

USER'S MANUAL

EYELETTING MACHINE

MODEL: HM-307AS

HIKER ENTERPRISES LTD.

107 Ferrier Street,
Markham, Ontario,
Canada L3R 3K6
Tel: (905) 479-5390
Fax: (905) 479-0530
www.hikerenterprises.com

INDEX

1	SPECIFICATION	1
2	INSTALLATION	1
3	INSPECTION AND TESTING	1
3.1	VISUAL CHECKING LIST BEFORE TEST	2
3.2	TEST	3
4	OPERATION	3
5	ADJUSTMENT	4
5.1	ADJUSTING THE TOOLS	4
5.2	ADJUSTMENT OF THE FEEDER HOPPERS	4
5.3	ADJUSTMENT OF THE FEEDER ARMS/ SIDEWAYS	4
5.4	ADJUSTING THE DRIVE BELT	5
5.5	ADJUSTING THE BRAKE	5
6	MAINTENANCE	5
7	ASSEMBLY DRAWING AND THE PARTS LIST	5, 8~17
8	ALIGNING THE SELF PIERCING DIE	6
9	OIL AND GREASE FEEDING POINTS	7

1. SPECIFICATION

Semi-automatic Eyeletting Machine – Model No: HM-307AS

Material Handling:

Eyelet or Grommet Feeding: Automatically.

Washer Feeding: Manually.

Operating:

Manually start the punch by foot pedal.

Material:

This machine is suitable for the insertion of eyelets or rivets into wide range of materials, such as: PVC, Bunting, Coated Cloths, Polythene, Canvas, Cotton and Woven materials. It has been designed for use in a DRY AND STABLE ENVIRONMENT. It should always be used in accordance with the relevant regulations and good workshop practices.

2. INSTALLATION

The machine can be maneuvered into a suitable working position by means of a hand pallet truck. Remove the machine from the pallet and secure into position by 10mm or 3/8" anchor bolts.

The machine should firmly fixed to the floor and sufficient space around it to allow easy movement of the materials used. Do not allow rubbish or spare materials to accumulate under the machine near the pedal operating area. Keep it clean and clear at all times.

3. INSPECTION AND TESTING

The machine had been well inspected and tested in shop before shipping. For the safety reason, the user will be requested to check and test run the machine before operation to make sure that the machine is all right after the transportation..

3.1. VISUAL CHECKING LIST BEFORE TEST:

- a) Check power supply at correct voltage, 110V and 50-60 Hz.
- b) Check for damaged or broken cables and fittings.
- c) Check for loose or missing screws/fittings.
- d) Check for damaged parts.
- e) Check machine is empty/clear of eyelets and washers.
- f) Check the eyelets and washers correspond to the correct size of Hoppers.

3.2. TEST:

Always disconnect the machine from the power supply before undertaking any work on the machine.

Before connecting the machine to the power supply and proceeding with normal operation, go through a procedure of operating the machine manually to ensure the correct alignment of the dies and tracks (feeder units) as follows:

- a) To unplug the power cable of the machine before the following test procedure.
- b) Check the machine is empty or clear of grommets and washer. If there is any grommet left in the feeder unit, pull the track off the punch position and press the grommet stopper at the rear end of the track to release the grommets from the track and the Hopper Cone. If there is any washer left on the lower die, remove it by a soft tool such as a paper slit.
- c) Unlock and open the opening of the Flywheel Cover at its right side for the hand can reach the Flywheel.
- d) Depress the foot pedal and rotating the Flywheel by hand until a click sounded that means the clutch is engaged.
- e) Continue to rotate the Flywheel to lower the upper die slowly and check the alignment and the clearance between the upper die and the lower

die. User should calibrate the clearance between two dies to fit the thickness of the materials to be grommetted. When the clearance is calibrated, fixed the lower die firmly.

- f) Load one grommet into the feeder unit and one washer to the lower die. Rotate the Hopper Cone by hand to feed the grommet through the track to the punch position. When manually turning the machine keep alert to ensure there is only one grommet and one washer between the dies at any one time. Once this testing procedure is complete, remove the grommet and washer left in the tool.
- g) Locate the material to the grommetting position and grommet the material by rotating the Flywheel by hand.
- h) Check the grommetting to be satisfied, or the user should calibrate the clearance between the dies again.

4. OPERATION

Always check the machine before use, to ensure it was the correct dies and feed mechanisms to insert the size of eyelet you wish to use.

Every size of eyelet and washer requires its corresponding dies, feed units and hoppers.

Great care must be taken to ensure the correct sized eyelets and washers have been put into the hoppers. The wrong size can damage your machine, punches and dies. The operator should wear sound protection.

Before switching on the machine, check that there is no damage to the electric cables or electric fittings. If the machine has been adjusted or the eyelets changed in size, make sure all eyelets and washers of the previous size have been removed from the hoppers, feed units and under the punch and die.

For Emergency Stop, push the Red Button. Switch the machine to OFF, if it is to be left for a while.

Do not over fill the eyelets/grommets into the Hopper to avoid scratch on the material and damage the machine.

5. ADJUSTMENT

Always disconnect the machine from the power supply before undertaking any work on the machine. In order to work on the machine or to effect many of the initial adjustments, it will be necessary to remove the Main Guard. To do so remove 10 screws from the top and two sides of the Main Guard. The guard can now be lifted off.

To gain access to the Flywheel, loosen the two clamps to the side of the Flywheel and open the guard door.

5.1. ADJUSTING THE TOOLS

The tool adjustment screw, located underneath the bottom tool is screwed up or down to ensure the correct setting height is achieved.

5.2. ADJUSTMENT OF THE FEEDER HOPPERS

Ensure the Hopper Cone is able to rotate freely, (but not loosely), adjusting the tension by tightening or loosening the tension spring on the Hopper Cone. Too much pressure can cause damage to the eyelet or washer. Too little pressure can cause double feeding.

5.3. ADJUSTMENT OF THE FEEDER ARMS/SIDEWAYS

It is most important to ensure the alignment of the Feeder Arms is correct.

To adjust the feeder arms from side to side, loosen and/or tighten the adjusting screws located front and back of Hopper, aligning the feeder central to the punch.

To align the feeder arms inwards or outwards, loosen off the nut and adjust the feeder slide stopper in the direction required to align the eyelet directly under the punch.

To check the alignment of the manual washer feeder, pull the arm toward the punch die to see whether the upper hole, lower hole of the washer feeder and the die was aligned. To calibrate the alignment may adjust the stop-screw at opposite side of the feeder arm and the fixing bolts of the

manual washer feeder. Then test the feeder by load the washer which the size was checked, pull the feeder arm to the unload position to see whether the washer to be unloaded to the die precisely.

5.4. ADJUSTING THE DRIVE BELTS

All the tension of the drive belts should be taught, but not tight and not loose or slack. Tightness can be tested by ensuring the belts have approximately 1-2cm of play.

The Flywheel Belt can be adjusted by raising or lowering the keyed slide way located at the rear and in the middle of the two Hoppers.

5.5. ADJUSTING THE BRAKE

Either tighten or loosen the butterfly nut to increase or decrease the tension on the Brake Spring.

6. MAINTENANCE

Always disconnect the machine from the power supply before undertaking any work on the machine.

This machine requires limited maintenance. The only routine maintenance is lubrication. All oil and grease wells should be checked periodically and kept them full.

7. ASSEMBLY DRAWING AND THE PARTS LIST

Attached as next pages.

8. Aligning the Self Piercing Die

- (1) With the power DISCONNECTED and the Die Holder (E-15) in the OPEN position, install the Self Piercing Die in the machine holder. The bottom holding bolt should be finger tight.

- (2) Open flywheel access door located on the right side of the flywheel cover.

- (3) Engage the clutch with the foot pedal.

- (4) Move the flywheel down with your hand (clockwise) until the die closes.

- (5) Using your fingers, feel the die edges at the front & back, left & right. The bottom and top die edges should be flush with each other.**

- (6) If the edges are not flush, use a mallet to tap the bottom die into alignment.

- (7) Tighten the bottom holding bolt when the bottom and top die edges are flush.

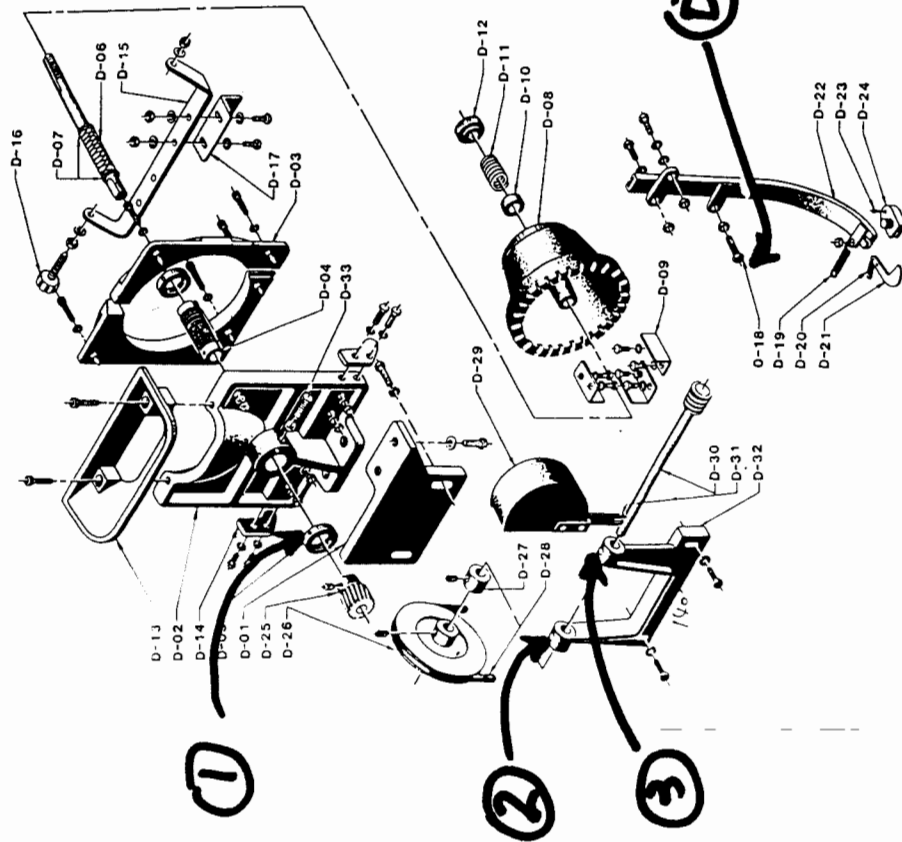
- (8) Close the flywheel access door. The Self Piercing die is now aligned.

9. Oil and Grease Feeding Points

HIKER

HOPPER COMPLETE SET EXPLODED VIEW

(FIG.5)



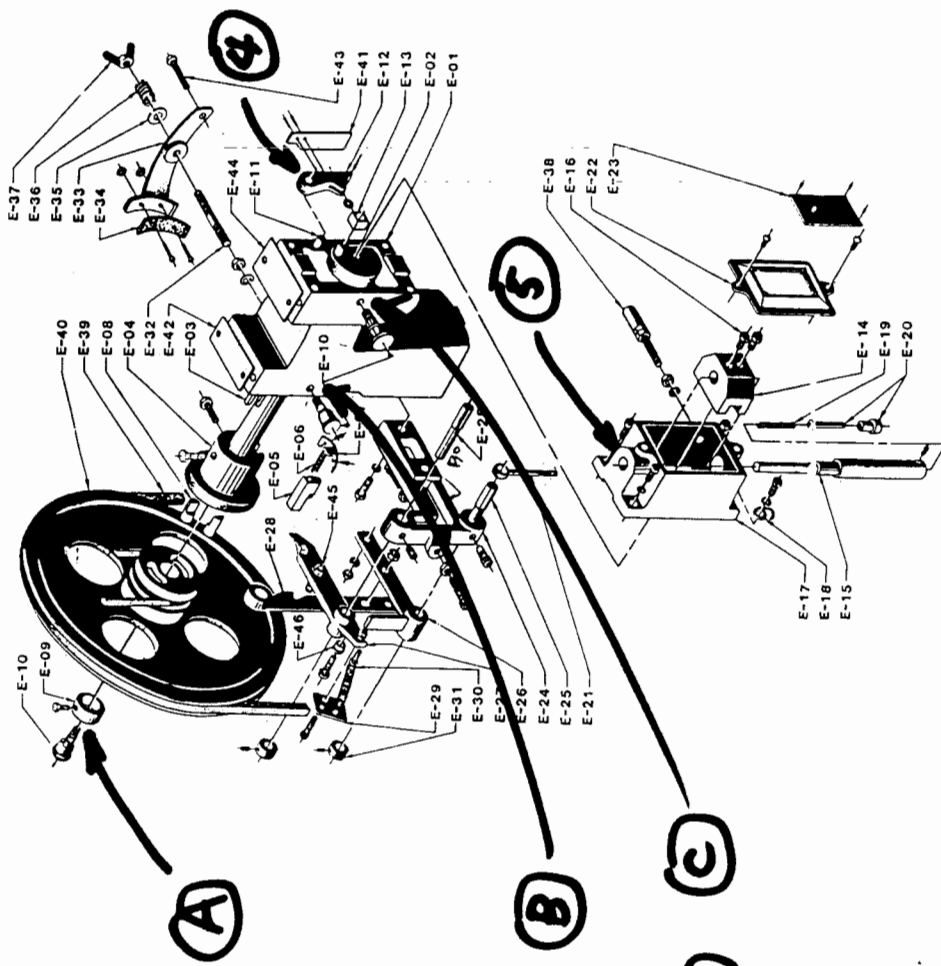
① ~ ⑤ add oil

① ~ ④ add grease

HIKER

CLUTCH TRANSFER SHAFT EXPLODED VIEW

(FIG.6)

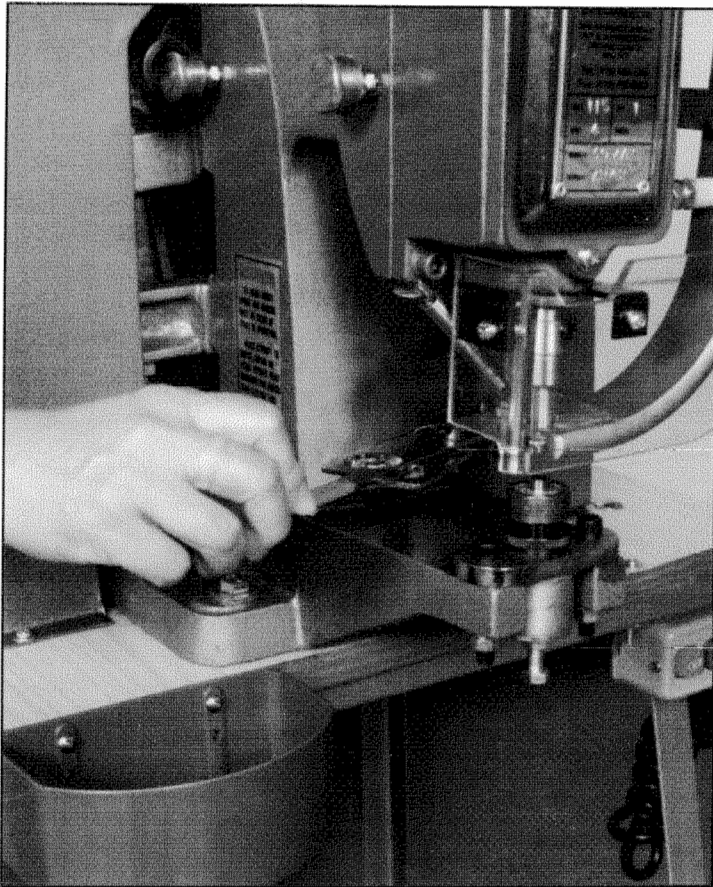


HM-307AS

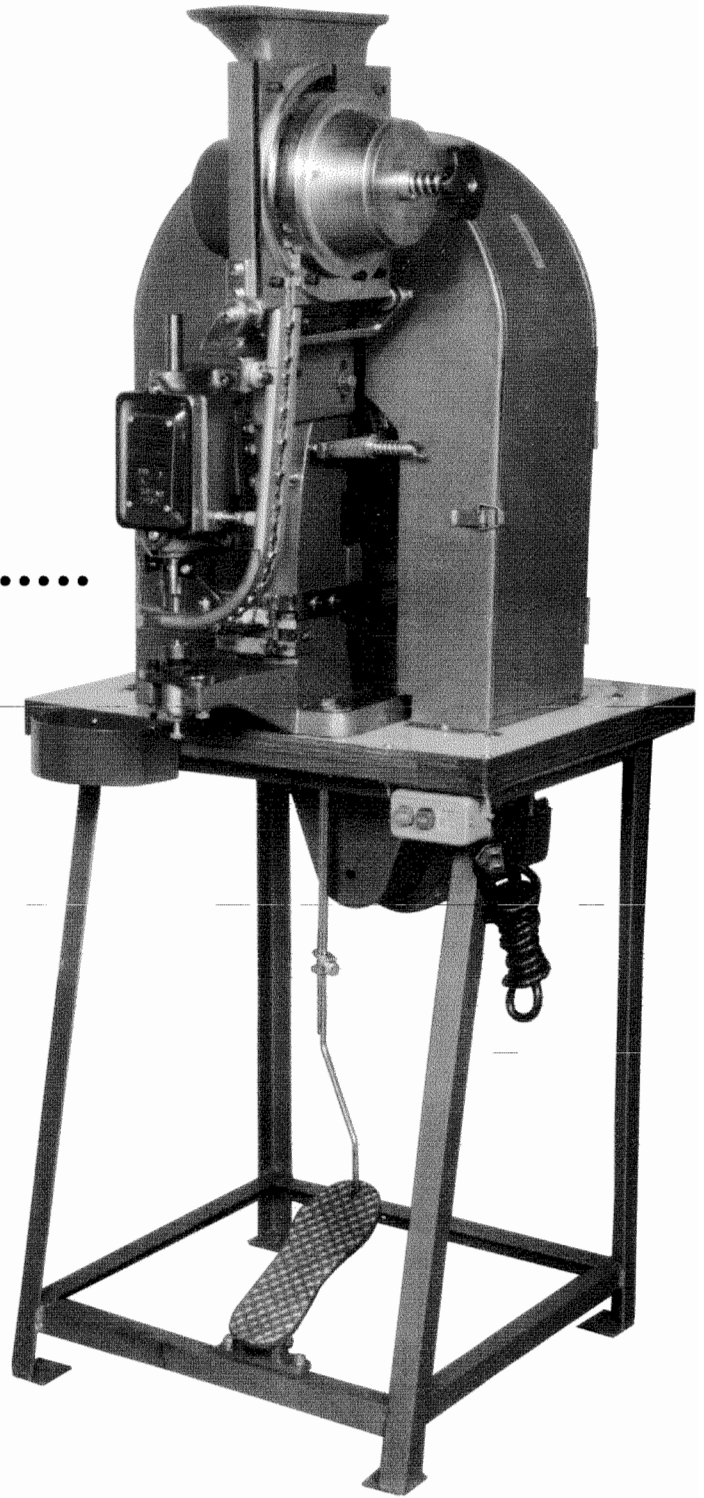
EYELETING/GROMMETING MACHINES

THESE MACHINES ARE DESIGNED FOR INSERTING EYELETS OR GROMMETS IN FABRIC OR SIMILAR MATERIAL.

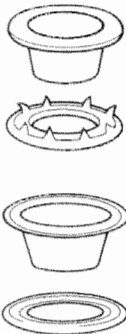
- Grommets or Eyelets fed automatically
- Washers fed manually.



.....



OPTIONAL SAFETY ACCESSORY
"MANUAL WASHER FEEDER"



SPECIFICATIONS

Throat Depth: 4 1/2"
Motor: 1/4 HP
NET Weight: 220 lbs
Packing Size: 29" x 29" x 60"



Hiker Enterprises Ltd
107 Ferrier Street, Markham, Ontario, Canada L3R-3K6
Tel: (905) 479-5390 Fax: (905) 479 0530 www.hikerenterprises.com

SEATS AND BASIC EXPLODED VIEW (FIG.3)

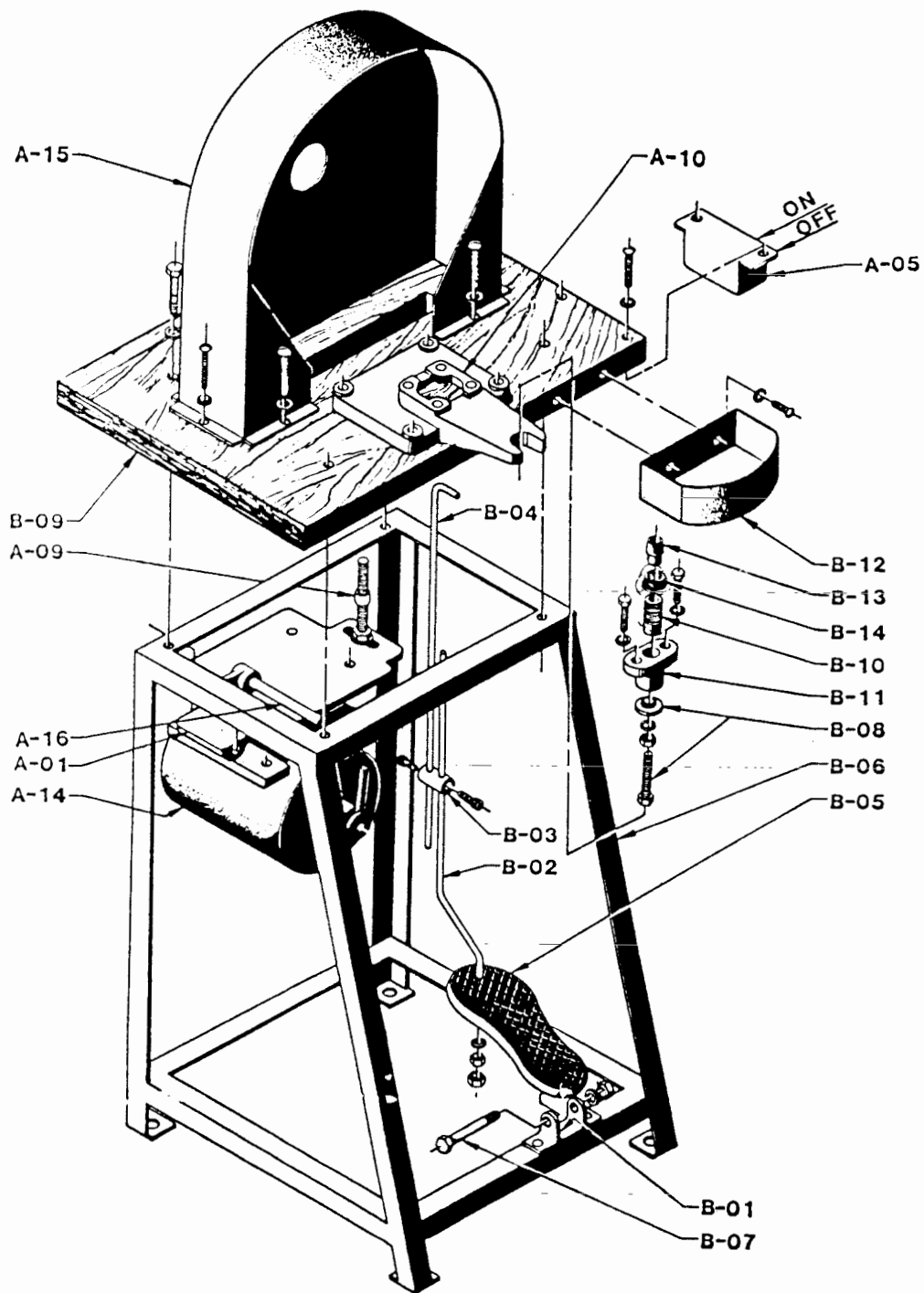


圖3 零件表

組別 項次 Group Item	名 稱 Description	數量 Qty	附 記 Remarks
B-01	腳踏板支架 Pedal support		
B-02	下拉勾 lower treadle rod		
B-03	調位頭 connector		
B-04	上拉勾 upper treadle rod		
B-05	腳踏板 pedal		
B-06	腳座 frame		
B-07	腳踏板固定螺絲 pedal bolt		
B-08	墊 片 spacing washer		
B-09	桌 板 working plate		
B-10	下模螺紋套 hollow inner screw		
B-11	下模軸座 T-sleeve		
B-12	鈕釦備料盒 tools and parts box		
B-13	雞眼模 die set		
B-14	螺 姆 ring nut		
A-01	馬達板 motor plate		
A-05	開關座 switch assembly		
A-09	馬達板調整螺絲 motor adjusting screw		
A-10	台 底 guide way base		
A-14	馬 達 motor		
A-15	機 殼 flywheel cover		
A-16	馬達板心軸		

HOPPER COMPLETE SET EXPLODED VIEW

(FIG.5)

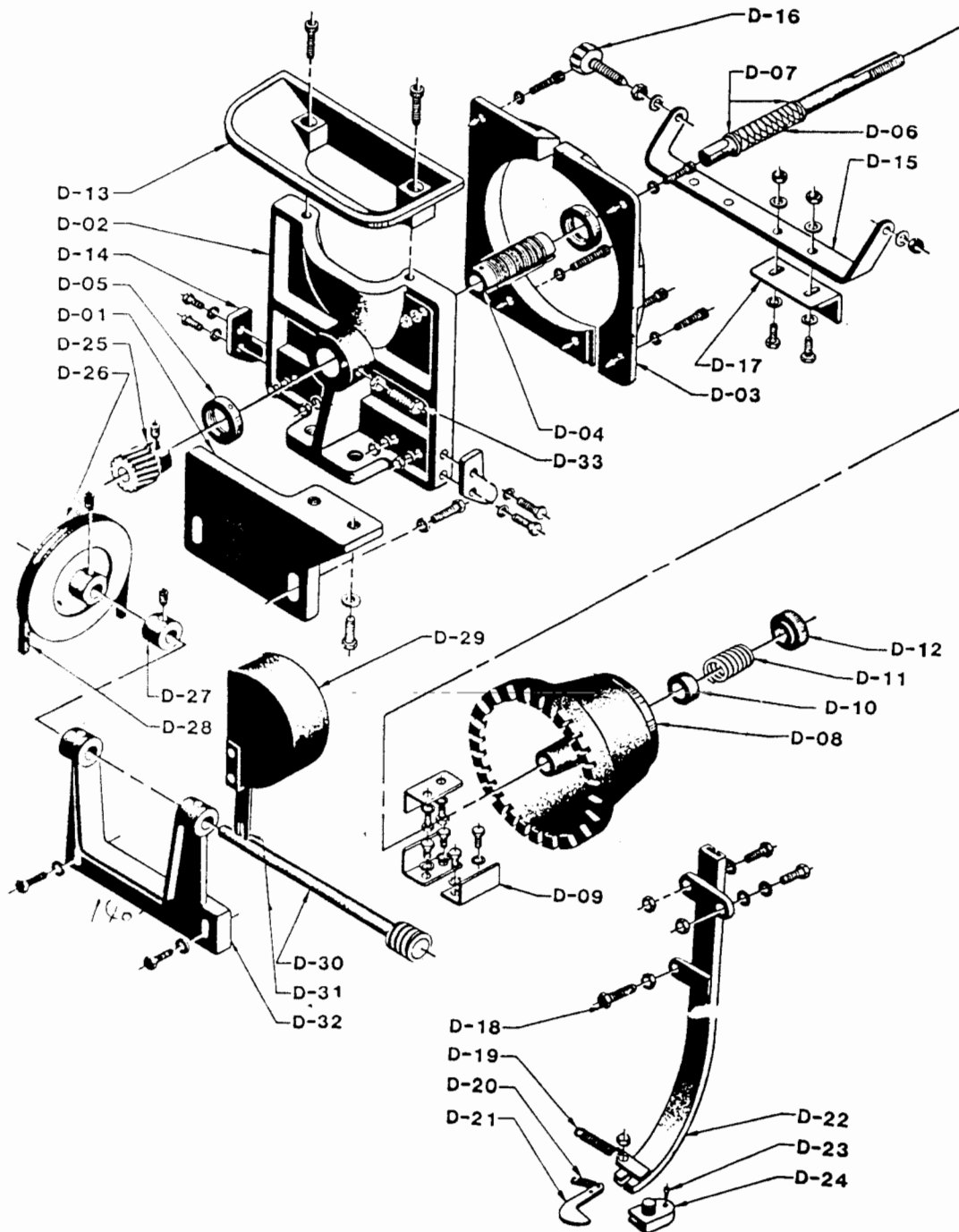


圖5 零件表

組別 項次 Group Item	名 稱 Description	數量 Qty	附 記 Remarks
D-01	支 架 bracket,		
D-02	四角板 Loading chute plate		
D-03	四角環 hopper cone ring shield		
D-04	螺紋套 threaded pipe, spindle		
D-05	螺紋套螺姆 ring nut		
D-06	心 軸 spindle		
D-07	油封圈 oil seals		
D-08	選料齒輪 hopper cone		
D-09	撥 片 stirrers		
D-10	墊 圈 spacer		
D-11	螺形彈簧 spring coil,		
D-12	壓花螺姆 ring nut, spindle		
D-13	鋁 斗 hopper		
D-14	頂心腳 edge support		
D-15	中心吊架 suspension bracket,		
D-16	頂心螺絲 adjusting screw,		
D-17	直角接片 track holder plate		
D-18	流道調位螺絲 patting plate adjusting screw		
D-19	流道拉簧 track spring		
D-20	控制勾彈簧 exit controller spring		
D-21	控制勾 exit controller		
D-22	流 道 track plate		
D-23	圓 梢 pin		
D-24	控制頭 exix controller shield		
D-25	齒輪式蝸輪 worm gear		
D-26	傳動皮帶輪 pulley		
D-27	固定環套 fixed ring		
D-28	飛輪皮帶 belt		
D-29	蝸輪安全蓋 cover		
D-30	蝸 桿 worm gear shaft		
D-31	蝸輪蓋固定片 locking plate		
D-32	軸 架 holder, worm gear shaft		
D-33	特殊螺絲 fixed screw		

CLUTCH TRANSVER SHAFT EXPLODED VIEW (FIG.6)

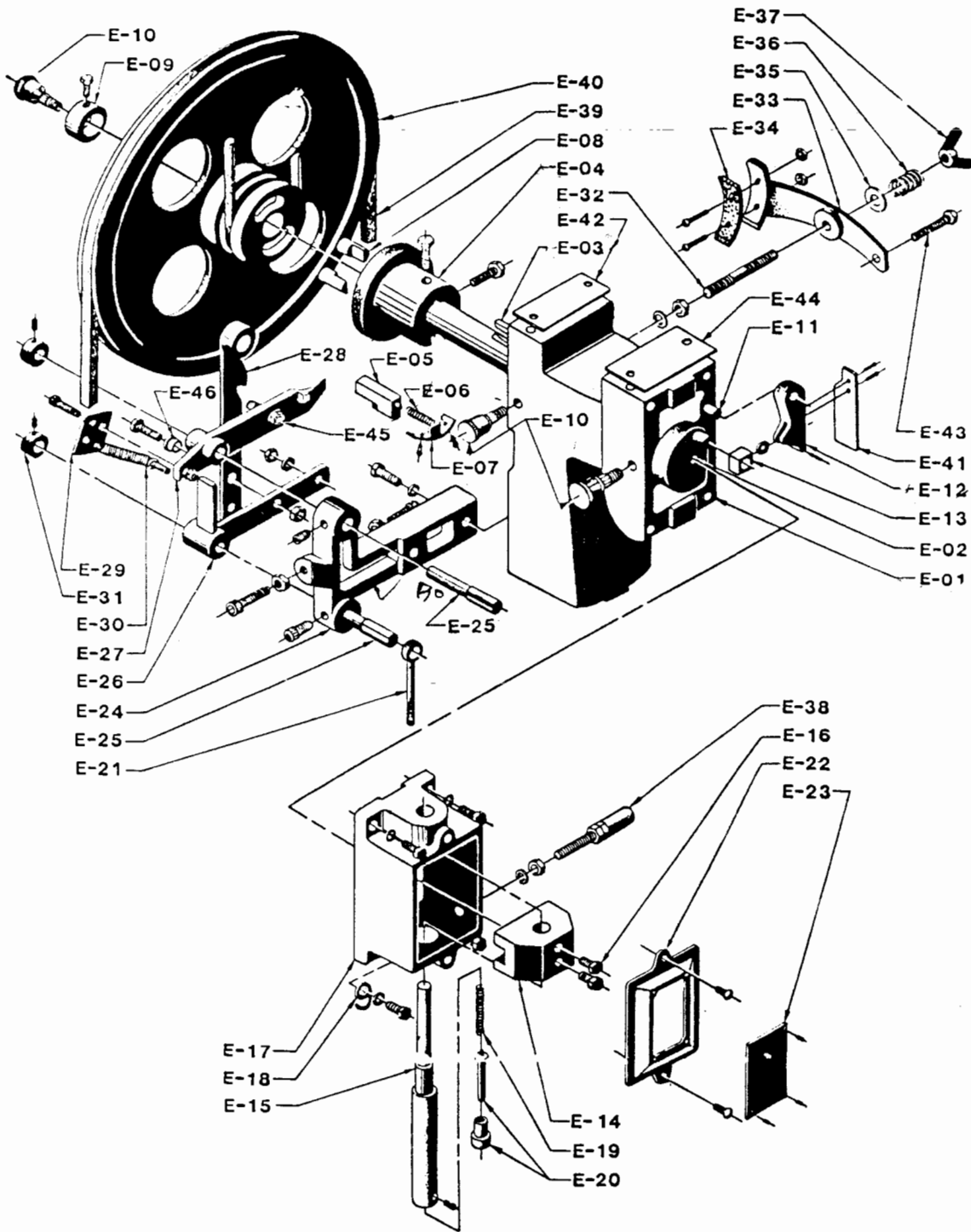


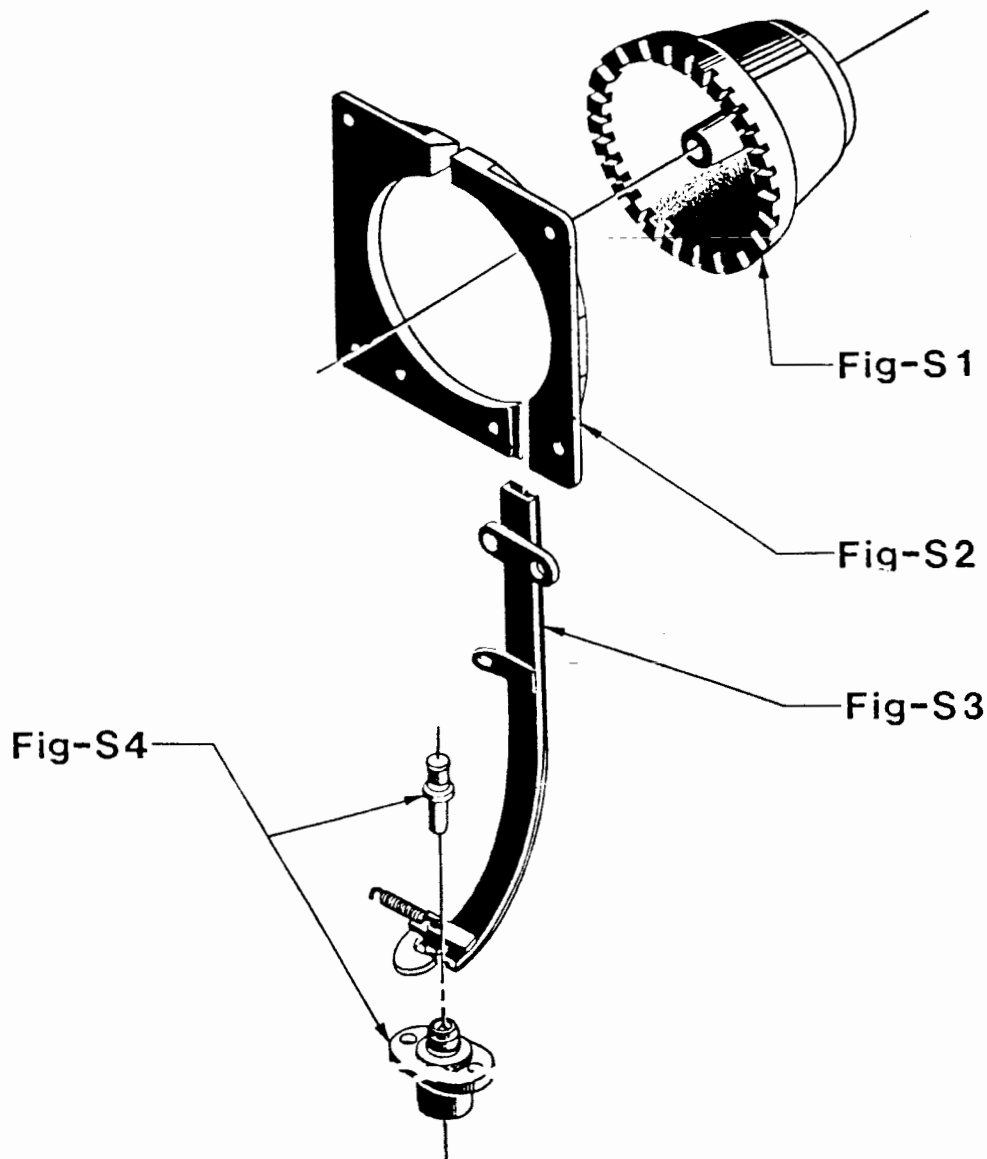
圖6 零件表

組別 項次 Group Item	名 稱 Description	數量 Qty	附 記 Remarks
E-01	本 台 head body		
E-02	主 輪 drive shaft		
E-03	方 鍵 key,		
E-04	離 合 器		
E-05	離 合 梢 clutch		
E-06	離 合 梢 彈 簧 spring,		
E-07	止 檔 片 cover, key spring		
E-08	飛 輪 梢 insert, flywheel		
E-09	固 定 環 套 outer collar		
E-10	黃 油 杯 grease cup		
E-11	圓 梢 pin		
E-12	拍 動 頭 patting control		
E-13	銅 仁 square guide bushing		
E-14	銑 仁 moving guide		
E-15	三 節 心 three-step-pin		
E-16	導 動 體 固 定 螺 screws		
E-17	四 角 斗 component case		
E-18	9 字 彈 簧 拉 勾 support rod, bracket		
E-19	上 模 彈 簧 coil spring, die post		
E-20	上 模 組 upper die set		
E-21	接 頭 螺 絲		
E-22	前 蓋 side plate		
E-23	名 牌 name plate		
E-24	支 架 braket, treadle rod arm		
E-25	二 節 心 clutch lever pin		
E-26	吊 臂 rod arm		
E-27	斧 頭 clutch lever		
E-28	勾 頭 clutch lever hook		
E-29	勾 彈 簧 片 hook plate		
E-30	離 合 桿 拉 簧 spring, clutch level		
E-31	固 定 環 套 stop collar		
E-32	雙 頭 牙 螺 絲 threaded stud, brake anchor		
E-33	剎 車 體 brake anchor		
E-34	剎 車 皮 brake lining		
E-35	平 面 墊 圈 flat washer		
E-36	螺 形 彈 簧 adjusting spring		
E-37	蝴 蝶 螺 帽 thumb-nut		
E-38	頂 流 道 螺 絲 adjusting screw		
E-39	飛 輪 皮 帶 flywheel belt		
E-40	主 傳 動 飛 輪 flywheel		
E-41	拍 動 板 patting control plate		
E-42	本 台 上 蓋 upper jaw arm		
E-43	剎 車 體 固 之 螺 絲 screws		
E-44	本 台 上 蓋 upper jaw arm		
E-45	固 定 螺 柱 clutch lever pin		
E-46	勾 頭 襯 套 screws collar		

Group parts list

下列各項零件規格可以依照圖號申請更換，但務必要按照你現用扣型規格而定，並希寄上樣品以便試車。

These following items may be replaceable with the figure numbers. It must be according to the specifications of the different buttons which you will use and you also provide us some your samples for them, please.




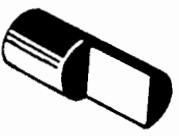
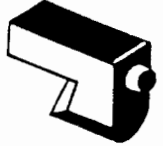


HM-307A 各部另件採購表

The Individual Group Parts of HM-307A
Be Supplied with Your Purchase Order

項次 編號 Item No.	組別 編號 Group No.	名 稱 Description	附 記 Remarks
1	Fig-S1	選料齒輪總成 hopper cone set	<p>以上所有零件可以更換，在訂購之前你必須確認所使用的釦型及號碼，同時我們需要您寄上200個釦子以使機械試用。</p> <p>All items of these group parts are replaceable. Before ordering you have to be definit the kind and some suitable to the fasteners ligne are being used.</p> <p>Meanwhile we need your buttons about 200 pieces for our machine trials.</p>
2	Fig-S2	四角環 Ring shield	
3	Fig-S3	流道總成 track set	
4	Fig-S4	上下模 Dies, upper & lower	

正常損耗另件表

Normal Wornout Parts List

零件圖 Parts	組別 項次 Fig No.	統一編號 Part No	機型 Mach.	損耗 (工/時) Worn Out (W/Hr)	附記 Remarks
	E-13		307	9000Hrs	注意飛輪離 合器之定期 保養 With care of the flywheel, clutch and shaft Lubricating performance in regular Maintenance
	E-08		307	3000Hrs	
	E05		307	3000Hrs	
	E-14		307	3000Hrs	
	E-27		307	3000Hrs	