

Type 57AV3 Model 1006

UNIVERSAL TEST UNIT

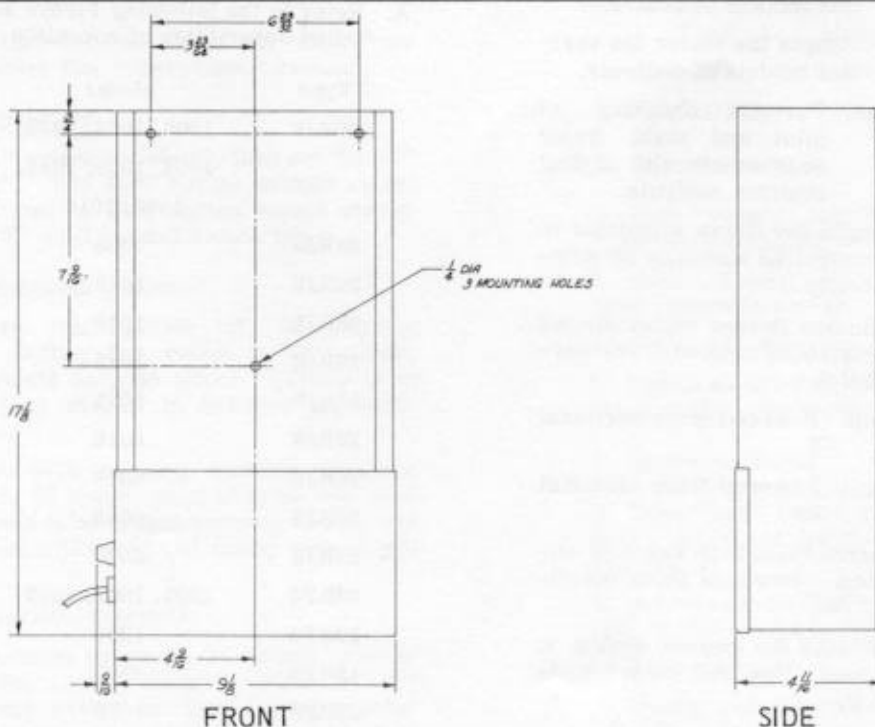
Features

Fireye Universal Test Unit type 57AV3 Model 1006 provides a simple convenient means for testing Fireye controls type 26RJ8, 26SJ5 and 29RF5 in the field. When a Fireye control chassis is plugged into the test unit, a complete burner firing operation can be simulated and checked through the use of switches and indicating lamps on the panel.

Specifications

Supply Voltage: 120 volts, 60 cycle.
 Power Consumption (with Control): 40va
 Ambient Temperature Limit: 125°F.
 Fuse: Type 3AG, 1 amp 250 volt.
 Lamp (Flame Simulator): NE-51
 Shipping Weight: 10 lbs.

Dimensions



Installation

1. For best results, the Universal Test Unit should be mounted on a vertical surface with screws or bolts at the mounting holes provided. It need not be mounted if it is desired to use it as a portable tester.

2. The type 57AV3 frame must be securely grounded.

3. For Fixed installations, provide grounding type 3-wire receptacle.

4. For Portable use where only 2 wire receptacles are available, use 3 wire to 2 wire adapter and ground the pigtail. When the adapter is inserted in a non polarized receptacle, insure that the wider Blade is at ground potential.

Identification of switches and indicating lamps.

1. Power Switch - Simulates the main disconnect switch. Connected between line fuse and terminal 4.
2. Limit Switch - Simulates all line voltage limit and operating controls. Connected between terminals 3 and 4.
3. Control Switch - Simulates operating control. (PAFI)*
4. Air Flow Switch - Simulates an air flow switch. Connected in the R circuit.
5. LFS Switch - Simulates starting interlock such as low fire start switch. Connected in the B circuit.
6. Selector A Switch - Adapts the tester for various models of controls.
7. Selector B Switch - Adapts the tester for various models of controls.
8. Main Scanner' Switch: Permits checking of pilot and main flame scanner circuits of dual scanner controls.
9. Signal Switch: Permits the flame simulator to be controlled manually or automatically.
10. Motor lamp: Indicates Burner motor circuit energized-Powered from terminal 8.
11. Ignition No. 1 Lamp: Powered from terminal 5.
12. Ignition No. 2 Lamp: Powered from terminal 6.
13. Fuel Lamp: Indicates Main fuel valve is energized. Powered from terminal 7.
14. Alarm Lamp: Indicates the lockout switch is tripped. Powered from terminal 9.

15. Modulator Low, Auto, High lamps: Indicates the position of the modulator. Connected to terminals 10, 11, 12, 13.



Procedure for testing Fireeye type 26RJ8, 29RF5 controls.

- A. Refer to the following Fireeye Bulletins for detailed description of operation.

Type	Model	Bulletin
26RJ8	1000, 1002, 1003, 1004, 1005, 1006, 1009, 1011	CT-2
26RJ8	1008	CT-2
26RJ8	1012	CT-2
26RJ8	1016	CT-2
26RJ8	1018	CT-2
26RJ8	6012	CP-52
26RJ8	6016	CP-53
26RJ8	6018	CP-51
26RJ8	6058	CP-58
26RJ8	6070	CP-59
29RF5	1000, 1002, 1005	CT-2
29RF5	1001	CT-2
29RF5	1009	CT-2
29RF5	1015	CT-2
29RF5	6009	CF-36
29RF5	6015	CF-37

*For 26RJ8 6070 - Simulates Purge Air Flow Interlock.

B. Tester Switch Positions

Selector Switch Positions For Normal Operation

	26RJ8	26RJ8	26RJ8	29RF5	26RJ8	26SJ5
	1009	1012	1000, 1003	1000	6070	1000
	6009	1016	1004, 1005	1002		6000
	29RF5	6012	1006, 1008	1005		
	1001	6016	1011, 1018	1015		
Selector Switch	1009		6008, 6018	6015		
	6009		6058			
A	2	1	1		1	1
B	1	2	1		3	1
Signal	Auto	Auto	Auto		Auto	Auto

C. Special Notes.

1. Turn "power" switch off before installing or removing control chassis.
2. With any but 6000 series models, leave "limit" Switch off for about 30 seconds after power is turned on, to allow for tube warmup.
3. With Type 29RF5 Models 1001, 1009 and 6009 the secondary fuel valve circuit is monitored by the "Mod Auto" indicator lamp.
4. Reset the control lockout switch if it is tripped.
5. Place AC line plug in 115 or 120 volt socket.
6. With 26RJ8, Model 6070, for "purge air flow interlock" use "PAFI" switch and for "running air flow" use "Air Flow" switch.
7. CAUTION: SELECTOR SWITCH B SHOULD BE IN PROPER POSITION ACCORDING TO TABLE BELOW BEFORE INSTALLING A CONTROL CHASSIS. OTHERWISE DAMAGE TO CONTROL WILL RESULT.

D. Operating Tests.

1. Recycle

Open and then reclose either the "Limit" or (where applicable) The "Oper. Cont." switch.

2. Safe Start Interlock

Set "Signal" switch to "Man.", then set "Limit" switch to "On". The 1000 series models should not start. Timer of 6000 series should stop at dial position "X" until lockout switch trips.

3. Starting Interlocks (External)

With "Start. Int." switch off, no program should start. Setting this switch to "Off" during a program should have no effect. (There is no starting interlock circuit in 26RJ8-1012, 1016, 6012 and 6016).

For 26RJ8 - 6070 opening starting Interlock switch prior to 53 second point of cycle will have no effect. Should it be opened between 53 sec. and 59 sec. program will cease and safety lockout will follow.

4. Starting Interlock (Internal)

During a normal program, at or just prior to dial position No. 1, set "Power" switch to "Off" and immediately return to "On". Master relay (RL1) should drop out and should not pull in again until timer has reset to dial position Zero.

5. Air Flow Interlock

With "Air Flow" switch off, master relay (RL1) should drop out before dial position No. 1 and neither ignition nor fuel valve should be energized. (Exception: In 26RJ8-1012 and 1016 the program is normal to dial position No. 2 at which point the action is the same as for ignition failure). For 26RJ8-6070 opening of air flow switch after 70 seconds will cause safety Lock-out.

6. Ignition Failure

Set up for normal operation except set "Signal" switch to "Off". At dial position No. 2, ignition should turn off; fuel valve should not turn on. Lockout switch should trip within about one minute and timer will not advance beyond dial index (.) until lockout switch trips.

7. Flame Failure

During normal program set "Signal" switch to "Off" anytime after dial position No. 2. Fuel Valve (and ignition if energized at the time) should be De-energized within 4 seconds. Lockout ensues in the manner described under Ignition Failure.

8. Pilot Scanner Circuit

(Applies only to 26RJ8-1012, 1016, 6012 and 6016). Start normal program except set "Main Scanner" switch to "Off". Operation should be normal until dial position No. 3, at which point the control should react exactly as if there were flame failure.

Procedure for testing Fireeye type 26SJ5 controls.

A. Refer to the following bulletins for detailed description of operation.

Type	Model	Bulletin
26SJ5	1000	CT-2
26SJ5	6000	CP-54

B. Special Notes

1. Turn "Power" switch off before installing or removing control chassis.
2. Leave "Limit" switch off for about 30 seconds after power is turned on, to allow tube warm up.
3. Place AC line plug in 115 or 120 volt socket.
4. Install an external jumper between terminals 3 and 8 on the control chassis.

C. Operating Tests

1. Turn "LFS" switch to On position. The Master Relay (RL1) and the flame simulator will be energized.
2. As soon as the flame relay (RL2) is energized, turn "LFS" switch to Off position.
3. Flame Failure

During normal operation, turn "Signal" switch off. Fuel valve should be de-energized within 4 seconds, and alarm actuated.