

H220

SERVICE

MANUAL



Fillon Pichon USA Inc.

Dear User,

Thank you for choosing a FILLON PICHON product. It has been carefully designed to enable you to prepare and blend your paint with speed and ease.

Your mix-unit has been shipped so as to insure easy assembly and installation. It should reach you in perfect condition. If not, we would like to know.

This Manual will enable you to obtain maximum performance from your new mix-unit. To prevent accidents, we strongly recommend that it be read fully by all operators, and kept in a safe place for future reference.

Yours truly,

A handwritten signature in black ink, appearing to read 'R. Fillon', with a large, sweeping flourish underneath.

Roger Fillon, President
Fillon Pichon USA Inc

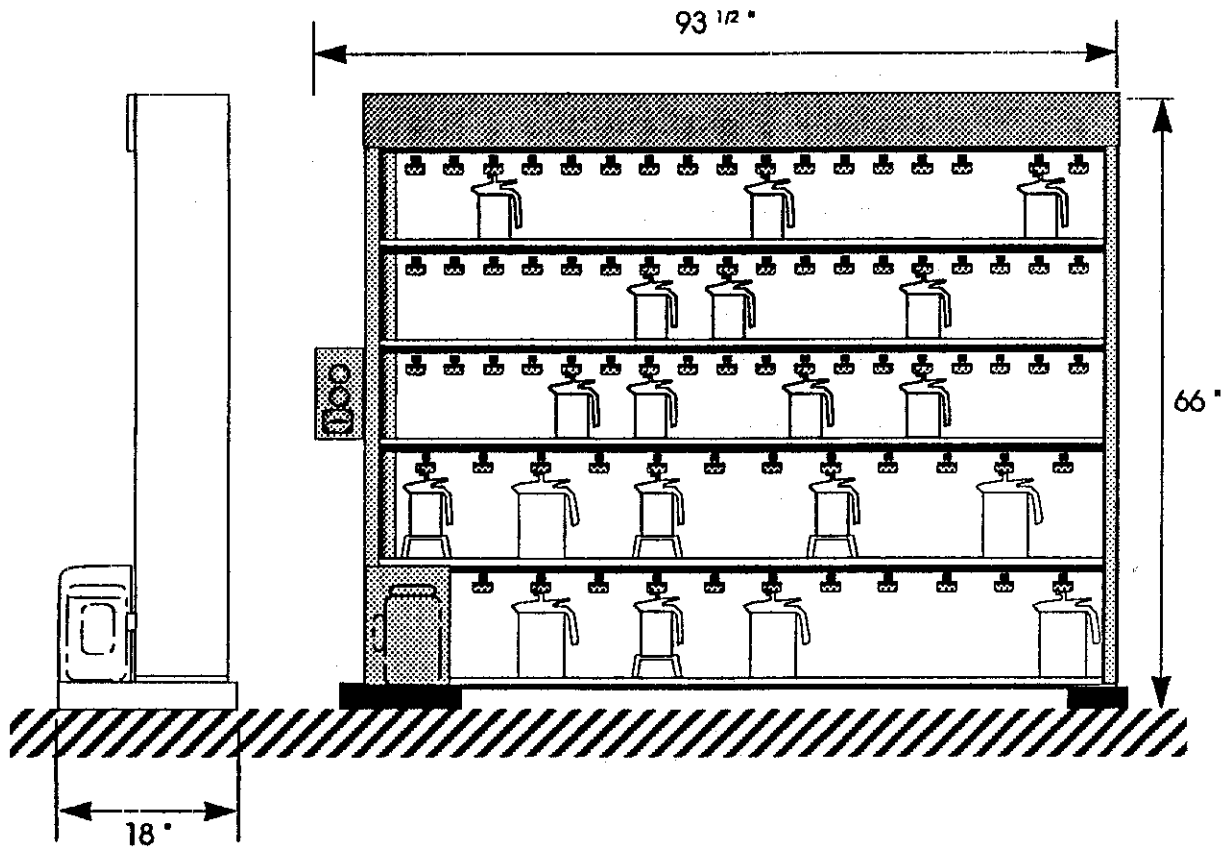
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H220 MIX-UNIT

DRIVE UNIT	REF: Y84.H004.01
FRAME ASSEMBLY	REF: Y84.H004.01
MIX-SHELF 12 X 2.5 L.	REF: Y84.H124.01
MIX-SHELF 16 X 1 L.	REF: Y84.H164.01

H220 MIX-UNIT



THE EQUIPMENT

Your H220 mix-unit is shipped in 7 pre-assembled parts.

1. DRIVE UNIT : CARTON A

- Base Frame
- Motor Assembly (mounted)
- Motor Housing
- Mechanical Control Box
- Tool Box
- Instruction Manual.

2. FRAME ASSEMBLY: CARTON B

- Header Board with 2 brackets
- Cross Braces (set of 2)
- Top shelf cover
- Side panels (left and right)
- Plastic Shelf Spacers (set of 2)
- Base spacer panel

3. FIVE FULLY ASSEMBLED MIX-SHELVES: CARTONS C/D/E

Two types: 12 x 2.5 liter cans

 16 x 1 liter cans

Carton C : 2 / MIX-SHELF 12 X 2.5 L.

Carton D : 1 / MIX-SHELF 16 X 1 L.

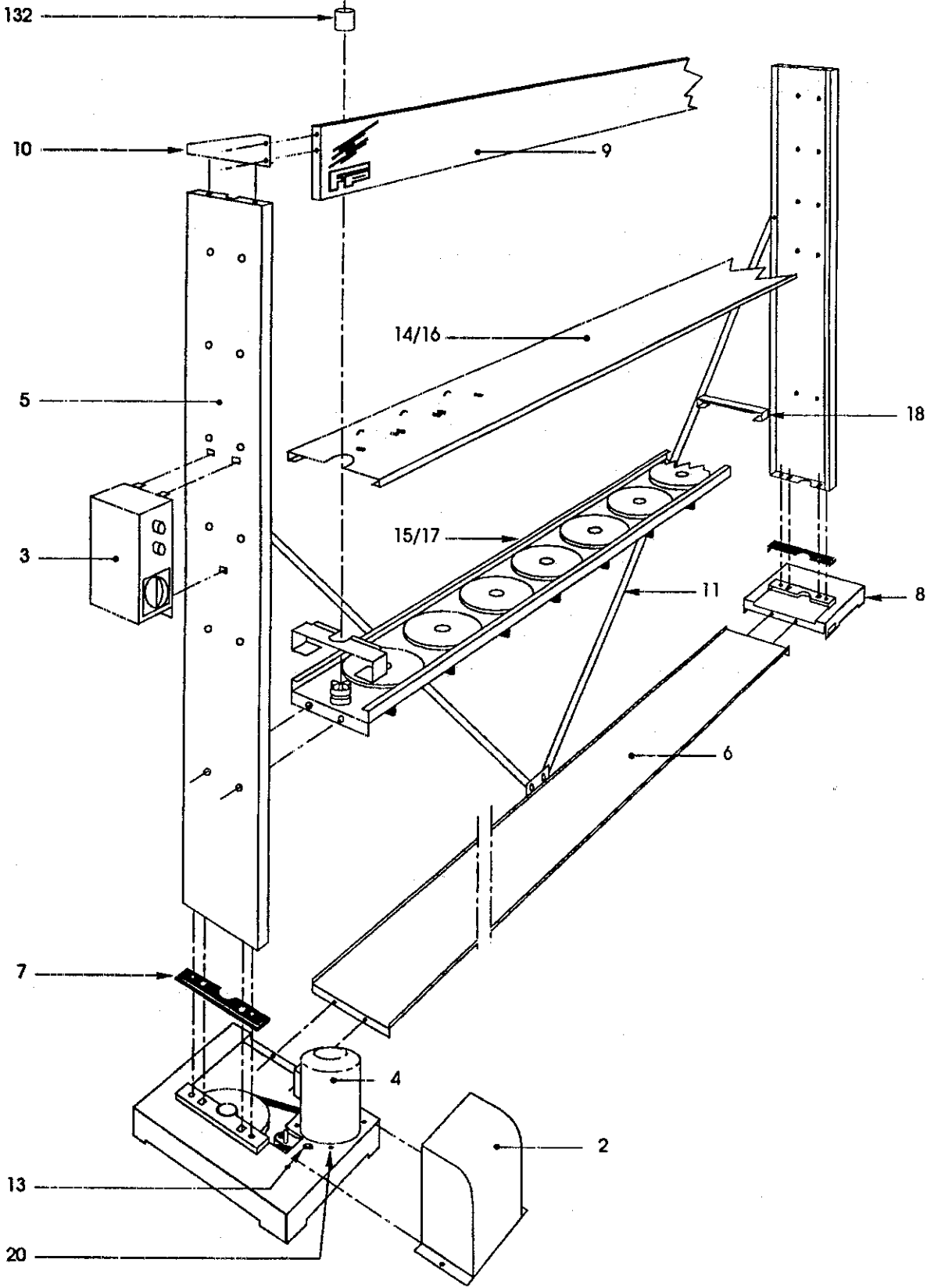
Carton E : 2 / MIX-SHELF 16 X 1 L.

CAUTION: Electrical connections and installation must be carried out in accordance with all Federal, Provincial and local regulations, and **ONLY BY A FULLY QUALIFIED ELECTRICIAN.**

OPTIONAL: * Snap-on platforms, enabling 1 liter cans to be mounted at 2.5 liter stations, can be ordered individually and may be shipped separately or with the mix-unit.

* Agitator lids, in 2.5 liter or 1 liter sizes, incorporating safety handle and patented flow control system, are ordered and shipped separately.

ASSEMBLY AND INSTALLATION



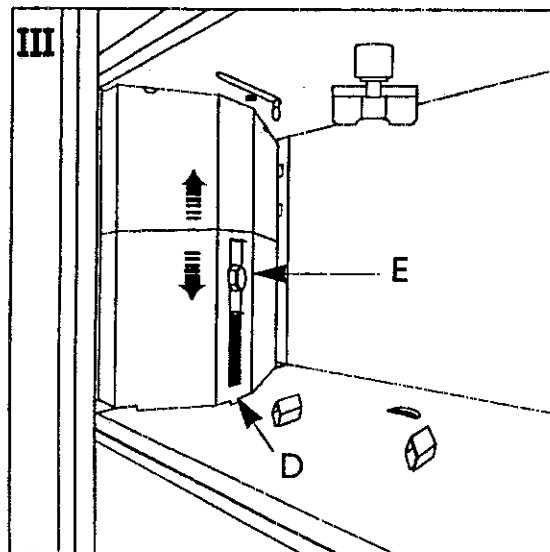
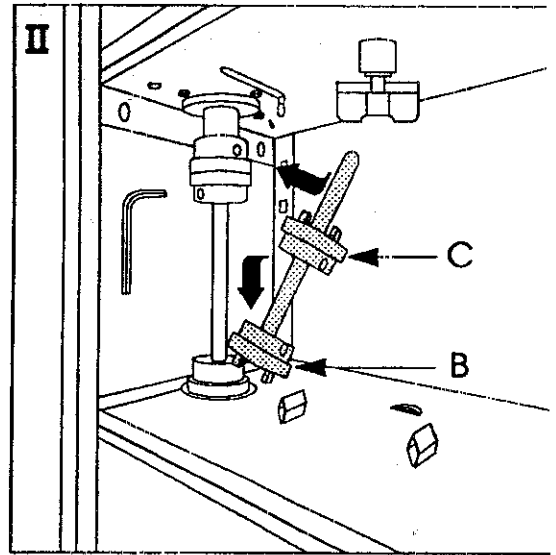
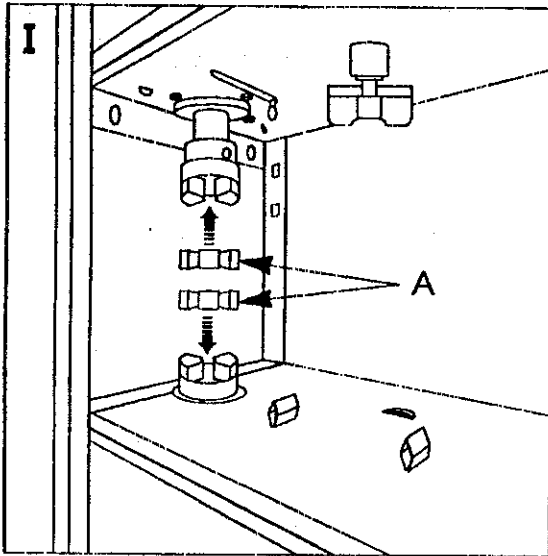
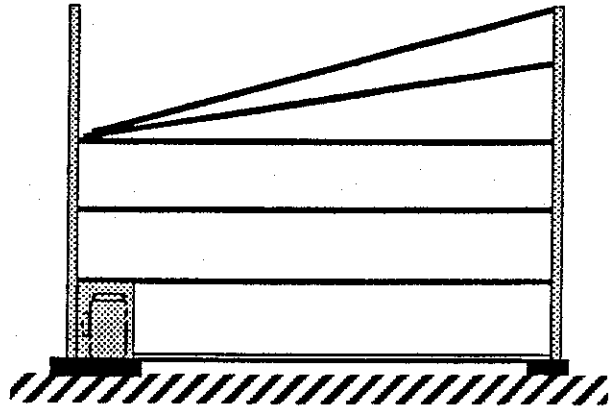
ASSEMBLY AND INSTALLATION

PLEASE REFER TO DIAGRAM ON PAGE 4.

Note: Nuts and bolts to mount mix-shelves are packed with each mix-shelf. All other hardware is packed inside carton A.

1. Open cartons A and B.
2. Connect motor unit (4), base unit (8), and base spacer panel (6).
Then, locate this assembly in its definitive position in the shop (it will be more difficult to move when fully assembled).
3. Attach the two rear braces (11) loosely onto the base only.
4. Locate bottom plastic shelf spacers (7) onto left side and right side of base assembly.
5. Place left and right upright side panels (5) on top of plastic spacers and bolt down loosely.
6. Open carton C. Mount the first 2.5 liter mix-shelf, then the second 2.5 liter mix-shelf immediately above. Bolt the shelves to the side panels, using the lower (round) holes in the panels. (The square holes can be used at a later date, when your paint is supplied in US Gallon and Quart cans).
7. Mount the third (1 liter) mix-shelf (carton D).
8. Position the last two (1 liter) mix-shelves (carton E) together, at the same time, in between the side panels (see fig. 1, page 6).
 - a) First, secure the top shelf.
 - b) Then, mount the fourth shelf beneath it.
9. Secure rear braces (11) onto side panels, and tighten at base.
10. Place the left and right metal shelf spacers (18) at each end of every shelf.
Then, place the slotted shelf covers (14/16) onto the shelves.

ASSEMBLY AND INSTALLATION



ASSEMBLY AND INSTALLATION

11. TO MOUNT TRANSMISSION SHAFTS (see page 6)

I) Mount the two cross pieces (A), one on the lower drive sleeve, the other on the upper drive sleeve of each mix- shelf.

II) Locate the drive sleeve (B), fixed at the end of the shaft, onto the lower cross-piece, and push down firmly until it is fully engaged.

Unscrew the other drive sleeve (C) and slide it up the shaft. Again, make sure it is fully engaged into the upper cross-piece. Lock the drive sleeve by tightening screw against flat surface of shaft. Allen wrench is provided.

III) Insert lug (D) at base of shaft cover into the space provided in the shelf cover. Secure with bolt (E).

12. Place the top shelf cover (non-slotted) into position.

13. Mount header brackets (10) onto each side panel, then bolt header (9) to brackets.

14. Mount yellow plastic safety cap (132) onto top drive sleeve.

15. Mount motor housing (2).

16. Mount control box (3) onto the left side panel. The cable to the motor is pre-mounted and pre-set in the factory.

MOTOR INSTALLATION

BEFORE STARTING:

You have received an explosion-proof motor (115 V/60 Hz) which complies with UL and CSA standards (Class 1, Division I, Group D), for this reason the motor must be installed by a **QUALIFIED ELECTRICIAN ONLY**. Installation should be in accordance with all Federal, Provincial and local regulations.

IMPORTANT:

Check that the shaft of the motor rotates clockwise. An arrow label is provided to guide you.

The mix-unit must be fully grounded. A small ground cable is supplied to ground the motor to the machine. A second (longer) cable is supplied to ground the machine to a suitable structure in the shop.

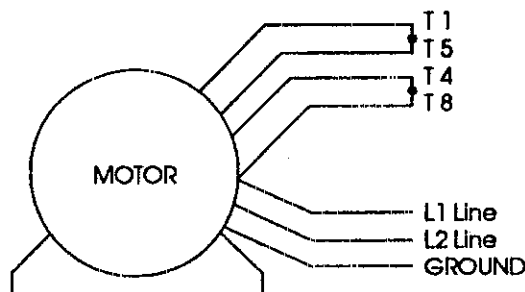
THE MIX-UNIT MUST NOT BE INSTALLED IN A DAMP PLACE.

The H220 motor requires clockwise rotation (facing the lead end).

The motor has been pre-wired (connections insulated) and tested before leaving the factory (steps 1 and 2 below). The wiring diagram is for use by a Qualified Electrician should any of the wires need to be reconnected.

CLOCKWISE ROTATION

- 1) Tie motor leads marked "T1" and "T5" together and insulate this connection.
- 2) Tie motor leads marked "T4" and "T8" together and insulate this connection.
- 3) Tie motor lead marked "L1" and one mains power lead together and insulate this connection.
- 4) Tie motor lead marked "L2" and remaining mains power lead together and insulate this connection.
- 5) The green lead is for grounding to the machine.



MOTOR INSTALLATION

TO REMOVE MOTOR :

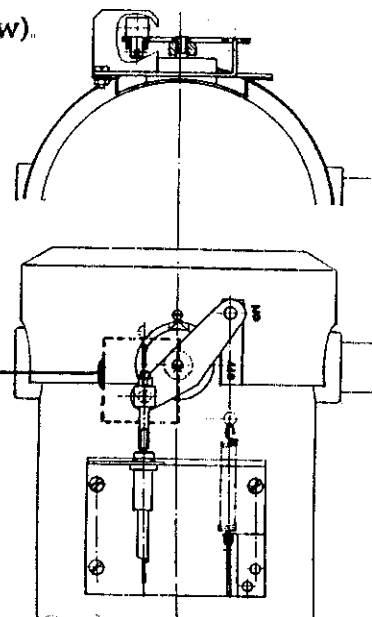
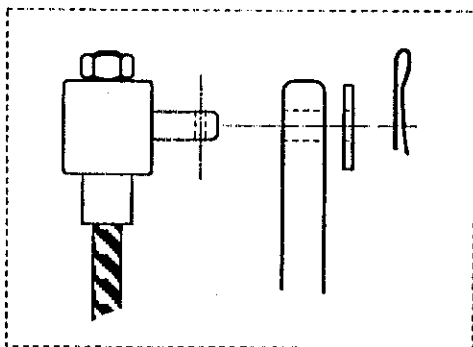
- Shut off power at mains.
- Disconnect all leads and cables.
- Remove the control box (3) from the side panel (5).
- Remove the slotted shelf (14).
- Remove the transmission shaft on the bottom mix-shelf.
- Remove the two bolts (21) between the drive unit (4) and the base spacer (6).
- Remove the two bolts (22) securing the left side panel (5).

The next step requires two people :

- One person slightly lifts the left side panel while the other slides the drive unit forward until it is fully disengaged.
- Then remove the four bolts (20).
- Turn bolt (13) anti-clockwise to loosen the motor belt, then remove belt.
- Remove motor.

TO REPLACE MOTOR ASSEMBLY :

- Place motor in position (without bolting) with controls facing the rear of the base.
- Feed motor belt around pulleys and tension regulator
- Secure motor with four bolts (20).
- Again, one person lifts the left side panel while the other slides the drive unit back into place.
- Re-tighten the four bolts (21,22).
- Attach control cable to the motor switch (see below).
- Attach control box to the left side panel.
- Reconnect motor leads to mains supply (see below).
- Ensure both ground wires are installed.



COMMISSIONING & OPERATION

COMMISSIONING :

Before first using your mix-unit, check that :

1. The operator has seen and read all caution markings and texts on the mix-unit and in the Service Manual.
2. The power supply is compatible with the power rating of the mix-unit.
3. All protective covers are firmly in place.
4. All electrical connections are covered.
5. All nuts and bolts are tight. They may have worked loose in transport.
6. Belts are correctly adjusted (see routine maintenance).
If they are too loose, they will slip; if they are too tight, you may overload the motor.
7. All belts are securely in place and running smoothly after 2- 3 minutes operation.
8. Can clamps are correctly mounted. At each station, the notch on each of the two clamps should point outward.
9. The unit is installed away from any source of heat (explosive vapors).
10. Do not use dented cans. Check manually that the agitator blades turn freely before placing can in mix-unit.

COMMISSIONING & OPERATION

OPERATION :

1. Make sure that agitator lids are firmly locked in position before placing cans in mix-unit.

Agitator lid should preferably incorporate a handle, to make can handling easier and safer.
2. Make sure that all cans are securely in position before switching mix-unit ON.
3. Place small 1 liter cans rather than larger 2.5 liter cans on higher mix-shelves, for easier handling and greater safety.
4. **DO NOT OVERREACH** when placing cans in, or removing cans from the mix-unit.
5. The unit will not operate until the timer has been set.
6. Paint cans may be safely placed in, or removed from the mix-unit during operation.

ROUTINE AND ELECTRICAL MAINTENANCE

CAUTIONS : Before removing any protective covers, and prior to any maintenance or repair operation, make sure that mains power is OFF (disconnect the unit if possible).

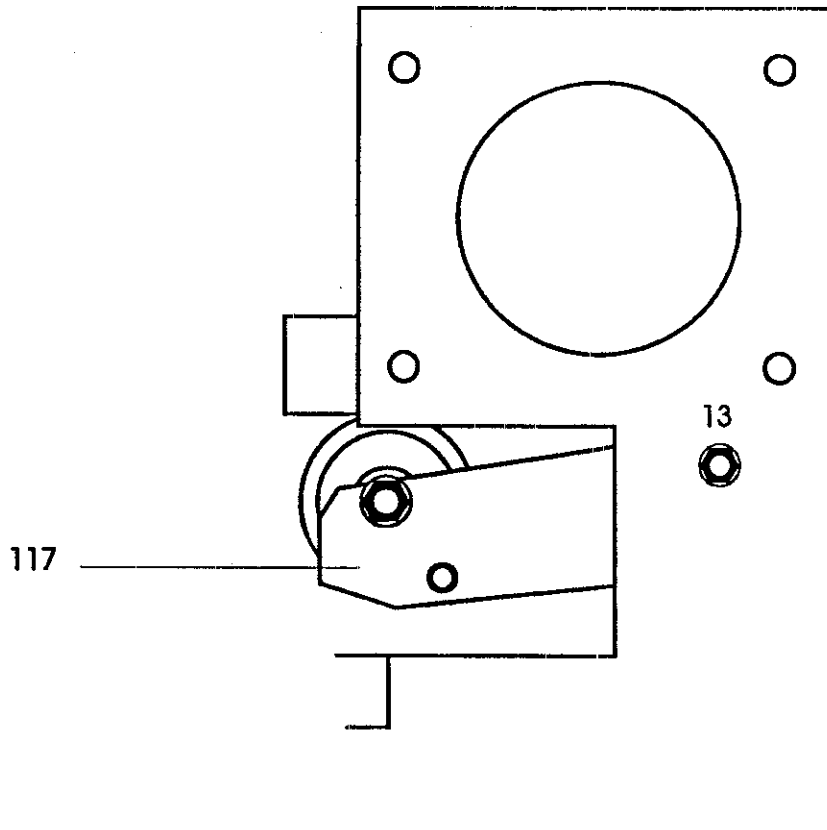
Your mix-unit will serve you longer, and risk of accidents will be reduced, if regular maintenance is carried out.

DAILY : Remove any spilled paint from the mix-shelves. Dried paint spills may make cans unstable and difficult to remove from the shelves. Use a standard, non abrasive thinner. NEVER USE WATER TO WASH DOWN THE MIX UNIT. Be careful not to spill thinner on belts or spacers.

MONTHLY : Check condition and tension of the mix-shelf belts and the motor drive belt.

To adjust :

- Mix-shelf belts : Use tension regulator (106).
- Motor drive belt : Use tension regulator arm (117) and belt regulator adjusting screw (13).



PARTS LIST

ITEM	DESCRIPTION	PART
	<u>Drive unit H220</u>	
1	Top shelf	13.12.01
2	Motor Housing	19.31.00
3	Mechanical control box, - complete with cable - cable only, with fittings	24.89.00 24.89.70
4	Motor assembly and mounting base	15.103.00
5	Side panel H220 - Left - Right	11.33.20 11.33.22
6	Base spacer panel	15.103.20
7	Plastic shelf spacer (set of 2)	04.20.06
8	Right base unit	15.103.10
9	Header board	18.85.10
10	Header bracket - left - right	18.85.14 18.85.15
11	Cross brace (set of 2)	25.16.00
13	Regulator adjusting screw	-----
	<u>Mix-shelf : Large Cans</u>	
14	Slotted shelf - modular stage: 12 x 2.5 liter cans	13.12.29
15	Modular mechanical shelf (w/ fittings) - modular stage: 12 x 2.5 liter cans	12.65.10
	<u>Mix-Shelf : Small Cans</u>	
16	Slotted shelf - modular stage : 16 x 1 liter cans	13.12.13
17	Modular mechanical shelf (w/ fittings) - modular stage : 16 x 1 liter cans	12.46.10
18	Metal shelf spacers - Left - Right	13.55.06 13.55.07
19	Detachable platform (Height = 50 mm)	21.01.19
20	Motor mounting bolts (set of 4)	08.50.50

PARTS LIST

ITEM	DESCRIPTION	PART
100	Drive sleeve (with screw)	04.10.04D
101	Drive cross piece	04.20.01
102	Standard drive block	08.17.00
105	Can clamps (bag of 25)	04.01.29E
106	Adjustable tension regulator	08.72.00
107	Fixed belt roller	08.71.00
108	Mechanical shelf drive belt L = 4450 mm	03.01.39
109	Mechanical shelf pulley Ø 150 mm (2.5 L) Mechanical shelf pulley Ø126 mm (1 L)	04.20.03 04.20.04
110	Self lubricating ring 12 x 15 x 12 (2 per station, upper & lower)	03.04.01
111	Drive plate	04.20.07
112	Pin	04.01.39
113	Lock ring	09.90.17
114	Motor belt (L = 813 mm)	03.01.63
115	Motor pulley POLY V 33	05.01.104D
116	Explosion-proof single-phase motor 1 HP (w/ pulley) with built-in switch * Silent-blocs (w/nuts) * Ground wires	06.01.70D 03.02.03 06.50.01
117	Adjustable belt regulator	08.81.00
123	Shaft cover : * 2.5 liter can stage * 1 liter can stage	19.08.30D 19.08.00D
124	Drive shaft : * L = 292 mm (bottom shelf) * L = 201 mm (2.5 liter can stage) * L = 150 mm (1 liter can stage)	29.2.292 29.2.201 29.2.150
131	Driven pulley POLY V 165 (w/screw)	05.01.80D
132	Upper drive block cap	03.09.15
—	Tool box	08.60.48

PARTS REPLACEMENT

Refer to diagrams on page 16.

Drive Cross-Piece (101)

- Remove the shaft cover.
- Unscrew upper drive sleeve, push it down, and remove drive shaft.
- Replace worn cross-piece, reinstall drive shaft and shaft cover.

NOTE: To replace any of the following parts, first remove the drive shaft cover (123), the drive shaft (124) and slotted shelf of the mix-shelf involved.

For the topmost shelf, remove the top cover. Slacken belt (108) by loosening adjustable tension regulator (106) and fixed belt rollers (107).

Mechanical Shelf Belt (108)

Remove the worn belt and install new one. Make sure that it is correctly positioned with regard to the adjustable tension regulator (106) and the fixed belt rollers (107)

Faces of adjustable belt regulators and fixed belt rollers push against the outside of all belts.

Adjust the fixed belt rollers (107) to ensure correct belt tension. Hand tighten the belt rollers. Do not use tools for leverage.

Drive Block (102)

Remove the shaft cover and drive shaft from the shelf immediately below the shelf involved.

Remove belt (108) and replace defective block.

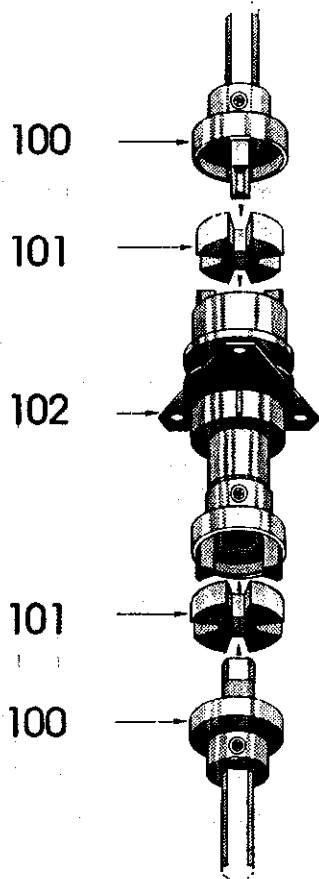
Adjustable Tension Regulator (106)

Simply replace.

Fixed Belt Rollers (107)

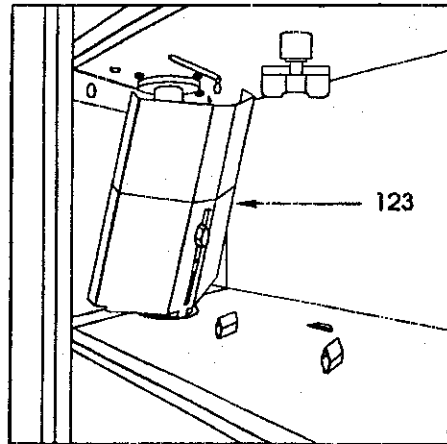
Unscrew to replace.

PARTS REPLACEMENT

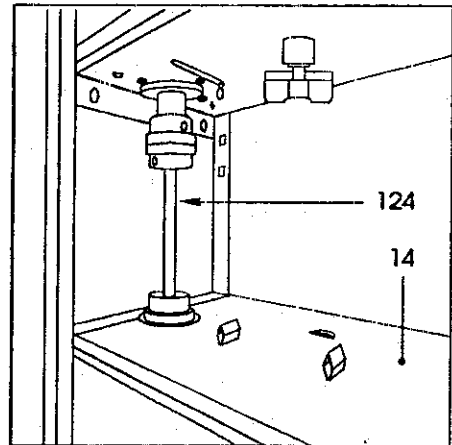


FLEXIBLE DRIVE
SHAFT ASSEMBLY

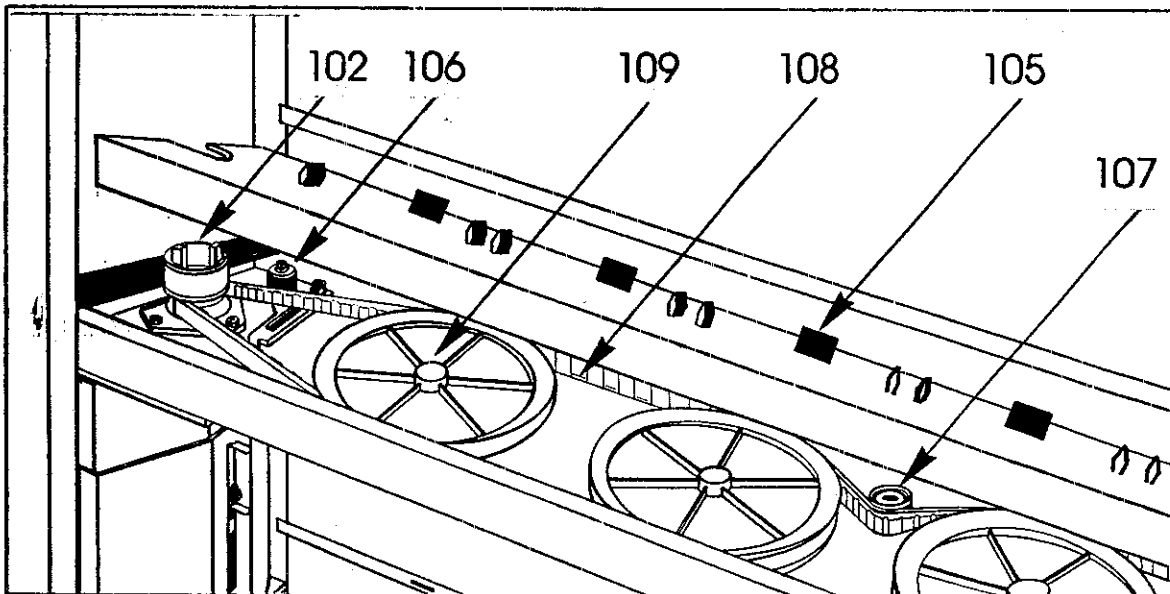
SHAFT COVER



DRIVE SHAFT



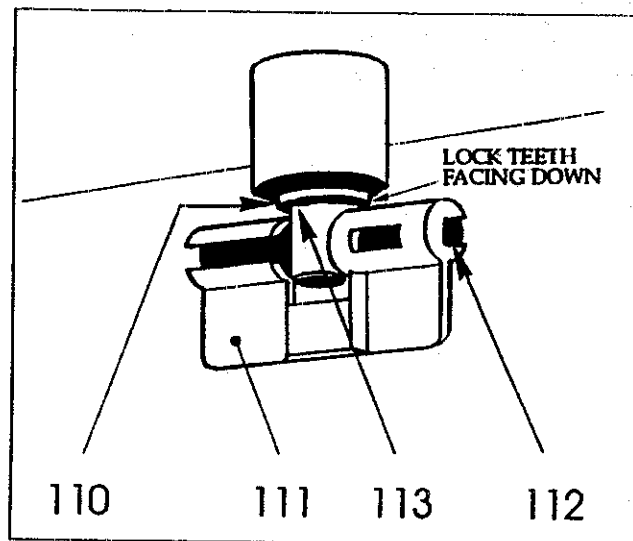
MECHANICAL SHELF



PARTS REPLACEMENT

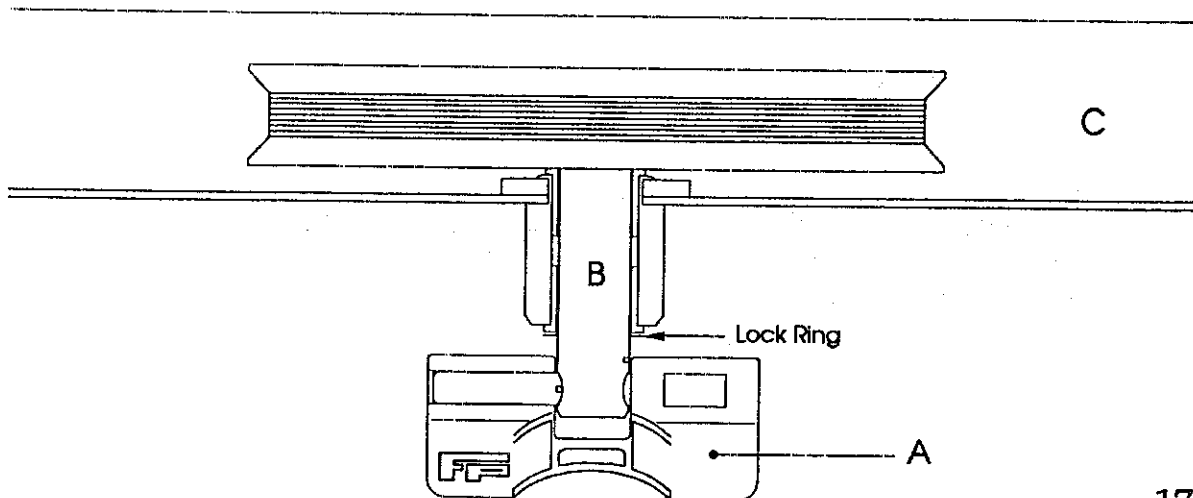
Upper and Lower Self-Lubricating Rings (110)

- Turn and snap off drive plate (111).
- Slide out pin (112).
- Remove lock ring (113) with needlenose pliers.
- Replace self-lubricating rings and re-install all parts in reverse order.



Plastic Mechanical Shelf Pulley (109)

- Remove driving device (A) as instructed above.
- With a rubber mallet, tap shaft (B) through shelf (C).
- Replace pulley.
- Replace pulley and re-install all parts in reverse order.



SUMMARY OF CAUTIONS

1. The mix-unit should be installed in a damp-free place, away from any source of heat or explosive vapors. Mix-units driven by a non explosion-proof electrical assembly should not be used in any area where there is a possible risk of paint vapor ignition.
2. Installation of the mix-unit, as well as any check, adjustment, or repair of any electrical component (motor, connections, etc....) should be carried out only by a **FULLY QUALIFIED ELECTRICIAN**. Installation must be in accordance with all Federal, Provincial and local regulations and the mix-unit must be fully grounded.
3. All electrical connections should be fully covered at all times.
4. Protective covers should always be in position. They are provided to protect you against any possible risk of injury.
5. Before removing any protective covers, and prior to any maintenance or repair operation, make sure the mains power is switched OFF (unit fully disconnected if possible).
6. The upper mix-shelves should be reserved for smaller cans, which are lighter, and thus safer to handle.
7. Do not use dented cans. Check manually that the agitator blades turn freely before placing cans in mix-unit.
8. Make sure that agitator lids are firmly secured before placing cans in the mix-unit.
9. Make sure that the cans are securely in place before switching the mix-unit ON.
10. Never overreach when placing cans in, or removing cans from the mix-unit.
11. Never use water to wash down the mix-unit.

The manufacturer can not be held responsible for any accident resulting from non-compliance with the cautions contained in this manual or affixed to the mix-unit, nor in the case of a mix-unit modified without the prior knowledge and consent of the manufacturer.

TROUBLE-SHOOTING CHART

PROBLEM	POSSIBLE CAUSE	SOLUTION
MOTOR WILL NOT TURN	<p>NO CURRENT</p> <p>TIMER NOT ACTIVATED.</p> <p>MOTOR SWITCH NOT ACTIVATED</p> <p>INTERNAL MOTOR PROBLEM</p>	<p>CHECK POWER SUPPLY (115V)</p> <p>ACTIVATE TIMER.</p> <p>CHECK TENSION OF SPRING TO MOTOR SWITCH PLATE. ADJUST CABLE TENSION. REPLACE CABLE IF SEVERELY CRIMPED.</p> <p>DO NOT OPEN MOTOR. CALL FILLON PICHON AT : 1-800-777-1583.</p>
NO MIX-SHELVES TURNING	<p>MOTOR NOT TURNING</p> <p>WORN, LOOSE OR SLIPPED MOTOR DRIVE BELT.</p> <p>LOOSE MOTOR PULLEY.</p>	<p>SEE ABOVE.</p> <p>IF SLIPPED, REMOUNT. IF LOOSE, ADJUST TENSION. IF WORN, REPLACE</p> <p>TIGHTEN PULLEY.</p>
INDIVIDUAL MIX SHELF WON'T TURN	<p>MIX SHELF BELT SLIPPED, LOOSE OR WORN.</p> <p>WORN DRIVING CROSS-PIECE.</p> <p>LOOSE DRIVING SLEEVE</p> <p>FIXED TENSION ROLLER(S) NOT TIGHT.</p> <p>DRIVE BLOC SEIZES OR HEAT UP.</p> <p>TENSION REGULATORS SEIZE OR HEAT UP.</p>	<p>IF SLIPPED, REMOUNT. IF LOOSE, ADJUST TENSION. IF WORN, REPLACE.</p> <p>REPLACE CROSS PIECE.</p> <p>TIGHTEN SET SCREW</p> <p>TIGHTEN.</p> <p>CHANGE BLOC.</p> <p>CHANGE TENSION REGULATOR</p>
AGITATOR PADDLE WON'T TURN	<p>DENT IN CAN</p> <p>DRIVE FORK NOT CORRECTLY LOCATED UNDER DRIVE PLATE.</p> <p>LOOSE DRIVE FORK</p> <p>BROKEN DRIVE FORK.</p> <p>LID BADLY SEALED ON CAN.</p>	<p>TRANSFER PAIN TO NEW CAN.</p> <p>LOCATE CORRECTLY.</p> <p>TIGHTEN SET-SCREW.</p> <p>REPLACE FORK.</p> <p>RE-LOCATE LID.</p>

WARRANTY

FILLON PICHON USA INC. warrants its products to be free from defects in material and workmanship under normal use and service.

FILLON PICHON USA INC will replace and/or repair any part of its product which it determines is defective for a period of twelve (12) months after delivery of the product to the original end user. Not included under the terms of this warranty are parts which require replacement due to normal wear and tear (belts, fuses, etc).

All Warranty claims should be made by contacting the company which was responsible for selling the product to the original end user. Under no circumstances should the product or any part thereof be returned to the factory for inspection; repair and/or replacement without the express written consent of FILLON PICHON USA INC.

This Warranty is expressly in lieu of all other warranties and representations expressed or implied, and all other obligations and liabilities on the part of FILLON PICHON USA INC.

All electrical components of the product furnished by FILLON PICHON USA INC but not manufactured by FILLON PICHON USA INC are warranted specifically by their respective manufacturers and FILLON PICHON USA INC makes no claims with respect to these items.

This Warranty shall be valid for the Warranty period, as long as the product has been properly installed or repaired by a fully qualified electrician or mechanic. The Warranty shall be void if the product has been subjected to unauthorized modification, misuse, neglect, accident or non-compliance with instructions in the Service Manual.

This Warranty is for the sole benefit of the original end user and is not assignable or transferable. The term "original end user" in this Warranty shall be deemed as that person or entity for whom the product was originally installed.