

January 9, 2017

Product: Ishida WM-4000 Automatic Wrapper

Issue: 0480 "Film Remaining" and 0461/0462 "Film Over" Error Messages

Cause: Blocked or Faulty Film Detect Sensors or Lever Assemblies

Solution: Film Detect Sensor or Lever Assembly Access and Replacement



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## Background

The WM-4000 is equipped with four Film Detect sensors that monitor film feeding. The sensors are located at both ends of the two Film Feeder assemblies (Fig. 1 & Fig. 2). When film contacts the Film Detect Lever it tilts to the side which unblocks the photo sensor mounted below the lever. After the film passes the spring-loaded lever returns to the original position blocking the sensor.

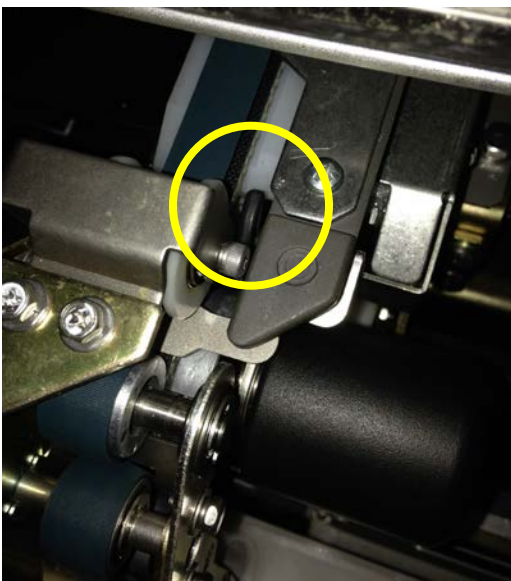


Fig 1. Film Detect Lever: FR & RL

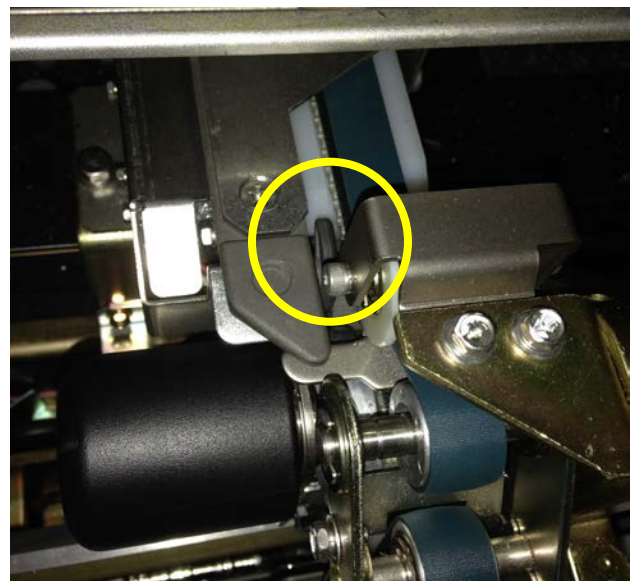


Fig 2. Film Detect Lever: FL & RR

There are several causes of 0480 "Film Remaining" and 0461/0462 "Film Over" errors.

- Faulty Film Detect sensor or cable connection.
- Film pieces deflecting the Film Detect sensor levers.
- The Film Feeder assembly's long green belts shifted out of position and contacting the Film Detect sensor levers.

- Film Detect sensor levers damaged by improper film removal or excessive film accumulation.

### Issue

If one of the spring loaded Film Detect Lever assemblies is damaged and does not return to the original position errors 0480, 0461, or 0462 will occur. The lever assembly must be replaced to correct the problem. It can be replaced without removing the Film Feeder assembly by the steps listed below.

### Error Codes

The WM-4000 error codes indicate which of the four Film Detect sensors or levers is not operating properly.

0480-00xx Film Remaining. When a Film Detect Lever is deflected on the side the film is to feed from before film feeding begins this error message is displayed. The last two digits indicate the location of the activated sensor.

- 0001 Rear Right
- 0002 Front Right
- 0004 Rear Left
- 0008 Front Left

If multiple Film Detect Levers are deflected the values are added together. For example, if the Front Left and Rear Left sensors are activated the code would be 0480-0012.

0461-0000 – Film Over Right Side. If film feeding from the left side travels too far it will deflect the right side Film Detect Levers. The error message does not indicate which lever has been tripped.

0462-0000 – Film Over Left Side. If film feeding from the right side travels too far it will deflect the left side Film Detect Levers. The error does not indicate which lever has been tripped.

### Checking the Film Detect Sensors and Levers

The operation of the Film Detect sensors can be checked in the Test Menu as follows.

1. Press **MENU** to enter the menu screen.
2. Enter the service password **495344** then press **TEST MODE**.
3. Press **PAGE**.
4. Press **WRAPPER/APPLICATOR ADJUST**.
5. Press **SENSOR CHECK** and **EXECUTE**.
6. Open the upper Film Removal covers and actuate the Film Detect Levers.
7. Push the lever forward (in) and pull it back (out).
  - a. The wrapper should beep as the bottom of the lever blocks and unblocks the sensor photo eye.
  - b. The lever should spring back into the upright position.
  - c. Compare the "bad" Film Detect Lever operation with a "good" lever.
8. To exit press **MENU**, **MENU**, and **OPERATION**.

### Replacement Procedure

Refer to the following steps to access and replace the Film Detect Lever assemblies and Photo Sensors.

**Tip:** Lay out a sheet of film under the Film Feeder to catch any dropped parts.

1. Remove the large black Film Guide Roller secured by a spring clip. (Fig. 3)
2. Remove the Auxiliary Clamp secured by two counter sink phillips screws. (Fig. 3)

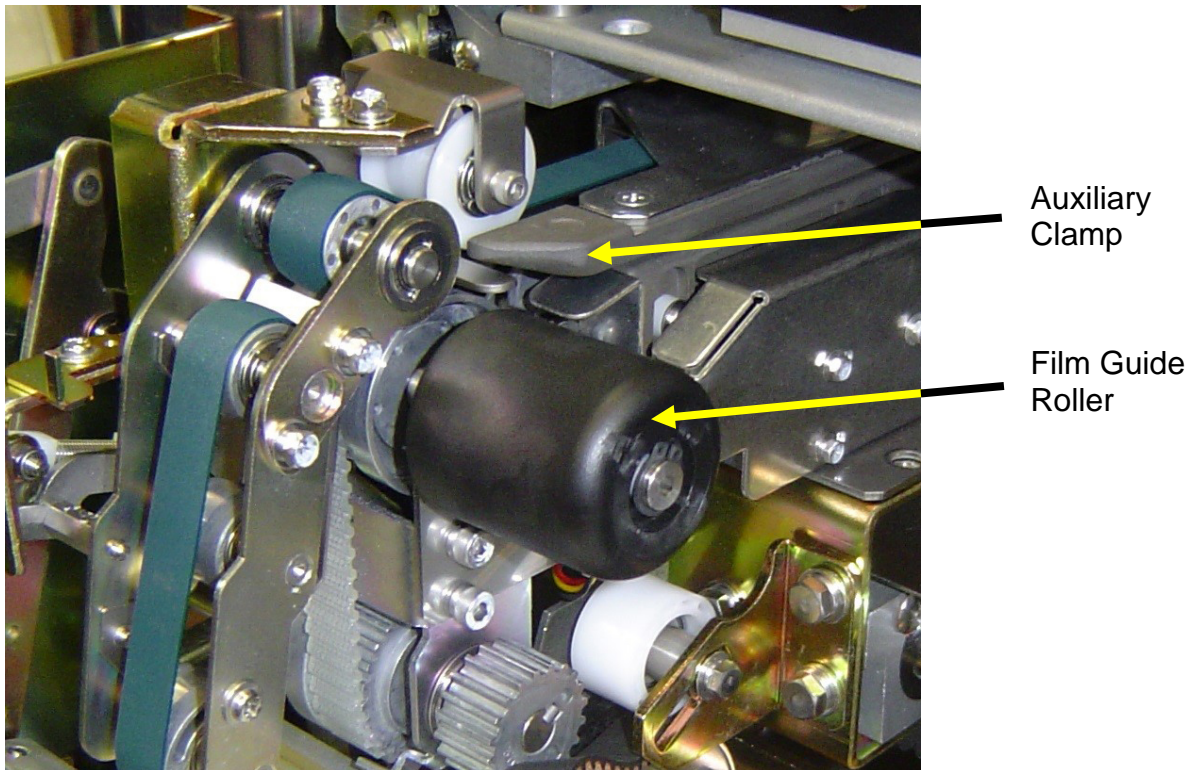


Fig 3. Film Guide Roller and Auxiliary Clamp

3. Disconnect the photo sensor cable then remove the mounting screw and remove the sensor. (Fig. 4)
4. Remove the nut and two washers securing the Film Detect Lever assembly. (Fig. 4)

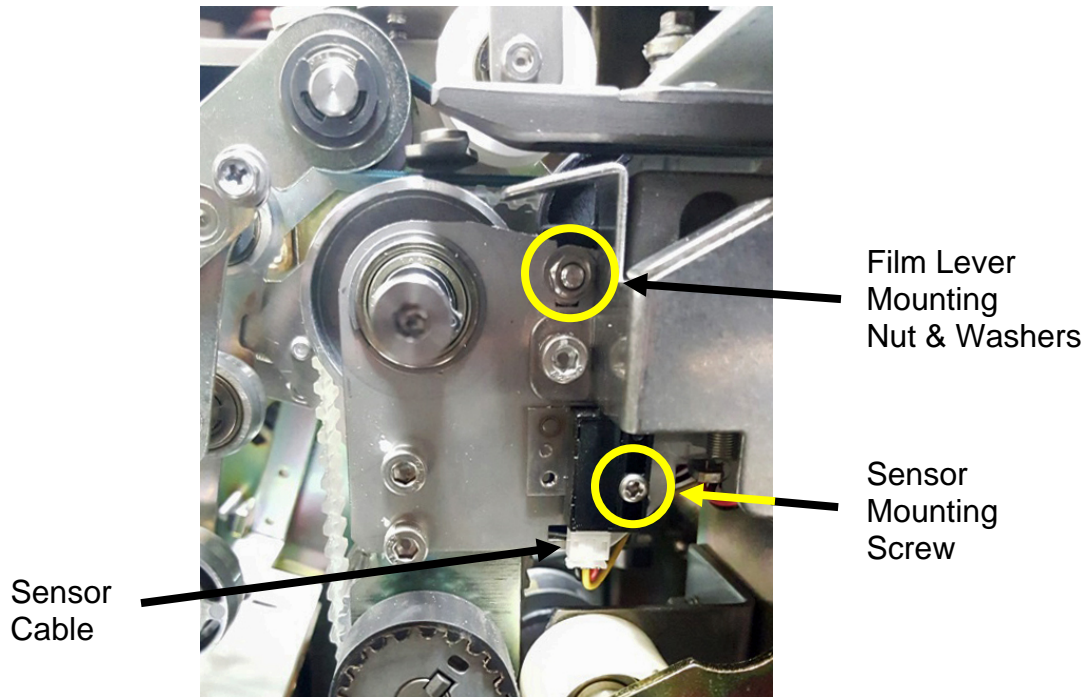


Fig 4. Film Detect Sensor and Film Lever Mounting

5. Remove the Film Detect Lever assembly from the top:
  - a. Push the white and green belts to the side for clearance.
  - b. Looking down, carefully move the lever assembly to the side and then turn it 90 degrees to free it. (Fig. 5):
    - Front Right & Rear Left – rotate clockwise
    - Front Left & Rear Right – rotate counter-clockwise

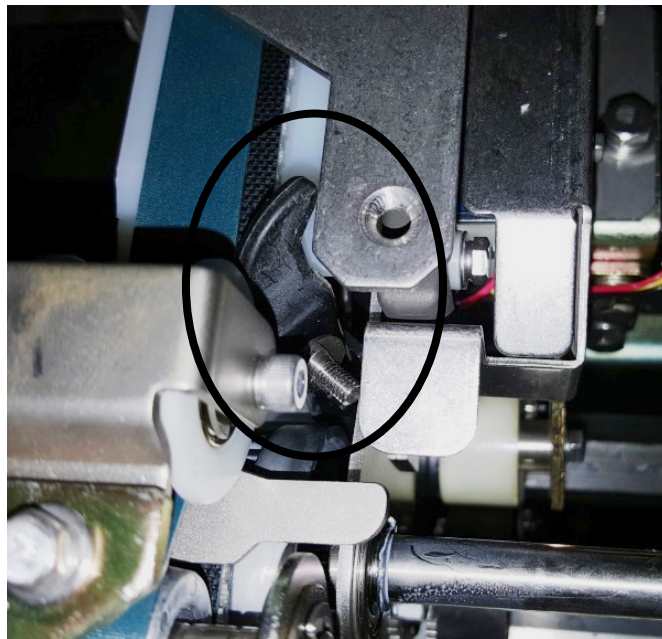


Fig 5. Film Detect Lever Assembly – Rotated





Fig 6. Film Detect Lever Assembly

6. Install the replacement Film Detect Lever assembly starting at the same 90 degree rotation of the original lever assembly when it was removed.
7. Be sure the Film Detect Lever assembly is setting in the slot at the final position.
8. Secure the Film Detect Lever assembly with the two washers and nut removed in step 4.
9. Mount the sensor and secure with the screw removed in step 3.
10. Remount the Auxiliary Clamp (step 2) and the Film Guide Roller (step 1).

#### Notes

- There are two versions of the Film Detect Lever assembly: Front Right / Rear Left and Front Left / Rear Right. The lever assemblies in the opposite corners of the wrapper are the same.

#### Part Numbers

- 166949 – Film Detect Lever assy: Front Right, Rear Left
- 166950 – Film Detect Lever assy: Front Left, Rear Right
- 104239 – Photo Sensor

#### Film Detect Lever Mounting Hardware

- 48237 – 4mm Washer, SUS
- 42854 – 4mm Spring Washer, SUS
- 48236 – 4mm Nut, SUS

#### Reference

- WM-4000 Replacement Parts Book – Film Feeder Unit Front/Rear (p/n 171233)
- WM-4000 Service Manual (p/n 155665)
- WM-4000 Service DVD (p/n 154803)