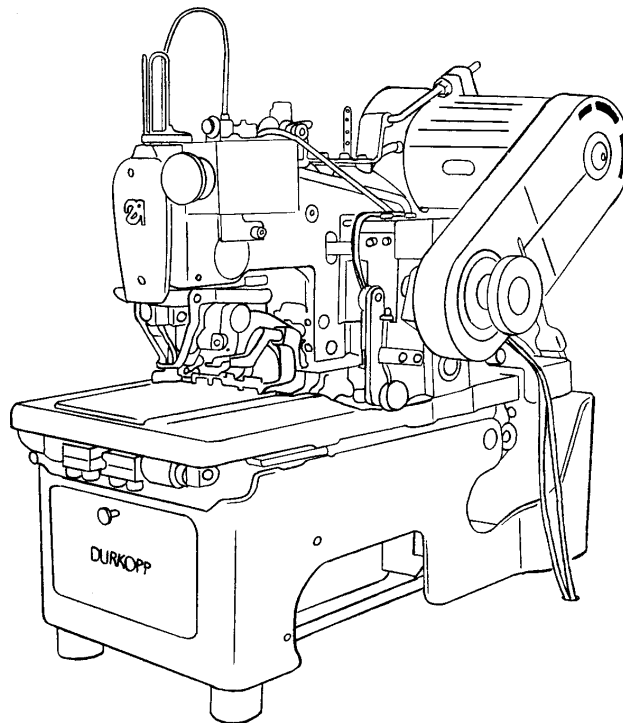


ML8890BH-7

CLINTON
MODEL 8890BH
PROGRAMMABLE CONTROLLER
DRIVE SYSTEM
FOR
DURKOPP 558
BUTTONHOLE MACHINE



SERVICE MANUAL

40-0240-01

Para Español vea el reverso del libro



Clinton Industries, Inc.
700 Washington Ave.
Carlstadt, N.J. 07072
Phone: 201-935-4242
Fax: 201-935-3615
Web Site: <http://www.clintonind.com>
Email: general@clintonind.com

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SECTION I
DESCRIPTION

The Clinton Model 8890BH is a Micro Computer Controlled Electro / Mechanized / Pneumatic system designed to enhance the performance and drastically reduce the maintenance required to operate a Durkopp Buttonhole machine.

Two DC Servo Motors are used to replace the complete mechanized stop motion components including the clutch, brake, spur gears and shafts.

State of the art sensors are used to communicate position and speed data to the single micro computer control system. By use of the LCD Programmable Display, both the machine speed and buttonhole "Eye" speed can be precisely entered and controlled. The LCD can also be used to command repair cycles or 3 step cycles to assist in machine maintenance.

Figure 1-1 shows the major components of the system.

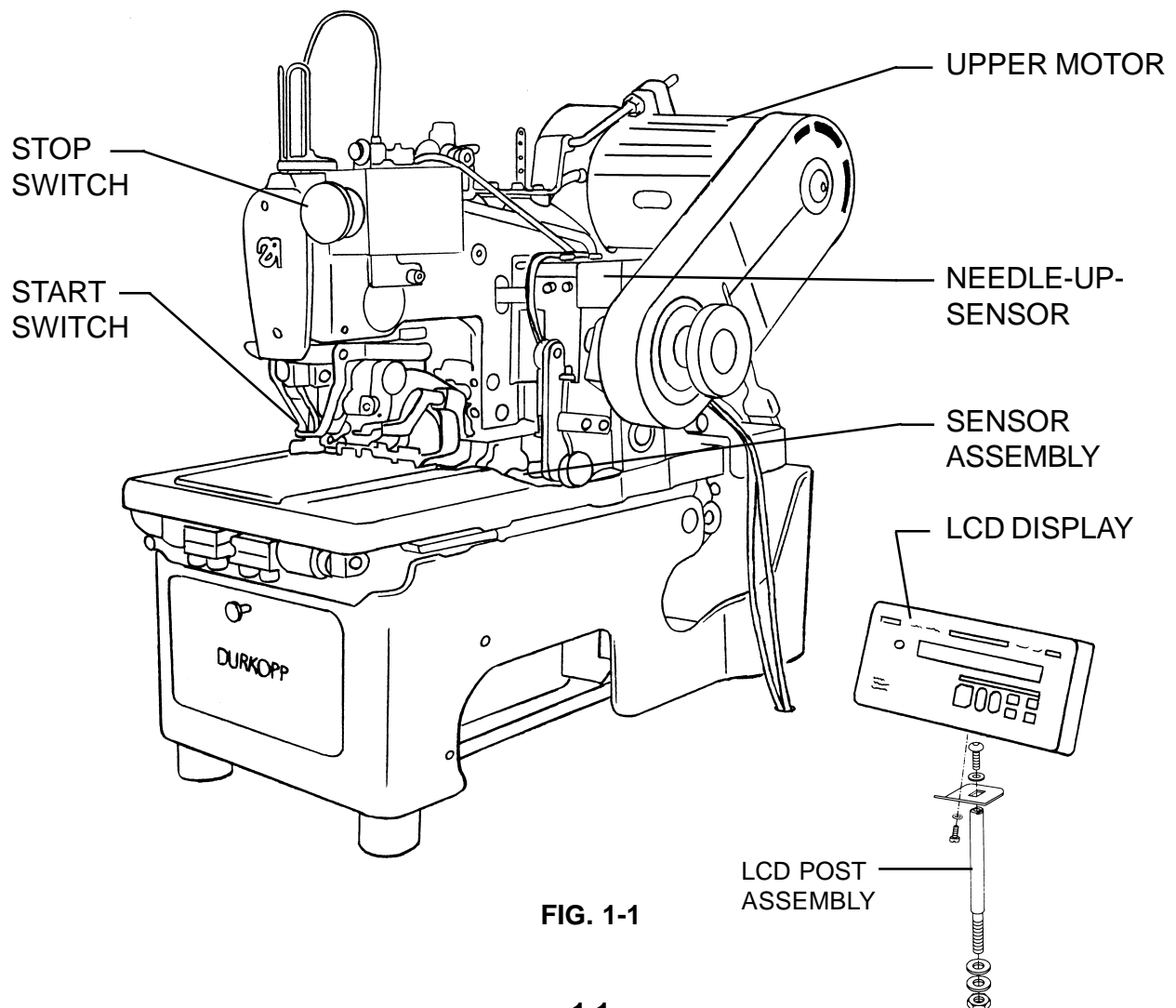


FIG. 1-1

SECTION II**INSTALLATION**

Insure that the machine is in working order.

Mark the home position.

A. To install the drive pulley assembly. Remove the manual crank mechanism by rotating the crank in the clockwise direction (See Fig. 2-1). Remove the pulley carrier assembly by loosening the hex nut which attaches it to the reversing lever (Fig. 2-1, Item 1) and sliding the entire assembly off the end of the cross shaft. Remove the large hex nut which holds the manual crank onto the crank hub (Fig. 2-1, Item 2). Remove all parts from the crank hub. Loosen hex head screw (Fig. 2-1, Item 3) and slide it toward the operator as far as it will travel in it's adjusting slot. Place collar (02-4007-01) and pulley assembly (10-1457-01) on the end of the cross shaft (See Fig. 2-2).

NOTE: The pulley assembly contains a locking bearing, insure that the bearing locks and drives the shaft in the counterclockwise direction and free-wheels in the clockwise direction. Replace the crank hub, spring holding device, manual crank and retaining nut (Fig. 2-2).

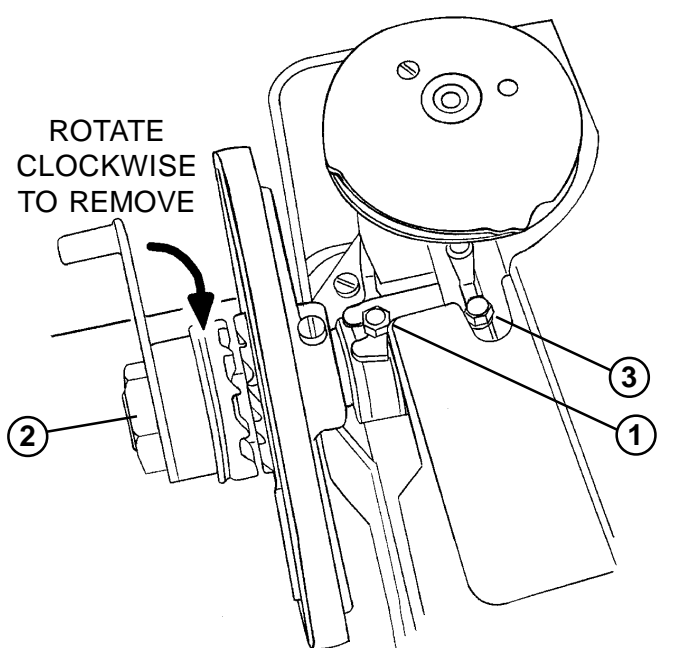


FIG. 2-1

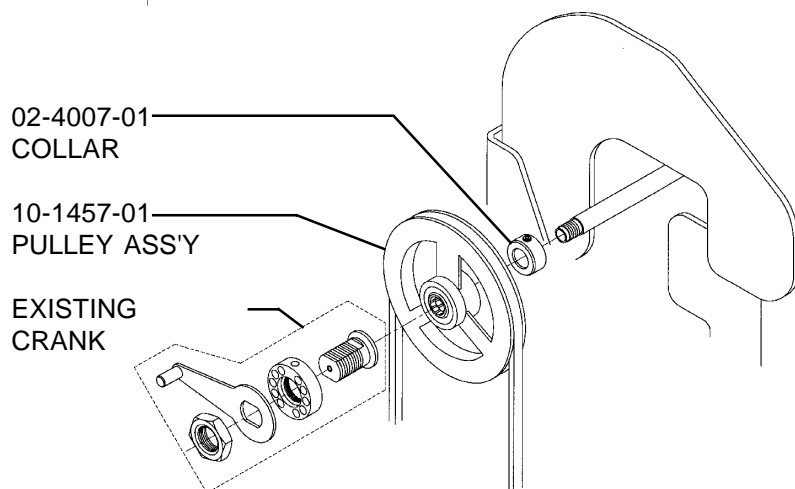


FIG. 2-2

B. To install the synchronizer and sensor assemblies. Remove cover assemblies (Fig. 2-3). Remove the hand wheel and sewing head pulley by removing the two locking nuts (Fig. 2-4, Item 1). Remove the stop motion eccentric (Fig. 2-4, Item 2) by removing the threaded stud (Fig. 2-4, Item 3). Retain the hand wheel, washer and locking nuts so that they may be put back on at a later time. Remove the stop motion roller assembly (Fig. 2-5, Item 1) by loosening the two clamp screws (Fig. 2-5, Item 2). Manually rotate the machine to it's furthest foreword point (half way around the eye). Remove the stop motion leaf spring assembly (Fig. 2-5, Item 3) and three forks lever by loosening the clamp screw (Fig. 2-6, Item 2) and sliding the leaf spring shaft out of the casting. Remove torsion spring assembly (Fig. 2-6, Item 1). Remove the length adjusting slide, stop and gauge plate (Fig. 2-7, Items 1, 2, & 3). Remove the tension release block (Fig. 2-7, Item 4) from the length adjusting slide and attach it to the first stitch sensor block (Fig. 2-8, 10-1458-01). Replace the length adjusting slide with the first stitch sensor block. Using the screw provided install the home position sensor block (Fig. 2-8, 02-4008-01) and stop bracket (Fig. 2-8, 02-4015-01). Using the screws provided install the sensor block assembly (Fig. 2-8).

WARNING: Insure that there is at least 1/16th of an inch clearance between bottom of the home and sew sensors and the home position and first stitch blocks (Fig. 2-9) so that no damage is caused to the sensors when the machine is cycled.

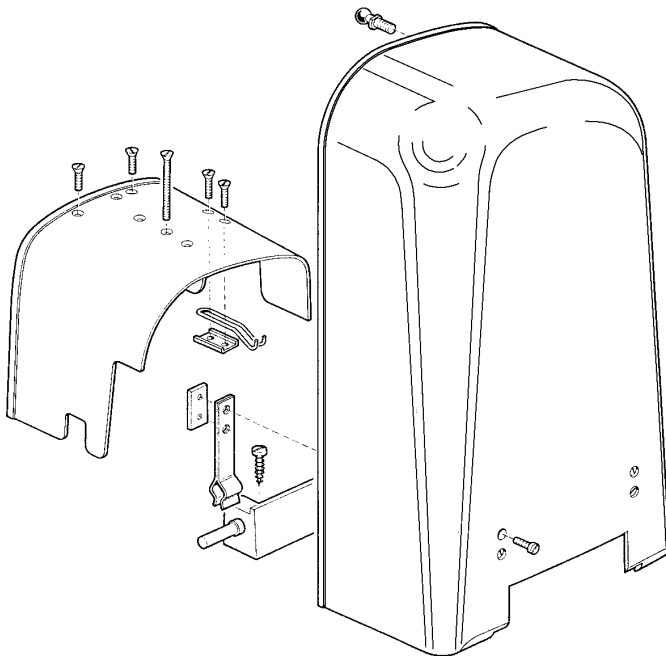


FIG. 2-3

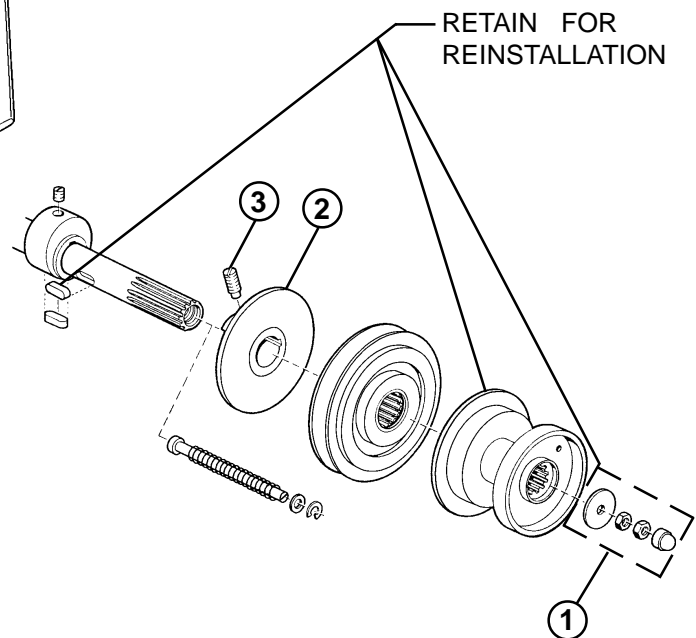


FIG. 2-4

C. To install the sewing head drive pulley assembly. Attach the magnet disk holder to the sewing head pulley (Fig. 2-8). Slide the pulley onto the arm shaft. Replace the hand wheel, washer and locking nuts (Fig. 2-4).

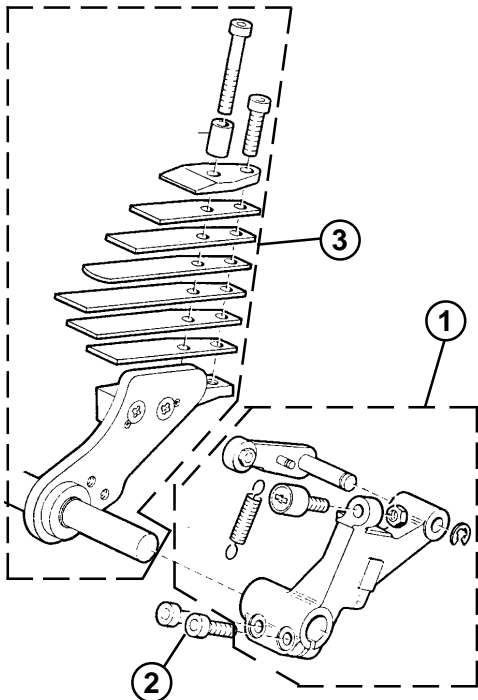


FIG. 2-5

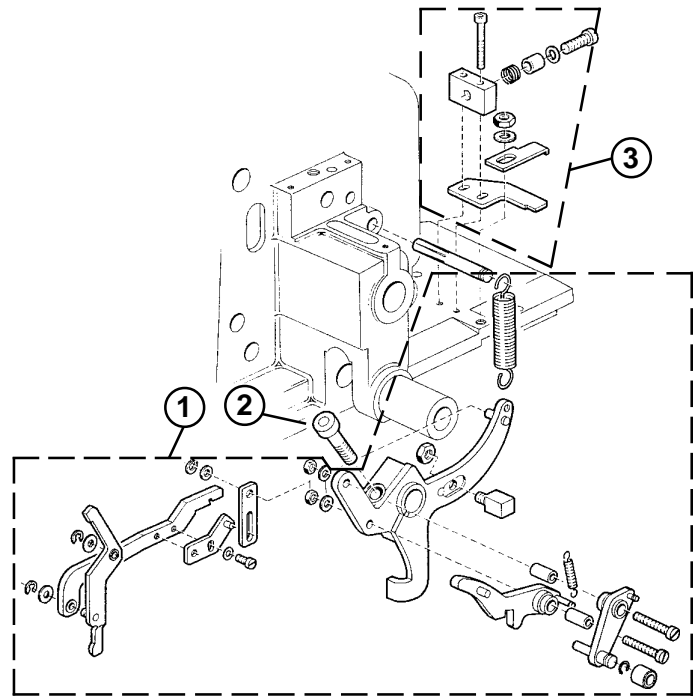


FIG. 2-6

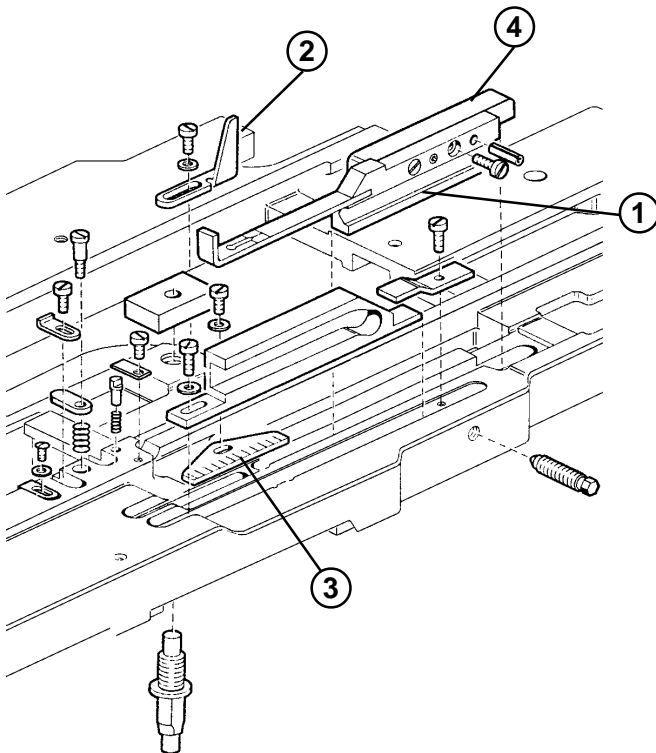


FIG. 2-7

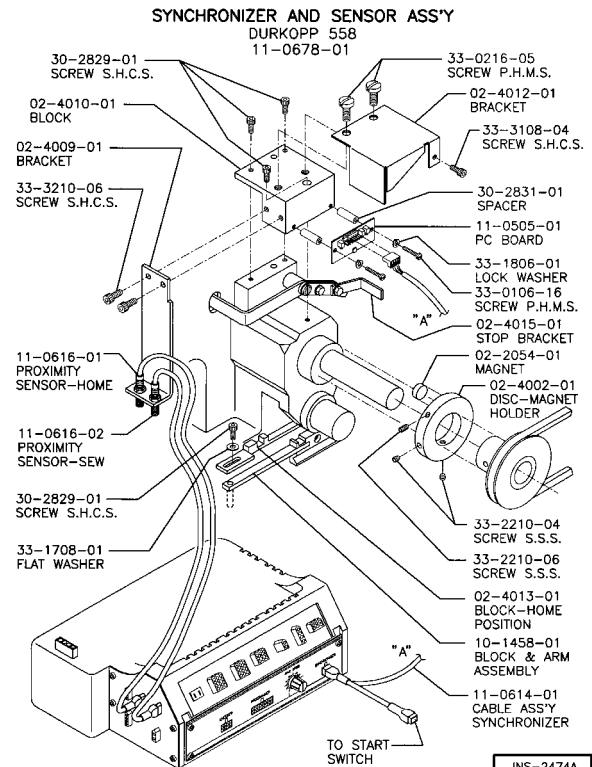


FIG. 2-8

D. To install the start switch assembly. Remove the hand lever and clamping angle (Fig. 2-9, Item 1 & 2) by removing the two pivot pins (Fig. 2-9, Item 3 & 4). Remove the manual start switch (Fig. 2-9, Item 5). Remove the stop stud and locking nut (Fig. 2-9, Item 6 & 7). Remove the clamping lever (Fig. 2-10, Item 1) by removing the lock nut and pivot bolt (Fig. 2-10, Item 2 & 3). Install the start switch. (See Fig. 2-12).

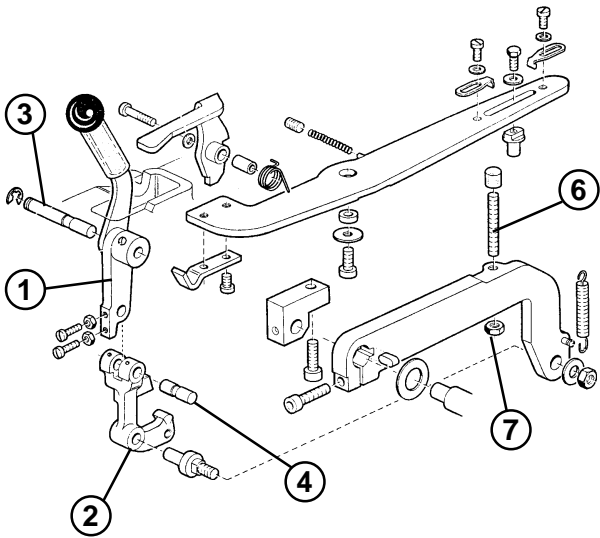


FIG. 2-9

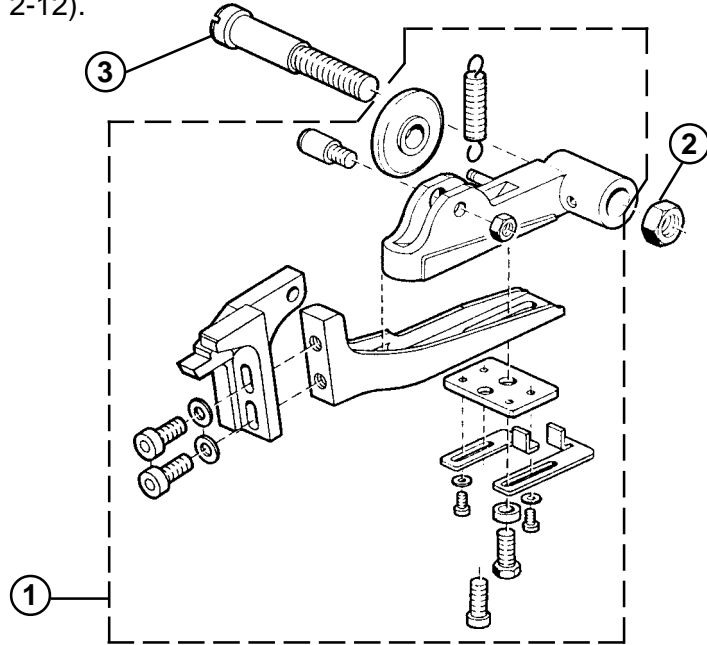


FIG. 2-10

E. To install the air cylinder assembly. See Fig. 2-12.

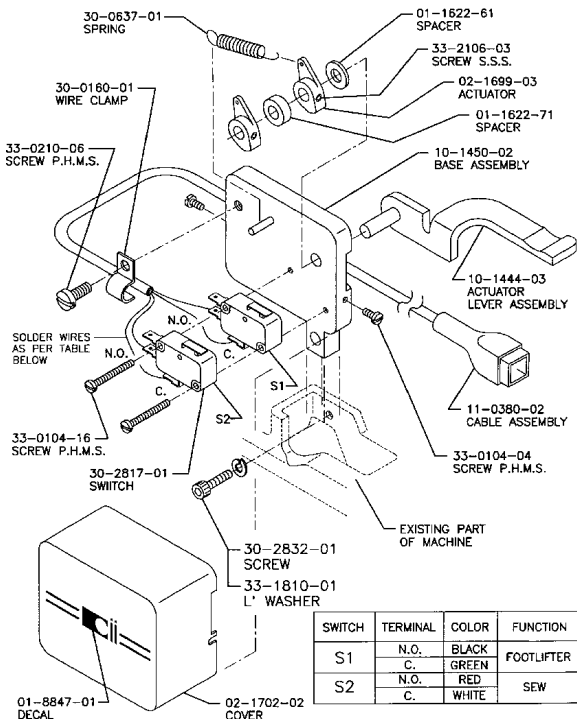


FIG. 2-11

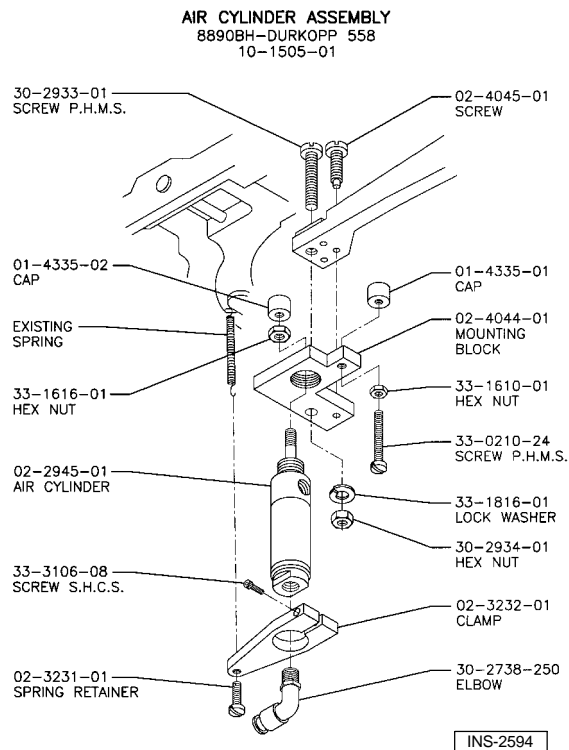


FIG. 2-12

F. To install the Upper Motor. Remove the two cover retaining screws (Fig. 2-13, Item 1), and using the screws provided install the upper motor (See Fig. 2-14).

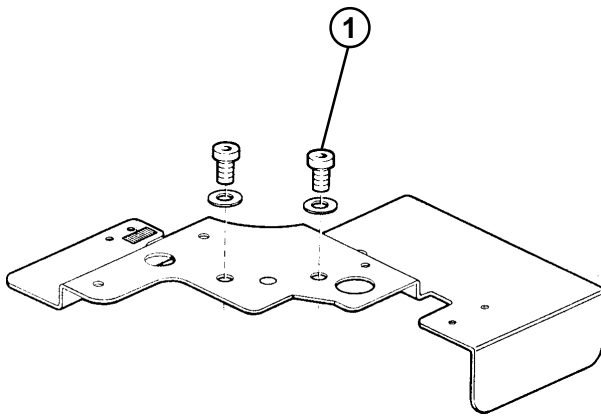


FIG. 2-13

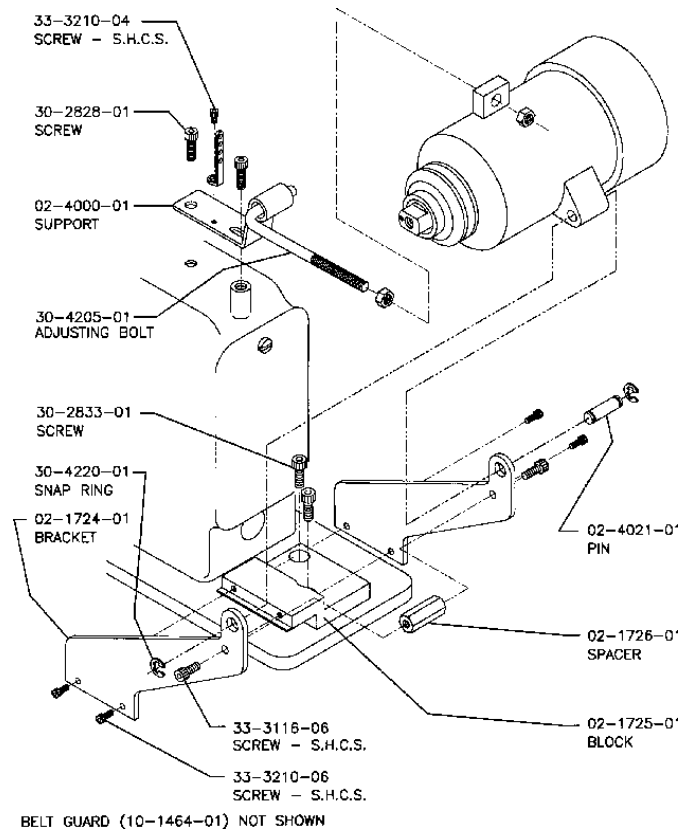


FIG. 2-14

G. To install the Emergency Stop Switch. Use the screws provided and install as shown (See Fig. 2-15).

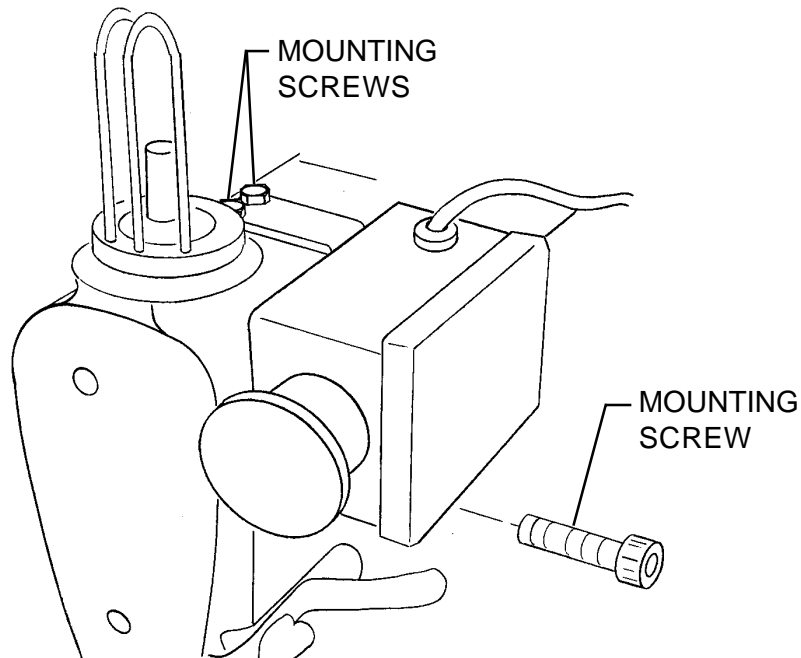


FIG. 2-15

SECTION III

ADJUSTMENT INSTRUCTIONS

Remove the needle.

- A. To set the Home Position.** Return the machine to the home position by rotating the manual crank until the arrows on the home position labels are aligned. Making sure that the air supply is disconnected turn the power on. Loosening the home position block retaining screw (Fig. 2-8) and slide the home position block toward the rear of the machine as far as the adjusting slot will allow. Slowly pull the home position block toward the operator until the indicator light on the home position sensor goes out. Gently push the home position block toward the rear of the machine until the indicator light again comes on. Tighten the retaining screw.
- B. To set the first stitch position.** Rotate the machine with the manual crank until the leading edge of the material clamp is aligned with the needle. Loosen the first stitch sensor block retain screw and push the stitch sensor block toward the rear of the machine as far as it will travel. Pull the first stitch sensor block toward the operator until the indicator light on the first stitch sensor comes on. Tighten the retaining screw. Return the machine to the home position.
- C. To set the needle up position.** Rotate the hand wheel until the needle bar is at to dead center with the left hand looper at the extreme left hand end of it's stroke. With the machine in this position loosen the set screws on the magnet disk. Rotate the magnet disk until the magnet is aligned with the magnet sensor on the synchronizer board and as close as possible to it without touching. Tighten the set screws.

Connect the air supply.

CAUTION: *With the air supply now connected the machine will cycle if the start switch is depressed.*

D. SENSOR and MOTOR FUNCTIONS. To test the sensor and motor functions, with the table motor and sewing motor drive belts removed test the sensor and motor functions as described on (page 6-1, B) of the programming manual. This will insure that the sensors and motors are operating as intended in order to prevent any damage to the sewing head. Replace the drive belts.

E. TENSION RELEASE MECHANISM. Remove the cloth plates and set the machine to the Single Step mode of operation (See programming instructions page 4-1). Depress the start switch, the machine will cycle to the first stitch position. Depress the start switch a second time, the machine will complete the stitching phase of the cycle and stop after the last stitch. With the machine in this position insure that the tension release roller (Fig. 3-16, Item 1) is 1 mm from the lobe on the tension release arm (Fig. 3-16, Item 2). If it is not, loosen the locking nut (Fig. 3-16, Item 3) and set the gap using the adjusting screw (Fig. 3-16, Item 4).

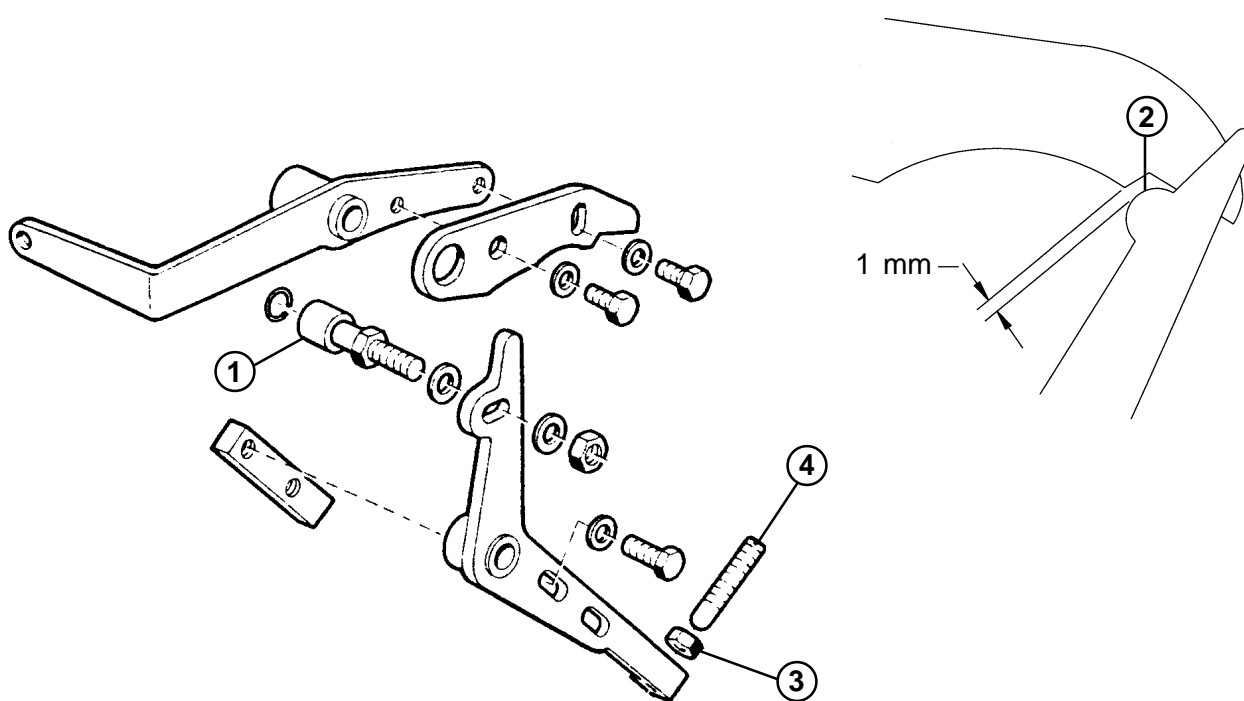


FIG. 3-16

NOTE: For fixed length machines, where the swing knife is actuated from the cam skip to step 9.

F. SWING KNIFE and LOOPER THREAD TRAPPER. With the machine still at the end of the sewing phase of the cycle, insure that the swing knife actuating block (Fig. 3-17, Item 1) is 1 mm from the swing knife linkage (Fig. 3-17, Item 2). When this gap has been properly set, depress the start switch, the machine will move to the punch position phase of the cycle. With the machine in this position insure that the looper thread trapper (Fig. 3-18, Item 1) is approximately 1 mm to the right of the slot in the throat plate (Fig. 3-18, Item 2).

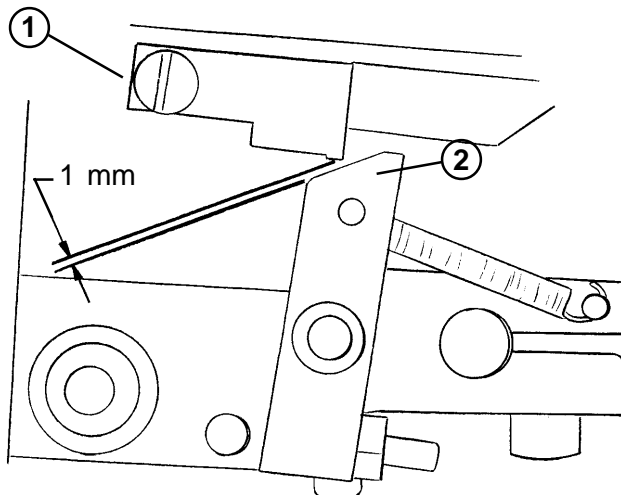


FIG. 3-17

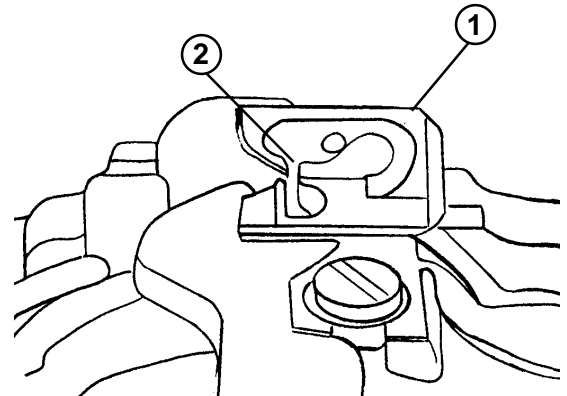


FIG. 3-18

G. To set the Thread Nipper. With the machine still in the punch position, insure that the thread nipper (Fig. 3-19, Item 1) is completely closed and that the thread can not pull through it.

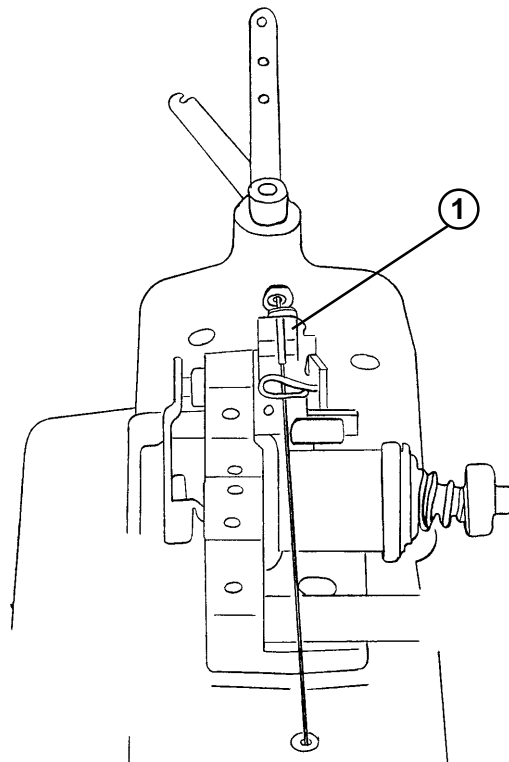


FIG. 3-19

Depress the start switch, the machine will cycle to the home position. The machine is now ready for operation.

SECTION IV**PROGRAMMING INSTRUCTION****MODES OF OPERATION**

The LCD display may be operated in any one of three different modes.

They are:

OPERATING MODE, PROGRAMMING MODE and TEST MODE.

I OPERATING MODE

There are four different headings contained in this mode, they are:



FULL CYCLE

SINGLE STEP

MOVE TABLE ONLY

REPAIR CYCLE

To change from one operating mode to the next press the  button.

Example: If the display reads "FULL CYCLE " press the  button, the display will now read "SINGLE STEP". To return to the "FULL CYCLE" mode continue pressing the  button until the display again reads "FULL CYCLE".

A. FULL CYCLE

Two different "FULL CYCLE" modes are possible:

"FULL CYCLE 2 STEP" (default selection) or

"FULL CYCLE 1 STEP"

If this mode is selected, the machine starts on the first stage of the START SWITCH, the second stage has no function. In all the other modes like "SINGLE STEP", "MOVE TABLE ONLY" or "REPAIR CYCLE", the first stage operates the clamp.

In the 2 step mode, the first stage of the START SWITCH is for toggling the clamp.

When operating in this mode the machine is set to sew a complete button hole automatically. After starting the cycle, by pressing the start button, the table motor moves the table from the "home position" to the "sew position". **To adjust the speed see page 5-4 (5a3).** At the sew position, the table motor stops and the sew motor starts.

In the full cycle mode the following options may be selected:

1. **SLOW START** (1 to 25 of the beginning stitches may be programmed to run at a slower R.P.M. than the rest of the sewing cycle this helps to insure that the machine will start sewing on the first stitch and prevents the machine from being knocked out of time if any mechanical failure should occur. One or two stitches is generally all that is needed).
2. **SLOW EYE** (This is provided to run the machine at a slower R.P.M. around the eye of the button hole in order to provide better thread coverage at the eye).
3. **SLOW END** (1 to 25 of the end stitches may be programmed to run at a slower speed than the rest of the sewing cycle).

To overlap the last stitch with the first, an adjustable stitch counter is available (**see page 5-3 (3e)**). After finishing the sew mode the table motor starts again and moves the table back to the “home position“. On the way back to home position the hole will be punched. After punching the hole the clamp can be raised before the table is at home position to insure that the shear cutter dose not cut the material. **To adjust the raise timing of the clamps see page 5-4 (5b2).**

B. SINGLE STEP

This mode provides step-by-step operation of the machine for easy adjustment and maintenance. To operate:

Press the START switch: The table moves to the sew position.

Press the START switch again: The button hole will be sewn.

Press the START switch again: The table moves back to home position.



C. MOVE TABLE ONLY

In this mode the table moves only from home position to home position without sewing. This mode is used for adjusting the button slot knife.

D. REPAIR CYCLE


After pressing the START switch the table moves to the sew position and stops, if the switch is fully released. Then if the START switch is depressed to it's first position (dropping the clamp in the normal operation mode) the table will move at a very slow speed to any point around the button hole. When the table has been jogged to the desired position the sewing cycle may be started by fully depressing the START switch.

SECTION V**PROGRAMMING MODE**



There are two ways to go from the operating to the programming mode. Press the  button to go to the first group (SPEEDS). Continue pressing this key to step through the groups or press the  button to go to the last changed parameter.

After changing the parameters press the  button to return to the operating mode.

A. HOW TO PROGRAM**1. SPEEDS, TIMERS, COUNTERS**


Select the parameter group with the  button to the desired parameter group (example SPEEDS).

Select the desired parameter (example SOFTSTART) by pressing the  button.

Change displayed number with  (increase) or  (decrease) button.

2. TOGGLE SWITCHES



Select the parameter group "TOGGLE SWITCHES" with the  button.

Select the desired parameter to be changed with the  button.

Toggle the desired parameter with the  or  button.

B. ACCESS TO HIDDEN PARAMETERS

Step 1: Turn power off.

Step 2: Press the  and  buttons at the same time.

Step 3: Turn power on while both buttons are pressed.

Step 4: Release the buttons.

The display shows stars (*****) which are counting down.

Step 5: Press the  button before the stars disappear.

Step 6: Select the desired parameter as usual.





The hidden parameters have stars in front of the group name


Normal parameter: SPEEDS

Hidden parameter: **** SPEEDS

Note: Access to HIDDEN PARAMETERS is disabled after power is shut off.

C. MASTER RESET (Caution: Overrides the program memory with default settings).

- Step 1: Turn power off.
- Step 2: Press the ,  and  buttons simultaneously.
- Step 3: Turn on power while all three buttons are pressed.
The display alternates between "PUSH SET" and "FOR RESET".
- Step 4: Push the  button within 10 cycles.
The display will read: "PROGRAMMING".

Note: If the  button is not pressed within 10 cycles the program goes to the main menu without executing the MASTER RESET.

1. PULLEY RATIO (Ratio between the machine and motor pulleys).

No ratio will be taken automatically for this operation. That means, that to maintain the correct speeds the pulleys must be the same. (Original setup is 80mm for both pulleys).

D. EXPLANATION OF PARAMETERS

1. PARAMETERS WITH DIRECT ACCESS

a. SPEEDS (spm, stitches per minute is the same as R.P.M.)

b. SLOW SPD (Slow speed)

Sets the s.p.m. of the machine while in the slow start or slow end options.
(See page 5-3 (3a) and (3d)).

Range: 200 to 800 s.p.m.

Steps: 20 s.p.m.

Default setting: 400 s.p.m.

c. EYE SPEED

If the "SLOW EYE" function is selected the selected number of stitches around the eye will sewn at this speed. (See page 5-3 (4a)).

Range: 200 to 800 s.p.m.

Steps: 10 s.p.m.

Default: setting: 500 s.p.m.

2. TIMERS (ms = milli seconds)

a. START DEL (Start delay)

This delays the motor from starting in order to allow the clamps sufficient time to come completely down before the machine starts sewing. If the clamp is already in the down position this setting will not effect the start.

Range: 10 to 500 ms

Steps: 10 ms

Default: 40 ms

b. TRIM ON

TRIM-ON-TIME, for pneumatic trimmer (shear) only.

DEF: 150 m.s.

3. COUNTERS

a. SLOWSTRT (SOFT or SLOW START)

Sets the number of beginning stitches sewn at "SLOW SPEED". (See page 5-2 (D1c)).

Range: 1 to 5 stitches

Steps: 1 stitch

Default: 2 stitches

b. EYE STRT (EYE START)

The "SLOW EYE" sensor is stationary, this means that there are no mechanical adjustments. The number of stitches set by this parameter determine where the slow eye begins. Increasing the number means the slow eye starts later.

Range: 1 to 15 stitches

Steps: 1 stitches

Default: 1 stitches

c. SLOW EYE

Sets the number of stitches sewn in the slow eye mode.

Range: 1 to 20 stitches

Steps: 1 stitch

Default: 10 stitches

d. SLOW END

Sets the number ending stitches sewn at "SLOW SPEED". (See page 5-2 (D1c)).

Range: 1 to 15 stitches

Steps: 1 stitch

Default: 0 stitches

e. ENDCOUNT

As there is no mechanical adjustment for the last stitch sensor, this setting is used to align the last stitch with the first stitch.

Range: 1 to 5 stitches

Steps: 1 stitch

Default: 0 stitches

4. TOGGLE SWITCHES (Switches set by software)

a. SLOW EYE

Turns the "SLOWEYE" function on or off.

Default: off

b. SLOWSTRT

Turns the slow start function on or off.

Default: off

c. SLOW TBL (SLOW TABLE)

This function causes the table to move at half speed from the punch position to the home position.

Default: off

d. CUT HOLE

This function is used to set the system for cut before or cut after stitching.

NOTE: This parameter is exclusively with Reece machines. Durkopp machines must be set on cut after even if they are a cut before machine.

Default: AFTER

e. TOGG. CMP (TOGGLE CLAMP)

When this parameter is set to on it will cause the clamp remain in the down position even if the start switch is released, the clamp will remain down until the start switch is depressed a second time.

When it is set to off the clamp will feather with the start switch.

Default: off

f. START MODE (TOGGLE SWITCHES)

This function is for the mode "FULL CYCLE" only.

Step 1:

Normally, the first stage of the start switch is used for "CLAMP DOWN", the second stage starts the sew cycle. If this parameter is set to 1 step, the first stage of the start switch starts the sew cycle already.

Step 2:

The first stage of the start switch operates the clamp, the second stage starts the sew cycle.

Default: 2 step

5. HIDDEN PARAMETERS**a. **** SPEEDS****1. TRIM / POS**

This parameter determines the speed of the trim and position cycle.

Range: 100 to 250 s.p.m.

Steps: 10 s.p.m.

Default: 300 s.p.m.

2. SEWSPEED (Sew speed)

Sets the speed at which the button hole is sewn.

Range: 300 to 1200 s.p.m.

Steps: 10 s.p.m.

Default: 920 s.p.m.

Note: As the processor only detects every other stitch the actual speed of the machine is double the number set in this parameter.

3. TABLESPD (Table speed)

Sets the speed at which the table moves.

Range: 300 to 1600 s.p.m.

Steps: 10 s.p.m.

Default: 1000 s.p.m.

b. ** MISCEL (Miscellaneous)****1. CLAMP DTY (Clamp duty cycle or percentage of current applied to keep the solenoid energized). The clamp duty cycle should be set at the minimum value required to keep the solenoid energized.**

(a) If the duty cycle value is too low the solenoid will vibrate (this will cause it to make a chattering noise) and the clamp may drop.

(b) If the clamp duty cycle value is too high the solenoid may get hot and the deenergize time will greatly increase.

Range: 2 to 10

Steps: 1

Default: 4

2. CLAMP DL

This value sets the timing of the clamp release.

This parameter is used to insure that the clamp is released before the shear cutter is actuated. This is done so that the shear cutter does not cut the material.

Range: 1 to 50

Steps: 1

Default: 3

c. TRIM DEL

This parameter is used exclusively with the Reece pneumatic trim system.

This value sets the delay from the time the clamp raises until the trimmer fires.

Range: 1-50

Steps: 1

Default: 10

d. BR FORCE (BRAKE FORCE)

This parameter sets the amount of force used to stop the sewing head from rotating.

As the amount of force required to turn the sewing head will vary from machine to machine, the force required to stop the sewing head from rotating will also vary. This parameter allows for the adjustment of that force for accurate needle positioning. If the motor overshoots the needle-up position the brake force is too low. If the motor undershoots the needle-up position then the brake force is too high.

Range: 0-40

Steps: 1

Default: 20

e. LANGUAGE

Two languages are available which is English and Spanish.

Default: ENGLISH

f. REL TIME (RELAY TIME)

This parameter is used for delaying the start of the table motor after the sew head positioned to compensate the delay time of the relay. If this time is too short, the relay may arc (spark) and the needle may go out of position (because the start pulse for the table motor goes to the sew motor).

Default: 75



CAUTION: If the table overshoots the "HOME POSITION" (the display reads: "not home"), do not try to correct this problem by adjusting the parameter "BRAKE FORCE", this parameter does not affect the table motor because the one-way-bearing in the table pulley. Try to adjust the HOME SENSOR, lower the TABLE SPEED or choose the function "SLOW TABLE". (See page 5-3 (4c)).

E. PARAMETER LIST

PARAMETER	RANGE	SUGGESTED	DEFAULT
SPEEDS			
SLOW SPD	200-800 S.P.M.	400	400
EYE SPD	200-800 S.P.M	400	400
TIMERS			
START DEL	10-500 m.s.	40	40
COUNTERS			
SLOW STRT	1-5	1	2
EYE STRT	1-15	1	1
SLOW EYE	1-20	10	10
SLOW END	1-5	0	0
ENDCOUNT	1-15	1	1
TOGGLE SWITCHES			
SLOW EYE	ON / OFF		OFF
SLOW STRT	ON / OFF	ON	OFF
SLOW TBL	ON / OFF	OFF	OFF
CUT HOLE	BEFORE / AFTER	AFTER*	AFTER*
HIDDEN PARAMETERS			
***SPEEDS			
TRIM / POS	100-250 S.P.M.	180	180
SEW SPEED	300-1000 S.P.M.	900	900
TABL SPEED	250-1500 S.P.M.	1000	1000
****MISCEL			
CLAMP DTY	2-10	4	4
CLAMP DL	2-100	15	15
TRIM DEL	10-100	30	30
BR FORCE	0-20	5-9	7

* ALL DURKOPP 558 REQUIRE THIS PARAMETER TO BE SET TO AFTER EVEN IF THEY ARE A CUT BEFORE TYPE.

SECTION VI**TEST MODE****A. BUILT-IN TEST PROGRAM**

A test program is available to test the major input functions, synchronizer and encoder for proper operation. To access the program press the  and  buttons simultaneously. The display will read "SYSTEM TEST", after which the following may be tested:

- Needle position
- Start switch
- Home & sew sensors

If the machine is in its home position the display should now read "-1- HOMESENSOR". This indicates that the processor is receiving a signal from the home sensor. Any other display would indicate a malfunction in the home sensor. Only one function can be displayed at a time, this means that if two signals are being received at one time the signal with the highest priority will be displayed. The order of signal priorities is as follows:

1. HOME and SEW SENSORS
2. CLAMP DOWN and START
3. NEEDLE UP (This signal has no priority)

B. TESTING THE HOME AND SEW SENSORS

As the machine is turned through its cycle manually the display will change to indicate which signal is being received. For example, if the machine starts in its home position the display will read "HOMESENSOR" as the machine is turned away from home position the display will change to "NEEDLE UP" (If the machine is not in the needle up position and no other signals are being received the display will read "test inputs:"). Continue turning the machine and the display will again read "HOMESENSOR" as the machine reaches the punch position plateau (see page 6-2 (F1)) of the home sensor block. Continue turning the machine until the sew sensor has reached the first stitch plateau (see page 6-2 (F2)) of the sew sensor block, the display should now read "-2- SEW SENSOR".


C. TESTING THE CLAMP DOWN AND START SWITCHES

Turn the machine manually until the display reads either "NEEDLE UP" or "test inputs:". Now press the start with lightly until the display reads "-4- CLAMP DOWN", then fully depress the start switch, the display should now read "-5- START".

D. TESTING THE MOTORS

Note: To avoid damage to the machine the belts should be removed for this test.


1. TESTING THE TABLE MOTOR

Press the  button. The display will now read "ONLY w/adapter".


Press the  button again, the display will now read "TEST TABLE MOTOR".


Press the start button lightly to its first position (clamp down in the normal mode). The motor will begin to rotate with a fixed low current (no speed control). After releasing the start switch the display should now read 800 pls. (800 pulses) any number other than 800 indicates a failure in the system and it should not be used until corrected. Depress the start switch fully and the motor will begin to rotate at 100 r.p.m. controlled speed.

2. TESTING THE SEW MOTOR

Press the  button. The display should now read “TEST SEW MOTOR”.
To test the sew motor follow the same procedure as testing the table motor.

E. EXITING THE TEST MODE

Press the  button, you are now back in the normal test mode.

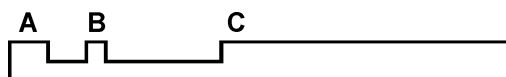
To exit this mode press the  button.

You are now back in the operating mode.

F. DESCRIPTION OF THE HOME AND SEW SENSOR BLOCKS

1. THE HOME SENSOR BLOCK

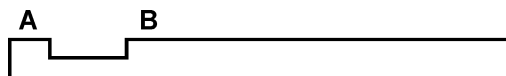
The home sensor block has three plateaus. They are:



- a) HOME
- b) PUNCH POSITION
- c) SLOW EYE DETECTION

2. SEW SENSOR BLOCK

The sew sensor block has two plateaus. They are:




- a) FIRST STITCH
- b) LAST STITCH

3. DESCRIPTION OF AN AUTOMATIC CYCLE

The table is in a home position. Pressing the start lever to the first switch position drops the clamp. Depressing the start lever fully to the second switch position starts the table moving at table speed (see page 5-4 (5a3)) toward the leading edge of the sew sensor. At the leading edge of the sew sensor block, the table speed will decrease to half of its set value. At the trailing edge of the first stitch plateau the table will stop and the sew motor will start. As the machine begins to sew, the leading edge of the last stitch plateau will be ignored. As the cycle continues, the leading edge of the slow eye detection plateau on the home sensor block will start the slow eye function if selected (see page 5-3 (3c) and (4a)). As sewing continues, the trailing edge of the last stitch plateau starts the final stitch count to complete the button hole. (See page 5-3 (3e)). At this point the sewing motor will stop in the needle up position and the table motor returns the table to the home position. While returning to the home position the home sensor will pass over the “PUNCH POSITION” plateau of the home sensor block and punch the hole will then be punched. The trailing edge of the “PUNCH POSITION” plateau will then start the counter that lifts the clamp before reaching the home position. The table motor stops at home position. The machine is ready for the next cycle.


G. USING THE EMERGENCY STOP BUTTON

After pressing the emergency stop button the display reads "EMERGENCY STOP".

To exit this mode press the  button and hold it for at least one second.

Note: This relatively long time is for safety reasons, so that the emergency stop mode can not be left accidentally.

The display will now read "cont. or go home". You now have two options, to move the table to the home position or to continue the program where ever it was stopped.

Pressing the  button will move the table to the home position. Pressing the start switch will continue the program from where ever it was stopped.

NOTE: If the needle is not in the needle up position the table motor will not start.

The display will read "NOT NEEDLE UP" which will disappear as soon as the machine is manually rotated to the needle up position. Please note that there is only one true needle up position every two needle bar strokes.

H. THE AIR PRESSURE SWITCH

To avoid serious damage to the machine it will not operate without air pressure.

If there is no air pressure to the machine and the start switch is pressed the display will read "NO AIR PRESSURE". This expression will disappear as soon as an air supply is connected to the machine.

02
CC

10
PU

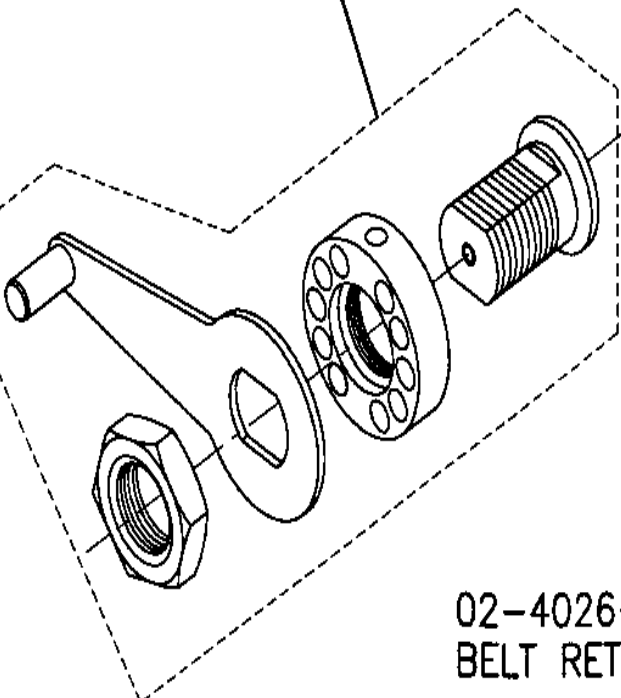
EX

DRIVE PULLEY ASSEMBLY
DURKOPP 558
10-1461-01

02-4007-01
COLLAR

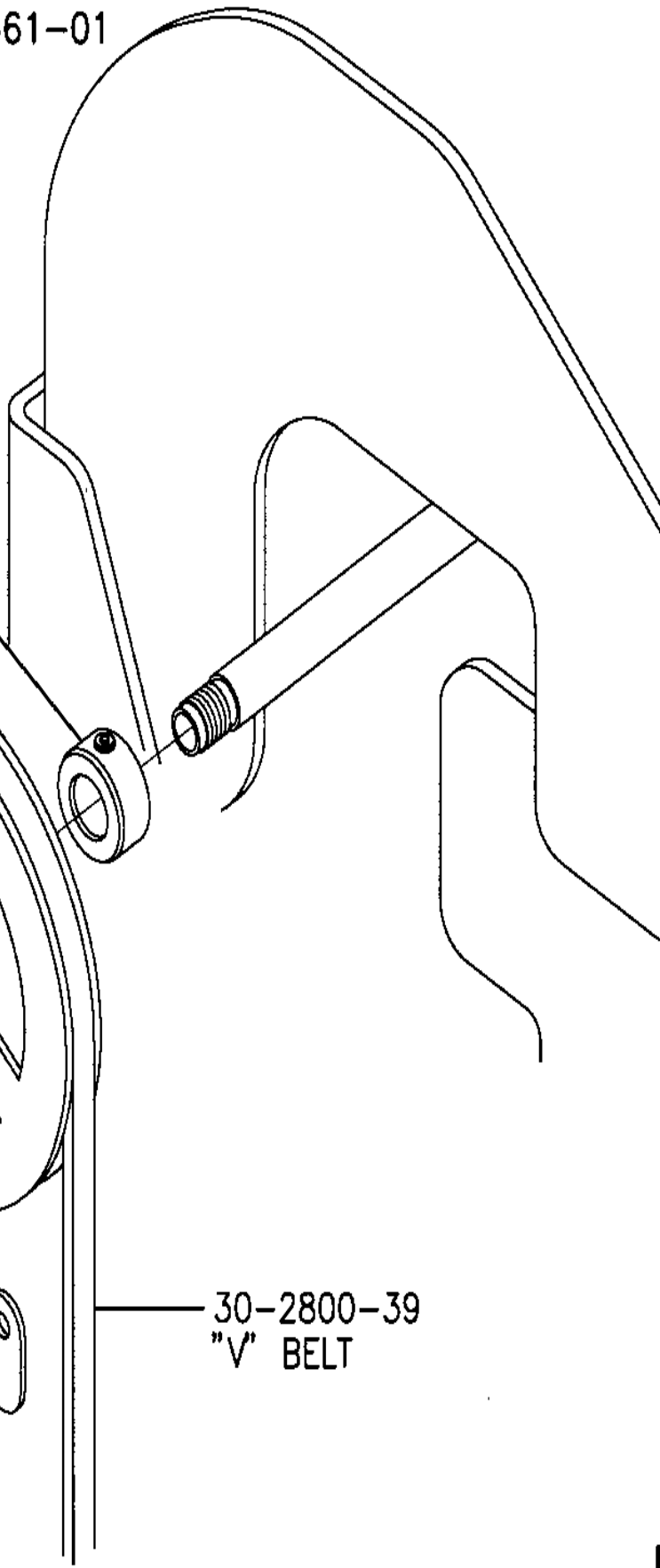
10-1457-01
PULLEY ASS'Y

EXISTING CRANK



02-4026-01
BELT RETAINER

30-2800-39
"V" BELT



STOP SWITCH ASSEMBLY

DURKOPP 558
11-0676-01

01-8512-01
COVER

33-0206-03
SCREW-P.H.M.S.

30-0100-01
STRAIN RELIEF

11-0646-01
CABLE ASS'Y

30-1892-01
BLOCK SWITCH

30-1893-01
BUTTON SWITCH

33-0206-03
SCREW-P.H.M.S.

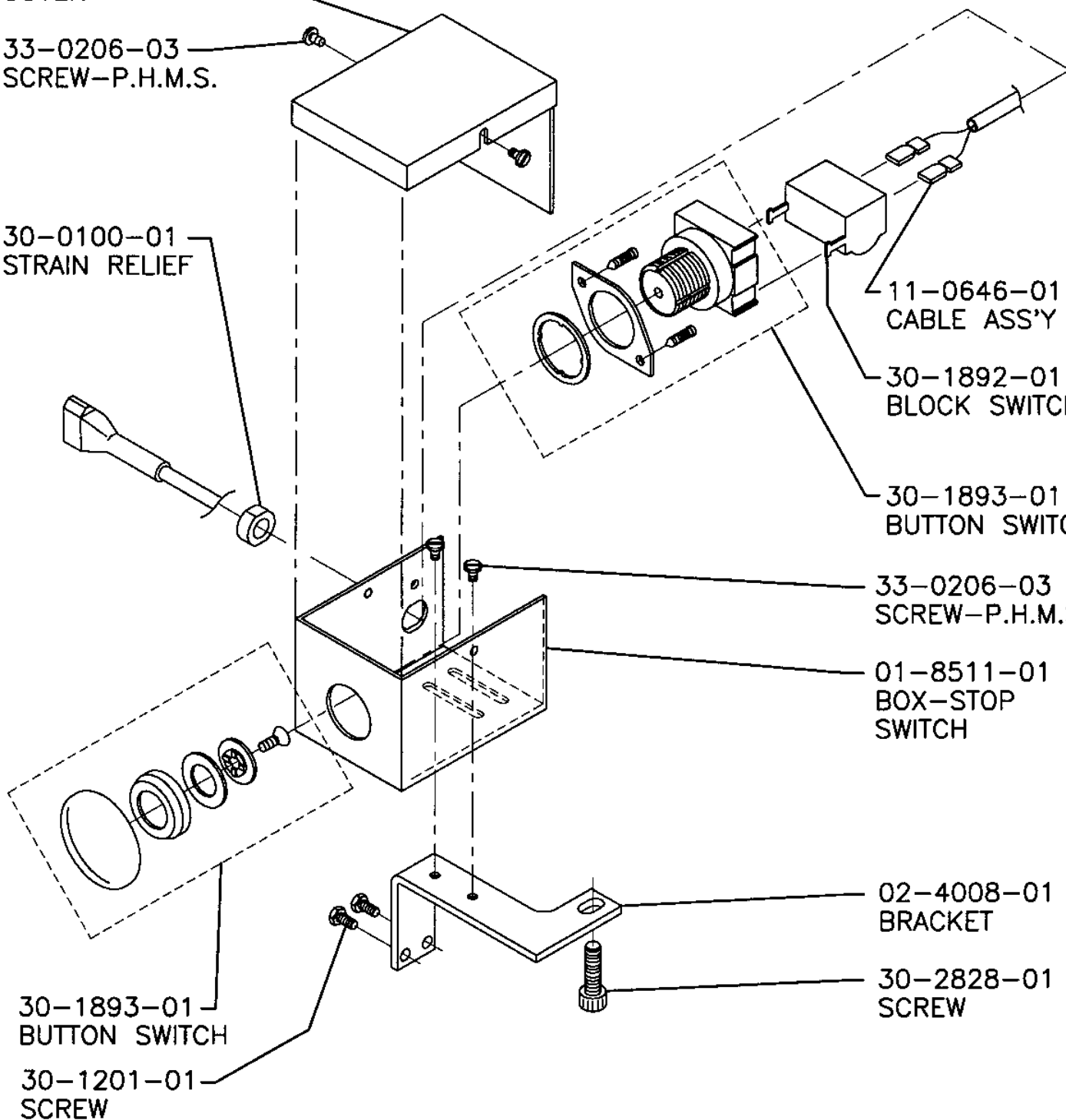
01-8511-01
BOX-STOP
SWITCH

02-4008-01
BRACKET

30-2828-01
SCREW

30-1893-01
BUTTON SWITCH

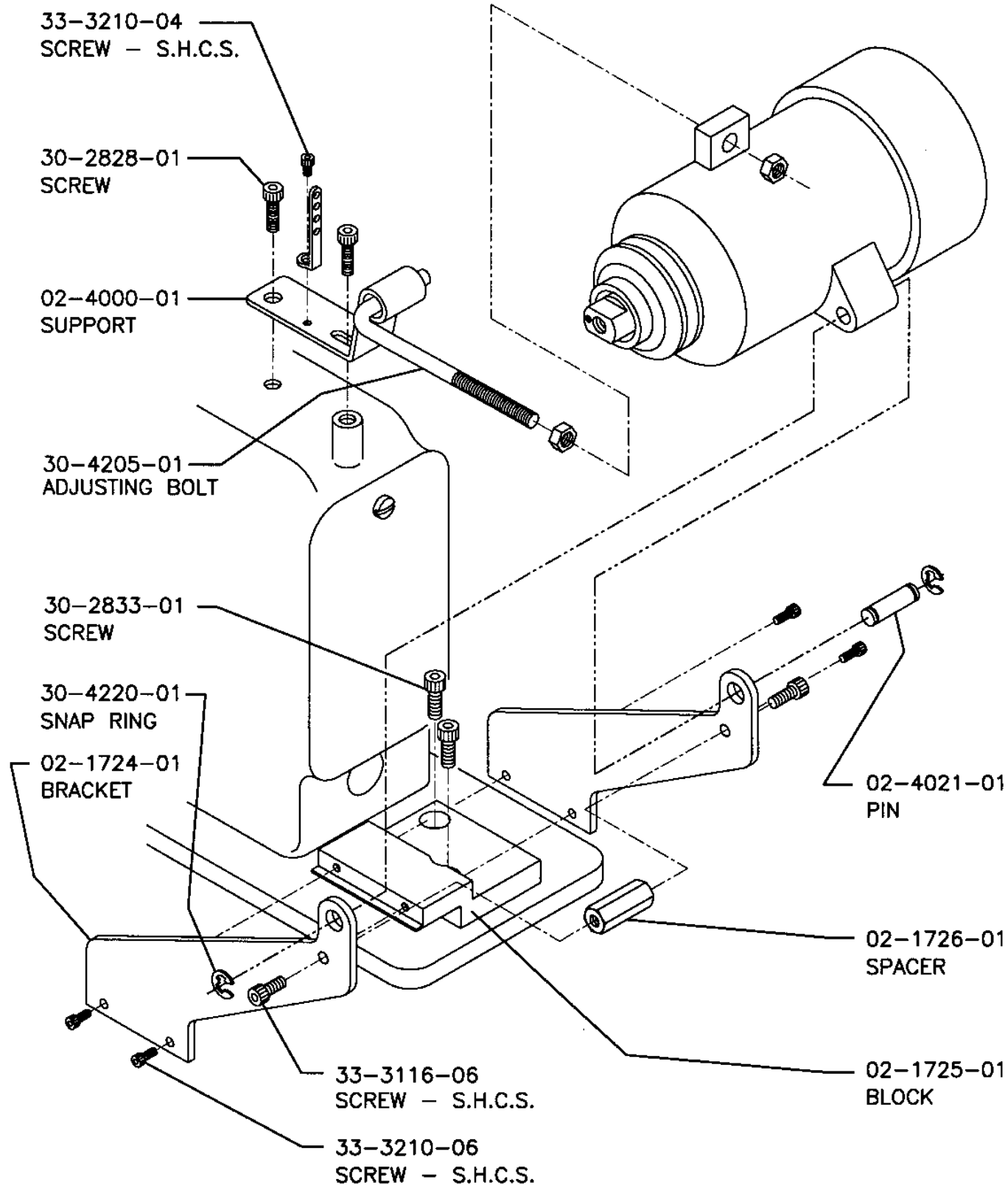
30-1201-01
SCREW



MOTOR MOUNT ACCESSORIES

DURKOPP 558

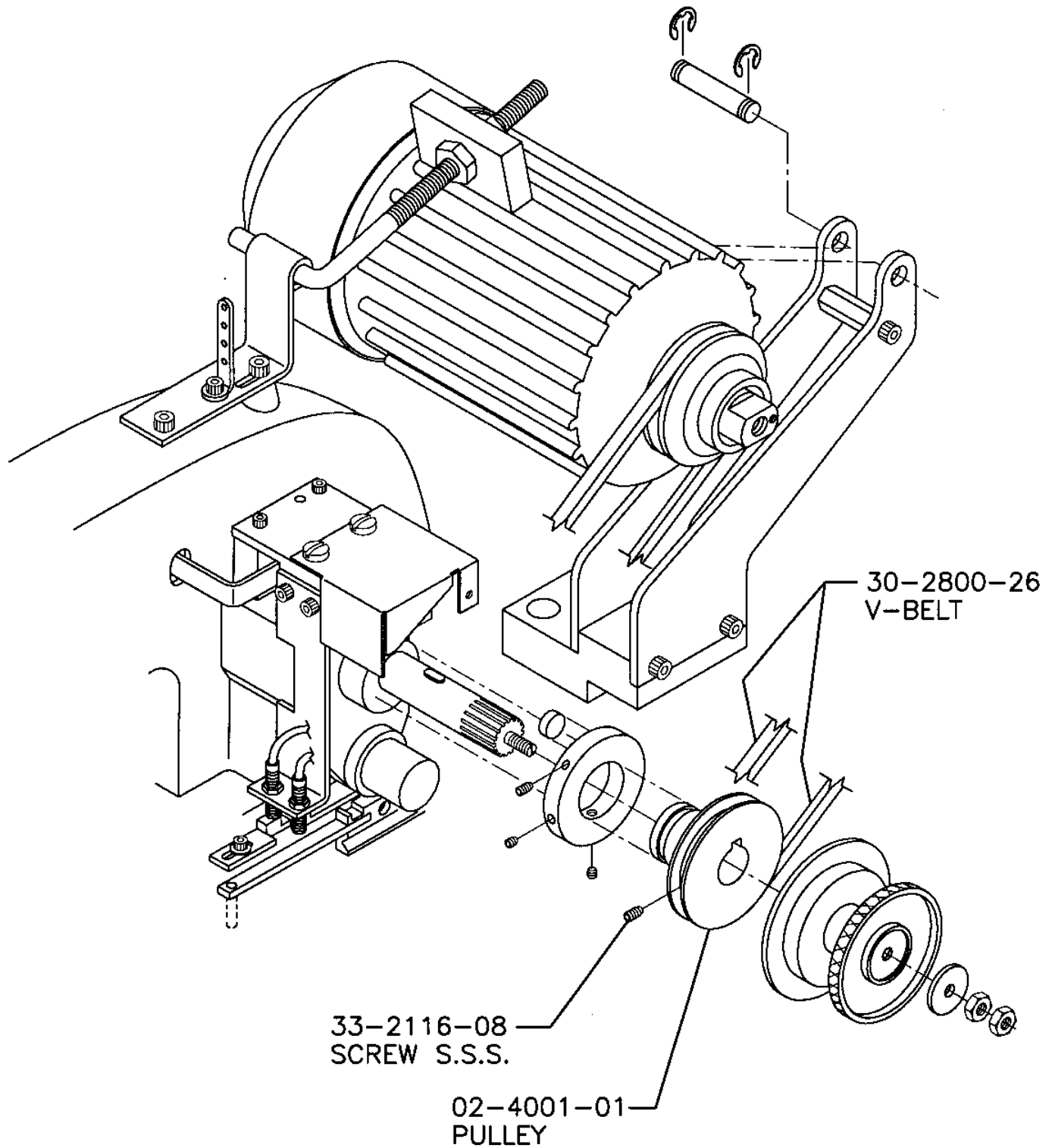
10-1463-01



BELT GUARD (10-1464-01) NOT SHOWN

INS-2473B

PULLEY ASSEMBLY
8890BH DURKOPP 558
10-1465-01

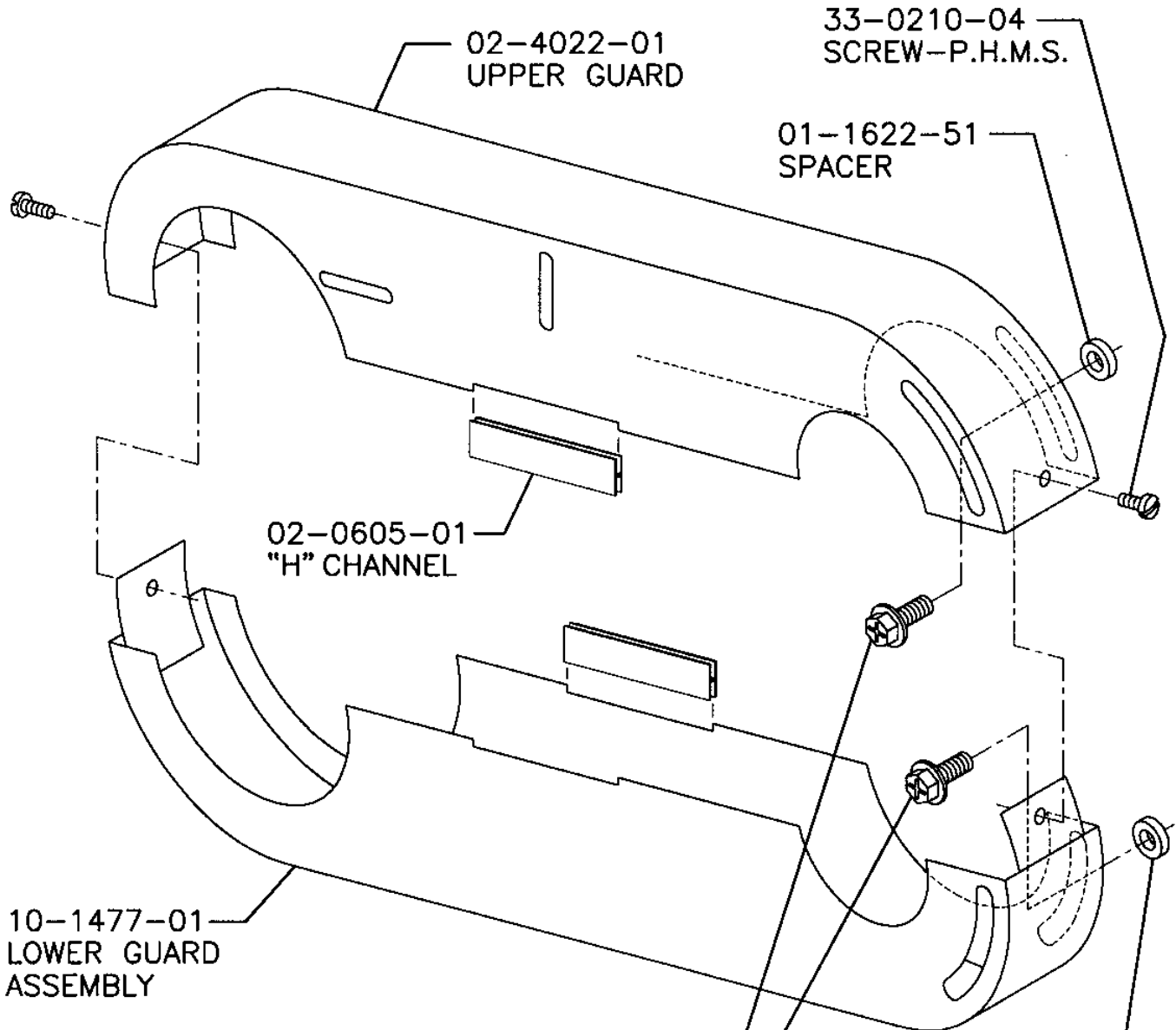


BELT GUARD ASSEMBLY

8890BH

10-1464-01 DURKOPP 558 / REECE 101

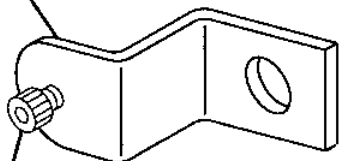
10-1464-02 REECE 103/104



REECE 103/104 ONLY

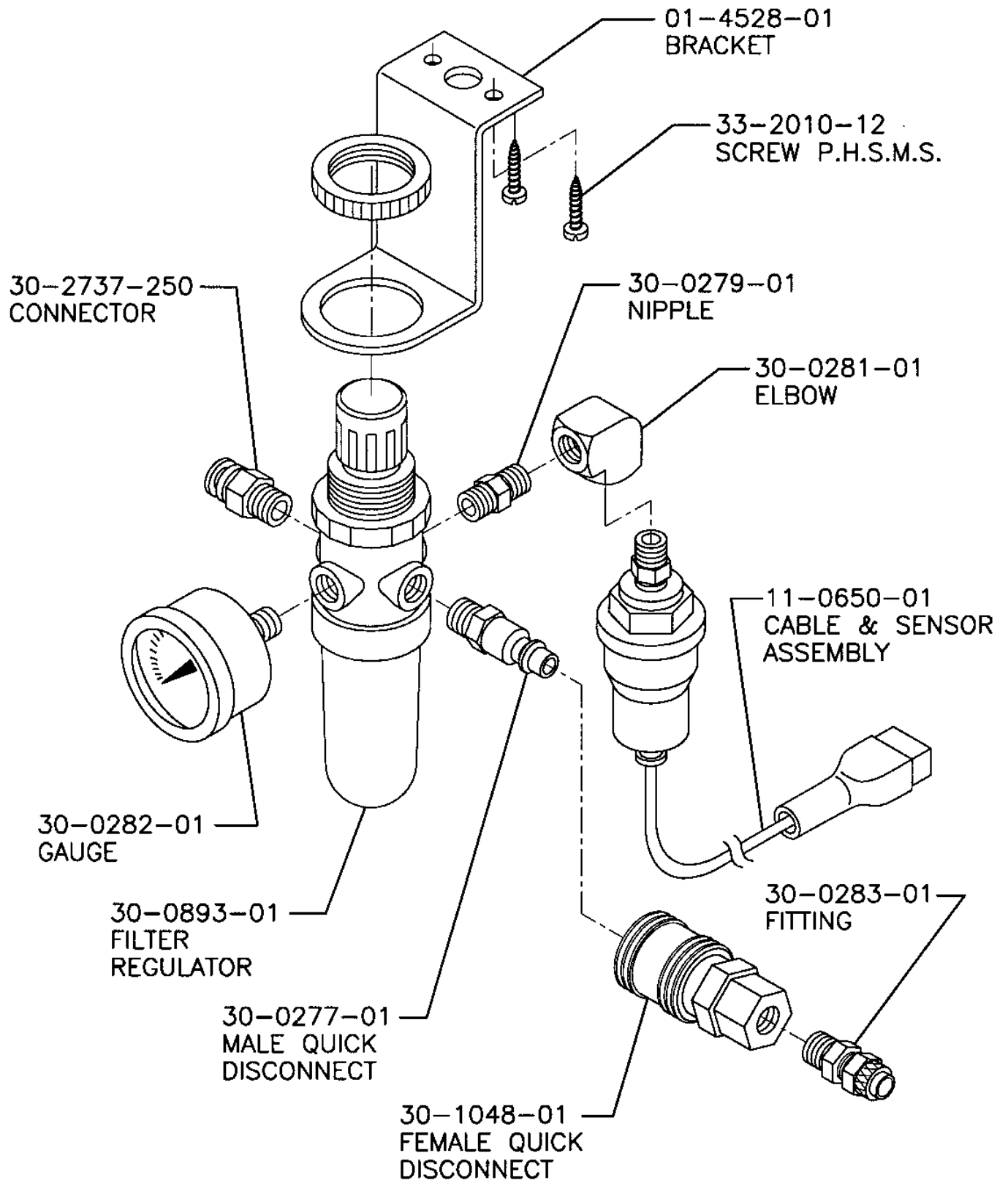
02-4024-01
BRACKET

33-3108-04
SCREW - S.H.C.S.

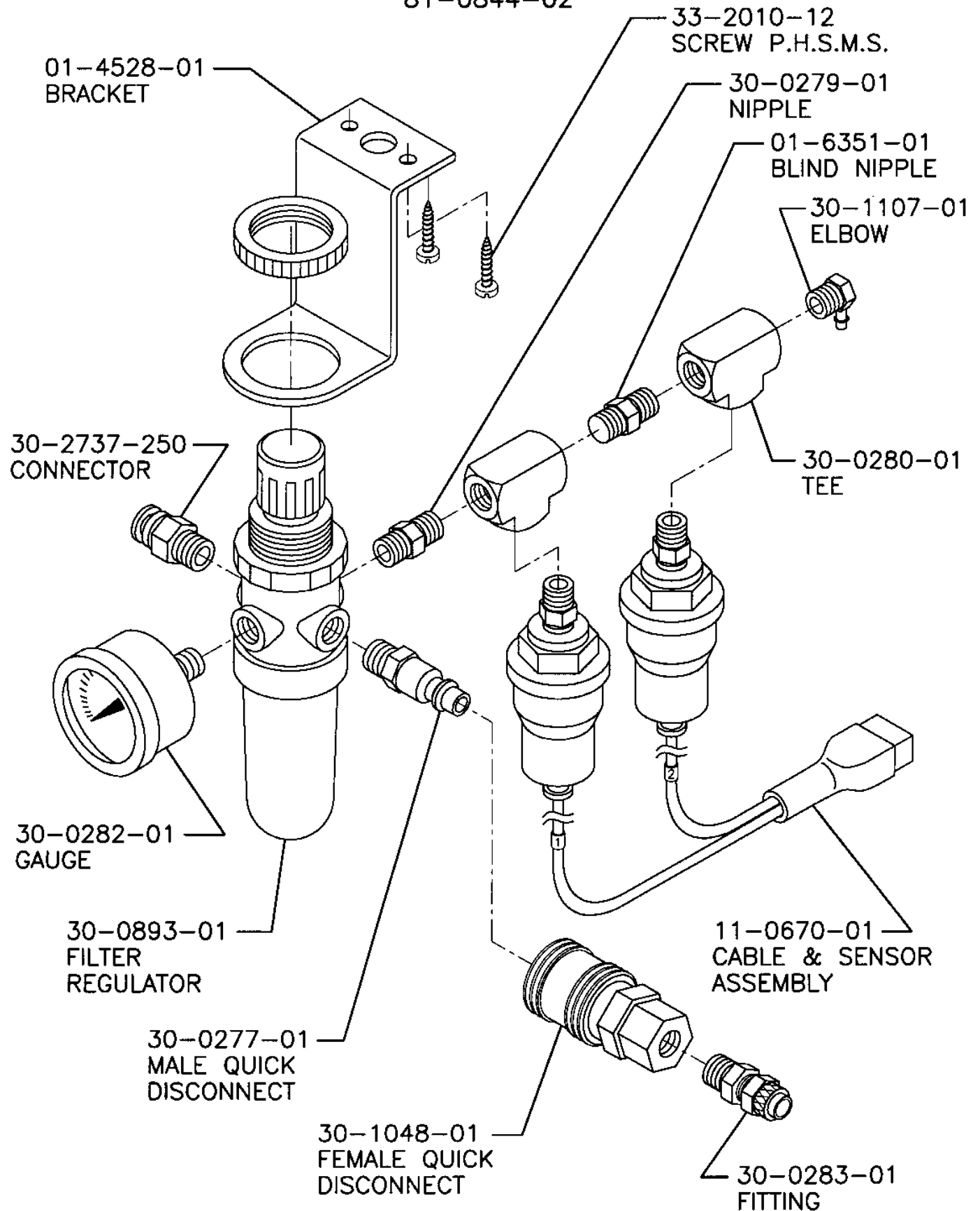


REGULATOR & AIR SENSOR ASSEMBLY

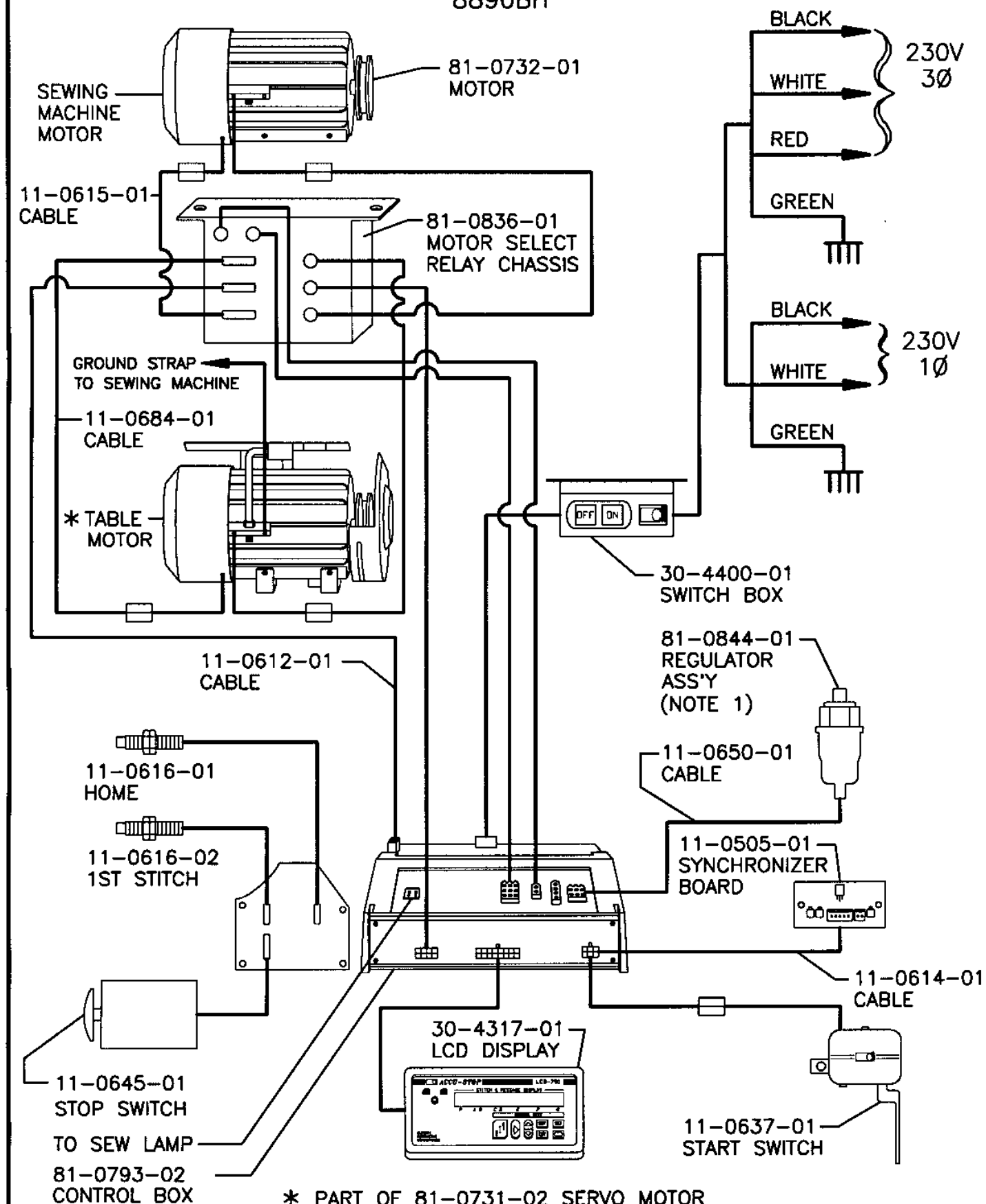
8890BH
81-0844-01



REGULATOR & AIR SENSOR / INDEXER ASSEMBLY

8890BH
81-0844-02

CABLE DIAGRAM 8890BH



* PART OF 81-0731-02 SERVO MOTOR

NOTE 1. USE 81-0844-02 WHEN AN INDEXER IS USED