

United States of America
Department of Transportation -- Federal Aviation Administration
Supplemental Type Certificate

Number SA02785CH

This certificate issued to Hartzell Engine Technologies LLC
2900 Selma Highway
Montgomery, Alabama 36108

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

See Type Certification Data Sheet No. A7SO for complete certification basis.

Original Product - Type Certificate Number: A7SO

Make: Piper Aircraft

Model: PA-34-200, PA-34-200T, PA-34-220T

Description of Type Design Change:

Installation of C&D Associates 24-volt combustion heater pump P/N CD52050 in accordance with Installation Instructions IN52050, no revision, dated November 23, 2009 or later FAA approved revision.

Limitations and Conditions:

1. Compatibility of this design change with previously approved modifications must be determined by the installer.
2. Annually check mounting security and pump fuel leakage.
3. Refer to the Piper Maintenance Manual for heater fuel pump maintenance.
4. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: November 19, 2009

Date reissued: February 11, 2016

Date of issuance: December 2, 2009

Date amended:

By direction of the Administrator

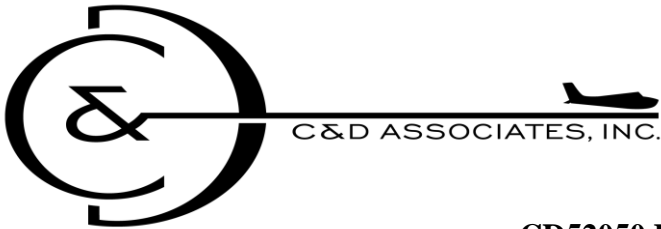



(Signature)

Timothy P. Smyth
Manager,
Chicago Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

**CD52050 Pump, 24 VDC Fuel Kit**

FOR PIPER PA-34-200, PA-34-200T, PA-34-220T

Replaces Janitrol P/N 91E92-1, Piper P/N 37167-058, 84251-003, 461-736, 461-742, 481-701, 481-842

1. INTRODUCTION:

- A. The new C&D Associates, Inc. fuel pump kit P/N CD52050/461-771 containing fuel pump CD29110/461-773 is an FAA-PMA direct replacement for the existing pump. Its appearance may be different than the pump it replaces however the inlet fuel line and outlet connection is compatible. The fuel pump electrical connection has a fuse holder containing a three-amp slow blow fuse.

2. INSTRUCTION OF CONTINUED AIRWORTHINESS:

- A. Refer to the Piper PA-34-200, PA-34-200T, PA-34-220T Seneca I, II, III, IV/V Maintenance Manual for "Heater Fuel Pump Maintenance."
- B. Annually check mounting security and inspect for evidence of fuel leakage. Any leakage of the pump assembly is cause for replacement. The fuel pump is not repairable and cannot be overhauled. Replace filter cartridge, P/N CD21346, every 200 hrs.
- C. In the event that the fuse needs to be replaced a 3 amp slow blow fuse should be used (C&D P/N CD21584).

3. REMOVAL:

- A. Piper Service manual requires fuel selectors to be placed in the off position and that the right fuel tank be drained of all fuel.
- B. Disconnect the electrical lead from pump(s).
- C. Disconnect the aircraft fuel lines from the inlet and outlet of pump(s). Cap the aircraft fuel lines to prevent contamination.
- D. Discard the fuel box cover P/N 37167-051 and inlet fuel line P/N 83744-159.

4. INSTALLATION:

WARNING: DO NOT USE TEFLON TAPE ON ANY FUEL CONNECTIONS. Using it will void warranty. REF: AC43-13-1B Paragraph 8-38f and torque fuel lines in accordance with section 2 table 9-2.

- A. Install the new unit in accordance with the Piper Service manual. Reverse the procedures of removal for installation.
- B. Make sure pump is grounded well to airframe.
 - 1) Clean metal under pump legs and grounding strap to ensure grounding is complete.
- C. Install the new 3/8" OD inlet fuel line P/N 21741/699-126 by applying a torque wrench value to the AN818-6D "B" nuts of 110-130 inch pounds while holding the inlet filter housing stationary with a 3/4 inch wrench .
- D. Reinstall the existing fuel regulator inlet onto the fuel pump and reconnect the outlet fuel line to the regulator. Torque the 1/4" OD fuel line "B" nut (AN818-4D) to 50-65 inch lbs.
- E. Connect the electrical lead, containing a 3-amp slow blow fuse to the pump.

5. TESTING AFTER INSTALLATION

- A. Place 5 gallons of fuel in aircraft.
- B. Disconnect the fuel line from the heater and direct the end into a suitable safe container. Turn the heater on while observing the fuel discharge until all air and preservatives are purged from the system.
- C. Reconnect fuel line to heater.

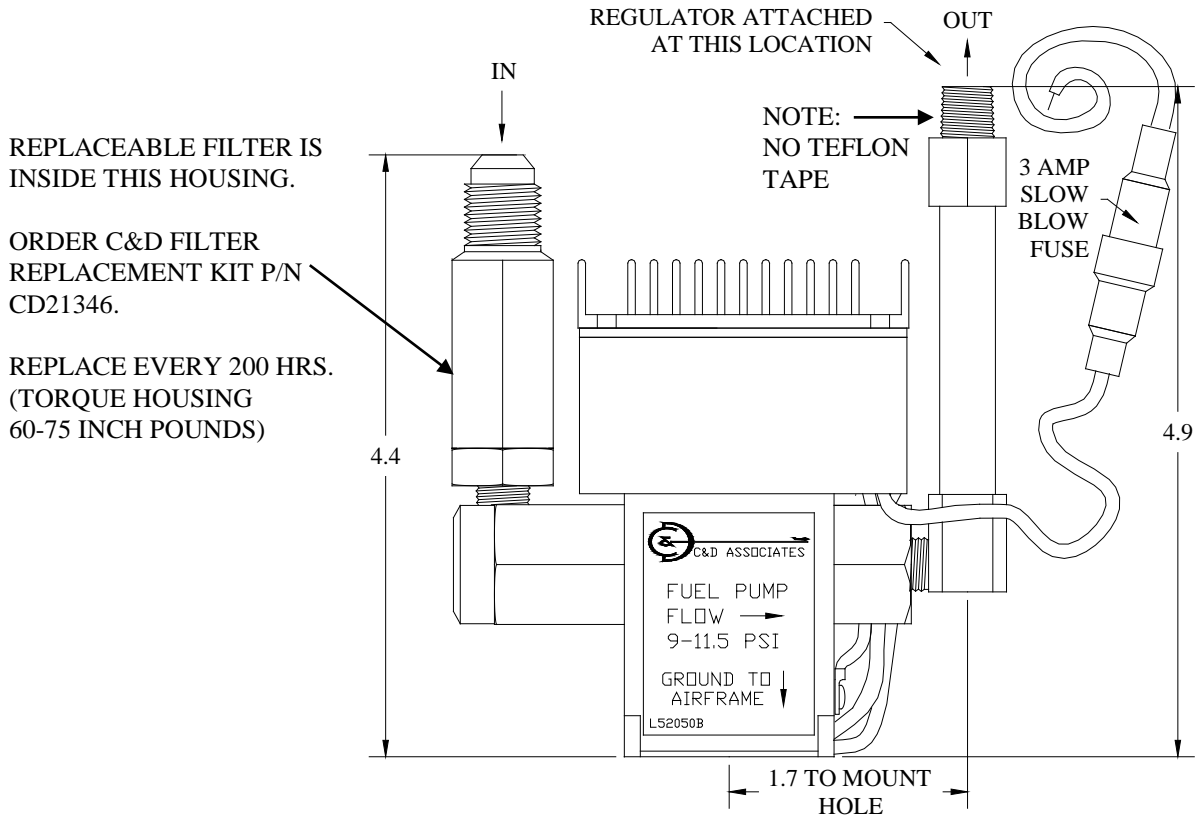
NOTE: If a fuel pressure check is desired, a 15-PSI gauge should be teed in between the fuel pump and heater regulator. At this location pressure will read pump pressure of 9-11 PSI while heater is running. If the gauge is teed in between the remote fuel regulator shut off valve and the heater, it will read regulated pressure which should be 7.5 PSI \pm .5 when heater is running.



- E. Operate heater and check for fuel leakage and proper operation.
- F. Install the new fuel box cover P/N 21740/652-682. Complete installation in accordance with Piper service manual.

5. ELECTRICAL

- A. Specifications of pump are 24-28 VDC at 1 amp draw.



6. CORE:

- A. If unit is not under warranty, discard removed pump, [(1) C3069x4x2 Nipple (476-716)], [(2) TSE01-25 Seal Nuts (688-409)] and [(1) AN816-6D Nipple (476-662)] as they are not used in the new installation.

DOCUMENTATION AND PARTS REQUIREMENT TABLE

| DOCUMENTATION | | Quantity |
|---------------|-----------------------------------|-------------------|
| 1. | PMA SUPPLEMENT # 63 | ___ |
| 2. | Installation Instructions IN52050 | ___ |
| PARTS | | S/N |
| 1. | (1) Fuel Pump Assembly (24v) | 29110/461-773 ___ |
| 2. | (1) Cover | 21740/652-682 ___ |
| 3. | (1) Fuel Line | 21741/699-126 ___ |

Initials: _____ Date: _____