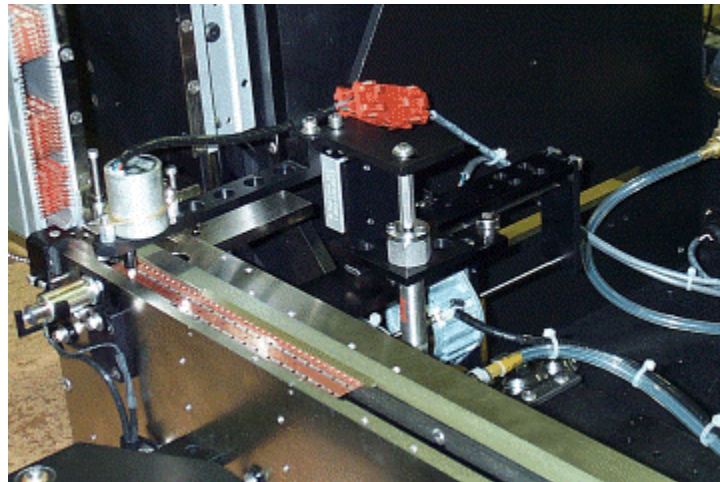


**STRIPPER BRUSH INSTALLATION AND SET-UP**  
**INSTRUCTIONS**  
**FOR LFI3010/3020/3060**



NOTE: Unless otherwise specified, reference Brush Kit drawing 20001084-314 and Bill of Materials (BOM) 20001084-014.

NOTE: All adjustments are Pre-set at the factory, but due to shipping and handling, adjustments may be altered. Allteq suggests that a quick check of these adjustments be made to insure proper operation of the Brush.

NOTE: If the Stripper Brush is installed and not working properly refer to *Page-3, Step 9*, only after the correct leadframe and Brush parameters are programmed.

- 1) Turn off machine. Disconnect power and air source.
- 2) Remove Microscope mount, Left-Top Cover, Leadframe Shield and Bottom-Left Cover.
- 3) To help install Items 4 and 5, open Rear Panel Assembly. Route through rear center plate and connect to the Driver PCB 30001060-410 and Program Panel PCB 30001017-420 (*Refer to Page-7*).
- 4) Remove Block-Off Plate from position-3, Barb Fitting from position 3B from Air Manifold and install Items-3, 13, 14, 24 (*Refer to Drawing 20001084-314 and Bills of Material 20001084-014*).
- 5) Remove Dowel Pins and discard (*if applicable*). Install Bias Solenoid Item-1 (*Refer to Bills of Material*).
- 6) Remove Rear-Rail Assembly and mount Brush & Brush Support assemblies to Rear-Rail Assembly. Mount to the holes shown on 20001084-314 drawing. After installing, make sure the Brush Assembly is **“SQUARE/90 DEGREES”** to the Rear-Rail assembly. Make sure it is biased toward the rear of the machine. In addition, make sure that Brush Assembly is centered to the Rear-Rail slot (*Refer to Page-9*).
- 7) Install Rear-Rail assembly back onto the machine, and then connect ALL tubing(s) and cable(s) (*Refer to 20001084-314*).
- 8) Turn on machine.

At this time, the machine does not know if there is Brush installed on the machine. To activate the Brush, push the **“MODE SELECT”** key, then clear the existing mode and enter mode “910”. Press the enter key until the display is shown below:

**NO Rework/Reject ID Selected. Use MD key  
To Change or NEXT/ENTER key to Continue**

This asks if the machine has one or more of the optional Rework/Reject Identification mechanisms. The seven (7) possible ways of identifying Rework and/or Rejects. If your unit is NOT equipped with any DID (Defect Identifiers), the machine will display on the previous page.

To activate any of these options, press the “**MD**”. Press the “**CLEAR**” key to select the DID (Defect Identifier) you want to use or “**NEXT/ENTER**” key to continue through the menu. You may exit this mode by pushing the “**MODE**” key. If the “**MD**” key was selected, display will be as shown below:

DIDs (1)L/Pn (2)H/Pn (3)W/Br (4)E/Mk  
(5)B/Sc (6)T/lk (7)B/lk; **CLEAR Changes**

If none of the numbers is flashing, the machine had never been programmed to have any DIDs or they have been deactivated. The available options are as follows; Brush with Top or Bottom Inker, Punch with Top or Bottom Inker or Punch or Inker with Edge Marker. To select a DID, push the “**CLEAR**” key. For example, if the Wiper Brush is installed on the machine, pressing the “**3**” key will select that option and number will flash and any other DID that can be used with it. To only select ONLY the Wiper Brush, push the “**ENTER**” key, at this time the display will be shown below: To exit, push the “**MODE**” key. At this time the DID will go to it’s home position. If it doesn’t, turn off machine and check all cable connection. (Refer to 20001084-314)

DIDs (1)L/Pn (2)H/Pn (3)W/Br (4)E/Mk  
(5)B/Sc (6)T/lk (7)B/lk; **CLEAR Changes**

**Now Homing the Defect Positioning Motor  
The machine has a working Home Sensor.**

The Following steps are the mechanical and calibration set-ups:

- 9) There are four (4) steps to setting up the Brush. 1) “Z” down direction; 2) Bias Solenoid; 3) Z mechanical adjustment and Brush Calibration using Mode “998”; 4) Brush Support assembly.

- 10) First step, press the **“MODE SELECT”** keys, clear existing mode and enter 920. Press the (3)Solenoid key. Next, disconnect Item-8 (*Refer to Page-10*) and slide Brush assembly forward. Next, push the (3)Punch/Brush key, at this time the Brush should come down. The objective is to adjust the speed of the air valve Item-6 so that a smooth down motion is obtained. Turning the air speed valve adjustment screw, Item-7 clockwise to decrease and counterclockwise to increase the speed. **“NOTE: This may take several attempts.”**
- 11) Second step is to adjust the Bias Solenoid Assembly (*Refer to Page 8*). Loosen Items-1 & 2, **“DO NOT LOOSEN ITEM 3”**. Slide a leadframe from the right side of Conveyor, under the Brush Assembly brush. Next, push (2)FRAME BIAS; the solenoid should now activate moving the Pin inward against the leadframe. If Pin does not move, loosen Item1 and adjust so **NO BINDING** occurs. **“DO NOT ALLOW PIN TO SLIDE OVER OR UNDER LEADFRAME”**.

Once adjusted, tighten Item-1. **“ WARNING DO NOT OVER TIGHTEN OR BRACKET MAY MOVE AND CAUSE BINDING, BENDING OR BOWING OF PIN! ”**. (NOTE: This may take several attempts.) At this time, the Pin Item-6 should make contact with the leadframe and hold it against the Rear-Rail. Leadframe either should not BOW or BEND leadframe, if or both occur, turn Solenoid Item-4, Counterclockwise to back out Pin and Clockwise to move PIN In. Once completed, tighten nut Item-2. **“ WARNING DO NOT OVER TIGHTEN OR BRACKET MAY MOVE AND CAUSE BINDING, BENDING OR BOWING OF PIN! ”**. (NOTE: This may take several attempts). Last, is to adjust the Pin Stop Bracket Item-5. When the Pin, Item-6 inward against the Leadframe, adjust Pin Stop Bracket Item-5 by loosening setscrew Item-7 and adjusting bracket so approximately .125 mils is between End Pin Item-10 and Pin Stop Bracket Item-5. Tighten setscrew Item-7.

- 12) At this time turn off machine and wait 30 seconds, then connect Item-8 (*Refer to Page-10*). Turn machine back on. Machine leadframe parameters should be entered, including Brush parameters, this will insure when the Brush calibration is set, that the Brush will operate correctly. Press the **“PARAMETER SELECT”** key enter the leadframe parameters, after the Grab parameter is entered the display will be shown below:

DID Status	W/Brush
Indictors	*Off

To setup the Brush press the **“CLEAR”** key and at this time the display will flash to indicate it is active. To turn on the Brush, press the **“NEXT”** or **“LAST”** key to toggle from OFF to REJECT. The display will be shown below:

DID Status	W/Brush
Indictors	*REJECT

To turn off the Brush, press the “NEXT” or “LAST” key to toggle from REJECT to OFF. To continue, press the “ENTER” key.

To program the Wire Brush operation, enter a value for “Ya” (**Yb and greater for multiple devices**). The “Ya” value is the distance in the “Y” direction from the back edge of the strip/leadframe to the center of the closest device. “Yb” is the distance from the back edge of the strip/leadframe to the center of the second closest device and so on with “Yc, Yd”. **Note: “Yd” cannot be used on an LFI3010.** The “Xdie” and “Ydie” the value is the distance from the center of the device to its outer edge. Thus, it’s 1/2 the length of the die, front to back (see page 11). Thus, it’s 1/2 the width of the die (left to right). The “Ya” variable is distance in the Y direction from the rear of the leadframe to the center of the corresponding device. The “LD” function corresponds to how the leads/legs are positioned on the leadframe. If the leads/legs are in the “X” direction for brushing, then “LD” needs to be set for “X”. If the leads/legs are in the “Y” direction for brushing, then “LD” needs to be set for “Y”. To toggle this function from press the “MD” key.

X/Br	Ya	Yb	Xdie	Ydie	LD
mil	*200.	200.	1.	1.	X

If the Brush programming is done as described above, the sides, left/right-front/back of the die are completely brushed. In some applications, this may not be necessary. Total brushing time can be lowered if only part of the left and right die sides need to be brushed. This can be accomplished by reducing the “Ydie” value. Other special brushing operations are possible by varying the programming parameters.

13) Third step is to calibrate the Brush; this is done by using Mode 998. At this time, a magazine with dummy leadframes will be used. Press the “MODE SELECT” key and clear the existing mode and enter Mode 998, then the display will be shown below:

**Wire Brush is Active,    to Calibrate Push  
ENTER; to Select Another DID Push CLEAR**

To continue press the “ENTER” or “CLEAR” key. If you push the “ENTER” key, the display will be shown below:

**WARNING - Set-Up Mode Please See Manual!  
Push ENTER to Continue or CLEAR to Exit**

To continue press the “**ENTER**” or “**CLEAR**” key. If you push the “**ENTER**” key, the display will be shown below:

**First Enter Desired Slot Number -  
Push MODE key when adjustments are Done.**

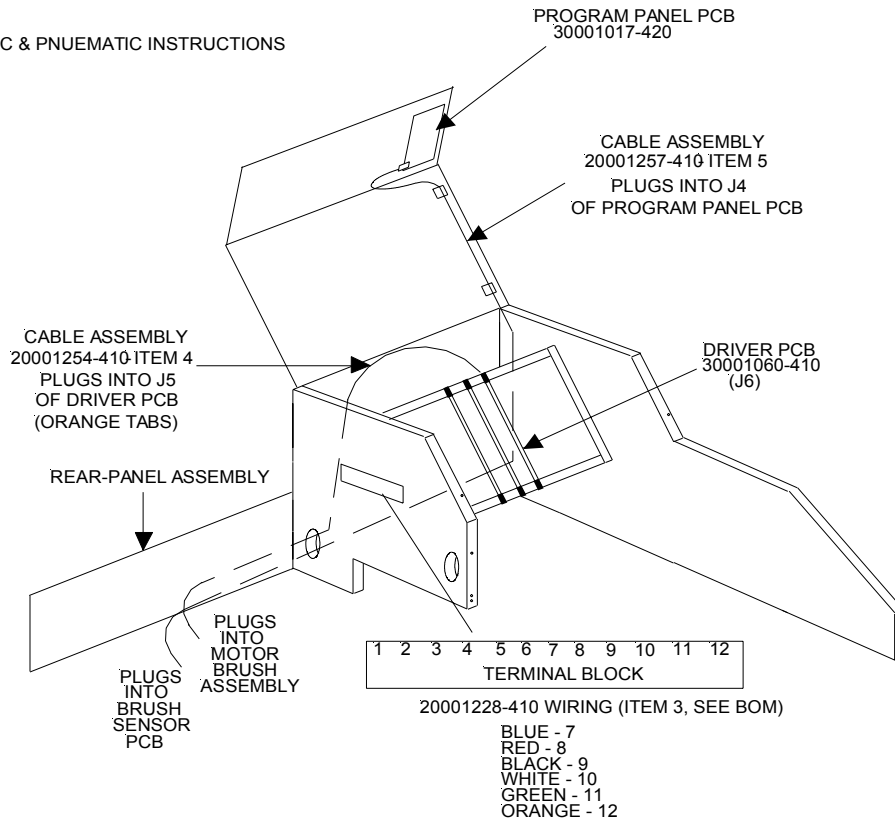
Now enter the slot number of the leadframe that will be used, typically Slot 1. Once a slot number has been entered, the display will be shown below:

**Mechanically Adjust Brush’s Z position  
Use ENTER to Change Side; MODE when Done**

The objective is to adjust the Z position, is done by using Item-5 (*Refer to Page-10*) To adjust the Z position, use Item-5, to adjust the height, clockwise to lower and counterclockwise to raise cylinder. When completed, press the “**MODE**” key.

- 14) Fourth step is to adjust the Brush Support Block. Slide a leadframe into the Conveyor from the right side of machine. Slide Brush support to where the device from the leadframe is. Slide leadframe over support, at this time the support should lift the leadframe approximately 10 mils. To adjust the height, loosen Item-1 and turn Item-2. Adjust until the support is adjusted properly, clockwise will raise and counterclockwise will lower (*Refer to Page-8*).

SCHEMATIC & PNEUMATIC INSTRUCTIONS



20001228-410 WIRING (ITEM 3, SEE BOM)

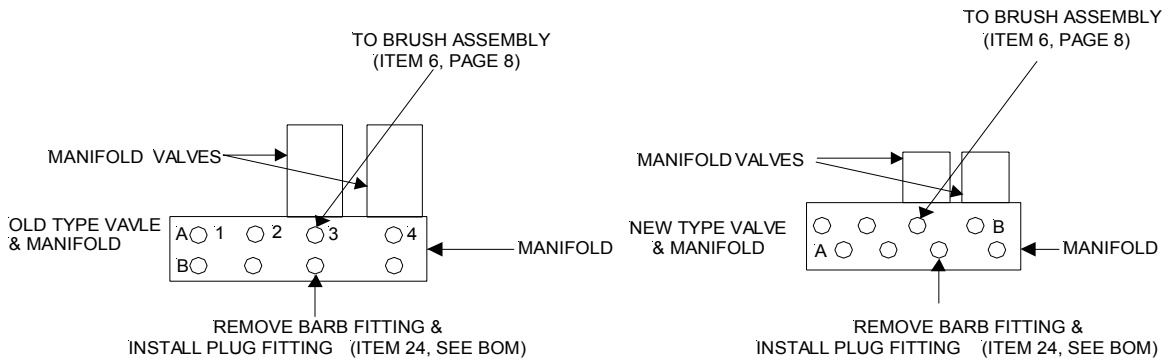
- BLUE - 7
- RED - 8
- BLACK - 9
- WHITE - 10
- GREEN - 11
- ORANGE - 12

BIAS SOLENIOD WIRING (ITEM 1, SEE BOM)

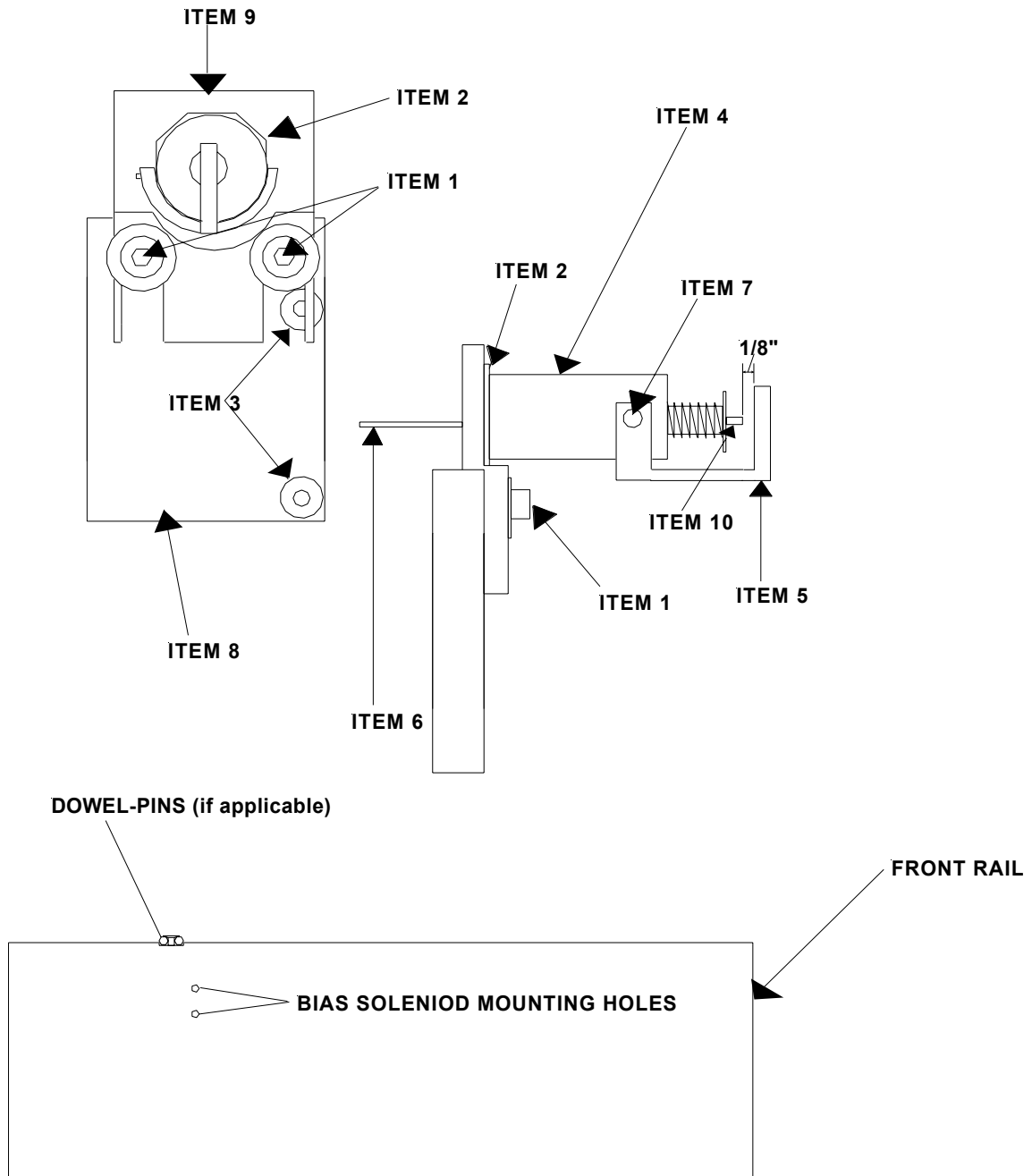
- BLACK - 6
- RED - 8

MANIFOLD VALVE WIRING (ITEM 13, SEE BOM)

- BLACK - 7
- BLACK - 8

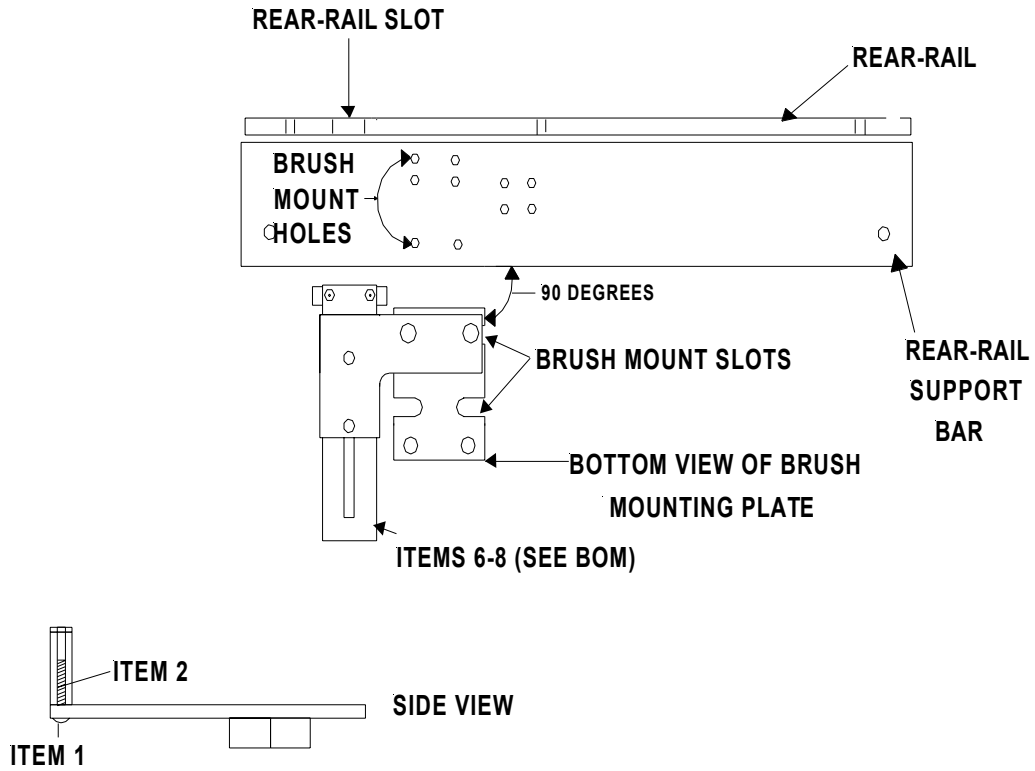


# BIAS SOLENOID

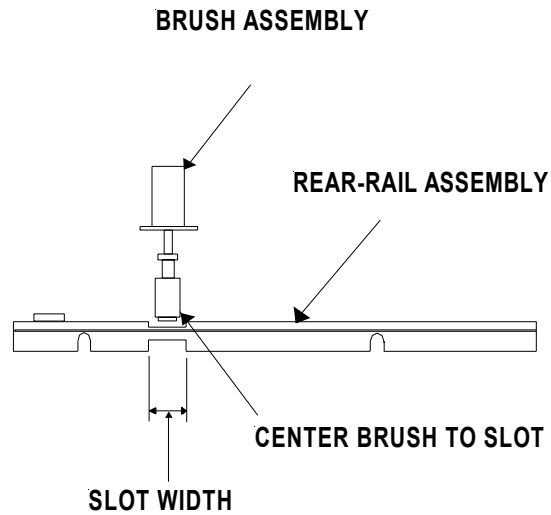




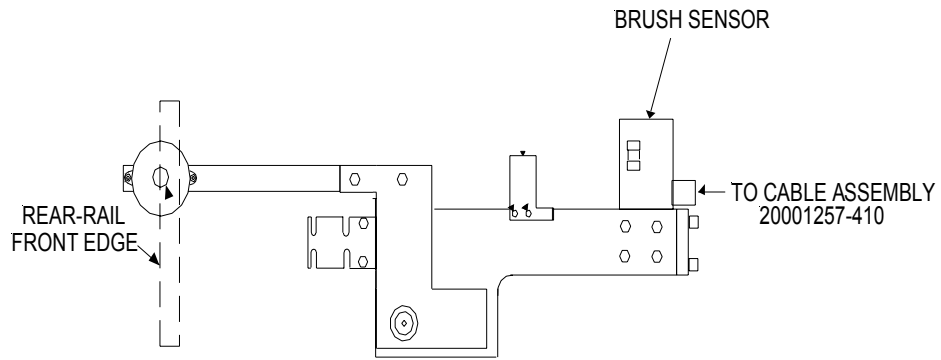
**BOTTOM VIEW OF REAR-RAIL ASSEMBLY**



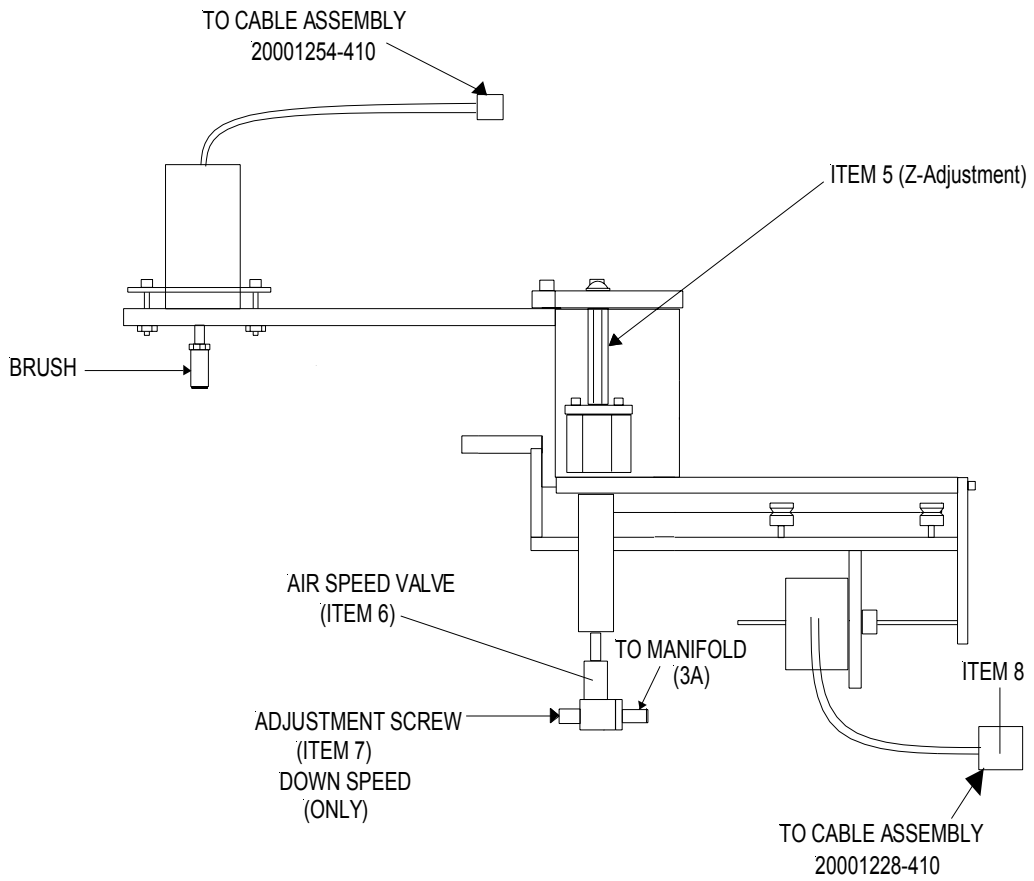
**FRONT VIEW OF BRUSH & REAR-RAIL ASSEMBLY**



TOP VIEW OF BRUSH ASSEMBLY



SIDE VIEW OF BRUSH ASSEMBLY

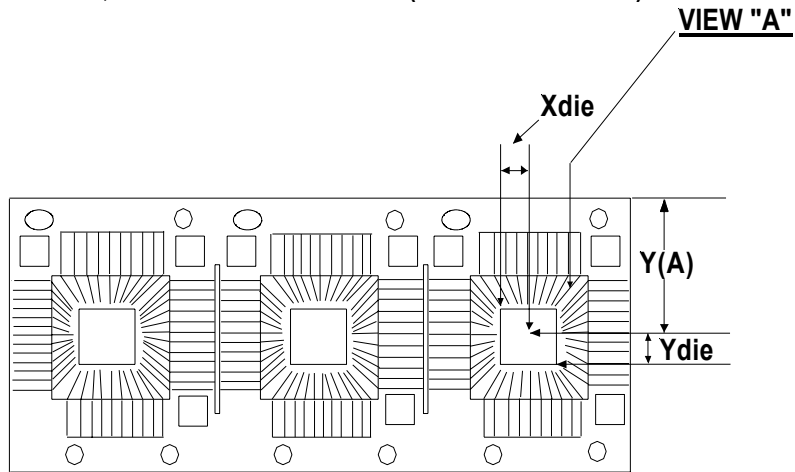


**REFERENCES FOR BRUSHING**

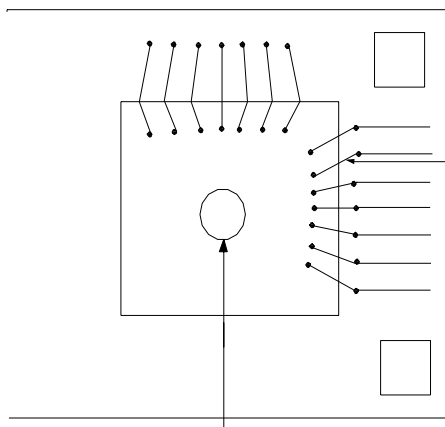
**Xdie - CENTER OF DIE, TO DIE'S OUTER EDGE OR 1/2 THE DIE**

**Ya - BACK EDGE OF LEADFRAME TO CENTER OF DIE**

**Ydie - CENTER OF DIE, TO THE OUTER EDGE (FRONT TO BACK)**

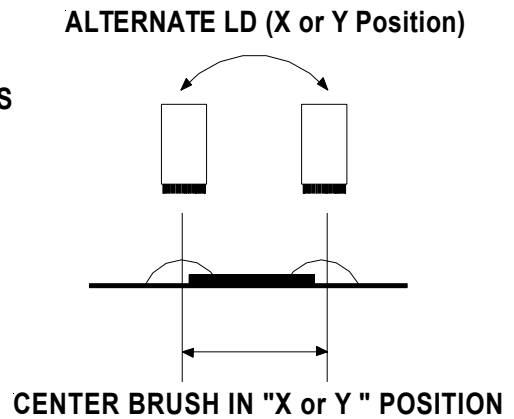


**TOP VIEW OF LEADFRAME**



**CENTER BRUSH IN DIE IN THE "X or Y" POSITION**

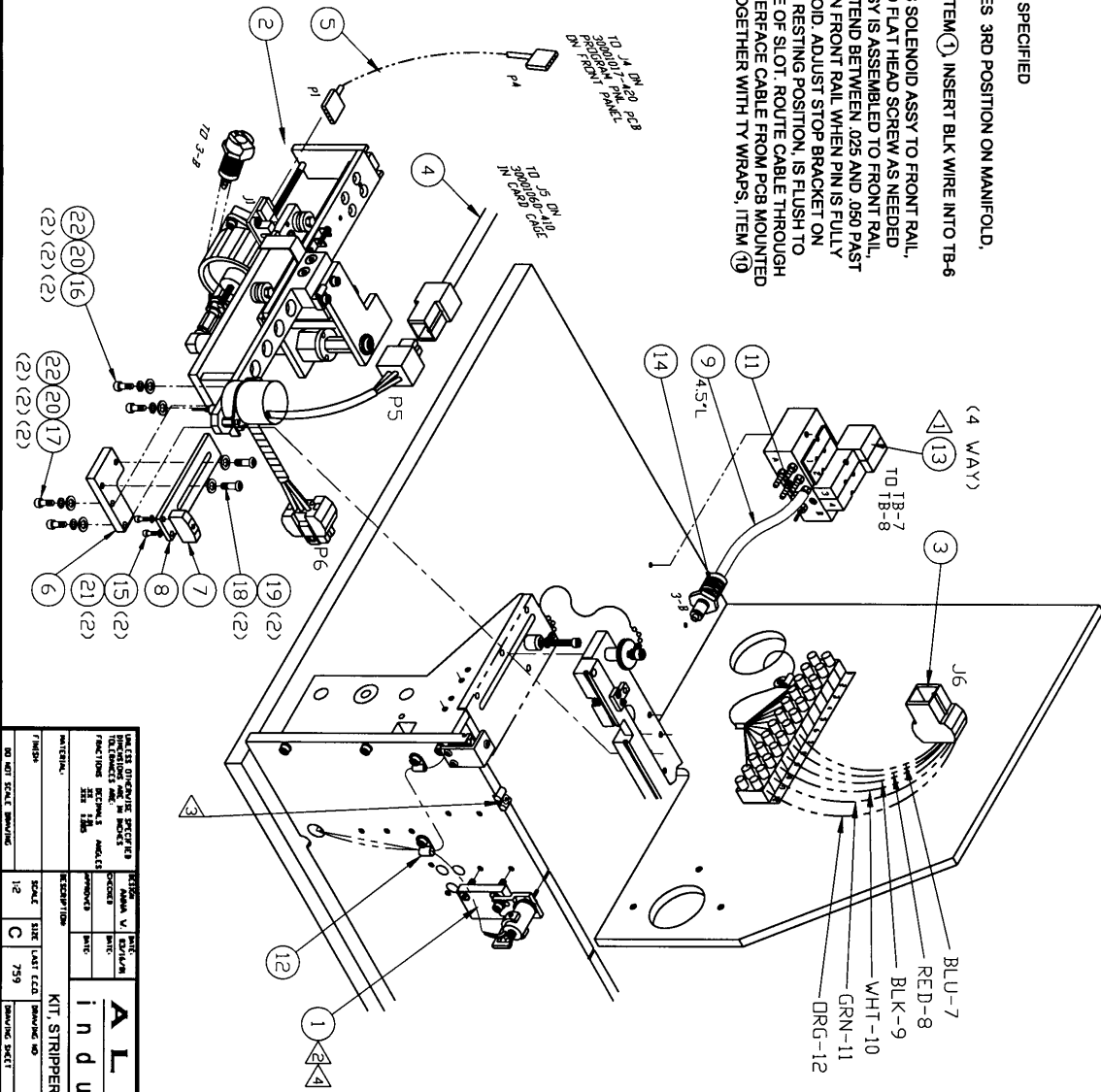
**SIDE/FRONT VIEW OF LEADFRAME**



**Bill of Material for Assembly 20001084-014, KIT, STRIPPER BRUSH**

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Quantity</b>
1	20001226-002	ASSY,BIAS SOLENOID,L3050	1.0000
2	20001227-009	ASSY,STRIPPING 13RUSH	1.0000
3	20001228-410	ASSY,CABLE,REJECT ID INTERF	1.0000
4	20001254-410	ASSY,CABLE,P-ZOOM MOTOR INT	1.0000
5	20001257-410	ASSY,CABLE,PUNCH SENSOR	1.0000
6	40001503-001	PLATE,LEADFRAME SUPPORT MOU	1.0000
7	40001504-001	BLOCK,LEADFRAME SUPPORT,BRU	1.0000
8	40001505-001	BPACKET,LEADFRAME SUPP.,BRU	1.0000
9	60001023-001	TU13ING,POLYUR .12SID .2500D	0.5000
10	60001046-004	TY-WPAP,4	11.0000
11	60001250-001	FTNG,PLUG 10-32	1.0000
12	60001264-004	CLAMP,CABLE 1/4 13LACK	1.0000
13	60001462-001	VALVE,MANIFOLD,4-WAY,MINI	1.0000
14	60001799-001	FTNG,QUICK-CONNECT SHUT-OFF	1.0000
15	68110810-063	SCREW,CAP SK, 4-40 X .375	2.0000
16	68111210-083	SCREW,CAP SK, 6-32 X .500	2.0000
17	68111210-123	SCREW,CAP SK, 6-32 X .750	2.0000
18	68121210-063	SCREW,BUT SK, 6-32 X .375	2.0000
19	68311631-055	WASHER ' FLAT,46 NY	2.0000
20	68311644-043	WASHERIFLAT #6 REG. PAT. S	4.0000
21	68321300-003	WASHER,SPLI'TLOCK,#4 SS	2.0000
22	68321600-003	WASHER,SPLITLOCK,#6 SS	4.0000
100	20001084-314	DWG,KIT,STRIPPER BRUSH	REF

- NOTES: UNLESS OTHERWISE SPECIFIED
- ▷ REMOVE BLOCK OFF PLATES 3RD POSITION ON MANIFOLD.
  - ▷ MOUNT VALVES, ITEM ⑬ ON BIAS SOLENOID ASSY, ITEM ① INSERT BLK WIRE INTO TB-6 AND RED WIRE INTO TB-8
  - ▷ BEFORE ASSEMBLING BIAS SOLENOID ASSY TO FRONT RAIL, DISCARD DOWEL PINS AND FLAT HEAD SCREW AS NEEDED.
  - ▷ AFTER BIAS SOLENOID ASSY IS ASSEMBLED TO FRONT RAIL, SOLENOID PIN SHOULD EXTEND BETWEEN .025 AND .050 PAST VERTICAL EDGE OF SLOT IN FRONT RAIL. WHEN PIN IS FULLY EXTENDED OUT OF SOLENOID, ADJUST STOP BRACKET ON SOLENOID SO THAT PIN, IN RESTING POSITION, IS FLUSH TO OR BELOW VERTICAL EDGE OF SLOT. ROUTE CABLE THROUGH MACHINE WITH MOTOR INTERFACE CABLE FROM PCB MOUNTED ON CONVEYOR. ATTACH TOGETHER WITH TV WRAPS, ITEM ⑩



<b>ALLTEQ</b> Industries		KIT, STRIPPER BRUSH	
PART NO. 20001084-314	REV. A	DATE 7/99	DRAWN BY JAV
CHECKED BY JAV	APPROVED BY JAV	SIZE C	SHEET NO. 739
DO NOT SCALE DRAWING			