

FISCHBEIN MODEL "F-R-H "

FISCHBEIN®

A DURAVANT COMPANY



Serial Number:.....

Weight:.....6.3Kg

Noise Level:.....79dB

Edition:.....02/2016

USER MANUAL

Manufactured and Assembled by:
Fischbein LLC
151 Walker Road – Statesville, NC 28687
USA

Imported and serviced by:
Fischbein sa
Paepsem Business Park
Boulevard Paepsem,8 – 1070 Brussels
www.fischbein.com

REF: 14852F-GB



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

FISCHBEIN

Model F-R-H

PORTABLE BAG CLOSER

USERS MANUAL



SERIAL NUMBER :

WEIGHT :6,3 kg

NOISE LEVEL : 79 dB

EDITION :02 / 2016



Manufactured and assembled by : Fischbein LLC
151 Walker Road
Statesville , NC 28687
USA

Imported and serviced by : Fischbein S.A.
Paepsem Business Park
Boulevard Paepsem, 8, B - 1070
Brussels - Belgium



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

1. FOREWORD.

The contents of this manual are considered to be proprietary and confidential to FISCHBEIN and should not be reproduced without the prior written permission of FISCHBEIN.

Nothing contained in this document is intended to extend any promise, warranty or representation, expressed or implied, regarding the FISCHBEIN products described herein.

Any such warranties or other terms and conditions of products shall be in accordance with the standard terms and conditions of sale for such products, which are available upon request.

FISCHBEIN reserves the right to make changes and improvements to products without notice and without incurring any obligation to make such changes or add such improvements to products sold previously.

The use of repair parts other than those included within the FISCHBEIN approved parts list may create hazardous conditions over which FISCHBEIN has no control. Therefore FISCHBEIN cannot be held responsible for equipment in which non-approved repair parts are installed.

ATTENTION!!!!!!

OPERATORS AND MAINTAINING THIS EQUIPMENT SHOULD READ THIS ENTIRE DOCUMENT BEFORE ATTEMPTING TO HANDLE OR OPERATE THE MODEL F SERIES PORTABLE BAG CLOSER.

USE CLEAN, DRY NON LUBRICATED AIR – MOTOR NEEDS NO LUBRIFICATION.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

2. MACHINE SPECIFICATIONS.

Model:	F-R-H
Stitch length:	approximately 7 mm
Maximum thickness of sewn material:	6,5 mm
Sewing speed:	approximately 13,6 m / min (charge)
Weight:	6,3 kg ,with electric cord and 200gr cone.
Vibration level:	
Noise level:	79 dB.
Air supply:	air motor Min: 0,5Mpa- Max: 0,8 Mpa.
Seam:	single thread chain stitch.
Needle:	D5, REF: 13050
Thread:	20/4 Polyester, 200 gr cone

VIBRATIONS!!!!

Daily exposure values must not exceed 180 bag/h over a period of 8 h (1 work shift)
Bag width: 55cm Internal doc: A003-0237PD

3. GENERAL GUIDELINES FOR TORQUE APPLIED TO F HARDWARE.

Cover screws:	2,5 - 2,9 Nm
Needle bar guard and other covers:	2,5 - 2,9 Nm
Retaining collars (internal or external):	2,5 - 2,9 Nm
Looper holder and cam follower clamp screws:	2,5 - 2,9 Nm
All other set screws:	2,5 - 2,9 Nm
All other hardware fasteners not specified:	2,5 - 2,9 Nm
Needle bar clamp:	2,9 - 3,5 Nm
Looper Cam set screws:	not exceed 0,14Nm
Eccentric set screws:	2,9 - 3,5 Nm
Slide bar button head screws (4):	2,1 - 2,3 Nm



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

4. TABLE OF CONTENTS.

1. FOREWORD.....	4
2. MACHINE SPECIFICATIONS.	5
3. GENERAL GUIDELINES FOR TORQUE APPLIED TO F HARDWARE.....	5
4. TABLE OF CONTENTS.	6
5. SERVICE.....	7
6. RECOMMENDATIONS FOR MAX. PERFORMANCE	7
6.1. Work area.	7
6.2. Before you start the machine.....	7
6.3. As you sew with the Fischbein model F-R	7
6.4. Maintenance.....	8
7. HOW TO USE THE FISCHBEIN PORTABLE BAG CLOSER?.....	8
8. HOW TO HANDLE A BAG BEFORE CLOSING IT?	9
9. METHOD OF THREADING, ADJUSTMENT AND TENSION.	10
9.1. Threading.	10
9.2. Thread cone replacement.	10
9.3. Tension adjustment	11
10. HOW TO OPEN A SEWN BAG?.....	12
11. MAINTENANCE AND SMALL REPAIRS.	13
11.1. DAILY MAINTENANCE.....	13
11.1.1. Lubricating the machine in operation.....	13
11.1.2. Cleaning of the machine.....	13
11.2. WEEKLY MAINTENANCE.	14
12. BOTTOM SIDE VIEW OF THE F PORTABLE BAG CLOSER.	15
13. REPLACEMENT OF PARTS: HOW TO PROCEED?	16
13.1. Placement of the machine for parts replacement.....	16
13.2. How to replace a needle?	16
13.3. How to replace the looper, 11300.	17
13.4. HOW TO REPLACE THE FEED DOG 11203?.....	19
13.5. HOW TO REPLACE THE KNIVES?.....	19
13.6. SCREWS AND HARDWARE.	19
13.7. REPLACING THE BELT.	21
14. MACHINE ADJUSTMENTS.	21
14.1. LOOPER STROKE ADJUSTMENTS.....	22
14.2. ADJUSTMENT OF THE NEEDLE HEIGHT VERSUS THE LOOPER.....	22
14.3. LOOPER CLEARANCE ADJUSTMENT.	23
14.4. MOTOR INSTRUCTIONS.....	24
15. TROUBLE - SHOOTING LIST.....	24
16. SPARE PARTS.	25
17. PLATE A: HOUSING, NEEDLE LEVER, AND PRESSER FOOT.	28
18. PLATE B: MAIN SHAFT AND LOOPER ASSEMBLY.....	30
19. PLATE C: HANDLE AND PNEUMATIC DRIVE.....	32
20. PLACEMENT STICKERS AND ADD GUARDS.	34
21. SAFELY DISPOSING OF A MODEL F-R.	36
22. SPARE PARTS WITH FISCHBEIN LOGO.....	37



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

5. SERVICE.

Should your machine require factory service or maintenance, please contact any of the Fischbein authorized distributors or Fischbein Brussels. Return the warranty card with details concerning your problems for warranty justification.

They can also give you the best advice on utilization, oil, thread and spare parts.

6. RECOMMENDATIONS FOR MAX. PERFORMANCE .

6.1. Work area.

The MODEL F-R-H machine should be operated in an area that allows freedom of motion for the operator and the unit. The machine's input end at the feed dog works quickly and the output end near the thread knife is very sharp. Other operators should keep out of arm's reach from the area in which the machine works. Operators should always wear proper eye protection when operating the machine and not wear loose clothing or jewelry. Long hair should be pulled back and tied to avoid getting caught in the machine.

6.2. Before you start the machine.

1. Make sure your machine is well connected to an adequate power supply as indicated on the motor.
2. Verify that all guards are in place.
3. No special installation is required, but we may recommend you to place something on the ground to set the machine on when not in use.
4. The machine is shipped to you with some examples of sewn test trips. Examine these carefully to see how proper chain form should look.
5. Use of the Fischbein model 1550PLUS suspension and balancing unit is recommended. This will allow the machine to be suspended at any convenient height, ready for use.
6. You may want to try the machine on some empty bags or pieces of paper to get a feel of how to use it, before you start with filled bags.

6.3. As you sew with the Fischbein model F-R-H-ATEX .

1. Do not use the machine in very humid or explosive environments.
2. Machine mechanism will carry the bag automatically through; therefore do not pull, push, or turn the machine.
3. Keep hands and fingers away from the bag moving mechanisms.(feed dog, presser foot)
4. Only use the machine to close bags of specific thickness. It is not designed for clothing or very thin plastic bags, (see page 3, machine specifications).
5. A minimum of paper bag strength is required. For plastic bags, a minimal thickness of 120 μ (microns) is necessary, depending on quality of PE used.

USE CLEAN, DRY NON LUBRICATED AIR – MOTOR NEEDS NO LUBRIFICATION.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

6.4. Maintenance.

1. Always use genuine Fischbein parts.
2. Do not use screws other than those indicated in the parts list. Hardware items on the Fischbein model F systems are not metric.
3. Always use original Fischbein D5 needles.
4. Use a 20 / 4 Fischbein 100 % polyester thread to get the best results.
5. Fischbein Premium Thread (Ref: 25010) is an excellent product, and available in various colors. With a full 200 gr cone you will sew around 250 bags (depending of bag widthness).
6. We also recommend that you use other Fischbein products such as: cleaning agents and crepe paper (tape); these products were selected to avoid problems and allow maximum efficiency of the machine.
7. Proper settings for all internal components are made at the factory, any change to these settings could cause damage to the machine mechanism.

7. HOW TO USE THE FISCHBEIN PORTABLE BAG CLOSER?

1. Take the machine in your right hand and place your finger over the start switch placed on the underside of the handle.
2. The switch engages and disengages with a positive “click“. Pressing and holding it in will start the machine running, releasing it will stop the machine.
3. It is recommended that bag top “gussets“ be formed before sewing the bag. This will make a stronger and more durable closure. See fig: 1-3.
4. Take the top of the bag in your left hand at the right side of the bag.
5. Feed the top of the bag between the presser foot and the throat plate.
6. Press on the switch so that the machine starts running. During the closing operation, the bag will be carried through the sewing gap correctly by the action of the feeding mechanism. There is no need to push the machine or pull the bag.
7. When the bag is in the machine, it may be useful to shift your left hand to the other end of the bag top to support the bag and achieve a straight seam.
8. When you reach the end of the bag, let the machine run for a little to form a short “chain“ and then gently turn the machine to the left, enabling the knives to cut the thread.

WARNING !!!!

Keep always your hand away from the presser foot to avoid the danger that your hand could be caught by the feed dog.

NOTE.

Important to check is the free space available between the top of the bagged product and the sewing line. The free space must be sufficient the whole width of the bag to allow enough material to sew.

When closing net bags or jute bags, a free space between the top of the product and the sewing line of 10 cm is recommended. For paper bags, not less than 5 cm is suitable.

Experiment with each type of product and bag material to see how much space needs to be left, to avoid tearing of the bag.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

8. HOW TO HANDLE A BAG BEFORE CLOSING IT?

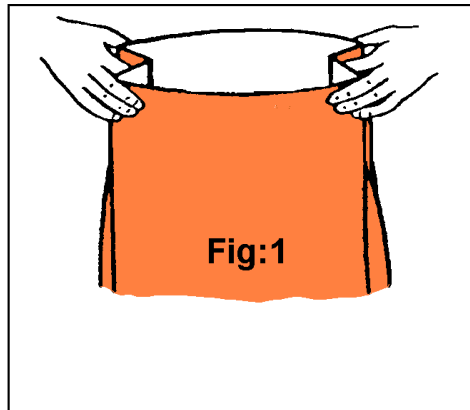


Fig 1: When the bag is filled in and ready to be closed, you must manually reform the bag top including the recommended gussets.

Fig 2: After reforming operation, fold the bag top as close as possible to the product and bring the bag in its original vertical position as shown on Fig : 2 and 3.

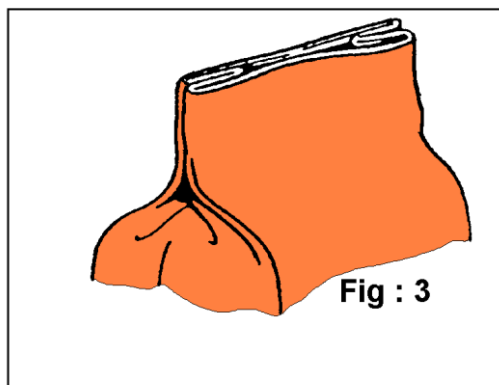
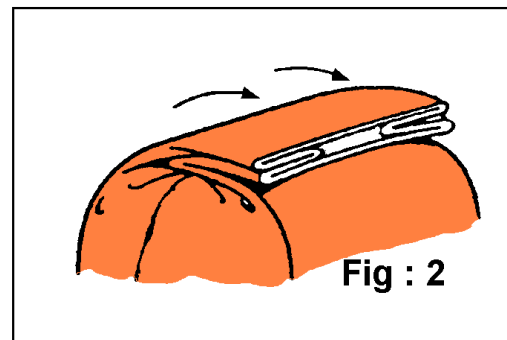
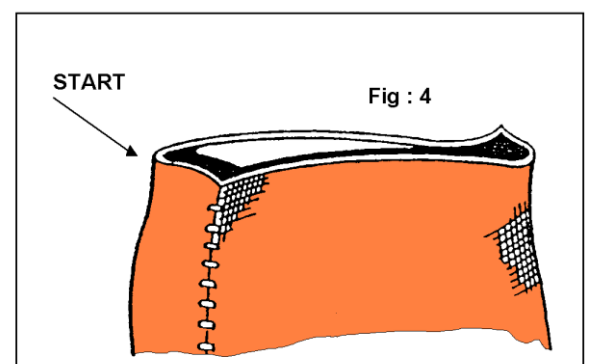


Fig 3: You can now start the closing operation remembering to leave sufficient free space between the top of the product and the sewing line.

Fig 4: When handling a jute bag with thick bag edges, do not introduce this edge directly into the mechanism but shift the edge gently before introduction and starting the closing operation.





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

9. METHOD OF THREADING, ADJUSTMENT AND TENSION.

WARNING !!!

Always disconnect the machine from it's power source before threading or adjustment .

9.1. Threading.

To thread the machine follow the thread path indicated in Fig:5.1 & 5.2 .

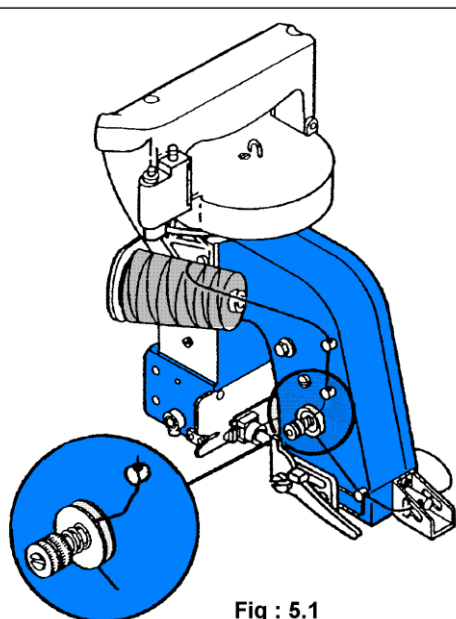


Fig : 5.1

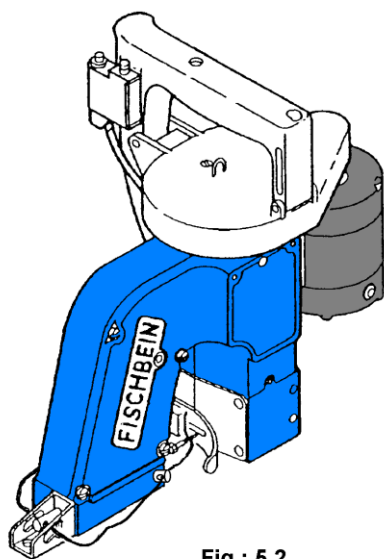


Fig : 5.2

1. Pass the thread through the first and second eyelet (11109).
2. Take the thread around the tension stud, inserting between the two tension discs (11114).
3. Pass it through the third eyelet (11109) close to the needle bar guarding (11101).
4. It should then be passed through the slotted opening in the needle bar guard, through the needle bar (11500) and finally through the opposite side of the needle bar guard.
5. Then push the thread through the eyelet (11109), to reach the needle front side.
6. Push the thread through the needle eye from the front side and pull it through for about 8 cm .
7. Take a bag or small test piece and introduce it between the throat plate and the presser foot, making sure that the needle is up. Start the machine and sew it through. This will provide a "thread chain ".
8. The machine is now ready to be used.

9.2. Thread cone replacement.

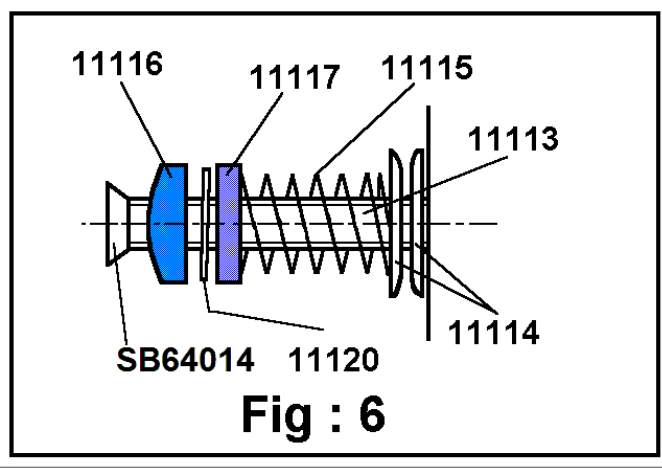
To install a new cone of thread:

1. Unscrew the wing nut (11805) at the base of the thread stand.
2. Remove the thread clamping bolt (11804).
3. Take a new cone of thread; place it on the thread clamping bolt, and put it on the thread stand (11815) .
4. Re - attaching the wing nut and tightening it sufficiently. The cone must not be able to rotate or wobble on the thread stand



9.3. Tension adjustment.

- ✦ It should not typically be necessary to change the thread tension unless you change to a much different thread or are sewing a special type of material. Consult your dealer or a Fischbein service representative for questions concerning special thread applications.



- ✦ The spring (11115) determines the tension on the thread when pulled through the two discs (11114).
- ✦ By turning the nuts of the tension discs clockwise, you will get more thread

tension, by turning in the opposite direction you will reduce that tension.

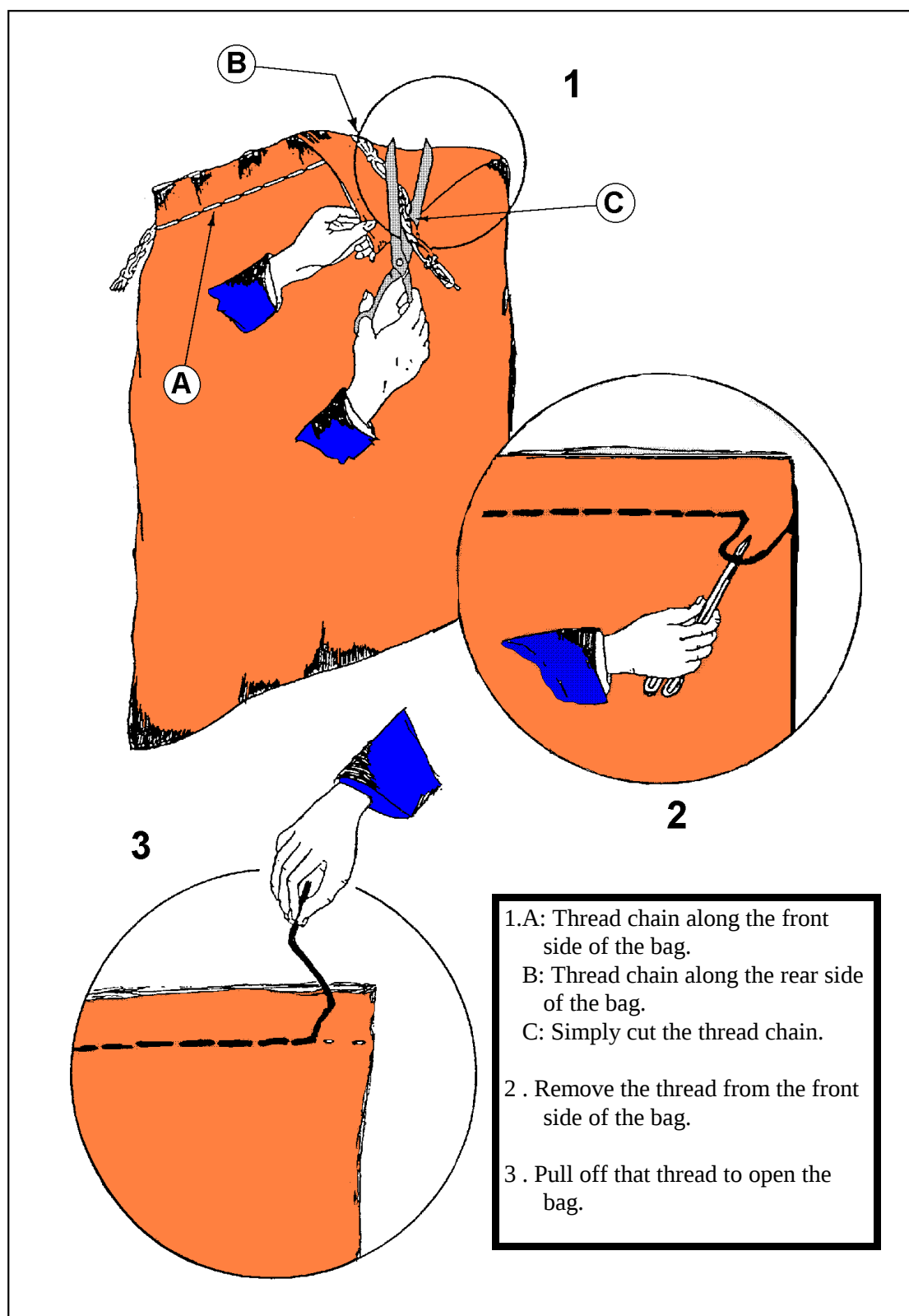
- ✦ The first nut (11117), close to the spring (11115) is there to adjust the tension, the second nut (11116) and the washer spring (11120), serve to lock the adjustment.
- ✦ The screw (SB64014) prevents eventual loss of the nuts (11116&11117) and has no adjustment purpose.
- ✦ Start with minimum tension initially and examine the stitch. If it appears too loose, gradually tighten the tensioning nut until a proper stitch is achieved. Be sure to tighten the locking nut when the proper setting is reached.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

10.HOW TO OPEN A SEWN BAG?





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

11. MAINTENANCE AND SMALL REPAIRS.

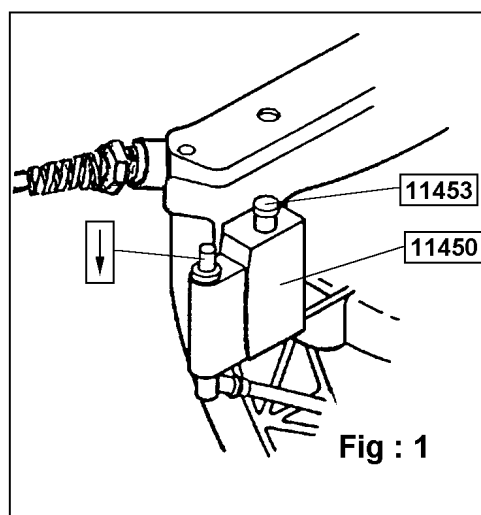
WARNING !!!!

Always unplug the machine before starting maintenance or repair.

11.1. DAILY MAINTENANCE.

11.1.1. Lubricating the machine in operation.

1. Before closing your first bag, be certain to see that the lubrication mechanism is functioning properly.
2. To speed oil through the machine mechanism you must simply press the oil pump button 2 or 3 times in succession. You will see the oil flowing through the feeder tube as you do. This should be performed every 2 hours of machine usage. The wicking inside the housing carries the dispensed oil to other moving parts near the looper and needle bar. Do not remove the wicking from the MODEL F-R-ATEX. If the wicking (11508) becomes worn and thin, replace it immediately.
3. Check the level of the oil pump regularly. Always fill with genuine Fischbein machine oil (12800).
4. Always replace the oil reservoir cap to avoid contaminating the lubricant. This could cause the oil lines to plug and prevent lubrication of the machine parts.
5. We recommend pushing the oil pump while the machine is running to give better oil distribution inside the machine.



11.1.2. Cleaning of the machine.

Each day, clean the machine of any dust or accumulated debris. This can easily be done by blowing out the machine cavities with compressed air or by using a dry bristle brush. Sticking particles must be removed by using a small brush.

Do not forget to clean around the bottom of the machine, especially around the looper and the knives.

If you are working in a very dusty environment, we recommend this cleaning operation twice a day. To do that, simply slide open the looper cover (11102). Blow out the inside with compressed air. Close the looper cover and tighten the cover pivot screw (11108) if necessary.

By doing these operations daily, you will increase the life of your machine.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

11.2. WEEKLY MAINTENANCE.

WARNING!!!!

Always disconnect the machine from the electrical power source before performing any maintenance or adjustment.

Clean the machine weekly, for a few minutes in a cleaning oil bath.
How to proceed?

1. Fill in a small tank with cleaning oil up to 6 cm maximum.
2. Remove looper cover located at the bottom of the machine and the belt pulley cover and handle.
3. Plunge the machine vertically into the oil so that it is immersed to the level of the throat plate.
4. Turn the machine manually at the pulley so the moving parts are cleaned in the cleaning oil bath.
5. Remove the machine from the bath and drain any excess of oil from the mechanism.
6. Your machine is now free of dirt and parts are cleaned up.
7. If necessary you may want to loosen any stubborn dirt or grit with a small brush and rinse the machine again.
8. Afterwards you may want to clean the outside parts by using a small oiled brush. Wipe the machine off with a soft, absorbent cloth.

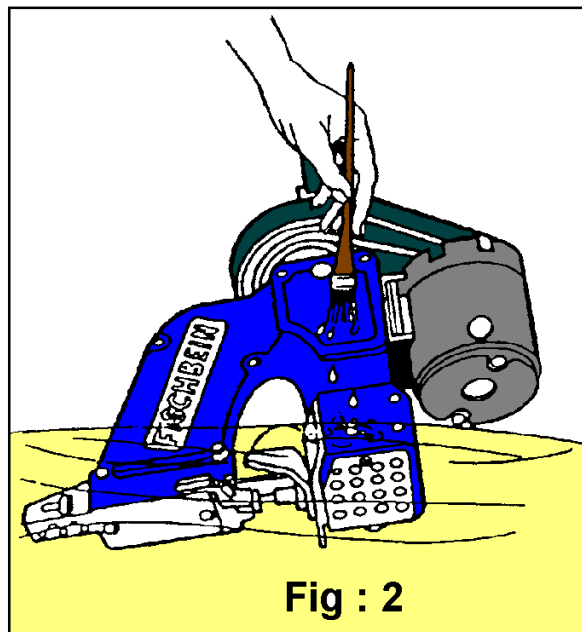


Fig : 2

CAUTION !!!!

For a good job, always use Fischbein cleaning oil (12802).

Never use benzene or similar aggressive or volatile products. Such products could dry the oil from critical moving parts and cause extensive damage to the machine or melt some of the plastic components.
Volatile solvent fumes could present a fire hazard if the machine is run where such vapors exist.

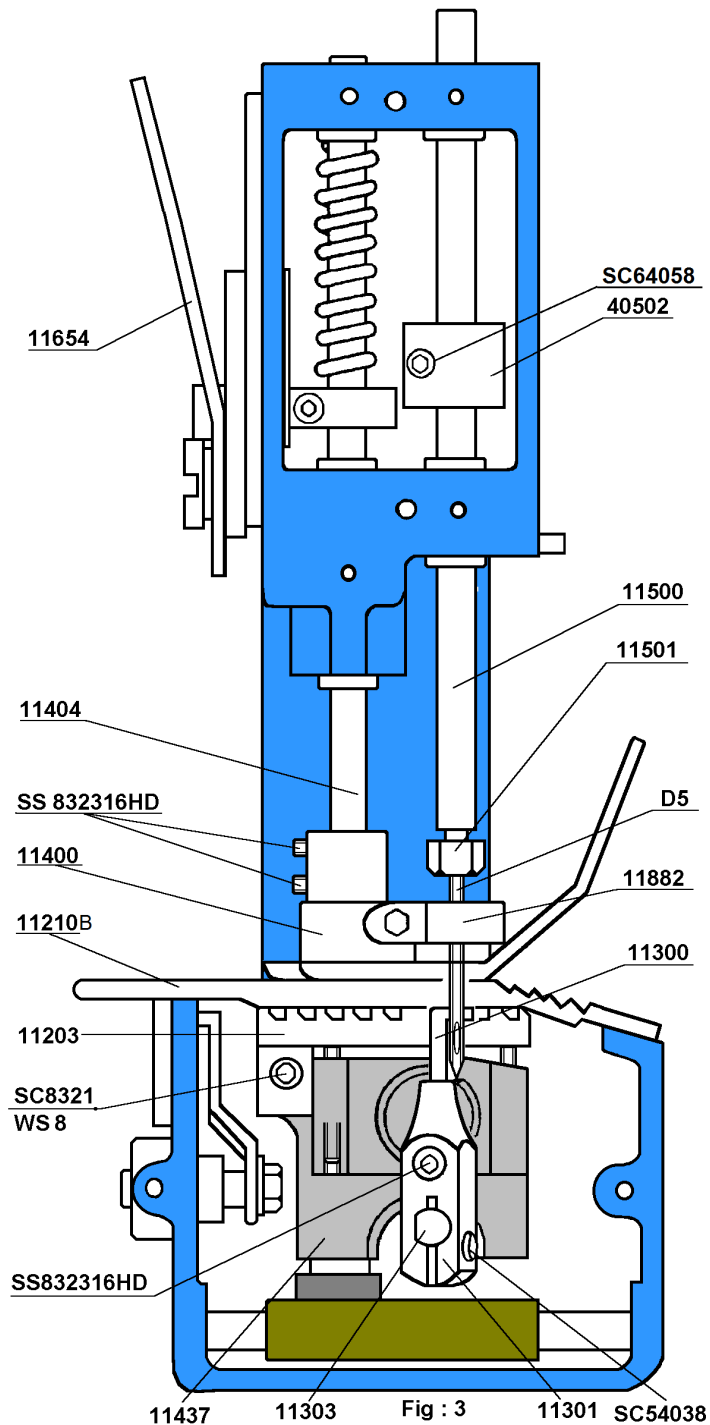


50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

12. BOTTOM SIDE VIEW OF THE F PORTABLE BAG CLOSER.

After removing needle bar guard (11101), looper cover (11102) and knife guard (11125).





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

13. REPLACEMENT OF PARTS: HOW TO PROCEED?

13.1. Placement of the machine for parts replacement.

Place the machine so that it rests on the motor and the machine handle is flat against the table. It should be sitting so that you are looking into the looper cavity and at the needle bar guard.

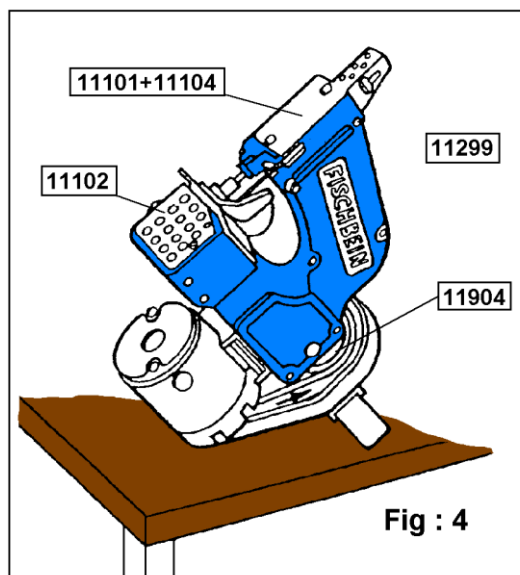


Fig : 4

13.2. How to replace a needle?

The needle is held in the needle bar by using the special nut (11501).

The nut should be adjusted with a 3/8 open end wrench or suitable adjustable tool (11645). Be careful not to strip the threads or the hex surface. **Do not use pliers.**

1. Unplug the machine.
2. Remove the pulley guard (11801).
3. Raise the presser foot to its detent position and rotate the machine manually until the needle bar is at its highest position.
4. Loosen the needle bar clamping screw (11501) with the wrench provided with the machine (11645).
5. Remove the needle. (D5)
6. Place the new needle in the needle bar making sure that it is fully inserted and that the long groove faces you and the needle scarf is to the back. The groove lips should match the base of the machine as close as possible and the eye should be facing you.
7. Tighten the screw to clamp the needle in place. The nut is designed so that it does not require excessive force to tighten, a firm torque will be sufficient.
8. Lower the presser foot.
9. Check to see if the needle is parallel with the throat plate (11210) See also

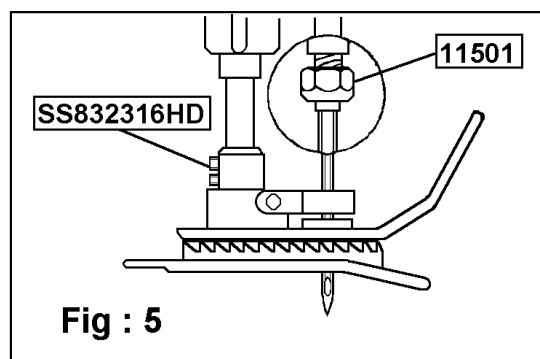


Fig : 5

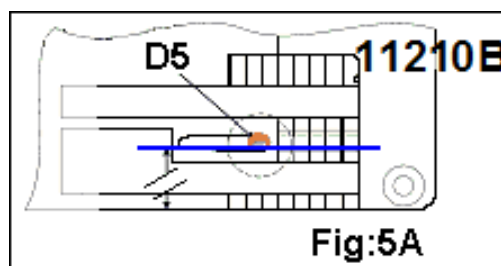


Fig:5A

Fig: 5A.

10. Replace the pulley guard.
11. Re - thread the machine.
12. Use always genuine Fischbein D5 needles.

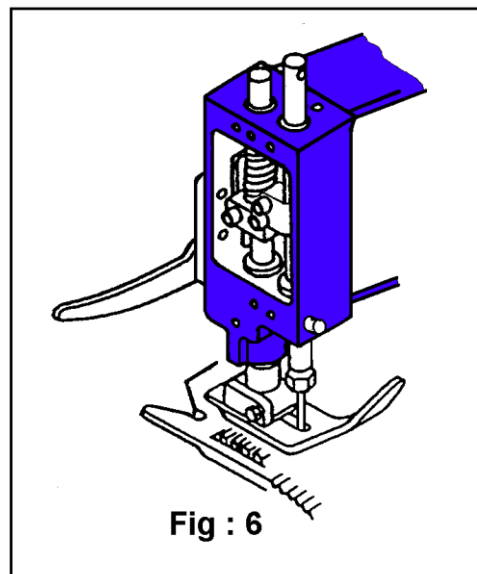
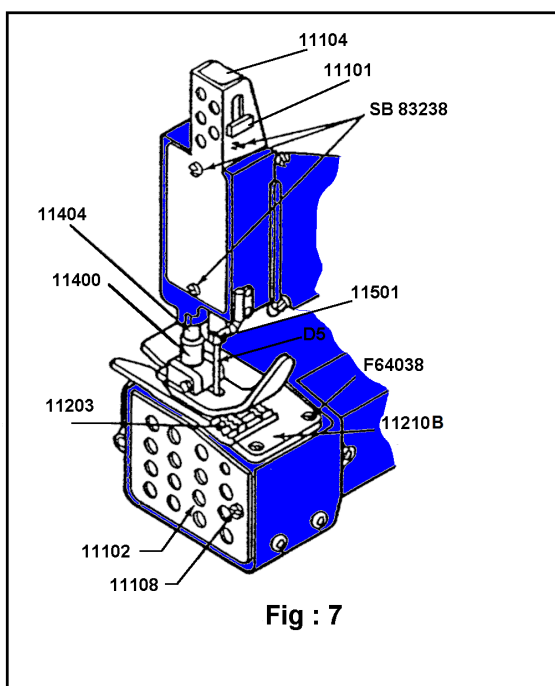
CAUTION !!!

Keep always your fingers away from under the needle.



13.3. How to replace the looper, 11300.

1. Unplug the machine.
2. Place the machine in the position described above.
3. Raise the presser foot to its detent position. See Fig: 6.
4. Remove the pulley guard (11801) and rotate the machine manually until the feed dog is at it's lowest position.
5. It's advisable to remove the needle (D5) for safety purposes.
6. Remove the looper cover (11102) by unscrewing screw (11108).

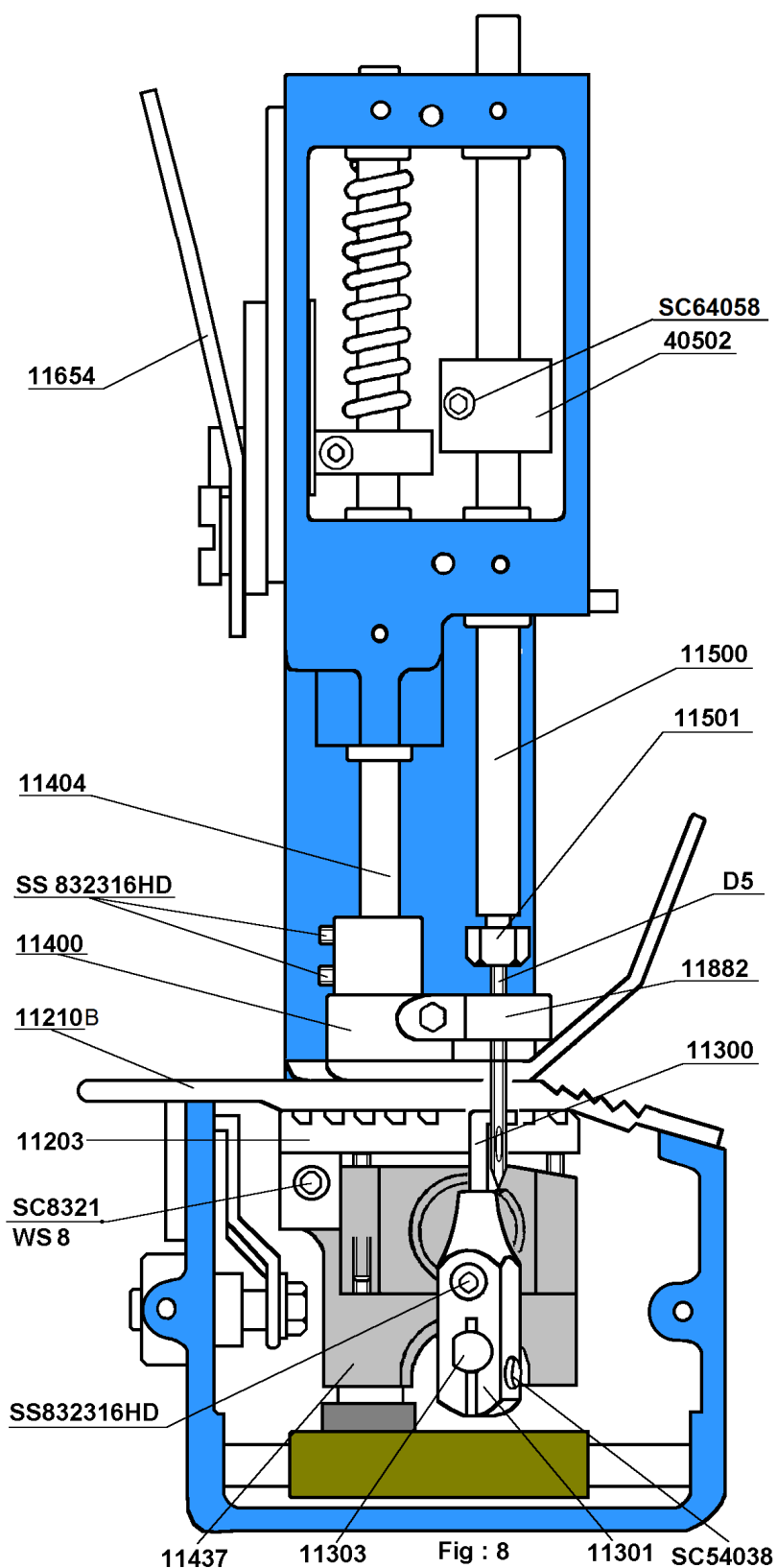


7. Remove the throat plate (11210) by unscrewing the 3 screws (F64038).
8. Remove the feed dog (11203) by removing screw (SC8321) and the washer (WS8).
9. Remove the looper (11300) from the looper holder (11301) by loosening the set screw (SS832316HD).
10. Install the new looper (11300) into the looper holder (11301). Make sure that: the flat side of the looper is faces the set screw (SS832316HD). The looper is inserted completely to the bottom of the looper holder (11301). This is very important for the adjustment of the machine.
11. Tighten the looper set screw (SS832316HD).
12. Replace the needle as per the previous procedure.
13. Now is a good time to check the machine timing (see timing procedure).
14. Replace the feed dog making sure that it is set correctly on the height adjustment screws.
15. Replace the throat plate.
16. Replace the looper cover and check to see that all screws are tight.
17. Replace the pulley guard.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology



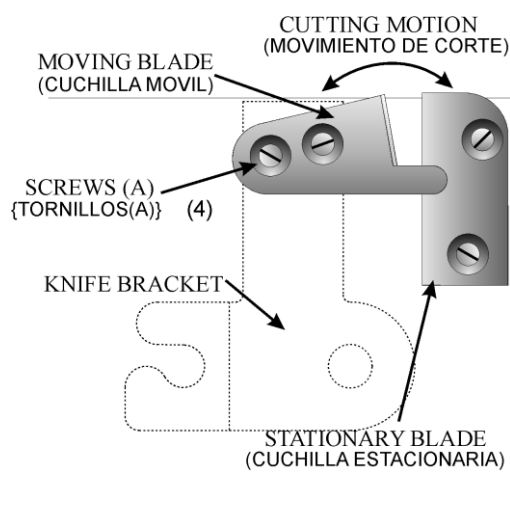


13.4. HOW TO REPLACE THE FEED DOG 11203?

1. Unplug the machine.
2. Place the machine in position described at the beginning of this chapter.
3. Get the presser foot up by getting the lever lifter presser foot (11654) down.
4. Remove the throat plate (11210).
5. Remove the looper cover (11102).
6. Remove the pulley guard (11801) and turn the machine until the needle reaches the highest point.
7. Unscrew both (SC8321) screw and (WS8) washer from carrier block (11437) to get feed dog (11203) out.
8. Set up a new (11203) feed dog on and set (SC8321+WS8) back again by secured screwing.
9. Reassemble other parts back.
10. Your machine is ready again for new jobs.

13.5. HOW TO REPLACE THE KNIVES?

1. Unplug the machine.
2. Remove knife guard (11125).
3. Remove the pulley guard (11801).
4. Rotate the machine until the knives are in closed position. This will prevent damage when you replace the blades.
5. Remove the moving knife (11702) from his holder (11007) by unscrewing the 2 screws (F348316).
6. Now remove the stationary knife (11703) from the housing.
7. Replace the stationary knife (11703) on the housing orienting it so that the blade edge faces the moving knife bracket. For best results use only genuine Fischbein repair hardware, screw (F348516).
8. Mount the moving knife (11702) onto its holder (11007).
9. Check to see that the knives are flat to each other.
10. Replace the knives guard (11125) and pulley guard (11801).
11. Your machine is ready again.



13.6. SCREWS AND HARDWARE.

All fasteners and hardware are assembled to Fischbein factory torque specifications, but because of the vibration inherent in any machine operation we recommend that periodic inspection and adjustment of the following hardware items be performed to ward off potential damage to the machine.



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

To proceed:

1. Unplug the machine.
2. Remove the needle guard (11101) and the looper cover (11102).
3. Check the set screws on the needle bar clamp (40502), and tighten if necessary.
4. Check the set screw on the presser foot lifter (11652), and tighten if necessary.
5. Replace the needle guard (11101).
6. Remove the looper cover (11102).
7. Check the set screw and the clamp screw on the looper holder (11301), and tighten if necessary.
8. Check the socket cap screw holding the presser feet dog (11203) and tighten if necessary.
9. Check the hex head screw on the knife bracket (11007), and tighten if necessary.
10. Replace the looper cover (11102).
11. Remove the housing cover.
12. Check the set screws on the cam assembly (40310), and tighten if necessary.
13. Check the set screws on the connecting rod assembly (11079), and tighten if necessary.

WARNING!!!

Never remove these screws or change the orientation of either of these components. Never try to remove a broken screw or attempt to drill it out. Consult your repair center.

Note:

If this assembly moves the machine must be re - timed, tighten it if necessary.

14. Check the clamp screw on the cam follower assembly (40317).
15. Check the hex head screw attaching the connecting rod assembly (11079) to the needle arm assembly (40099), tighten it if necessary.
16. Replace the housing cover.
17. Finish by checking the throat plate screws and checking and adjusting the belt tension.
18. Reassemble the machine and it is ready to sew.

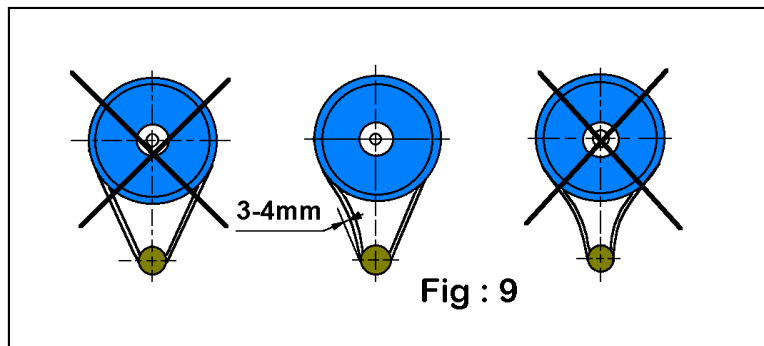


50003F-H

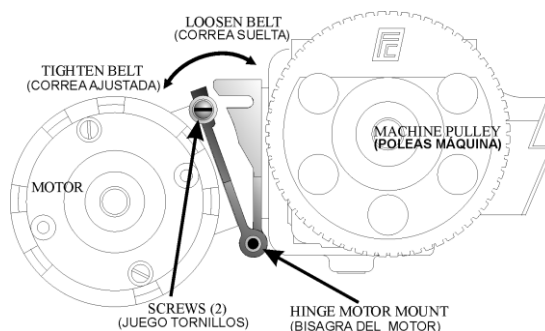
FISCHBEIN LLC
The Leader in Bag Closing Technology

13.7. REPLACING THE BELT.

1. Unplug the machine.
2. Remove the thread cone from the thread cone holder (11815).
3. Remove the handle assembly by unscrewing two screws (SC142034)
4. Loosen the two set screws (11908) on the hinged motor mount 11906



5. Press the motor mount completely closed to allow slack for removal of the used belt and to allow the new belt to be installed.
6. Install a new belt (11340) around both pulleys.
7. Apply tension to the belt by opening the motor mount hinge and tightening the two set screws. The belt must remain slightly flexible.
8. Reattach the handle assembly, and the thread cone holder + thread cone back on the machine.
9. Your machine is now ready to use.



14.MACHINE ADJUSTMENTS.

In order for your machine to perform to its fullest capabilities it is important to maintain the machine timing and to be sure that the key components in the sewing operation are in good repair.

Basic components important to the sewing operation are the:

- ⇒ Needle - it should be sharp and correctly oriented.
- ⇒ Feed Dog - the teeth should be sharp and the height should be correct.
- ⇒ Looper - it should be smooth and correctly adjusted.
- ⇒ Before any adjustment to the machine, it is important that you respect following basic rules.

1. Unplug the machine.
2. Always rotate the pulley in the direction of machine operation.
3. Install a new needle.
4. Adjust the machine in a 3-step procedure, followed by a running test.
5. It is important to follow these steps in order.



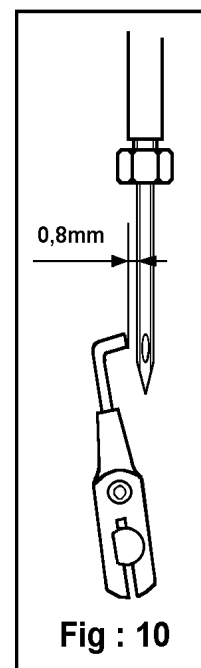
50003F-H

FISCHBEIN LLC

The Leader in Bag Closing Technology

14.1. LOOPER STROKE ADJUSTMENTS.

1. Put the machine on a flat surface, with the looper cover (11102) facing you.
2. The needle bar guard will be pointing up and the motor will be underneath, Fig: 4.
3. Raise the presser foot (11400) with the lifting lever (11654) until the presser foot is no longer touching the throat plate (11210), see Fig: 6.
4. Remove the looper cover (11102).
5. Remove the pulley guard (11801).
6. Remove the throat plate (11210), Fig: 7.
7. Remove the feed dog (11203), Fig: 3.
8. Turn the machine pulley (11339) until the looper (11300) is at maximum back stroke position to left of needle.
9. At this moment, the distance between the point of the looper and the left side of the needle must be of 0,8 mm. Use gage, 11302, to check that distance, Fig: 9.
10. If that distance is not correct, take off the housing cover (11299) and 6 screws (SC83212).
11. Loosen screws (SC63258) of the arm, follower cam (40317) and turn the looper shaft (11303) up to reaching the distance of 0,8 mm Tighten the screw SC63258.

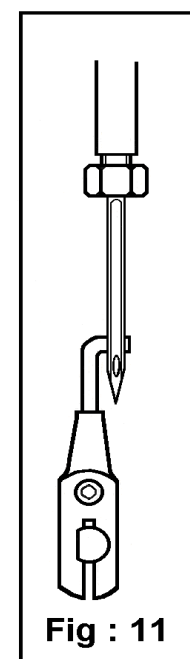


14.2. ADJUSTMENT OF THE NEEDLE HEIGHT VERSUS THE LOOPER.

1. Always adjust the needle height after the looper stroke adjustment has been made. See previous procedure.
2. Remove the needle bar guard (11101).
3. Turn the machine pulley (11339) in the direction of machine operation until the looper begins to come forward, toward the needle.
4. As the looper passes behind the needle the point of the looper should be visible past the right edge of the needle (0,8 mm max .) just before the bottom edge of the looper hook is seen in the eye of the needle, see Fig.

If adjustment is necessary.

1. Slightly loosen the screws (SC54012) on the needle bar clamp assembly (40502).
2. Move the needle bar (11500) up or down until you reach an adjustment as per step 3.
3. Be sure that you do not rotate the needle bar or the machine pulley as you are performing this step.
4. When the proper setting is reached, tighten the screws (SC54012).
5. Rotate the machine trough one cycle to verify your adjustment.





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

NOTE!!

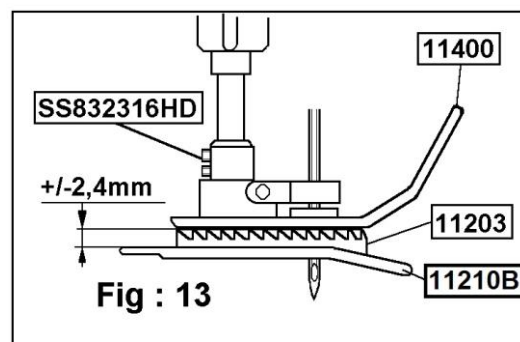
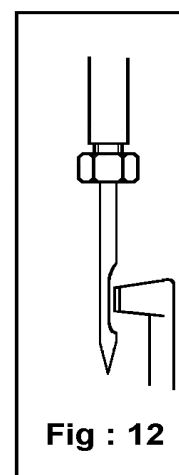
As you rotate the machine for timing purposes, always move forward. If you pass the setting point, simply turn the machine through the cycle, back to the point you require.

14.3. LOOPER CLEARANCE ADJUSTMENT.

To verify this adjustment, you have to look at the machine from the side. The aim of this adjustment is that the point of the looper passes behind the needle, as close to the “needle scarf” as possible, without touching it. The needle scarf is the hollowed-out section of the needle on the un-grooved side just above the hole, see Fig: 11.

If an adjustment is necessary, please proceed as follows:

1. Rotate the machine until the looper is directly behind the needle. Do not forget; always rotate the pulley of the machine as the arrow indicates.
2. Loosen the socket cap screw (SC54038) on the looper holder.
3. Move the looper holder (11301) on the looper shaft (11303) until the looper is positioned as closely as possible to the needle without actually touching it. You should be able to pass a sheet of paper between the back of the needle and the looper edge.
4. When this is complete, tighten the socket cap screw on the looper holder.
5. Rotate the machine through a complete cycle to be sure that the looper clears the needle both on the up stroke and the back stroke of the cycle. When you have made or verified all of the adjustments, you can replace the guards, covers, and parts removed when you began.
6. Replace the needle bar guard (11101).
7. Replace the feed dog (11203) on the feed dog carrier block (11437).
8. Replace the throat plate (11210).
9. Replace the looper cover (11102).
10. Rotate the lifter lever back to its initial position. This will replace the presser foot on the throat plate.
11. Cycle the machine until the feed dog is at the top of its stroke to verify the feed dog height. This should be approximately 2,4 mm . The trailing edge of the feed dog should be 0,25 mm higher than the leading edge. This adjustment is made at the factory and should not need changing, even when replacing the feed dog.
12. Your bag closer is now ready to use!!!



**50003F-H****FISCHBEIN LLC**
The Leader in Bag Closing Technology

14.4. MOTOR INSTRUCTIONS.

The motors used on Fischbein bag closers are not designed for long-run periods without stops.

They are produced specially for numerous starts and stops as is the case for bag closing operations.

Little maintenance will be required but periodic inspection of the motor of the motor will assure that your machine continues to operate at maximum efficiency. The motor must not be oiled.

USE CLEAN, DRY NON LUBRICATED AIR – MOTOR NEEDS NO LUBRIFICATION.

15.TROUBLE - SHOOTING LIST.

1. Stitch is too loose.	1. Recheck thread tension. 2. Adjust thread between the tension discs, 11114.
2. Stitch is too short.	1. Eventually replace feed dog, 11203.
3. The bag is tearing up at the sewing line.	1.Do not hold the machine during the sewing operation of the bag. 2. Is there still good transportation of the bag? 3. Is there enough pressure on the presser foot, 11400? 4. Has the bag quality been changed?
4. Machine is no longer running!	1. Is the plug secure in position? 2. Is the power air tube still, ok? 3. Pull on switch, air must flow or else change switch
5. Thread breakage.	1. Is thread unrolling properly? 2. Check threads tension. 3. Is thread blocking thread guides? 4. The needle is too hot! 5. Use oiled thread. (pay attention to oil quality) 6. Call your Fischbein specialist.
6. Machine is not providing a thread chain at the end of the bag or is missing stitches.	1. Check thread path. 2. Check threads tension. 3. Is the presser foot 11400 still passing along the plate 11210? 4. Is the feed dog 11203 worn out? 5. Is needle well fixed on the machine? 6. Is looper 11300 affected or worn out? 7. Look at the adjustment of the machine.
7. Needle keeps breaking.	1. Check the looper alignment. 2. Check the needle alignment to the throat plate and presser foot needle guide

If problems still occur call your Fischbein specialist or Fischbein Brussels.

**50003F-H****FISCHBEIN LLC**
The Leader in Bag Closing Technology**16.SPARE PARTS.**

MODEL F SPARE PARTS AND ACCESSORIES			
Item	Quantity	Part No.	Description
1	2	D5 (13050)	Needles (25/package)
2	2	11300	Looper
3	2	11203	Feed Dog
4	1	11400	Assy Presser Foot
5	2	11702	Moving Knife
6	2	11703	Stationary Knife
7	1	11704	Knife Tension Spring
8	2	11340	Drive Belt
9	1	11210	Throat Plate
10	1	11335B	Air Motor
11	1	11338	Pulley air motor
12			
13	1	11302	Looper Gauge
14	1	13069	Lubricating Oil (NOT FOOD APPROVED) **
15		1550PLUS	Model F Suspension Unit
16		11147	Model F Tool Kit
	**	For Food Approved Oil contact Fischbein Brussels	



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

FISCHBEIN BAG CLOSER

MODEL F

TYPE : F / R/H

DRAWINGS

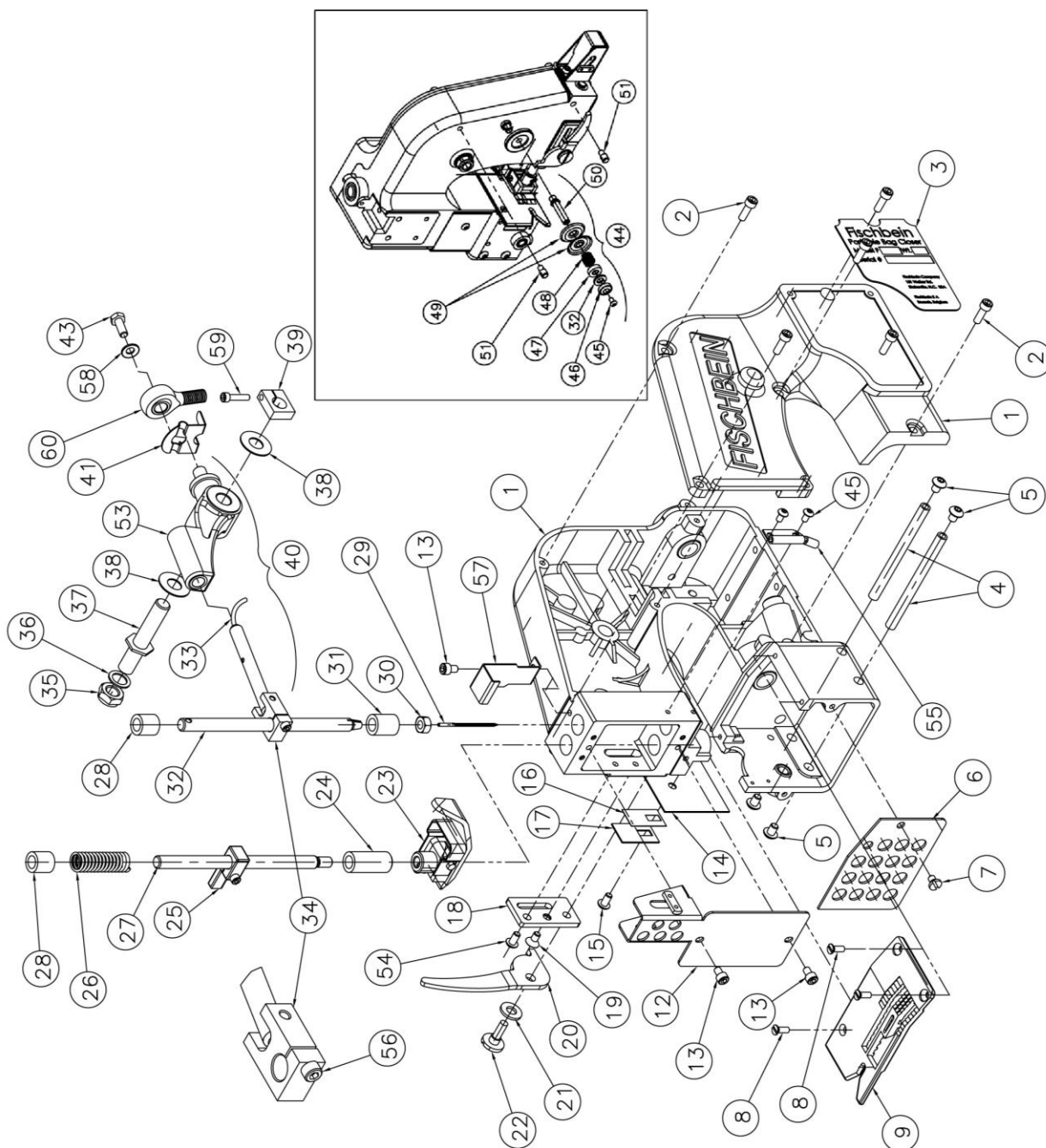
AND PARTS LIST



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

17.PLATE A: HOUSING, NEEDLE LEVER, AND PRESSER FOOT.



WARNING: Inscription “HIJ” on part 60 must face part 41

**50003F-H****FISCHBEIN LLC**
The Leader in Bag Closing Technology**PLATE A: HOUSING - NEEDLE, LEVER and PRESSER FOOT.
PARTS LIST.**

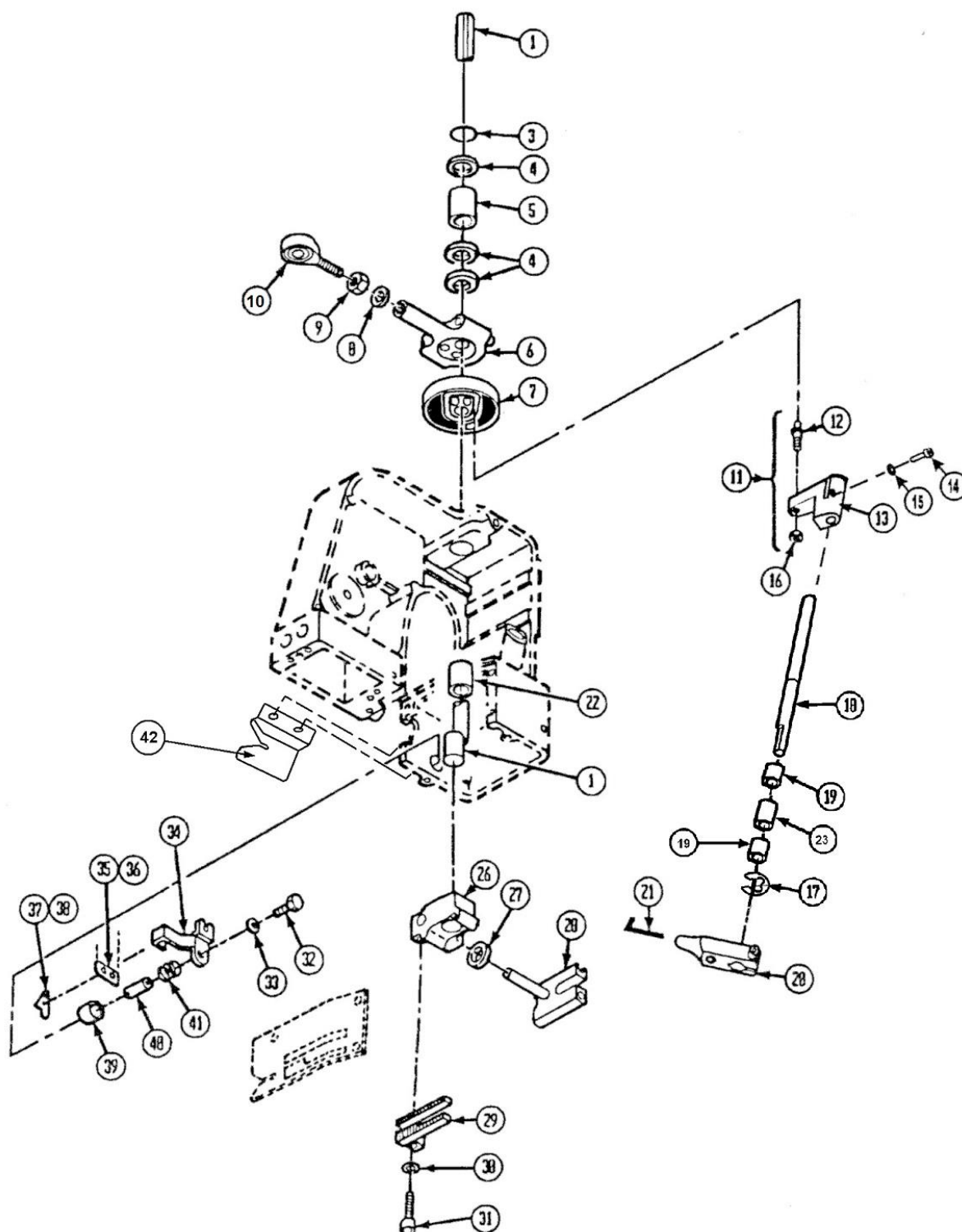
Item .	Qty .	Part number	Description :
1	1	11448	Housing assembly
	5	SS 832316HD	Screw , bushings Soc , set # 8-32 x3/16
2	6	SC83212	Screw # 8-32 x 5/8
3	1	40004	Name plate
4	2	11010	Stud , feed dog , carrier slide .
5	4	SB 103214	Soc button screw # 10-32 x1/4
6	1	11102	Cover , looper
7	1	11108	Stud looper cover
8	3	F 64038	Flat sunk screw # 6-40 x 3/8
9	1	11210	Throat plate
12	1	11101	Guard needle bar .
13	4	SC 83214	Screw, Soc CAP # 8-32 x 1/4
14	1	11009	Plate , cover
15	1	B103214	Binding Screw #10-32x1/4
16	1	11657	Cover slide pad
17	1	11656	Pad , slide
18	1	11651	Plate lever
19	2	SF 832516	Screw Soc Flat # 8-32 x 5/16
20	1	11654	Lever lifter , presser foot
21	2	11655	Washer spring
22	1	11653	Screw , pivot
23	1	11400	Assy. presser foot
	1	11402	Bolt , hinging
	1	11711	Nut
	2	SS 832316HD	Screw , bushings Soc , set # 8-32 x3/16
	1	11882	Guard needle
24	1	11444	Bushing , lower
25	1	11652	Lifter presser foot
26	1	11414	Spring presser bar
27	1	11404	Presser bar
28	2	11442	Bushing , upper presser bar
29	1	13050	Needle D5 , round point
30	1	11501	Nut needle bar
31	1	11443	Bushing needle bar , lower
32	1	11500	Needle bar
33	1	11508	Wicking
34	1	40502	Assy. Clamp needle bar
35	1	11268	Nut , lock (Nylock) 3/8-24NC
36	1	A 3934	Washer flat # Idler
37	1	11287	Pin pivot
38	2	WT 38132	Washer thrust needle lever
39	1	11008	Clamp, pivot – needle
40	1	40099	Assy , clamp needle bar and lever
41	1	11510	Spring
42	1	WF 10	Flat washer # 10
43	1	H 103212	Hex screw # 10-32 x 1/2
44	1	11112	Assy , thread tension
45	1	SB 64014	Screw Soc Btnn # 6-40 x 3/8
46	1	11116	Nut , tension - upper
47	1	11117	Nut , tension - lower
48	1	11115	Spring , tension
49	2	11114	Disc , tension
50	1	11113	Stud , tension
51	4	11109	Eyelet , thread pull off
52	1	11120	Washer lock 1/4" LT tension
53	1	11025	Lever, Needle
54	2	SB832516	Screw Soc Btnn # 8-32x5/16
55	1	11321	Tube Thread Guide, front
56	1	SC64012	Screw, Soc Cap #6-40x1/2"
57	1	11104	Guard Needle Bar, Back
58	1	WS10	Washer, Spring #10
59	1	SC64058	Screw, Soc Cap #6-40x5/8"
60	1	11607	Bearing, Rod End



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

18.PLATE B: MAIN SHAFT AND LOOPER ASSEMBLY.





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

PLATE B : MAIN SHAFT AND LOOPER ASSEMBLY .

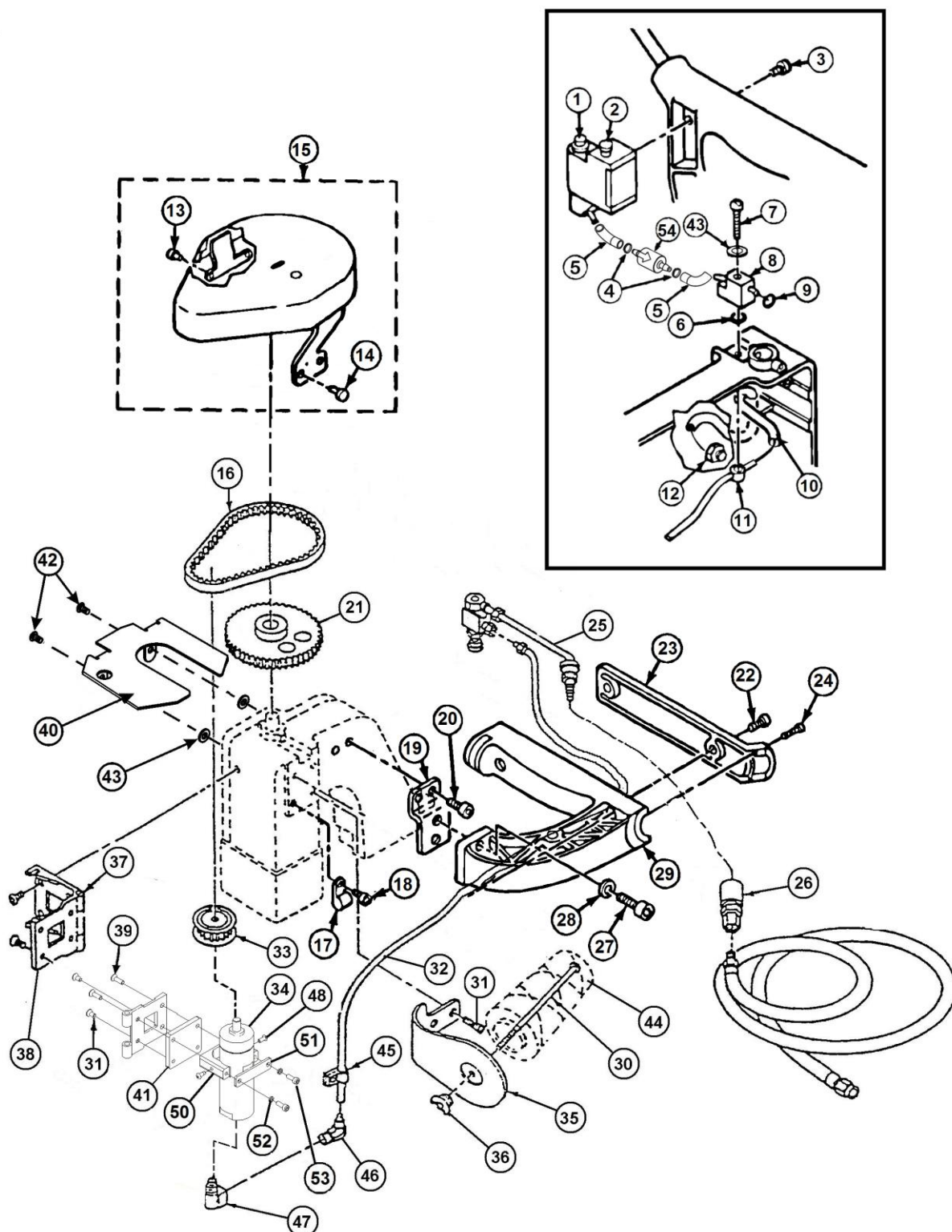
Item .	Qty.	Part number .	Description :
1	1	11600	Main shaft
	1	11616	Collar , main shaft (only for model FB)
	1	SC 54038	Soc. cap screw # 5-40 x 3/8
3	1	10420	Ring "O"
4	3	11006	Washer trust
5	1	11441	Bushing , main shaft rear
6	1	11079	Assembly connecting rod & eccentric (replacement)
7	1	40310	Assy. cam looper
	1	SS 83212CP **	Soc.set screw # 8-32 x 1/2 cone point ** Max Torque: 0,14Nm
	1	SS 83212 **	Soc.set screw # 8-32 x 1/2 ** Max Torque: 0,14Nm
8	1	WIT 516	Washer , internal tooth
9	1	11608	Nut , hex special
10	1	11607	Bearing , rod end
11	1	40317	Assy , arm & stud cam follower
12	1	11308	Stud Cam follower
13	1	40307	Arm cam follower
14	2	SC 63258	Soc. cap screw # 6-32 x 5/8
15	2	40313	Washer flat
16	1	11309	Nut , hex special
17	1	67693	E-clips (1/4" shaft)
18	1	11303	Shaft looper
19	2	11449	Bushing , looper shaft 1/2" Long
20	1	11301	Holder looper
	1	12025	Soc.set screw # 8-32 x 3/16 HD
	1	SC 54038	Soc.cap screw " 5-40 x 3/8
21	1	11300	Looper
22	1	11447	Bushing main shaft , front
23	1	11454	Spacer
26	1	11437	Carrier block , feed dog
	4	SS 64038FP	Soc.set screw # 6-40 x 3/8 FP
	1	WIT 8	Washer # 8 , internal tooth
	1	11003	Clip angle
27	1	11410	Washer felt
28	1	11446	Slide
29	1	11203	Feed dog
30	1	WS 8	Washer spring # 8
31	1	SC 8321	Soc. cap screw # 8-32 x 1
32	1	H 103238	Hex.screw # 10-32 x 3/8
33	1	WIT 10	Washer # 10 , internal tooth
34	1	11007	Bracket knife
35	1	11703	Knife , stationary
36	2	F 348516	Flat sunk screw # 3-48 x 5/16
37	1	11702	Knife , moving
38	2	F 348316	Flat sunk screw # 3-48 x 3/16
39	1	11016	Bushing , knife shaft
40	1	11707	Shaft knife
41	1	11704	Spring , knife tension
42	1	11125	Guard knife
43	1	SB 103214	Soc.button screw # 10-32 x 1/4
44	1	SB 83214	Soc. button screw # 8-32 x 1/4



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

19.PLATE C: HANDLE AND PNEUMATIC DRIVE.



The arrow flow direction in the 11412 check valve must be as shown in the picture



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

PLATE C: HANDLE AND PNEUMATIC DRIVE

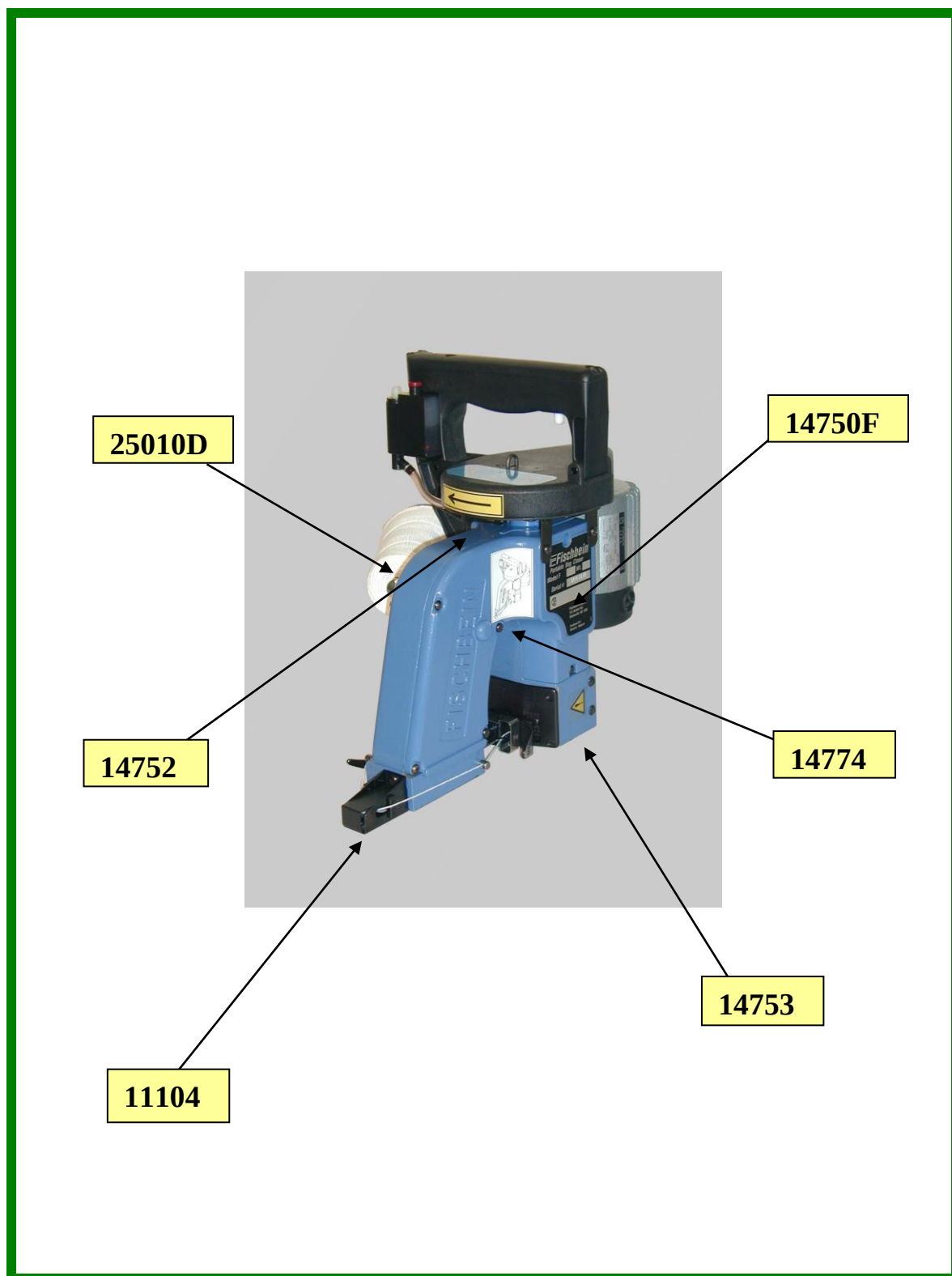
Item	Qty.	Part number	Description .
1	1	11450	Assy. oil pump
2	1	11453	Plug , pump oil
3	1	SB 83212	Screw soc. Btn # 8-32 x 1/2
4	4	11472	Clamp , spring tubing
5	1	85128	Tubing oil pump Tygon 1/4" OD (90mm long)
6	1	11479	Ring " O "
7	1	SB 832114	Screw soc. Btn # 8-32 x 11/4
8	1	11475	Assy , valve block manifold
9	1	11478	Ring " O "
10	1	85128	Tubing oil pump Tygon 1/4" OD (153mm long)
11	1	11485	Weldment , manifold inside
12	1	11490	Fitting
13	1	SB83214	Screw soc. Btn # 8-32 x 1/4
14	2	SB142038	Screw soc. Btn # 1/4-20 x 3/8
15	1	11239	Assy , guard Model H
16	1	11340	Belt, Air Motor
17	1	11348	Clip, Tube Nylon
18	1	SB103238	Screw soc. Btn # 10-32 x 3/8
19	1	11240	Bracket Handle
20	1	SB142038	Screw soc. Btn # 14-20 x 3/8
21	1	11339	Pulley , assy for air powered portable
	2	SS 103212	Soc.set screw # 10-32 x 1/2
22	2	SB 103212	Soc.button screw # 10-32 x 1/2"
23	1	11011	Cover , handle
24	1	SC 44034	Screw Soc. Cap # 4-40 x 3/4
25	1	11327	Assy, valve and monifold
26	1	11863	Socket coupling
27	2	SC 142034	Soc.cap screw # 1/4-20 x 3/4
28	2	WS 14	Washer spring # 1/4
29	1	11214	Handle for F-R model H
30	1	11804	Bolt , thread clamping
31	10	SF 103238	Flat soc.screw # 10-32 x 3/8
32	1	P4969	Tube air supply motor
33	1	11338	Pulley air motor
	2	SS 832316	Soc.set screw # 8-32 x 3/16
34	1	11335B	Air Motor new
35	1	11815	Stand , thread
36	1	11805	Wing nut
37	1	11906	Assy , hinge motor mount
38	2	11908	Screw , hinge
39	1	SF103212	Soc.Flat Screw 10-32x 1/2
40	1	11801 AIR	Guard pulley drive Air Motor
41	1	11335-01	Joint Motor Bracket
42	2	B 83214	Binding screw # 8-32 x 1/4
43	3	WN 8	Washer nylon # 8
44	1	25010..	Thread cone
45	1	P4976	Clip Nylon
46	1	P4966	Elbow Male 1/4" – Tube3/8
47	1	11346	Elbow 90° 1/4 Male – 1/4 Female
48	2	SB103238	Soc.button screw # 10-32 x 3/8"
49	1	11336	Strap, Air Motor
50	1	11335B-02	Bracket Air Motor
51	1	11335B-03	Cover Plate Motor Bracket
52	2	WL10	Washer lock 10#
53	2	SC103258	Screw Soc. Cap # 4-40 x 5/8
		11084	Assy , belt guard and handle (items ,13..15,17...20,22...24,29)
54	1	11412	Check Valve, Portable Oil Line



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

20.PLACEMENT STICKERS AND ADD GUARDS.

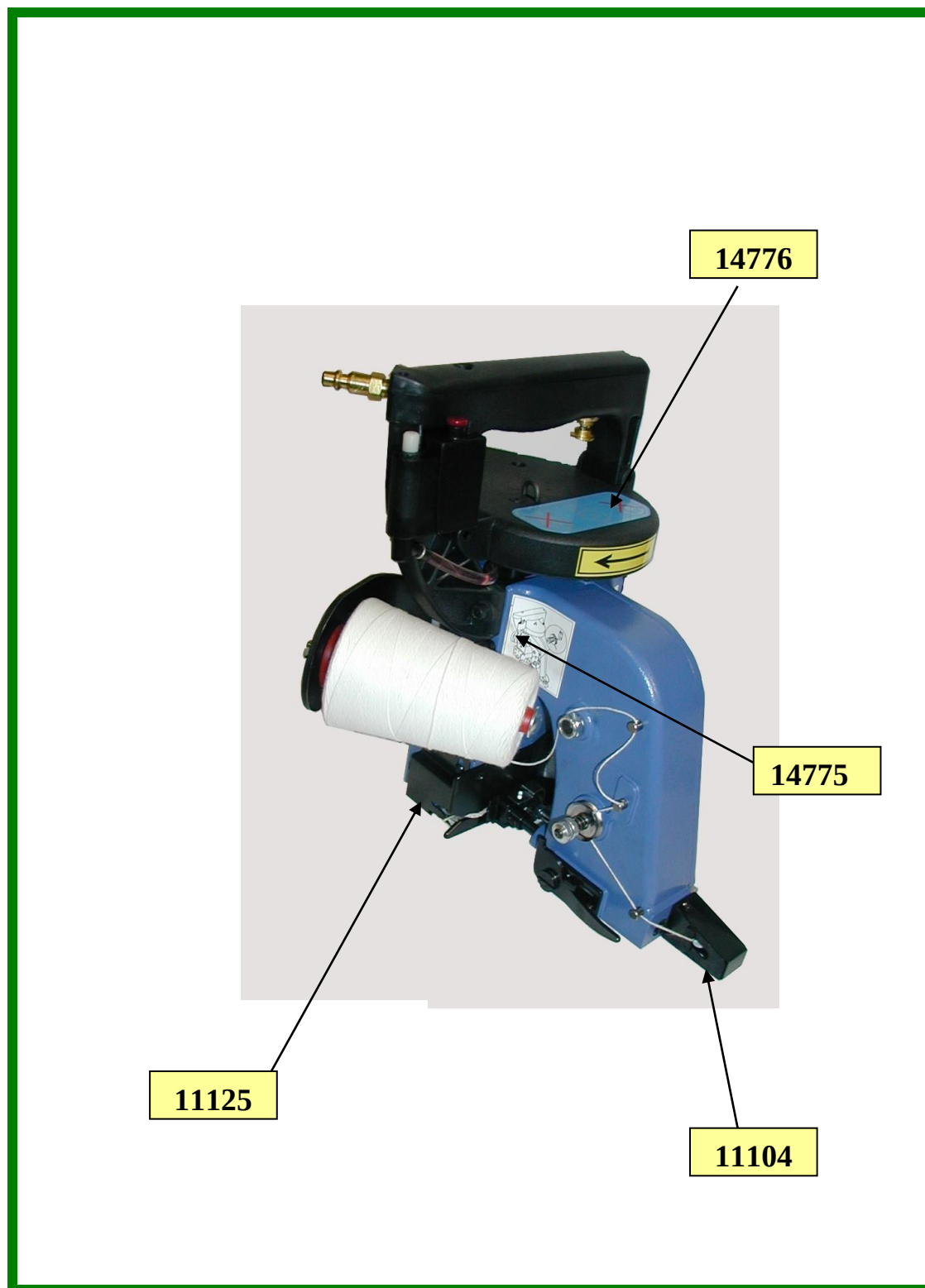




50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

PLACEMENT STICKERS AND ADD GUARDS.





50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

21.SAFELY DISPOSING OF A MODEL F-R-ATEX.

If a MODEL F-R-ATEX sewing machine becomes damaged beyond repair or simply worn to a nonfunctional state after years of service, it should be put out of service only after it is safe to dispose of it.

First, drain all the oil according to your appropriate local environmental regulations. After the oil is be drained and disposed of, bring the sewing head to a recycling center or metal scrap facility.

**50003F-H****FISCHBEIN LLC**
The Leader in Bag Closing Technology

22.SPARE PARTS WITH FISCHBEIN LOGO

PARTS WITH FISCHBEIN LOGO - UPDATED FEBRUARY 22-09, 2015	
PART NO	DESCRIPTION
2626-PAF	KNIFE INFEED 2700
10017	PLATE, THROAT (STD) LO-SP
10017B	PLATE, THROAT (SHORT-STITCH-SPECIAL) , STD. STITCH
10017-BSR	PLATE, THROAT- WITH ATEX COATING , STD. STITCH
10017-ST	PLATE, THROAT- SPECIAL GRIND , STD. STITCH
10017-UST	PLATE, THROAT – SPECIAL GRIND ROTARY KNIF , STD. STITCH
10017-STSR	PLATE, THROAT – NICOTEP SPARK RESIST , STD. STITCH
10017SR	PLATE, THROAT SPARK RESISTANT , STD. STITCH
10017-U	PLATE, THROAT - FOR 26445 ROT. KNIFE, STD. STITCH
10018SR	PLATE, THROAT SPARK RESISTANT, LONG STITCH
10018-U	PLATE, THROAT - FOR 26445 ROT. KNIFE, LONG STITCH
10018ST	PLATE, THROAT MODEL 200 , LONG STITCH
10018-UST	PLATE, THROAT SPECIAL GRIND , LONG STITCH
10018	PLATE, THROAT (LONG STITCH) LO-SP
10048	RESTRAINER, ROD - CONNECTION
10059	HOLDER, LOOPER
10060	LOOPER, TWO THREAD
10078	DOG, FEED - STANDARD
10079	DOG, FEED - LONG STITCH
10120	DISK TENSION LARGE
10155	SHANK, PRESSER FOOT
10156	BLOCK, HINGE - PRESSER FOOT
10157	ASSY, PRESSER FOOT
10164	EYELET, THREAD GUIDE
10165	GUIDE, THREAD
10171	PULL-OFF, NEEDLE THREAD
10174	GUARD, NEEDLE
10177	HOLDER, GUARD - NEEDLE
10185	FOOT, PRESSER - CURVED
10199	ASSY, PULLEY - VARIABLE
10285	FOOT, PRESSER (RIB CORD)
10302	PLATE, RAMP CUTTER THROAT (LG STCH)
10303	PLATE, RAMP CUTTER THROAT (STD)
10306	KNIFE, BED
10307	KNIFE, MOVING
10414	ROD CON-PISTON
10434	POST, OFFSET
10443	KNIFE, MOVING - WIDE
10479	FOOT, PRESSER (TAPE/CHAIN)
10481	ASSY, PRESSER FOOT - TAPE
10484	FOOT, PRESSER (TAPE)
10486	DOG, FEED - STANDARD MV
10491	DOG, FEED- TAPE OR CHAIN
10494	FOOT, PRESSER (1 1/4 TAPE)
10555	FOOT, TAPE PRESSER (3/8 WIDE)
10558	FOOT, TAPE PRESSER (WIDE)
10565	DOG, FEED - PULL TAPE



50003F-H

FISCHBEIN LLC
The Leader in Bag Closing Technology

11003	CLIP, ANGLE - MODEL E, F
11007	BRACKET, KNIFE (MODEL E,F)
11008	CLAMP, PIVOT - NEEDLE (MODEL E,F)
11025	LEVER, NEEDLE
11079	ASSY, CONNECTING ROD & EXENTRIC
11101	GUARD, NEEDLE BAR
11104	GUARD, NEEDLE BAR (BACK)
11114	DISC, TENSION
11203	DOG, FEED
11210	PLATE, THROAT
11212	PLATE, THROAT - TAPE
11213	PLATE, THROAT (SPECIAL)
11304	COLLAR, LOOPER SHAFT
11321	TUBE GUIDE-THREAD FRONT
11396	ASSY, PRESSER FOOT - TAPING
11399	ASSY, PR FOOT-TAPING&PLASTIC
13399-U	ASSY, PR FOOT-TAPE 70 AND FILLER CORD
11400	ASSY, PRESSER FOOT
11446	SLIDE
11485	WELDMENT, MANIFOLD - INSIDE
11494	FEED DOG - GO GAGE
11510	SPRING
11600	MAINSHAFT
11652	LIFTER, PRESSER FOOT
11654	LEVER, LIFTER - PRESSER FOOT
11801	GUARD, PULLEY DRIVE
11801-AIR	GUARD, PULLEY DRIVE - F-AIR MODEL
11801-H	GUARD, PULLEY DRIVE - F-H MODEL
11882	GUARD, NEEDLE
11902	ASSY, PULLEY - MOTOR TIMING
11904	PULLEY, MACHINE
11906	ASSY, HINGE - MOTOR MOUNT
11210B	PLATE, THROAT (SPECIAL)
11212B	PLATE, THROAT (SPECIAL)
11213B	PLATE, THROAT (SPECIAL)
11396-U	PRESSER FOOT TREATED
15056	MANIFOLD, FILTER-OIL (ASSY)
15065	ASSY, KNOCKLE CLAMP
15115	FOOT, PRESSURE JUTE (BELGIUM)
31007	LEVER, SLOTTED-FEED ROCKER
31008	CLAMP, ROD-FEED DOG CARRIER
31014	SEAL, LEVERS
31029	KNIFE, MOVING (STD)
31032	KNIFE, STATIONARY (STD)
31034	LEVER, LIFTER PRESSER FOOT
31037	PLATE, THROAT ROT/KNIFE (STD) LO-SP
31038	GEAR DRIVE PUMP EXTER 100/101
31063	BLANK, CONNECTING LOOPER DRIVE ROD
31208	LOOPER, SINGLE THREAD
31218	HOLDER, LOOPER TWIN
31223	PRESSER FOOT, CURVED TWIN
31224	DOG FEED, TWIN
31231	LOOPER ASSEMBLY, TWIN
31251	LOOPER 1, TWIN

**50003F-H****FISCHBEIN LLC**
The Leader in Bag Closing Technology

40099	ASSY, CLAMP NDLE BAR LEVER (MODEL F)
40307	ARM, CAM FOLLOWER (MODEL F)
40317	ASSY, ARM&STUD CAM FOLLOWER (MOD F)
67275	MOTOR, ECR/MODEL F 1/6HP 115/1/60 V
67276	MOTOR, ECR/MODEL F 1/6HP 220/1/60 V
67342	MOTOR, ECR 12VDC W/LABEL
67753	MOTOR, MODEL F 1/6 HP, 220 V (DI)
67753-110	MOTOR, 1/6 HP FOR PORTABLE, DOUBLE INSULATED, CE
67762	LABEL EURO MOTOR 230V
67762-24	LABEL EURO MOTOR 24V
67762-110	LABEL EURO MOTOR 115V
67842	MOTOR MODEL F -115V (DI)
67883	MOTOR MODEL F -115V (DI)
67884	MOTOR MODEL F -230V (DI)
4022	CRANK
4294	LEVER, SPRING

PARTS WITH NAME FISCHBEIN.

15053	GAUGE, OIL 0-60 LB (STAINLESS STEEL HOUSING)
15053-1	GAUGE, OIL 0-60 LB (BOTTOM MOUNT)
15053-B	GAUGE, OIL 0-60 LB (PLASTIC HOUSING)
11299	COVER, HOUSING W/BUSHING (COMPLETE) UNPAINT
10230	TIMING GAGE, 10M
10230B	TIMING GAGE BRUSSELS
10227	MANOMETER, OIL PRESSURE