

## 5.5 Tester Station

### 5.5.1 Tester Assembly

#### 5.5.1.1 Removing the Tester Assembly

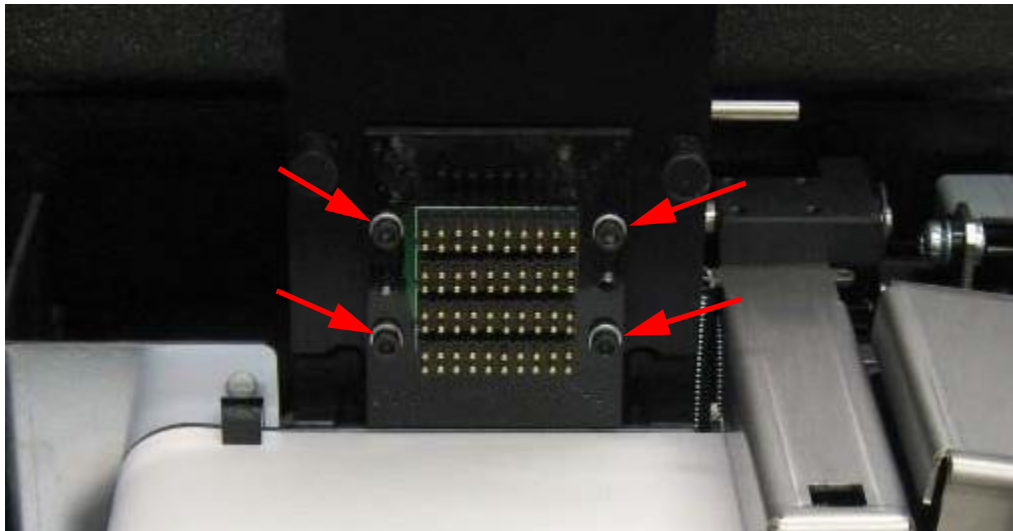
- T10 torx driver
- 5/32" allen wrench

---

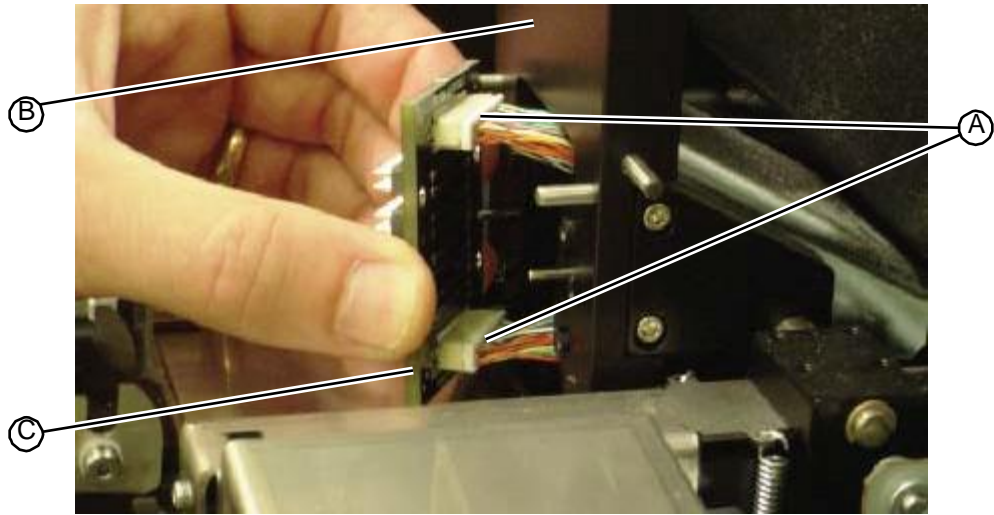
#### TASK

1. Remove the upper hood (see “Removing the Upper Hood” on page 5-3).
2. Remove the tester cover.
3. Remove the paper roll according to the instructions on the front of the tester.
4. Using a T10 torx driver, remove the four T-10 screws that secure the tester interconnect board.

**Figure 5.221:**Fasteners that secure the tester interconnect board



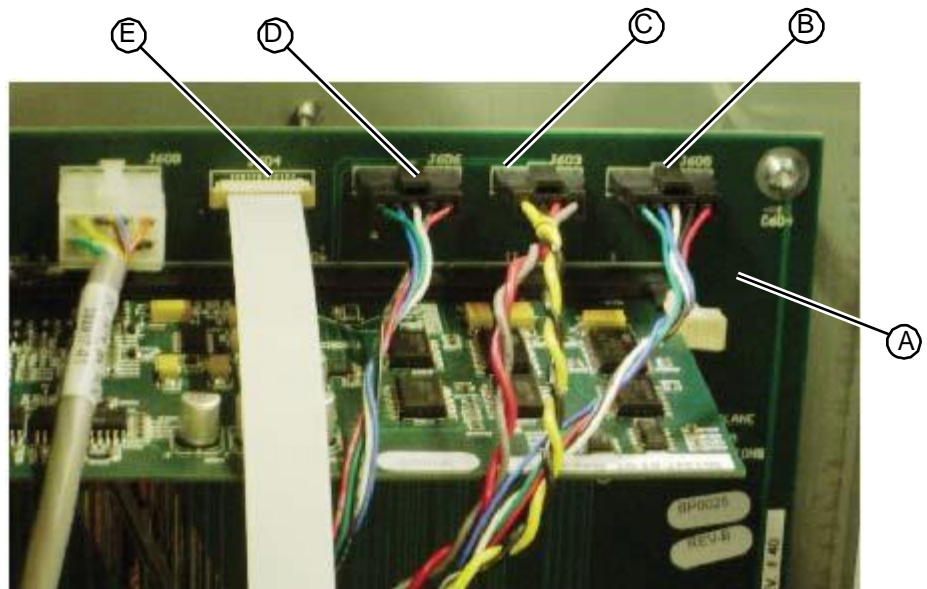
5. Gently pull the tester interconnect board out of the tester fixture mount just enough to be able to access the cable connections on the back of the board.
6. There are two cables plugged in to the back of the interconnect board. The connectors can be removed by pulling straight out from the board.



7. Unplug the cables at the following connections on the top of the tester PC backplane board.
  - J603
  - J604
  - J605
  - J606

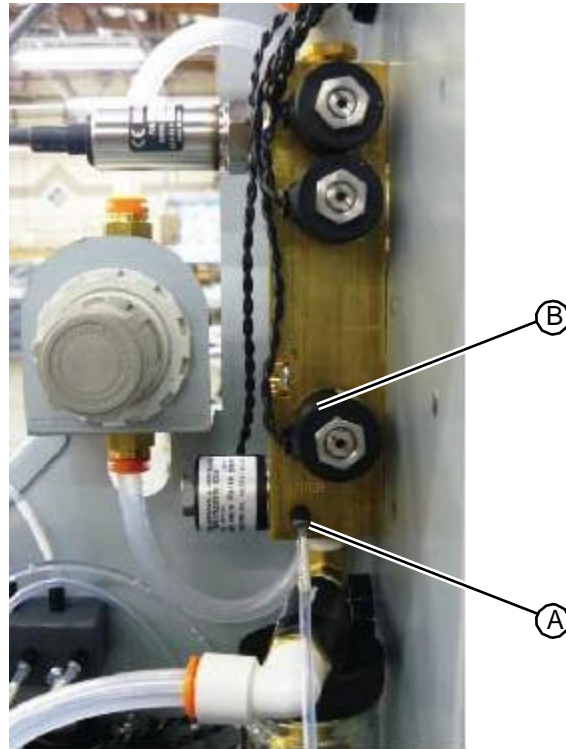
To unplug the cable connected to J604, pull the brown tabs on the connector forward and slip the cable out.

**Figure 5.223:** Tester connections on the tester backplane PC board



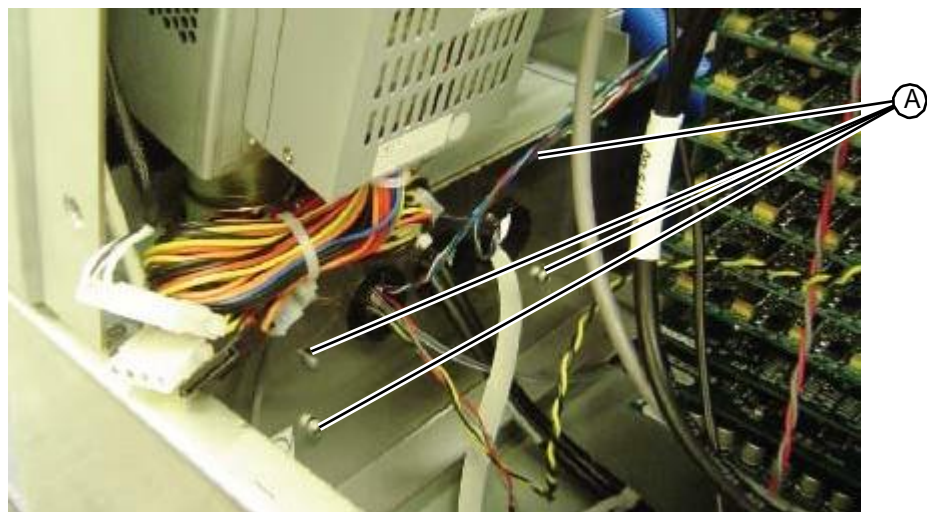
8. *\*If present:* disconnect the tester vacuum tube at the main vacuum manifold, located in the vacuum chamber at the back of the unit, behind the drill station.

**Figure 5.224:**\*Vacuum tubing connection at the main vacuum manifold, located in the plumbing tower



9. Using a 5/32" allen wrench, remove the four fasteners that secure the tester to the system frame.

**Figure 5.225:**Fasteners that secure the tester assembly to the system frame, viewed from inside the electrical tower



10. From the front of the system, slide the tester out of the unit while carefully routing tester cables and vacuum tubing through the protected cable bushings.
11. Return the tester assembly to RIS.

RELATED LINKS:

- “Replacing the Tester Assembly” on page 5-134
- “Tester Station” on page 1-24

### 5.5.1.2 Replacing the Tester Assembly

Make sure the work surface is properly installed before replacing the tester assembly. If the work surface has been removed, replace it before starting this procedure.

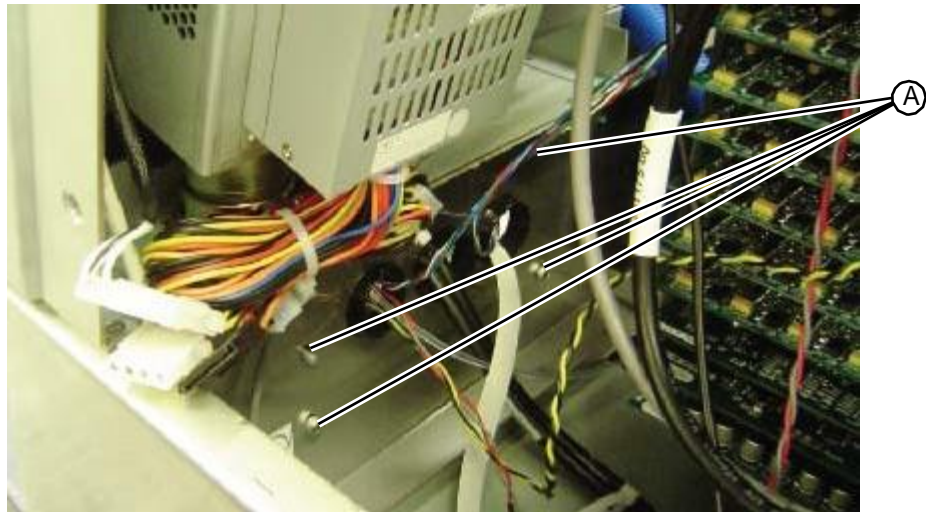
- T10 torx driver
- 5/32” allen wrench

---

TASK

1. Carefully route the tester vacuum tube and the tester cables through the protective bushings in the system frame.
2. Align the mounting holes in the tester with those in the system frame.
3. Support the tester assembly from the front of the system with your left hand and use a 5/32” allen wrench to insert and tighten the four fasteners that secure the tester to the system frame.

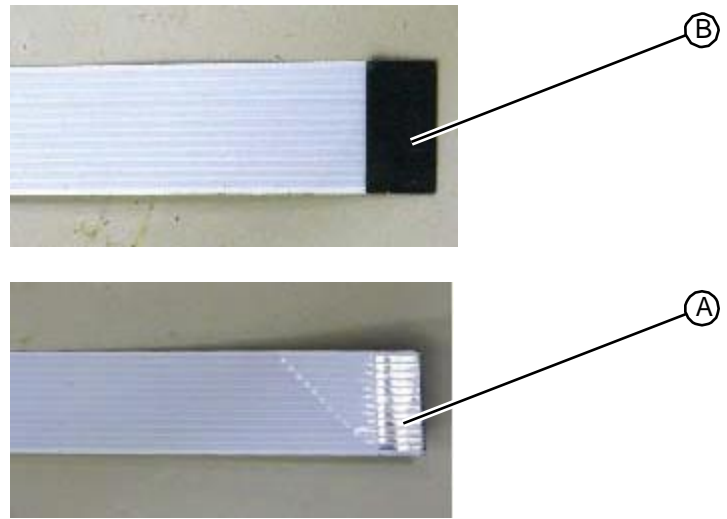
**Figure 5.226:**Fasteners that secure the tester assembly to the system frame, viewed from inside the electrical tower



4. Position the flat ribbon for the scanner so that the gold/silver side faces up and the black connector side faces down, insert the cable into the J604 connector, and push the brown snaps in to secure the connection.

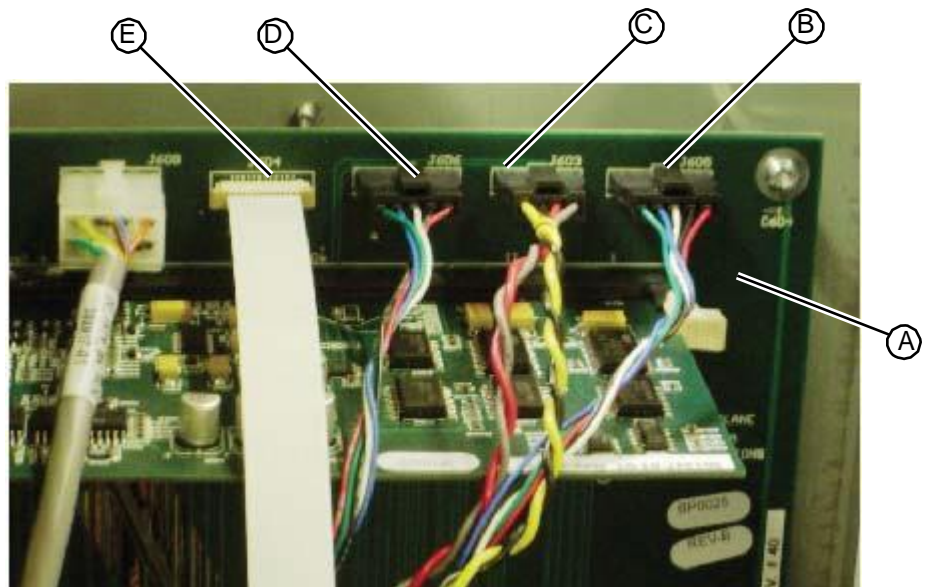


**Figure 5.227:**Connections end of tester scanner cable



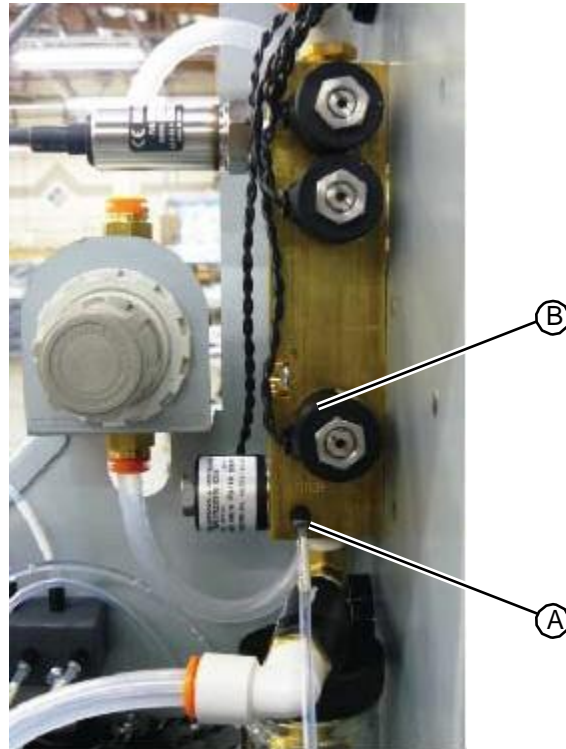
5. Plug the four-pin connector on the tester motor cable into connector J603 on the tester board.
6. Plug the five-pin connectors on the two tester sensor cables into either J606 or J605.

**Figure 5.228:**Tester connections on the tester backplane PC board



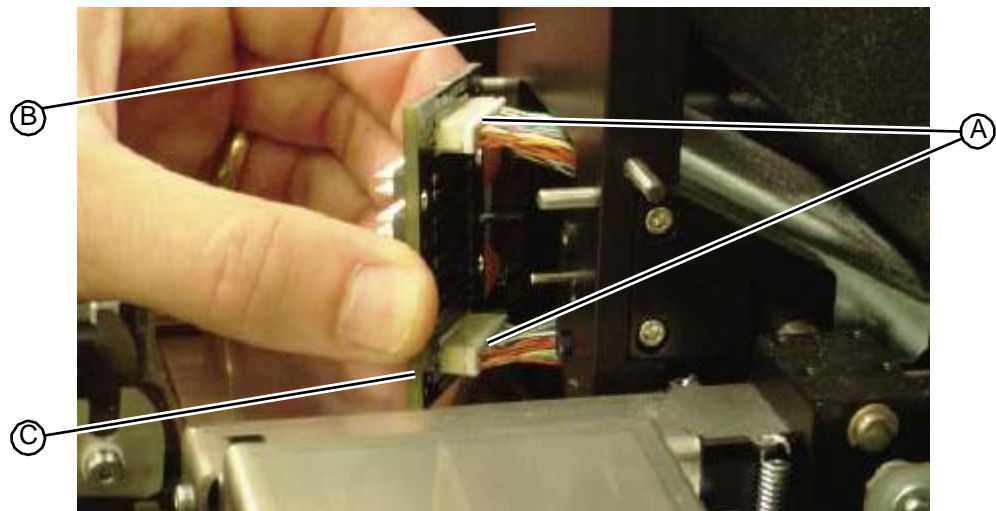
7. *\*If present:* route the tester vacuum tube through the back of the central system chamber and into the vacuum chamber.
8. *\*If present:* insert the tester vacuum tube into its port on the main vacuum manifold, and turn it clockwise to tighten.

**Figure 5.229:**\*Vacuum tubing connection at the main vacuum manifold, located in the plumbing tower



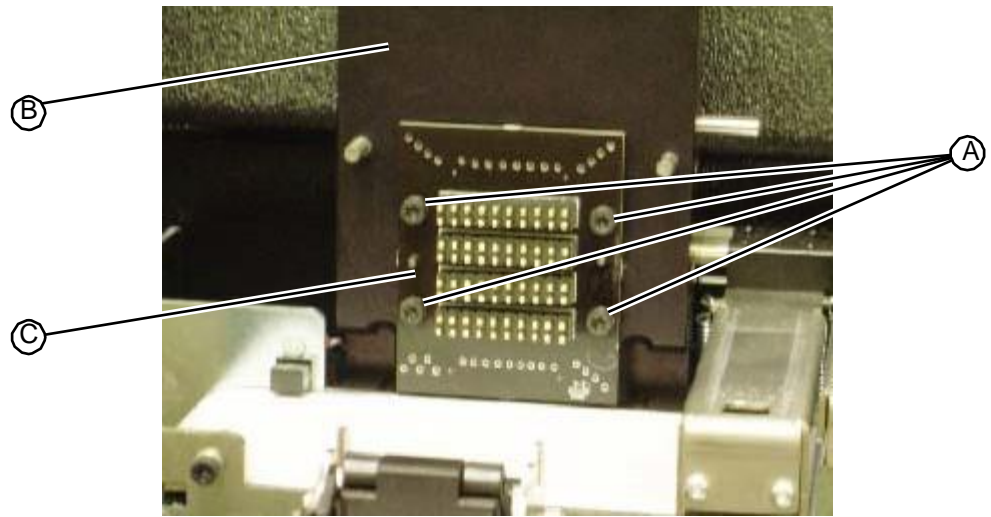
9. Plug the cable labeled 1 that is connected to PL101 on the bottom of the tester PC board into the top connector, labeled J1 on the back of the tester interconnect board.
10. Plug the cable labeled 2 that is connected to PL102 on the bottom of the tester PC board into the bottom connector, labeled J2 on the back of the tester interconnect board.

**Figure 5.230:**Connections on the back of the interconnect PC board



11. Using a T10 torx driver, insert and tighten the four fasteners that secure the tester interconnect board.

**Figure 5.231:**Fasteners that secure the tester interconnect board



12. Replace the paper roll according to the instructions on the front of the tester.
13. Replace the upper hood (see “Replacing the Upper Hood” on page 5-4).

RELATED LINKS:

- “Removing the Tester Assembly” on page 5-131
- “Tester Station” on page 1-24

## 5.5.2 Tester Fixture Cover

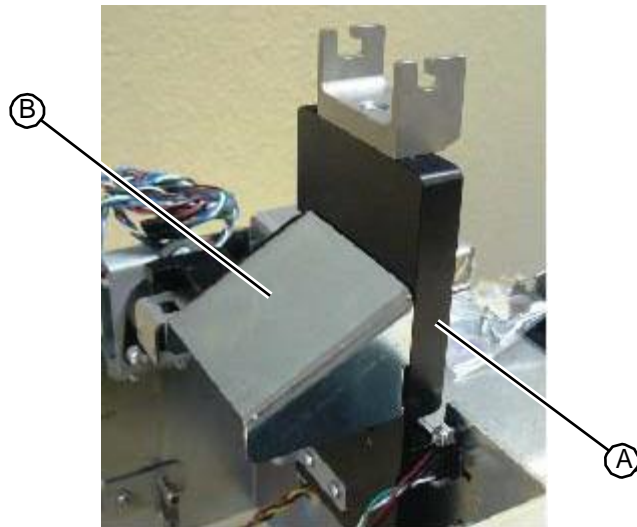
### 5.5.2.1 Removing the Tester Fixture Cover

- T15 torx driver

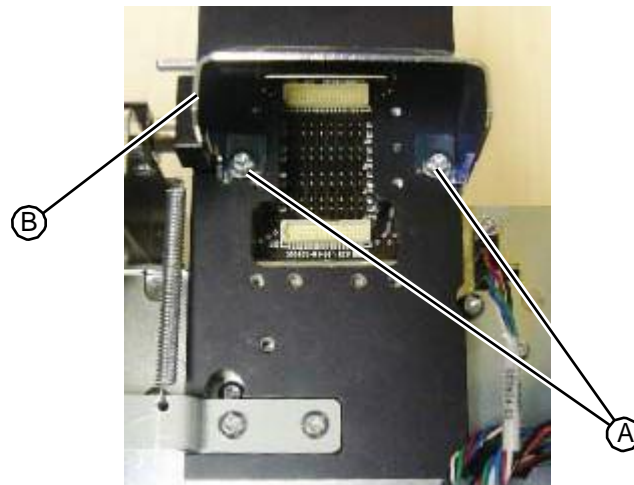
TASK

1. Remove the tester assembly (see “Removing the Tester Assembly” on page 5-131).
2. Using a T15 torx driver, loosen the two fasteners, lock washers, and flat washers that secure the tester fixture cover to the back of the tester interface assembly. Do not remove the fasteners.

**Figure 5.232:**Location of tester fixture cover



**Figure 5.233:**Fasteners that secure the tester fixture cover to the back of the tester interface assembly



3. Pull the tester fixture cover up, remove, and discard.

RELATED LINKS:

“Replacing the Tester Fixture Cover” on page 5-138

“Tester Station” on page 1-24

### 5.5.2.2 Replacing the Tester Fixture Cover

- T15 torx driver

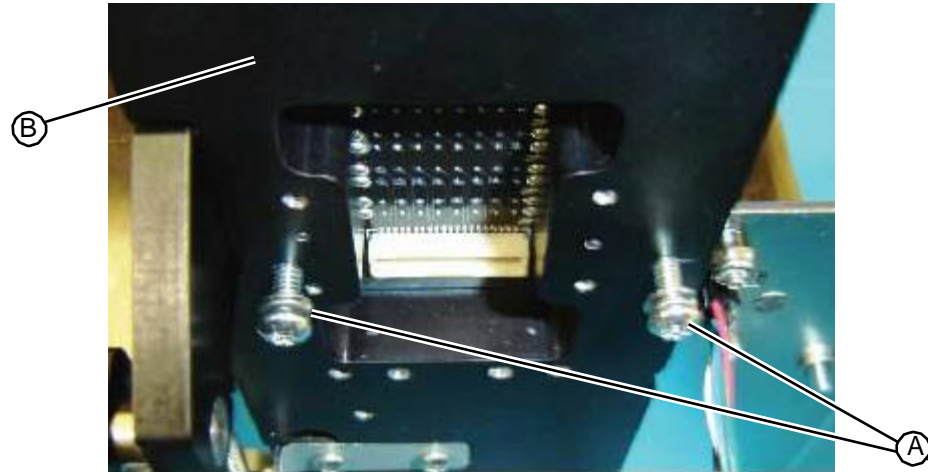
---

TASK

1. If the fixture cover fasteners are not already attached to the back of the tester interface assembly, use a T15 torx driver to loosely insert the two fasteners, lock washers, and flat washers that secure the tester fixture cover to the back of the tester interface assembly. Do not tighten the fasteners.

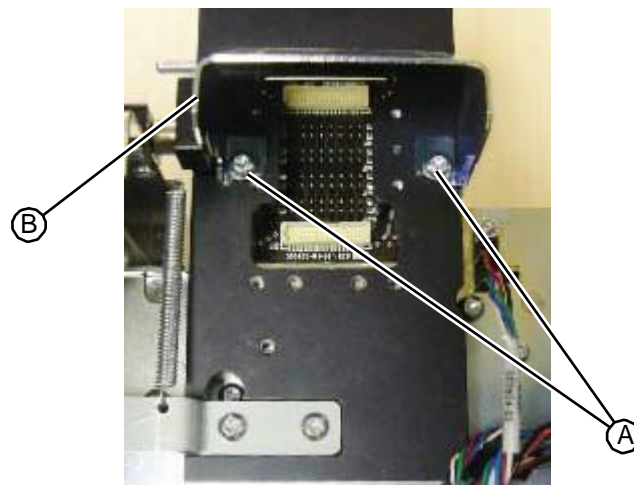


**Figure 5.234:** Test fixture cover fasteners attached to the back of the tester interface assembly



2. Slide the tester fixture cover onto the fasteners, in back of the washers.

**Figure 5.235:** Fasteners that secure the tester fixture cover to the back of the tester interface assembly



3. Using a T15 torx driver, tighten the fasteners.
4. Replace the tester assembly (see “Replacing the Tester Assembly” on page 5-134).

RELATED LINKS:

“Removing the Tester Fixture Cover” on page 5-137

“Tester Station” on page 1-24

## 5.5.3 Tester Interconnect PC Board

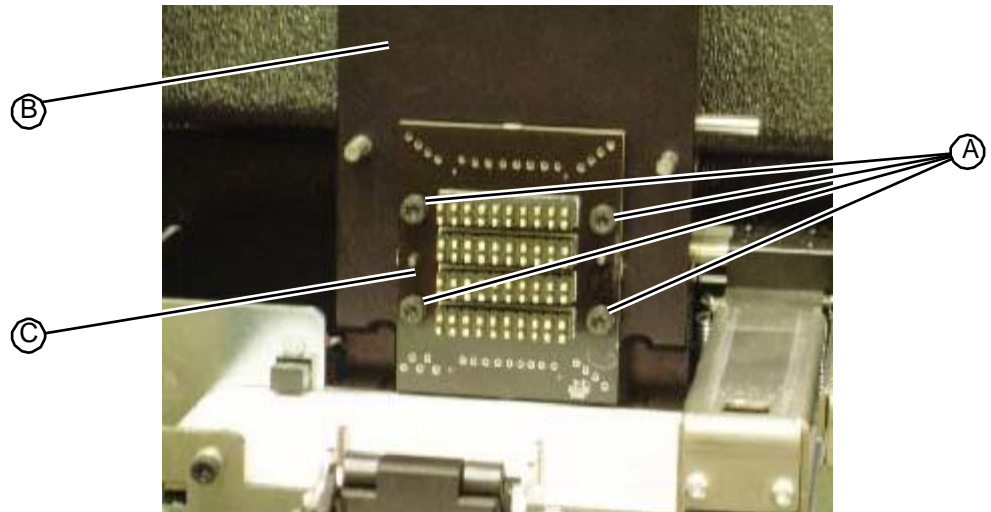
### 5.5.3.1 Removing the Tester Interconnect PC Board

- T10 torx driver
- 5/32” allen wrench

TASK

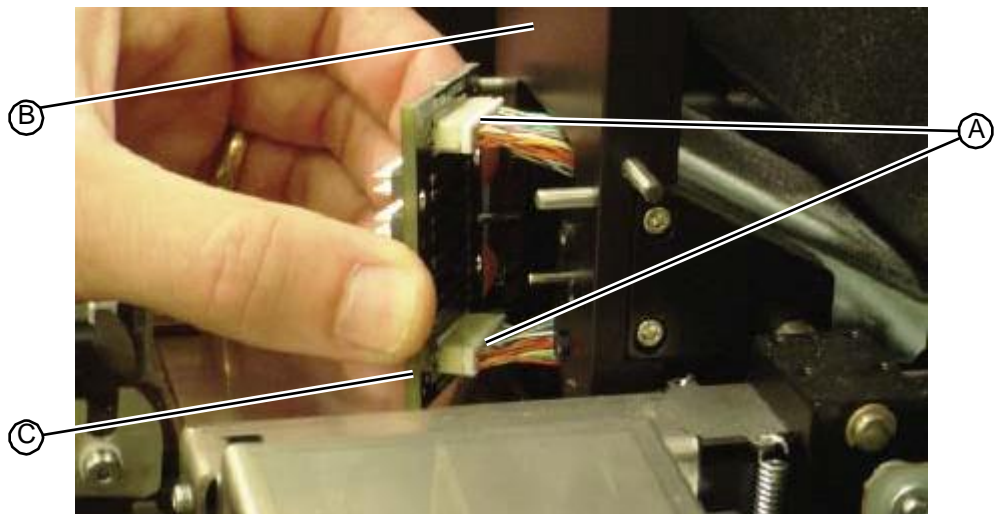
1. Remove the tester cover.
2. Using a T10 torx driver, remove the four fasteners that secure the tester interconnect board.

**Figure 5.236:**Fasteners that secure the tester interconnect board



3. Gently pull the tester interconnect board out of the tester fixture mount just enough to be able to access the cable connections on the back of the board.
4. Unplug the two connectors from the back of the tester interconnect board.

**Figure 5.237:**Connections on the back of the interconnect PC board



5. Remove the tester interconnect PC board and return it to RIS.

RELATED LINKS:

“Replacing the Tester Interconnect PC Board” on page 5-141

“Tester Station” on page 1-24

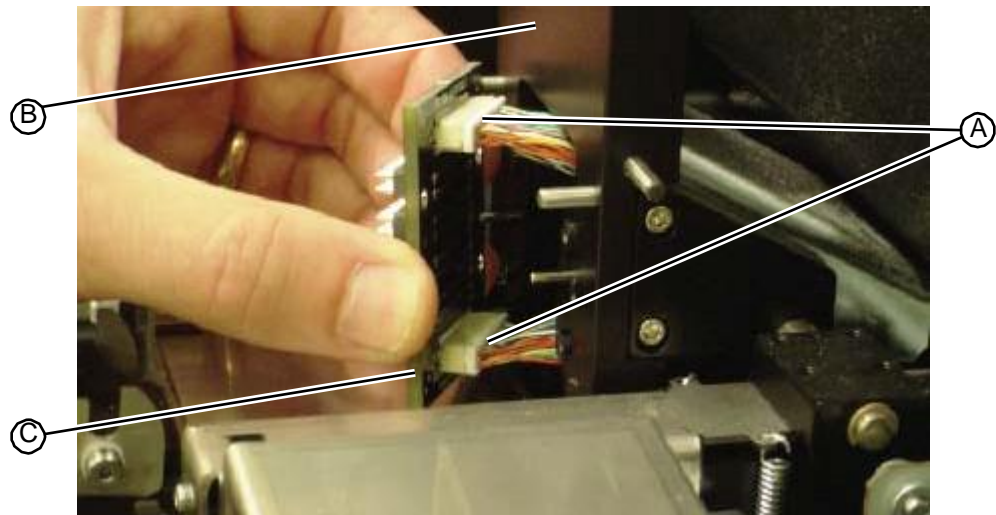
### 5.5.3.2 Replacing the Tester Interconnect PC Board

- T10 torx driver

#### TASK

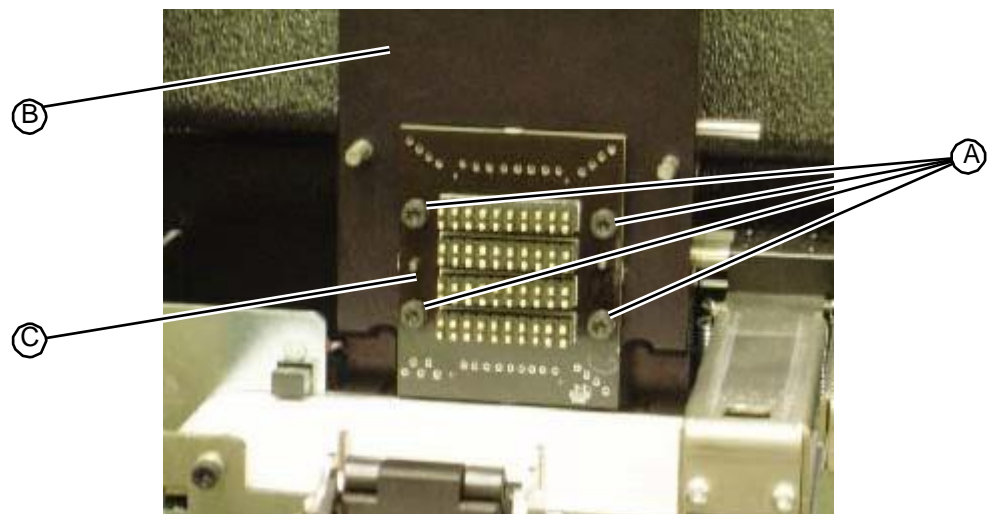
1. Plug the cable labeled 1 (connected to port PL101 on the bottom of the tester PC board) into the top port, labeled J1 on the back of the tester interconnect board.
2. Plug the cable labeled 2 (connected to port PL102 on the bottom of the tester PC board) into the bottom port, labeled J2 on the back of the tester interconnect board.

**Figure 5.238:**Connections on the back of the interconnect PC board



3. Using a T10 torx driver, insert and tighten the four fasteners that secure the tester interconnect board.

**Figure 5.239:**Fasteners that secure the tester interconnect board



4. Replace the tester cover.

#### RELATED LINKS:

“Removing the Tester Interconnect PC Board” on page 5-139

## 5.5.4.2 Replacing the Tester Latch Assembly

### 5.5.4 Tester Latch Assembly

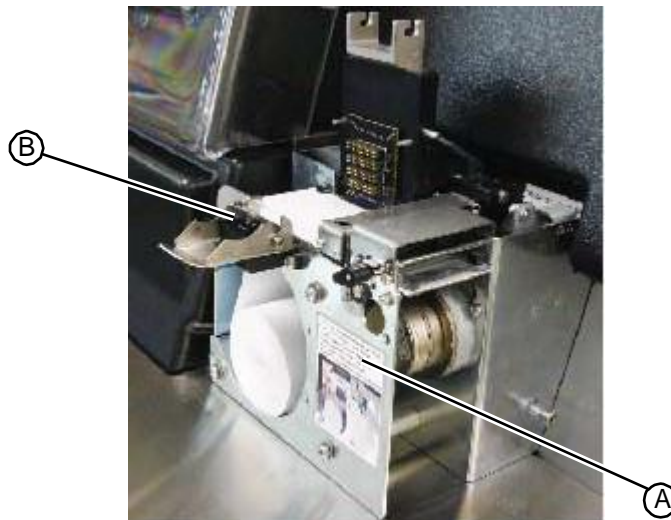
#### 5.5.4.1 Removing the Tester Latch Assembly

- T10 torx driver

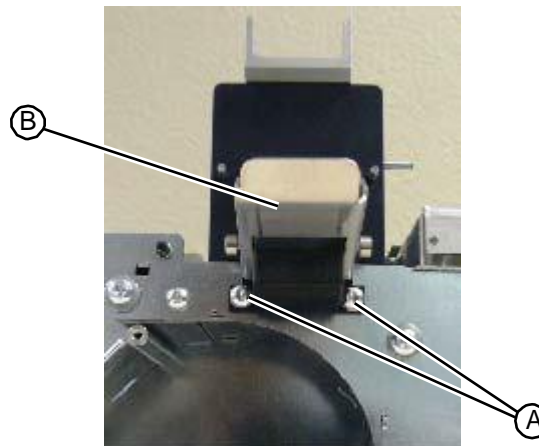
##### TASK

1. Remove the tester cover.
2. Using a T10 torx driver, remove the two fasteners, washers, and flat washers that secure the latch assembly to the front of the tester assembly.

**Figure 5.240:** Location of tester latch assembly



**Figure 5.241:** Fasteners that secure latch assembly to front of tester assembly



3. Pull the tester latch assembly out from the tester assembly and discard.

##### RELATED LINKS:

“Replacing the Tester Latch Assembly” on page 5-143

“Tester Station” on page 1-24

### 5.5.4.2 Replacing the Tester Latch Assembly

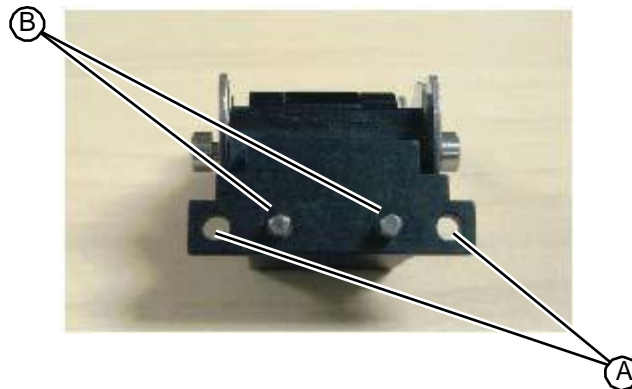
- T10 torx driver

---

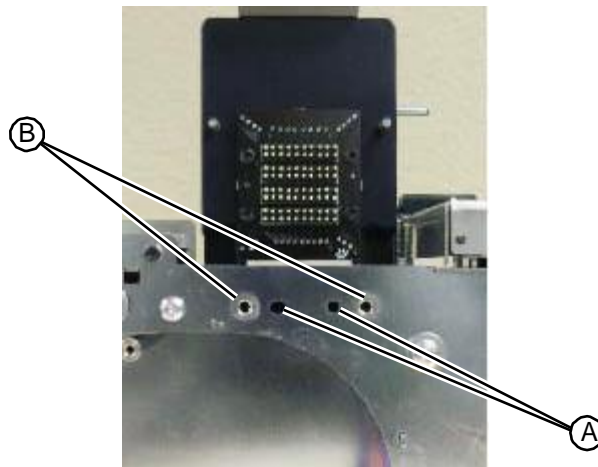
#### TASK

1. Insert the two locating pins on the back of the tester latch assembly into the two locating holes on the front of the tester assembly.

**Figure 5.242:** Mounting pins on the back of the tester latch assembly

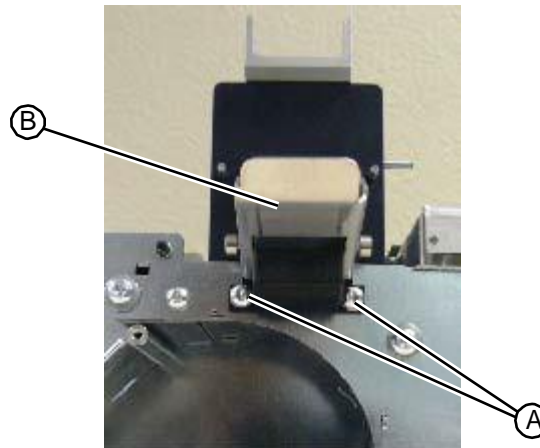


**Figure 5.243:** Mounting and locating holes on front of the tester assembly



2. Using a T10 torx driver, insert and tighten the two fasteners, lock washers, and flat washers that secure the latch assembly to the front of the tester assembly.





3. Replace the tester cover.

RELATED LINKS:

“Removing the Tester Latch Assembly” on page 5-142

“Tester Station” on page 1-24

## 5.5.5 Tester Front Paper Guide

### 5.5.5.1 Removing the Tester Front Paper Guide

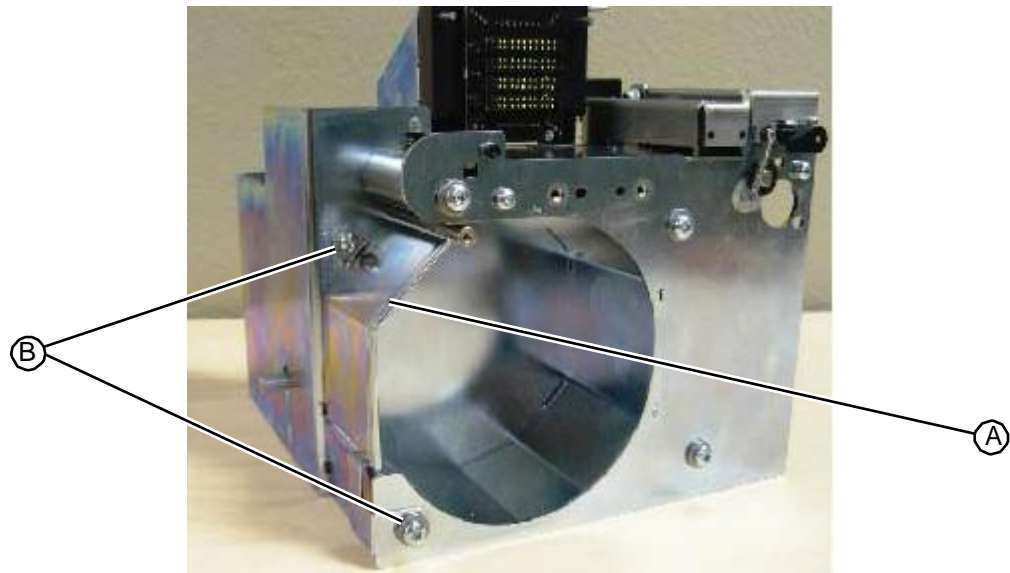
- T15 torx driver

---

TASK

1. Remove the tester assembly (see “Removing the Tester Assembly” on page 5-131).
2. Using a T15 torx driver, remove the two fasteners, lock washers, and flat washers that secure the front paper guide to the tester assembly.

**Figure 5.245:**Fasteners that secure the front paper guide to the tester assembly



3. Remove the tester front paper guide and discard.

RELATED LINKS:

- “Replacing the Tester Front Paper Guide” on page 5-145
- “Tester Station” on page 1-24

### 5.5.5.2 Replacing the Tester Front Paper Guide

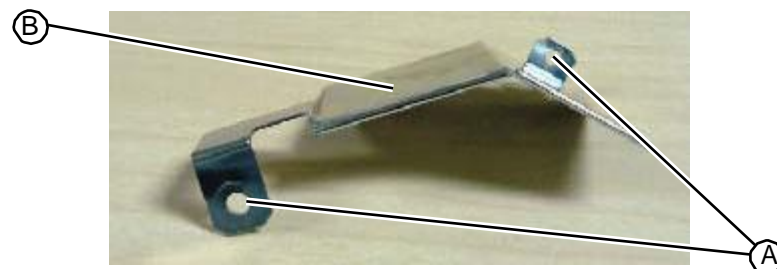
- T15 torx driver

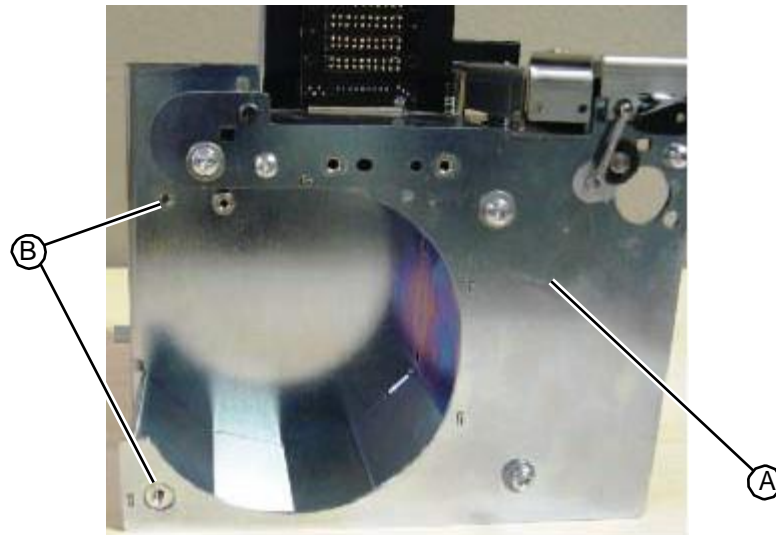
---

TASK

1. Align the mounting holes in the tester front paper guide with its mounting holes in the tester assembly.

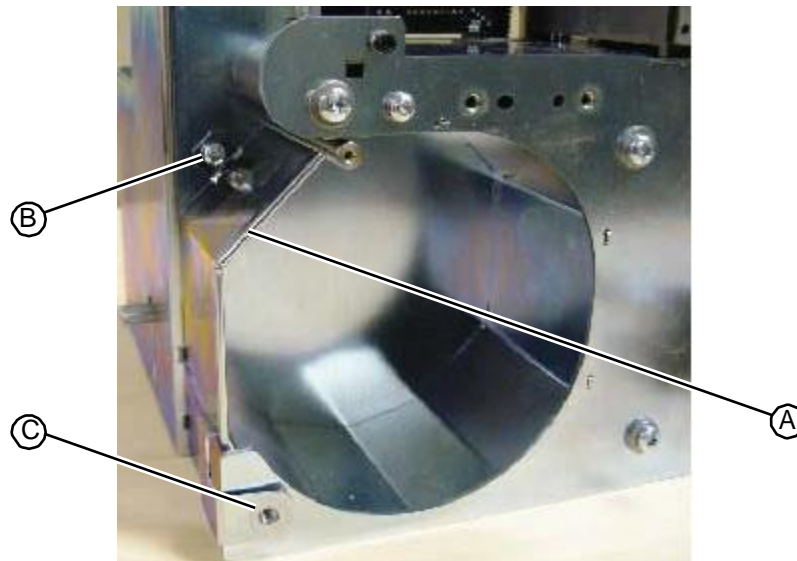
**Figure 5.246:**Mounting holes on tester front paper guide





2. Using a T15 torx driver, loosely insert the top, rear tester paper guide fastener, lock washer, and flat washer. Do not tighten the fastener.

**Figure 5.248:**Top rear tester paper guide fastener loosely installed



3. Using a T15 torx driver, loosely insert the bottom front tester paper guide fastener, lock washer, and flat washer.
4. Ensure that the paper guide is firmly seated in the assembly and tighten both fasteners.
5. Replace the tester assembly (see “Replacing the Tester Assembly” on page 5-134).

RELATED LINKS:

- “Removing the Tester Front Paper Guide” on page 5-144
- “Tester Station” on page 1-24

## 5.5.6 Tester Thru-beam Paper Sensors

### 5.5.6.1 Removing the Tester Thru-beam Paper Sensors

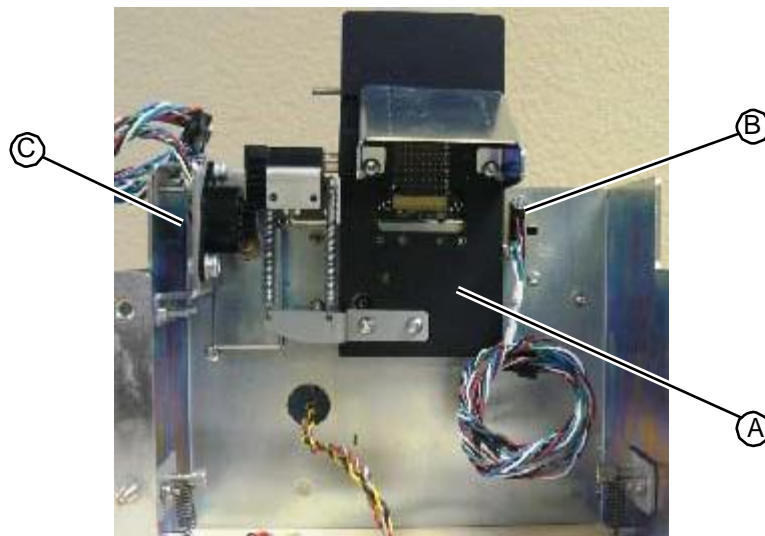
- 1/4" hex nut driver

---

#### TASK

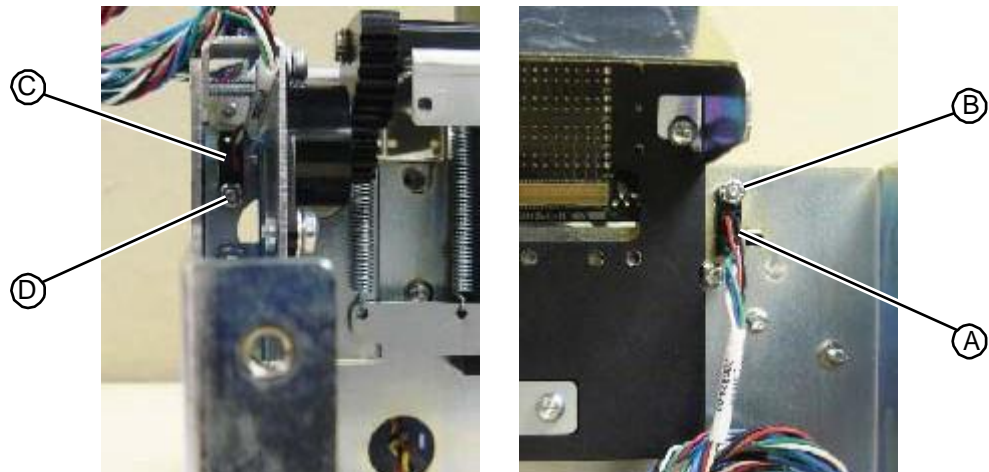
1. Remove the tester assembly (see "Removing the Tester Assembly" on page 5-131).
2. From the back of the tester assembly, locate the two thru-beam paper sensors. One is attached at the paper exit guide. The second is attached above the front paper guide.

**Figure 5.249:**Location of the thru-beam paper sensors from the back of the tester assembly



3. Using a 1/4" hex nut driver, remove the fastener that secures the sensor to the rear tester assembly wall.

**Figure 5.250:**Fasteners that secure paper sensors to the rear tester assembly wall



4. Lift the sensor off its mounting stud and discard.

RELATED LINKS:

“Replacing the Tester Thru-beam Paper Sensors” on page 5-148

“Tester Station” on page 1-24

### 5.5.6.2 Replacing the Tester Thru-beam Paper Sensors

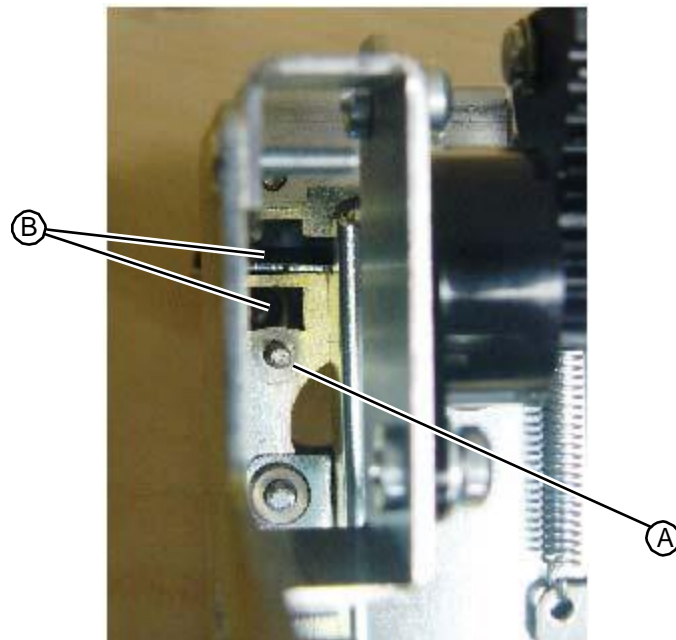
- 1/4” hex nut driver

---

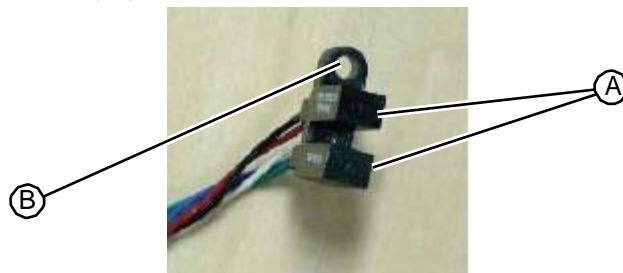
TASK

1. Insert the thru-beam paper sensor into the rear wall of the tester assembly so that the sensor unit fits through the mounting holes and over the pem stud.

**Figure 5.251:** Pem stud and mounting holes on rear wall of tester assembly



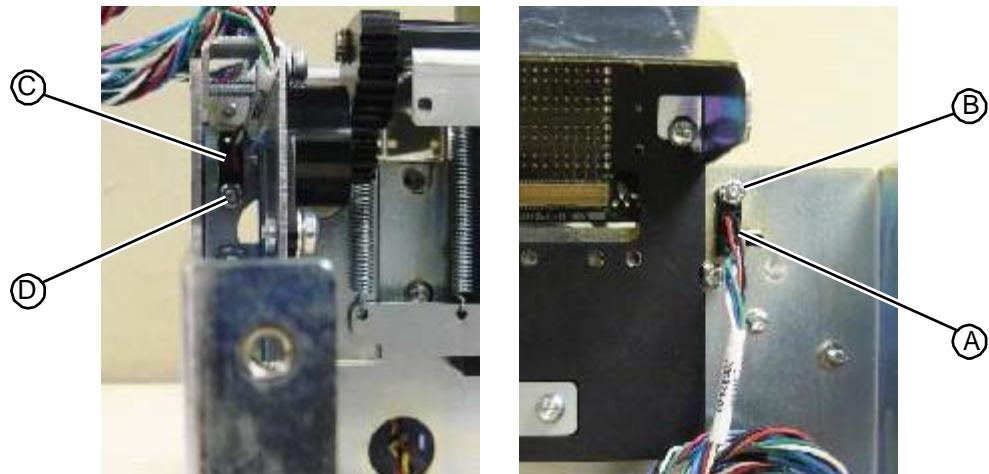
**Figure 5.252:** Thru-beam paper sensor head



2. Using a 1/4” hex nut driver, insert and tighten the fastener on the pem stud. Be sure to attach the fastener with the domed side facing up.



**Figure 5.253:**Fastener that secures the paper sensor to the rear tester assembly wall



3. Replace the tester assembly.

RELATED LINKS:

- “Removing the Tester Thru-beam Paper Sensors” on page 5-147
- “Tester Station” on page 1-24

## 5.5.7 Tester Scanner Cable

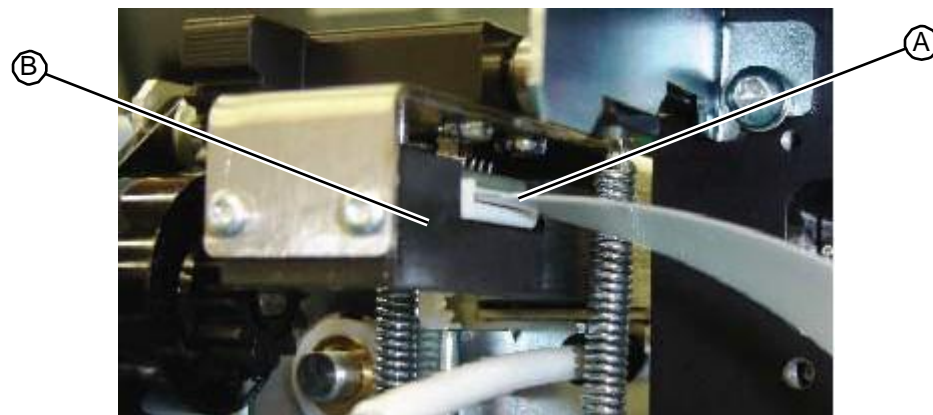
### 5.5.7.1 Removing the Tester Scanner Cable

- No tools required

TASK

1. Remove the upper hood (see “Removing the Upper Hood” on page 5-3).
2. Remove the tester assembly (see “Removing the Tester Assembly” on page 5-131).
3. From the back of the tester assembly, remove the flat scanner cable from the scanner module.

**Figure 5.254:**Scanner cable connection to the tester scanner module



4. Gently pull the tester interconnect board out of the tester fixture mount just enough to be able to access the cable connections on the back of the board.
5. Discard the flat flexible scanner cable.

RELATED LINKS:

“Replacing the Tester Scanner Cable” on page 5-150

“Tester Station” on page 1-24

### 5.5.7.2 Replacing the Tester Scanner Cable

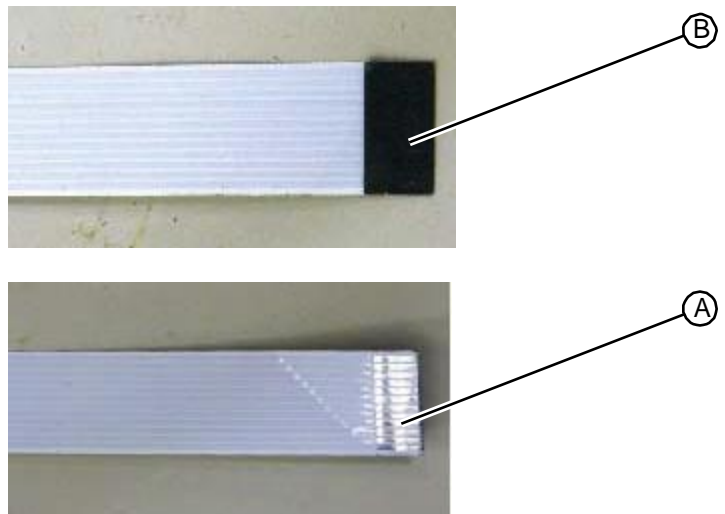
- No tools required

---

TASK

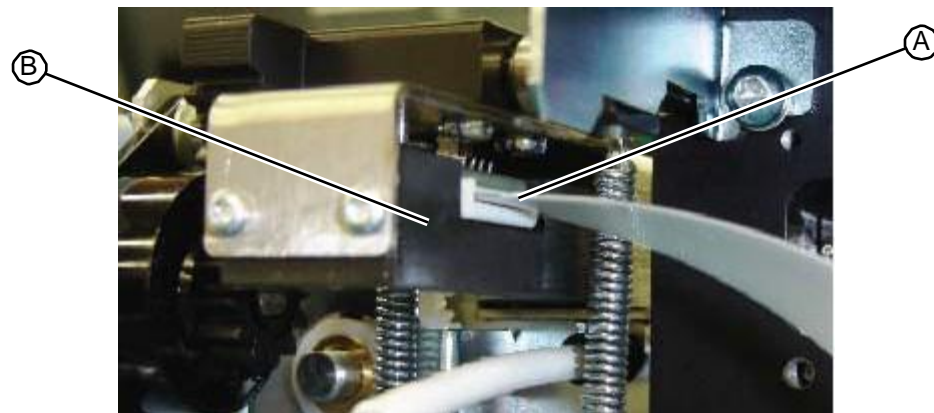
1. From the back of the tester assembly, align the scanner cable so that the side with the gold/silver strip faces up and the side with the black strip faces down.

**Figure 5.255:** Proper orientation for scanner cable



2. Insert the scanner cable into the white connector on the scanner module.

**Figure 5.256:** Scanner cable connection to the tester scanner module



3. Replace the tester assembly (see “Replacing the Tester Assembly” on page 5-134).
  4. Replace the upper hood (see “Replacing the Upper Hood” on page 5-4)
- 

RELATED LINKS:

- “Removing the Tester Scanner Cable” on page 5-149
- “Tester Station” on page 1-24

## 5.5.8 Tester Top Latch

### 5.5.8.1 Removing the Tester Top Latch

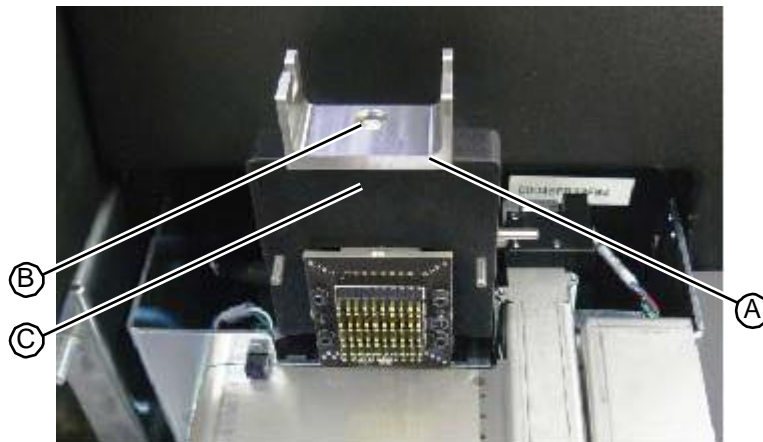
- T15 torx driver

---

TASK

1. Remove the tester cover.
2. Using a T15 torx driver, remove the single fastener, washer, and lock washer that secures the tester to latch to the tester fixture mount.

**Figure 5.257:**Fastener that secures the tester top latch to the tester fixture mount



3. Lift the tester top latch up off the tester mount fixture and discard.

RELATED LINKS:

- “Replacing the Tester Top Latch” on page 5-151
- “Tester Station” on page 1-24

### 5.5.8.2 Replacing the Tester Top Latch

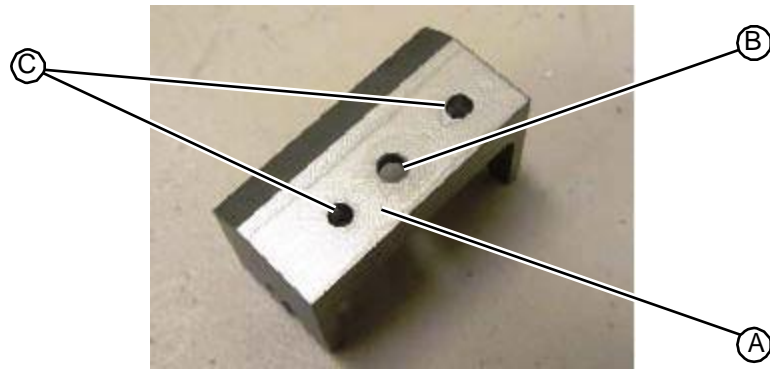
- T15 torx driver

---

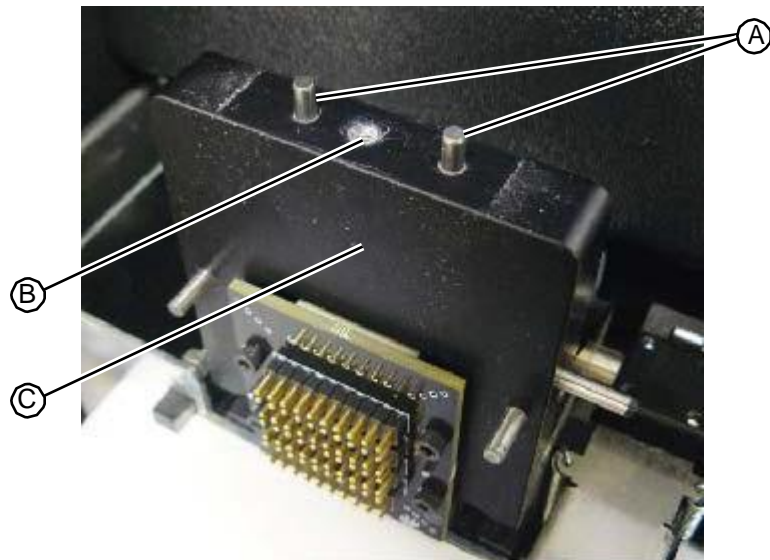
TASK

1. Align the mounting holes on the bottom of the tester top latch with the to locating pins and the fastener hole on the top of the tester fixture mount, and insert the tester top latch onto the fixture mount.

**Figure 5.258:**Mounting holes on the bottom of the tester top latch

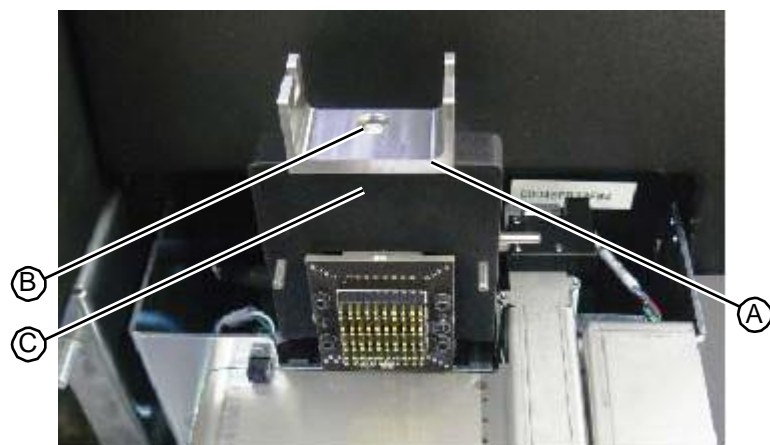


**Figure 5.259:**Mounting hole and locating pins on top of test fixture mount



2. Insert a lock washer and a flat washer into the fastener mounting hole.
3. Using a T15 torx driver, insert and tighten the fastener.

**Figure 5.260:**Fastener that secures the tester top latch to the tester fixture mount



4. Replace the tester cover.

RELATED LINKS:

“Removing the Tester Top Latch” on page 5-151

“Tester Station” on page 1-24



