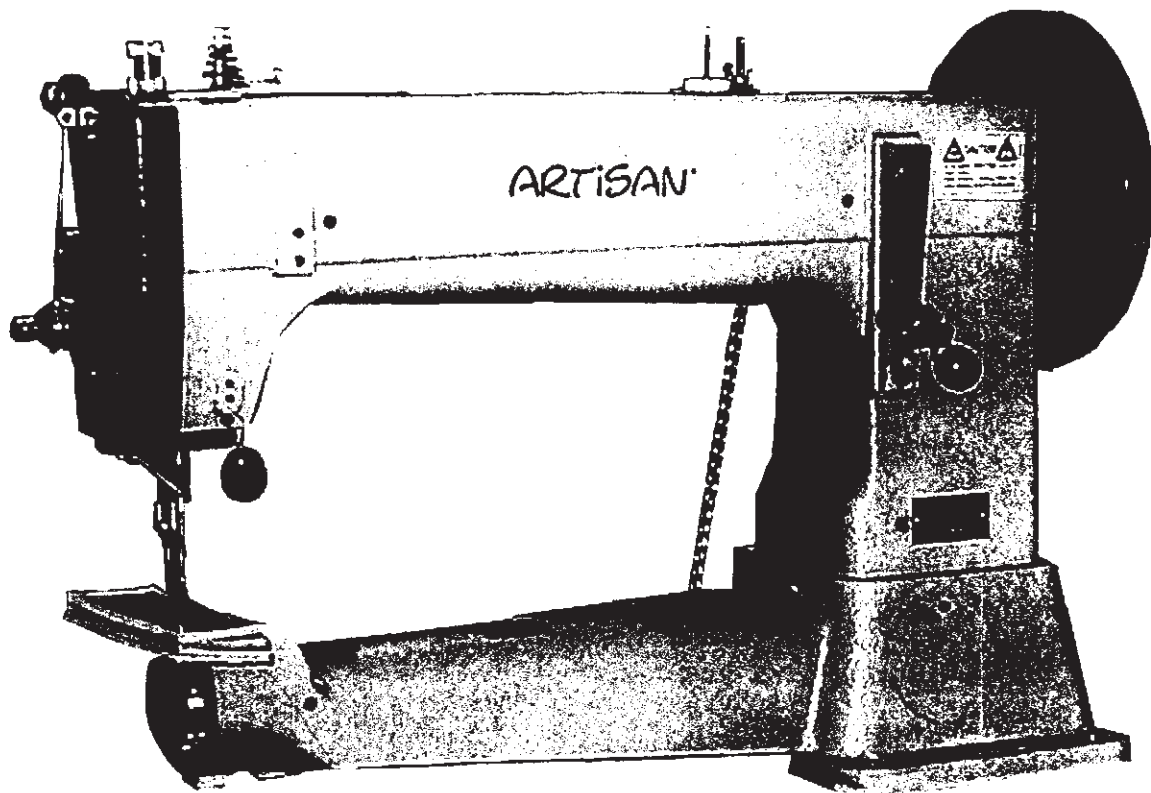


ARTISAN®



TORO 4000

INSTRUCTION
and
SPARE PARTS
MANUAL

ARTISAN®

TORO-4000

Extra Heavy Duty Cylinder Bed Lockstitch Compound
Needle Feed Walking Foot Stitching Machine.

CAUTION.....

READ BEFORE OPERATING
THIS MACHINE...

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Lubricate the TORO-4000 before operating! 2. Confirm you are plugging the electric motor into the correct rated voltage. 3. Confirm the machine and motor are turning over in a counter-clockwise rotation. 4. After operating the machine for more than 45 days, the top speed can be increased from a maximum speed of 600 spm to 800 spm. 5. If your Artisan machine is set up with a speed reducer/speed controller for leather stitching, your max. operating speed should be from about 150 spm to 300 spm. | <ol style="list-style-type: none"> 6. Keep your hands and all clothing away from the machine when pushing the button to turn the electric motor on. 7. Wait 5 seconds for the motor to wind up to full speed before beginning to sew. 8. Always switch off the motor when finished sewing. Never leave the motor running while away from the machine. 9. Always switch off the motor and wait for it to stop before changing needles or adjusting the sewing machine. 10. The machine is a fine tool, not a toy. Do not let children operate the sewing machine. |
|--|---|

SPECIFICATIONS

USAGE	Saddle Stitching, Tack, Shoes, Boots, Saddle Bags, Harness.	Needle	Schmetz brand 794 D or 794 S
SEWING SPEEDS	Normal up to 600 spm. Max. 800 spm.	Needle Diameter	# 160 to 250 # 23 to 27
STITCH LENGTH	0 to 11 mm	Thread	Z-69 to 554 # 00 to # 8 cord
PRESSER FOOT LIFT	By Hand Lifter 12 mm By Foot Lifter 22 mm	Stitch Adjusting	Sliding Lever with Reverse
THREAD TAKE-UP SYSTEM	Cam type thread take-up lever	Lubrication	Manual Lubrication with Sewing Machine Oil
NEEDLE BAR STROKE	56 mm	Motor	3/4 HP, 1720 RPM 4 Pole, min.

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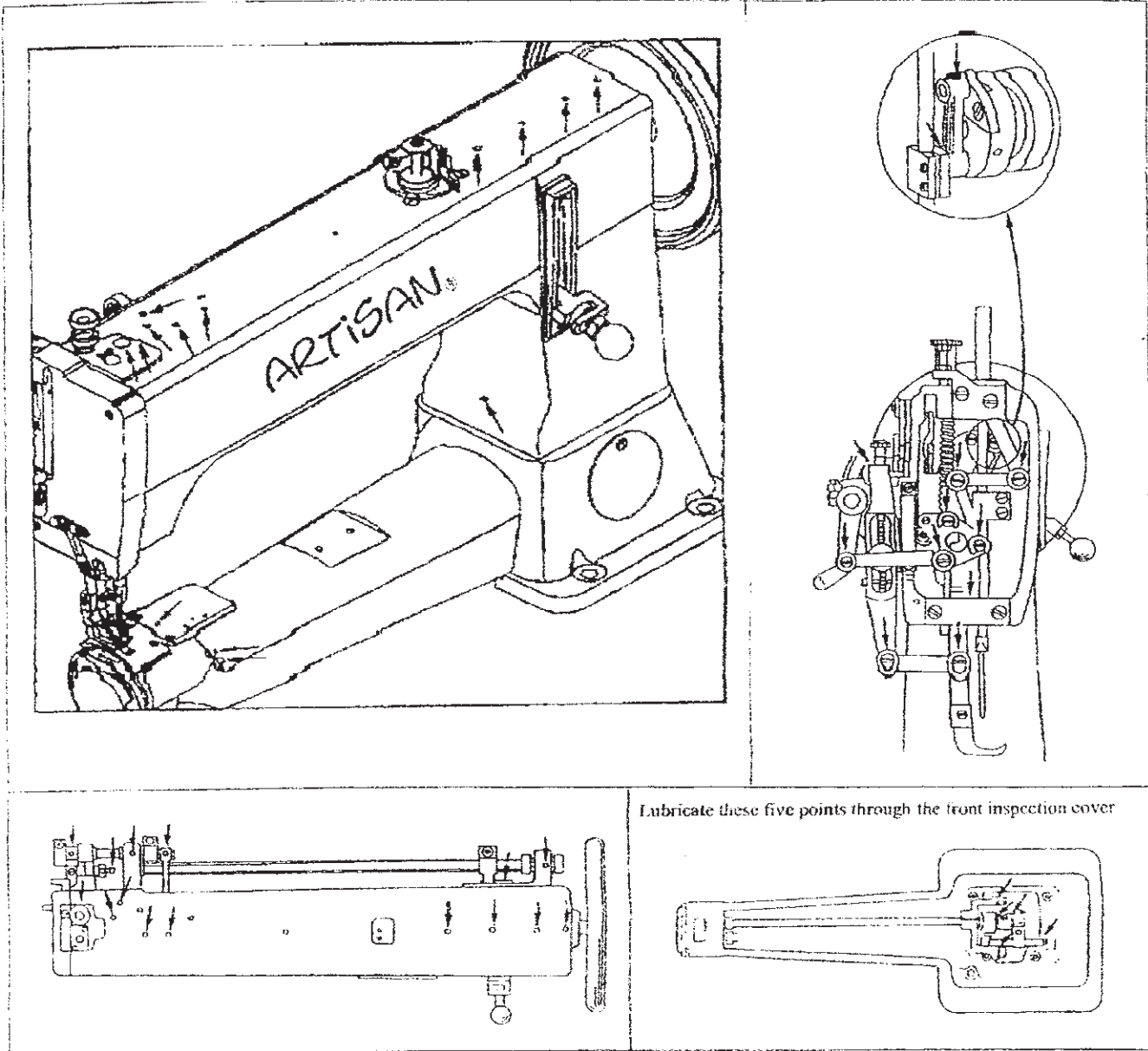
II. Spare Parts List

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1. CLEANING

Normal stitching operation causes dust, lint, and dirt to build up around the moving parts of your TORO-4000. Periodically clean around all the moving parts of the machine. Pay special attention to keeping the shuttle, shuttle race, and throat plate area clean. Simply wipe off the build-up with a clean cloth or blow off the dirt with compressed air.

2. LUBRICATION



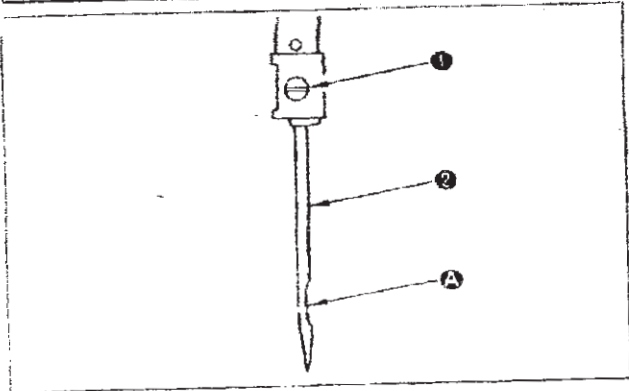
Your new ARTISAN TORO-4000 was thoroughly lubricated at our factory. However please re-lubricate the machine before putting the new slitcher into service.

The TORO-4000 requires lubrication at the above points on a regular basis. Artisan recommends that the machine is oiled about every 7 to 12 hours of actual usage.

We suggest the best time to oil the machine is at the end of your work day. When you begin to use the machine the next time, simply wipe off the excess oil and the dirt or lint at the same time.

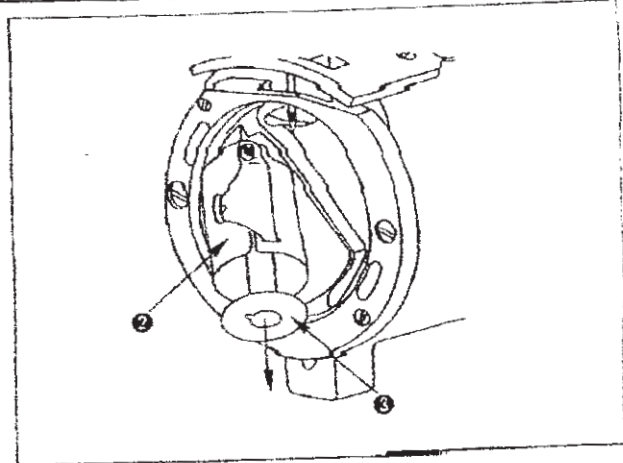
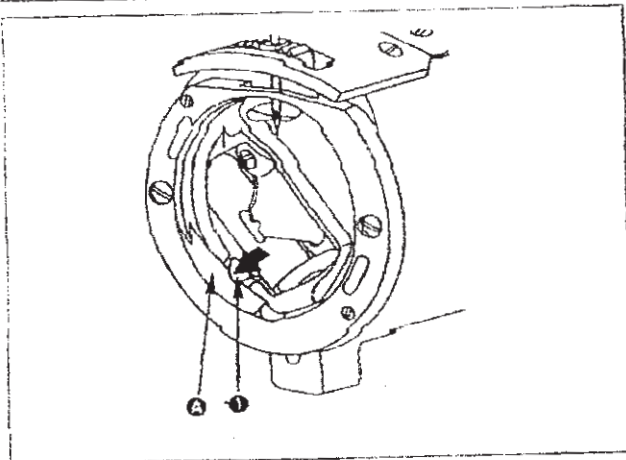
If sewing for prolonged periods of time oil the machine about every 5 to 7 hours.

3.7. HOW TO INSTALL THE NEEDLE



- * Be sure to power-off the motor.
The standard needle is a Schmetz 774, however any organ needle can be used.
1. Turn the handwheel by hand and raise the needle bar to its top position.
 2. Loosen screw ① and insert the needle ② into the hole until it will go no further.
(Insert the needle with its recess ③ facing directly to the right-hand side.)
 3. Securely tighten the screw in the needle.

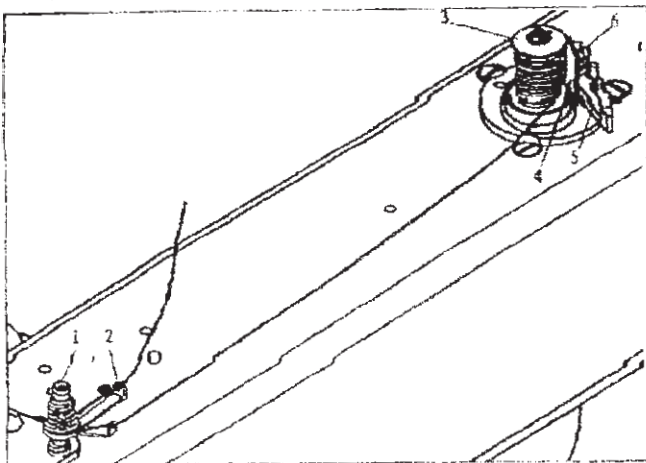
4.3. HOW TO TAKE OUT THE BOBBIN



1. Turn the handwheel by hand (until the needle bar comes down to the lowest point of its stroke) so that case retaining spring ① in the shuttle body comes to recess ② in the cover of the shuttle race body.

2. When the case retaining spring is pressed, the bobbin case ② will be opened and the bobbin ③ will pop out of the case.

5.3. HOW TO WIND A BOBBIN THREAD



- (1) Push the bobbin ② on the bobbin winder shaft as far as it will go.
- (2) Bring the thread forward toward the bobbin and wind from below in clockwise direction several times around the bobbin.
- (3) Push the lever ⑤ toward other side so that the driving wheel and driven wheel will engage and then start the machine.
- (4) The driven wheel will automatically be free from the driving wheel and stop after the bobbin is filled with thread.

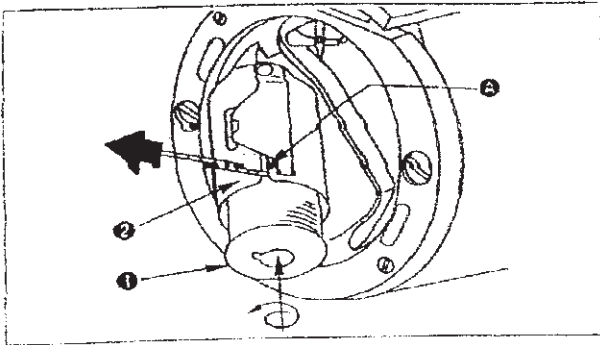
* Adjusting the amount of thread wound round the bobbin

- (1) In case of uneven winding

If the thread does not wind evenly on the bobbin, loosen the nut ① and move the bracket ② to the right or to the left as may be required, then tighten the nut.

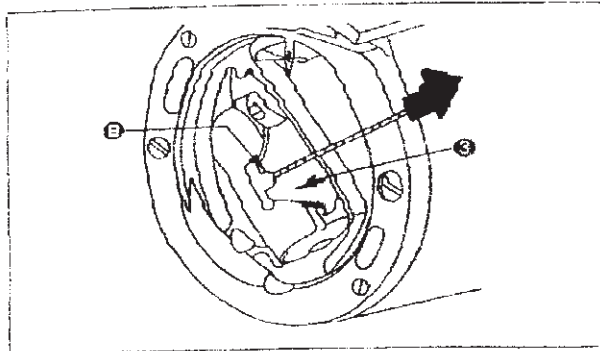
- (2) Winding amount of thread

6. HOW TO INSTALL THE BOBBIN



1. After pulling out thread approximately 10 cm from bobbin ①, put the bobbin into bobbin case ②.
2. Pass the thread through the threading groove ④ in the bobbin case.

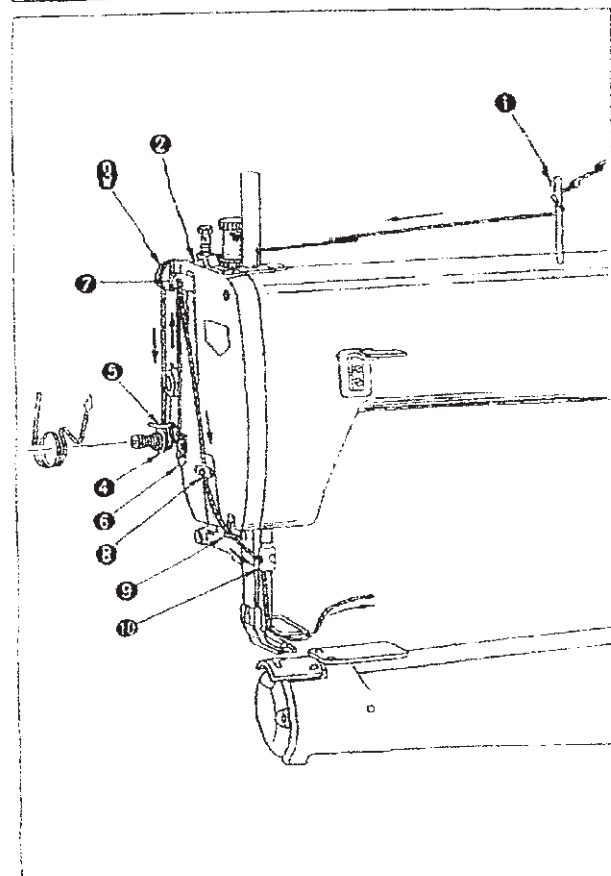
(Caution) Fit the bobbin in the bobbin case so that the bobbin turns in the direction of the arrow when the bobbin thread is pulled.



3. Pass the thread through thread slit ③ and pull it up. Then the thread can be passed under the thread tension spring ⑤ and pulled out.

4. Push the bobbin case into the original position of holding the bobbin.

7. HOW TO THREAD THE MACHINE HEAD

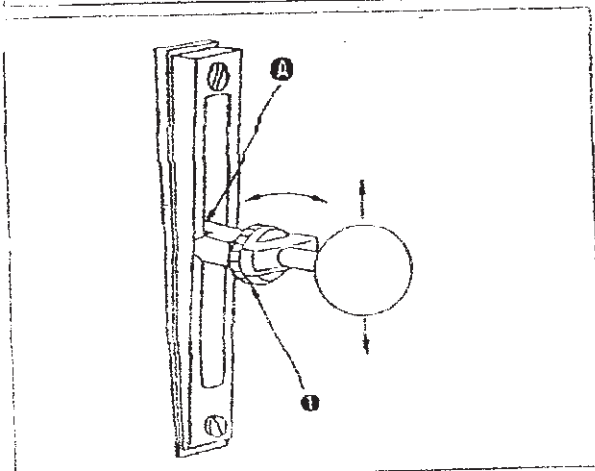


1. Turn the handwheel by hand to move the thread take-up lever to its top position.
2. Thread in the order illustrated and thread the needle from the left to the right.

3. Pull out the thread, which has been threaded in the needle, approximately 10 cm.

(Caution) Thread the right-hand side of section ⑧ when viewed from the face plate.

8. ADJUSTING THE STITCH LENGTH AND REVERSE STITCHING



*** Adjusting the stitch length**
To adjust the stitch length, use the feed regulator nut (1). Align the upper end (A) of the feed lever to the scale indicating the desired amount.

To increase the pitch, turn the nut counterclockwise.

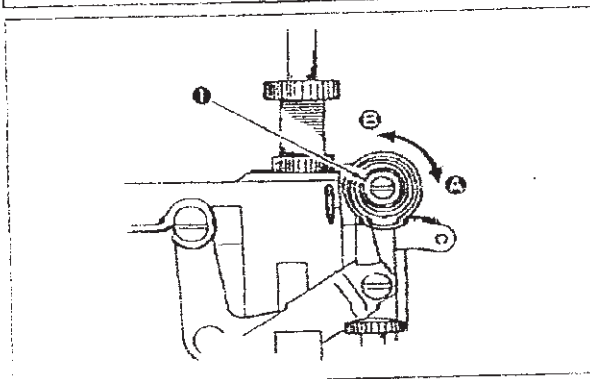
To decrease the pitch, turn the nut clockwise.

(To decrease the stitch length, turn the nut while slightly pushing the feed lever down.)

*** Reverse stitching**

To carry out reverse stitching, push the feed lever up by hand as far as it will go. Reverse stitching can be done only when the feed lever is pushed up.

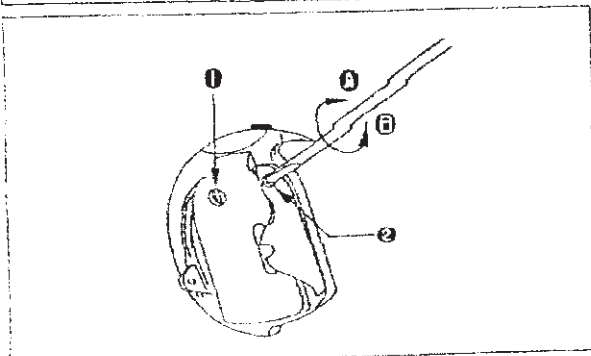
9. THREAD TENSION



*** Adjusting the needle thread tension**

Adjust the needle thread tension by thread tension nut (1). To increase the needle thread tension, turn the nut to the clockwise (A).

To decrease the needle thread tension, turn the nut to the counterclockwise (B).



*** Adjusting the bobbin thread tension**

To adjust the bobbin thread tension

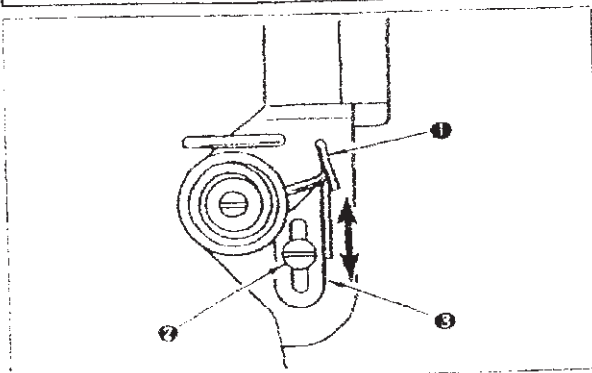
1. Loosen screw (1).

2. Adjust the bobbin thread tension by turning screw (2). To increase the bobbin thread tension, turn the screw to the clockwise (A).

To decrease the bobbin thread tension, turn the screw to the counterclockwise (B).

3. After the bobbin thread tension has been adjusted, tighten screw (1) firmly.

10. THE THREAD TAKE-UP SPRING



The standard stroke of thread take-up spring (1) is 8 to 10 mm.

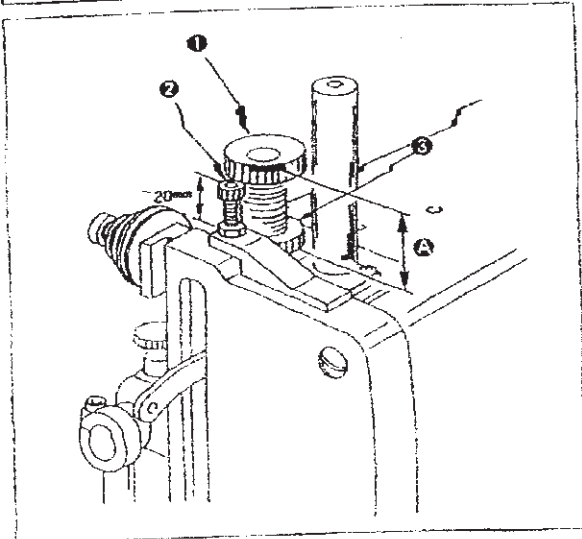
To adjust the operating range:

1. Loosen screw (2).

2. Adjust the operating range by moving the thread take-up spring adjusting plate (3) up and down.

3. After adjustment has been completed, tighten screw (2) firmly.

11. ADJUSTING THE PRESSER FOOT PRESSURE



Standard height (4) of presser spring regulator (1) is 20 mm.

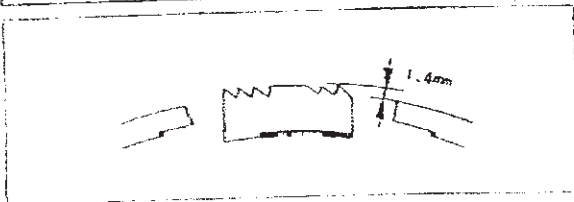
The intermediate presser foot pressure and walking foot pressure can be adjusted according to the type of material to be used.

To adjust the work pressing pressure, follow the procedure stated below.

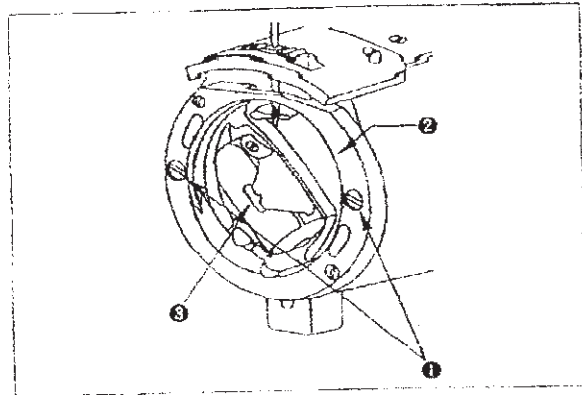
1. Loosen the nut of presser spring regulator (1).
2. Turn the regulator (2) clockwise to increase the pressure, or counterclockwise to decrease it.
3. After the adjustment, tighten the nut (1) so that regulator is securely fixed at the proper position.

* Operate the machine with the work pressing pressure minimized.

12. ADJUSTING THE HEIGHT OF THE FEED DOG

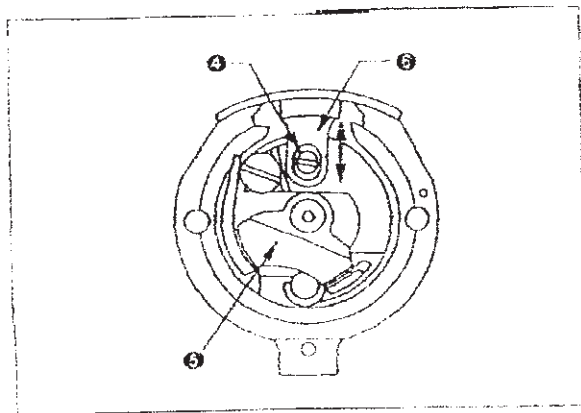


NOT APPLICABLE TO LEATHER STITCHING MACHINERY



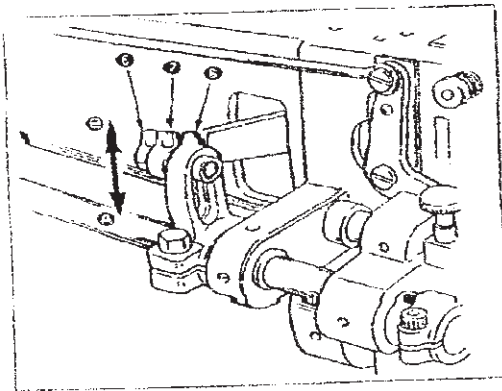
To adjust the height of the feed dog according to the sewing condition given,

1. Remove two screws (1) in the shuttle race, and remove shuttle race (2). Then remove shuttle (3).



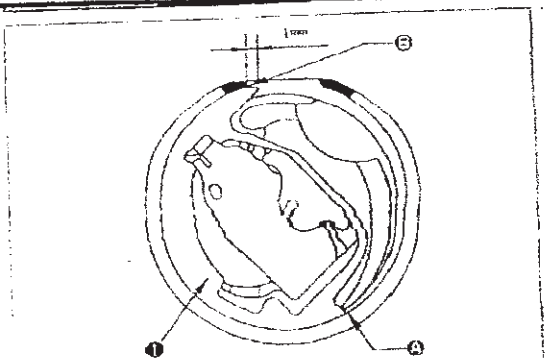
2. Turn the handwheel to move shuttle driver (5) until screw (6) in the feed dog appears.
3. Loosen screw (8) in the feed dog, and adjust the height of the feed dog by moving feed dog (7) up or down.
4. After the adjustment, firmly tighten screw (8) in the feed dog.

13. WALKING FOOT HEIGHT ADJUSTMENT

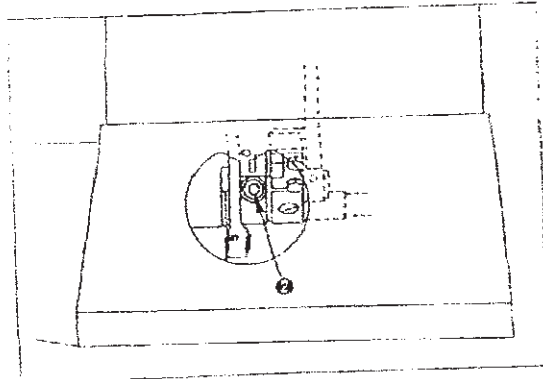


- * **Operating height of the walking foot and the presser foot**
 The standard operating height has been minimized. The operating height may be changed for better finish according to the sewing product.
1. Loosen hinge screw ① in the walking foot rod.
 2. Secure walking foot rod ② to lower area ③ of the walking foot arm (rear) ④ to maximize the operating height (8 mm), or to upper area ⑤ to minimize the operating height (4 mm).
 3. After the adjustment, firmly tighten hinge screw ① in the walking foot rod.

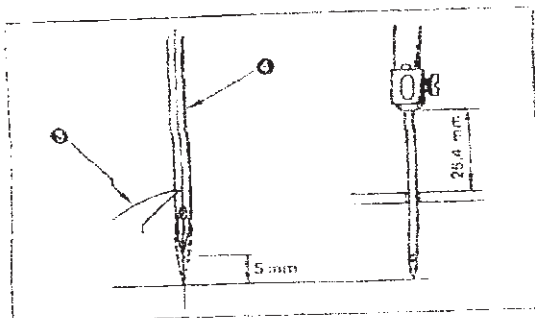
14. ADJUSTING THE NEEDLE-TO-SHUTTLE RELATIONSHIP



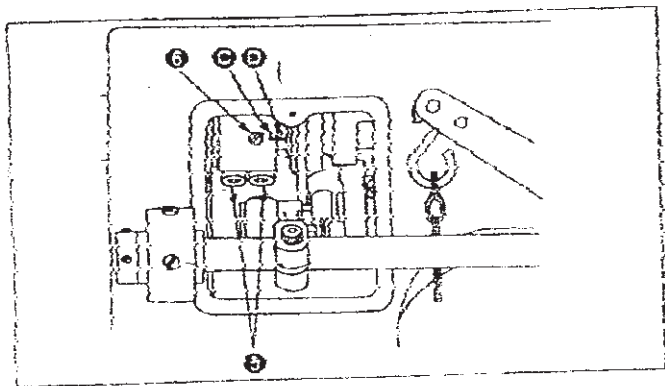
- * **The position of the shuttle when it is recessed most.**
 When shuttle ① turns counterclockwise until it will go no further and the shuttle and the shuttle race come in contact with each other at point ③, a distance of 1 mm should be provided between the blade point of the shuttle and end face ④ of the shuttle race.



- To adjust the position of the shuttle being pulled:
1. Turn the handwheel and stop turning when the shuttle turns counterclockwise until it will go no further.
 2. Loosen screw ②.
 3. Align the blade point of the shuttle by turning the shuttle by hand.
 4. After adjustment has been completed, tighten screw ② firmly.

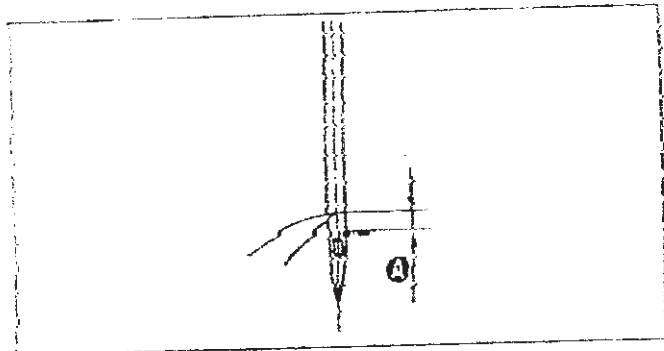


- * **Positioning the needle and shuttle**
 Turn the handwheel to make the needle bar ascend 5 mm from its lowest position. At this time, blade point ③ of the shuttle should be aligned with the center of needle ④.
 (Reference value of the lowest position of the needle bar stroke)
 The distance from the upper surface of the throat plate to the lower end of the needle bar should be 26.4 mm with the feed pitch set to 0 mm.



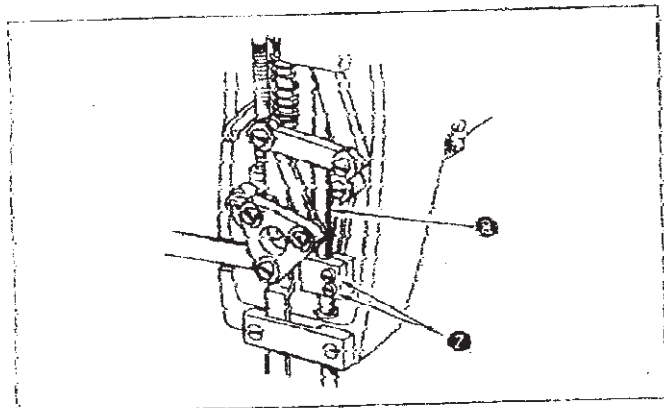
To adjust the position of the needle and shuttle

1. Loosen screw (B) ⑤ .
2. Loosen screw (A) ⑥ , and adjust so that marker dot ④ engraved on the eccentric cam of the vertical rod is aligned with marker line ③ engraved on the main shaft. Then, tighten screw ⑤ .
3. Turn the handwheel toward you, and check the lifting amount of the needle bar.
4. After the adjustment, securely tighten screws ⑤ and ⑥ .



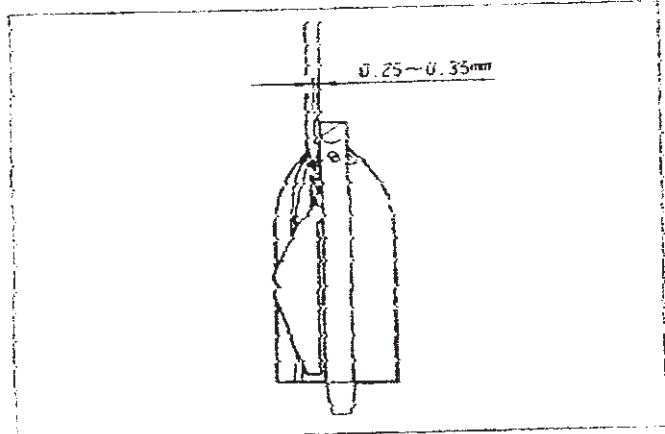
Set the needle bar on the TORO-4000 as - A - when the point of the shuttle hook is 2 mm above the eye of the needle on the rise of the needle.

5



To adjust the height of the needle bar

1. Turn the handwheel and stop typing it when the blade point of the shuttle is aligned with the center of needle.
2. Loosen screws ⑦ .
3. Adjust the height by moving needle bar ⑥ up and down.
4. After adjustment has been completed, firmly tighten screws ⑦ .

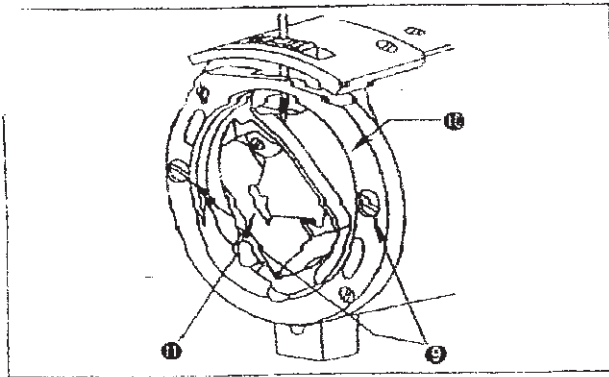


*** The needle-to-shuttle clearance**

The clearance between the recess in the needle and the blade point of the shuttle has already been adjusted to 0.25 ~ 0.35 mm.

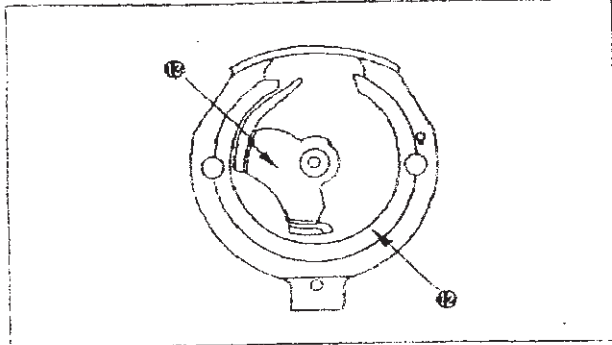
Point of the shuttle has already been adjusted to 0.25 mm. Adjust the clearance between the needle and the shuttle by replacing the shuttle race back.

(The shuttle race back comes in six different thickness in addition to the standard thickness.)

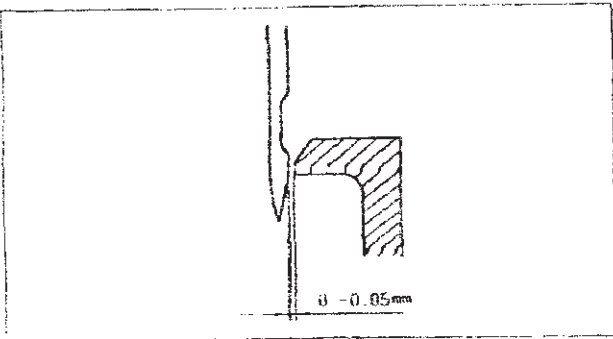


To replace the shuttle race back.

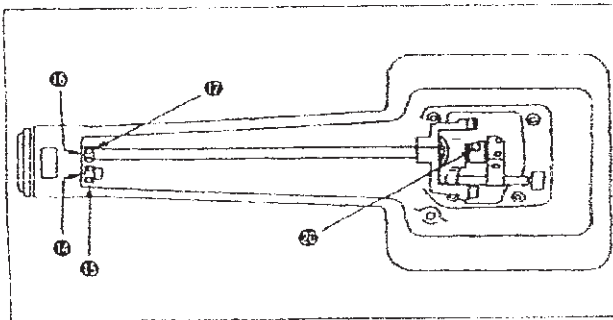
1. Remove two screws (11) in the shuttle race, remove shuttle race (12), and remove shuttle (13).



2. Turn the handwheel until shuttle driver (14) is brought to the position where shuttle race back (12) comes off. Then replace the shuttle race back.

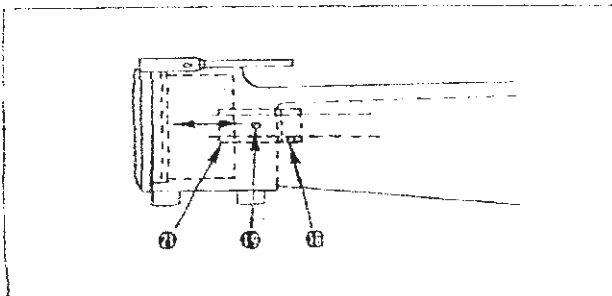


*** Clearance between the needle and the shuttle driver**
The clearance between the needle and the needle guide of the shuttle driver has already been adjusted to the range of 0 through 0.05 mm.

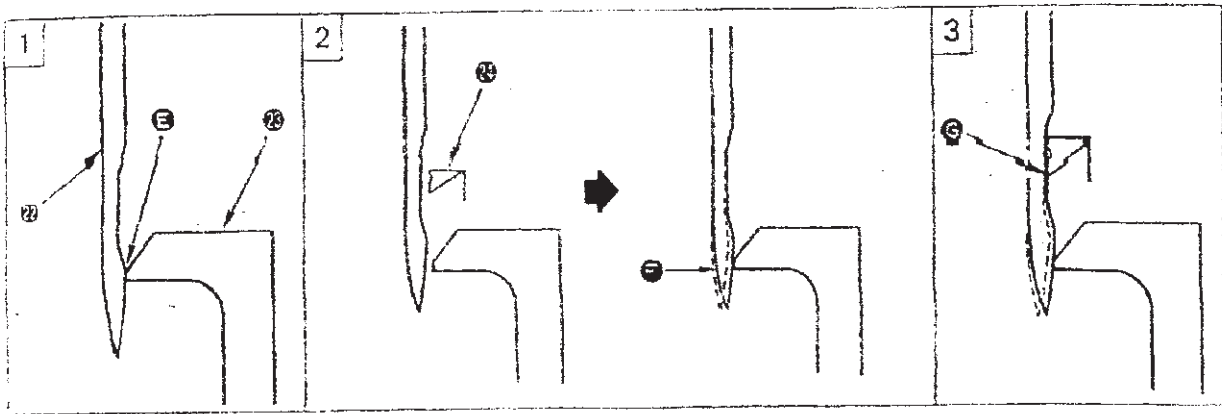


To adjust the clearance between the needle and the shuttle driver:

1. Loosen two screws (16), and remove thrust collar (15) of the feed rock driving shaft on the feed bracket.
2. Loosen two screws (17), and move thrust collar (15) of the feed rock shaft.
3. Loosen two screws (18) in the shuttle driving shaft thrust collar, screw (19) in the shuttle driving shaft front bushing and small pendulum clamping screw (20).



4. Adjust the clearance by moving shuttle driving shaft front bushing (21) to the left and right.
5. After the adjustment has been completed, secure the shuttle driving shaft thrust collar and the small pendulum, making sure there is no axial play of the shuttle driving shaft.
6. Finally, secure the respective thrust collars, making sure there is no play in the feed driving shaft and the feed rock shaft.

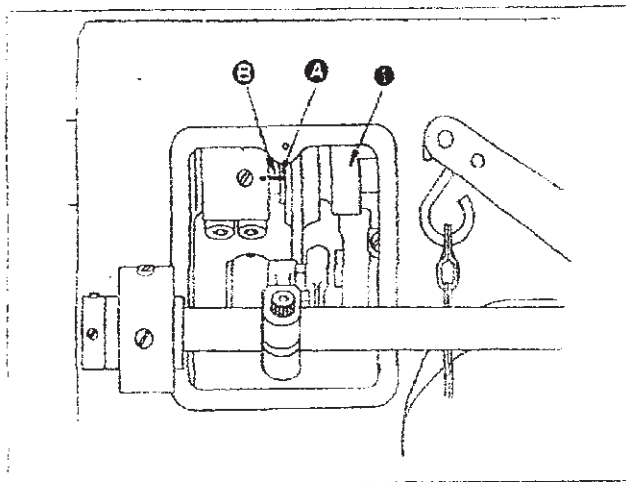


[The standard for adjusting the clearance between the needle and the blade point of the shuttle]

Use a standard Schmetz 794-Nm230 needle.

1. Adjust the clearance (E) between the convex section of needle (2) and shuttle driver (3) to 0.
 2. Align the needle center with the blade point of shuttle (2) and press the (3) section of the needle against the shuttle driver.
 3. Adjust the clearance (E) to a minimum, with the needle pressed against the shuttle driver, making sure that the needle does not contact the blade point of the shuttle.
- * By this adjustment the needle-to-shuttle blade point clearance will be 0.25 ~ 0.35 mm.


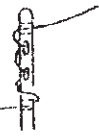

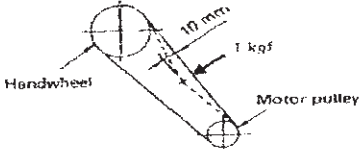
19. THE FEED DOG-TO-NEEDLE RELATIONSHIP



The standard timing between the feed dog and the needle is obtained when the feeding motion starts at the same time when the needle starts descending from its highest dead point.

- * To adjust the timing between the feed dog and the needle, follow the procedure stated below.
1. Loosen the two screws in feed eccentric cam (1).
 2. Align marker line (A) engraved on the side plate of the feed eccentric with marker line (B) engraved on the main shaft to obtain the standard timing.
 3. After the adjustment, securely tighten the two screws in the feed eccentric cam.

16. PROBLEMS WITH SEWING AND CORRECTIVE MEASURES

Problem	Cause	Corrective measures
1. The thread breaks or tends to fray and then break.	<ol style="list-style-type: none"> 1. A burr, cut, ruffiness, or other imperfection was created on the needle plate, shuttle, shuttle race or presser foot by a broken or damaged needle. 2. Needle thread tension excessively tight. 3. Poor quality or incorrect thread size. 4. Machine is out of synchronization. 5. Excessive needle heat build-up. 	<ol style="list-style-type: none"> 1. Clean off and remove the flaw with a fine India stone or other abrasive. 2. Loosen the upper thread tension. 3. Always use a good quality pre-lubricated left twist sewing thread like "Rice" brand threads. 4. Check and if necessary re-time the machine. 5. Add an additional silicone thread lubrication system to your machine. 6. Replace your needle with a new "Schmetz" brand quality sewing needle.
2. Skipped Stitches	<ol style="list-style-type: none"> 1. The needle-to-shuttle blade point clearance is excessive. 2. The timing of the needle and the shuttle is too early or too slow. 3. The presser bar pressure is insufficient. 4. The distance from the upper end of the needle eyelet to the blade point of the shuttle is not proper. 5. The needle is improperly selected. 6. The amount of movement of the thread take-up spring is excessive. 7. Overheated needle or shuttle. Thread is not pulled smoothly. 8. Reverse stitching is made at low speed on light weight material using nylon thread. 	<ul style="list-style-type: none"> ○ Refer to "18. Adjusting the needle-to-shuttle relationship". ○ Refer to "18. Adjusting the needle-to-shuttle relationship". ○ Tighten the presser adjuster screw. ○ Refer to "18. Adjusting the needle-to-shuttle relationship". ○ Replace the needle with a one-count lower needle. ○ Decrease the amount of movement of the thread take-up spring. ○ Use silicone oil. ○ Wind the needle thread around the needle. 
3. Improper thread tension, irregular stitch, excessive bobbin thread tension	<ol style="list-style-type: none"> 1. Worn thread out guides. 2. The hobbin jatts. 3. Weak bobbin thread tension. 4. Bobbin thread is wound to tightly. 	<ul style="list-style-type: none"> ○ Smooth the surface with a fine paper file or using a buff. ○ Replace the bobbin or the shuttle. ○ Adjust the bobbin thread tension. ○ Decrease the tension of the bobbin thread winder. ○ Thread the tension guide bar as illustrated right.  ○ Use silicone oil.
4. Poor gloss of the needle thread	<ul style="list-style-type: none"> ○ Excessive height difference at stepped section. 	<ul style="list-style-type: none"> ○ Use silicone oil.
5. Inconsistently finished seam (stitches are not made straight but made such as "Z")	<ul style="list-style-type: none"> ○ Needle is too thick. 	<ul style="list-style-type: none"> ○ Replace the needle with a thinner one. Use cutting point needle 
6. Bobbin thread tension cannot be increased.	<ul style="list-style-type: none"> ○ The bobbin thread tension spring of the shuttle has become dusty or dirty. 	<ul style="list-style-type: none"> ○ Clean by removing the bobbin thread tension spring.
7. The belt slips (Motor stoppage occurs, if an electronic stop motor is used.)	<ol style="list-style-type: none"> ① The V belt is degraded. ② The V belt tension is not enough. 	<ul style="list-style-type: none"> ○ When degradation is found out to the V belt, such as wear, cracking, etc., replace with a new one. ○ Adjust the slack amount in the V belt to 10 mm/1 kgf. 

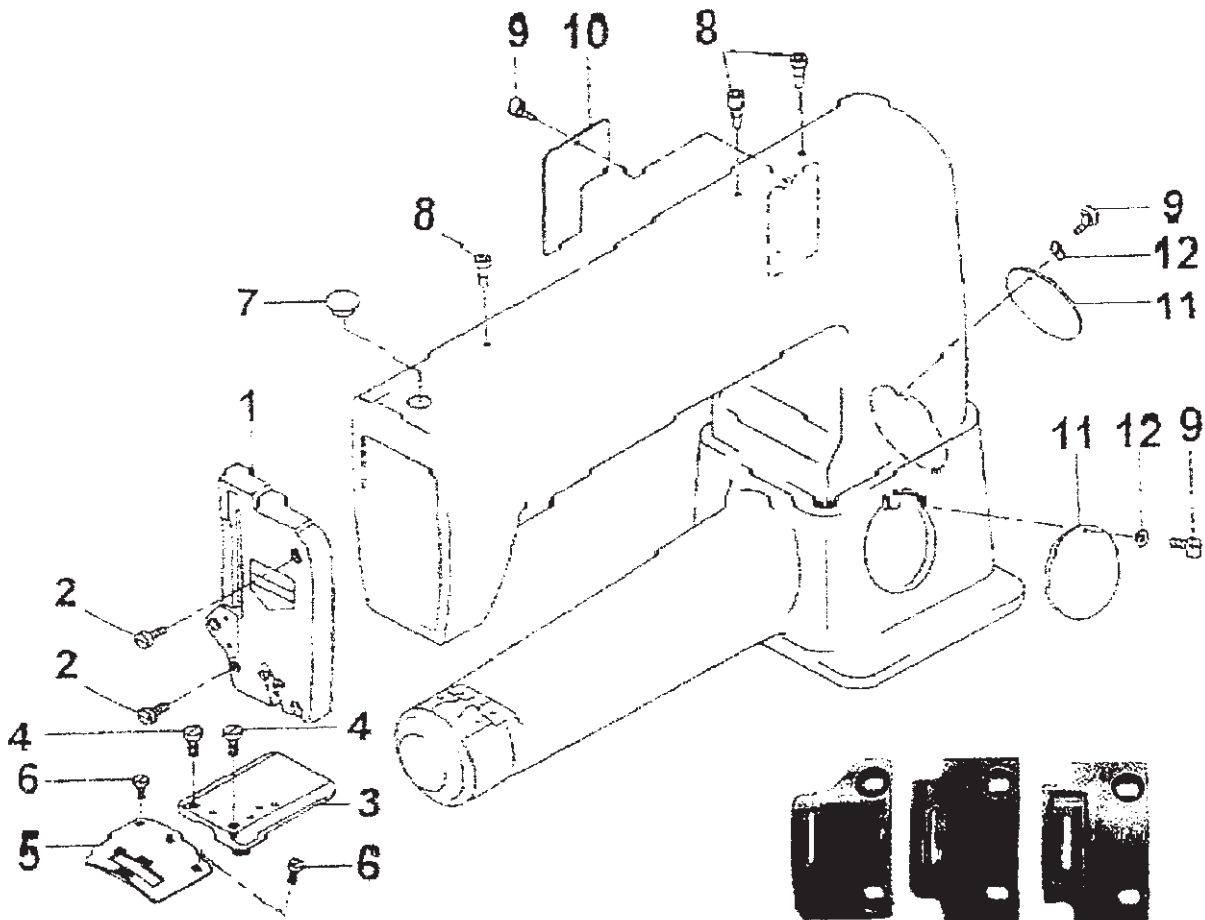
NOTES

Spare Parts List

ARTISAN

TORO-4000

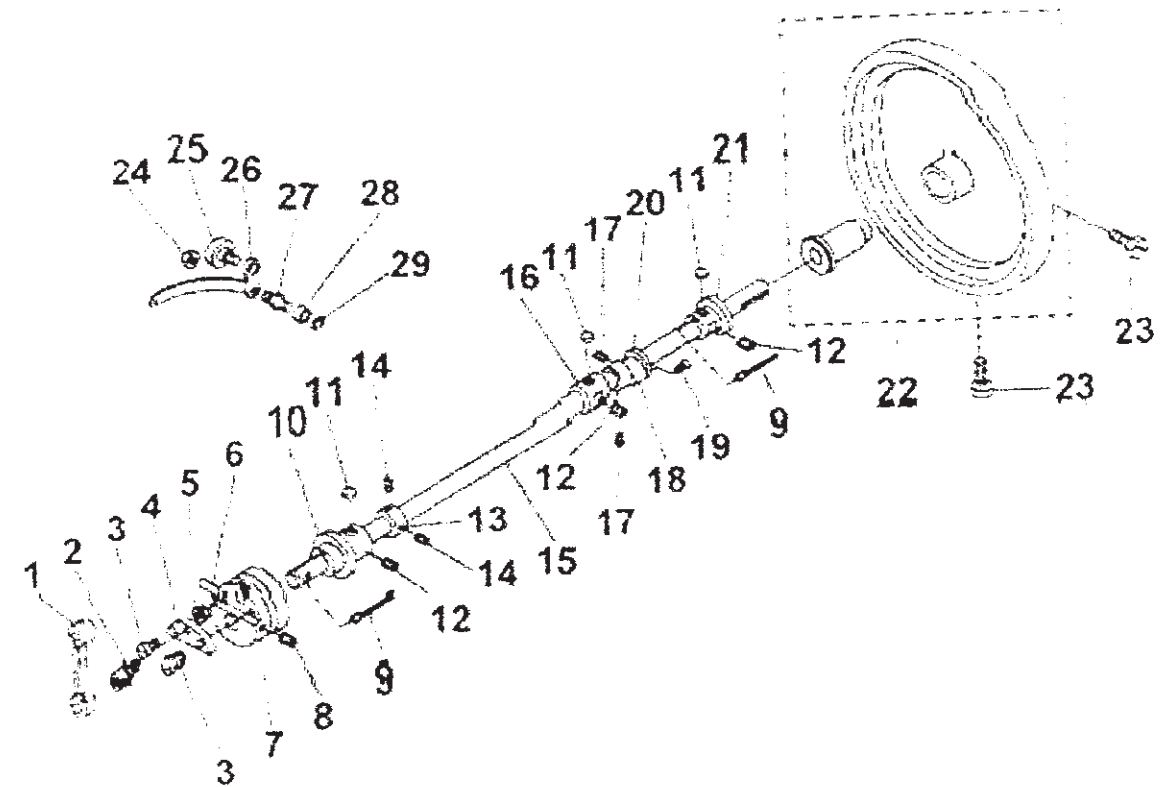
1. FRAME AND COVER COMPONENTS



NEEDLE PLATES FOR LEATHER STITCHING

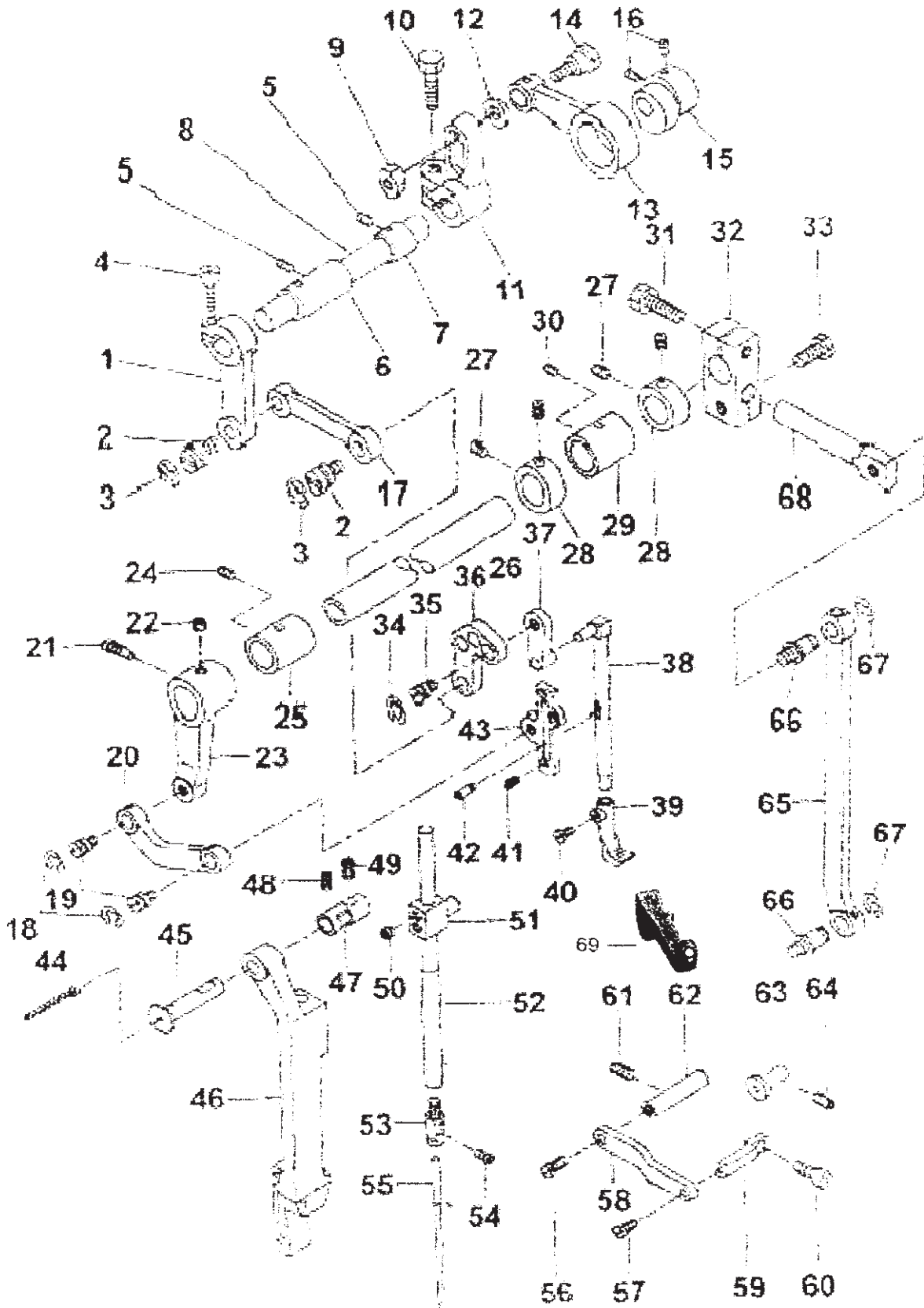
REF. NO.	NOTE	PART NO.	DESCRIPTION	ANT.
1.		210-90253	FACE PLATE ASM.	1
2.		SS-6151920-SP	SCREW 15/64-28 L=19.0	2
3.		211-51006	SLIDE PLATE	1
4.		SS-7111110-TP	SCREW 11/64-40 L=10.5	2
5.		211-60205	NEEDLE PLATE	1
6.		SS-7120910-SP	SCREW 3/16-28 L=9	2
7.		TA-1250406-RO	ROBBER PLUG	1
8.		311-56-025-000	OIL PIPE	3
9.		SS-7090710-SP	SCREW 9/64-40 L=6.8	3
10.		211-60106	SIDE COVER B	1
11.		211-33004	SIDE COVER	2
12.		WZ-0430390-XP	WASHER	2

2. MAIN SHAFT COMPONENTS



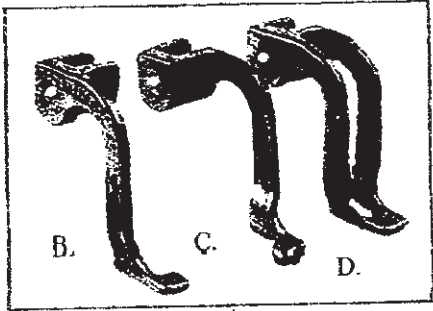
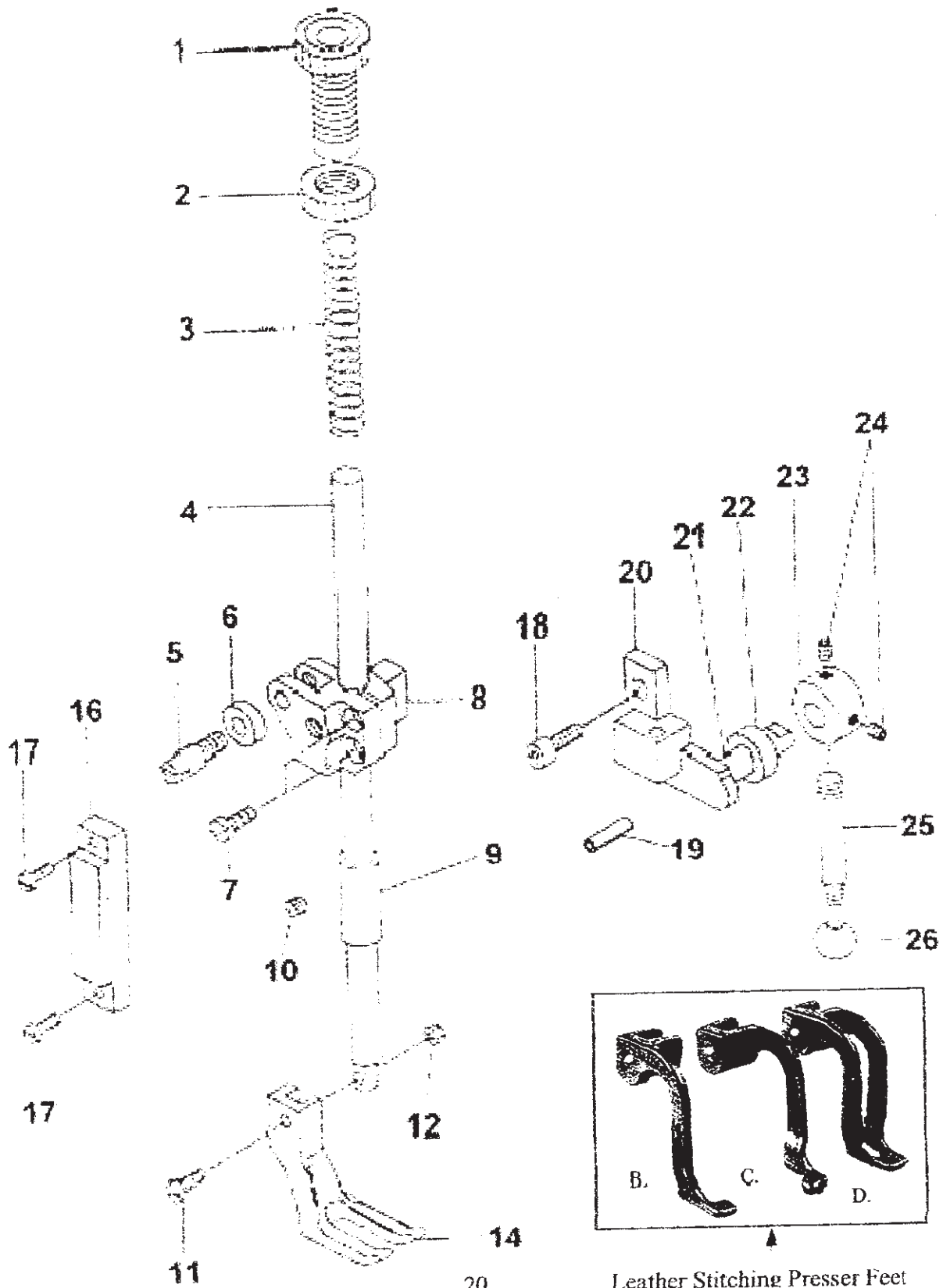
REF. NO.	NOTE	PART NO.	DESCRIPTION	QTY.
1		210-91767	CRANK ROD	1
2		210-45604	NEEDLE BAR CRANK SHAFT	1
3		SS-1681140-SP	SCREW 9/32-28 L=11	2
4		210-45109	CRANK PLATE	1
5		NS-6680410-SP	NUT 9/32-28	1
6		PT-0409600-SH	TAPER PIN	1
7		210-44994	THREAD TAKE-UP CAM	1
8		SS-8660612-TP	SCREW 1/4-40 L=6.0	2
9		CG-2020000-00	OIL WICK	1
10		210-44601	MAIN SHAFT BUSHING, FRONT	1
11		210-45496	FEED	1
12		SS-8151550-SP	SCREW 15/64-28 L=15	1
13		210-45703	THRUST COLLAR	1
14		SS-8660610-TP	SCREW 1/4-40 L=6	2
15		210-44506	MAIN SHAFT	1
16		210-44702	MAIN SHAFT BUSHING, CENTER	1
17		SS-8150710-SP	SCREW 15/64-28 L=7	2
18		211-51402	FEED CAN	1
19		SS-2116915-SP	SCREW 11/64-40 L=6.8	2
20		210-44505	SIDE PLATE	1
21		210-44505	MAIN SHAFT BUSHING, REAR	1
22		210-40555	REAR WHEEL ASSN.	1
23		SS-9702110-SP	SCREW	1
24		NS-6680410-SP	NUT 9/32-28	1
25		SD-1070621-TP	HINGE SCREW	1
26		210-41806	THREAD TAKE-UP LEVER	1
27		210-46305	ROLLER STUD	1
28		105-19302	ROLLER	1
29		RS-0400000-00	R-RING	1

3. NEEDLE BAR & UPPER FEED MECHANISM COMPONENTS



REF. NO.	PART NO.	DESCRIPTION	QTY.
1.	210-49408	DRIVING SHAFT ARM, FRONT	1
2.	210-48707	HINGE SCREW	2
3.	RE-0800000-KO	E-RING	2
4.	SM-6061552-TP	SCREW M6 L=15	1
5.	SS-8150710-SP	SCREW 15/64-28 L=7	2
6.	210-49705	BRUSHING, FRONT	1
7.	210-49806	BRUSHING, REAR	1
8.	210-49606	FEED SOCKER SHAFT	1
9.	NS-6720440-SP	NUT 11/32-28	1
10.	SS-9221813-CP	SCREW 5/16-18 L=18	1
11.	210-49507	DRIVING SHAFT ARM, FRONT	1
12.	210-50109	WASHER	1
13.	210-49309	CONNECTING ROD	1
14.	210-50000	HINGE SCREW	1
15.	210-49200	DRIVING CAN	1
16.	SS-8660610-TP	SCREW 1/4-40 L=6	2
17.	210-49903	ROD	1
18.	RE-0800000-KO	E-RING	2
19.	210-48707	HINGE SCREW	2
20.	210-92100	FRAME DRIVING LINK	1
21.	SS-7151550-SP	SCREW 15/64-38 L=14.5	1
22.	SS-8660512-TP	SCREW 1/4-40 L=5	1
23.	210-92804	DRIVING SHAFT FRONT ARM	1
24.	SS-8150710-SP	SCREW 15/64-28 L=7	1
25.	210-92606	DRIVING SHAFT FRONT METAL	1
26.	210-92507	DRIVING SHAFT	1
27.	SS-8660810-TP	SCREW	2
28.	CS-1801211-SH	THRUST COLLAR D=38 W=12	1
29.	210-92705	DRIVING SHAFT REAR METAL	1
30.	SS-8150710-SP	SCREW 15/64-28 L=7	1
31.	SS-9222443-CP	SCREW 5/16-18 L=24	1
32.	211-61609	DRIVING SHAFT REAR ARM A	1
33.	SS-9221813-CP	SCREW 5/16-18 L=18	1
34.	RE-0800000-KO	E-RING	1
35.	210-48707	HINGE SCREW	1
36.	210-93901	L LINK	1
37.	210-94008	UPPER FEED BRAKE DRIVING LINK	1
38.	210-94701	UPPER FEED BAR	1
39.	210-94107	PRESSURE FOOT	1
40.	SS-7110840-SP	SCREW 11/64-40 L=7.8	1
41.	SS-7110540-SP	SCREW 11/64-40 L=5	1
42.	210-94809	UPPER FEED BAR PIN	1
43.	210-94909	UPPER FEED BAR GUIDE	1
44.	CO-2020000-00	OIL WICK	1
45.	210-91405	FRAME DRIVING BASE SHAFT	1
46.	210-92101	FRAME DRIVING BASE	1
47.	210-91505	FRAME DRIVING BASE SHAFT METAL	1
48.	D246-141-100	METAL SCREW	1
49.	SM-8051812-TP	SCREW M6X12	1
50.	SS-8660512-TP	SCREW 1/4-40 L=5	2
51.	210-91509	NEEDLE BAR CONNECTION	1
52.	210-91002	NEEDLE BAR	1
53.	210-91403	NEEDLE STOPPER	1
54.	SS-8110710-TP	SCREW 11/64-40 L=6.5	1
55.	NS-5120213-00	NEEDLE (194 NS=230)	1
56.	SS-7111120-SP	SCREW 15/64-28 L=11	1
57.	SS-7111120-SP	SCREW 11/64-40 L=10.5	1
58.	210-91203	PRESSURE PLATE	1
59.	210-91203	PRESSURE PLATE	1
60.	SM-6061552-TP	SCREW M6 L=15	1
61.	SM-8061212-TP	SCREW M6X12	1
62.	210-91307	PRESSURE SHANK	1
63.	210-91614	FRAME DRIVING BASE GUIDE	1
64.	SM-8061212-TP	SCREW M6X12	1
65.	211-61801	FRAME DRIVING ROD	1
66.	RE-4741151-020	HINGE SCREW	1
67.	RE-0700201-KO	E-SHAFT SHAFT RING (700)	2
68.	211-61705	DRIVING SHAFT REAR ARM B	1
69.	43422	INSIDE LEATHER STITCHING PRESSER FOOT	1

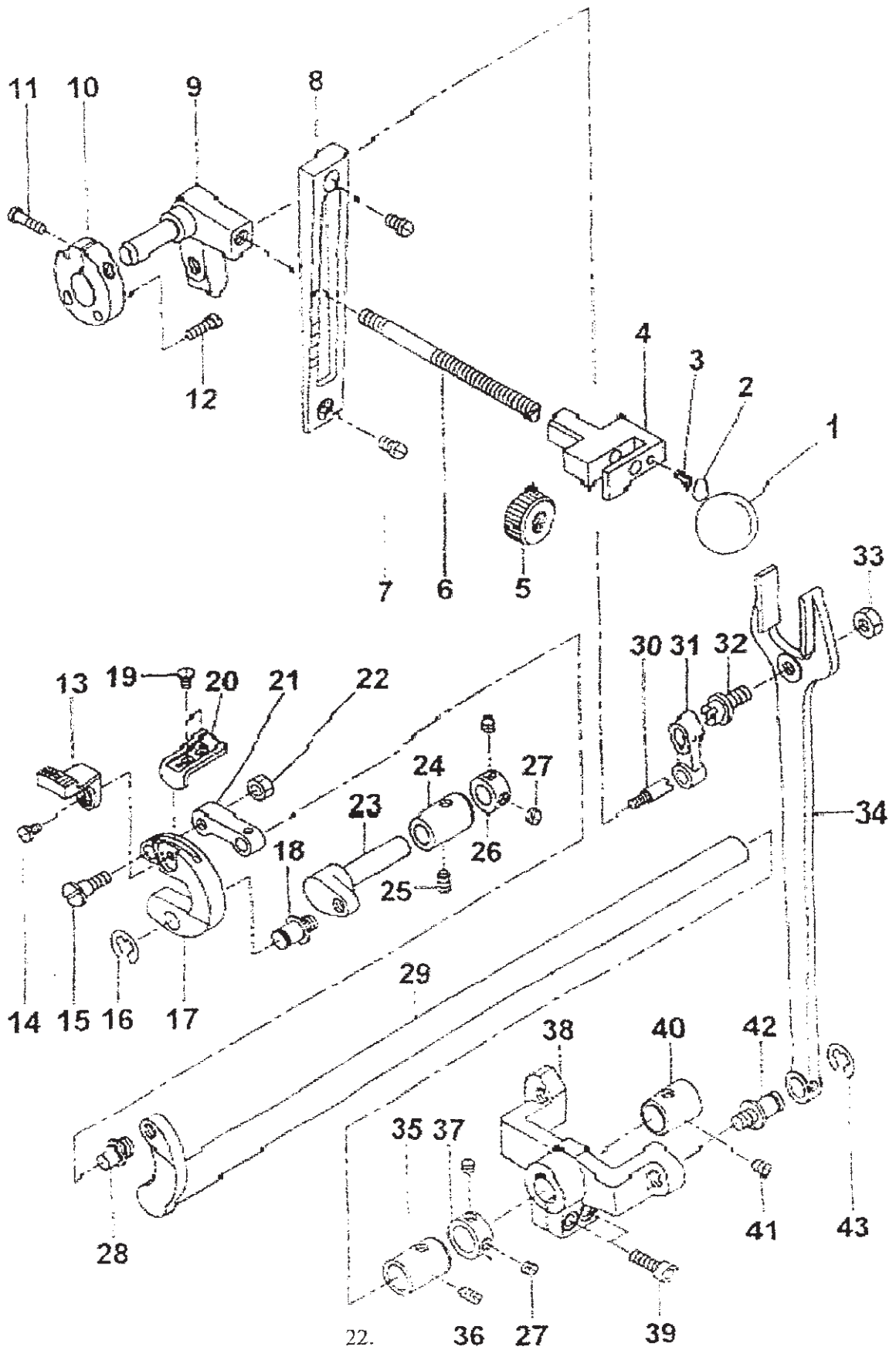
4. PRESSER BAR COMPONENTS



Leather Stitching Presser Feet

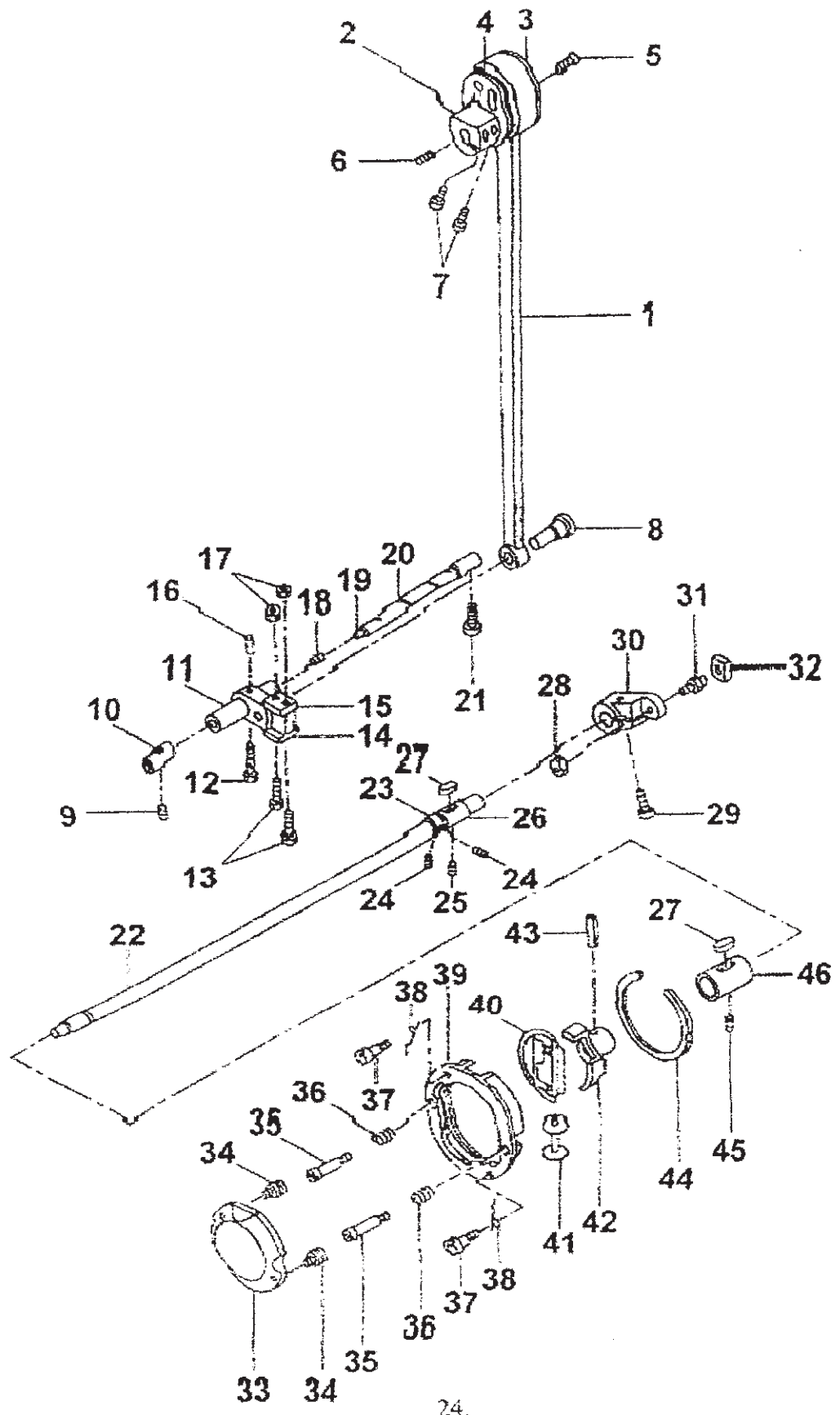
REF. NO.	PART NO.	DESCRIPTION	ANT.
1.	210-50703	SCREW	1
2.	210-51305	NUT	1
3.	210-50800	SPRING	1
4.	210-50505	PRESSER BAR	1
5.	210-51800	GUIDE NUT	1
6.	210-51701	ROLLER FOLLOWER	1
7.	SS-6121210-SP	SCREW 3/16-28 L=12	2
8.	210-95005	PRESSURE BAR	1
9.	210-50604	PRESSER BAR BUSHING	1
10.	SS-8150410-SP	SCREW 15/64-28 L=4	1
11.	SS-7091410-SP	SCREW 9/64-40 L=13.5	1
12.	NS-6090310-SP	NUT 9/64-40	1
14.	210-95104	OUTSIDE PRESSER FOOT WITH TEETH FOR FABRICS	1
16.	210-51503	GUIDE PLATE	1
17.	SS-7621040-SP	SCREW 3/16-32 L=9.5	2
18.	SS-6660522-TP	SCREW	1
19.	PS-0300201-KP	SPRING PIN 3.0X20	1
20.	210-51008	HAND LIFTER LINK	1
21.	210-51107	HAND LIFTER CAM	1
22.	B1662-562-000	COLLAR	1
23.	210-51602	THRUST COLLAR	1
24.	SS-8660522-TP	SCREW 1/4-40 L=4.5	2
25.	210-51206	HAND LIFTER LEVER	1
26.	210-51404	GRIP	1
B.	43423	LEFT SIDE LEATHER STITCHING PRESSER FOOT	
C.	43425	RIGHT SIDE LEATHER STITCHING PRESSER FOOT	
D.	43426	DOUBLE TOE LEATHER STITCHING PRESSER FOOT	

5. FEED MECHANISM COMPONENTS



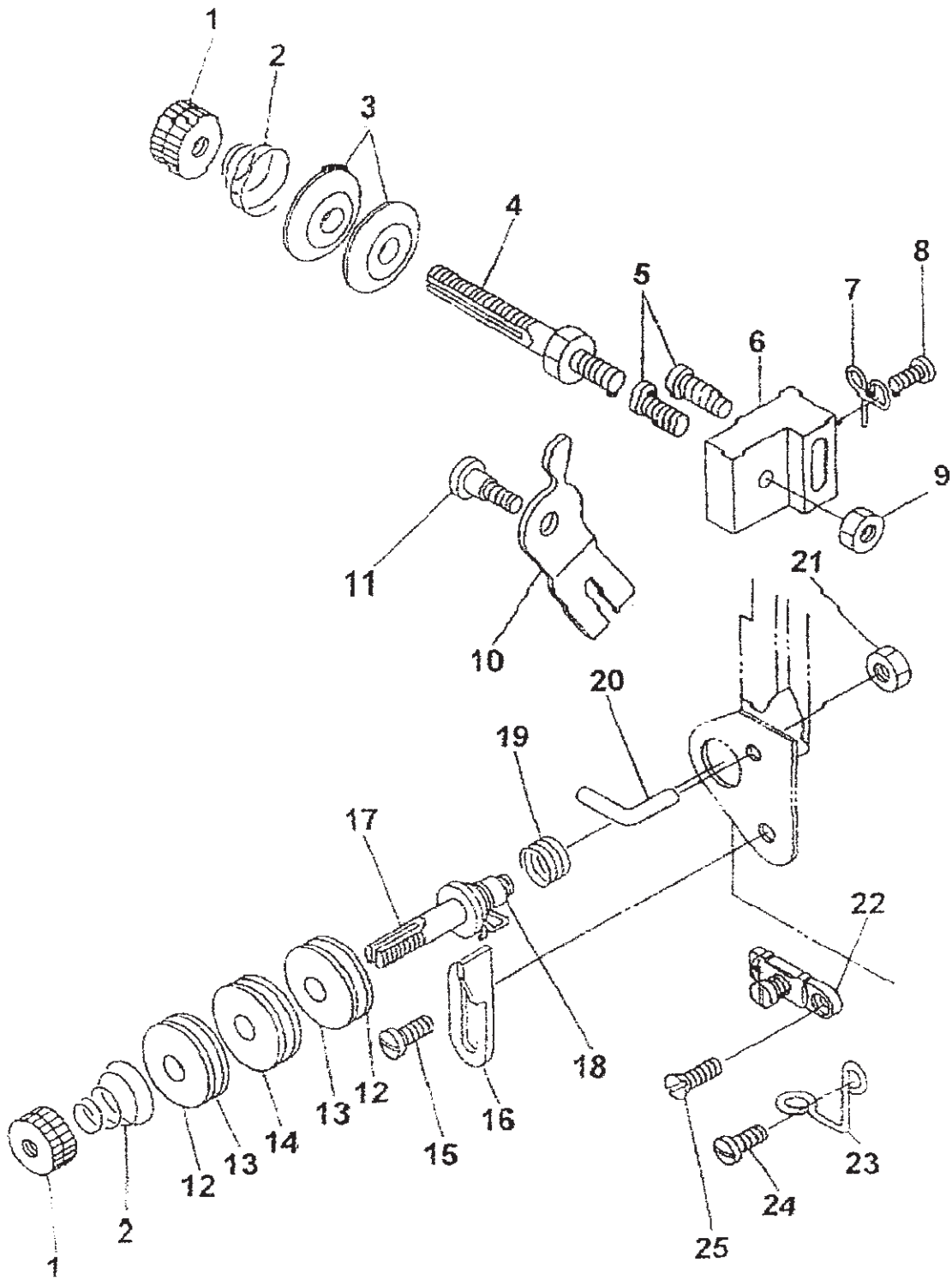
REF. NO.	NOTE	PART NO.	DESCRIPTION	AMT.
1.		210-54507	LEVER GRIP	1
2.		210-54903	BALL	1
3.		210-54804	SPRING	1
4.		210-54606	LEVER	1
5.		210-54705	NUT	1
6.		210-54408	LEVER SHAFT	1
7.		SS-7150940-SP	SCREW 15/64-28 L=9	2
8.		211-52905	SIDE COVER	1
9.		211-52806	FEED REGULATOR	1
10.		211-53903	SUPPORT PLATE	1
11.		SS-6621840-SP	SCREW 3/16-32 L=18.0	1
12.		SS-6121210-SP	SCREW 3/16-28 L=15.5	2
13.		211-62300	FEED DOGK	1
14.		SS-7110840-SP	SCREW 11/64-40 L=7.8	1
15.		SD-0790801-SP	HINGE SCREW D=7.94 H=8	1
16.		RE-0800000-KO	E-RING	1
17.		211-51907	FEED BAR	1
18.		210-26901	HINGE SCREW	1
19.		SS-6110610-TP	SCREW 11/64-40 L=6	2
20.		211-53705	FEED BAR PRESSURE	1
21.		211-52004	FEED BAR LINK	1
22.		NS-6160520-SP	NUT 1/4-24	1
23.		211-52103	DRIVING SHAFT	1
24.		211-53606	DRIVING SHAFT MEAL	1
25.		SS-8151150-SP	SCREW 15/64-28 10.5	1
26.		CS-1111019-SH	THRUST COLLAR D=11.11 W=10	1
27.		SS-8660330-SP	SCREW 1/4-40 L=3.0	4
28.		211-53804	HINGE SCREW	1
29.		211-52251	FEED ROCKER SHAFT ASM.	1
30.		B1617-241-H00	HINGE SCREW, A	1
31.		B1619-241-H00	FEED CONNECTING LINK	1
32.		B1618-241-H00	HINGE SCREW, B	1
33.		NS-6680410-SP	NUT 9/32-28	1
34.		211-52707	ROD	1
35.		211-52400	BUSHING, FRONT	1
36.		SS-8151150-SP	SCREW 15/64-28 L=10.5	1
37.		CS-1471012-SH	THRUST COLLAR D=14.72 W=10	1
38.		211-62003	FEED ROCK SHAFT CRANK	1
39.		SM-6061802-TP	SCREW M6 L=18	2
40.		211-52509	BUSHING, REAR	1
41.		SS-8150750-SP	SCREW 15/64-28 L=7	1
42.		B1424-158-000	HINGE SCREW	1
43.		RE-0700000-KO	E-SHAPED SNAP RING (7MM)	1

6. HOOK DRIVING SHAFT COMPONENTS



REF. NO.	PART NO.	DESCRIPTION	AMT.
1.	210-55504	CONNECTING ROD	1
2.	210-55603	CON-ROD ECCENTRIC CAM	1
3.	210-55702	CAM SLIDE PLATE	1
4.	210-57609	CAGE & ROLLER	1
5.	SS-2110920-TP	SCREW 11/64-40 L=8.5	2
6.	SS-8151550-SP	SCREW 15/64-28 L=15	1
7.	SM-6081802-TP	SCREW	2
8.	210-57203	CON-ROD PIN	1
9.	SS-8150750-SP	SCREW 15/64-28 L=7	1
10.	211-54109	ROCK SHAFT BUSHING	1
11.	210-55801	OSCILATING ROCK SHAFT	1
12.	SS-7621510-SP	SCREW	2
13.	210-57708	SCREW	1
14.	210-57005	SLIDE PLATE A	1
15.	210-57104	SLIDE PLATE B	1
16.	210-57302	CON-ROD PIN WEDGE	1
17.	NS-6110420-SP	NUT 11/64-40	2
18.	TA-0290301-MO	PLUG 2.9X3.2X3	1
19.	CQ-3030000-00	OIL WICK	1
20.	211-54000	HINGE SCREW	1
21.	SS-6151142-TP	SCREW 15/64-28 L=10.5	1
22.	211-54307	HOOK CRIVING SHAFT	1
23.	CS-1471012-SH	THRUST COLLAR D=14.72 W=10	1
24.	SS-8660330-SP	SCREW 1/4-40 L=3.0	2
25.	SS-8151550-SP	SCREW 15/64-28 L=15	1
26.	211-54505	DRIVING SHAFT BUSHING, REAR	1
27.	B1806-038-000	OIL FELT	2
28.	NS-6680320-SP	NUT 9/32-28	1
29.	SM-6081802-TP	SCREW	1
30.	211-54208	HOOK DRIVING SHAFT CRANK	1
31.	210-56304	SLIDE BROCK STUD	1
32.	210-56205	CRANK SLIDE BLOCK	1
33.	211-54802	HOOK COVER	1
34.	211-55007	HOOK COVER SCREW	2
35.	210-57906	SCREW	2
36.	210-57500	HOOK COUNTER SPRING	2
37.	SD-0260271-SP	HINGE SCREW D=2.60 H=2.7	2
38.	211-54901	HOOK COVER SPRING	2
39.	211-54703	SHUTTLE RACE BODY	1
40.	210-41850	HOOK COVER	1
41.	210-57401	BOBBIN	1
42.	211-63001	SHUTTLE DRIVER	1
43.	PT-0401800-SO	TAPERED PIN 4.0X18	1
44.	211-55106	MIKAZUKI (1)	1
45.	SS-8151550-SP	SCREW 15/64-28 L=15	1
46.	211-54406	DRIVING SHAFT BUSHING, FRONT	1

7. TENSION POST COMPONENTS



REF. NO.	NOTE	PART NO.	DESCRIPTION	QTY.
1.		B3125-012-000	THREAD TENSION STUD NUT	2
2.		210-59100	THREAD TENSION SPRING	2
3.		B3126-012-000	TENSION DISC	2
4.		210-59001	THREAD TENSION POST	1
5.		SS-7111120-SP	SCREW 11/64-40 L=10.5	2
6.		210-59209	THREAD TENSION POST BRACKET	1
7.		210-59308	THREAD TENSION GUIDE	1
8.		SS-7090710-SP	SCREW 9/64-40 L=6.8	1
9.		NS-6680320-SP	NUT 9/32-28	1
10.		210-59407	THREAD RELEASING PLATE	1
11.		SD-0600321-SP	HINGE SCREW D=6 H=3.2	1
12.		210-60207	FELT SUPPORT PLATE	2
13.		210-60108	WHEEL FELT	2
14.		210-60009	THREAD TENSION WHEEL	1
15.		SS-7090610-SP	SCREW 9/64-4 L=6	1
16.		210-59803	SPRING SUPPORT PLATE	1
17.		210-59902	THREAD TENSION WHEEL POST	1
18.		210-59605	SPRING A	1
19.		210-59704	THREAD TAKE-UP SPRING GUIDE	1
20.		210-59506	SLACK THREAD GUIDE	1
21.		NS-6150310-SP	NUT 15/64-28	1
22.		D1129-141-EAO	ARM THREAD GUIDE BOTTOM ASM.	1
23.		B1131-562-000	FRAME THREAD GUIDE, LOWER	1
24.		SS-7090710-SP	SCREW 9/64-40 L=6.8	1
25.		SS-1090410-SL	SCREW 9/64-40 L=4	1

8. BOBBIN WINDER AND THREAD GUIDE COMPONENTS

