

CATALOG NO.

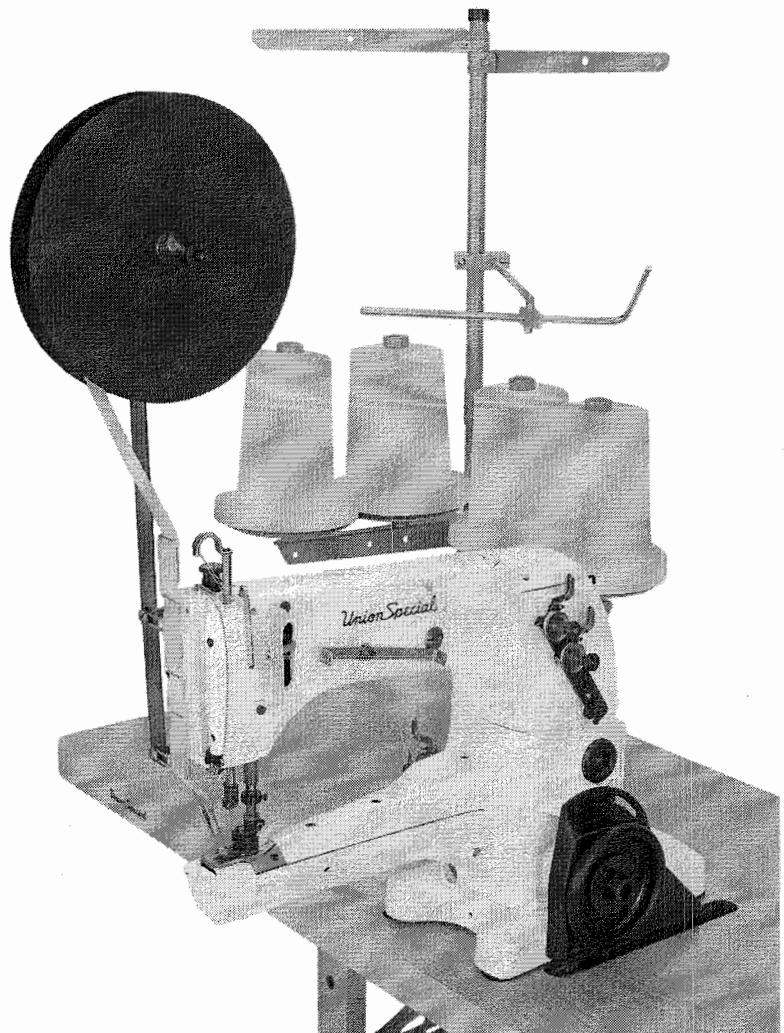
PT0203

First Edition

ADJUSTING INSTRUCTIONS AND ILLUSTRATED PARTS LIST

STYLES

31200AQ64
31200AQ64Z6



Finest Quality

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.

NEEDLE TYPE:

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.

SETTING THE NEEDLES:

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.

SETTING OF THE NEEDLE BAR:

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.

LOOPER ADJUSTMENT:

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.

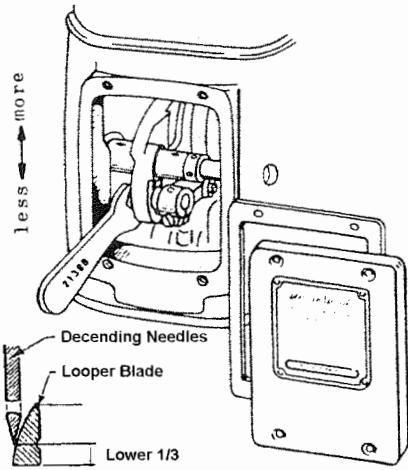
NEEDLE BAR HEIGHT:

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.

LOOPER TO NEEDLE SET:

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 descending 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.

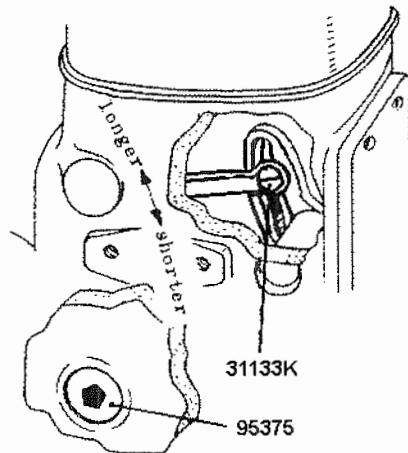
NEEDLE GUARD:

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.

FEED DOG SETTING:

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.



STITCH LENGTH ADJUSTMENT:

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.

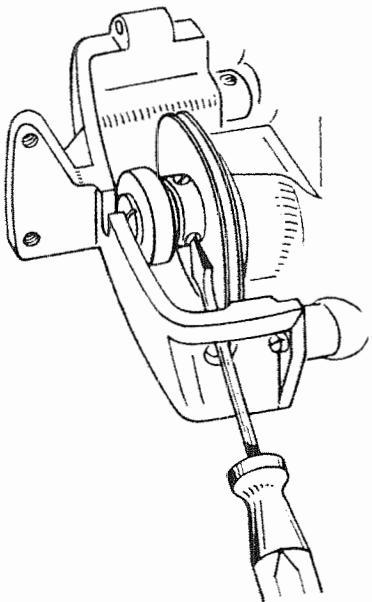
PRESSER FOOT:

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.

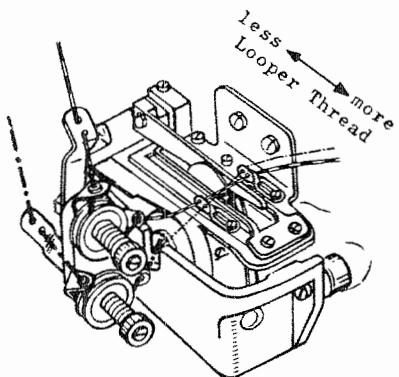
The pressure regulating screw is the knurled screw located on top of the machine arm next to the needle bar. Set the pressure of the presser foot spring so that there is just enough pressure for proper feeding of the fabric.





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.

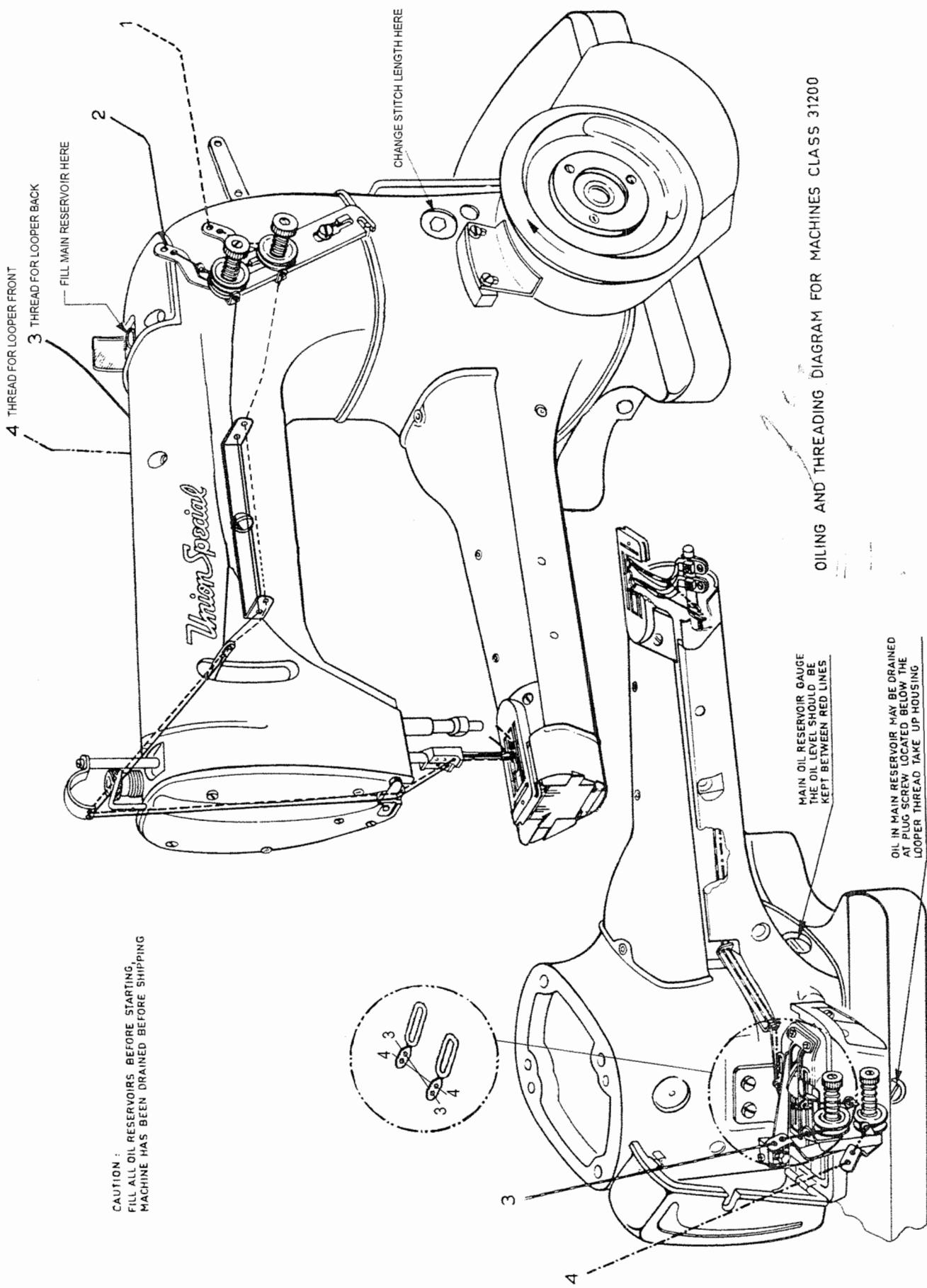
NEEDLE THREAD CONTROL:

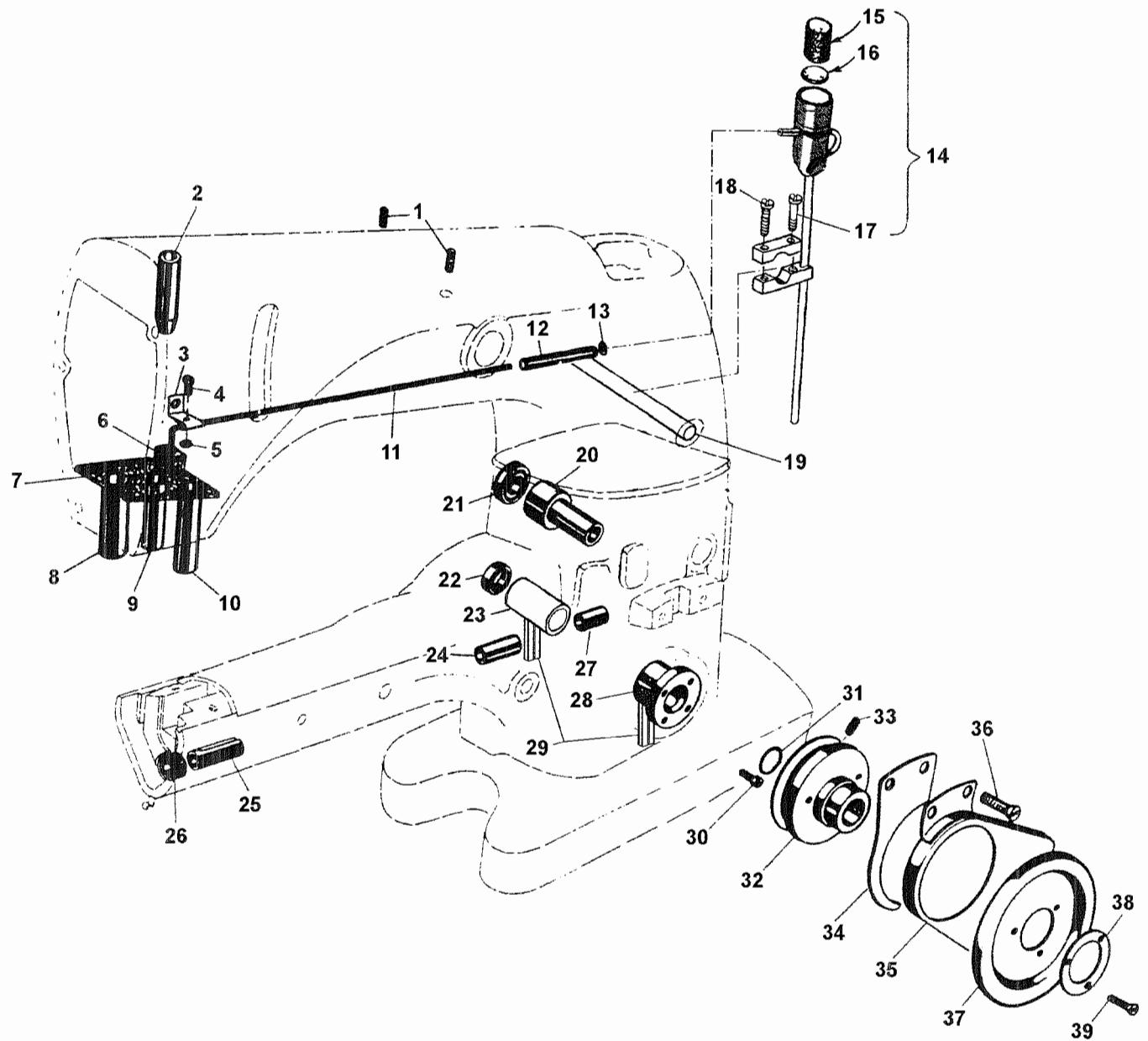
The frame eyelet No. G52758 located on the left side of the needle lever stud can be adjusted to get the required amount of needle thread. Raising the left side of the frame eyelet puts less thread in the stitch. Needle thread strike off should be set flush with bottom of thread holes in needle thread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

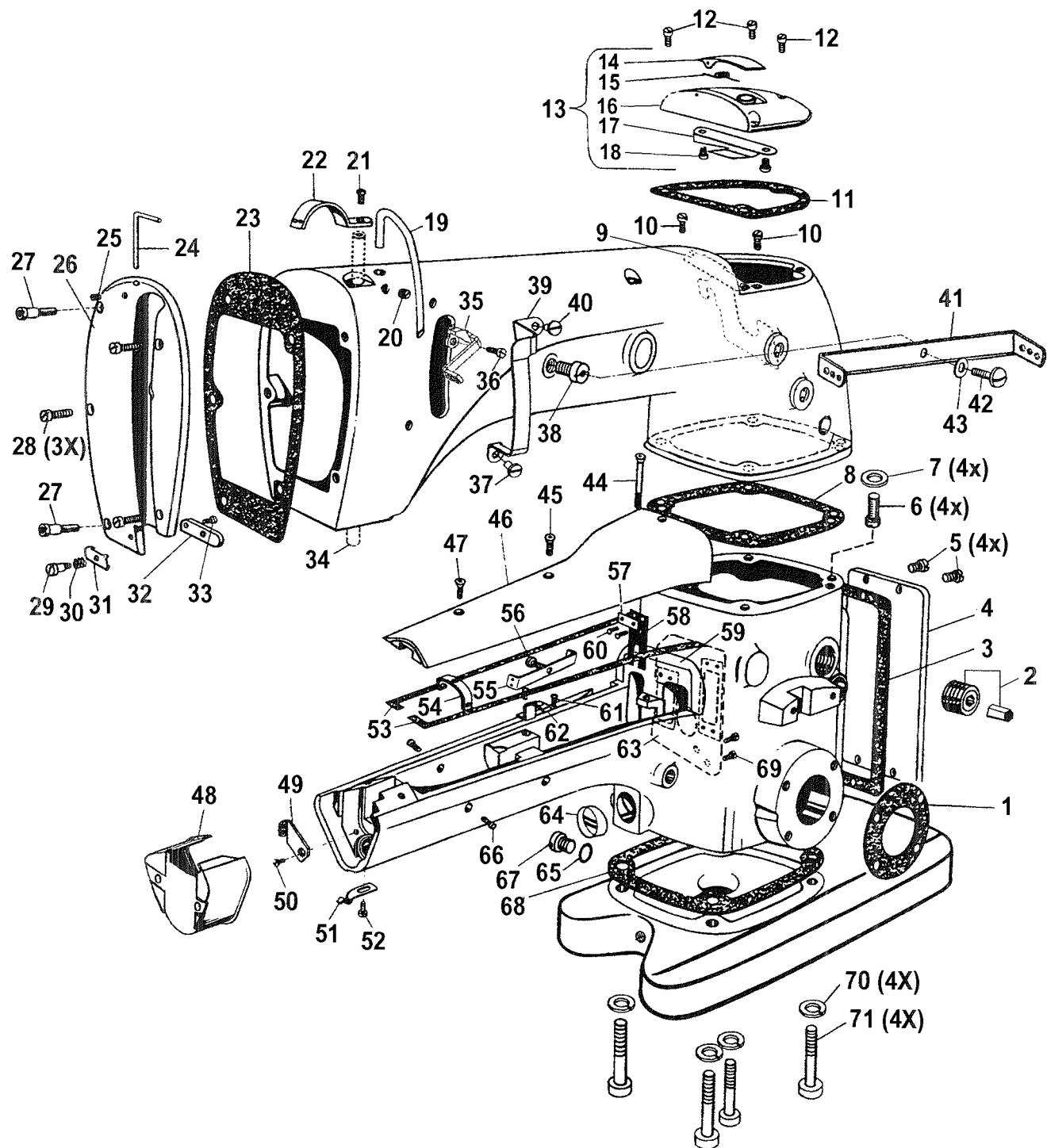






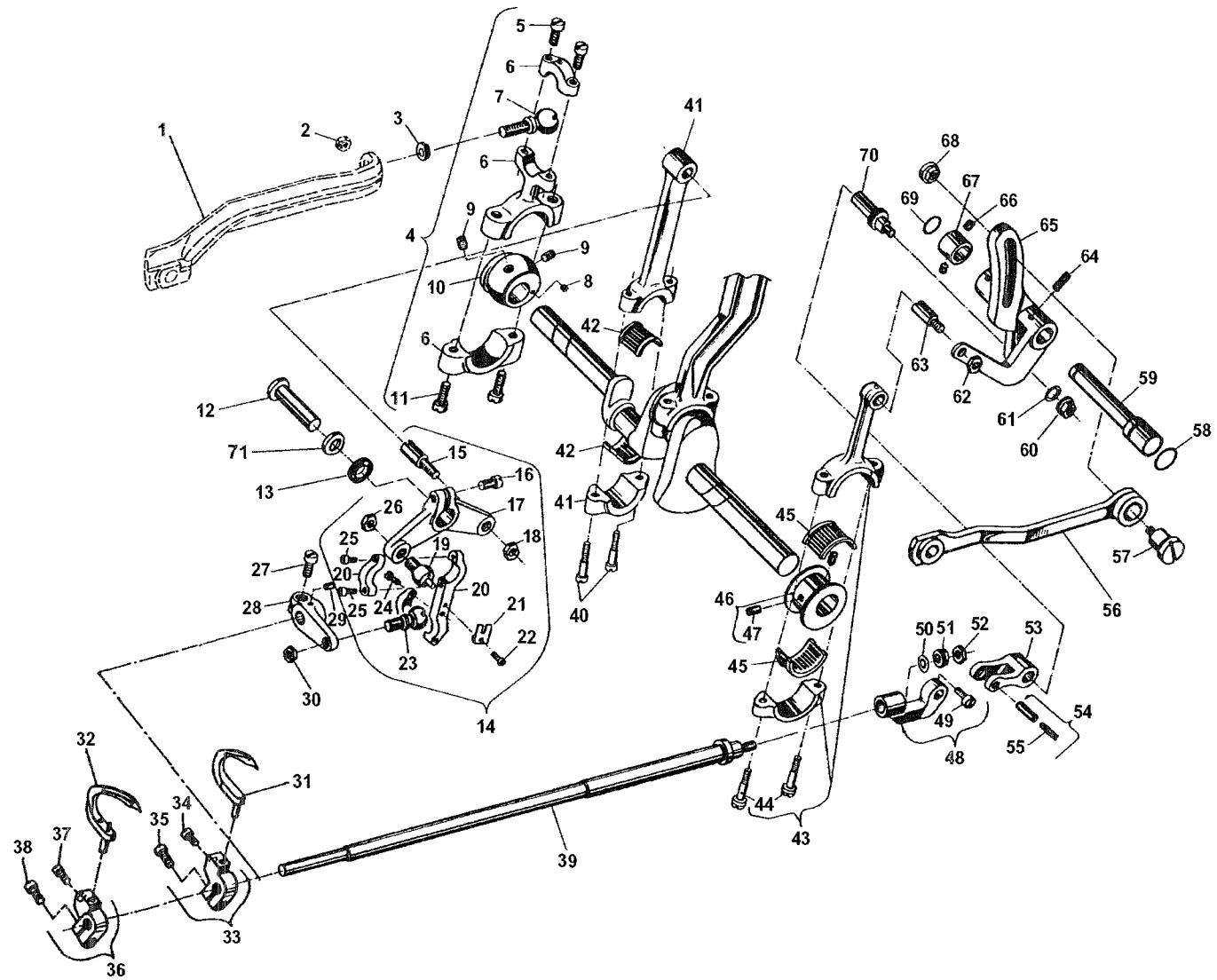
Ref.	No.	Part No.	Description	Amt.	Req.
1	719		Screw	2	
2	34354		Needle Bar Bushing, Upper	1	
3	31194A		Oil Tube Clamp	1	
4	87U		Screw	1	
5	43443Q		Nut	1	
6	666-214		Felt Lint Filter	1	
7	31194B		Felt	1	
8	80262I		Bushing For Presser Guide Bar	1	
9	31154		Needle Bar Bushing, Lower	1	
10	31155		Bushing 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	





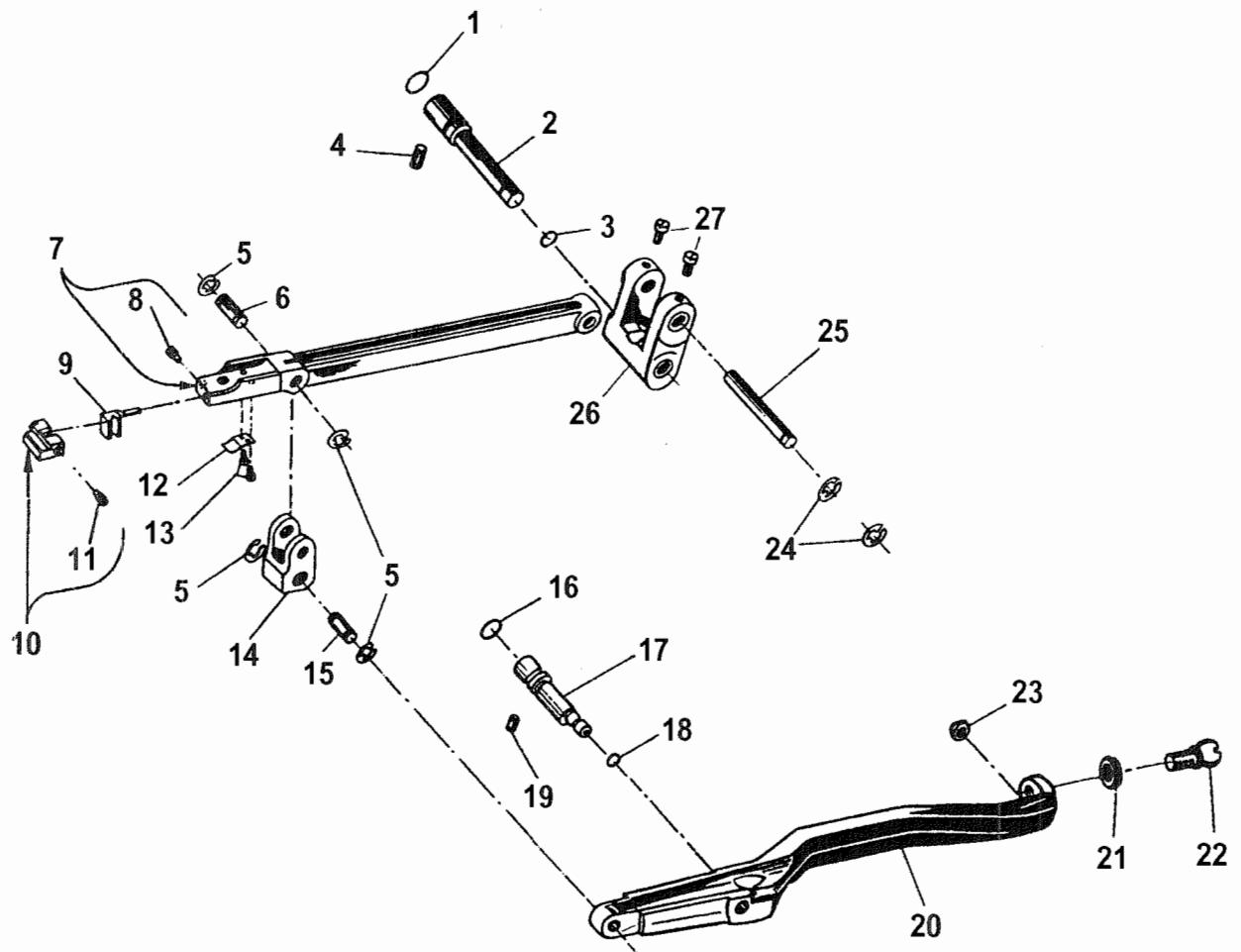
Ref.	No.	Part No.	Description	Amt.	Req.
1	31184A		Gasket	1	
2	95375		Plug Screw	1	
-	-		Adaptor for 95375	1	
3	31284B		Gasket	1	
4	31282G		Cover	1	
5	22839C		Screw	4	
6	22652E14		Screw	4	
7	35876U		Washer	4	
8	33784B		Gasket	1	
9	31284F		Baffle Plate	1	
10	90		Screw	2	
11	31284C		Gasket	1	
12	22541B		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	





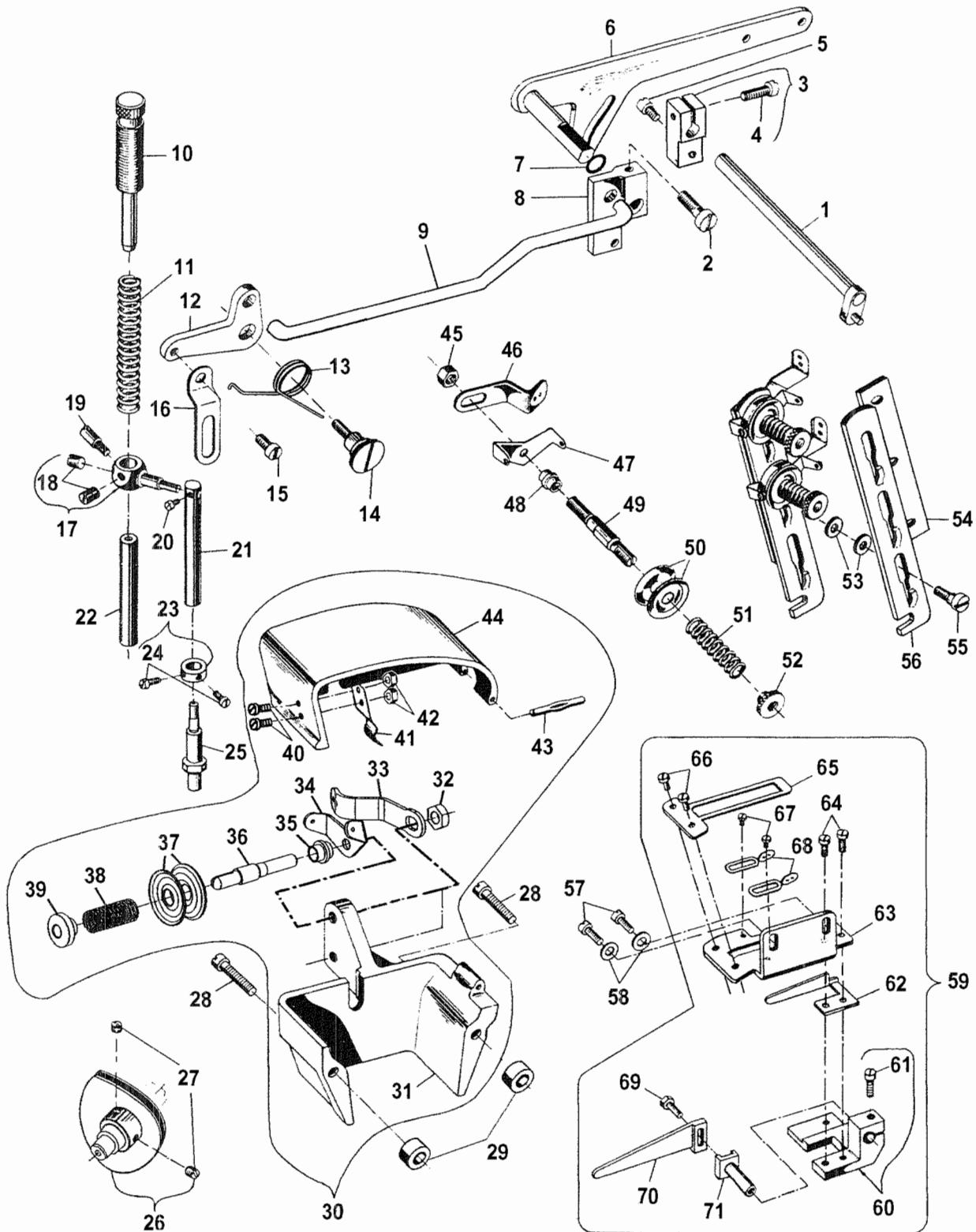
Ref. No.	Part No.	Description	Amt. Req.
39	31244A	Looper Rocker Shaft	1
40	75A	Screw	2
41	31116F	Looper Drive Lever Connection	1
42	999-38	Needle Bearing	1
43	31116C	Feed Drive And Looper Avoid Connection Assembly	1
44	22559C	Screw	2
45	999-40	Needle Bearing	1
46	31106	Eccentric	1
47	22894C	Screw	2
48	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	ShoulderScrew	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





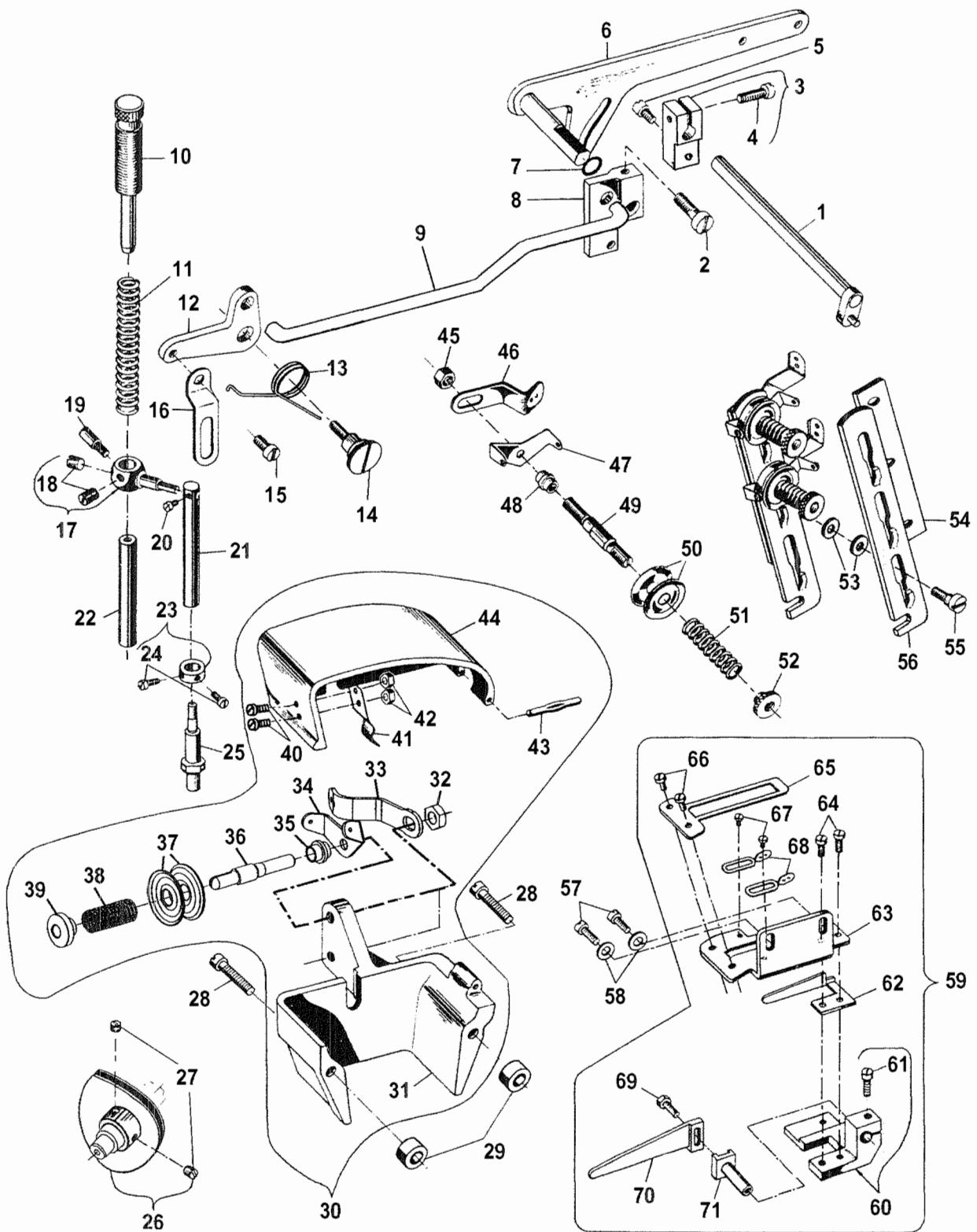
Ref. No.	Part No.	Description	Amt. Req.
1	990-30	"O"-Ring	1
2	31135C	Feed Rocker Shaft	1
3	660-221	"O"-Ring	1
4	22894C	Screw for 31135C	1
5	660-199	Retaining Ring	4
6	31136A	Link Pin	2
7	31234	FeedBar	1
8	99305	Screw	1
9	31225F	HolderForNeedleGuard	1
10	31225A	Needle Guard	1
11	99306	Screw	1
12	31134L	Spring	1
13	G41228A	Screw	2
14	31136E	FeedBarGuide	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





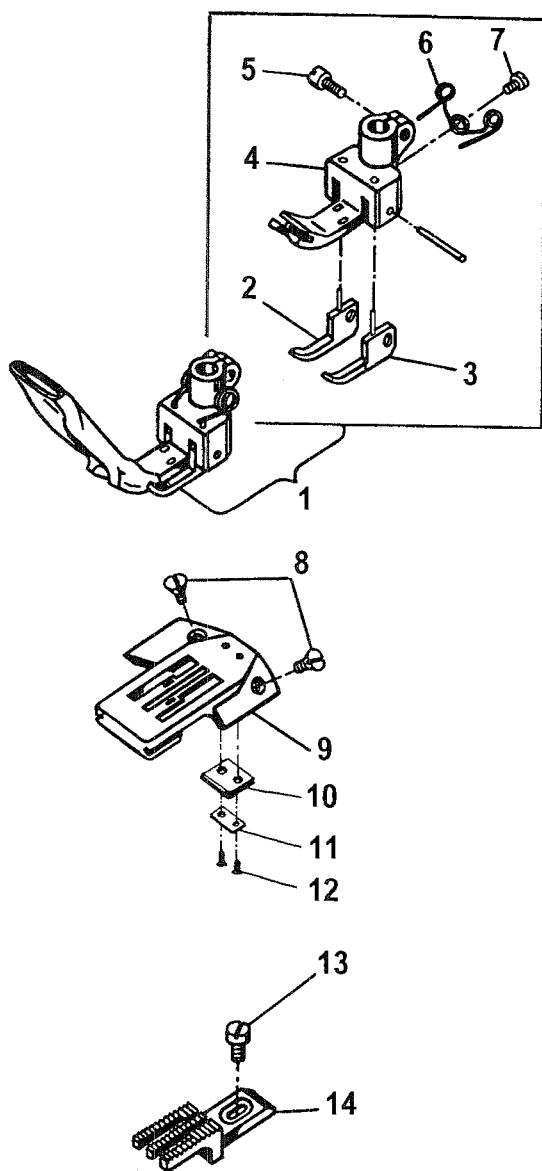
Ref. No.	Part No.	Description	Amt. Req.
1	21657W	Tension Release Lever Shaft	1
2	318	Screw	1
3	31292	TensionRelease and Foot Lifter Lever Connection	1
4	SS7121410TP	Screw	1
5	22875N	Screw	1
6	33783H	Presser Foot Lifter Lever	1
7	660-207	Oil Seal Ring	1
8	33783N	Presser Foot Lifter Lever, Internal	1
9	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	Amnt.	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	

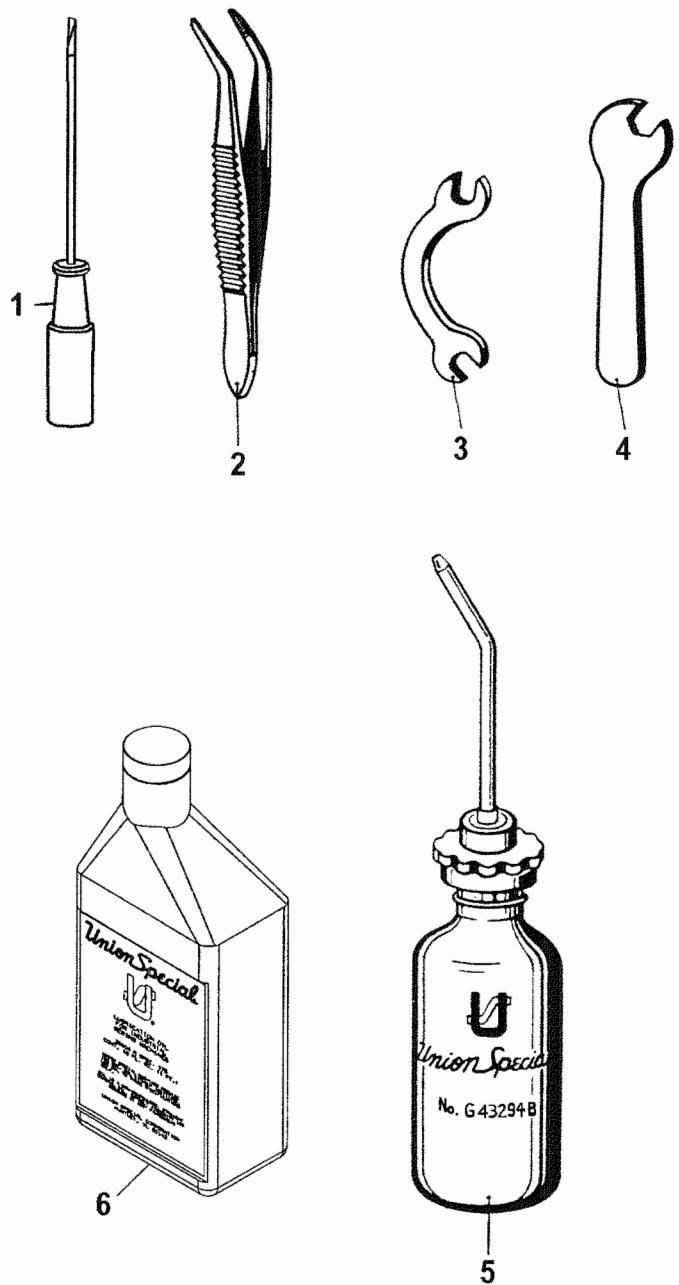




Ref. No.	Part No.	Description	Amt. Req.
*1	31220R16	Presser Foot Assembly For Style 31200Q64	1
2	31130S	Yielding Section, Left	1
3	31130T	Yielding Section, Right	1
4	31230R16	Presser Foot Bottom	1
5	91	Screw	1
6	11940	Spring	1
7	605	Screw	1
8	22524	Screw	2
9	31224Q16	Throat Plate	1
10	31134M	Stripper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

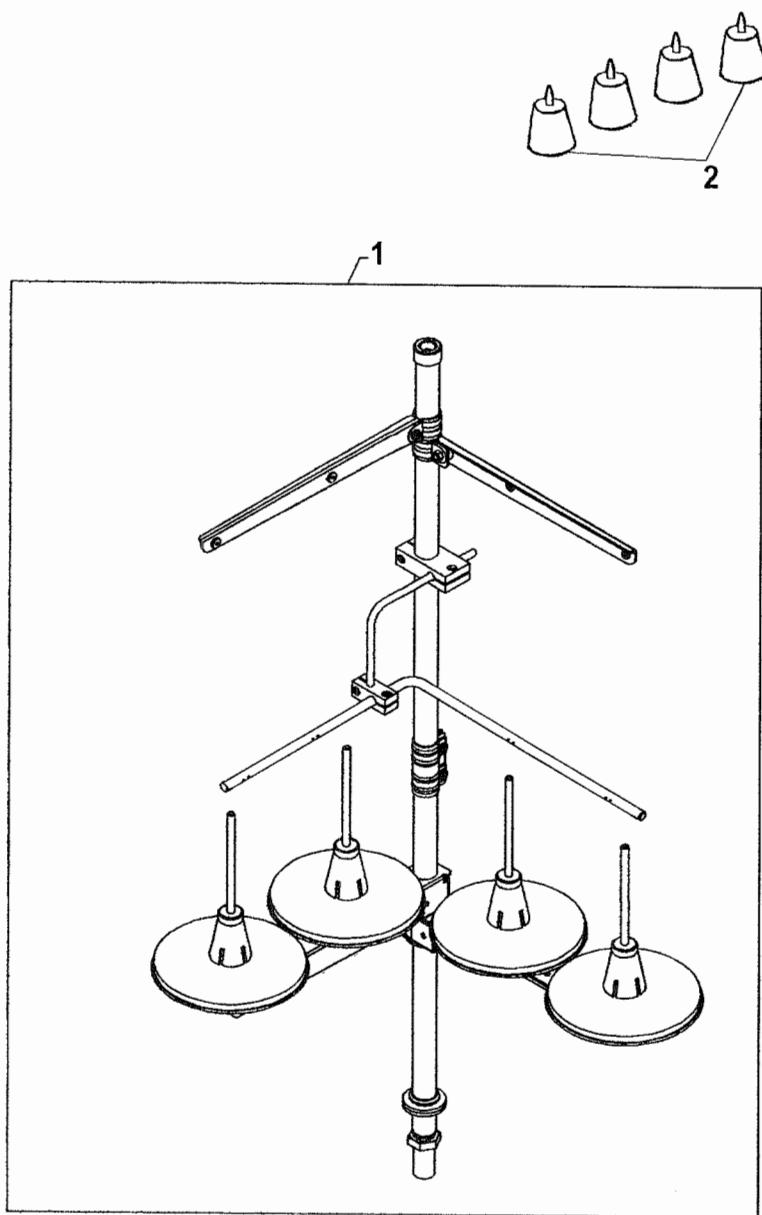
* 31220R16 Presser Foot Assembly not supplied
with machine style 31200AQ64Z6





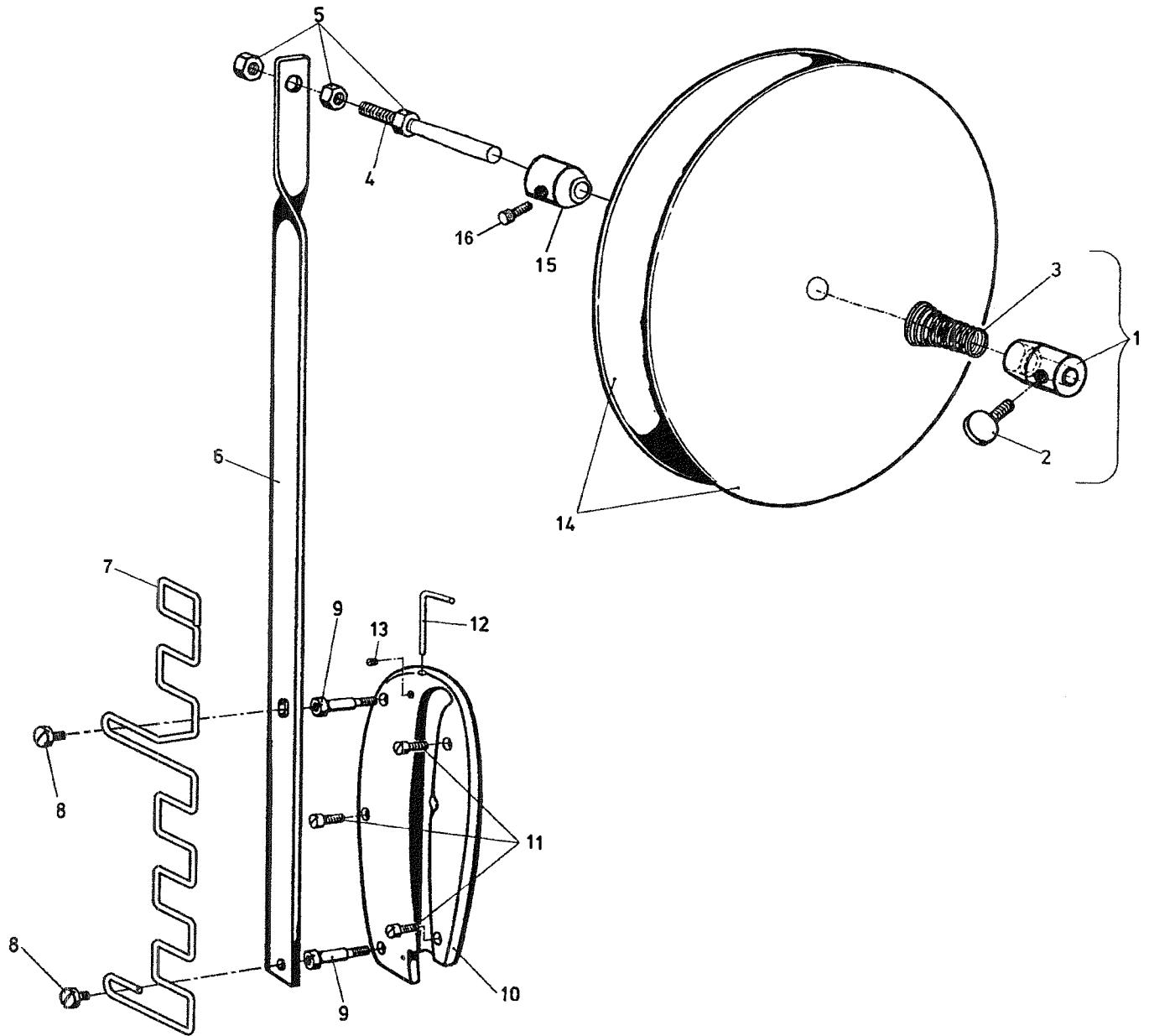
Ref. No.	Part No.	Description	Amt. Req.
1	21201	Screw Driver	1
2	12288403	Thread Tweezers	1
3	TT17	Wrench 9/32"	1
4	21388	Wrench 3/8"	1
5	G43294B	Oil Can	1
6	28604R	Container of Oil	1





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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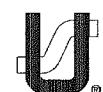


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