Example for interpreting a Test Failure and implementing the Required Operator Response

Table A-1 provides the Test Failure Codes and required operator responses which may allow the control unit to pass the periodic self-test.

The example code 0074 displayed in Figure A-1 means the following:

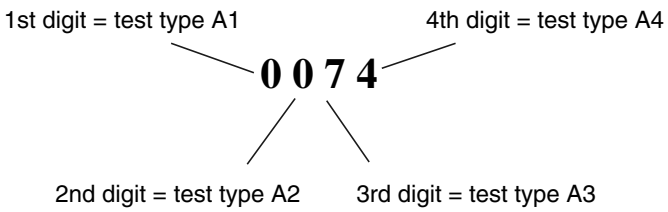


Figure A-1. Test Type Positions in a Test Failure Code

Note: Perform the required Operator Response starting with the fourth digit.

1. Fourth digit (test type A4): The number 4 = an A4 failure number 4 has occurred.

   Required Operator Response (see Table A-1): Reseat the return line into the air detector. If air is present in return line, the air must be removed. Follow the instructions given in Air Removal Procedures, Return Line During Air in Blood Alarm in the Troubleshooting chapter

2. Third digit (test type A3): The number 7 = an A3 test type failure 7 has occurred.

   In Table A-1 under the A3 column and the number 7 and then perform the Required Operator Response on the pressure pod(s) associated with the A3 test type failure 7.

   Required Operator Response (see Table A-1): If this alarm occurred in Prime Test, unclamp all lines and press RETEST. If the alarm recurs in Prime Test, or occurs in Run mode, reseat the pressure pods then perform the Diaphragm Reposition Procedure on the return, access, and filter pressure pods as required. After repositioning the pressure pods press RETEST.

3. Second digit (test type A2): The number 0 = there is no A2 test type failure. Required Operator Response (see Table A-1): None.

4. First digit (test type A1): The number 0 = A1 is always 0.

Table A-1. Self-test Failure Codes

Periodic Self Test Failure Due to:				Operator Response
A1	**A2**	**A3**	**A4**	
0	0 or 1		Any Digit Other Than 0. (1 thru 9 or A thru F)	Reseat the return line into the air detector. If air is present in return line, the air must be removed. Follow the instructions given in Air Removal Procedures, Return Line During Air in Blood Alarm in the Troubleshooting chapter. If A3 is 0, press RETEST. If alarm recurs, end treatment via DISCONNECT; call for service.
				In Prime Test, unclamp all lines and press RETEST. If the alarm recurs in Prime Test, or the alarm occurs in the Run mode, reseat the pressure pods and perform the Diaphragm Reposition Procedure on the corresponding pressure pod(s) listed below and press RETEST. (For instructions, see Diaphragm Reposition Procedure in the Troubleshooting chapter.) If alarm recurs, end treatment via DISCONNECT; call for service.
		1		Return
		2		Access
		3		Return and Access
		4		Filter
		5		Return and Filter
		6		Access and Filter
		7		Return, Access, and Filter
		8		Effluent
		9		Return and Effluent
		A		Access and Effluent
		B		Return, Access, and Effluent
		C		Filter and Effluent
		D		Return, Filter, and Effluent
		E		Access, Filter, and Effluent
		F		Return, Access, Filter, and Effluent
				Press RETEST. If alarm recurs, end treatment via DISCONNECT; call for service.
				A1 is always 0. No operator response is required
0	0	0	0	**Press RETEST.** If alarm recurs, end treatment via DISCONNECT; call for service.

Diaphragm Reposition Procedure

The Diaphragm Reposition procedure can be performed if a pressure pod is accidentally removed after priming is complete, or if an Alarm screen identifies one or more pods as a possible cause of the alarm. The procedure is done separately for each affected pod.

The Reposition Procedure moves the pod diaphragm back to the center of the pod, so that pressure monitoring can again occur. The procedure also clears the pressure sensor housing of any debris that may be preventing a tight seal between the pod and the sensor housing.

Supplies Needed

- Isopropyl alcohol and lint-free cloth
- 20-gauge (or smaller diameter) needle attached to a syringe 5-ml or smaller
- Sterile saline (needed only for access and effluent pods)

Reposition for Access and Effluent Pods

(See Figure 19)

Follow the steps below to reposition the diaphragm of the *access line pod* (near lowest red sample site) or the *effluent line pod* (near upper yellow sample site).

1. Stop all pumps, then clamp the line below the affected pod and above the sample site of the pod.

   Note: Pumps might already be stopped.

2. Remove the affected pod from its pressure sensor housing.

   Note: Pod might already be removed.

3. Use a lint-free cloth and alcohol to clean the sealing cone inside the sensor housing.

4. Use the needle and syringe to reposition the diaphragm of the affected pod. When the procedure has been completed, resume treatment, or press the appropriate softkey on the Alarm screen.

CAUTION

Use aseptic technique when repositioning with needle and syringe.

a. Draw 3 cc saline into the a 5-cc syringe or smaller.

b. *Inject* a maximum of 1 cc of saline into the color-coded sample site between the clamps. (If resistance is felt, remove 1/2 cc volume.)

CAUTION

Injecting more than 1 cc of saline may move the diaphragm beyond the center point of the pod.

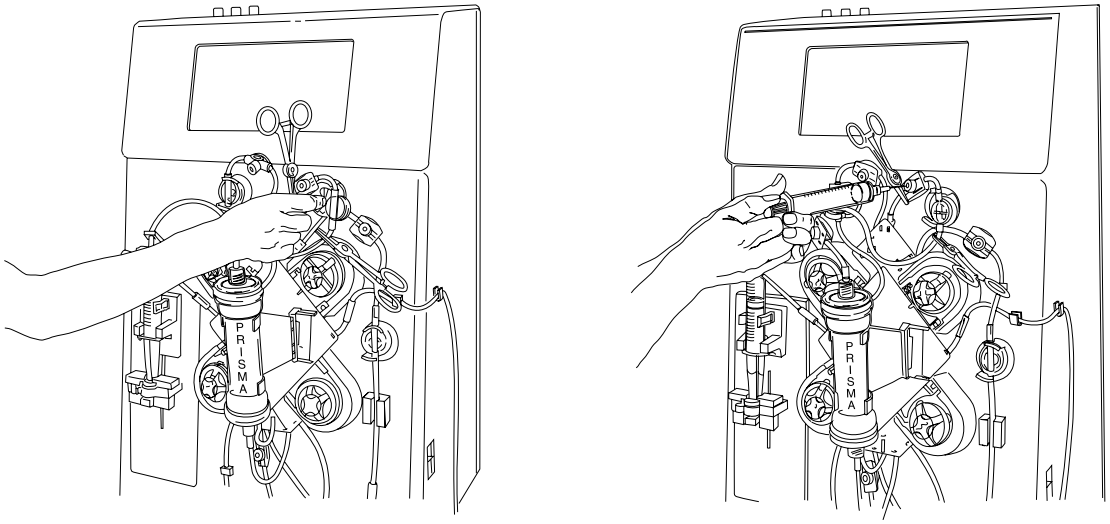
c. Remove the needle from the sample site. Reinstall the pressure pod in the correct pressure sensor housing and remove the clamps from the line.

d. Resume the treatment.

e. *For access pod reposition only:* Perform the following test to ensure proper functioning of the access pod. When the control unit is in Run mode, place a clamp on the access line between the access pressure pod and the cartridge. The Warning: Access Pressure Extremely Negative alarm should occur. Unclamp the access line and press the CONTINUE softkey on the Warning screen. Verify that the alarm is cleared (Warning screen leaves the display, green light illuminates).

WARNING

If the Warning: Access Pressure Extremely Negative alarm fails to occur, the access pod diaphragm has been repositioned incorrectly. Perform the reposition procedure again.



A

Clean the sealing cone inside the pressure sensor housing.

B

Inject or remove fluid via the appropriate sample site (depending on which pod is being repositioned).

Figure 19. Repositioning a Pressure Pod

Reposition for Filter and Return Pods

(See Figure 19)

Follow the steps below to reposition the diaphragm of the *filter pod* (near upper red sample site) or the *return line pod* (near blue sample site).

1. Stop all pumps, then clamp the line below the affected pod and above the sample site of the pod.

   Note: Pumps might already be stopped.

2. Remove the affected pod from its pressure sensor housing.

   Note: Pod might already be removed.

3. Use a lint-free cloth and alcohol to clean the sealing cone inside the sensor housing.
4. Use the needle and syringe to reposition the diaphragm of the affected pod. When the procedure has been completed, resume treatment, or press the appropriate softkey on the Alarm screen.

CAUTION

Use aseptic technique when repositioning with needle and syringe.

   a. Insert the needle with empty syringe into the color-coded sample site between the clamps.
   b. *Remove* a maximum of 1 cc of fluid (if resistance is felt, reinject 1/2 cc).

CAUTION

Removing more than 1 cc of fluid may move the diaphragm beyond the center point of the pod.

   c. Remove the needle from the sample site. Reinstall the pressure pod in the correct pressure sensor housing and remove the clamps from the line.
   d. Resume the treatment.
   e. Perform the following test to ensure proper functioning of the pressure pod. When the control unit is in Run mode, place a clamp on the line below the affected pressure pod. An Extremely Positive Warning alarm should occur. Unclamp the line and press the CONTINUE softkey on the Warning screen. Verify that the alarm is cleared (Warning screen leaves the display, green light illuminates).

WARNING

If the Extremely Positive alarm fails to occur, pressure pod diaphragm has been repositioned incorrectly. Perform the reposition procedure again.