



Chapter 3

Operating Procedures

Provides step-by-step procedures for starting, stopping, and operation of the wrapper.

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3.1 Sequence of Operation

1. Product is conveyed to the EDL WRAPPER via customer's infeed conveyor.
2. Product enters the WRAPPER INFEED CONVEYOR and passes two infeed photocells.
3. A gap is drawn between products as product is drawn onto SEALER 1 INFEED CONVEYOR
4. Product stops between, and is centered by, the CENTERING PADDLES.
5. SEALER 1 INFEED CONVEYOR moves product into film web in FLIGHT BAR area.
6. The FLIGHT BAR moves product into position to have film sealed by SEALER 1 JAW.
7. SEALER 1 JAW raises to pinch film against FLIGHT BAR ANVIL.
8. Film is cut and seals are allowed to be made under zero tension.
Product remains in this position until the next product enters FLIGHT BAR.
9. Product is pushed onto SEALER 2 INFEED CONVEYOR by the FLIGHT BAR.
10. Product length is sensed and product is positioned in front of PUSHER 1.
11. PUSHER 1 advances and pushes product through film web at SEALER 2.
12. The PACK CLAMP lowers onto the product allowing PUSHER 1 to return.
13. As PUSHER 1 returns past SEALER 2 JAW, the jaw is closed to cut and seal film.
14. Product is then conveyed to the POP UP CONVEYOR, measured and centered..
15. The POP UP CONVEYOR is raised and product travels onto the TUNNEL CONVEYOR.
16. Product is measured and the small (10 gallon) cases are "marked" for film compression.
17. The TUNNEL CONVEYOR conveys product through the SHRINK TUNNEL.
18. SHRINK TUNNEL causes excess film to shrink tightly around the product.
19. The FILM COMPRESSION PLATE lowers and film on leading end of a small case is compressed.
20. The FILM COMPRESSION PLATE raises and product is conveyed onto customer's Exit conveyor.
21. If no incoming product is sensed for 30 seconds the WRAPPER will clear out all product, by:
 - a. Stopping the WRAPPER INFEED CONVEYOR, preventing product from entering WRAPPER.
 - b. Cycling the FLIGHT BAR, moving product from SEALER 1 through entire WRAPPER.

3.2 Pre-Start

Use the following procedure to prepare the wrapper for operation before startup.

1. Make sure that all personnel, tools, equipment, and debris are cleared from the wrapper and from the general working area.
2. Ensure that the wrapper is ready for operation (i.e., no lockout/tag, no missing equipment, downstream equipment is ready).
3. Close all guard doors and verify that they are secured. The wrapper will not run unless all guard doors are closed and secured properly.

NOTE: If one or more guard doors are open, an alarm message will be displayed.



DANGER: ATTEMPTING TO OPERATE THE WRAPPER WITH GUARDDOORS OPEN, REMOVED, AND/OR BYPASSED COULD RESULT IN SERIOUS INJURY OR DEATH.

4. Ensure that the main electrical disconnect switch is in the **ON** position. If necessary, move the electrical disconnect switch to the **ON** position.
5. Make sure that the air supply is on. If necessary, move the air disconnect to the **ON** position.
6. Check that the main air regulator pressure gauge (incoming air) reads approximately 80 psi.
7. On the wrapper control panel, press the **START** button to apply power to the wrapper. When the wrapper power is on, the **START** button lights (green).

NOTE: Pressing the START button does not start the wrapper. When pressed, the wrapper powers up and the heaters start to heat up to operating temperature.

8. Check and resolve any active alarms or other fault conditions.
9. Verify that the heaters are on and heating up by monitoring control panel.

NOTE: Heaters require approximately 10 minutes to reach operating temperature. Wrapper cannot be started until seal jaws and shrink tunnel are up to operating temperature.

10. Ensure that the wrapper is loaded and threaded with the appropriate film. See “Loading and Threading Film” on page 3-6.



3.3 Startup Procedures

Use the following procedures to start or restart the wrapper after an extended shutdown, cycle stop, or emergency stop.

3.3.1 Initial Startup or Startup After an Extended Shutdown

Use the following procedure to start the wrapper after it has been shut down for an extended period of time, a period of three or more hours.

1. Complete the Pre-Start procedure. See “Pre-Start” on page 3-3.
2. On the wrapper control panel, press the **RUN** button.

3.3.2 Startup After a Cycle Stop

Use the following procedure to start the wrapper after a cycle stop.

1. Ensure all guard doors are closed and secured.
2. On the wrapper control panel, press the **START** button.
3. On the wrapper control panel, press the green **RUN** button.

3.3.3 Startup After an Emergency Shutdown

Use the following procedure to start the wrapper after an emergency stop condition.

1. Ensure that the reason for the emergency stop has been corrected, and that all personnel are clear of the wrapper.
2. Ensure that all guard doors are closed.
3. Pull out any activated **EMERGENCY STOP** button(s).
4. On the wrapper control panel, press the **START** button to reset the **E-Stop** condition.
5. Ensure that the heaters are on and up to temperature.

NOTE: If the emergency stop caused an extended shutdown, the heaters will need to reach operating temperature before the wrapper will run properly.

6. On the wrapper control panel, press the **RUN** button to start the EDL Wrapper.



3.4 Shutdown Procedures

Use the following procedures to shut down the EDL Wrapper under either normal operating or emergency conditions.

3.4.1 Cycle Stop

Use the following procedure to shut down the wrapper for a short period of time during normal operating conditions.

1. Press the **RUN CANCEL** button on the control panel.

NOTE: During a cycle stop, the wrapper completes the current cycle before stopping. The seal jaw and shrink tunnel heaters remain on after the wrapper stops.

3.4.2 Emergency Stop

Use the following procedure to shut down the wrapper in an emergency situation.

1. Press the closest **EMERGENCY STOP** button.

3.4.3 Long Term Shutdown

Use the following procedure to shut down the wrapper for an extended period of time.

1. Wait for all product to cycle through and discharge from the EDL Wrapper.
2. On the wrapper control panel, press the **RUN CANCEL** button.
3. On the wrapper control panel, press the **RUNDOWN** button.
4. When shutting down the equipment for long periods of time, such as overnight or on holidays, allow the tunnel to cool down completely and perform the following steps:
 - a. On the wrapper control panel, press the **EMERGENCY STOP** button.
 - b. Move the air disconnect to the **OFF** position.
 - c. Move the electrical disconnect switch to the **OFF** position.

3.5 Loading and Threading Film

Use the following procedures to load and thread film on the EDL Wrapper.

1. Press the **RUN CANCEL** button on the wrapper control panel to cycle stop the wrapper.
2. Open any guard door to prevent the wrapper from starting accidentally.
3. Use an appropriate lifting device or film roll hoist to load film onto the film cradles.



CAUTION – Heavy Materials

Film rolls are extremely heavy. Never attempt to lift film rolls without a lifting device or assistance from another person.

4. Load and thread the upper and lower film rolls.
 - a. Load the film roll on the free-spinning reel holders of the film cradles.
 - b. Pull several feet of slack film off the film roll. The film roll should rotate freely while pulling the film.
 - c. Thread the film around the guide rollers, drive roller, dancer rollers, and through the SEAL JAW according to the FILM FEED FILM PATH illustration. This illustration should be placarded on the side of the wrapper near the film feed area.

NOTE: When threading the film over the drive roller, lift the pinch roller on top of the drive roller first, thread the film around the drive roller, then lower the pinch roller. The pinch roller on the drive roller helps maintain the contact and friction between the drive roller and the film web. It must be installed in order for the film to feed properly during operation.

5. Close all guard doors.
6. Perform a Manual Seal, as described on page 3-7.
7. During operation, observe the film at the seal jaws. Ensure that the film edges have not “rolled over” on any of the film rollers.



3.6 Performing a Manual Seal

Use the following procedure to perform a manual seal after clearing a product jam, fixing a film problem, changing film roll width, or for any other reason requiring a manual seal.

1. Ensure that all fault conditions are corrected.
2. Make sure that the film web is threaded correctly through the SEAL JAW.
3. Close all guard doors.
4. Press the **START** button to reset the wrapper.
5. Press the **MANUAL SEAL** button on the wrapper control panel and monitor the sealing process.
6. Open a guard door and remove excess film from wrapper.



3.7 Monitoring

Use the following procedure as a guideline to monitor the EDL Wrapper during normal operation.

1. Ensure that there is an adequate supply of product available during operation.
2. Make sure that product is aligned properly at the infeed section of the wrapper.
Ensure that product feeds into the wrapper smoothly and evenly.
3. Watch for foreign objects on the infeed conveyor. Objects such as tools, parts, film cores, etc., will feed into the wrapper if left on the infeed conveyor.
4. Listen to, and watch, the EDL Wrapper during operation. Be aware of strange sounds and/or other signs of abnormal wrapper operation. After gaining experience operating the wrapper, it will become easy to detect signs of abnormal operation.
5. Watch for and correct product jam conditions. If possible, try to identify and correct problems that are causing jams.
6. Ensure that there is always an adequate supply of film on the wrapper. Change the film rolls as necessary during operation. See “Loading and Threading Film” starting on page 3-6, and “Performing a Manual Seal” on page 3-7.
7. Check the film tracking often. Make sure that both film webs are aligned and centered properly.
8. Monitor the operator interface for fault and informational messages.
9. Check the seal jaws periodically for product build up and or film deposits. The seal jaws will not seal properly unless they are clean.
10. Check the packages as they discharge from the wrapper.
11. Ensure that the packages are wrapped properly.
12. Check the film seals. Seals should be even and consist of approximately 1/8 inch of film and be complete across the ends of the wrapped bundle.
13. Watch the operation of the seal jaws and associated sealing components.
14. Ensure that the seal jaws cut the film properly.
15. Check that the seal jaw operates smoothly. Listen for abnormal sounds from the sealing areas during operation.