Replacing Sensors and Cables - FCO E897

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Creo Inc.
3700 Gilmore Way
Burnaby, BC
Canada V5G 4M1
(604) 451-2700

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1. BACKGROUND

This procedure is for ECO E897 for MPE devices.

Plate sensors on load ramp, load table, and unload table lose connection due to fretting on the contacts between the cable and sensor. Replacement high flex cables have more reliable connectors. Tie wraps are now used to help reduce strain on the cable-sensor connection. Sensors must also be replaced in case of corrosion caused by previous connectors.

Note: In this document, part numbers in italics are old parts to be replaced, for example, cable (*10-3687A*) is to be replaced by cable (10-3687B).

2. GETTING STARTED

Make sure that you have the correct kit for the device and follow the appropriate procedure for the device.

Device	Kit Number	Procedure starts on page
Trendsetter 400/800, Spectrum	512-00001	2
Trendsetter 3244 with Load/unload (LUE) and Trendsetter interface (TIF) electronics (S/N S162 and lower)	512-00002	2
Trendsetter AL Non-rotator, short pan Rotator, long pan	 512-00003 512-00004	6 **Note:** Install in conjunction with FCO E876 to reduce labor
Trendsetter NEWS	512-00005	17 **Note:** Install in conjunction with FCO E876 to reduce labor
Trendsetter VLF, VLF Autoloader	512-00006	27
ThermoFlex	512-00007	30

3. BASE TRENDSETTER 400/800, SPECTRUM (TS3,TS4,TS8), TRENDSETTER 3244 (LUE/TIF)

Note: Differences for Trendsetter 3244 (LUE/TIF) (S/N 165 and lower) are indicated in [square brackets].

To replace the load ramp plate sensor:

1. Make sure that you have kit **512-00001** for base Trendsetter and Spectrum.
   [For Trendsetter 3244 (LUE/TIF) (S/N 165 and lower) only, use kit 512-00002.]
2. Remove the existing load ramp plate sensor (*36-3210*) and cable (*10-3687A*) from the load ramp.
3. Disconnect the cable from the TEE board [LU board].
4. Discard the old sensor, cable and mounting screws.

   [Devices with S/N S65 and lower that still have the sensor mounted on a PC board will require a new load ramp assembly (57-3952C).]
5. Attach the new cable (10-3687B) to the new sensor (36-3210).

   [For Trendsetter 3244 (LUE/TIF) (S/N 165 and lower), attach the new cable (10-3687B and/or 10-3610B) to the new sensor (36-3210).]
6. Place the two strain relief tie wraps (18-3383) on the cable in the positions described below and shown in Figure 1.

   The wires exiting from the cable at the sensor end should make a 180-degree loop and go straight into the sensor. This will prevent the wires from entering the connector at tight angles.

   The tie wrap closest to the end of the cable should be 20 mm (+/-2mm) from the end of the shrink-wrap where the wires exit the cable.

   The second tie wrap should be 26.5 mm (+/- .5 mm) from the first.

   This will provide perfect spacing between the tie wraps to mount the sensor with the tie wraps to the load ramp.

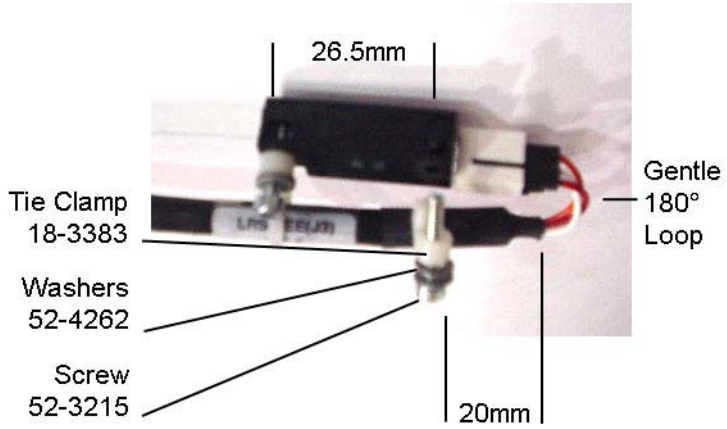


Figure 1 Sensor tie wraps/clamps

7. Place two washers (52-4262) on each of the two new mounting screws (52-3215) and put the screws through the tie wrap holes and sensor. See Figure 1
   For Spectrum Proofing devices, use 52-3099 (M3x20mm) screws instead of 52-3215 (M3x18 mm) and add M3 nuts, 52-3025, as a spacer between the sensor and the PEM nut on the load ramp. The reason for this is that the old style carriers with the black surface are often not detected by the sensor. If the sensor is too close to the carrier, the focal length is too short and causes it to go out of focus.

8. Place the sensor in position and check to make sure that the screws do not protrude from the plate loading side of the ramp. Do not permanently attach the sensor at this point.

   You may have to adjust the number of washers in order to prevent the screws from protruding. There should be at least .5 mm of clearance to ensure the screws do not touch plates as they slide across the load ramp.

9. Apply a small amount of non-permanent Loctite 222 on both pem nuts of the load ramp.

   Note: Do not apply Loctite to the screw.

CAUTION: Wipe away any excess Loctite from around the pem nut before mounting the sensor. Loctite can damage the sensor.

10. Mount the replacement sensor (36-3210) in the load ramp. See Figure 2.

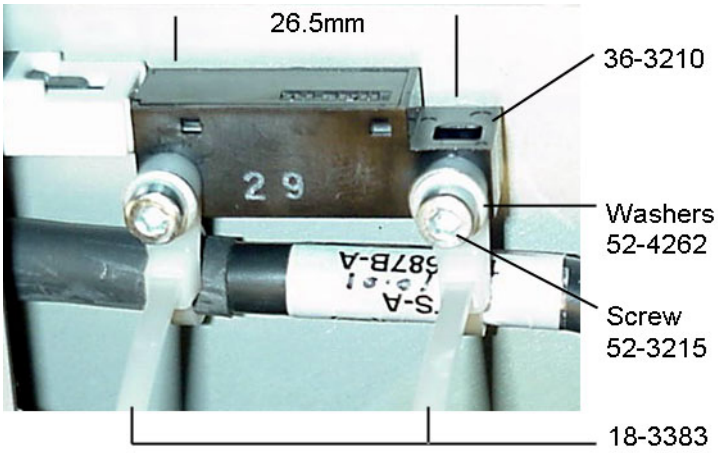


Figure 2 Mounted sensor

11. When installing the cable, make sure that there is enough of a loop on the cable so that as the load ramp moves in and out, it does not stress the cable.

12. Make sure cable can move freely, see Figure 3

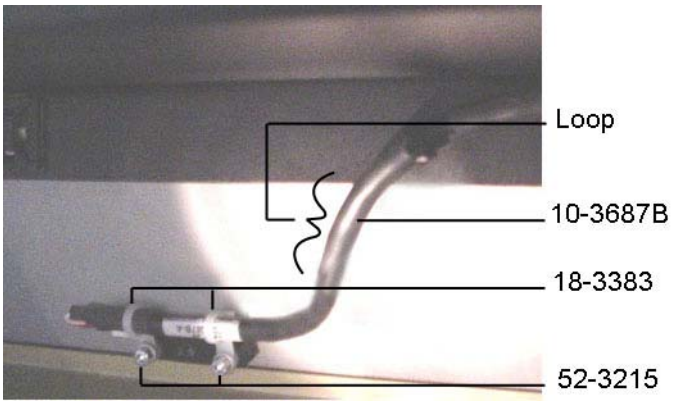


Figure 3 Loop in sensor cable

13. Tighten the mounting screws.

14. Recheck that the mounting screws are not protruding on plate side. See Figure 4

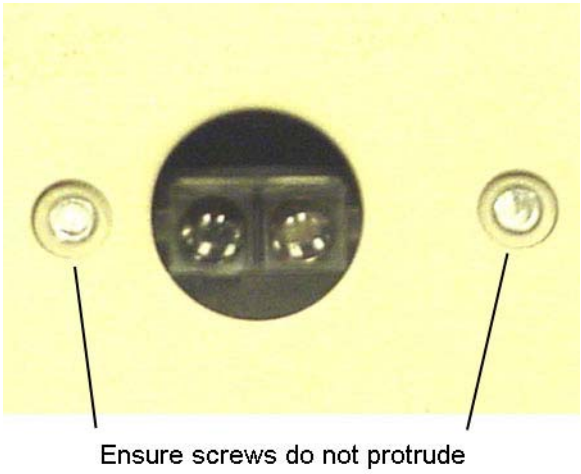


Figure 4 Plate loading side

15. Route the cable back to the TEE board and connect to J3. [J2 on LU board].
16. Test the sensor.
17. Update the 100 label as follows:

TS3	#31
TS4	#19
TS8	#19

4. TRENDSETTER AUTOLOADER

4.1 Replacing load ramp plate sensor and cable

1. Make sure that you have kit 512-00003 for a non-rotator, short pan AL, 512-00004 for a rotator, long pan AL.

Note: You should install this kit in conjunction with FCO E876 to reduce labor.

2. Disconnect the cable *(10-3687A)* from J3 on the TEE board.

3. Remove the load ramp from the machine by removing the Clevis pins on both sides of the engine side plates.

   Note: Ensure that the white spacers do not drop into the engine when removing the pins on the upper section.

4. Remove the existing load ramp plate sensor (*36-3210*) and cable (*10-3687A*) from the load ramp.

5. Discard the old sensor, cable and mounting screws.

6. Attach the new cable (10-3687B) to the new sensor (36-3210).

7. Place the two strain relief tie wraps (18-3383) on the cable in the positions described below and shown in Figure 5.

   The wires exiting from the cable at the sensor end should make a 180-degree loop and go straight into the sensor. This will prevent the wires from entering the connector at tight angles.

   The tie wrap closest to the end of the cable should be 20 mm (+/-2mm) from the end of the shrink-wrap where the wires exit the cable.

   The second tie wrap should be 26.5 mm (+/- .5 mm) from the first.

   This will provide perfect spacing between the tie wraps to mount the sensor with the tie wraps to the load ramp.

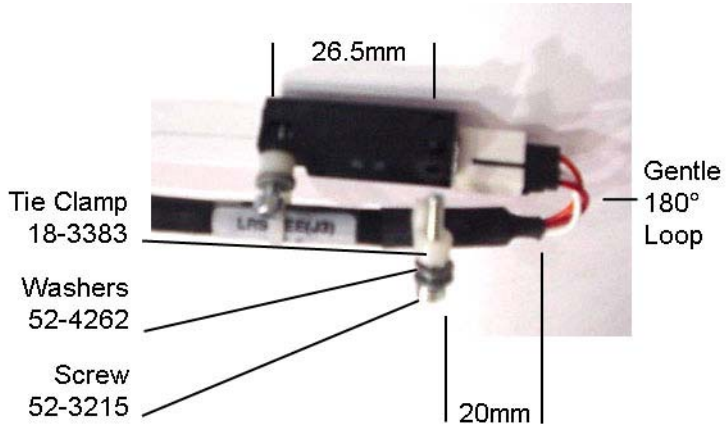


Figure 5 Sensor tie wraps/clamps

8. Place two washers (52-4262) on each of the two new mounting screws (52-3215) and put the screws through the tie wrap holes and sensor.

9. Place the sensor in position and check to make sure that the screws do not protrude from the plate loading side of the ramp. Do not permanently attach the sensor at this point.

   You may have to adjust the number of washers in order to prevent the screws from protruding. There should be at least .5 mm of clearance to ensure the screws do not touch plates as they slide across the load ramp.

10. Apply a small amount of non-permanent Loctite 222 on both pem nuts of the load ramp.

    Note: Do not apply Loctite to the screw.

CAUTION: Wipe away any excess Loctite from around the pem nut before mounting the sensor. Loctite can damage the sensor.

11. Mount the replacement sensor (36-3210) in the load ramp. See Figure 6

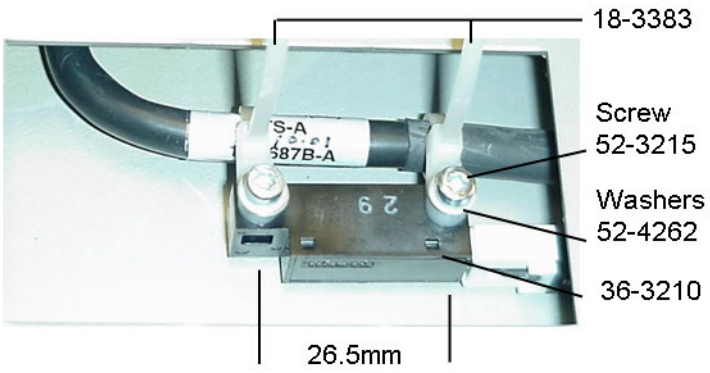


Figure 6 Mounted sensor

12. Tighten the mounting screws.

13. Recheck that the mounting screws are not protruding on plate side. See Figure 7

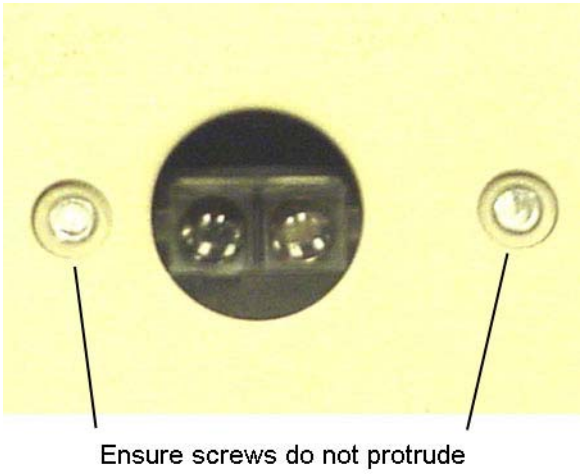


Figure 7 Plate loading side

14. Install the load ramp back into the device using the upper and lower Clevis pins and white spacers on both sides of the engine side plates.

15. When routing the cable from the load ramp onto the side plate, make sure that there is enough of a loop on the cable so that as the load ramp moves in and out, it does not stress the cable or interfere with the motion of the drum. See Figure 8

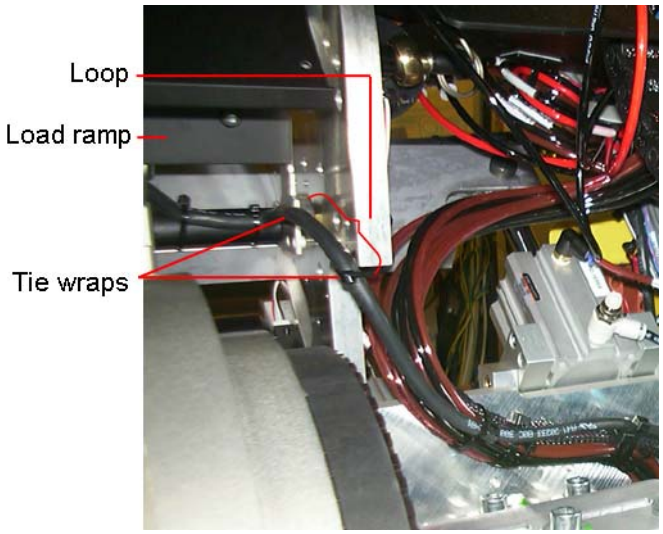


Figure 8 Cable loop (away side)

16. Route the cable back to the TEE board and connect to J3.

17. Test the sensor.

18. Update the 100 label as follows:

TS3	#31
TS4	#19
TS8	#19

4.2 Replacing load table plate sensor (last plate sensor) - TS AL

Use kit 512-00003 for a non-rotator, short pan AL, 512-00004 for a rotator, long pan AL.

To remove access covers from the back of the load table:

1. Using two medium sized flat screwdrivers on the 2 pressure points on one side of the circular cover, push in from under the rim of the cover.
   See push points in Figure 9

Note: Take care to not scratch the black painted surface of the load table.

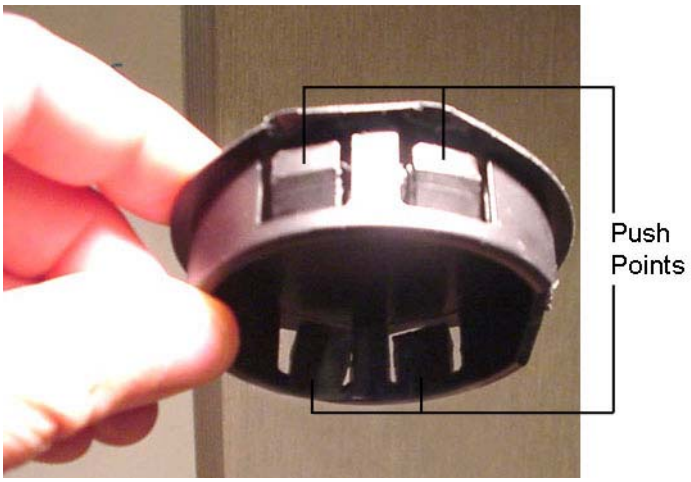


Figure 9 Push points on sensor cover

2. Move the cover up slightly.
3. Repeat step 1 and 2 on the other side of the cover.
4. Repeat steps 1 and 2 on alternating sides of the cover until the cover comes off.
5. Discard this cover, as it will be defective. A new rubber grommet will replace it.
6. Remove both cable access hole covers on the home and away hand side of the load table.
   See Figure 10

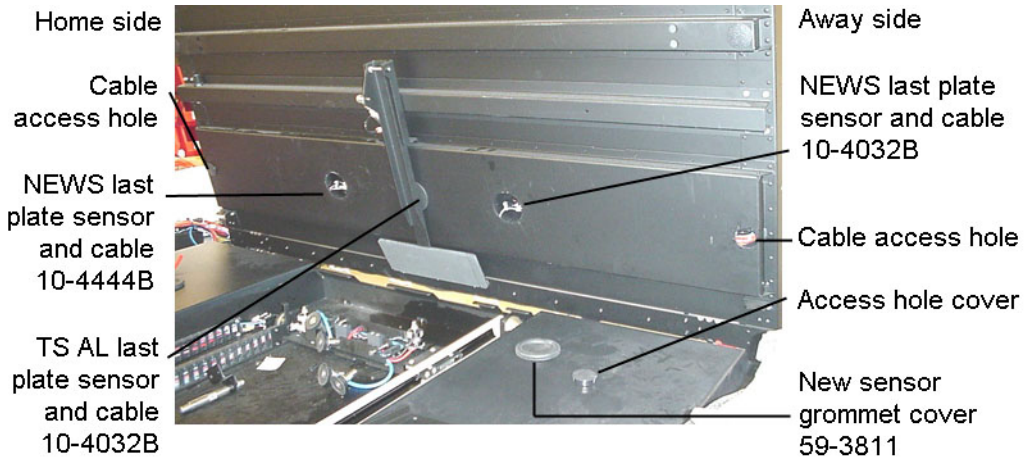


Figure 10 Load table plate sensor and cable access - AL and NEWS

To replace load table last plate sensor and cable:

1. Remove the last plate sensor (*36-3210*).
2. Disconnect cable (*10-4032A*) from J11 on the TEE board.
3. Remove the spade connectors on the cable from the home side picker separator arm switch.

   Note: Make a note of the terminals from which they were removed.
4. On the home side, push the wires (blue and violet) and connectors out the back through the cable access hole opened earlier.
   Leave the wires hanging out the access hole.
5. On the away side, remove the wires from the cover close switch and leave the wires hanging loosely.
6. Remove the spade connectors from the away separator arm reed switch. These are blue and violet colored wires twisted together.

   Note: Make a note of the terminals from which they were removed.

   Do not remove the separator arm reed switches or cover close switch.
7. On the away side, cut the blue and violet wires that go to the home side.
8. Push the 2 cut wires out the back of the away side access hole and let them hang loosely.
9. Install the home side separator arm section (longest piece of the blue and violet twisted pair) of new cable (10-4032B) by pushing both the longest section of blue and violet twisted wire and the 3-conductor cable that goes to the load table plate ejector sensor, through the away side access hole, to the back.
10. Use electrical tape to wrap the new cable to the old section of blue and violet wire (cut earlier) on the away side. This method is used to pull the new cable in place.

11. Pull the new section of the cable through the table from the away side to the home side.

12. Remove the tape and discard the old wire and push the new spade connectors and wire through the home side access hole from the back.
    Attach them to the home separator arm, ensuring they are put onto the same terminals as noted before.

13. Install the new last plate sensor (36-3210) and connect it to the last plate sensor section of 10-4032B. See Figure 11

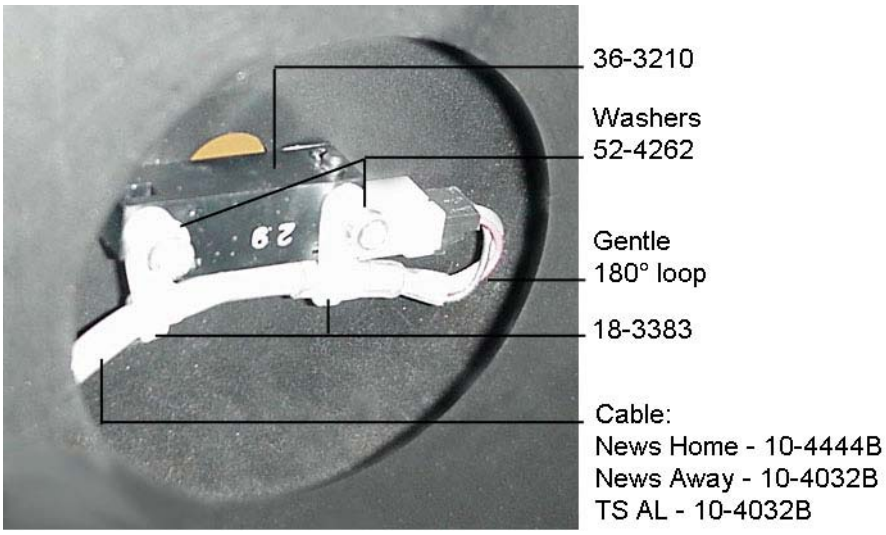


Figure 11 Load table last plate ejector sensor

14. Mount the sensor complete with the strain relief tie wraps (18-3383**)** and longer screws (52-3215).
    Follow the same procedure for placing tie wraps, using Loctite on pem nuts of the load table as for the load ramp. See **Replacing load ramp plate sensor and cable**.

15. Ensure that the screws do not protrude out the plate loading side of the load table.

16. Route the cable up to the away side separator arm reed switch and cover close switch.

17. Tie wrap the cable in place, ensuring that it does not interfere with any moving parts.

18. Replace the home and away cable access covers.

19. Install the new grommet type cover (59-3811) over the sensor access hole. See Figure 12

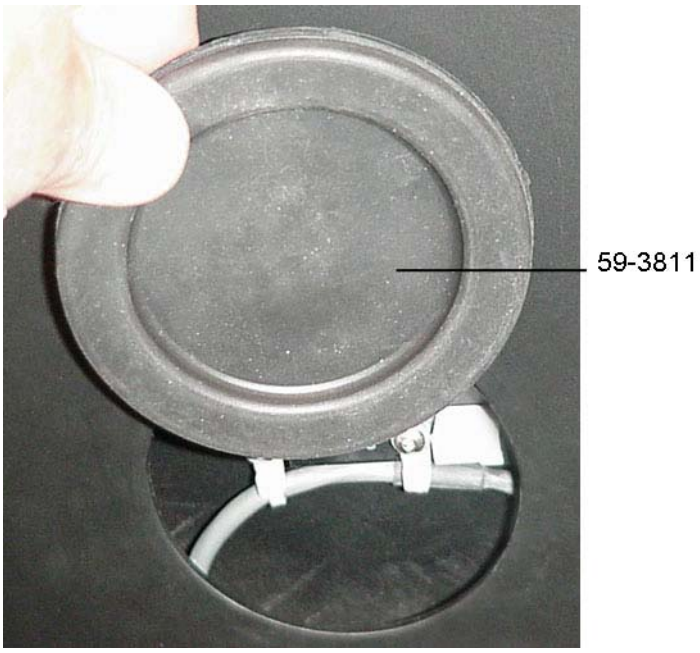


Figure 12 Grommet cover

20. Connect the new cable to J11 on the TEE board.

21. Test the sensor.

4.3 Replacing unload pan plate sensor (plate eject sensor) - TS AL

4.3.1 For non-rotator, short pan AL - kit 512-00003

1. Disconnect cable *10-3774A* in the unload pan from the table down reed switch, traveler home optical slot sensor, and traveler away optical slot sensor.

Note: Do not remove the table down reed switch or optical slot sensors.

2. Remove cable *10-3774A* from the unload pan noting how the cable was tied down. Mark the position of the pulley bearing and its position so that you can return the belt to the tension it had before the cable change.

3. Remove the pulley bearing mounting screws to adjust the position of the bearing when removing the cable. This loosens the belt and allows access to remove the cable. See Figure 13



Figure 13 Pulley bearing mounting screws and corner tie wrap

4. Remove the plate eject sensor (*36-3210*).
5. Discard both the cable and the sensor.
6. Install a new plate eject sensor (36-3210**)** and new cable (10-3774B**)**. See Figure 14
   Follow the same procedure for placing tie wraps, using Loctite on pem nuts as for the load ramp. See **Replacing load ramp plate sensor and cable**

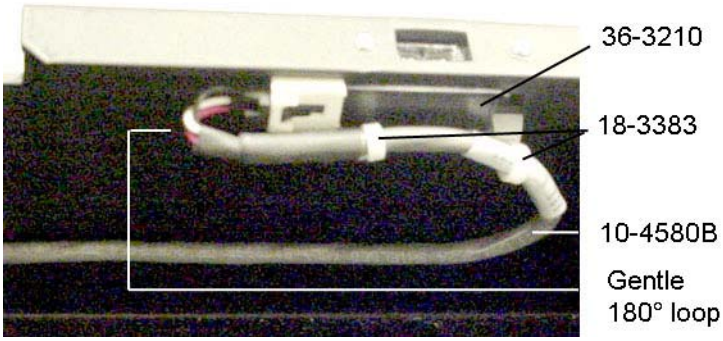


Figure 14 Plate eject sensor (short pan, non-rotator)

7. Connect the rest of the cable to the optical slot sensors and the table down reed switch.
8. Ensure the cable is tie wrapped down using the dual tie wrap holes in the side panels of the unload pan. See Figure 13 and Figure 15
   See **Appendix A** for cable routing diagram.



Figure 15 Dual hole tie wrap

9. Move the pulley bearing back to its original position that you marked earlier for belt tension (step 2) and return the pulley bearing mounting screws that you removed. See Figure 13

10. Ensure the cable does not interfere with the full motion of the flex track or suction cup assembly. See Figure 16



Figure 16 Unload pan cable tie

11. Test the sensor.

12. Update the 100 Label - # 30 for SA units, # 7 for TA units.

4.3.2 For rotator, long pan AL - kit 512-00004

1. Disconnect cable *10-3679A* in the unload pan from the table down reed switch, rotator retract reed switch, traveler home optical slot sensor, traveler away optical slot sensor, and traveler rotate optical slot sensor.

Note: Do not remove the table down reed switch or optical slot sensors.

2. Remove cable *10-3679A* from the unload pan noting how the cable was tied down. Mark the position of the pulley bearing and its position so that you can return the belt to the tension it had before the cable change.

3. Remove the pulley bearing mounting screws to adjust the position of the bearing when removing the cable. This loosens the belt and allows access to remove the cable. See Figure 18
4. Remove the plate eject sensor (*36-3210*).
5. Discard both the cable and the sensor.
6. Install sticky back cable mount (18-3014) shown in Figure 17, by first cleaning the surface with Isopropyl alcohol.
7. Apply a small amount of non-permanent Loctite 222 on both threads on the unload pan before mounting the sensor.

CAUTION: Wipe away any excess Loctite from around the threads before mounting the sensor. Loctite can damage the sensor.

Note: Do not apply Loctite to the screws.

8. Mount the new plate eject sensor (36-3210) with rounded pan head screws (52-3185). See Figure 17

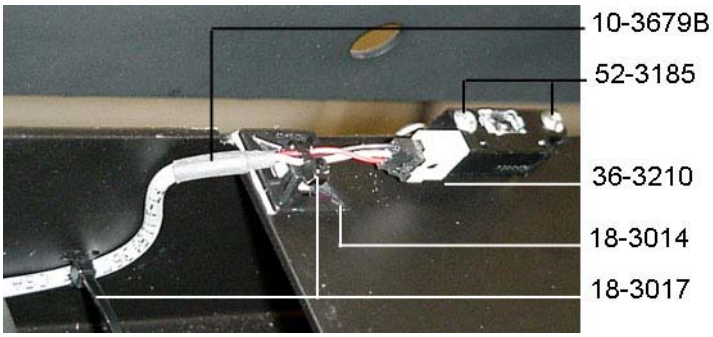


Figure 17 Plate eject sensor (long pan, rotator)

9. Connect the cable to the sensor and tie down as shown in Figure 17.
10. Connect the rest of the cable to the optical slot sensors and the table down reed switch.
11. Ensure the cable is tie wrapped down using the dual tie wrap holes in the side panels of the unload pan. See Figure 18.
    See **Appendix A** for cable routing diagram.

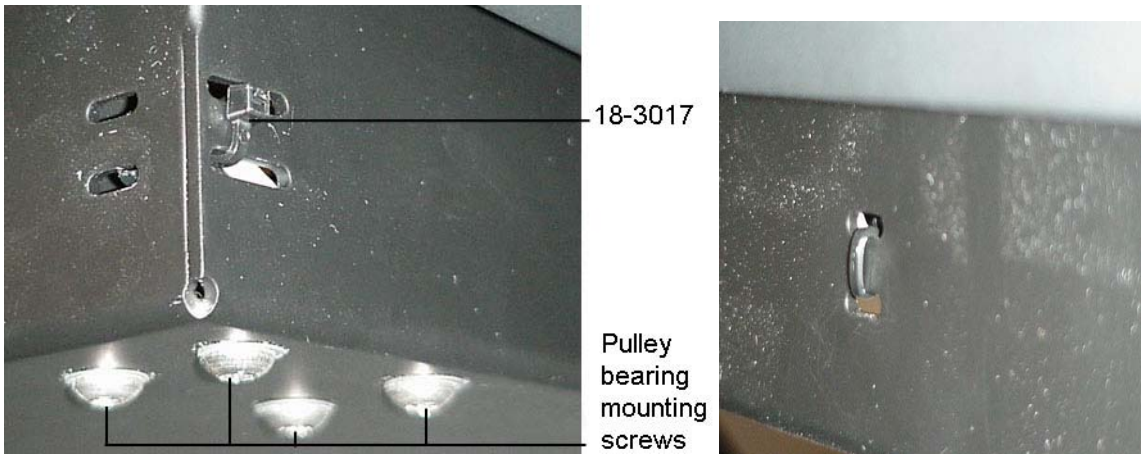


Figure 18 Corner tie wrap and dual hole tie wrap

12. Move the pulley bearing back to its original position that you marked earlier for belt tension (step 2) and return the pulley bearing mounting screws that you removed. See Figure 18
13. Ensure the cable does not interfere with the full motion of the flex track or suction cup assembly. See Figure 16
14. Test the sensor.
15. Update the 100 Label - # 30 for SA units, # 7 for TA units.

5. TRENDSETTER NEWS

5.1 Replacing load ramp plate sensors and cables

1. Make sure that you have kit 512-00005 for Trendsetter NEWS.

Note: You should install this kit in conjunction with FCO E876 to reduce labor.

2. Disconnect cable *10-3687A* from J3 on the TEE board and disconnect cable *10-4602A* (home side) from cable 10-4444A (away side).

3. Remove the load ramp from the machine by removing the Clevis pins on both sides of the engine side plates.

   Note: Ensure that the white spacers do not drop into the engine when removing the pins on the upper section.

4. Remove both the existing load ramp plate sensors (*36-3210*) and sensor cables (*10-3687A* and *10-4602A*) from the load ramp.

5. Discard the old sensors, cables and mounting screws.

6. Attach the new cables (10-3687B-away, 10-4602B-home) to the new sensors (36-3219).

   Note: Only MPE TS NEWS machines require the SHARP 36-3219 sensors on the Load Ramp. This sensor will be used on all remaining MPE based NEWS machines and any replacement Load Ramp sensors in FRU Kit 512-00004A. They must not be confused with the ALEPH 36-3210. They look similar but have different focal lengths. This requirement is due to the position of the sensors on the load ramp with respect to reflective components on the picker. The Sharp sensor is in limited supply from the manufacturer.

7. Place the two strain relief tie wraps (18-3383) on the cables for each sensor in positions described below and shown in Figure 19.

   The wires exiting from the cable at the sensor end should make a 180-degree loop and go straight into the sensor. This will prevent the wires from entering the connector at tight angles.

   The tie wrap closest to the end of the cable should be 20 mm (+/-2mm) from the end of the shrink-wrap where the wires exit the cable.

   The second tie wrap should be 26.5 mm (+/- .5 mm) from the first.

   This will provide perfect spacing between the tie wraps to mount the sensor with the tie wraps to the load ramp.

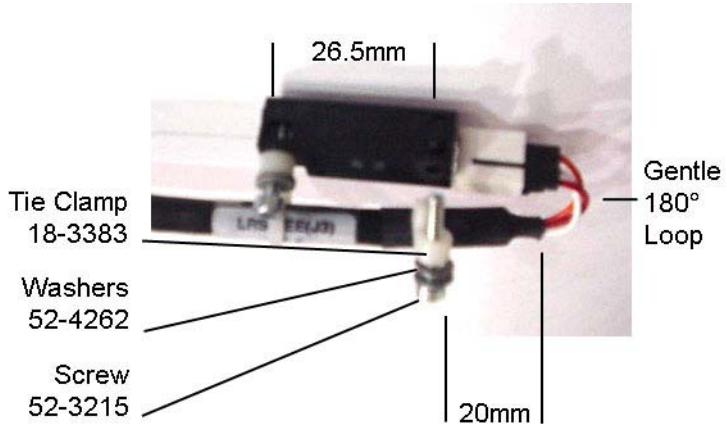


Figure 19 Sensor tie wraps/clamps

8. Place two washers (52-4262) on each of the two new mounting screws (52-3215) and put the screws through the tie wrap holes and sensor.

9. Place the sensor in position and check to make sure that the screws do not protrude from the plate loading side of the ramp. Do not permanently attach the sensor at this point.

   You may have to adjust the number of washers in order to prevent the screws from protruding. There should be at least .5 mm of clearance to ensure the screws do not touch plates as they slide across the load ramp.

10. Apply a small amount of non-permanent Loctite 222 on both sets of pem nuts (home and away) of the load ramp.

    Note: Do not apply Loctite to the screw.

CAUTION: Wipe away any excess Loctite from around the pem nut before mounting the sensor. Loctite can damage the sensor.

11. Mount the replacement sensors (36-3219) in the load ramp. See Figure 20 and Figure 21

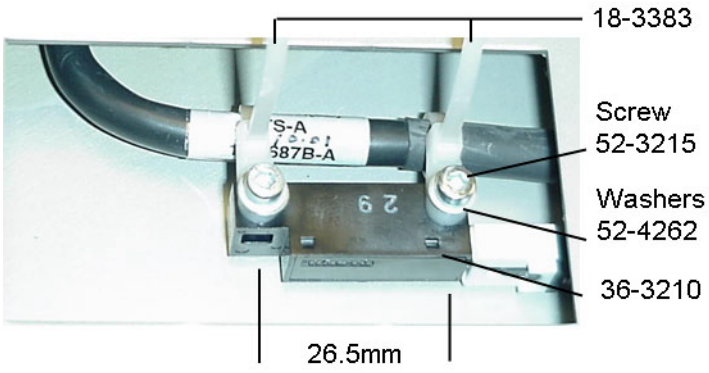


Figure 20 Mounted sensor

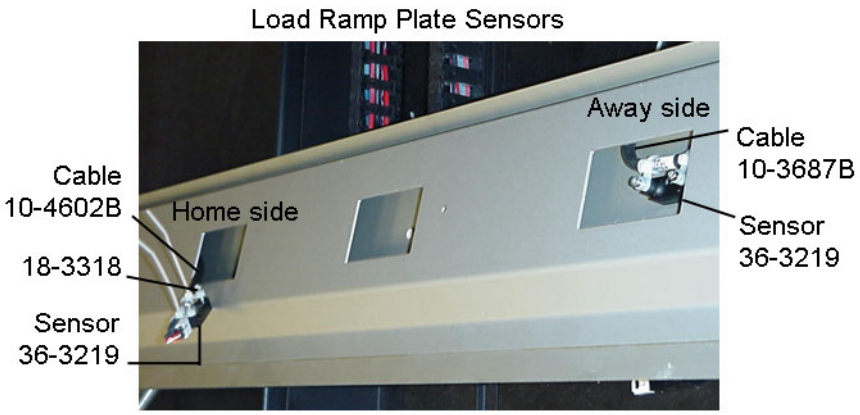


Figure 21 Load ramp plate sensors

12. Tighten the mounting screws.
13. Recheck that the mounting screws are not protruding on plate side. See Figure 22

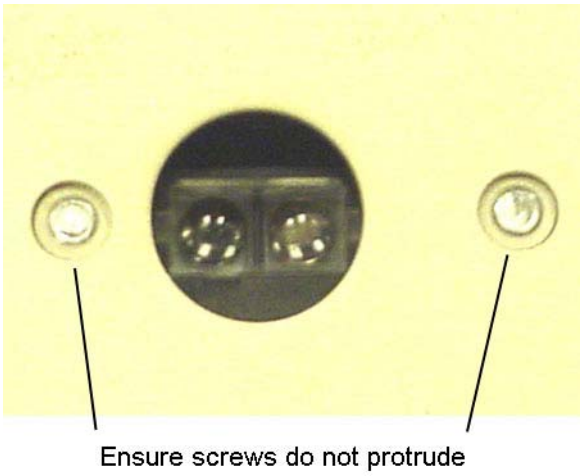


Figure 22 Load ramp plate side

14. Install the load ramp back into the machine using the upper and lower Clevis pins and white spacers on both sides of the engine side plates.
15. When routing the cables from the load ramp onto the side plate, make sure that there is enough of a loop in the cables so that as the load ramp moves in and out, it does not stress the cables or interfere with the motion of the drum. See Figure 23

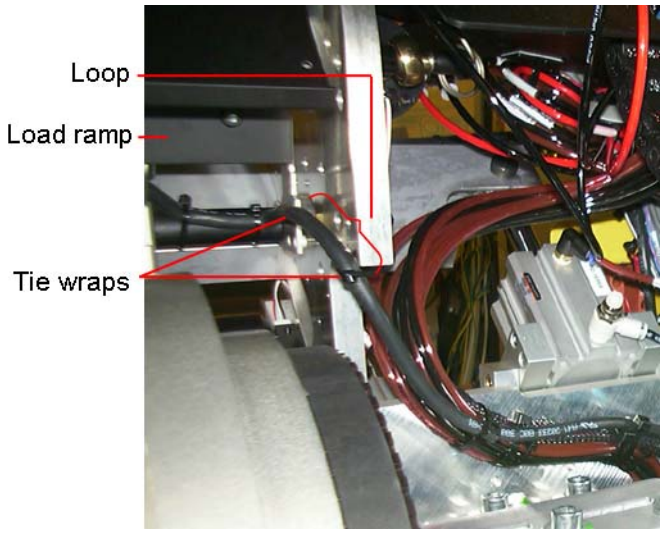


Figure 23 Cable loop (away side) - TS AL
Note: For TS NEWS, both sensor cables (10-3687B and (10-4602B) should run parallel.

16. Route cable 10-3687B back to the TEE board and connect to J3.

17. Route cable 10-4602B and connect to cable 10-4444A.

18. Test the sensor.

5.2 Replacing load table plate sensors (last plate sensor) - TS NEWS

To remove access covers from the back of the load table:

1. Using two medium sized flat screwdrivers on the 2 pressure points on one side of the circular cover, push in from under the rim of the cover.
   See push points in Figure 24

Note: Take care to not scratch the black painted surface of the load table.

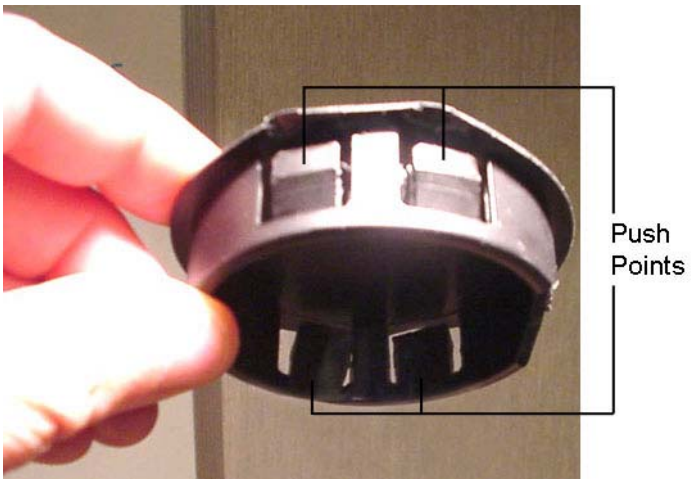


Figure 24 Push points on sensor cover

2. Move the cover up slightly.
3. Repeat step 1 and 2 on the other side of the cover.
4. Repeat steps 1 and 2 on alternating sides of the cover until the cover comes off.
5. Discard these covers, as they will be defective. New rubber grommets replace the old covers.
6. Remove both cable access hole covers on the home and away side of the load table. See Figure 25

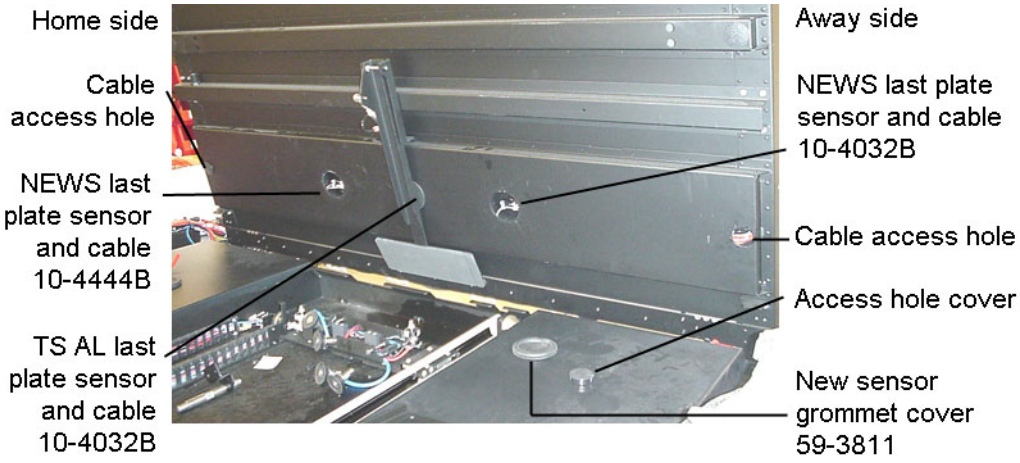


Figure 25 Load table plate sensor access

To replace load table last plate sensors and cable:

1. Remove the last plate sensors (*36-3210*).
2. Disconnect cable (*10-4032A*) from J11 on the TEE board.
3. Disconnect cable (*10-4444A*) from 10-4441A.
4. Remove the spade connectors on the cable from the home side picker separator arm switch.

   Note: Make a note of the terminals from which they were removed.
5. On the home side, push the wires (blue and violet) and connectors out the back through the cable access hole opened earlier.
   Leave the wires hanging out the home side access hole.
6. On the away side, remove the wires from the cover close switch and leave the wires hanging loosely.
7. Remove the spade connectors from the away hand separator arm reed switch. These are blue and violet colored wires twisted together.

Note: Make a note of the terminals from which they were removed.

Do not remove the separator arm reed switches or cover close switch.

8. On the away side, cut the blue and violet wires that go to the home side.
9. Push the 2 cut wires out the back of the away side access hole and let them hang loosely.
10. Install the home side separator arm section (longest piece of the blue and violet twisted pair) of new cable (10-4032B) by pushing both the longest section of blue and violet twisted wire and the 3-conductor cable that goes to the load table plate sensor, through the away side access hole, to the back.
11. Use electrical tape to wrap the new cable (10-4032B) and 10-4444B at the appropriate distance to the old section of blue and violet wire (cut earlier) on the away side. This method is used to pull the new cable in place.
12. Pull the new section of the cable through the table from the away side to the home side.
13. Pull the sensor end of 10-4032B out the away side sensor access hole and the sensor end of 10-4444B out the home side sensor access hole as you are pulling all 3 sections through the load table.
    Only the twisted blue and violet pair will be long enough to reach the home side access hole.
14. Remove the tape and discard the old wire and push the new spade connectors and wire through the home side access hole from the back.
    Attach them to the home separator arm, ensuring they are put onto the same terminals as noted before.
15. Connect the new sensors (36-3210) to cable (10-4032B) on the away side and to cable (10-4444B) on the home side. See Figure 26

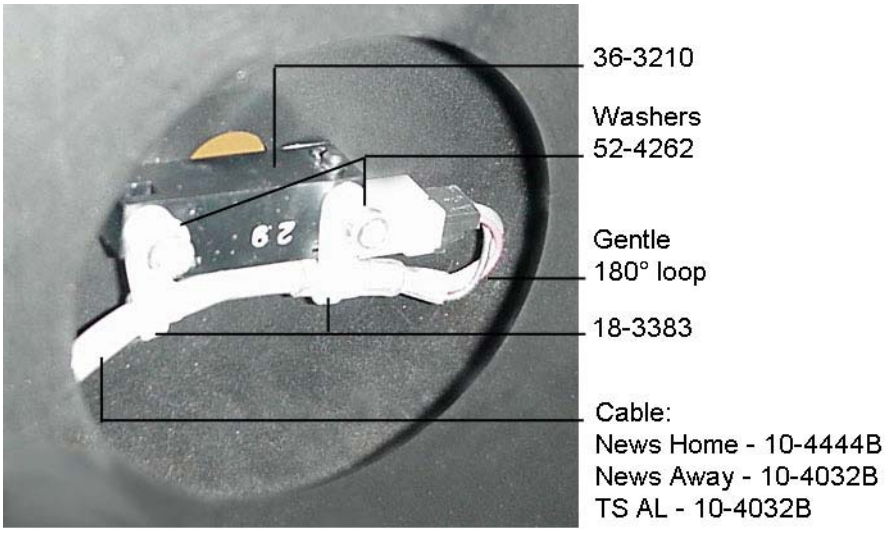


Figure 26 Load table plate sensor

16. Mount the sensor complete with the strain relief tie wraps (18-3383) and longer screws (52-3215**)**. Follow the same procedure for placing tie wraps, using Loctite on pem nuts of the load table as for the load ramp. See **Replacing load ramp plate sensors and cables**.
17. Ensure that the screws do not protrude out the plate loading side of the load table.
18. Route the cable up to the away side separator arm reed switch and cover close switch.
19. Tie wrap the cable in place, ensuring that it does not interfere with any moving parts.
20. Replace the home and away cable access covers.
21. Install the new grommet type covers (59-3811) over both sensor access holes. See Figure 27

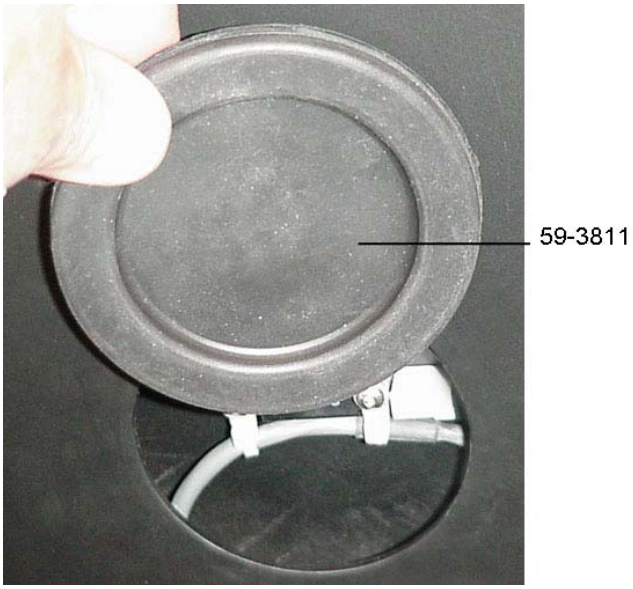


Figure 27 Grommet cover

22. Connect the new cable to J3 on the TEE board.
23. Test the sensors.

5.3 Replacing unload pan plate sensors (plate eject sensor) - TS NEWS

Home side unload pan:

1. Remove cable *10-4580A* and the plate eject sensor (*36-3210*) from the home unload pan. Mark the position of the pulley bearing and its position so that you can return the belt to the tension it had before the cable change.
2. Remove the pulley bearing mounting screws to adjust the position of the bearing when removing the cable. This loosens the belt and allows access to remove the cables. See Figure 29 and Figure 30
3. Discard the old cable and sensor.

4. Apply a small amount of non-permanent **Loctite** 222 on both threads of the unload pan before mounting the sensor.

   Note: Do not apply Loctite to the screw.

CAUTION: Wipe away any excess Loctite from around threads before mounting the sensor. Loctite can damage the sensor.

5. Install the new home plate eject sensor 36-3210 and new cable 10-4580B into the home unload pan.
   Follow the same procedure for placing tie wraps as for the load ramp. See Replacing load ramp plate sensors and cables. See Figure 28

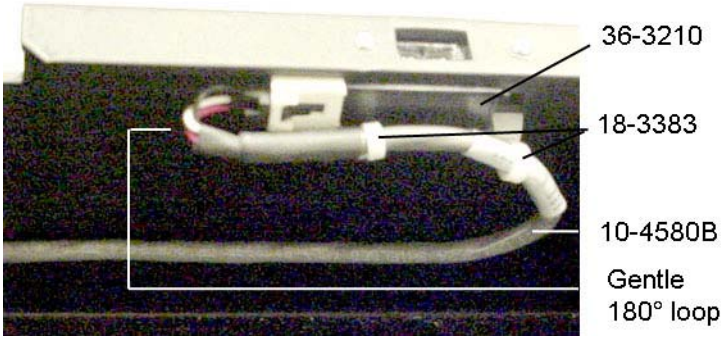


Figure 28 Home plate eject sensor

Away side unload pan:

1. Disconnect cable *10-3774A* in the away unload pan from the table down reed switch, traveler home optical slot sensor and traveler away optical slot sensor.

Note: Do not remove the table down reed switch or optical slot sensors.

2. Remove cable *10-3774A* from the unload pan noting how the cable was tied down.
3. Remove the plate eject sensor (*36-3210*).
4. Discard both the cable and the sensor.
5. Apply a small amount of non-permanent Loctite 222 on both pem nuts on the unload pan before mounting the sensor.

CAUTION: Wipe away any excess Loctite from around the threads before mounting the sensor. Loctite can damage the sensor.

6. Connect the new sensor (36-3210**)** to new cable (10-3774B).
7. Mount the sensor complete with the strain relief tie wraps (18-3383**)** and longer screws (52-3215).
   Follow the same procedure for placing tie wraps as for the load ramp. See Replacing load ramp plate sensors and cables. See Figure 29

   Note: Do not apply Loctite to the screws.

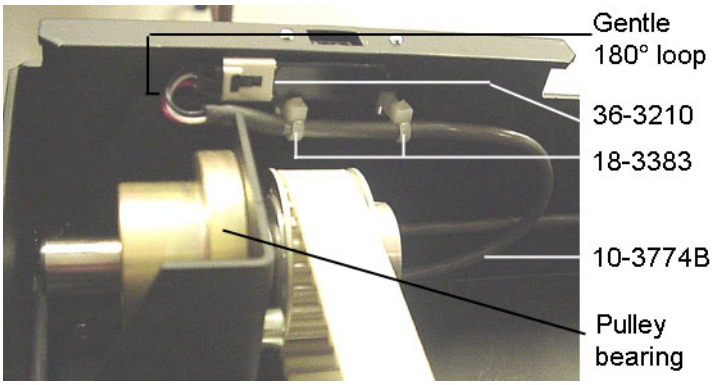


Figure 29 Away plate eject sensor

8. Connect the rest of the cable to the optical slot sensors and the table down reed switch.
9. Attach cables 10-4580B and 10-4602B to cable 10-4444B.
10. Ensure the cable is tie wrapped down using the dual tie wrap holes in the side panels of the unload pan or sticky back cable mounts 18-3061. See Figure 30.
    See **Appendix A** for cable routing diagram.

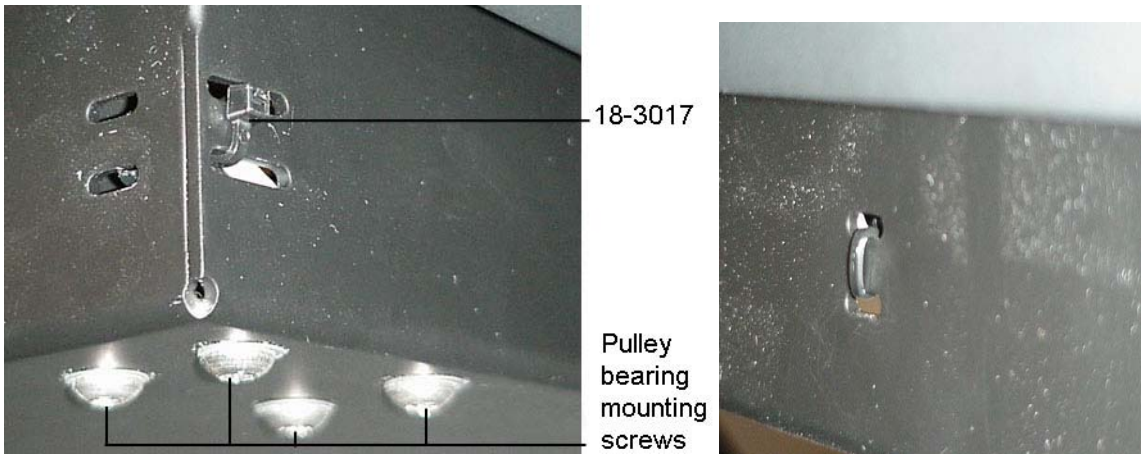


Figure 30 Corner tie wrap and dual hole tie wrap

11. Move the pulley bearing back to its original position that you marked earlier for belt tension and return the pulley bearing mounting screws that you removed.
12. Ensure the cable does not interfere with the full motion of the flex track or suction cup assembly. See Figure 31



Figure 31 Unload pan cable tie

13. Test the sensors.

14. Update the 100 Label - # 12

6. TRENDSETTER VLF

6.1 Replacing load table plate sensor and cable

1. Make sure that you have kit 512-00006 for Trendsetter VLF.
2. Raise the table to the up position.
3. To remove the bracket that holds the sensor from the underside of the table (Figure 32):
   - Make sure that the mid-table extension is pulled all the way out
   - Remove the single 3mm screw

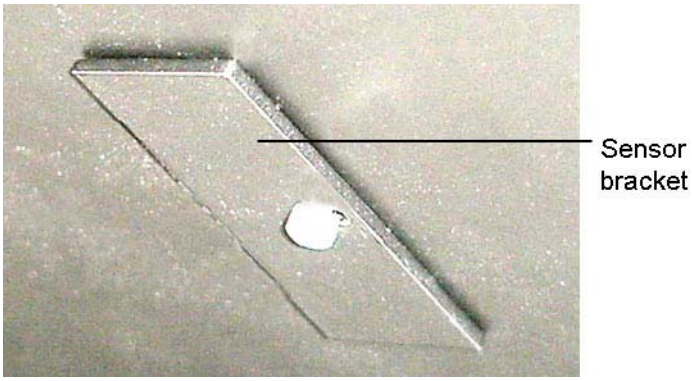


Figure 32 Sensor access

4. Disconnect sensor (*36-3141*) from cable 10-3542A.
5. Remove the load table sensor (*36-3141*) from the bracket and discard it.
6. Apply a small amount of non-permanent Loctite 222 on the threads of the bracket before mounting the sensor.

CAUTION: Wipe away any excess Loctite from around the threads before mounting the sensor. Loctite can damage the sensor.

Note: Do not apply Loctite to the screws.

7. Clean the surface of the bracket near the sensor with Isopropyl alcohol.
8. Install sticky back cable mount (18-3061) for the new adapter cable (10-9097A**)** as shown in Figure 33.

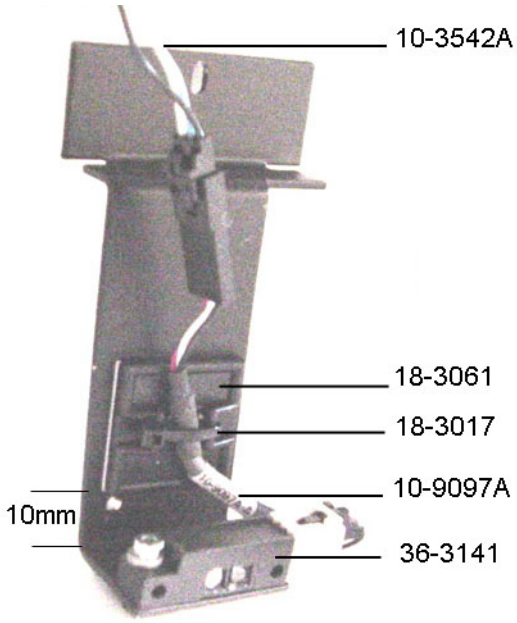


Figure 33 Sensor and bracket showing cable mount.

9. Connect adapter cable 10-9097A to sensor.

10. Install the new sensor (36-3141). See Figure 34
    The wires exiting from the cable at the sensor end should make a 180-degree loop and go straight into the sensor. This will prevent the wires from entering the connector at tight angles.

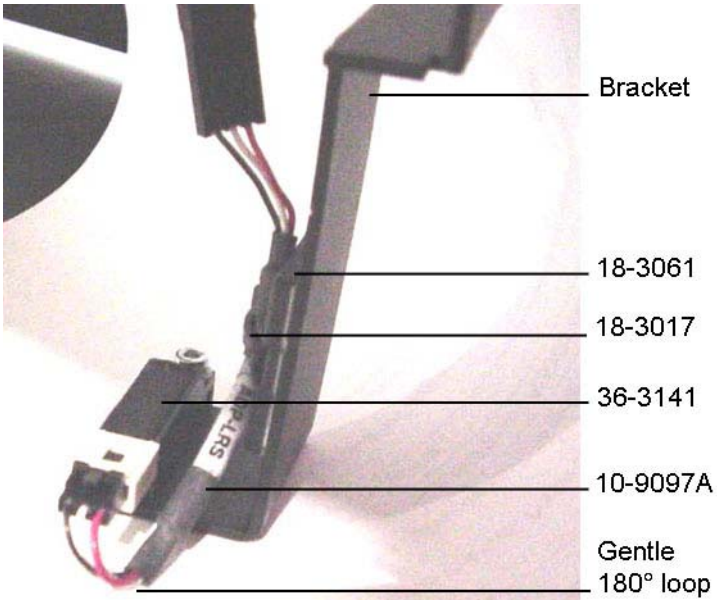


Figure 34 Sensor bracket showing cable loop

11. Plug the adapter cable 10-9097A into cable 10-3542A.

12. Tie the adapter cable down to the cable mount with tie wrap (18-3017). See Figure 33 and Figure 34.

13. Replace the assembly back into the table.

14. Test the sensor.

7. THERMOFLEX

7.1 Replacing load table plate sensor and cable

1. Make sure that you have kit 512-00007 for ThermoFlex.
2. Raise the table to the up position.
3. Remove the bracket that holds the load table sensor to the table.
   You can access the bracket screws by reaching under the table from the front of the device.
4. Remove the old load table sensor (*36-3141*) and cable (*10-3911A*) from the bracket.
5. Discard the old sensor and cable.
6. Apply a small amount of non-permanent Loctite 222 on both threads of the bracket before mounting the sensor and apply the same amount of Loctite to the threads in the table frame to secure the bracket to the table.

CAUTION: Wipe away any excess Loctite from around the threads before mounting the sensor and bracket. Loctite can damage the sensor.

Note: Do not apply Loctite to the screws.

7. Use the new mounting screws (52-3215) to attach the new sensor (36-3141**)** to the bracket.
8. Connect the new cable (10-3911B) to the sensor. See Figure 35.

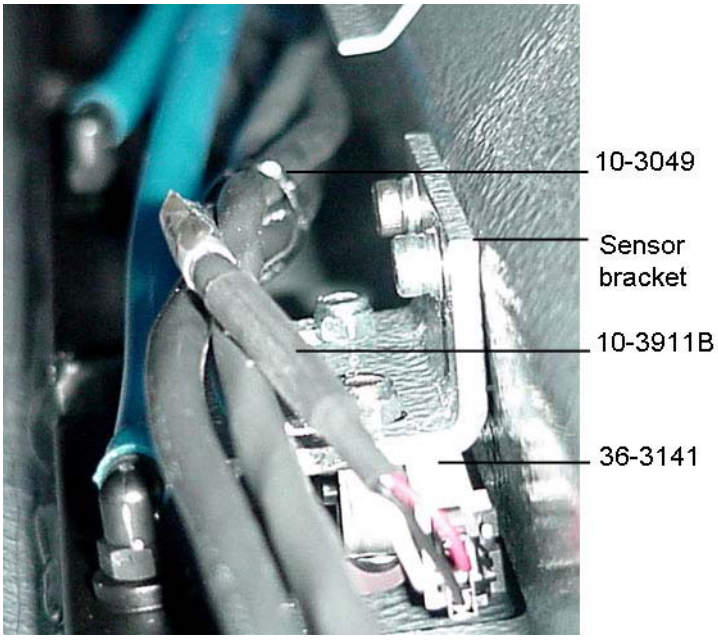


Figure 35 Sensor bracket
(view looking up at sensor from under table)

9. Replace the bracket onto the load table.
10. After installation the sensor should be seen through the top aperture in the table as shown in Figure 36.



Figure 36 Load table sensor aperture

11. Test the sensor.

APPENDIX A - CABLE ROUTING

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