

CATALOG NO.

143M

First Edition

STYLES

LF611K100HM

LF611K100MF

LF611K100MG

LF611K100MR

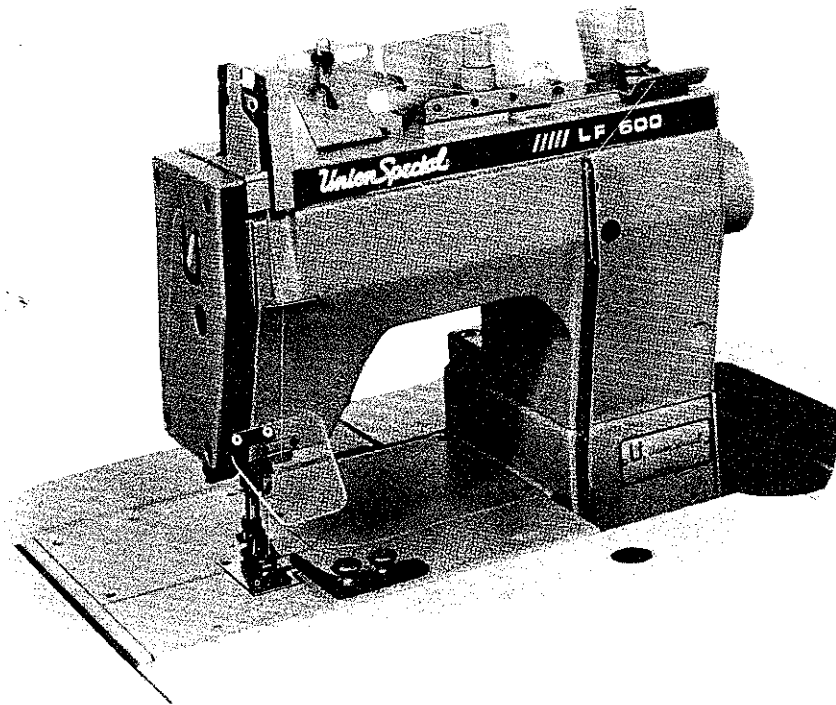
LF611K100MW

LF611K100MAW

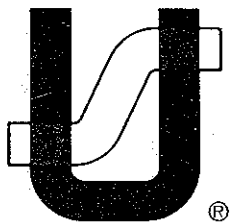
LF611K112MF

LF611K112MG

Adjusting instructions and illustrated parts list



Single-needle, LF600 "Standard Class" plain
feed flatbed machines for seaming operations.



Finest Quality

Union Special®
Industrial Sewing Equipment

FOREWORD

This technical manual has been prepared to guide you in the maintenance of your new UNION SPECIAL machine. Careful attention to the instructions for operating and adjusting these machines will enable you to maintain the superior performance and reliability designed and built into every UNION SPECIAL machine.

The Adjusting Instruction portion of this manual explains in detail the proper setting for each of the components related to forming the stitch and completing the functions of the machine. Figures are used to illustrate the adjustments using reference letters to point out specific items discussed.

Adjustments are presented in sequence so that a logical progression is accomplished. Some adjustments performed out of sequence may have an adverse effect on the function of other related parts.

Implementation of Preventive Maintenance Schedule can bring about significant improvements in operator productivity by avoiding costly equipment breakdowns. Whenever it becomes necessary to make repairs or replace parts on your machine, be sure to insist on genuine UNION SPECIAL Repair Parts. These parts are designed specifically for your machine and manufactured with utmost precision to assure long lasting service.

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

CATALOG NO. 143M

For Styles

LF611K100HM	LF611K100MW
LF611K100MF	LF611K100MAW
LF611K100MG	LF611K112MF
LF611K100MR	LF611K112MG

First Edition

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Each UNION SPECIAL machine is identified by a Style number, which on this machine Class, is stamped into the Style plate affixed to the right front of machine. Serial number is stamped into bed casting at the left rear base of machine.

NOTE: Instructions stating direction or location, such as right, left, front or rear of machine, are given relative to the operator's position at the machine, unless otherwise noted. The handwheel rotates counterclockwise in operating direction when viewed from the right end of machine.

STYLES OF MACHINES

High speed, maximum performance, double locked stitch, plain feed flatbed machine. Totally enclosed feed and looper drive mechanism, fully automatic forced feed lubricating system with easily replaceable oil filter, quick stitch change, independently driven rear needle guard and quick adjustable looper avoid.

LF611K100HM Single needle, HIGH sewing capacity machine with sewing parts to accomodate Selvage Edge Binder - for binding mattress ticks made from medium heavy to heavy weight materials. Uses selvage edge binding 5/8, 3/4 and 7/8 inch (15.8, 19.0 and 22.2mm) wide to produce a 5/16, 3/8 and 7/16 inch (7.9, 9.5 and 11.1mm) finish. Standard recommended needle Type 128 GAS, Size 125/049. Stitch range 5-14 S.P.I. Maximum recommended speed 6500 R.P.M.

LF611K100MF Single needle, MEDIUM sewing capacity machine with low inertia presser foot, permitting light presser foot pressure for positive feeding and chaining at high speeds - for long seams on light to medium weight fabrics such as in trousers, skirts, coats, jackets, etc. Standard recommended needle Type 128 GBS, Size 90/036. Stitch range 7-10 S.P.I. Maximum recommended speed 6500 R.P.M., depending on operation.

LF611K100MG Single needle, MEDIUM sewing capacity machine used for side and inseaming men's work and dress pants made from medium weight material. Standard recommended needle Type 128 GBS, Size 90/036. Stitch range 10-14 S.P.I. Maximum recommended speed 6500 R.P.M., depending on operation.

LF611K100MR Same as Style LF611K100MF except - fitted with feeding presser foot with yielding section to left, allowing crossing of seams and pockets.

LF611K100MW Same as Style LF611K100MF except - used for seaming cotton, flannel and leather palm gloves. Standard recommended needle Type 128 GAS, Size 110/044. Stitch range 5-14 S.P.I.

LF611K100MAW Same as Style LF611K100MF except - equipped with narrow feeding presser foot and related sewing parts for 3/16 inch (4.8mm) margin.

LF611K112MF Same as Style LF611K100MF except - equipped with Power "AIR-KLIPP®" chain cutter.

LF611K112MG Same as Style LF611K100MG except - equipped with Power "AIR-KLIPP®" chain cutter.

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SAFETY RULES



CAUTION!

THIS SYMBOL INDICATES YOUR PERSONAL SAFETY IS INVOLVED

TO PREVENT PERSONAL INJURY:

- All power sources to the machine **MUST** be **TURND OFF** before threading, oiling, adjusting or replacing parts.
- Wear safety glasses.
- All shields and guards **MUST** be in position before operating machine.
- **DO NOT** tamper with safety shields, guards, etc., while machine is in operation.

LUBRICATION

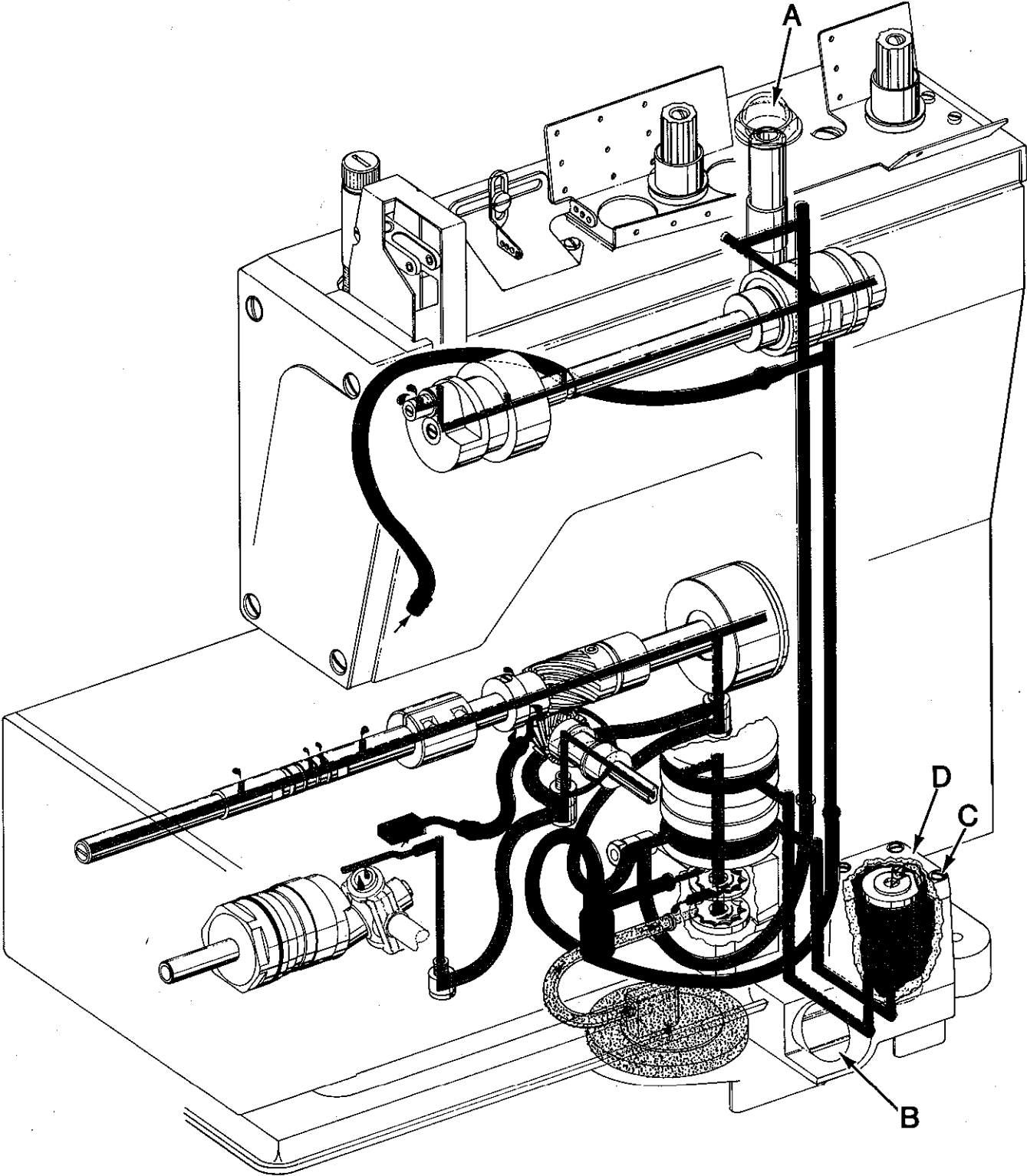
IMPORTANT: Machine must be in a leveled position.

Oil has been drained from main reservoir before shipment. Use a straight mineral oil with a Saybolt viscosity of 90 to 125 seconds at 100 degrees Fahrenheit. This is equivalent to UNION SPECIAL Specification No. 175. Remove oil filler cap (A, Fig. 1) and fill to the TOP line of oil level gauge (B). Replace oil filler cap.

CAUTION! On new machines, machines that have been out of service for an extended period of time OR machines that have been drained of oil and refilled.....**RUN MACHINE SLOWLY** at 300 R.P.M. for approximately five minutes while paying strict attention to the oil flow indicator which should rise in the oil filler cap (A) and remain steady while machine is running. This must be noted to ensure that oil flow indicator is functioning and oil is circulating. Check oil level while machine is running which **MUST** be maintained between the red lines of oil level gauge.

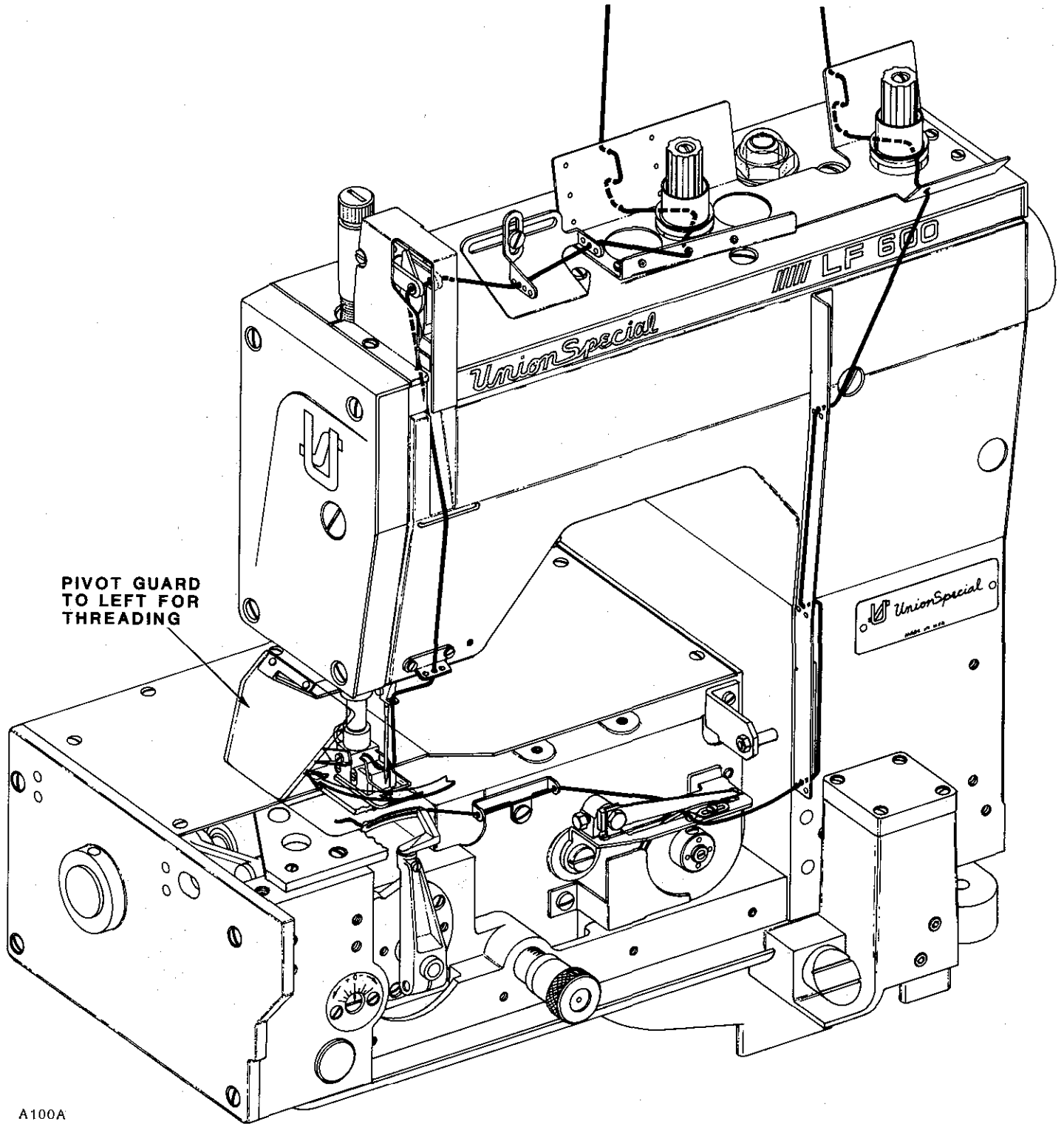
To maintain maximum recommended speed and serviceability of these machines, refer to General Preventive Maintenance Schedule. Under no circumstances, should oil remain in the machine for more than one year. Oil drain plug is located in bottom of oil pan. **ALWAYS** change oil filter when oil is changed. At this time, evaluate the contaminated condition of the oil to determine if the oil filter should be changed more or less frequently. To replace filter, remove four screws (C, Fig. 1) and cover (D); lift out filter cartridge. **REMOVE (brass) BY-PASS VALVE FROM TOP OF OLD FILTER AND INSTALL IN NEW FILTER.** Reassemble in reverse manner.

LUBRICATION DIAGRAM



- | | | | |
|---|---------------------|---|-----------------------|
|  | PRESSURE OIL |  | SIPHON RETURN |
|  | INLET |  | FILTER BY-PASS |

Fig. 1



PIVOT GUARD
TO LEFT FOR
THREADING

A100A

THREADING DIAGRAM

NEEDLES

Each needle has both a type and size number. Type number denotes the kind of shank, point, length, groove, finish and other details. Size number, stamped on the needle shank in metric, denotes largest diameter of blade, measured midway between shank and eye. Collectively, type and size number represent the complete symbol, which is given on the label of all needles packaged and sold by UNION SPECIAL CORPORATION.

The type numbers of the needles recommended for each Style of machine covered by this catalog are given in the machine style description. Other needles are available, but the ones indicated are those recommended to produce the most satisfactory results. The type numbers of the recommended needles together with their descriptions, and the sizes available are listed below:

<u>NEEDLE TYPE</u>	<u>DESCRIPTION</u>	<u>SIZES AVAILABLE</u>
128 GAS	Round shank, round point, short, double groove, struck groove, ball eye, spotted, chromium plated.	80/032, 90/036, 100/040, 110/044, 125/049, 140/054, 150/060, 170/067.
128 GBS	Round shank, round point, short, double groove, struck groove, ball eye, spotted, ball point, chromium plated.	80/032, 90/036, 100/040, 110/044, 125/049, 140/054, 150/060.

To have needle orders promptly and accurately filled, an empty package, a sample needle, or the type and size number should be forwarded. Use description on label. A complete order would read "1000 needles, Type 128 GBS, Size 90/036".

THREAD MACHINE AS ILLUSTRATED.

TIMING FEED TO NEEDLE

Adjustment would be required if the machine is feeding while the needle is in the work.

This can be accomplished by removing top cover, head cover, left cloth plate and top feed chamber cover. Rotate handwheel in operating direction to position needle bar at bottom of stroke. At this time, the first screw (A, Fig. 2) in the feed drive eccentric (B) must be on the flat of the feed drive shaft and in a vertical position. Adjustment can be made by loosening two screws (A, Fig. 3) in upper mainshaft sprocket (B). Hold the handwheel firmly with needle bar at bottom of stroke and rotate pulley as required to position screw (A, Fig. 2) so it is vertical. Tighten screws (A, Fig. 3) securely.

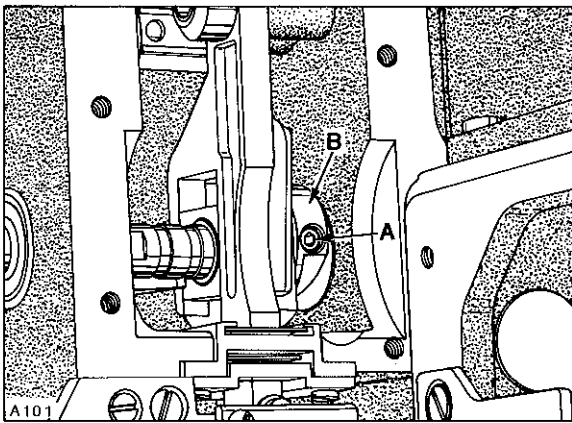


Fig. 2

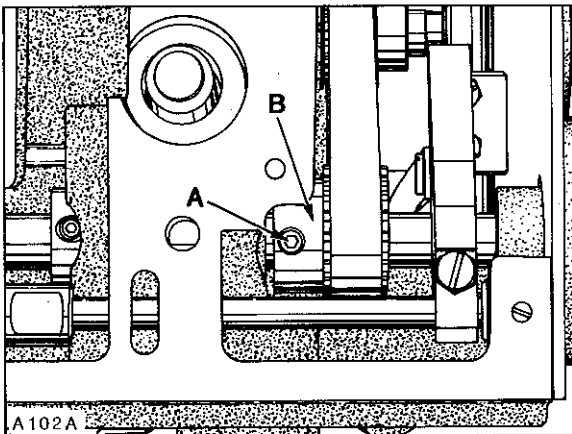


Fig. 3

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS

NOTE: End cover has been removed for clarity in Figure 4, but MUST BE IN POSITION WHILE MAKING THE FOLLOWING ADJUSTMENTS.

Looper drive belt, (A, Fig. 4) has proper tension if, when turning handwheel in operating direction to position looper in the center of its (right to left) travel...there is no noticeable (right to left) play in the looper mechanism. There should be approximately 1/8 inch (3.2mm) deflection in looper drive belt when pressing firmly with thumb, midway between sprockets (B and C). Adjustment can be made by loosening two screws (A, Fig. 5) and turn looper module (D, Fig. 4) counterclockwise to tighten belt or clockwise to loosen, as viewed in Figure 4. Retighten screws (A, Fig. 5).

To synchronize machine, remove needle bar eyelet guard, needle thread take-up cam, needle, presser foot, throat plate, looper and feed dog. Turn handwheel to position needle bar at BOTTOM of stroke and looper holder at EXTREME right end of travel.

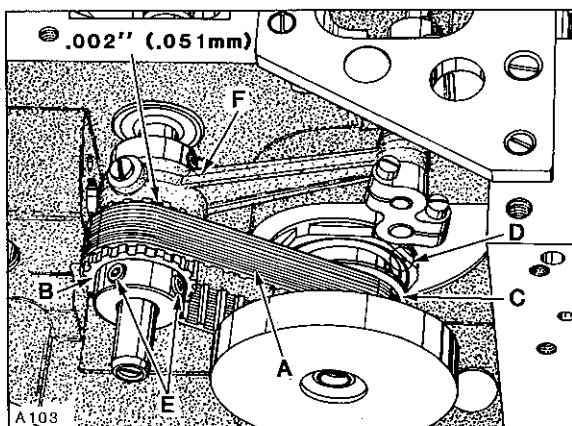


Fig. 4

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS (Continued)

Using gauge No. 21227 R, mount gauge plate with throat plate attaching screws. Insert pin (included with gauge) into looper holder. Mount indicator block to machine head with one of the screws removed from needle bar eyelet guard. Insert shank of indicator gauge into indicator block and tighten screw against shank. (See sketch A for reference).

Rotate handwheel in OPERATING direction until the pin in looper holder contacts gauge plate. Loosen screw (A, Fig. 6) in needle bar connection (B) and position needle bar (C) as required to set the pointer of indicator gauge at "0" and tighten screw (A) VERY LIGHTLY.

NOTE: This screw is specifically tightened to ONLY 10 in-lbs (11.5 cm/kg).

Rotate handwheel in REVERSE direction until pin in looper holder again makes contact with gauge plate and note the reading on the gauge. A variation of (1) graduation on the scale is permissible. If the reading is above "0", loosen screws (E, Fig. 4) and turn rear looper drive sprocket (B) towards the operator (clockwise as viewed in Figure 4). If the reading is below "0", turn sprocket away from operator (counterclockwise as viewed in Figure 4). Temporarily snug screws.

Rotate handwheel in OPERATING direction until pin in looper holder contacts gauge plate and note the reading on scale. If the reading is above "0", loosen screws (E) and turn sprocket (B) away from operator (counterclockwise as viewed in Figure 4). If the reading is below "0", turn sprocket towards the operator (clockwise as viewed in Figure 4). Temporarily snug screws.

Continue to check and adjust in both OPERATING and REVERSE directions until pointer of indicator gauge comes within (1) graduation on the scale when turning the handwheel in either direction. Before tightening screws (E) securely, be sure to have .002 inch (.051mm) clearance between sprocket (B) and needle guard drive connecting rod (F).

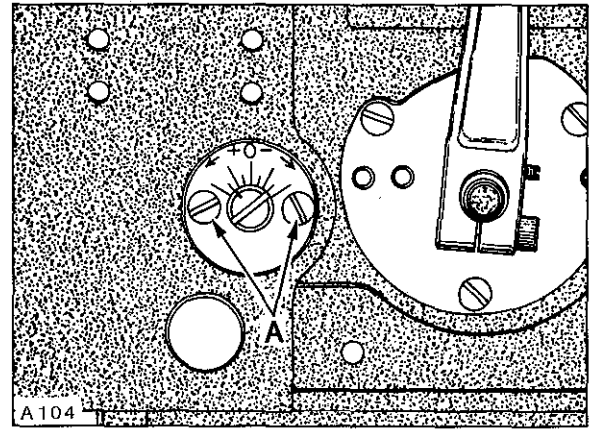
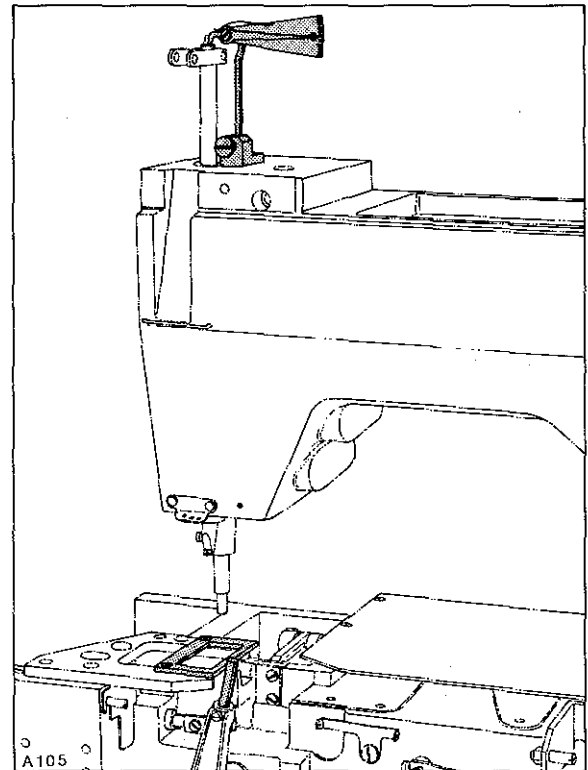


Fig. 5



SKETCH A

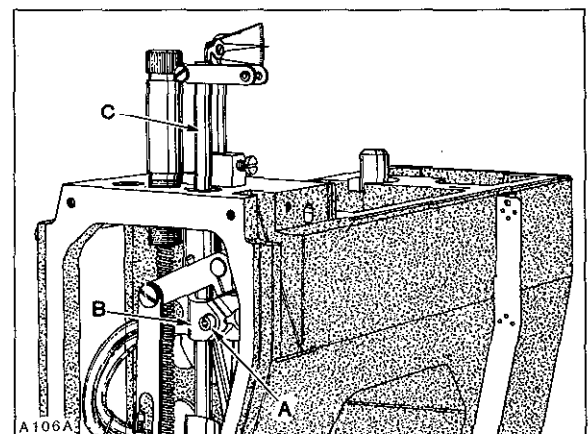
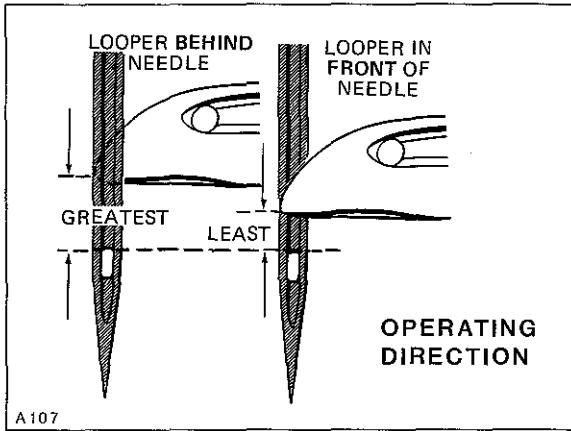


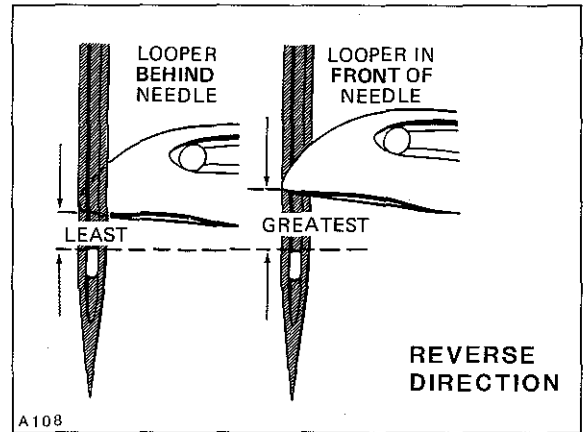
Fig. 6

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS (Continued)



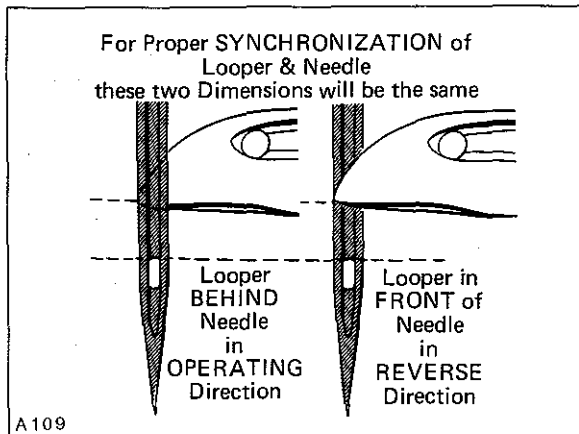
SKETCH B

the left side of needle and check the distance from the eye of needle to the bottom of looper blade. If the distance was greater when handwheel was turned in operating direction, (as viewed in sketch B) loosen screws (E, Fig. 4) and turn rear looper drive sprocket (B) away from operator (counterclockwise as viewed in Figure 4).



SKETCH C

If the distance was greater when handwheel was turned in reverse direction, (as viewed in sketch C) turn sprocket towards the operator (clockwise as viewed in Figure 4). Temporarily snug screws. Continue to check and adjust in both OPERATING and REVERSE directions until the distance from the eye of



SKETCH D

the needle to the bottom of looper blade is the same in either direction (as viewed in sketch D). Before tightening screws (E, Fig. 4) securely, be sure to have .002 inch (.051mm) clearance between sprocket (B) and needle guard drive connecting rod (F).

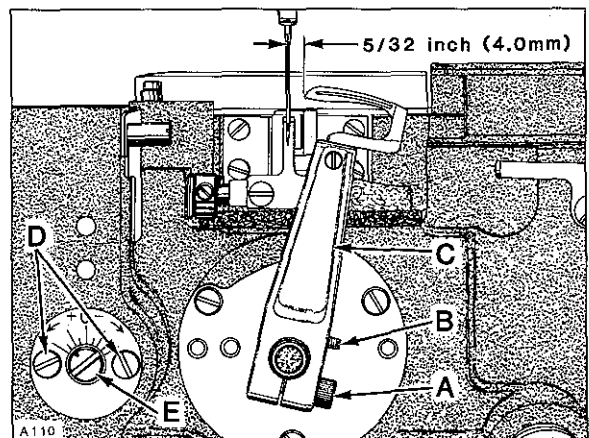


Fig. 7

LOOPER SETTINGS

Insert a new needle, type and size specified. With looper positioned at EXTREME right end of travel, distance from centerline of needle to point of looper should be 5/32 inch (4.0mm). Adjustment can be made by loosening screw (A, Fig. 7) and turn screw (B) clockwise to increase looper gauge or counterclockwise to decrease. Apply pressure to the upper portion of looper holder (C) to the left while making this adjustment and locking with screw (A). Looper gauge No. 21225-5/32 can be used advantageously while making this adjustment. Looper must also be set so, as it travels to the left behind the needle, NOT to touch, but with a MAXIMUM clearance of .005 inch (.127mm). Adjustment can be made by loosening screw (A) and moving looper holder (C) forward or rearward on its shaft to obtain specified conditions; apply pressure to the upper portion of looper holder to the left while tightening screw (A).

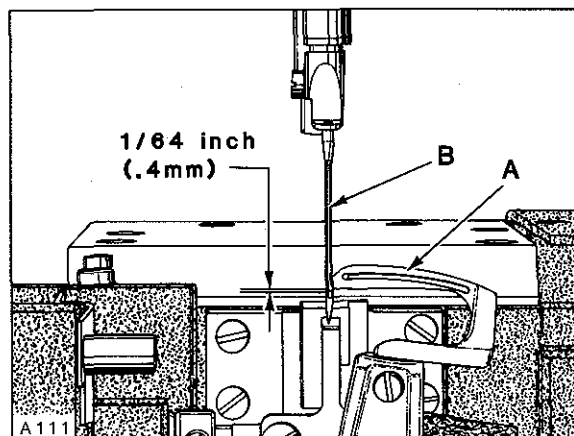


Fig. 8

NEEDLE BAR HEIGHT

Turn handwheel in operating direction until POINT of looper (A, Fig. 8) is even with the LEFT side of the needle (B). TOP of needle eye should be 1/64 inch (.4mm) below the undersurface of looper blade, as shown in Figure 8. Adjustment can be made by loosening screw (A, Fig. 9) and move needle bar (B) up or down as required; TORQUE screw (A) to 10 in-lbs (11.5 cm/kg).

NOTE: Needle bar has a special coating. DO NOT wedge with any type of tool, as damage to same may result.

LOOPER AVOID

Machine is equipped with a quick adjustable looper avoid mechanism to accommodate extreme differences in needle sizes. If looper avoid requires re-setting, loosen two screws (D, Fig. 7) and turn eccentric stud (E) towards the plus side (counterclockwise) for MORE looper avoid or towards the minus side (clockwise) for LESS looper avoid. When desired setting is acquired, tighten screws (D).

NOTE: Whenever looper avoid is changed, always recheck "LOOPER SETTINGS".

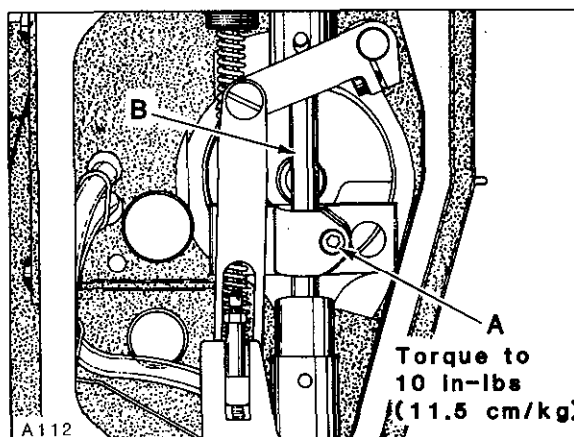


Fig. 9

REAR NEEDLE GUARD TIMING AND ADJUSTMENT

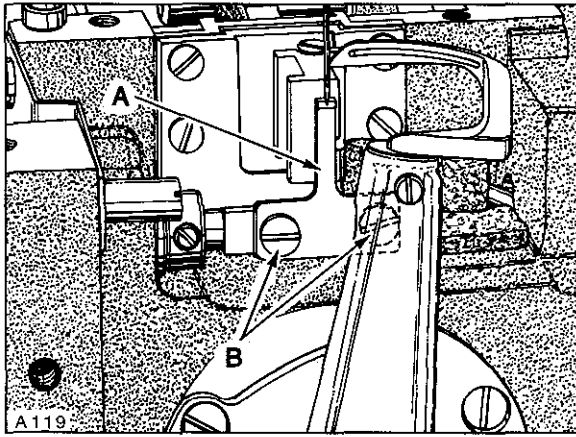


Fig. 10

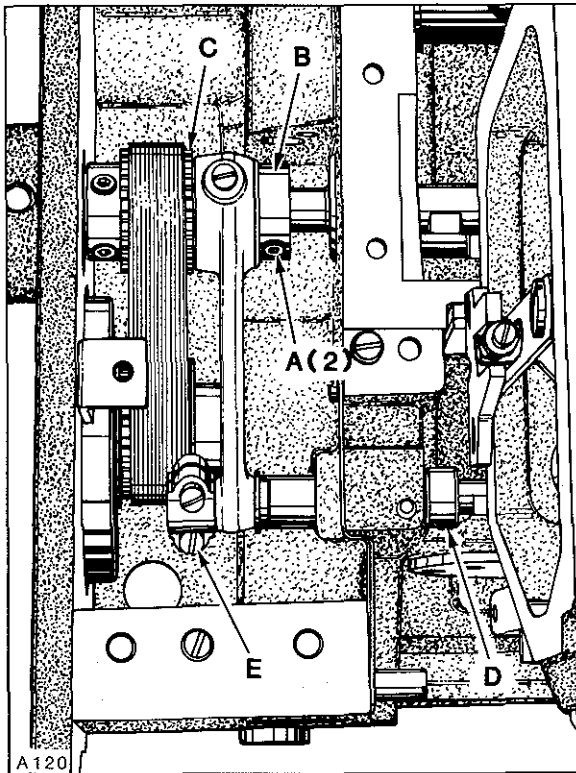


Fig. 11

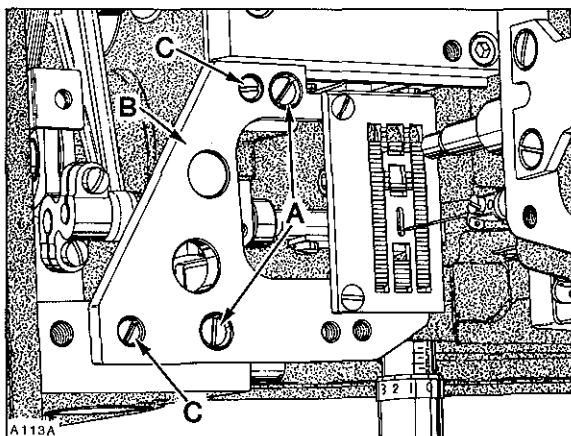


Fig. 12

Rotate handwheel in operating direction to position looper point at the RIGHT hand side of needle. At this time the needle guard (A, Fig. 10) should be at its EXTREME END of FORWARD travel. Adjustment can be made by loosening two screws (A, Fig. 11) and turn needle guard eccentric (B) slightly as required until this condition exists. Ensure .002 inch (.051mm) clearance between needle guard eccentric (B) and looper drive sprocket (C) while tightening screws (A) securely. Needle guard should also be positioned (left to right) so the needle centers in the width of the guarding surface. Adjustment can be made by loosening collar screw (D) and pivot link screw (E) permitting guarding surface to be centered to needle. Position collar against needle guard shaft bushing and tighten screw (D) securely. Rotate guard as required to obtain .002-.004 inch (.051-.102mm) clearance between guarding surface and needle. Take up thrust by exerting pressure against collar to the left and pivot link to the right and tighten pivot link screw (E) securely. Guard should be set as low as possible yet have its vertical face approach approximately 3/64 inch (1.2mm) of needle point. Adjustment can be made by loosening two screws (B, Fig. 10) to position guard to proper height and retighten screws (B) securely being sure to keep the width of its guarding surface centered to needle.

NOTE: Change in stitch length WILL NOT require change in needle guard setting, but a change of needle SIZE may.

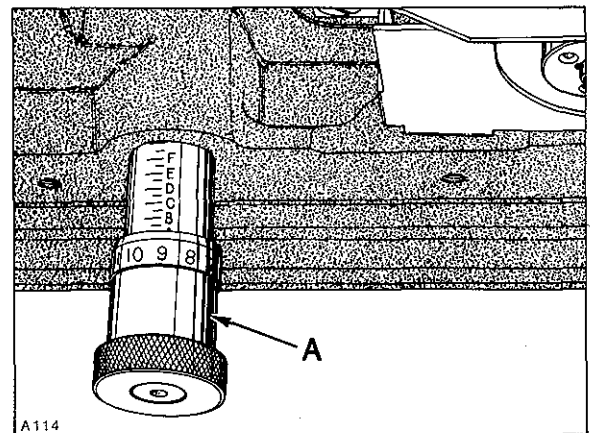


Fig. 13

FEED DOG SETTINGS

Feed dog should be centered in throat plate with equal clearance on both sides and ends. At highest point of travel, feed dog teeth should extend the depth of a full tooth, or approximately 3/64 inch (1.2mm) above throat plate. MINOR (right to left) adjustments can be made by loosening two screws (A, Fig. 12) in throat plate support (B). Loosen two screws (C) securing two locating ferrules which allow movement to align throat plate support. Reposition slightly as required, considering both needle hole slot and feed dog slots. Tighten screws (C) first, then screws (A).

Front to rear adjustment can be made by turning stitch regulating knob (A, Fig. 13) counterclockwise to obtain LONGEST stitch length. Remove rear feed chamber cover which is secured with four screws.

Loosen Allen screw (A, Fig. 14) and turn eccentric (B) while rotating handwheel in operating direction to obtain equal clearance in throat plate, front and rear. Tighten screw (A) securely.

Feed dog can be leveled or tilted by loosening screw (A, Fig. 15) and rotate feed rocker tilting shaft (A, Fig. 16) slightly as required. Check parallelism of feed dog by placing throat plate in position. Before tightening screw (A, Fig. 15), make sure to have approximately .002 inch (.051mm) clearance between feed rocker (B) and spacer sleeve (C).

IMPORTANT: Recheck front to rear clearance of feed dog in throat plate slots whenever feed rocker tilting shaft has been repositioned. Replace rear feed chamber cover.

With feed travel set to desired stitch length, set feed dog height as specified by loosening mounting screw (A, Fig. 17) to position as required. Feed dog supporting screw is located in the feed dog holder, adjust as required to support feed dog before tightening screw (A).

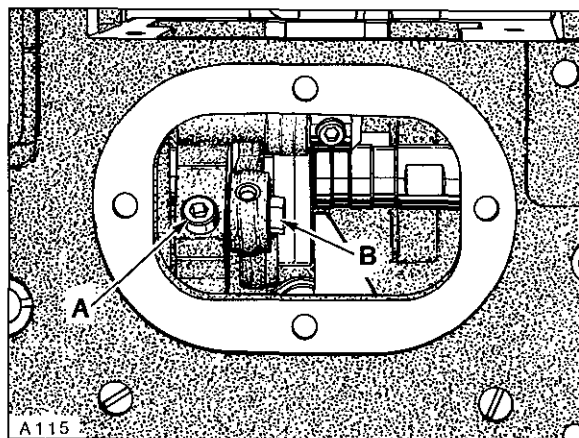


Fig. 14

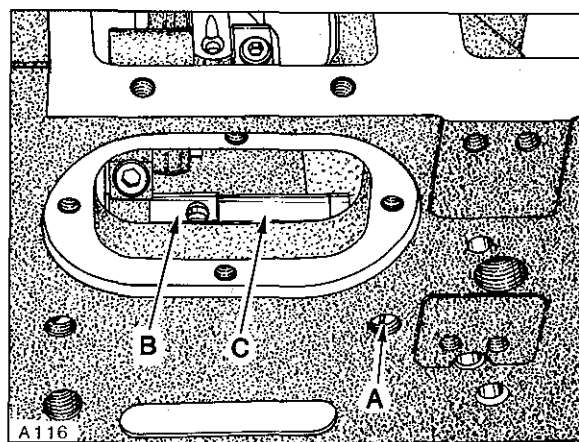


Fig. 15

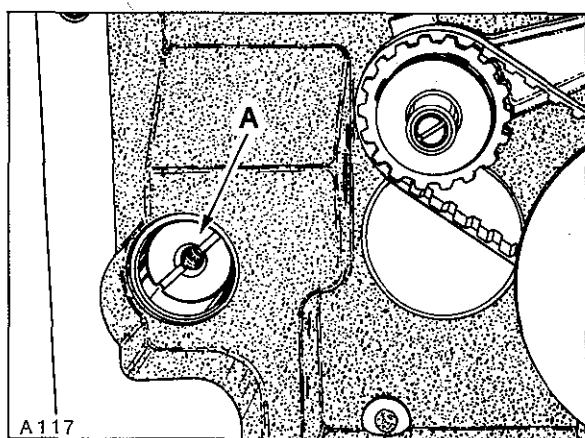


Fig. 16

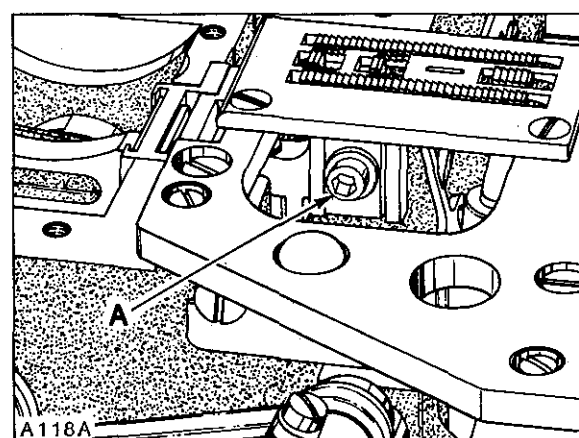


Fig. 17

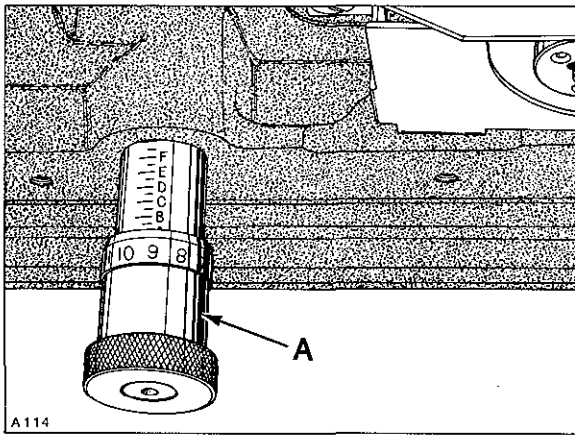


Fig. 18

CHANGING STITCH LENGTH

Stitch length is changed by turning stitch regulating knob (A, Fig. 18) clockwise to shorten the stitch or counterclockwise to lengthen same. Recheck front to rear clearance under "FEED DOG SETTINGS" whenever stitch length is changed. Stop collar at rear of machine attached to stitch regulating knob shaft can be set to prevent stitch length regulating knob (A) from accidentally being turned beyond the desired stitch length.

PRESSER BAR AND PRESSER FOOT (For Styles LF611K100HM, 100MG, 100MW and 112MG)

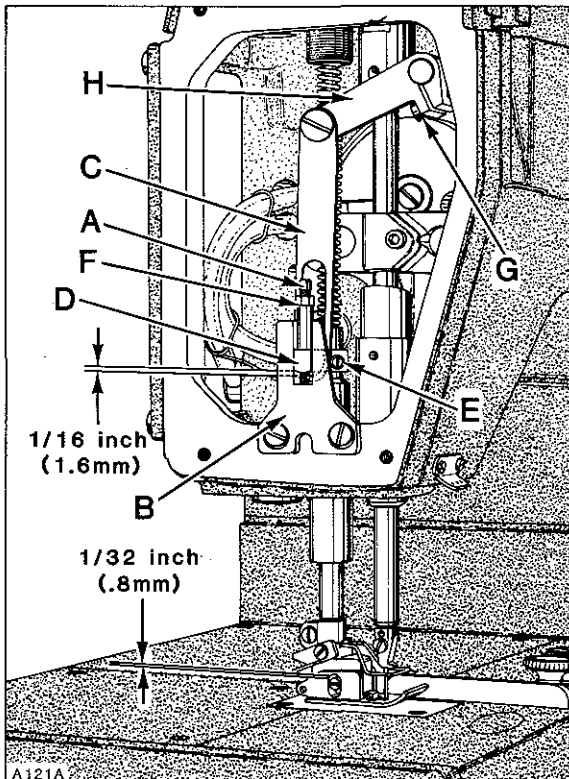


Fig. 19

With needle bar at bottom of stroke and presser foot resting squarely on throat plate, there should be minimum clearance of 1/64 inch (0.4mm) between the bottom of screw (A, Fig. 19) and bottom of slot in presser bar guide plate (B). There should also be 1/16 inch (1.6mm) clearance between bottom of slot in lifter lever link (C) and bottom of presser bar guide (D) when foot lifter lever is released. If adjustment is required, proceed as follows:

Back off presser bar spring regulator to release tension on spring. Loosen two screws (E) in presser bar guide (D). Loosen nut (F) and turn screw (A) down against guide plate (B) to obtain at least 5/64 inch (2.0mm) clearance between bottom of presser bar guide (D) and guide plate (B). Align presser foot with needle and press down **FIRMLY** while tightening two screws (E) in presser bar guide (D).

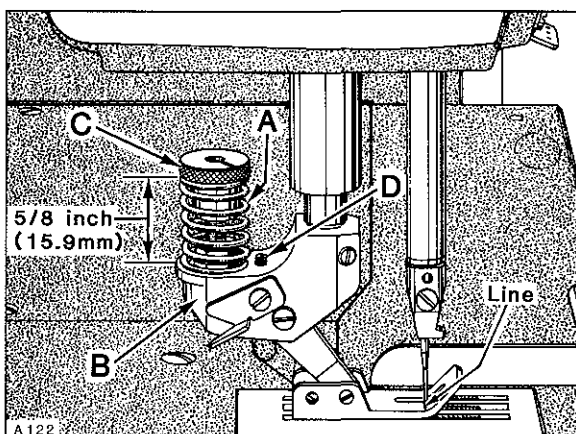


Fig. 20

NOTE: This setting was necessary to prevent damage to the scraper edge of presser bar bushing, should presser foot be removed from machine. Turn presser bar spring regulator down. Back off screw (A) to obtain the 1/64 inch (0.4mm) dimension between bottom of screw and bottom of slot in presser bar guide plate (B), lock nut (F).

PRESSER BAR AND PRESSER FOOT (Continued)
(For Styles LF611K100HM, 100MG, 100MW and 112MG)

Loosen screw (G) in lifter arm (H) and rotate arm slightly as required to obtain the 1/16 inch (1.6mm) dimension between link (C) and guide (D), retighten screw (G) ensuring no left to right shake in lifter arm (H).

Adjust presser bar spring regulator so it exerts only enough pressure on presser foot to feed the work uniformly. Turning it clockwise increases the pressure, counterclockwise acts the reverse.

PRESSER BAR AND PRESSER FOOT
(For Styles LF611K100MF and LF611K112MF)

With needle bar at bottom of stroke and presser foot resting on throat plate, there should be 1/32 inch (.8mm) clearance between top of screw and top of slot in presser foot as shown in Figure 19. There should be 1/16 inch (1.6mm) clearance between bottom of slot in lifter lever link (C) and bottom of presser bar guide (D) when foot lifter lever is released. If adjustment is required, proceed as follows: Loosen nut (F) and turn screw (A) down approximately 1/8 inch (3.2mm) below bottom surface of presser bar guide (D). Back off presser spring regulating screw and loosen screws (E) in presser bar guide (D) so that presser foot is sitting squarely on throat plate and screw (A) is touching the bottom of the presser bar guide plate, then secure screws (E).

Turn presser spring regulating screw all the way down, then back off screw (A) counterclockwise to obtain the 1/32 inch (.8mm) dimension in presser foot, lock nut (F). Loosen screw (G) in lifter arm (H) and rotate arm slightly as required to obtain the 1/16 inch (1.6mm) dimension between link (C) and guide (D), retighten screw (G). Make sure that there is no shake, left to right, in lifter arm (H).

FEEDING PRESSER FOOT
(For Styles LF611K100MR and LF611K100MAW)

With presser foot resting on throat plate and the needle in its lowest position, the distance from top of spring (A, Fig. 20) to top of yoke (B) should be 5/8 inch (15.9mm) and the line stamped across the presser foot bottom should line up with centerline of needle.

As the presser foot is raised, its bottom should move VERY SLIGHTLY towards the rear...1/64 inch (.4mm) maximum. If adjustment is required, proceed as follows: Remove presser spring regulating screw, presser bar spring guide and presser bar spring. Loosen nut (F, Fig. 19) and turn screw (A) down approximately 1/8 inch (3.2mm) below bottom surface of presser bar guide (D). Loosen screws (E) in presser bar guide (D). Adjust spring regulator nut (C, Fig. 20) as required so its lower surface is 5/8 inch (15.9mm) from top of yoke (B) as viewed in Fig. 20. With presser foot resting on throat plate and feed dog down below throat plate, press down on spring regulator nut (C) until the marks in presser foot bottom align with centerline of needle and positioned to keep needle in center of needle slot. Tighten screws (E, Fig. 19) securing presser bar guide to presser bar, ensuring stop screw (A) in presser bar guide is resting on bottom of presser bar guide plate. Replace presser bar spring, presser bar spring guide and presser spring regulating screw. Turn regulating screw down until the top of its threaded portion is level with head casting. Rotate handwheel to position feed below throat plate with presser foot resting on throat plate. Depress presser foot lifter lever to see if presser foot bottom moves SLIGHTLY towards the rear before presser foot begins to lift.

FEEDING PRESSER FOOT (Continued)
(For Styles LF611K100MR and LF611K100MAW)

Adjustment can be made by turning stop screw (D, Fig. 20) clockwise to shorten or counterclockwise to lengthen the distance of travel.

Loosen screw (G, Fig. 19) in lifter arm (H) and rotate arm slightly as required to obtain 1/16 inch (1.6mm) clearance between link (C) and guide (D); retighten screw (G), assuring all end play is removed from lifter arm (H).

Presser foot, at back of needle slot should cover most of throat plate land when resting directly on throat plate.

When the presser foot bottom is raised by material and the feeding foot spring bottoms, rear of needle slot should clear the needle. Main presser bar should not begin to lift before the spring of feeding foot bottoms.

Purpose of the feeding presser foot is to make top and bottom plies of material feed the same amount without pulling on the bottom ply. Final adjustment may be required to match plies; turning nut (C, Fig. 20) to increase pressure on spring (A) will tend to feed the bottom ply more...decreasing pressure will tend to feed the top ply more.

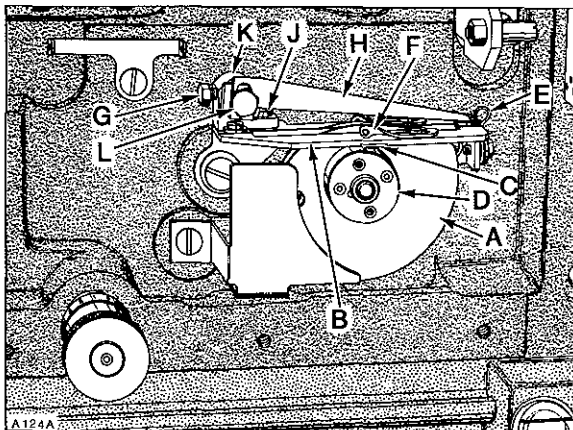


Fig. 21

LOOPER THREAD TAKE-UP AND CAST-OFF PLATE

Looper thread take-up (A, Fig. 21) must be centered, front to back in cast-off plate (B). It should also be positioned so as the needle bar is descending, the looper thread is "cast-off" the highest lobe of looper thread take-up when the point of the needle is even with the bottom of looper blade.

If adjustment is required, lift cast-off plate up. Loosen screw (A, Fig. 22) in positioning collar (B) and two screws (C) in looper thread take-up. Advance or retard take-up as required. Tighten two screws (C) securely in take-up making sure it is centered in cast-off plate. Positioning collar (B), which has a slot in its face, must be aligned with two screws which secure the discs of take-up together while THRUSTING positioning collar forward against take-up. Remove the play between screw heads in take-up and slot in positioning collar by applying pressure on the collar CLOCKWISE while tightening screw (A) securely. Cast-off plate (B, Fig. 21) should be positioned with .004 inch (0.1mm) clearance between cutting edge of looper thread anti-wrap-up knife (C) and hub (D) of looper thread take-up, which can be adjusted by repositioning latch (E). Set adjustable eyelets (F) in the center of their mounting screws. More or less, looper thread can be supplied in the stitch by moving adjustable eyelets to the right or left respectively.

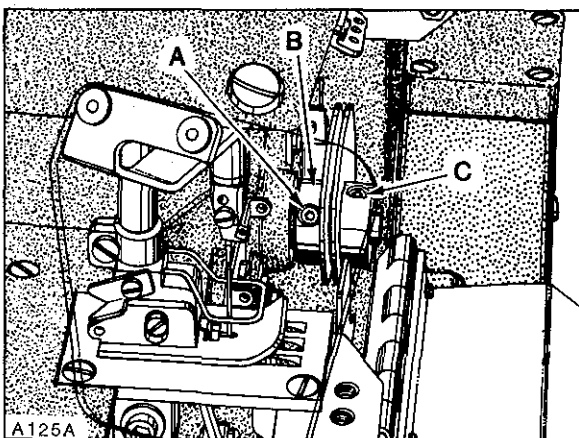


Fig. 22

LOOPER THREAD TAKE-UP AND CAST-OFF PLATE (Continued)

If retaining finger is rubbing take-up, loosen screw (G), center the finger (H) and retighten screw. If retaining finger is on an angle, loosen screw (J), turn retaining finger support (K) slightly as required and retighten screw. The height of retaining finger can be adjusted by loosening screw (L), set to required height and tighten screw securely.

THREAD TENSION RELEASE

Needle thread tension assembly (A, Fig. 23) is set correctly when the tension discs (B) start to release as the presser foot is raised to within 1/8 inch (3.2mm) of the end of its travel and completely released when presser foot has reached its highest position.

Adjustment can be made by removing plastic plug (C) and loosening screw (D) and lower the tension assembly (A) to advance the release action or raise tension assembly to retard the release action. Hold tension assembly in position while retightening screw (D). Reassemble plastic plug securely.

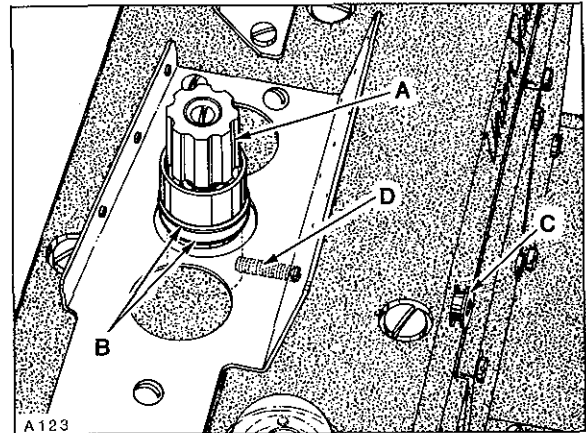


Fig. 23

THREAD CONTROL (PRELIMINARY SETTINGS)

Needle bar eyelet (A, Fig. 24) should be set with its eyelets 1/16 inch (1.6mm) below strike-off (B) on needle thread cam (C), as shown in Figure 24, with needle bar at BOTTOM of stroke.

Adjustments can be made by bringing needle bar up, loosen screw (D) slightly, bring needle bar down to BOTTOM of stroke, reposition eyelet (A) as required and bring needle bar back up. Torque screw (D) to 10 in-lbs (11.5 cm/kg).

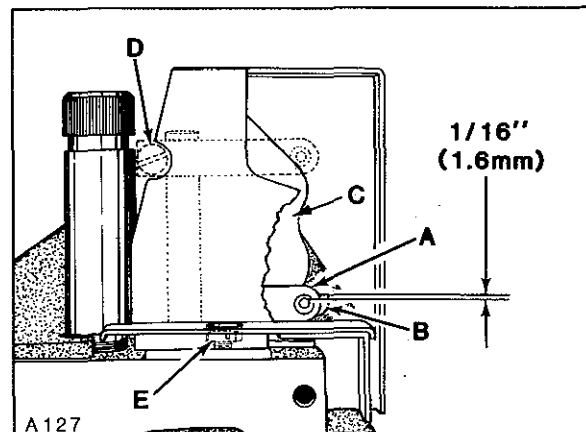
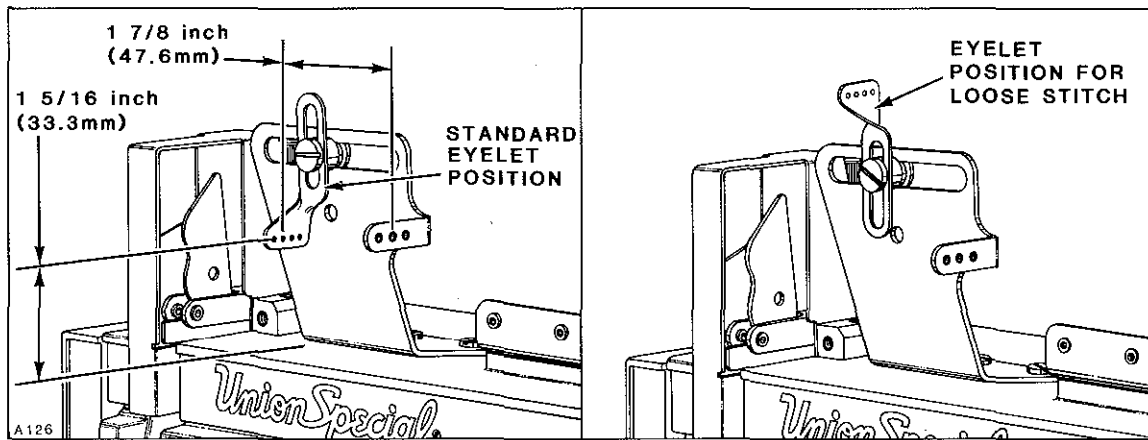


Fig. 24

Needle thread cam (C) should be set to barely contact needle thread with needle bar at top of stroke. Adjustment can be made by loosening needle thread cam attaching screw (E), reposition cam forward or rearward as required and retighten screw (E).

THREAD CONTROL (PRELIMINARY SETTINGS) (Continued)



As a starting point, the needle thread (adjustable) eyelet should be set 1 7/8 inch (47.6mm) from its right side to the right side of the thread control plate eyelet and 1 5/16 inch (33.3mm) from centerline of its eyelet to the top of the top cover, as illustrated above.

Tension on needle thread should be just enough to pull up uniform stitches. Tension on looper thread should be just enough to steady thread.

POWER "AIR-KLIPP" CHAIN CUTTER ADJUSTMENTS

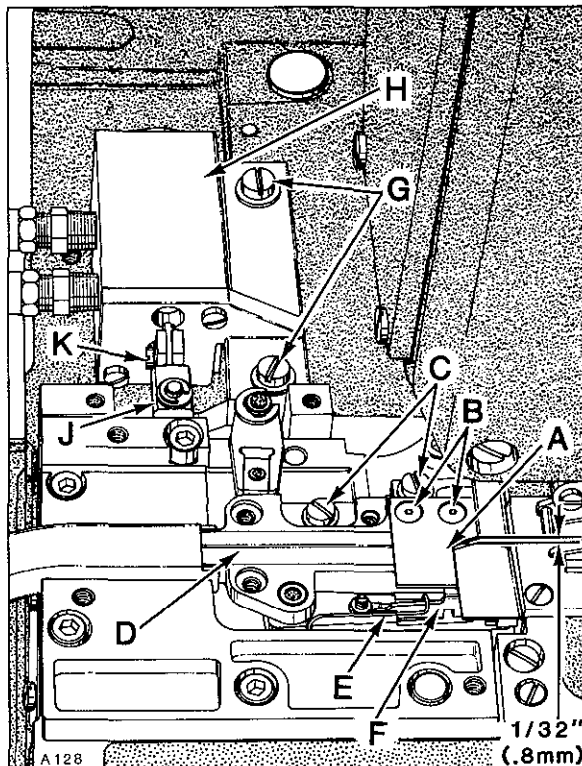


Fig. 25

Upper knife (A, Fig. 25) can be replaced by removing two screws (B). To replace lower knife, the upper knife must be removed and rear suction tube cover. Loosen two screws (C) and slide housing (D) towards the rear. Remove screw (A, Fig. 26) and lift up thread inlet (B). Unhook knife spring (E, Fig. 25) and remove lower knife (F). Reassemble knives in reverse manner. Reassemble thread inlet (B, Fig. 26) and slide housing (D, Fig. 25) forward against rear of throat plate; tighten two screws (C).

SETTING KNIFE CROSS OVER

Adjustment may be necessary after replacing or repairing knives. With sewing motor switch in "OFF" position and air lines connected to air motor, depress treadle until air motor begins to operate, in and out.

POWER "AIR-KLIPP" CHAIN CUTTER ADJUSTMENTS (Continued)

IMPORTANT: Be sure that lower knife does NOT strike against knife housing or feed chamber cover. Adjustment should be accomplished by loosening two screws (G, Fig. 25) and reposition air motor (H) left or right slightly, but under extreme circumstances it may become necessary to shorten the stroke of lower knife travel by repositioning coupling (J).

Carefully press against lower knife (F, Fig. 25) until air motor stalls. With treadle still depressed, check the knife cross over. Cross over of lower knife to upper knife is positioned correctly when the lower knife is 1/32 inch (.8mm) from the front of upper knife as shown in Figure 25. If adjustment is required, loosen screw (K) and reposition coupling (J) as required to obtain specified dimension.

SHEAR ANGLE

Shear angle should be .003 inch (.076mm), measured at rear cutting edge of lower knife (F, Fig. 25) and cutting edge of upper knife (A). Adjustment can be made by loosening nut (A, Fig. 27) and turning screw (B) clockwise to increase the angle or counterclockwise to decrease. Lock nut (A) after shear angle is set.

SETTING PRESSURE VALVES

Regulate valve on pneumatic control device for air motor of the "AIR-KLIPP" chain cutter to approximately 20-22 p.s.i. (1.5 bar) when air motor is operating. Regulate valve on pneumatic control device for the suction air to obtain maximum suction, yet so that the FABRIC TO BE SEWN will not be cut by the "AIR-KLIPP" chain cutter knives.

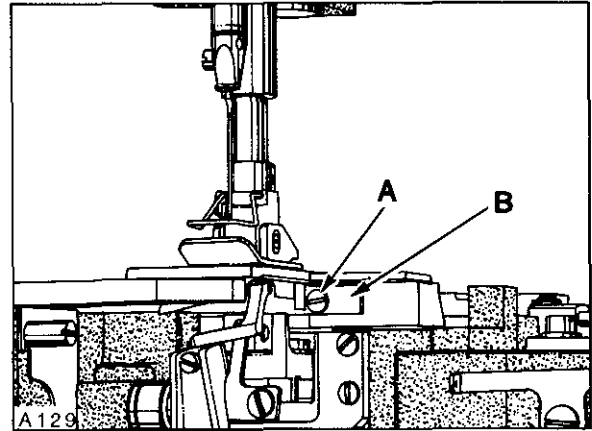
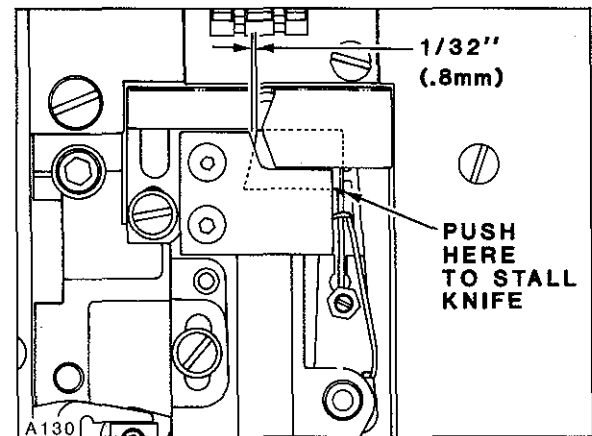


Fig. 26



KNIFE CROSS OVER

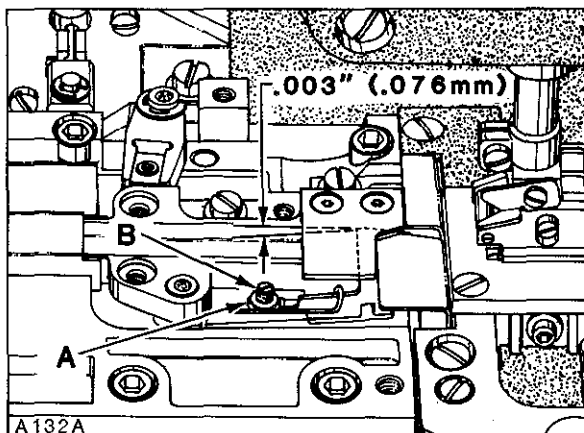
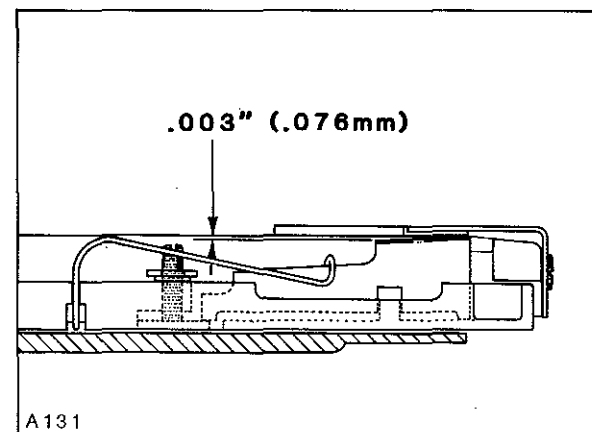


Fig. 27

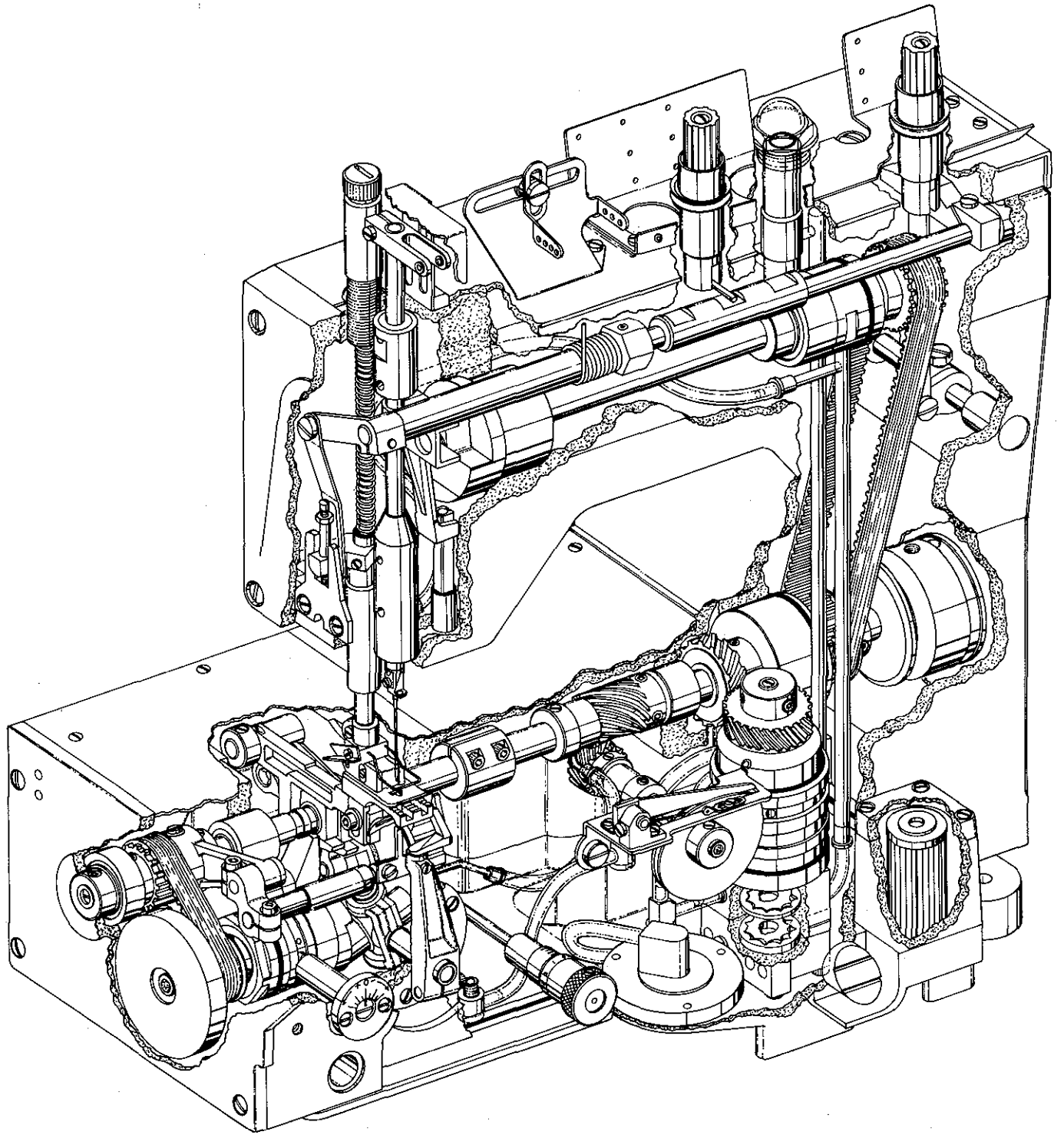


SHEAR ANGLE

GENERAL PREVENTIVE MAINTENANCE SCHEDULE

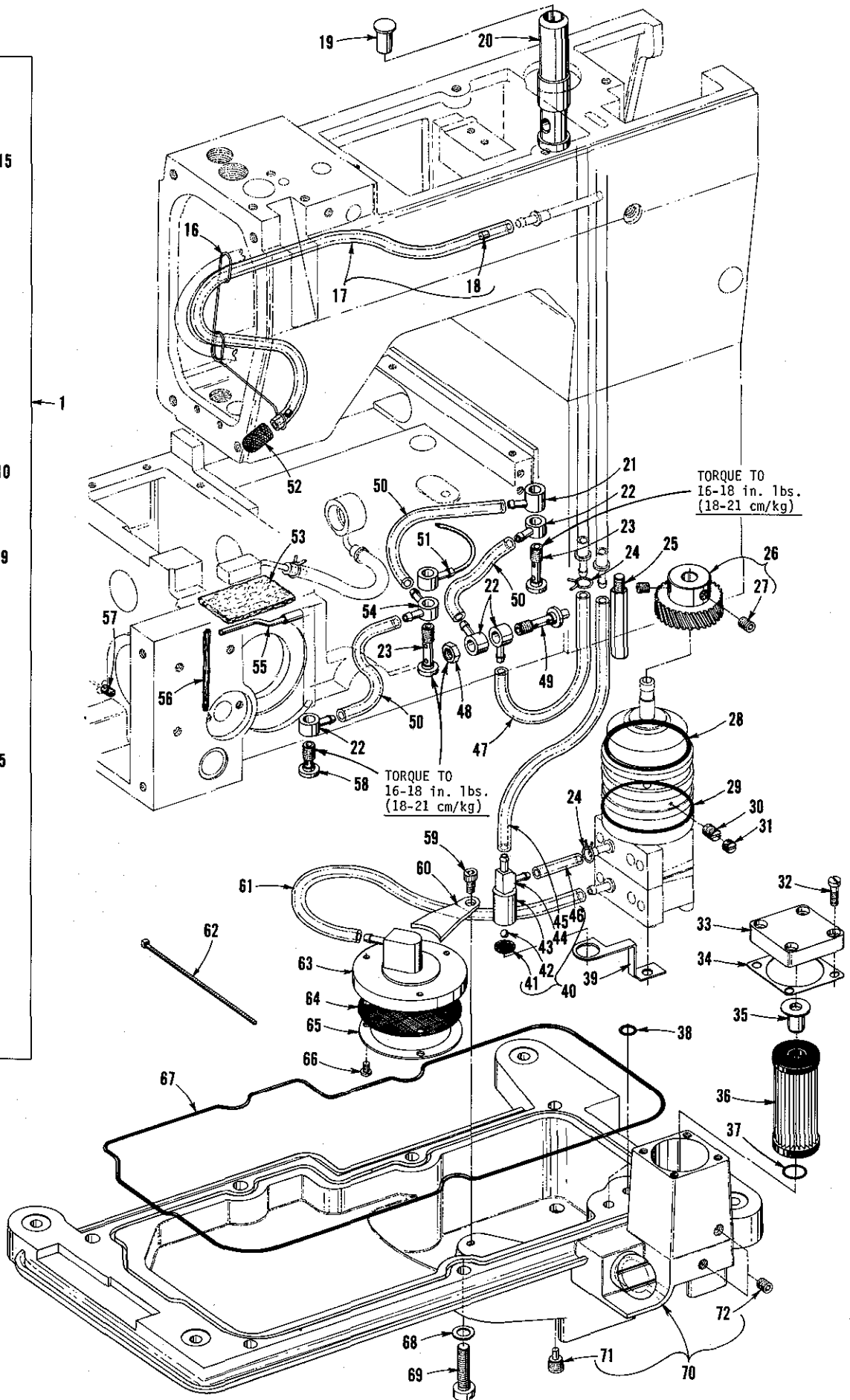
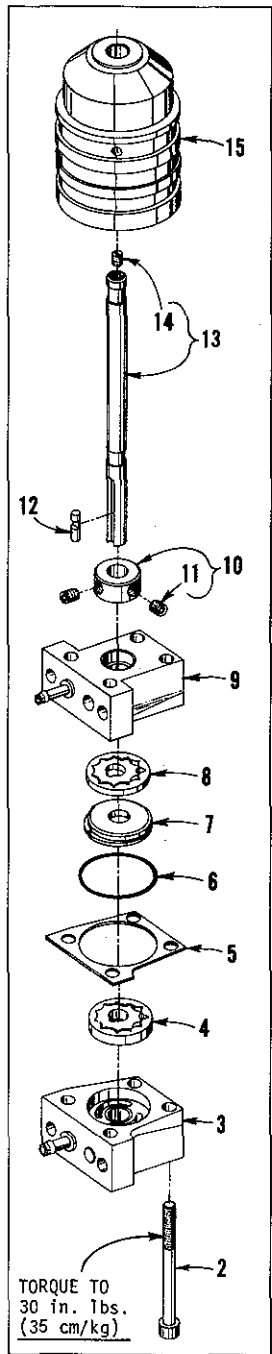
LF 600 TASK	DAILY	AFTER FIRST MONTH	EVERY MONTH	EVERY -3- MONTHS	EVERY -6- MONTHS	Yearly
Check oil level (sight gauge)oil level between red lines.	LF600					
Check pump operation (oil flow indicator - top of arm)	LF600					
Clean lint and dirt from machine	LF600					
Check that all guards and shields are in place and being used	LF600					
Change oil-filter (housed-on machine bottom cover)		LF600		LF600		
Change oil (oil which conforms to U.S.C. spec 175 must be used)		LF600			LF600	
Clean lint and dirt from suction screen (inside bottom cover)						LF600
Clean head oil suction screen						LF600
Check tension on internal timing belts		LF600			LF600	
Inspect clutch/ positioner motor, V-belt, tension and wear					LF600	
Check clutch motor clutch/brake adjustment				LF600		
Clean lint from clutch/positioner motor air passages		LF600	LF600			
Check needle (S) bent, blunt, sharp or worn eye or groove	LF600					

NOTE: SCHEDULING IS BASED ON NORMAL WORKING CONDITIONS FREQUENCY OF TASKS DEPENDS ON MACHINE DUTY CYCLE TIME AND PERSONNEL RESPONSIBLE TO PERFORM TASK DETERMINED BY PLANT MANAGEMENT.



EXPLODED VIEWS
AND
DESCRIPTION OF PARTS

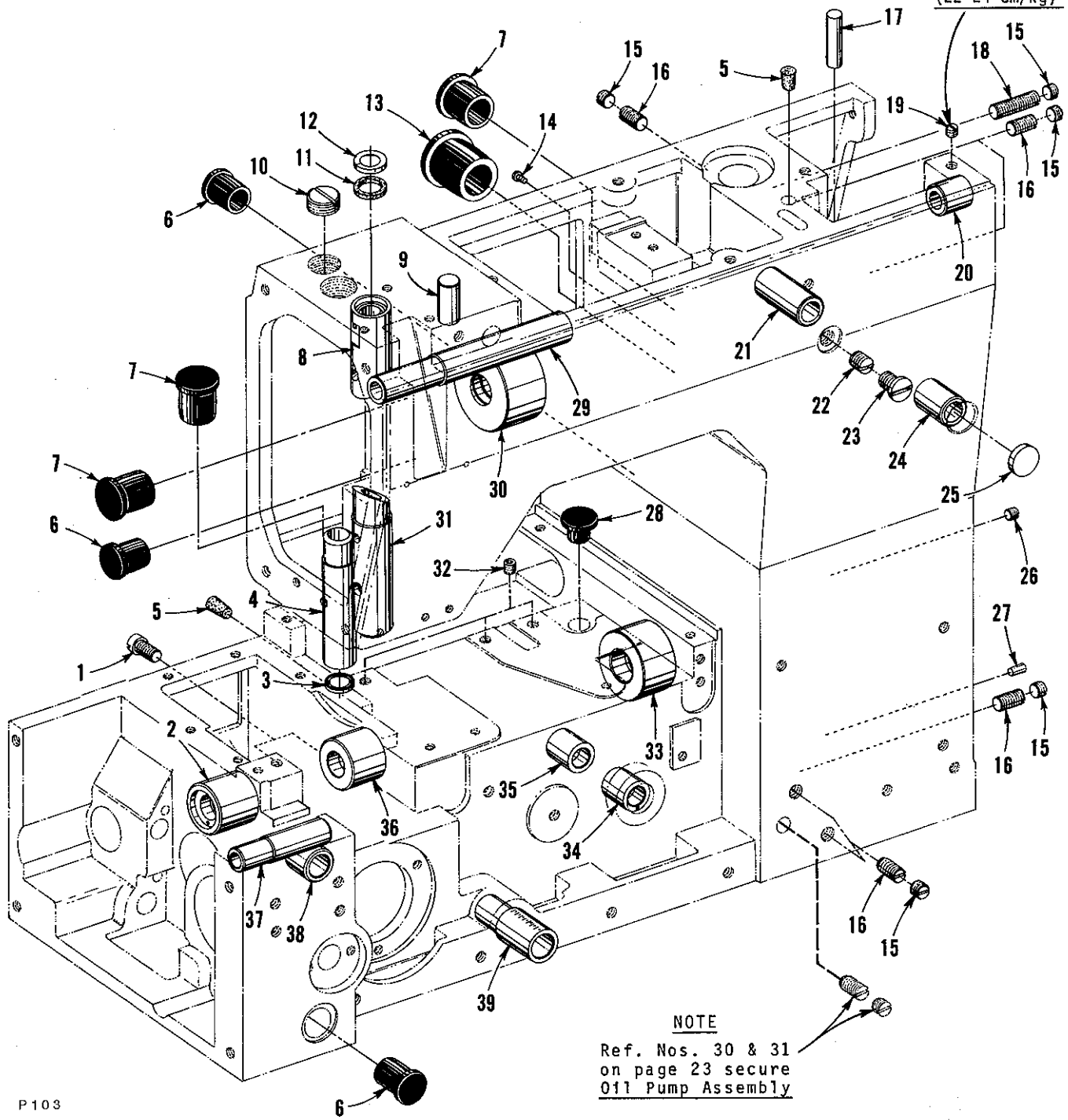
P101



OIL PUMP, PAN, AND LUBRICATING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	50393 E	Pump Assembly, oil -----	1
2	22653 B-36	Screw -----	4
3	50393 F	Housing, (pressure side) -----	1
4	C50093 U	Gerotor, 1/4 inch (6.4mm) thick -----	1
5	C50093 T	Divider, housing -----	1
6	660-684	"O" Ring -----	1
7	C50093 S	Spacer, housing -----	1
8	C50093 R	Gerotor, 1/8 inch (3.2mm) thick -----	1
9	50393 J	Housing, (syphon side) -----	1
10	35036 X	Collar, (positioning and thrust) -----	1
11	22894 C	Screw -----	2
12	C50093 Z	Pin, dowel -----	1
13	50393 D	Shaft, drive -----	1
14	89	Screw -----	1
15	50393 C	Bushing, oil delivery -----	1
16	50393 V	Retainer, wire -----	1
17	50393 AX	Tube, oil return -----	1
18	50393 BB	Restrictor, oil -----	2
19	50393 AT	Cap, oil indicator -----	1
20	50393 A	Indicator, oil, (priority metering valve) -----	1
21	50394 K	Connector, oil, single feed -----	1
22	C50094 C	Connector, oil, single feed -----	4
23	35094 A	Screw, oil connection -----	2
24	668-885	Clamp, oil tube -----	2
25	22841 M	Stand, oil plug -----	1
26	35039 A	Gear, driven, oil pump -----	1
27	22894 J	Screw -----	2
28	661-51	"O" Ring, -----	1
29	660-455	"O" Ring, -----	1
30	74 E	Screw -----	1
31	22586	Screw, locking -----	1
32	22541	Screw -----	4
33	C50093 F	Cover, oil filter -----	1
34	C50093 G	Gasket -----	1
35	C50093 CB	By-Pass, oil filter -----	1
36	C50093 CA	Filter, oil -----	1
37	660-206	"O" Ring -----	1
38	999-211 E	"O" Ring -----	2
39	50393 BA	Bracket, manifold -----	1
40	50393 AW	Syphon Assembly, oil -----	1
41	50393 AU	Screen, oil -----	1
42	79-31	Ball, steel -----	1
43	50393 AV	Manifold, oil syphon -----	1
44	671 F-41	Fitting -----	1
45	C50093 CJ	Tube, oil return -----	1
46	50393 AY	Tube, oil -----	1
47	C50094 R	Tube, oil -----	1
48	258	Nut -----	1
49	50393 BK	Fitting, oil -----	1
50	50394 B	Tube, oil -----	3
51	50394 L	Tube, oil, complete (take-up gear) -----	1
52	50393 X	Screen, filter -----	1
53	666-310	Felt, oil return -----	1
54	C50094 B	Connector, double feed -----	1
55	50394 G	Tube, oil (looper rocker) -----	1
56	W0-3	Yarn, Columbia, rear needle guard bushing (8 strands)-----	1
57	C50094 AK	Plug, felt, oil return -----	1
58	22720 A	Screw, oil connection -----	1
59	22652 A-4	Screw -----	1
60	50393 AR	Clamp, oil screen housing -----	1
61	C50094 Y	Tube, oil -----	1
62	670 E-2	Tie, cable, to secure Ref. No. 45 to Ref. No. 22 -----	1
63	35093 F	Housing, screen -----	1
64	35093 H	Screen -----	1
65	35093 J	Plate, retaining -----	1
66	97	Screw -----	3
67	35082 B	Gasket, oil pan -----	1
68	6042 A	Washer -----	7
69	820	Screw -----	7
70	50393 N	Pan, oil -----	1
71	22571 E	Screw, oil drain plug -----	1
72	22571 J	Screw, plug -----	2

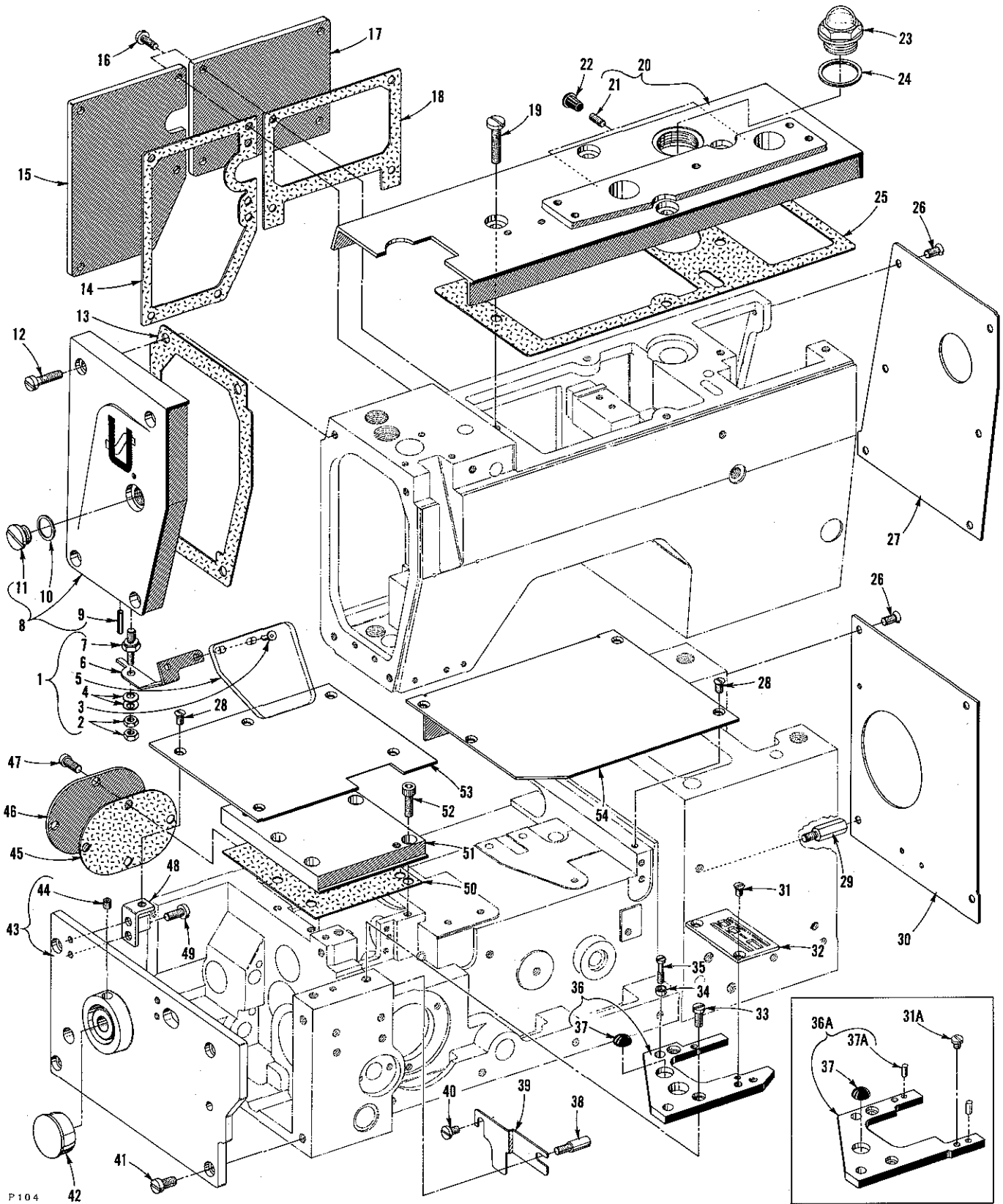
TORQUE TO
19-21 in. lbs.
(22-24 cm/kg)



NOTE
Ref. Nos. 30 & 31
on page 23 secure
Oil Pump Assembly

MAIN FRAME BUSHINGS AND PLUGS

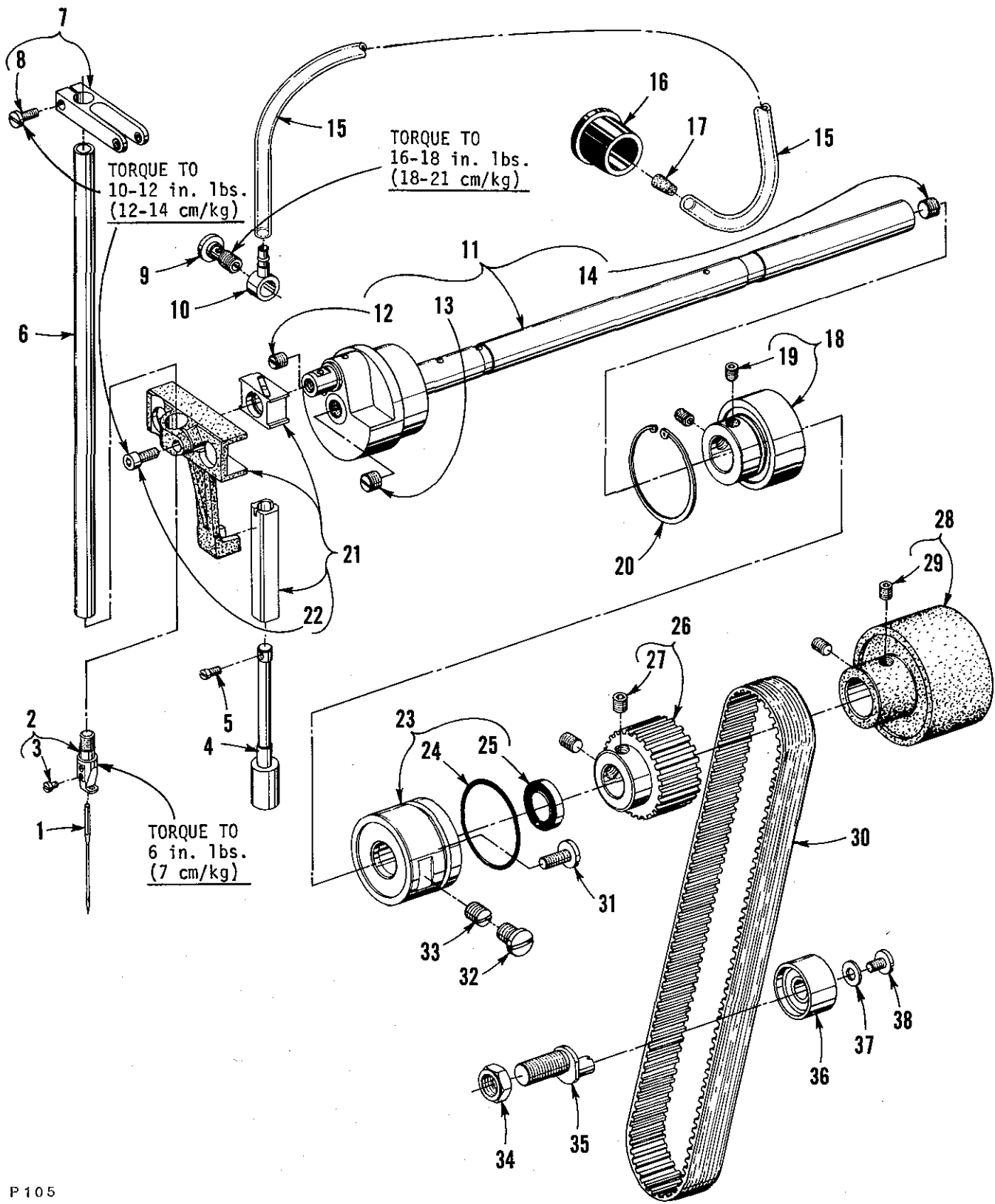
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	136 A	Screw -----	2
2	50344 K	Bushing, lower mainshaft -----	1
3	660-739	Seal, oil presser bar bushing -----	1
4	C50057 D	Bushing, presser bar -----	1
5	C067 B	Plug, cork -----	2
6	C50093 CT	Plug, oil -----	3
7	C50093 AY	Plug, oil -----	3
8	50354 C	Bushing, needle bar (upper) -----	1
9	51-794 BLK.	Plug, aluminum -----	1
10	22539 G	Screw, plug -----	1
11	666-311	Screen, needle bar bushing -----	1
12	C50054 D	Shield, needle bar bushing -----	1
13	C50093 AX	Plug, oil -----	1
14	604	Screw, plug -----	2
15	22586	Screw, locking -----	5
16	74 E	Screw, plug -----	4
17	50394 S	Plug, steel -----	1
18	22533 A	Screw, plug -----	1
19	22764 C	Screw, set -----	1
20	50390 C	Bushing, presser foot lifter lever (right) -----	1
21	50390	Bushing, presser foot lifter lever (rear) -----	1
22	C50055 H	Screw, set -----	1
23	22706 C	Screw, locking -----	1
24	50390 A	Bushing, presser foot lifter lever (front) -----	1
25	51-627 BLK.	Plug -----	1
26	22565	Screw, plug -----	1
27	C50093 CN	Plug, aluminum -----	1
28	C50035 Z	Plug, oil -----	1
29	50390 D	Bushing, presser foot lifter lever (left) -----	1
30	50355 L	Bushing, upper mainshaft -----	1
31	50354 B	Bushing, needle bar (lower) -----	1
32	22894 C	Screw, plug -----	3
33	50344 L	Bushing, lower mainshaft -----	1
34	50344 G	Bushing, take-up shaft (front) -----	1
35	50344 F	Bushing, take-up shaft (rear) -----	1
36	50344 B	Bushing, lower mainshaft -----	1
37	50368 B	Bushing, rear needle guard shaft -----	1
38	50344 E	Bushing, looper rocker (rear) -----	1
39	35036 AB	Bushing, stitch control shaft -----	1



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SAFETY SHIELD, COVERS AND PLATES

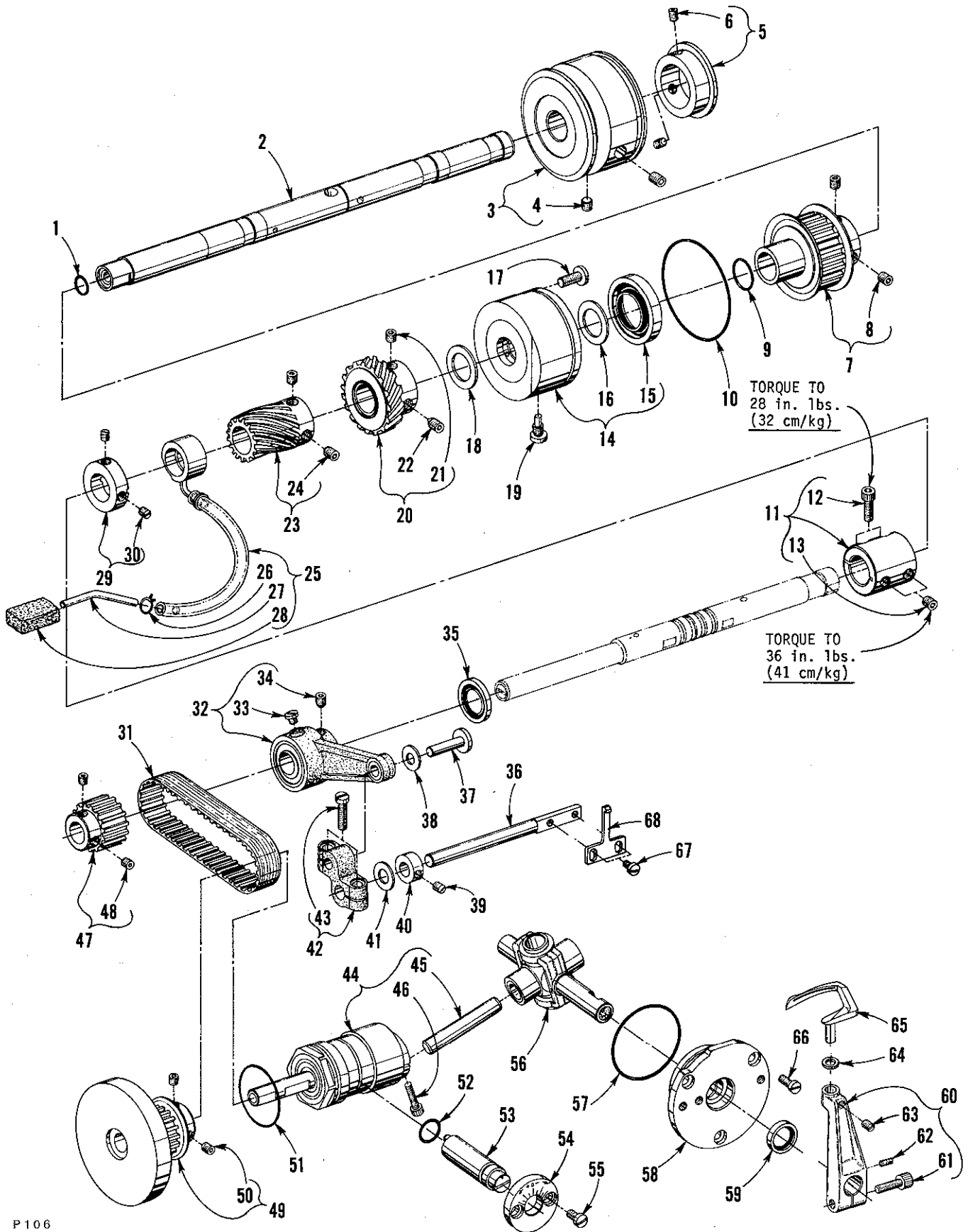
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	C50095 G	Shield Assembly, safety -----	1
2	12934 A	Nut -----	2
3	RM2879-2	Rivet -----	2
4	97127	Washer, spring -----	2
5	C50095 F	Shield, safety -----	1
6	C50095 E	Bracket, mounting -----	1
7	C50095 D	Stud -----	1
8	C50082 R	Cover, head -----	1
9	660-219 A	Pin, roll (stop) -----	1
10	C50082 AA	Gasket -----	1
11	22883 B	Screw, plug -----	1
12	22541 C	Screw -----	4
13	C50082 AW	Gasket -----	1
14	C50082 K	Gasket -----	1
15	C50082 V	Cover, head (left rear) -----	1
16	22569 M	Screw -----	9
17	C50082 M	Cover, head (right rear) -----	1
18	C50082 N	Gasket -----	1
19	22861 C	Screw -----	4
20	50382 G	Cover, top -----	1
21	22894 J	Screw -----	2
22	50394 J	Plug, oil -----	2
23	C50093 AU	Cap, oil filler -----	1
24	C50082 X	Gasket -----	1
25	50382 F	Gasket -----	1
26	22526 H	Screw -----	10
27	50382 J	Cover -----	1
28	22525 E	Screw -----	9
29	22841 N	Screw, adaptor -----	1
30	50382 H	Cover -----	1
31	87	Screw, all Styles except LF611K100HM and 100MW -----	2
31A	22570	Screw, for Styles LF611K100HM and 100MW -----	2
32	- - -	Throat Plate, See "SEWING COMBINATIONS" -----	1
33	22839	Screw -----	2
34	35036 AE	Ferrule, locating -----	2
35	22587 N	Screw -----	2
36	50380	Support, throat plate, all Styles except LF611K100HM and 100MW -----	1
36A	50380 D	Support, throat plate, for Styles LF611K100HM and 100MW -----	1
37	660-939	Bumper, rubber -----	1
37A	51280 K	Pin, dowel -----	2
38	22799 AH	Stud, latch spring -----	1
39	50393 U	Shield, lint -----	1
40	94	Screw -----	1
41	22517	Screw -----	4
42	999-216 C	Plug, plastic -----	1
43	50382 A	Cover, end -----	1
44	22894 D	Screw (bearing) -----	2
45	35082 F	Gasket -----	1
46	35082 E	Cover, feed chamber (rear) -----	1
47	22569 D	Screw -----	4
48	50301 B	Support, cloth plate, all Styles except LF611K112MF and 112MG -----	2
-	50301 B	Support, cloth plate, for Styles LF611K112MF and 112MG -----	1
49	93	Screw, all Styles except LF611K112MF and 112MG -----	4
-	93	Screw, for Styles LF611K112MF and 112MG -----	2
50	50382 D	Gasket -----	1
51	50382 E	Cover, feed chamber (top) for Styles LF611K100MF, 100MG, 100MR and 100MAW -----	1
-	50382 EA	Cover, feed chamber (top) for Styles LF611K100HM and 100MW -----	1
52	22653 B-8	Screw -----	6
53	50301 A	Plate, cloth (left) for Styles LF611K100MF, 100MG, 100MR and 100MAW -----	1
-	50301 R	Plate, cloth (left) for Styles LF611K100HM and 100MW -----	1
54	50301	Plate, cloth (right) -----	1



P105

NEEDLE DRIVE (SCOTCH YOKE) AND ASSOCIATED PARTS

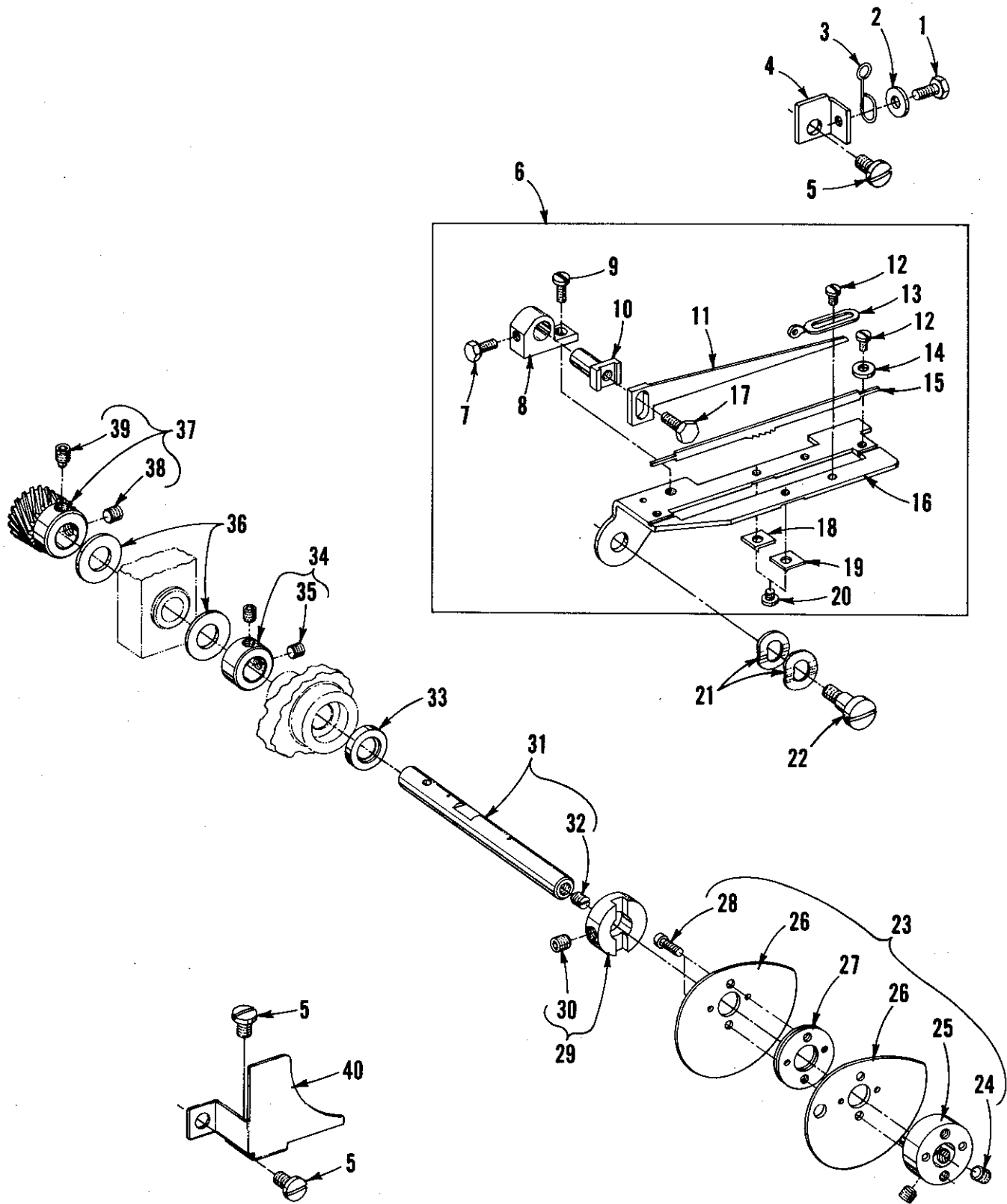
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	128 GBS	Needle, all Styles except LF611K100HM and 100MW ---	1
-	128 GAS	Needle, for Styles LF611K100HM and 100MW -----	1
2	C50018 D	Head, needle bar -----	1
3	22768 A	Screw -----	1
4	50355 G	Stud, support -----	1
5	22655 B-7	Screw -----	1
6	C50017 C	Bar, needle -----	1
7	C50058 H	Eyelet, needle bar -----	1
8	18-71	Screw -----	1
9	22720 C	Screw -----	1
10	C50094 X	Fitting, male (barbed) -----	1
11	50355 T	Scotch Yoke Assembly, all Styles except LF611K100HM	1
-	50355 P	Scotch Yoke Assembly, for Style LF611K100HM -----	1
12	88 B	Screw -----	1
13	J80 K	Screw -----	1
14	22591	Screw -----	1
15	C50093 CJ	Tube, air -----	1
16	C50093 AY	Plug -----	1
17	C067 D	Cork -----	1
18	C50036 P	Bearing and Collar Assembly -----	1
19	22894 AD	Screw -----	2
20	660-713	Ring, retaining -----	1
21	50355 H	Yoke Assembly -----	1
22	22596 E	Screw -----	1
23	35093 P	Housing, scotch yoke drive -----	1
24	660-708	"0" Ring -----	1
25	660-680	Seal, lip -----	1
26	35042 A	Sprocket, scotch yoke drive -----	1
27	22894 X	Screw -----	2
28	C50021 A	Handwheel -----	1
29	22894 C	Screw -----	2
30	50342 R	Belt, scotch yoke drive -----	1
31	25 S	Screw -----	2
32	22706 C	Screw, locking -----	1
33	C50055 H	Screw, set -----	1
34	80630 D	Nut -----	2
35	50354	Stud, idler -----	2
36	35042 C	Roller, idler -----	2
37	53678 N	Washer -----	2
38	22585 C	Screw -----	2



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LOWER MAINSHAFT, LOOPER AND REAR NEEDLE GUARD DRIVE

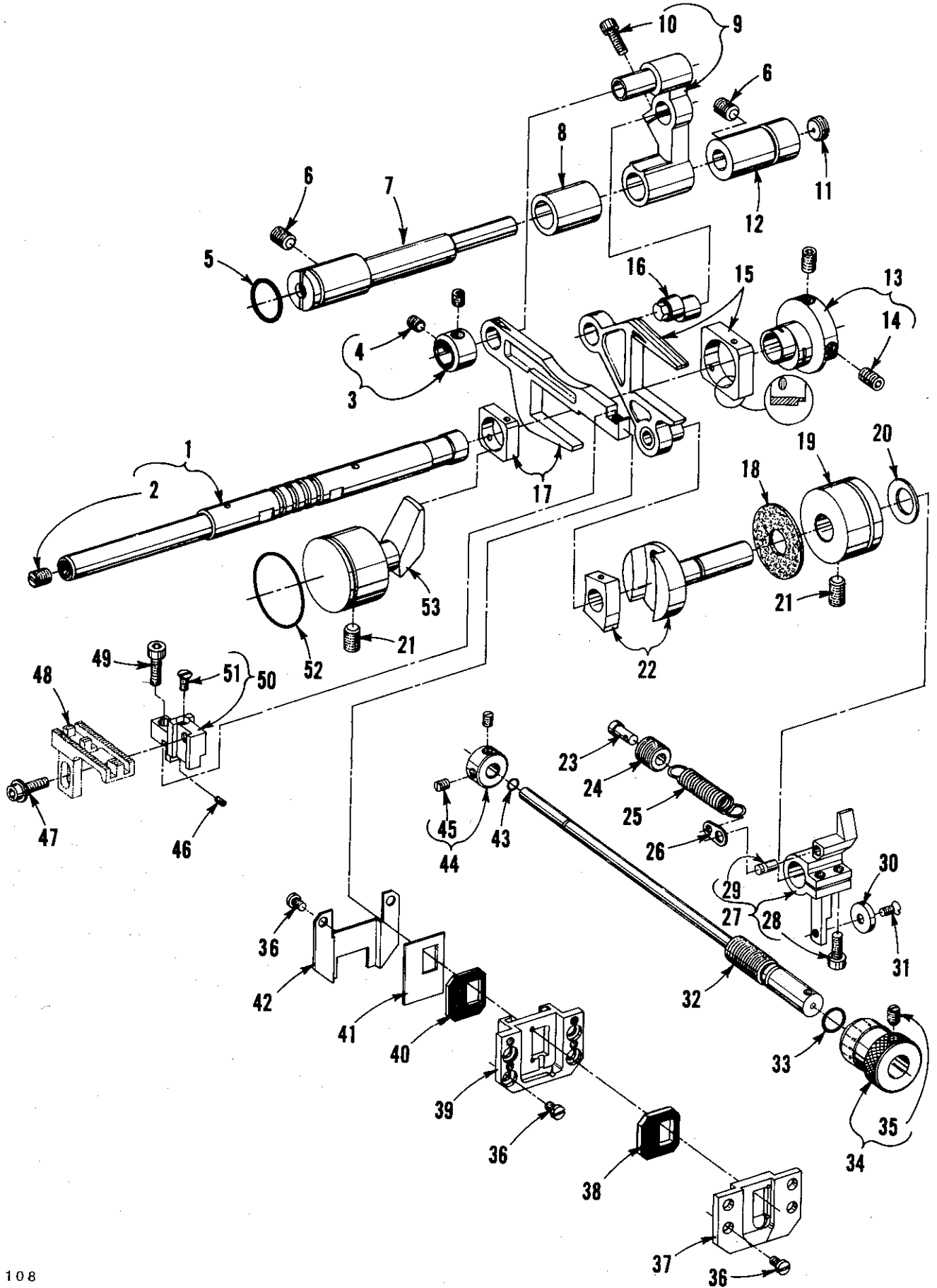
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	660-220	"0" Ring -----	1
2	50322 AA	Mainshaft, lower (right) -----	1
3	35021	Pulley -----	1
4	22650 CD-6	Screw, set -----	2
5	35021 B	Guard, pulley -----	1
6	22894 C	Screw, set -----	2
7	50342 H	Sprocket, lower mainshaft (right) -----	1
8	22894 X	Screw -----	2
9	660-212	"0" Ring -----	1
10	660-935	"0" Ring -----	1
11	50343	Coupling, lower mainshaft -----	1
12	22652 A-8	Screw -----	2
13	22894 AE	Screw, set -----	2
14	50393 S	Housing, lower mainshaft -----	1
15	660-998	Seal,oil -----	1
16	35055 V	Washer, thrust -----	1
17	25 S	Screw, retaining (lower mainshaft housing) -----	2
18	35055 V	Washer (spacer) -----	1
19	62245 C	Stud, locating -----	1
20	50339	Gear, oil pump drive (nylon) -----	1
21	22894 AD	Screw, set -----	1
22	22894 K	Screw, spot -----	1
23	50342 D	Gear, take-up drive -----	1
24	22894 C	Screw -----	2
25	50393 AN	Pump Assembly, oil siphon -----	1
26	660-885	Clamp, tube -----	1
27	50393 AL	Tube, brass -----	1
28	666-214	Felt -----	1
29	57847	Collar -----	1
30	95	Screw -----	2
31	C50042 AD	Belt, looper drive -----	1
32	50368 C	Connecting Rod, needle guard -----	1
33	22830	Screw -----	1
34	22894 AD	Screw -----	2
35	660-934	Seal, oil -----	1
36	C50068 AR	Shaft, rear needle guard -----	1
37	50368 A	Pin, pivot -----	1
38	50368 E	Washer, non-metallic -----	1
39	22743	Screw, for 50368 D -----	1
40	50368 D	Collar, thrust -----	1
41	6042 A	Washer -----	1
42	50368	Connection, rear needle guard pivot -----	1
43	22729	Screw -----	2
44	29105 AT	Drive Assembly, looper -----	1
45	667 J-33	Pin, crank -----	1
46	22653 J-8	Screw -----	1
47	50342 B	Sprocket, looper drive -----	1
48	22894 AD	Screw -----	2
49	50342 A	Sprocket, looper driven -----	1
50	22894 AD	Screw -----	2
51	660-979	"0" Ring -----	1
52	660-206	"0" Ring -----	1
53	50314	Eccentric, looper avoid adjusting -----	1
54	50314 A	Plate, eccentric retaining -----	1
55	22569 G	Screw -----	2
56	29192 AE	Rocker Assembly, looper -----	1
57	660-455	"0" Ring -----	1
58	50344 C	Housing, looper rocker bearing -----	1
59	C50044 V	Seal,oil -----	1
60	50313	Holder, looper -----	1
61	22652 B-10	Screw, binder -----	1
62	22575 B	Screw, adjusting -----	1
63	22565 X	Screw, set -----	1
64	21210	Collar, looper, for Styles LF611K100HM and 100MW ONLY -----	1
65	G51409 C	Looper, all Styles except LF611K100HM and 100MW -----	1
-	51909 C	Looper, for Style LF611K100HM -----	1
-	51208	Looper, for Style LF611K100MW -----	1
66	22569 G	Screw -----	3
67	90	Screw -----	2
68	50325	Guard, needle -----	1



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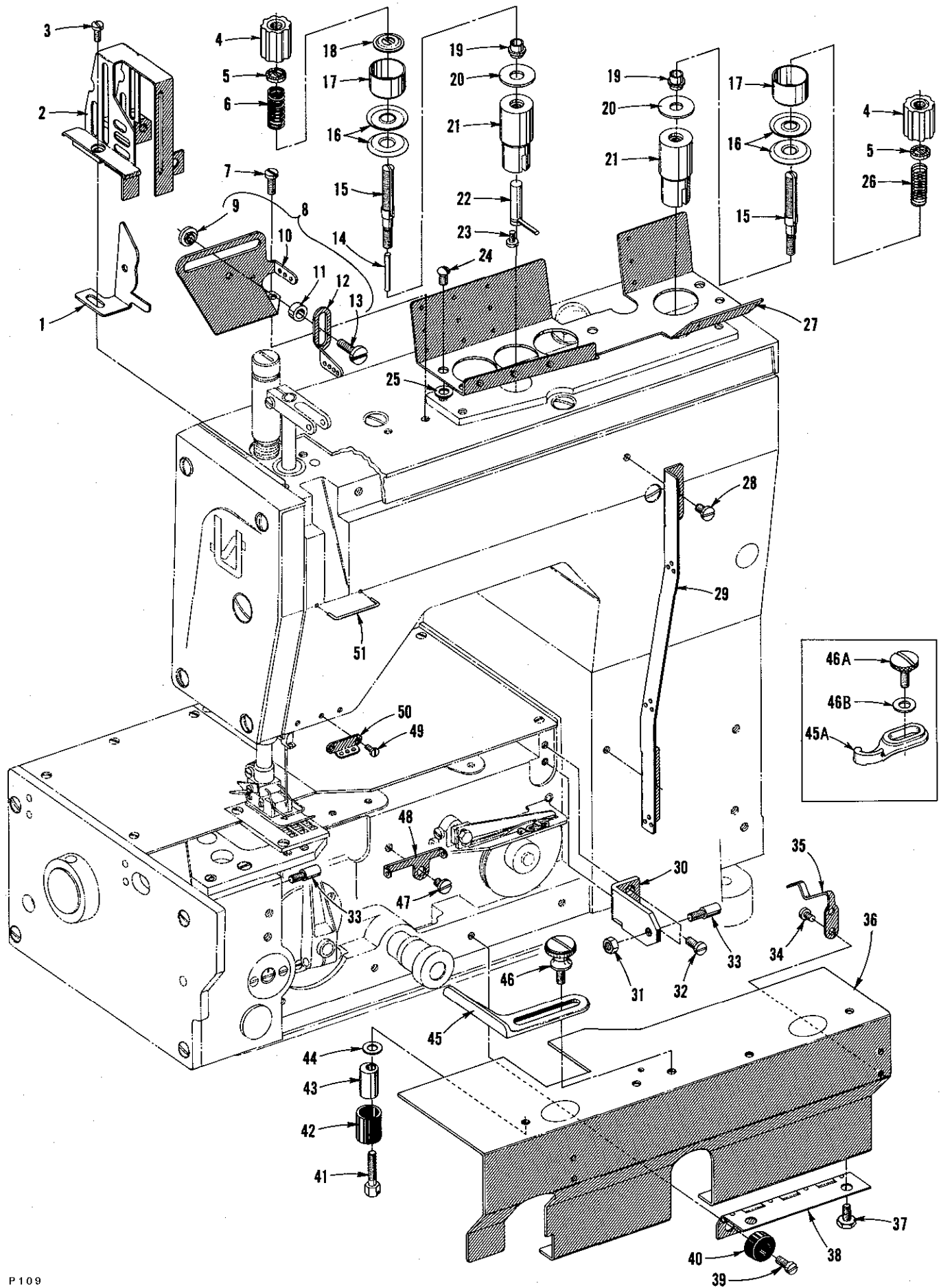
LOOPER THREAD CAST-OFF AND DRIVING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	22781	Screw -----	1
2	53678 N	Washer -----	1
3	50332	Spring, latch -----	1
4	50357 A	Bracket, mounting -----	1
5	22569 D	Screw -----	3
6	50357 B	Plate Assembly, cast-off support -----	1
7	22588 S	Screw -----	1
8	52904 E	Bracket, retaining finger support -----	1
9	22768	Screw -----	1
10	52804 E	Support, retaining finger -----	1
11	50304 A	Finger, retaining -----	1
12	73 A	Screw -----	4
13	52958 D	Eyelet -----	2
14	157-15	Washer -----	2
15	50323 D	Strike-off -----	1
16	50357	Plate, cast-off support -----	1
17	22588 A	Screw -----	1
18	50357 G	Knife, anti-wrap up (back) -----	1
19	50357 H	Knife, anti-wrap up (front) -----	1
20	22798	Screw -----	2
21	99521	Washer, spring -----	2
22	50357 D	Screw, shoulder -----	1
23	50323	Take-Up Assembly, looper thread -----	1
24	22894 C	Screw -----	2
25	50323 B	Hub -----	1
26	50323 A	Disc, take-up -----	2
27	C50077 P	Spacer -----	1
28	22797 B	Screw -----	2
29	50323 C	Collar, positioning -----	1
30	22894 C	Screw -----	1
31	50342 F	Shaft, take-up -----	1
32	89	Screw -----	1
33	660-986	Seal, lip -----	1
34	50344 H	Collar, thrust -----	1
35	22894 C	Screw -----	2
36	54274 P	Washer, thrust -----	2
37	50342 E	Gear, take-up (driven) -----	1
38	22894 C	Screw, set -----	1
39	22894 D	Screw, spot -----	1
40	50357 F	Guard, take-up disc -----	1



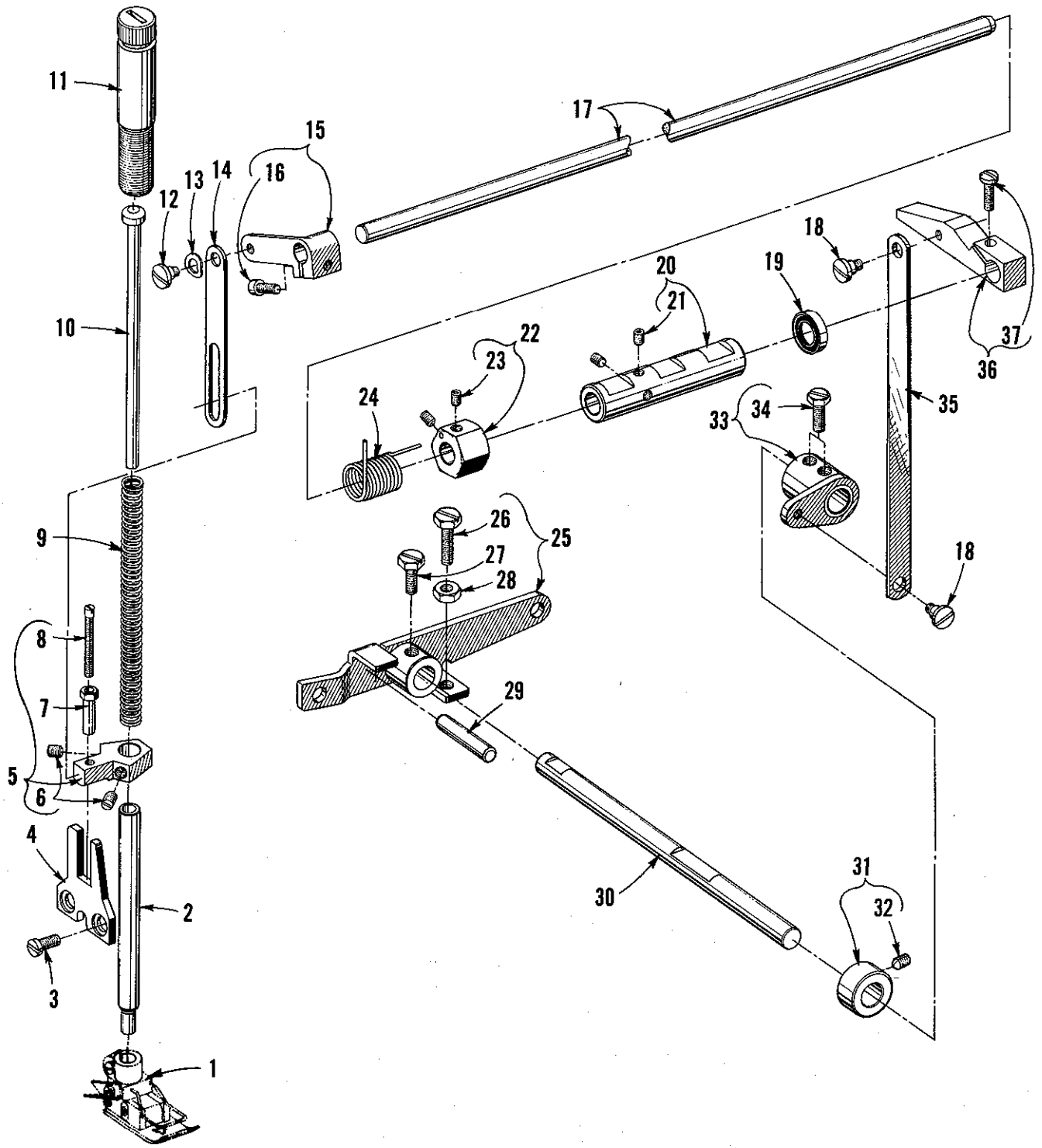
FEED DRIVE AND STITCH REGULATING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	50322 K	Mainshaft, lower (left) -----	1
2	22591	Screw -----	1
3	50335 L	Collar, feed bar thrust -----	1
4	22894 C	Screw, set -----	2
5	999-211 C	"0" Ring -----	1
6	22591 A	Screw, set -----	2
7	35034 N	Shaft, rocker -----	1
8	50336 C	Spacer, rocker shaft -----	1
9	50334 K	Rocker, feed -----	1
10	22596 E	Screw -----	1
11	22571 D	Screw, plug -----	1
12	35034 M	Bushing, rocker shaft -----	1
13	35040 B-15	Eccentric, double, all Styles except LF611K100HM ----	1
-	35040 B-22	Eccentric, double, for Style LF611K100HM -----	1
14	22894 J	Screw -----	2
15	29126 FB	Fork Assembly, driving -----	1
16	35034 J	Stud, eccentric -----	1
17	29126 EV	Feed Bar Assembly -----	1
18	35036 AZ	Pad, brake -----	1
19	35036 F	Bushing, stitch adjusting shaft -----	1
20	661-50	Washer, cup -----	1
21	22894 AB	Screw -----	2
22	35036 C	Shaft Assembly, stitch adjusting -----	1
23	50335	Retainer, spring -----	1
24	22714 C	Screw, tension (feed adjusting) -----	1
25	50355	Spring -----	1
26	50335 A	Holder, spring -----	1
27	50336 D	Lever, stitch control -----	1
28	22596 E	Screw -----	2
29	661-35	Pin -----	1
30	50335 C	Cam, roller -----	1
31	77 K	Screw -----	1
32	50335 E	Shaft, stitch control -----	1
33	660-206	"0" Ring -----	1
34	35036 AP	Knob, stitch adjusting shaft -----	1
35	22764 A	Screw -----	1
36	22617 J-16	Screw -----	10
37	50334 B	Guide, feed bar (front) -----	1
38	50334 AB	Seal, feed bar, (front) -----	1
39	50334 C	Guide, feed bar (rear) -----	1
40	50334 AA	Seal, feed bar (rear) -----	1
41	50334 W	Scraper, rear oil -----	1
42	50334 Y	Baffle, rear oil plate -----	1
43	660-980	"0" Ring -----	1
44	50335 D	Collar, stitch length stop -----	2
45	22560 B	Screw -----	2
46	99277	Screw, stabilizing -----	1
47	22569 AD	Screw -----	1
48	- - -	Feed Dog, See "SEWING COMBINATIONS" -----	1
49	22729 L	Screw -----	1
50	50334 F	Holder, feed dog -----	1
51	22637 P-24	Screw -----	1
52	660-969	"0" Ring -----	1
53	50334 A	Guide, feed bar -----	1



FRONT COVER AND THREAD HANDLING PARTS

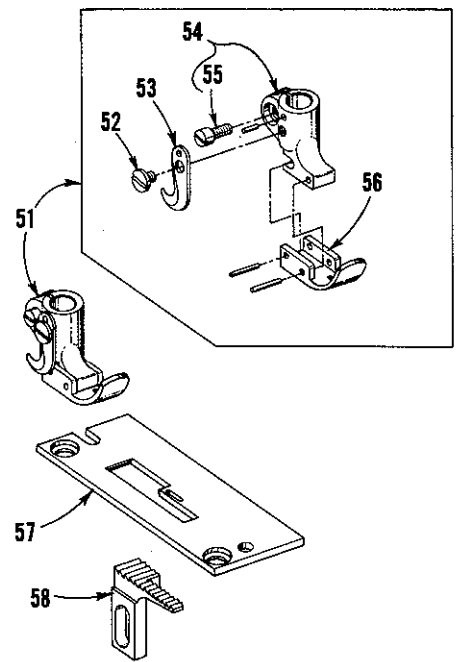
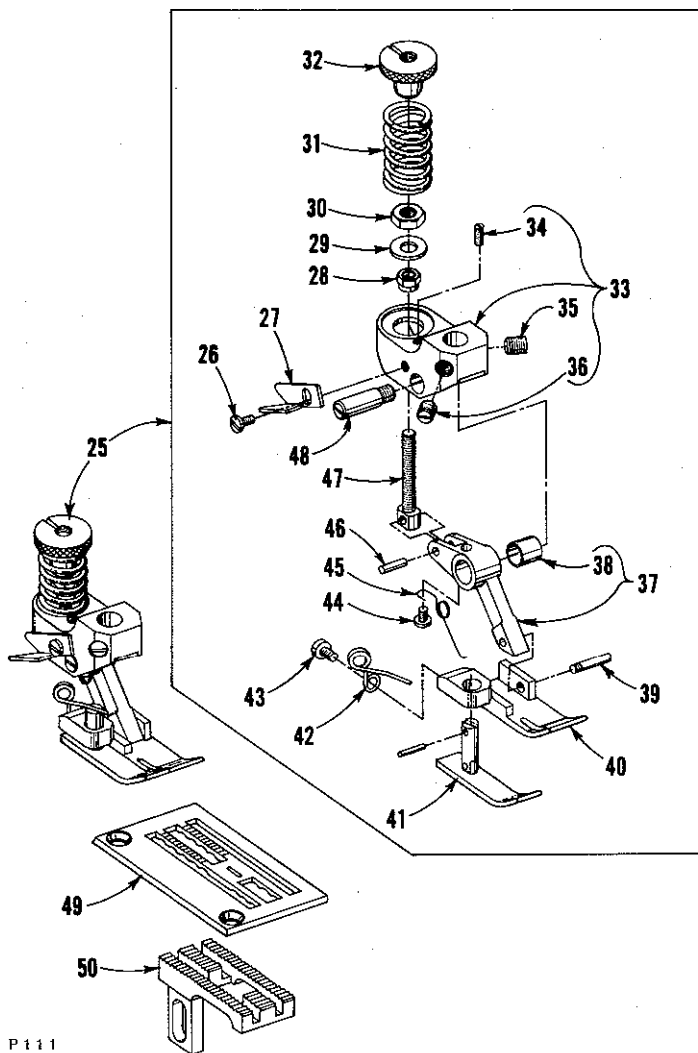
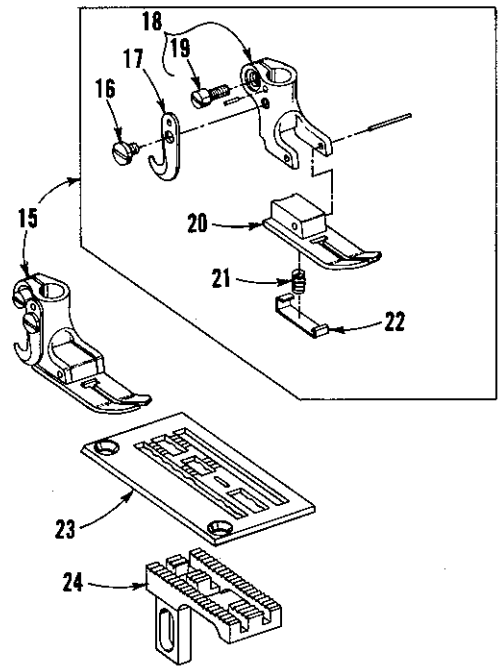
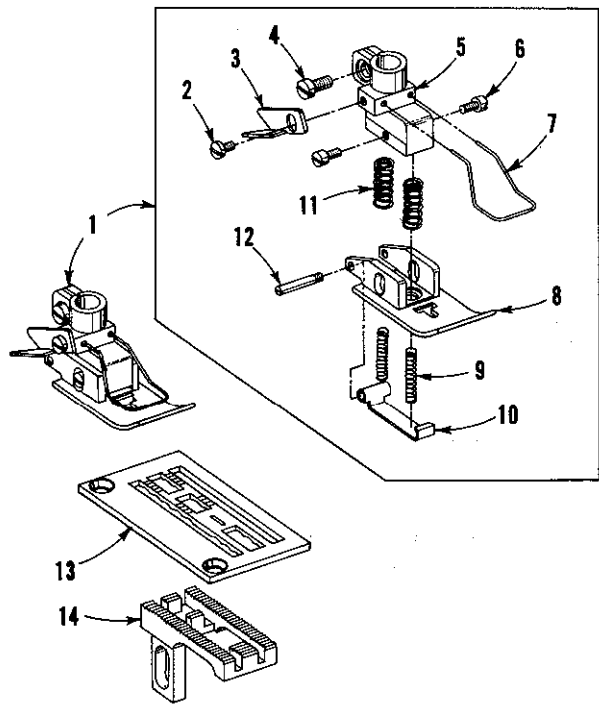
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	C50070 E	Cam, needle thread take-up -----	1
2	C50054 M	Guard, needle bar eyelet -----	1
3	22569 C	Screw -----	3
4	C50092 S	Nut, thread tension -----	2
5	39592 AK	Ferrule, tension spring -----	2
6	51292 F-4	Spring, needle thread tension -----	1
7	22569 C	Screw -----	2
8	29476 PG	Needle Thread Control Assembly -----	1
9	56358 D	Nut -----	1
10	C50004 C	Plate, needle thread control -----	1
11	C50058 R	Spacer -----	1
12	51858	Eyelet, adjustable -----	1
13	22757	Screw -----	1
14	C50092 J	Pin, thread tension release -----	1
15	C50092 L	Post, tension -----	2
16	109	Disc, tension -----	4
17	56392 F	Shield, tension spring -----	2
18	C50092 M	Washer, tension release -----	1
19	51292 A	Ferrule, tension post -----	2
20	C50092 R	Washer -----	2
21	50392 B	Housing, tension assembly -----	2
22	C50092 G	Pin, tension release actuating -----	1
23	18-799	Screw -----	1
24	22501 A	Screw -----	5
25	660-257	Gasket -----	5
26	51292 F-1	Spring, looper thread tension -----	1
27	50392	Guide, thread -----	1
28	22569 D	Screw -----	2
29	50358	Eyelet, looper thread -----	1
30	50332 B	Bracket, support -----	1
31	35569 J	Nut -----	1
32	22569 C	Screw -----	2
33	22799 AH	Stud, latch spring -----	2
34	22513	Screw -----	4
35	50332 A	Spring, latch -----	2
36	50382 C	Cover, front, all Styles except LF611K100HM and 100MW -----	1
-	50382 AM	Cover, front, for Style LF611K100HM -----	1
-	50382 AA	Cover, front, for Style LF611K100MW -----	1
37	22792 A	Screw -----	4
38	50378	Hinge, front cover -----	2
39	22569 B	Screw -----	4
40	661-26	Bumper, rubber -----	4
41	22519 J	Screw -----	2
42	50393 W	Bumper, rubber -----	2
43	50382 T	Stop, adjustable -----	2
44	20	Washer -----	2
45	24	Guide, edge, all Styles except LF611K100HM and 100MW -----	1
45A	25 S	Guide, edge, for Style LF611K100MW -----	1
46	25	Screw, all Styles except LF611K100HM and 100MW -----	2
46A	25 TB	Screw, for Style LF611K100MW -----	1
46B	21657 E	Washer, for Style LF611K100MW -----	1
47	22569 D	Screw -----	1
48	50392 A	Eyelet, looper thread -----	1
49	605 A	Screw -----	2
50	C50044 E	Guide, needle thread -----	1
51	C50058 F	Wire, rubbing, needle thread -----	1



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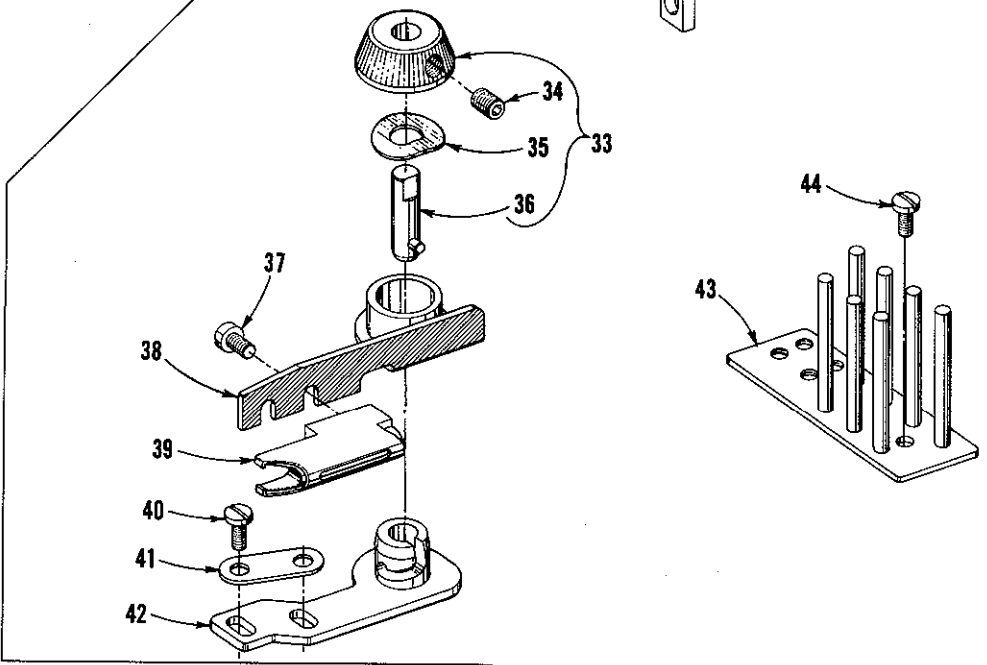
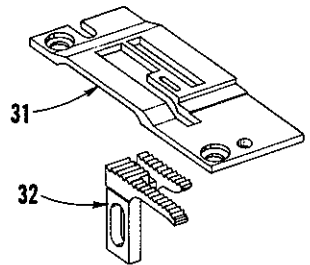
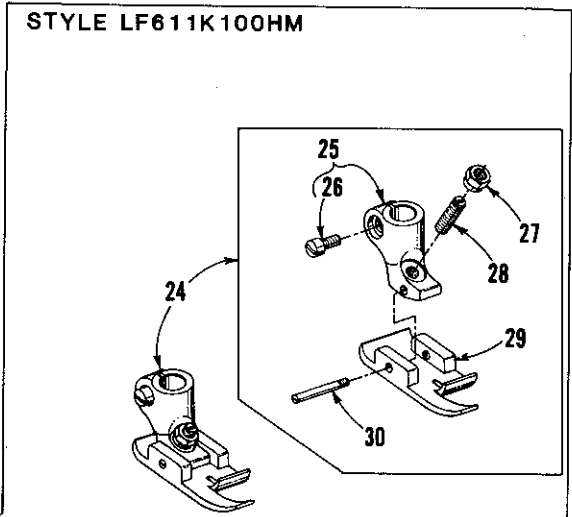
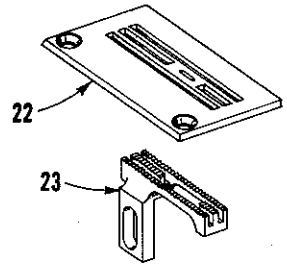
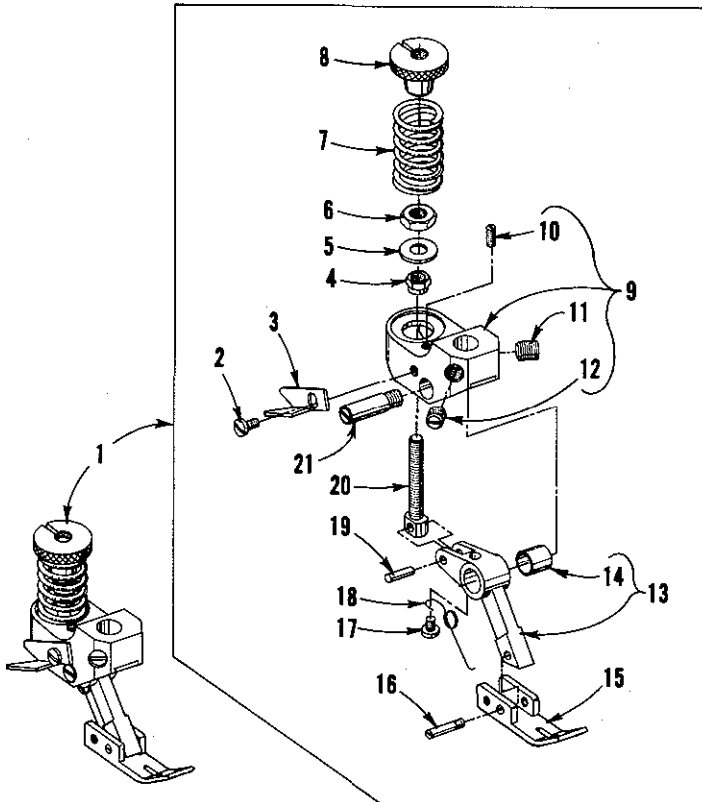
PRESSER FOOT AND TENSION RELEASE PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	- - -	Presser Foot Assembly, See "SEWING COMBINATIONS" --	1
2	C50057 E	Bar, presser -----	1
3	22569 C	Screw -----	2
4	C50067 K	Plate, presser bar guide -----	1
5	C50056 K	Guide, presser bar -----	1
6	531	Screw -----	2
7	C50056 J	Nut, lock -----	1
8	22840 C	Screw, adjusting -----	1
9	C50056 C	Spring, presser bar -----	1
10	C50056 B	Guide, presser bar spring -----	1
11	C50056 D	Regulator, presser bar spring -----	1
12	22758	Screw -----	1
13	660-718	Washer, spring -----	1
14	50367 E	Link, presser foot lift -----	1
15	C50067 G	Lever, presser foot lift (upper left) -----	1
16	22596 E	Screw -----	1
17	50322 B	Shaft, presser foot lift (upper) -----	1
18	22758	Screw -----	2
19	660-986	Seal, oil -----	1
20	50390 B	Sleeve, tension release -----	1
21	22894 W	Screw -----	2
22	C50090 M	Collar, tension release adjusting -----	1
23	22894 P	Screw -----	2
24	50390 E	Spring, tension release return -----	1
25	50367 A	Lever, presser foot lift (outer) -----	1
26	22596	Screw -----	1
27	22882	Screw -----	1
28	12934 A	Nut, locking -----	1
29	667 M-14	Pin, dowel (lifter lever stop) -----	1
30	50322 C	Shaft, presser foot lift (lower) -----	1
31	C50036 R	Collar, thrust -----	1
32	22894 L	Screw, spot -----	1
33	50367	Lever, presser foot lift (lower) -----	1
34	22882	Screw -----	2
35	50367 B	Connection, presser foot lift -----	1
36	C50067 B	Lever, presser foot lift (upper right) -----	1
37	22596	Screw -----	1



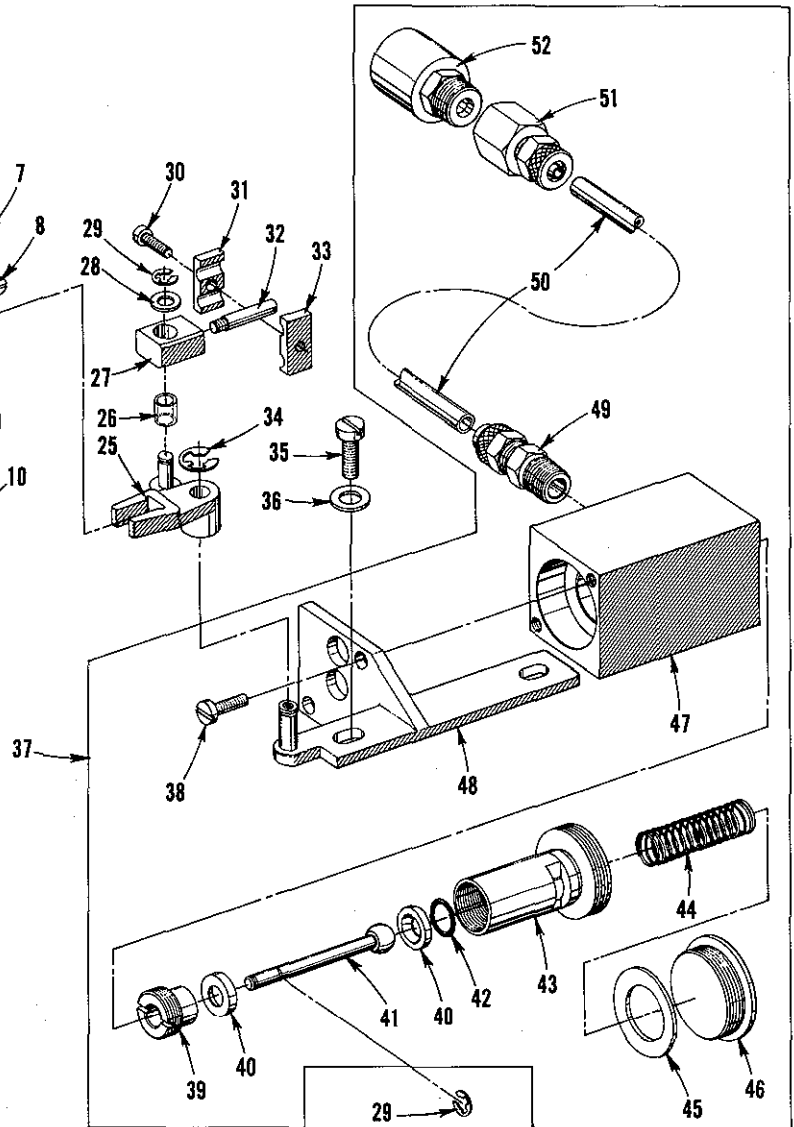
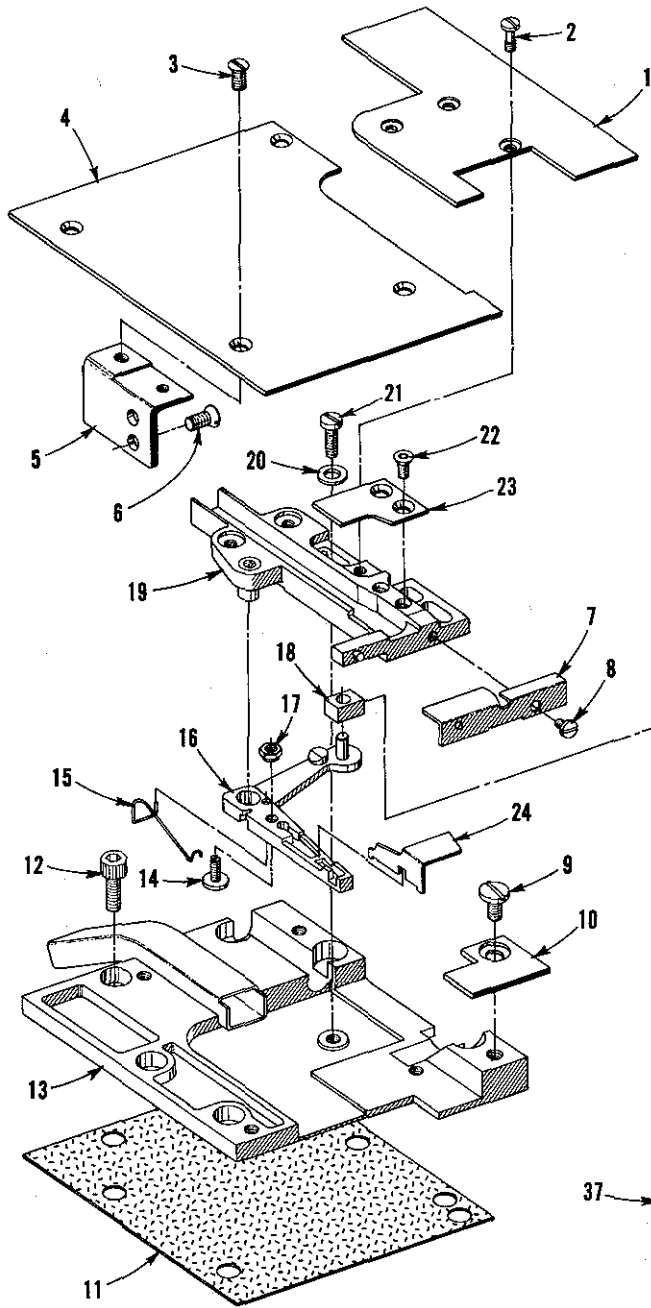
SEWING COMBINATIONS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	C50020	Presser Foot Assembly, for Styles LF611K100MF and 112MF -----	1
2	604	Screw -----	1
3	52930 AC	Knife, chain cutter -----	1
4	22562	Screw -----	1
5	C50030	Shank, presser foot -----	1
6	22784 M	Screw -----	1
7	C50031	Guard, finger -----	1
8	C50030 A	Bottom, presser foot -----	1
9	C50030 D	Spring -----	2
10	C50030 B	Section, yielding -----	1
11	C50030 C	Spring -----	2
12	22799 B	Screw, hinge -----	1
13	50324	Throat Plate, for Styles LF611K100MF and 112MF -----	1
14	C50005 F	Feed Dog, for Styles LF611K100MF and 112MF -----	1
15	G51320	Presser Foot Assembly, for Styles LF611K100MG and 112MG -----	1
16	187 B	Screw -----	1
17	1741 B	Knife, chain cutting -----	1
18	51330 AJ	Shank, presser foot -----	1
19	91	Screw -----	1
20	51330 AG	Bottom, presser foot -----	1
21	51330 W	Spring -----	1
22	51330 AH	Section, yielding -----	1
23	C50024 D	Throat Plate, for Styles LF611K100MG and 112MG -----	1
24	C50005 G	Feed Dog, for Styles LF611K100MG and 112MG -----	1
25	56320 H	Presser Foot Assembly, for Style LF611K100MR -----	1
26	604	Screw -----	1
27	52930 AC	Knife, chain cutting -----	1
28	51430 F	Nut -----	1
29	56330 AU	Washer -----	1
30	41071 G	Nut, locking -----	1
31	56330 AD	Spring -----	1
32	56330 AH	Nut, pressure regulating -----	1
33	56330 AK	Yoke -----	1
34	22785	Screw -----	1
35	22560 B	Screw -----	1
36	88	Screw -----	1
37	56330 AN	Link, presser foot -----	1
38	56330 AP	Bushing -----	1
39	22799 G	Screw -----	1
40	56330 AL	Bottom, presser foot -----	1
41	56330 AM	Section, yielding -----	1
42	56330 AR	Spring, yielding section -----	1
43	604	Screw -----	1
44	73 A	Screw -----	1
45	56330 AX	Spring, tilting -----	1
46	56330 AJ	Pin, hinge -----	1
47	56330 AG	Screw, connection -----	1
48	56330 AF	Screw, hinge -----	1
49	C51324 W	Throat Plate, for Style LF611K100MR -----	1
50	51305 W	Feed Dog, for Style LF611K100MR -----	1
51	51220 W	Presser Foot Assembly, for Style LF611K100MW -----	1
52	187 B	Screw -----	1
53	1741 B	Knife, chaining cutting -----	1
54	51230 F	Shank, presser foot -----	1
55	91	Screw -----	1
56	51230 G	Bottom, presser foot -----	1
57	C56224 A	Throat Plate, for Style LF611K100MW -----	1
58	51205 W	Feed Dog, for Style LF611K100MW -----	1



SEWING COMBINATIONS

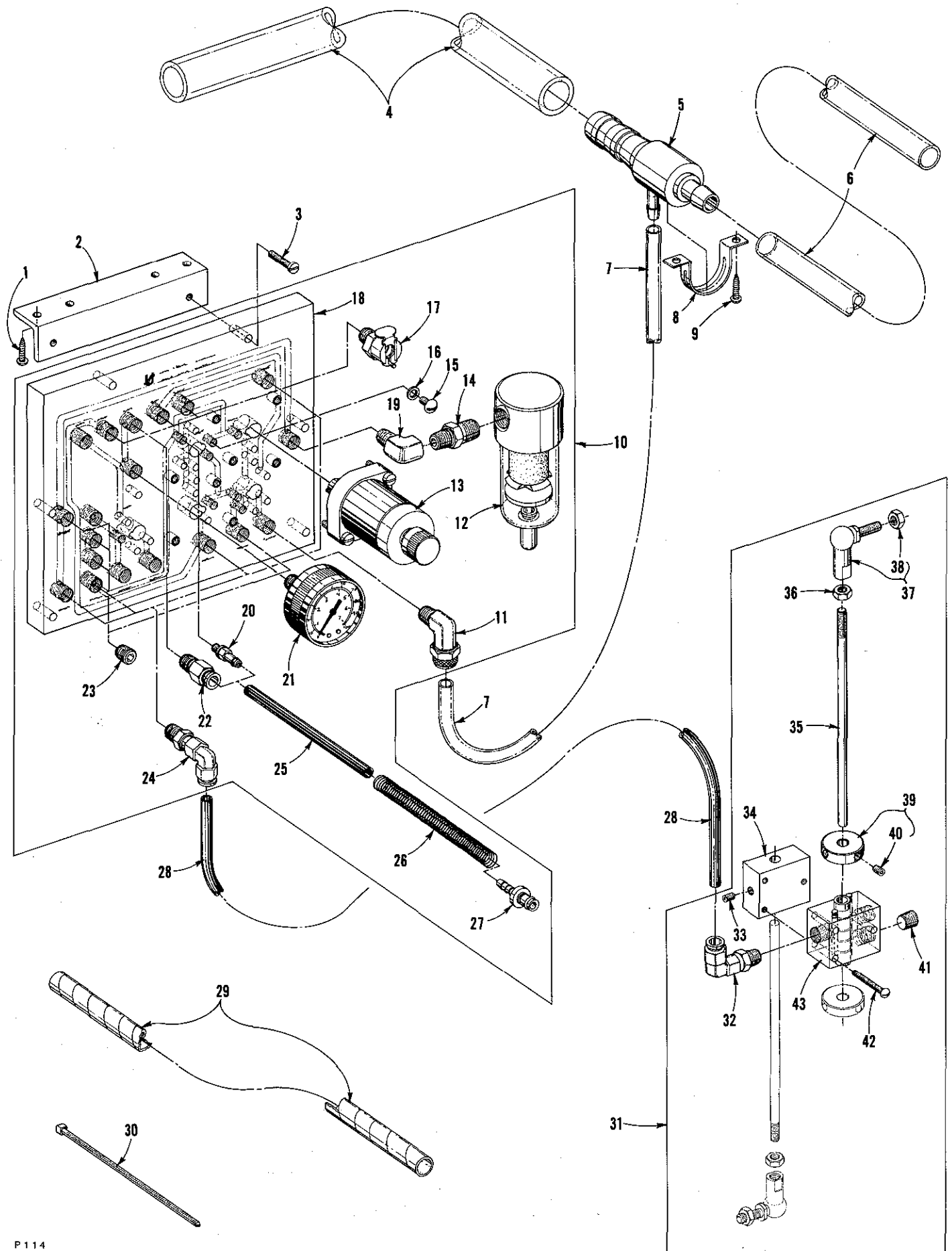
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	56320 E	Presser Foot Assembly, for Style LF611K100MAW -----	1
2	604	Screw -----	1
3	52930 AC	Knife, chain cutting -----	1
4	51430 F	Nut -----	1
5	56330 AU	Washer -----	1
6	41071 G	Nut -----	1
7	56330 AD	Spring -----	1
8	56330 AH	Nut, pressure regulating -----	1
9	56330 AK	Yoke -----	1
10	22785	Screw -----	1
11	22560 B	Screw -----	1
12	88	Screw -----	1
13	56330 AV	Link, presser foot -----	1
14	56330 AP	Bushing -----	1
15	56330 AW	Bottom, presser foot -----	1
16	22799 G	Screw -----	1
17	73 A	Screw -----	1
18	56330 AX	Spring, tilting -----	1
19	56330 AJ	Pin, hinge -----	1
20	56330 AG	Screw, connection -----	1
21	56330 AF	Screw, hinge -----	1
22	C56324 C	Throat Plate, for Style LF611K100MAW -----	1
23	56305 C	Feed Dog, for Style LF611K100MAW -----	1
24	6420 W	Presser Foot, Complete, for Style LF611K100HM -----	1
25	6430	Shank, presser foot -----	1
26	91	Screw, clamp -----	1
27	51430 F	Nut, lock -----	1
28	22840 A	Screw, adjusting -----	1
29	6430 A	Bottom, presser foot -----	1
30	22799 E	Screw, hinge -----	1
31	C50024 M	Throat Plate, for Style LF611K100HM -----	1
32	C50005 M	Feed Dog, for Style LF611K100HM -----	1
33	C50096 C	Knob Assembly, Complete, for Style LF611K100HM -----	1
34	22894 C	Screw, Set -----	1
35	C50096 A	Washer, spring -----	1
36	C50096	Pin, clamping -----	1
37	90	Screw, for Style LF611K100HM -----	2
38	23437 Z	Bracket, binder, for Style LF611K100HM -----	1
39	23215 BG-5/8	Binder, English, for Style LF611K100HM -----	1
	23215 BG-3/4	Binder, English, for Style LF611K100HM -----	1
	23215 BG-7/8	Binder, English, for Style LF611K100HM -----	1
40	22585 A	Screw, for Style LF611K100HM -----	2
41	23425 T	Plate, clamping, for Style LF611K100HM -----	1
42	50396	Bracket, binder, for Style LF611K100HM -----	1
43	23439 A	Pin, tension, for Style LF611K100HM -----	1
44	90	Screw, for Style LF611K100HM -----	2



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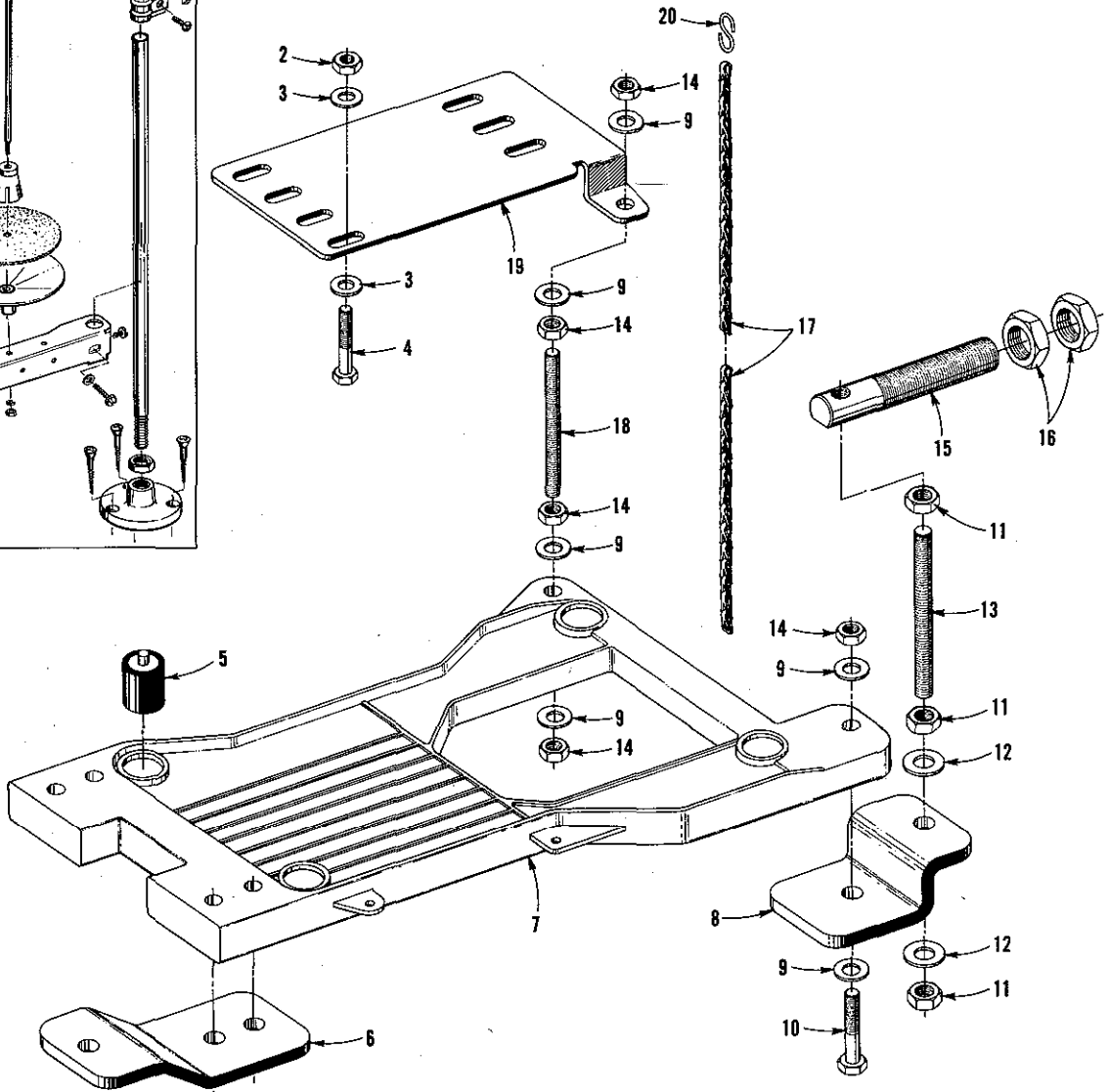
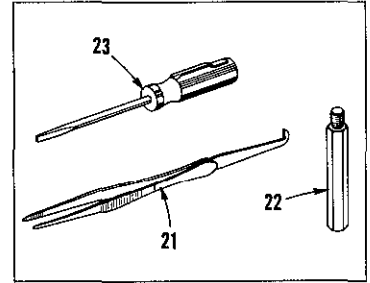
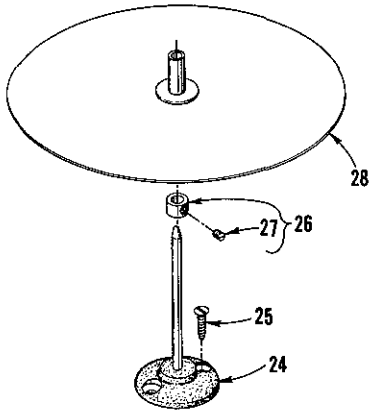
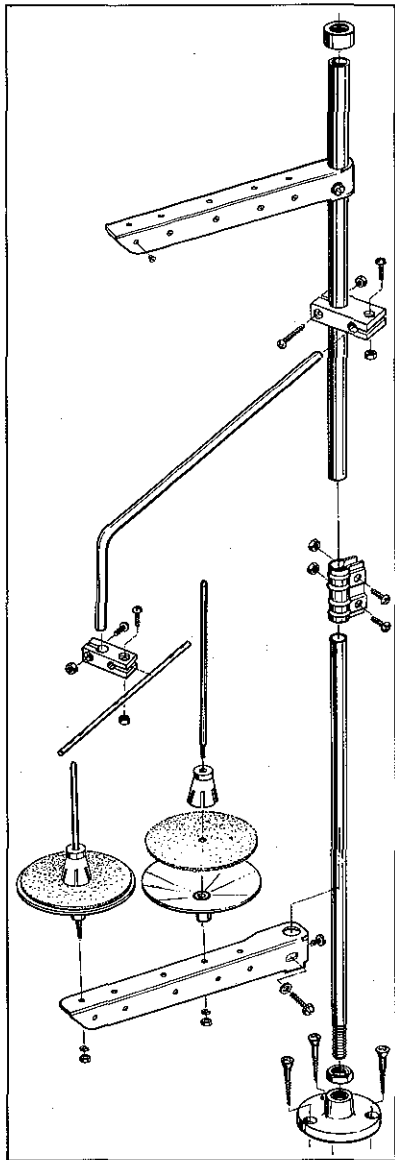
POWER "AIR-KLIPP®" CHAIN CUTTER AND RELATED PARTS
(Styles LF611K112MF and LF611K112MG ONLY)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	50382 Y	Cover, suction tube -----	1
2	99312 A	Screw -----	3
3	22525 E	Screw -----	4
4	50301 T	Plate, cloth, left -----	1
5	50332 E	Bracket -----	1
6	22526	Screw -----	2
7	99677 UA	Inlet, thread -----	1
8	77 F	Screw -----	1
9	22569 F	Screw -----	1
10	50382 Z	Cover, plate -----	1
11	50382 D	Gasket -----	1
12	22653 B-8	Screw -----	6
	V29944 C	Power "Air-Klipp" Assembly (complete) -----	1
13	99679 UA	Cover -----	1
14	99372 A	Screw, adjusting -----	1
15	99697 TA	Spring -----	1
16	99666 TA	Lever, knife -----	1
17	99322	Nut -----	1
18	99672 UE	Block, sliding -----	1
19	99691 TA	Housing, chain cutter -----	1
20	80265	Washer -----	2
21	22729 J	Screw -----	2
22	95435 A	Screw -----	2
23	99670 TH	Knife, upper -----	1
24	99669 TH	Knife, lower -----	1
25	99672 UD	Lever -----	1
26	99672 TC	Insert, plastic -----	1
27	671 H-4D	Connection -----	1
28	95954	Washer -----	1
29	96280	Ring, retaining -----	3
30	22562 A	Screw -----	1
31	99672 UB-2	Clamp, (rear) -----	1
32	HS100 D	Screw, stud -----	1
33	99672 UB-1	Clamp, (front) -----	1
34	96275	Ring, retaining -----	1
35	22517	Screw -----	2
36	80557	Washer -----	2
37	671 H-4	Air-Motor Assembly -----	1
38	22585	Screw -----	2
39	671 H-1E	Screw, plug -----	1
40	99646 BA	Collar, thrust -----	2
41	671 H-4C	Rod, piston -----	1
42	660-206	"O" Ring -----	1
43	671 H-1A	Piston -----	1
44	660-753	Spring -----	1
45	671 H-1F	Washer, bumper -----	1
46	671 H-1D	Screw, plug -----	1
47	671 H-2A	Housing -----	1
48	671 H-4A	Bracket, housing -----	1
49	660-400	Fitting, straight -----	2
50	99675 G 1000	Tubing, plastic -----	1
51	999-126 G	Connector, straight -----	1
52	999-140 C	Muffler -----	1



PNEUMATIC CONTROLS
(Styles LF611K112MF and LF611K112MG ONLY)

Ref. No.	Part No.	Description	Amt. Req.
1	RM2719-1	Screw, wood -----	2
2	671 G-3	Bracket, mounting -----	1
3	22835	Screw -----	2
4	671 B-11	Tube, discharge -----	1
5	671 D-2	Venturi -----	1
6	671 B-12	Tube, suction -----	1
7	671 B-3	Tube, venturi air supply -----	1
8	998-332	Holder, venturi -----	1
9	RM2719-1	Screw, wood -----	2
10	29480 WW	Pneumatic Control Board Assembly -----	1
11	671 F-3	Connector -----	1
12	671 D-5	Filter, air line -----	1
13	671 D-30	Regulator, pressure -----	3
14	RM3320-1	Fitting, reducer -----	1
15	22649 F-16	Screw -----	1
16	RM2964 B	Washer, fiber -----	1
17	660-971	Coupling Body -----	3
18	671 D-29	Control Board -----	1
19	RM2881-1	Fitting, elbow; 90 degree -----	1
20	671 F-4	Fitting, barb -----	2
21	671 D-10	Gauge, pressure -----	1
22	671 F-67	Fitting, straight -----	1
23	22571 F	Screw, plug -----	4
24	671 F-69	Fitting, elbow; 90 degree -----	4
25	RM2997 D	Tubing, air; 1/4 inch (6.35mm) O.D. 5 inches (127mm) long -----	2
26	39530 AL	Spring -----	2
27	671 F-68	Fitting, tube (plastic) -----	1
28	RM2997 D	Tubing, air; 1/4 inch (6.35mm) O.D. (Specify length) ----- as req.	1
29	RM3832-1	Wrap, harness -----	1
30	RM2871 B	Tie -----	4
31	29480 XU	Foot Treadle Valve Assembly -----	1
32	671 F-69	Fitting, elbow; 90 degree -----	2
33	22894 R	Screw -----	1
34	671-91	Block, mounting bracket -----	1
35	99563 A-155	Rod, pitman -----	2
36	95250	Nut -----	2
37	999-146	Link -----	2
38	95250	Nut -----	2
39	C50036 AS	Collar, actuating -----	2
40	22894 R	Screw -----	2
41	22571 F	Screw, plug -----	1
42	SC-191	Screw -----	3
43	671-90	Body, valve -----	1



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THREAD STAND AND ACCESSORIES

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	21101 W-2	Thread Stand Assembly -----	1
2	50335 T	Nut -----	1
3	652-16	Washer -----	3
4	22788 H	Bolt -----	3
5	35095 B	Isolator -----	4
6	21374 AP	Support -----	2
7	21374 AG	Cradle, machine -----	1
8	21374 AU	Support -----	1
9	RM3293-3	Washer -----	16
10	22641	Bolt -----	5
11	RM3211-5	Nut -----	9
12	RM3293-4	Washer -----	4
13	21374 AT	Rod, threaded -----	3
14	RM3211-3	Nut -----	3
15	21374 AM	Rod -----	4
16	651 M	Nut -----	8
17	421 D-42	Chain, presser foot lift -----	1
18	21371 PY-32	Rod, threaded -----	1
19	21374 BB	Bracket, motor mounting -----	1
20	660-264	Hook, "S" -----	2
21	660-240	Tweezer, thread -----	1
22	22841 M	Stand, machine -----	4
23	21207 B	Screwdriver -----	1
24	21169 F	Base, binding holder, for Style LF611K100HM -----	1
25	SC303	Screw, for Style LF611K100HM -----	2
26	161	Collar, for Style LF611K100HM -----	1
27	88	Screw -----	1
28	21169 E	Disc, binding holder, for Style LF611K100HM -----	1
	28604 R	Container of oil, 16 ounces (455 ml.), Spec. 175, (not shown) -----	1

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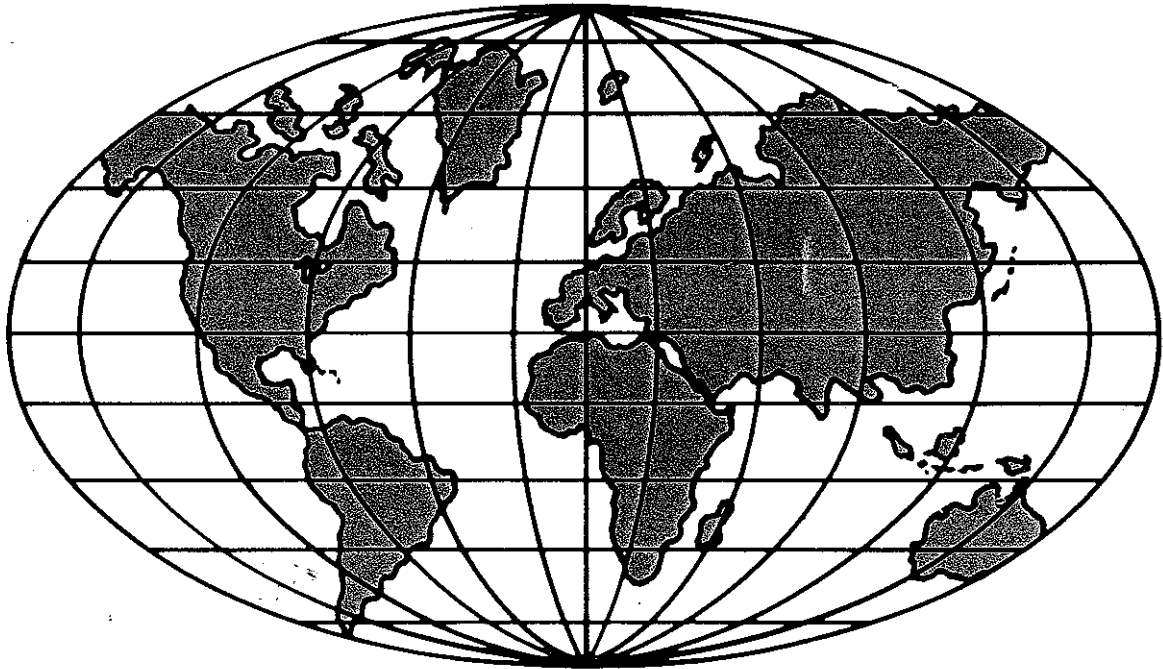
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