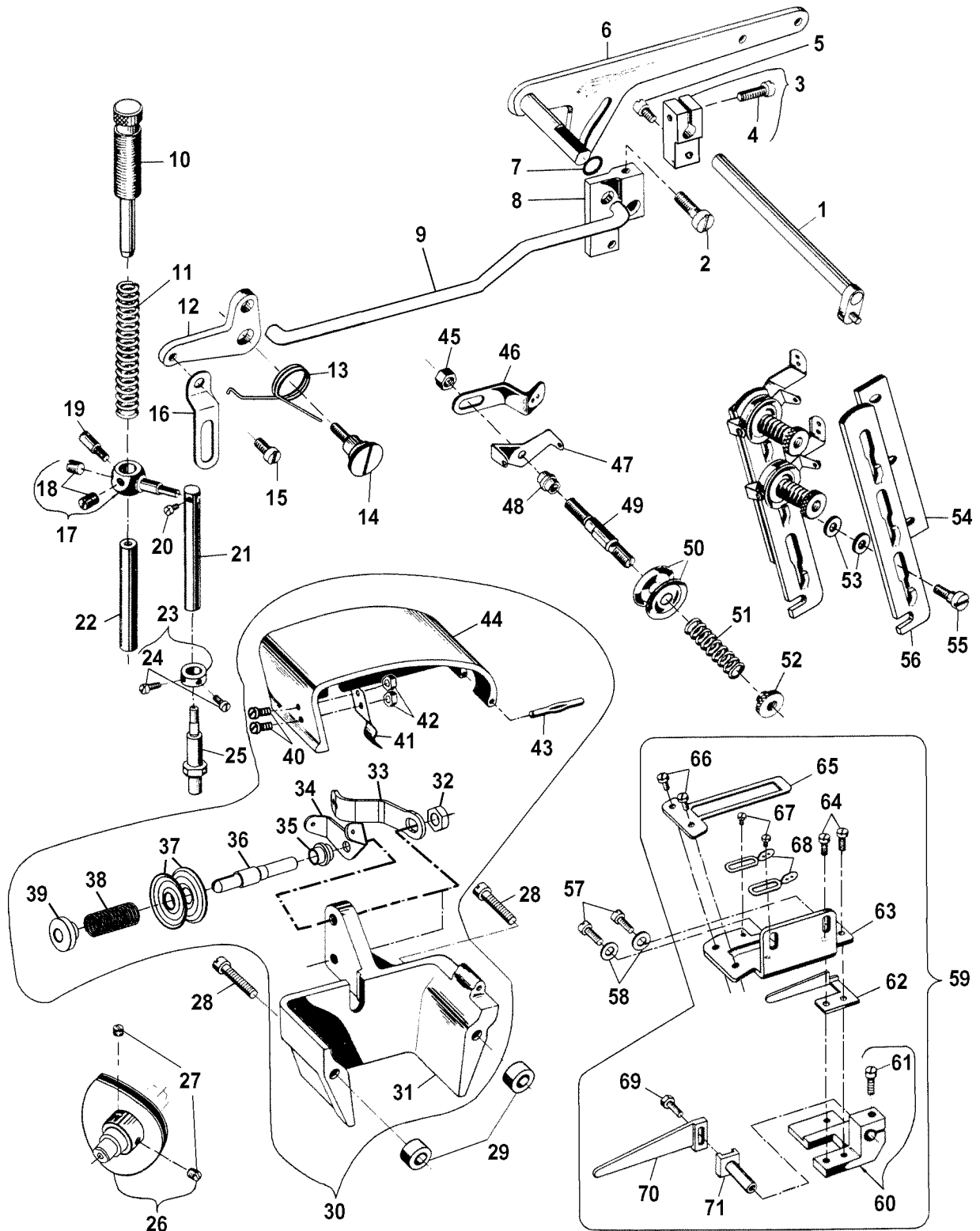
Ref. No.	Part No.	Description	Amt. Req.
1	990-30	"O"-Ring	1
2	31135C	Feed Rocker Shaft	1
3	660-221	"O"-Ring	1
4	22894C	Screw for 31135C	1
5	660-199	Retaining Ring	4
6	31136A	Link Pin	2
7	31234	Feed Bar	1
8	99305	Screw	1
9	31225F	Holder For Needle Guard	1
10	31225A	Needle Guard	1
11	99306	Screw	1
12	31134L	Spring	1
13	G41228A	Screw	2
14	31136E	Feed Bar Guide	1
15	31136A	Link Pin	1
16	999-30	"O"-Ring	1
17	31139A	Feed Bar Adjusting Pin	1
18	999-31	"O"-Ring	1
19	22894W	Screw For 31139A	1
20	31139C	Feed Rocker Arm	1
21	31146	Washer	1
22	35746C	Ball	1
23	258	Nut	1
24	96275	Retaining Ring	2
25	31135G	Feed Bar Shaft	1
26	31135E	Feed Rocker	1
27	90	Screw	2
28	CQ200000000	Oil Wick	1





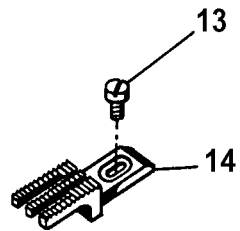
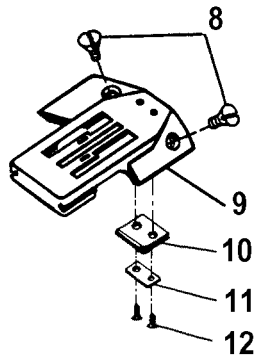
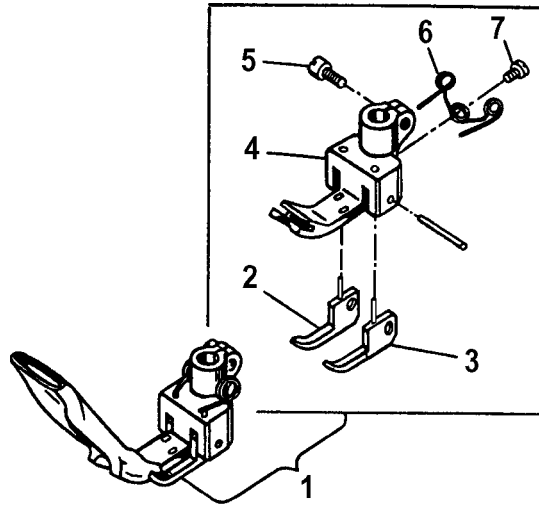
Ref. No.	Part No.	Description	Amt. Req.
1	21657W	Tension Release Lever Shaft	1
2	318	Screw	1
3	31292	Tension Release and Foot Lifter Lever Connection	1
4	SS7121410TP	Screw	1
5	22875N	Screw	1
6	33783H	Presser Foot Lifter Lever	1
7	660-207	Oil Seal Ring	1
8	33783N	Presser Foot Lifter Lever, Internal	1
9	33783M	Presser Foot Lifter Lever Connecting Rod	1
10	56356	Presser Spring Regulator	1
11	51256C	Presser Bar Spring	1
12	34383BA	Presser Foot Lifter Lever Bell Crank	1
13	56383D	Presser Foot Lifter Lever Bell Crank Spring	1
14	22557G	Screw	1
15	22758C	Screw	1
16	53783A	Lifter Lever Link	1
17	33783	Presser Bar Connection	1
18	88	Screw	2
19	G402	Screw	1
20	77	Screw	1
21	31260	Presser Bar	1
22	39135	Presser Bar Guide Bar	1
23	52888B	Collar For Presser Foot	1
24	22562	Screw	2
25	31260F	Presser Bar Insert For Style 31200Q	1
26	31223	Looper Thread Take-up	1
27	22580D	Screw	2
28	74	Screw	2
29	31274	Collar	2
30	31282M	Case For Take-up Complete	1
31	31282H	Case For Take-up	1
32	G43266	Nut	2
33	51491C	Thread lead in Guide	2
34	51292D	Tension Thread Eyelet	2
35	51292A	Tension Post Ferrule	2
36	51292G	Tension Post	2
37	109	Tension Disc	4
38	51292F2	Spring	2
39	51292C	Tension Nut	2
40	95303	Screw	2
41	31163	Spring	1
42	95259	Nut	2
43	96851	Pin	1
44	31282J	Cover	1





Ref. No.	Part No.	Description	Amt. Req.
45	43266	Nut	1
46	51491C	Thread Lead-in Guide	2
47	51292D	Tension Thread Eyelet	2
48	51292A	Tension Post Ferrule	2
49	51292G	Tension Post	2
50	109	Tension Disc	4
51	51292F4	Tension Spring-Needle	2
52	51292C	Tension Nut	2
53	80557	Washer	2
54	52892	Tension Post Support	1
55	22598C	Screw	1
56	21657-3	Tension Disc Separator	1
57	94	Screw	2
58	69H	Washer	2
59	G29389U	Take-up Shield Complete	1
60	31204	Cast-off and Retaining Finger Support Bracket	1
61	22729	Screw	1
62	53304C	Cast-off	1
63	31257	Take-up Shield	1
64	J87J	Screw	2
65	53304B	Cast-off Plate	1
66	28	Screw	2
67	73A	Screw	2
68	52958L	Eyelet	2
69	22588A	Screw	1
70	31104	Retaining Finger	1
71	52804E	Retainer Support	1

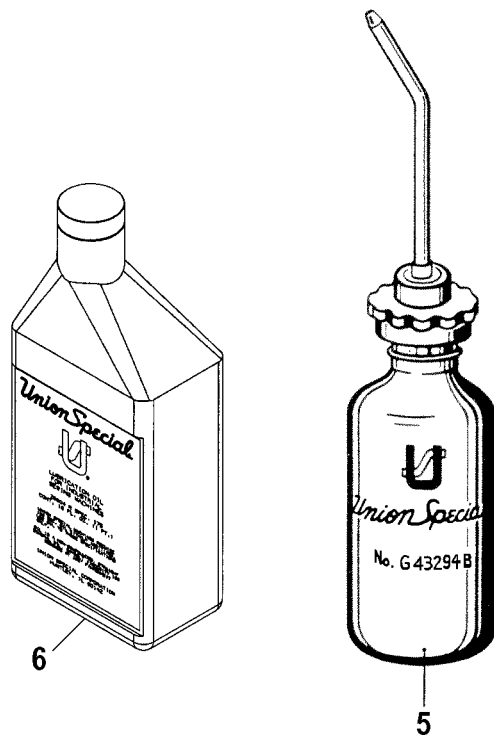
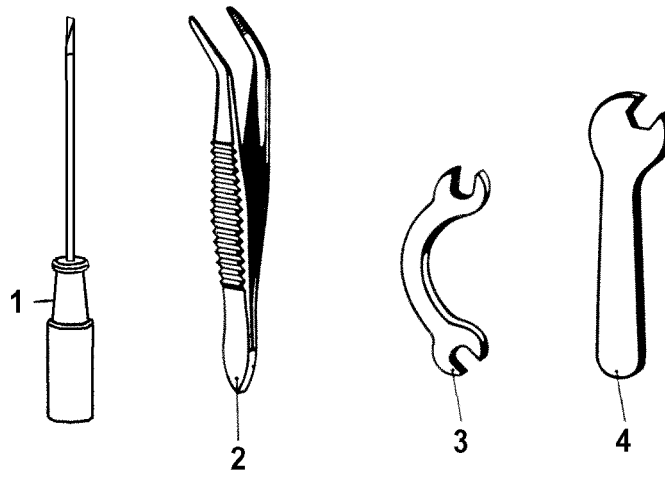




Ref. No.	Part No.	Description	Amt. Req.
*1	31220R16	Presser Foot Assembly For Style 31200Q64	1
2	31130S	Yielding Section, Left	1
3	31130T	Yielding Section, Right	1
4	31230R16	Presser Foot Bottom	1
5	91	Screw	1
6	11940	Spring	1
7	605	Screw	1
8	22524	Screw	2
9	31224Q16	Throat Plate	1
10	31134M	Stripper	1
11	31134N	Plate	1
12	22716	Screw	2
13	99293	Screw	1
14	31205Q	Feed Dog	1

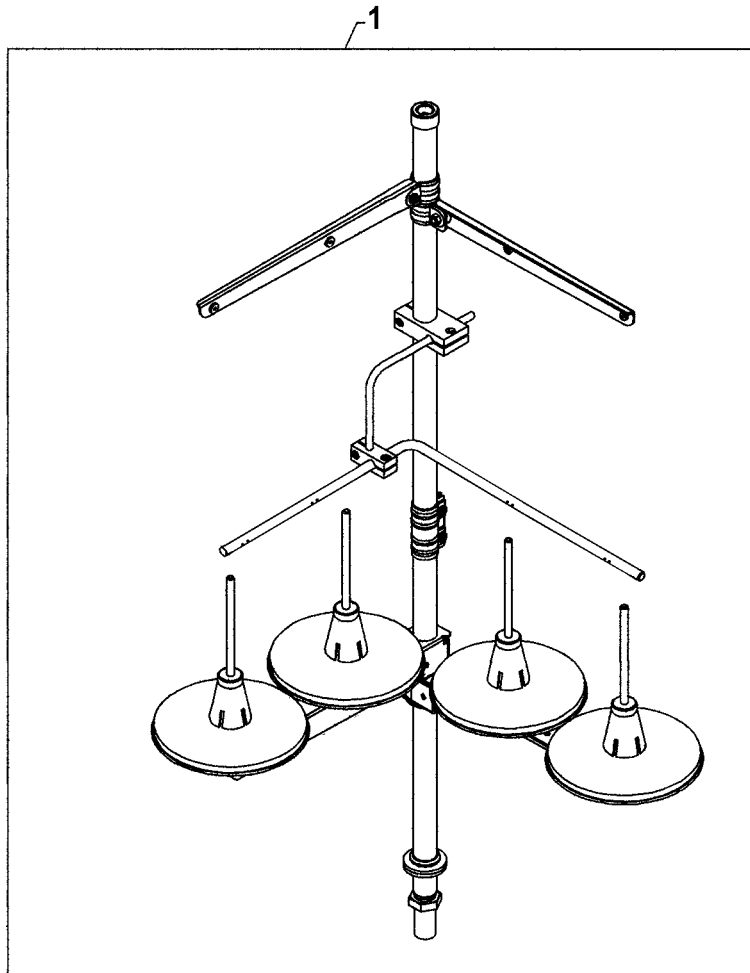
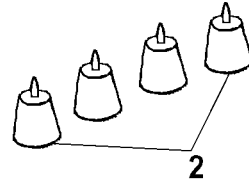
* 31220R16 Presser Foot Assembly not supplied with machine style 31200AQ64Z6





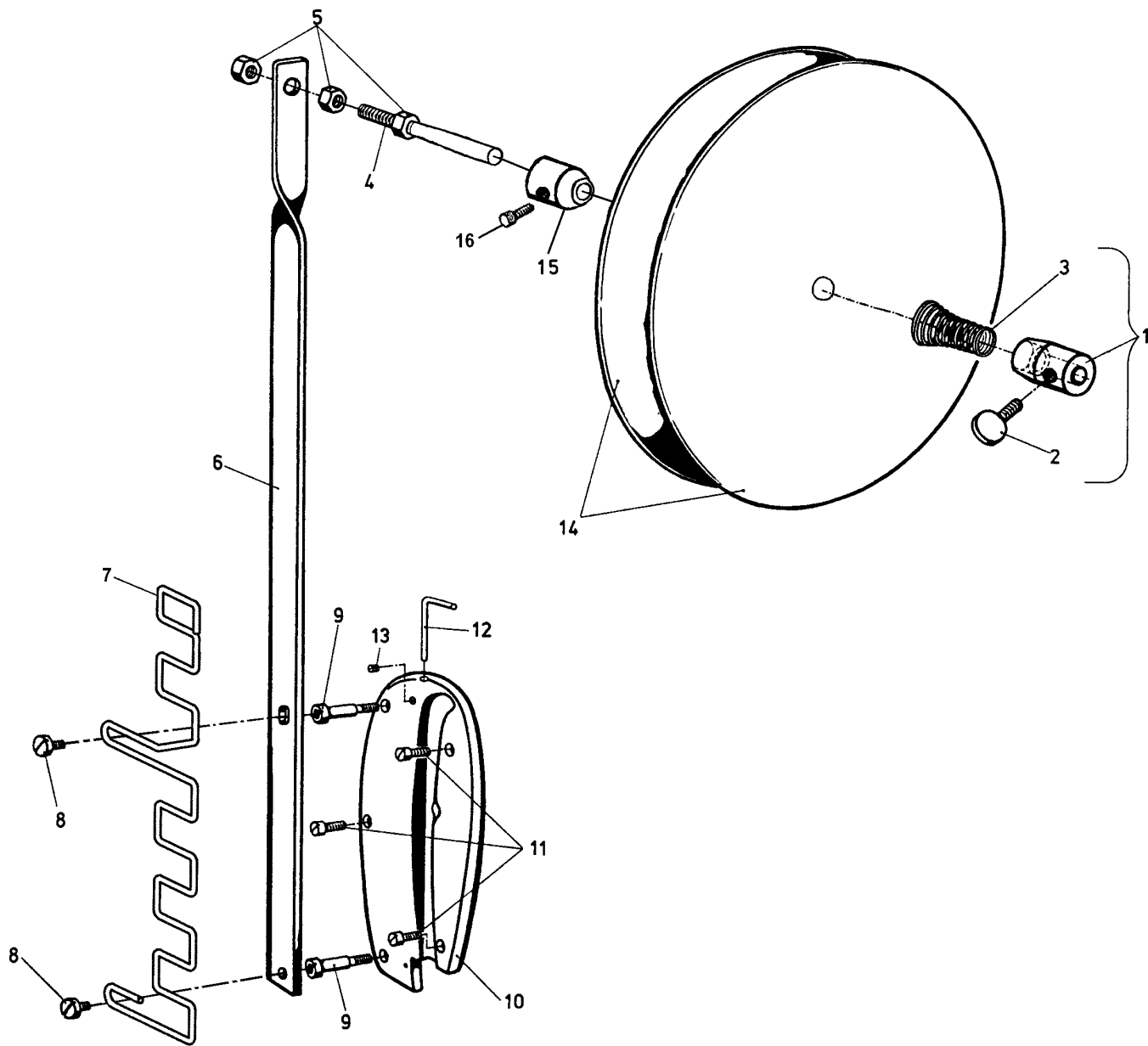
Ref. No.	Part No.	Description	Amt. Req.
1	21201	Screw Driver	1
2	12288403	Thread Tweezers	1
3	TT17	Wrench 9/32"	1
4	21388	Wrench 3/8"	1
5	G43294B	Oil Can	1
6	28604R	Container of Oil	1





Ref. No.	Part No.	Description	Amt. Req.
1	21101W4	Thread Stand.....	1
2	51295B	Mounting Isolator.....	4





Ref. No.	Part No.	Description	Amt. Req.
1	21177A	Tape Reel Tension Spring Complete	1
2	22647K24	Thumb Screw	1
3	1349A5	Spring	1
4	21114W	Spool Pin	1
5	258	Nut	3
6	23105B	Tape Reel Bracket	1
7	21182AP	Tape Tension Bracket	1
8	22581	Screw	2
9	52782C	Stud	2
10	31282E	Head Cover	1
11	22569	Screw	3
12	31270	Pull-off Wire	1
13	22565	Screw	1
14	31278	Tape Holder Disc	2
15	753	Spool Axle Cone	1
16	188D	Thumb Screw	1



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