



Martin Yale
INDUSTRIES, INC.



The following procedure is for the adjustment of roller pressure on the 912 checksigner. The roller pressure for the machine is set at the factory, and will only need to be adjusted when there is wear and tear on the drive rollers or when a document is thicker or thinner than the stock used to test the machine at the factory. If you have any questions on the unit, please feel free to contact the technical support division at Martin Yale Industries, Inc. at 260-563-0641.

Common reasons for adjustment of roller pressure would be: 1.) A side to side movement of the paper when leaving the feed table and going into the rollers. This should be verified while the retarder is loosened and the machine is being hand fed one sheet at a time. 2.) Inconsistencies of more than 1/16" from signature to signature. 3.) Unexplained error codes on the machine after all other options have been explored. 4.) "Missed sheet feed" error codes for no reason. 5.) Paper taking an unexplained path through the machine, for instance, going under the drive rollers instead of through them.

Of course, there is always a cleanliness issue with the rollers, and from time to time they will need to be cleaned. Roller cleaner and a scotch brite pad are the best approach for this. If you feel that the roller pressure for the machine does need to be adjusted, use the following procedure to complete the task.

GETTING TO DIAGNOSTICS

The easiest way into diagnostics would be by using the machines executive key.

1. Insert key into the back of the machine and turn.
2. Turn the machine on.
3. Wait for the prompt "or 2 to change stored forms".
4. Press pause/stop 1 time (screen will not change).
5. Press '9' key five times.

IF YOU DO NOT HAVE THE KEY

(Machines below s/n 12000)

1. Remove right side cover (requires a security socket MY# MRS012014).
2. Locate the small black button at location SW1 on logic board.
3. Hold down SW1 button while turning the machine on.

(Machines above s/n 12000)

1. Remove exit tray, feed tray and any other accessories.
2. Set machine on its back.
3. Remove the four security screws on bottom panel (requires part MRS012014 security socket).
4. Turn machine on, press SW1 switch on main logic board.

At this time you should see “Diagnostics 0-9” on the screen.

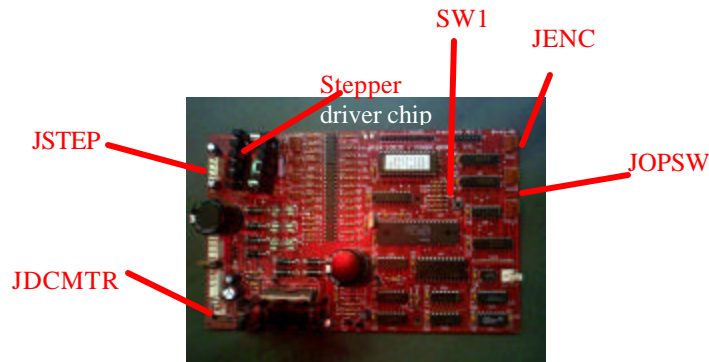
Once in diagnostics, you have the ability to test all the systems on the signer. Consider the “Diagnostics 0-9” prompt to be the home screen. In order to choose a diagnostic test, you must press the test number at that prompt, and you do not need to press ‘ENTER’ after you choose the test, it is automatically initiated. Below, please see an outline of what needs to be run in a common servicing situation.

3- Paper feed system test.

4- Stepper motor (signature shaft motor).

5- System output test (sensors, solenoids, ability to home, microswitches, auxiliary and primary encoder readings).

9- Encoder test.



Press SW1 while powering the unit up to go into diagnostics. (Without executive key.)

Below are the step by step instructions for verification of proper roller pressure.

1. **Take the machine into diagnostics.**
2. **Press '5' key for diagnostic test #5.**
 - 2A. Once in test #5, press the '2' key, this will momentarily energize the lid solenoids, raise the lid.
NOTE: If not done within 5 seconds, press '2' again.
 - 2B. Remove the signature plates and ink roller shaft.
 - 2C. Once removed, press 'UNDO' one time. This should return you to the prompt 'Diagnostics 0-9'.
3. **Press '3' key for test # 3.**
 - 3A. Press 'CE' key once. This will toggle off the speed control.
 - 3B. Press 'FL' key once. This will show the stock length in encoder pulses.
 - 3C. Raise the retarder completely.
4. **Press 'jog forward' key one time. Once pressed, the DC motor will energize.**
 - 4A. Feed paper through the machine one sheet at a time, each time this is done, the length of the sheet will be shown in the encoder pulses. Anything above 1092 pulses per sheet is potentially a problem, and would require roller adjustment.

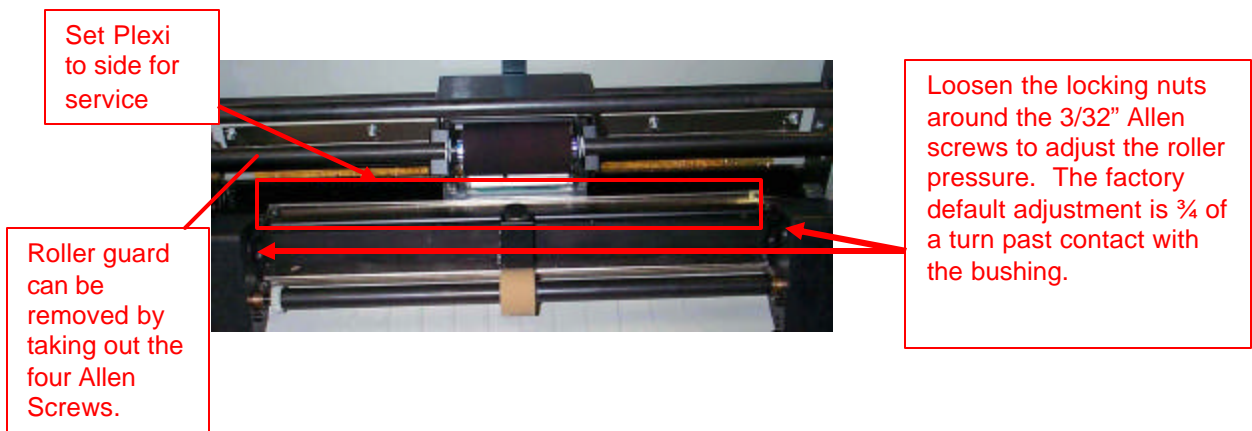
Verify that the paper is consistently tracking straight through the machine. If the paper does track well, and the number of pulses is consistent with the specification, then the roller pressure is as it should be. If not, perform the following steps. **NOTE: Even with normal tracking, it must be verified with the following steps:**

- 1.) Press 'Stop' key. Adjust the retarder for single sheet feeding. This is done by verifying that the surface of the retarder is not flat, and lowering into light contact with the feed wheel. (Too much retarder pressure can cause damage to the feed roller.)
- 2.) Count 10 sheets of the actual stock used, and set into the feed tray.
- 3.) Press 'jog forward' key. Allow the sheets to run through. Press 'stop'

After having made a determination of what is occurring (tracking left, tracking right, too many pulses, etc.) loosen the locking nuts on the left and right roller pressure Allen screws so that they can be adjusted. (See Photo.) **NOTE: If normal, skip to step two of the next section.**

(Remain in test #3, with the unit on.)

1. Once loosened, the first item to perform would be setting the roller pressure to default. The default setting would be $\frac{3}{4}$ of a turn from the point that the set screw makes contact with the bushing (See Photo).



2. Reload the 10 sheet stack into the feed tray. Press the 'jog forward' key. Observe the sheets going through the unit, paying close attention to the number of pulses registering for each sheet. If more than 1092 pulses are detected, increase roller pressure in 1/8 turn increments on each side and reset.
- 2A. Straight tracking of stock is accomplished by increasing or decreasing pressure on the set screw of the affected side. Remember, the goal is to stay at 1092 or below for each sheet.
- 2B. If roller pressure is too tight, it can cause the DC motor to labor excessively, this should be avoided. However, some labor of the motor is normal, and should be treated as a common sense boundary.

Test 3 Additional Information

The buttons on the keyboard will show the following information:

CE – Toggles Speed Controller *on* or *off*.

- 1 – 1000 Microsecond period.
- 2 – 1100 Microsecond period.
- 3 – 1200 Microsecond period.

Jog Forward – Runs the DC Motor forward.

Jog Reverse – Runs the DC Motor backwards.

FL – Display paper length while running.

5 – Minimum paper gap (should be no less than 70 milliseconds for 11" sheet).

6 – Max paper length

7 – Max length encoder pulse