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INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

MAINTENANCE MANUAL SUPPLEMENT

CONCORDE RG-380E/40GH-6, RG-380E/44GH-6, RG-380E/46GH-6, RG-380E/53GH-6, or
RG-380E/60GH-6

VALVE REGULATED LEAD-ACID BATTERIES INSTALLED IN

Gulfstream G280

NOTE: Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the Operator's Aircraft Maintenance Manual and the Operator's Aircraft Scheduled Maintenance Program. Any maintenance significant items that have periodic scheduled servicing, maintenance, or inspections are listed in section 5 of this document.

Revisions					
Rev.	Description	Date	Approved		
CONCORDE BATTERY CORPORATION, 2009 San Bernardino Road, West Covina, CA 91790					
TITLE: Instructions for Continued Airworthiness, Gulfstream G280, Battery Replacement			DWG No. 5-0663	REV NC	
CAGE CODE: 63017	DRAWN: PH 02/08/18	CHECKED: JBT 11/20/18	APPROVED: JBT 11/20/18	ISSUED: AT 11/20/18	SHEET: 1 OF 5

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1. **Scope:** This ICA, Maintenance Manual Supplement provides the additional data required to ensure satisfactory operation, maintenance, and repair of the Concorde RG-380E/40GH-6, RG-380E/44GH-6, RG-380E/46GH-6, RG-380E/53GH-6, or RG-380E/60GH-6 valve regulated lead-acid battery installed in Gulfstream G280 aircraft.
2. **Alteration Description:** Installation of a Concorde Battery System replacing original equipment lead acid batteries.

The Concorde Battery System consists of the following major components:

- a. Two RG-380E/(XX)GH* TSO-C-173a authorized batteries.
*RG-380E/(XX)GH =RG-380E/40GH, RG-380E/44GH, RG-380E/46GH, RG-380E/53GH, or RG-380E/60GH
- b. Two HCU-6 Heater Control Units, (TSO-C173a incomplete authorized).

3. **Safety Precautions:**

- a. **WARNING: LOW CAPACITY HAZARD.** Aircraft batteries are certified to have a certain minimum capacity for emergency operations in the event of an electrical generator system failure. Never use a battery that has less than 80% of rated capacity.
- b. **WARNING: ELECTRIC BURN HAZARD.** Lead-acid batteries are capable of delivering high currents if the terminals are shorted. The resulting heat can cause severe burns and is a potential fire hazard. Take the following precautions:
 - Do not place tools or metal objects across battery terminals.
 - Do not wear conductive rings, belt buckles, watches or other jewelry when servicing batteries
 - Wear insulated gloves and use insulated tools when servicing batteries.
 - Install battery terminal protectors whenever the battery is not connected in the aircraft or to the test equipment.
- a. **WARNING: DANGER OF EXPLODING BATTERIES.** Lead-acid batteries can produce explosive mixtures of hydrogen and oxygen while on charge or discharge, which can explode if ignited. Take the following precautions:
 - Do not smoke, use an open flame, or cause sparking near a battery
 - Wear proper eye and face protection when servicing batteries.
 - Make sure work area is well ventilated.
 - Do not constant current charge a battery when installed in an aircraft.
 - Connect cables securely to the battery terminals to avoid arcing.
- a. **WARNING: DANGER OF CHEMICAL BURNS.** Lead-acid batteries contain sulfuric acid which can cause severe burns to body tissue. Take the following precautions:
 - Never remove or damage vent valves
 - Avoid contact of the electrolyte with skin, eyes or clothing
 - Do not touch eyes after touching battery
 - In the event of acid in the eyes, flush thoroughly with clean cool water for several minutes and get professional medical attention immediately.
 - Refer to battery MSDS for additional information.
- a. **CAUTION: DANGER OF EQUIPMENT DAMAGE.** To prevent damage to the

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connector, arc burns, or explosion, batteries should never be connected or disconnected while being charged or discharged. Batteries must be connected or disconnected only when the circuit is open. Ensure the aircraft battery switch, external power source, or the charger/analyzer is in the "OFF" position before connecting or disconnecting the battery. Battery terminal protectors should be installed whenever the battery is not connected in the aircraft or to the test equipment.

4. **Maintenance Manual Information:** Refer to the Gulfstream G280 Aircraft Maintenance Manual concurrently with Concorde Battery Corporation Installation Instructions, drawing number 5-0662, for the applicable maintenance information with regard to removal and installation procedures.

5. **Line Replaceable Unit (LRU) Part Numbers:**

<u>Manufacturer</u>	<u>Part Number</u>	<u>Description</u>
Concorde Battery Corporation	RG-380E/40GH	38Ah Lead Acid Battery
Concorde Battery Corporation	RG-380E/44GH	42Ah Lead Acid Battery
Concorde Battery Corporation	RG-380E/46GH	46Ah Lead Acid Battery
Concorde Battery Corporation	RG-380E/53GH	53Ah Lead Acid Battery
Concorde Battery Corporation	RG-380E/60GH	48Ah Lead Acid Battery
Concorde Battery Corporation	HCU-6	Heater Control Unit

6. **Wiring Diagram Information:** The wiring changes associated with this alteration are given to the customer to be contained in the aircraft's Wiring Diagram Manual. The HCU-6 duplicates the combination of heater controls and temperature sensors contained in the original lead-acid batteries. There are no required wiring changes required for Concorde battery system installation. (Reference: Concorde Battery Drawing 5-0662, *Installation Instructions, Gulfstream G280 Battery Replacement.*)

7. **Recommended Periodic Scheduled Maintenance:**

<u>Item</u>	<u>Schedule</u>
RG-380E/40GH	Refer to Concorde Battery Corp. Drawing 5-0605, Component Maintenance Manual
RG-380E/44GH	Refer to Concorde Battery Corp. Drawing 5-0605, Component Maintenance Manual
RG-380E/46GH	Refer to Concorde Battery Corp. Drawing 5-0605, Component Maintenance Manual
RG-380E/53GH	Refer to Concorde Battery Corp. Drawing 5-0605, Component Maintenance Manual
RG-380E/60GH	Refer to Concorde Battery Corp. Drawing 5-0605, Component Maintenance Manual
HCU-6	Refer to Concorde Battery Corp. Drawing 5-0601, Component Maintenance Manual

8. **Recommended Periodic Structural Inspections:** None Required

9. **Airworthiness Limitations:** There are no airworthiness limitations required by the modification.

"The Airworthiness Limitations section is FAA approved and specifies maintenance required under section 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA approved."

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