



U.S. Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

WP-27 DB

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Republic	Model RC-3
	Serial No. 1000	Nationality and Registration Mark N5166B
2. Owner	Name (As shown on registration certificate) Davey Darrell L Davey Deborah A	Address (As shown on registration certificate) 6613 Santa Rosa Rd Camarillo Ca 93012-5672

3. For FAA Use Only

Fire detector

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7

22 Sep 99 *Michael J. Bell*
DATE SIGNATURE OAK-FSDO

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				<input checked="" type="checkbox"/>
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address Kenneth L. Thompson PO Box 411 Vineburg, Ca. 95487	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 545767051
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date <i>9-22-99</i>	Signature of Authorized Individual <i>Kenny Thompson</i>
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7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is APPROVED REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection <i>9-22-99</i>		Certificate or Designation No. 552273581	Signature of Authorized Individual <i>Douglas P. Smith</i>		

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Republic RC-3 N5166B Ser.# 1000

2. Description: Installed Kenair KA-FW1 Fire Warning System. Panel unit Kenair P/N FW1-A with MS25041-2 press to test indicator light was installed in upper instrument panel. Probe, Kenair P/N FW1-B, 250 degree F. non-adjustable, installed centered, 4" from top edge in Simufflight, Seattle STC# SA615NW modified vertical firewall aft of rear spar with 3ea. AN526-1032 truss head screws and MS21042-3 nuts. A 1 amp Potter and Brumfield circuit breaker P/N W23X1A1G1 is used for circuit protection and located in lower instrument panel. Wire used is 22 AWG conforming to MIL-W-22759/16 from 12 v.d.c. buss to panel unit and 22 AWG shielded conforming to MIL-C-27500 is used from panel unit to probe. This modification is compatible with the changes of STC# SA615NW. Work done in accordance with Kenair KA-FW1 Installation and Operation Manual FW1 dated 9-2-99 and AC 43.13 1A, Ch. 11, section 2, para.424, 429, section 3, para. 442, 443, 445 thru 451, fig. 11.7a, section 7, para. 514 thru 520, AC 43.13 2A, ch.11, para. 211 thru 214.
3. Control, operation information: Reference Kenair KA-FW1 Installation and Operation Manual FW1 dated 9-2-99
4. Servicing information: None
5. Maintenance instructions: Must be inspected annually in accordance with FAR 43 appendix D and FAR part 91.
6. Trouble shooting information: Reference Kenair KA-FW1 Installation and Operation Manual FW1 dated 9-2-99
7. Removal and replacement information: None
8. Diagrams: None
9. Special inspection requirements: None
10. Application of protective treatments: None
11. Data: None
12. List of special tools: None
13. For commuter category aircraft: N/A
14. Recommended overhaul periods: No additional overhaul time limitations
15. Airworthiness limitation section: No additional airworthiness limitations
16. Revision: A letter will be submitted to the local FSDO with a copy of the revised FAA form 337

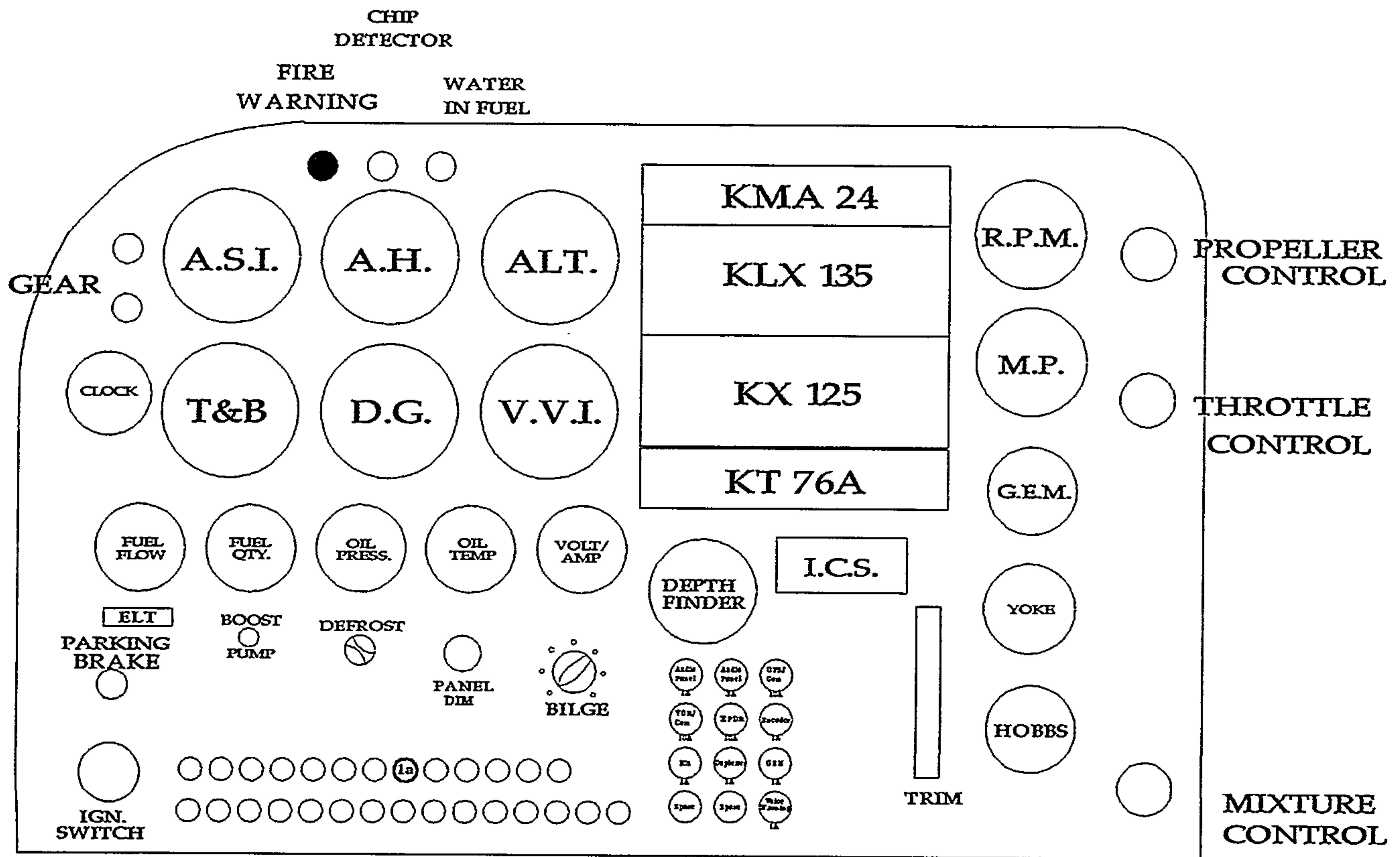
Pg. 1 of 3

Additional Sheets Are Attached

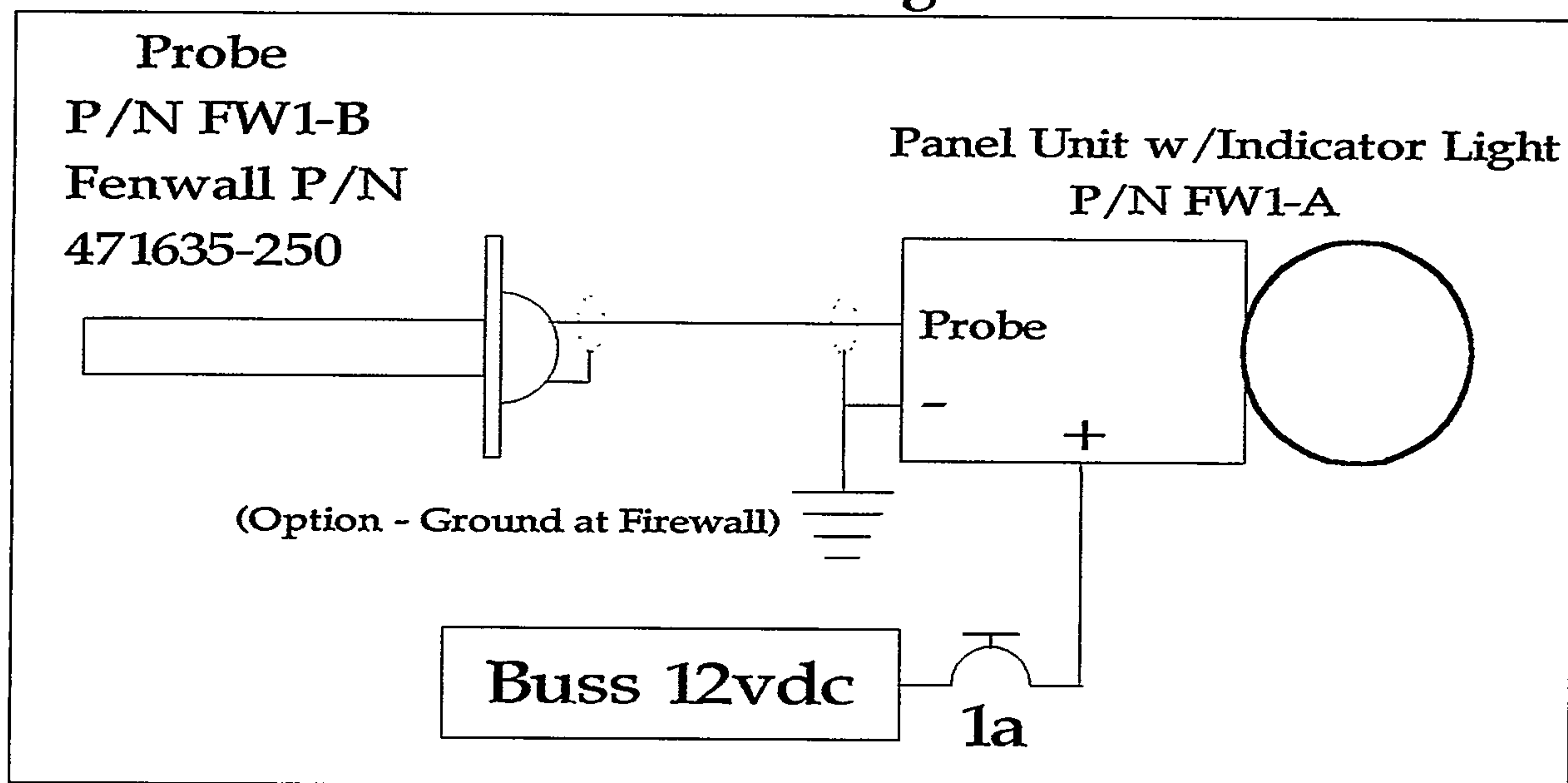
*U.S.GPO:1994-568-012/00019

RC-3 N5166B SER#1000

Panel Location of Kenair Fire Warning Unit KA-FW1 and Electrical Diagram



Electrical Diagram



9-22-99

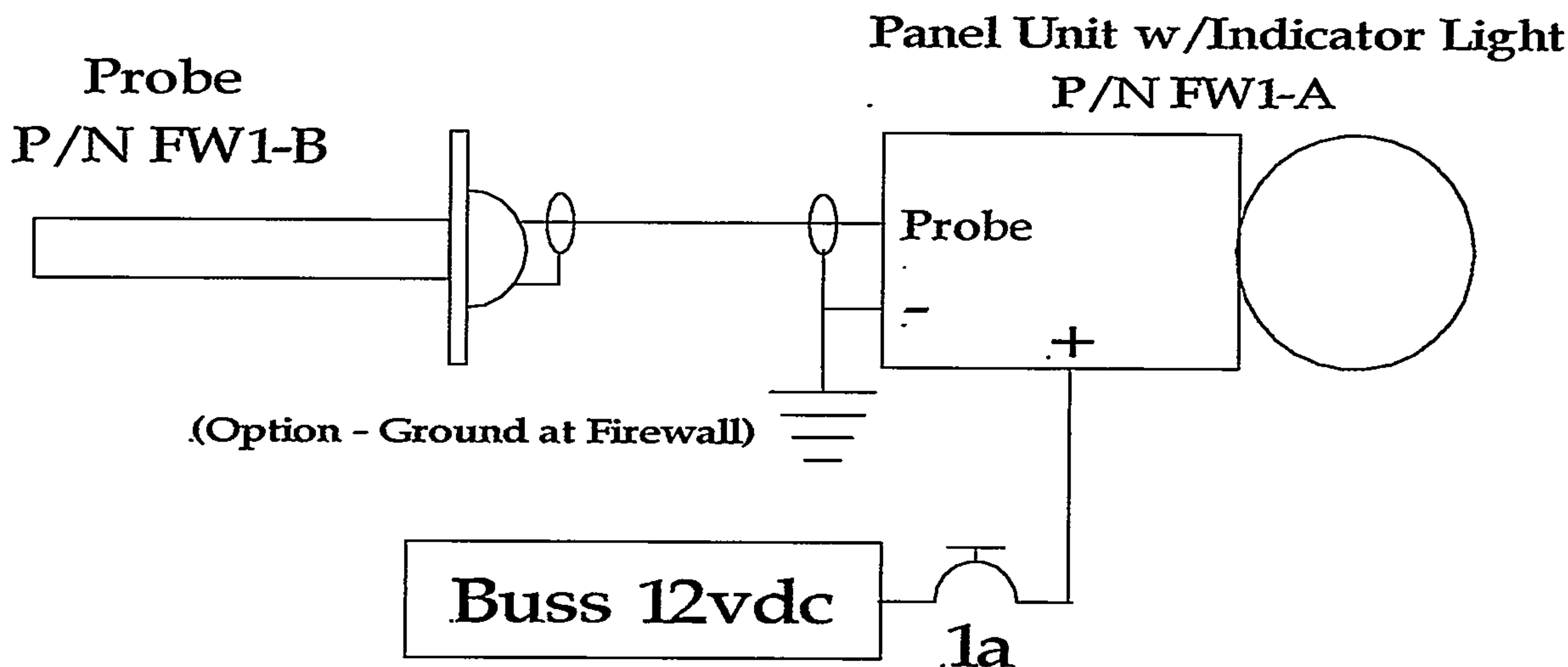
Kenair

KA-FW1 Fire Warning System

Installation and Operation Manual FW1 9-2-99

Note: The installation of the KA-FW1 Fire Detection System must be done by a person authorized by FAR 43.3

1. Install Fire Warning panel unit P/N FW1-A in suitable location in instrument panel. Reference AC 43.13 2A, ch. 11, para. 211 thru 214.
2. Locate and install fire warning probe P/N FW1-B in engine compartment on the vertical section of the firewall aft of rear carry thru spar, centered, appx. 4" from top with aircraft quality hardware using a minimum size of 6-32 screws. It is permissible to seal the probe mounting flange to firewall with an acceptable sealing compound. PRC 1422 B2 polysulfide compound or equivalent is recommended. Reference Simuflight, Seattle STC# SA615NW drawing# SS-1000 rev. A.
3. Using a minimum size of 22 AWG shielded wire that conforms to MIL-C-27500, make electrical connections from probe to panel unit as shown in fig.1. The shield is used for the conductor to ground probe to panel unit. An optional method of grounding the probe to the airframe at the firewall allowing the use of a single conductor wire min. 22 AWG that conforms to MIL-W-22759/16 from probe to panel unit is acceptable if the grounding at the firewall is sufficient. Use 22 AWG min. MIL-W-22759/16 wire to connect the 12 vdc buss/circuit protection/panel unit/ground to complete the circuit. The circuit protection device may be either a 1 amp fuse or 1 amp circuit breaker. Secure wires with plastic tie-wraps or equivalent. The use of high quality crimp on butt splice connectors is recommended. Reference AC 43.13 1A, chapter 11, sections 1 thru 7.
4. Make required entries in airframe maintenance records, equipment list, and weight and balance document. A FAA form 337 is required and must be submitted. Reference FAR Part 43.9
5. Test system by removing probe P/N FW1-B energize the system and using a suitable heat source, a heat gun is recommended, and a thermometer to monitor the actual temperature, heat the probe to 250 degrees F. At 250 degrees F., +/- 5 degrees, the indicator light should illuminate.
6. Troubleshooting - Disconnect wire to probe and with system energized make contact with airframe ground. If indicator light illuminates, replace probe. If indicator light fails to illuminate, replace light bulb or panel unit P/N FW1-A .
7. Operation of KA-FW1 Fire Warning System is automatic. When the temperature at the probe reaches appx. 250 degrees F. the indicator light will flash. If the warning light comes on in flight do not panic and continue to fly the airplane. This does not mean there is an actual fire. It only indicates that the temperature at the probe is appx. 250 degrees F. It would therefore be prudent land as soon as possible to investigate but do not lose control of aircraft as that is more dangerous than a fire. The Fire Warning System can be disabled by removing fuse/pulling circuit breaker.



9-22-99