

SERVICE MEMORANDUM NO. 67  
ELIGIBLE BATTERIES

Technical aspects of this Service Memorandum are DER approved.

DATE: May 9, 2005

SUBJECT: Batteries eligible for installation in Ercoupe/Forney/Alon/Mooney M10 aircraft.

The Ercoupe 415-C and Ercoupe 415-CD were originally certified with the following batteries:

- |                    |              |
|--------------------|--------------|
| (a) Exide 6-AC-7-1 | 16 lb. (+57) |
| (b) Reading R24-L  | 25 lb. (+55) |

The Ercoupe/Forney/Alon/Mooney Model - 415-D, Models - E and G, Model - F-1, Model - F-1A, Models - A-2 and A-2A, and Model - M10 aircraft were originally certified with the following batteries:

- |                                    |              |
|------------------------------------|--------------|
| (a) Reading R24-L, 12 v. 24 a. hr. | 25 lb. (+55) |
| (b) Exide AC-54, 12 v. 24 a. hr.   | 22 lb. (+41) |

None of the batteries listed above are currently manufactured. Until now, the only way to install a currently manufactured aircraft battery in an Ercoupe/Forney/Alon/Mooney M10 has been through the field approval process. This Service Memorandum lists additional approved batteries for installation on these aircraft.

Aircraft originally equipped with the Exide 6-AC-7-1 battery must still use the field approval process to install a new manufacture battery of the same size and capacity. Univair is unaware of an aircraft style battery to replace the Exide 6-AC-7-1 battery.

Aircraft that were originally equipped with a Reading R24-L battery have the battery located in a battery box located below the luggage compartment (at station +55).

Aircraft that were originally equipped with an Exide AC-54 battery have the battery located under the left-hand seat between the seat beam and the main wing beam.

The Reading R24-L may be replaced with a Concorde CB-25 or a Concorde RG-25 battery without modification to the battery box or electrical connections. Note that the Concorde batteries use hex head screws and conical washers in place of the battery posts with wing nuts as used on the Reading R24-L battery.

The Exide AC-54 battery was equipped with a vent fitting for the overflow tube (P/N F54090-14). The Concorde CB-25 does not have a provision for connection to an overflow tube. Therefore, the Exide AC-54 battery may be replaced by the Concorde RG-25 battery only. The RG-25 battery does not need an overflow tube. When installing a Concorde RG-25 battery in place of the Exide AC-54 battery, the vent tube may be removed or tied off to the side of the battery. The original battery tray assembly (P/N F54091) may have rounded corners that will interfere with the square shape of the Concorde RG-25 battery. Similarly the different location of the battery terminals may not allow the use of the battery top assembly (P/N F54094 or 800314). When installing the Concorde RG-25 battery, the battery tray must have square corners and the top hold down assembly must not interfere with the battery terminals. The battery tray may have to be replaced with a F54091-101 battery tray assembly and the battery top hold down assembly may have to be replaced with a F54094-101 assembly.

The Concorde CB-25 is a dry charged lead acid battery of similar construction and maintenance requirements as the Reading R24-L and Exide AC-54 batteries. The Concorde RG-25 is a recombinant gas, valve regulated, sealed lead acid battery. It is permanently sealed at the factory. No additional electrolyte or water is required for maintenance of the RG-25.

The original equipment generators installed on Ercoupe/Forney/Alon/Mooney M10 series aircraft do not have capacity capable of properly charging extra capacity Concorde RG-25XC batteries. Therefore, the RG25XC batteries are not approved as alternates for RG-25 batteries.

Installation of replacement batteries:

Removal and installation of the Reading R24-L and Exide AC-54 batteries are the same as that detailed in the Ercoupe, Forney, Alon, or Mooney M10 Service Manual as appropriate. It is highly recommended that Service Bulletins 8 and 22 be complied with on applicable aircraft while the battery is being replaced.

Replacement of the existing battery with a Concorde CB-25 or RG-25 can be accomplished as follows:

1. Review maintenance procedures regarding removal and installation of battery in appropriate Ercoupe, Forney, Alon, or Mooney M10 Service Manual. Review Instructions for Continued Airworthiness for Concorde battery (Concorde drawing 5-0144 for CB-25 battery or Concorde drawing 5-0142 for RG-25 battery).

2. Gain access to and remove existing battery in accordance with instructions in appropriate Ercoupe, Forney, Alon, or Mooney M10 Service Manual.
3. Clean battery box or tray in accordance with instructions in appropriate Ercoupe, Forney, Alon, or Mooney M10 Service Manual.
4. For aircraft with battery box and battery box cover located at station +55, verify that wood spacers are attached to the inside of the battery box and check their condition. Replace if necessary with 415-54067 spacers. Verify that battery box cover has two wood spacers located on the center of the cover spaced approximately 2.75 inches apart. These spacers should have sponge rubber pads approximately 3/16 inch thick on their lower surfaces. Replace or install battery box cover spacers as required (part number 415-54076). Univair Service Kit SK-12 has battery box and cover spacers with attaching hardware.
5. Paint inside surfaces of battery box or tray with acid proof paint if required and allow to dry before installing battery.
6. Replace battery tray with tray with square corners if necessary.
7. Activate Concorde CB-25 battery as outlined in Concorde Instructions for Continued Airworthiness, drawing 5-0144. Concorde RG-25 battery is activated prior to shipment and ready for installation.
8. Install Concorde battery in battery box or tray with battery terminals in same orientation as original battery.
9. The Concorde batteries do not employ battery posts as the original batteries. The Concorde batteries use hex head screws and conical washers. Connect battery cables using the hex head screws and conical washers. Torque terminal bolts as noted on battery label. Always disconnect the ground terminal first and install the ground terminal last.
10. Install battery box top or hold down hardware as required by appropriate Ercoupe, Forney, Alon, or Mooney M10 Service Manual.
11. Voltage regulator adjustments remain unchanged with installation of a Concorde battery (see appropriate Service Manual).
12. Revise weight and balance. The Concorde CB-25 weighs 22 pounds. The Concorde RG-25 weighs 22.75 pounds.

## INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Instructions for continued airworthiness of the electrical system are detailed in the appropriate Ercoupe, Forney, Alon, or Mooney M10 Service Manual. Instructions for continued airworthiness of the Concorde CB-25 battery are contained in Concorde drawing 5-0144. Instructions for continued airworthiness of the Concorde RG-25 battery are contained in Concorde drawing 5-0142. Concorde also has available a Concorde Aircraft Battery Owner/Operator Manual. It is recommended that this Service Memorandum and the appropriate Concorde drawing be placed with the aircraft service manual for future reference.

## SUMMARY

Model	Original Approved Battery	Approved Replacement Battery	Battery Weight (pounds)	Battery Box/Tray	Battery Location (inches aft of datum)
415-C S/N's 1 thru 112	Exide 6-AC-7-1	Exide 6-AC-7-1	16		+57
415-C 415-CD 415-D  S/N's: 113 and up	Reading R24-L	Reading R24-L	25	415-54035 with Service Kit SK-12 spacers	+55
		Concorde CB-25	22		
		Concorde RG-25	22.75		
415-E 415-F 415-G F-1 S/N's: all F-1A S/N's 5715 thru 5729	Reading R24-L	Reading R24-L	25	415-54070 or F-54070	+55
		Concorde CB-25	22		
		Concorde RG-25	22.75		
F-1A S/N's 5730 and up  Alon A-2 S/N's: all  Alon A-2A S/N's: all	Exide AC-54	Exide AC-54	22	F-54091 bottom assy F-54094 top assy	+41
		Concorde RG-25	22.75	F-54091-101 bottom assy F-54094-101 top assy	
Mooney M10 S/N's: all	Exide AC-54	Exide AC-54	22	800312 bottom assy 800314 top assy	+41
		Concorde RG-25	22.75	F-54091-101 bottom assy F-54094-101 top assy	

INFORMATION AND PARTS AVAILABILITY:

Copies of Ercoupe, Forney, Alon, and Mooney M-10 Service Manuals are available from Univair Aircraft Corporation.

Copies of Ercoupe, Forney, Alon, and Mooney M-10 Service Memoranda and Service Bulletins are available from Univair Aircraft Corporation.

Contact Univair Aircraft Corporation for availability and pricing of parts for complying with Service Memorandums and Bulletins.

Contact Univair Aircraft Corporation for availability and pricing of Service Kits for Ercoupe, Forney, Alon, and Mooney M-10 aircraft.

Concorde CB-25 and RG-25 batteries are available from Univair Aircraft Corporation or other authorized distributors for Concorde batteries.

Concorde drawing 5-0142, drawing 5-0144, and Concorde Aircraft Battery Owner/Operator Manual are available from Concorde Battery Corporation at [www.concordebattery.com](http://www.concordebattery.com) (Adobe Acrobat Reader is required to view the documents).

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