

N186CA Piper PA-32R-301,
S/N. 32R-8013046

Concorde Battery STC Installation
Instructions for Continued Airworthiness
and Maintenance Instructions

...the heart of your aircraft®

CONCORDE

CONCORDE BATTERY CORPORATION

N186CA

32R-8013046

PA-32R-301

License for use of Supplemental Type Certificate

To Whom It May Concern:

Item 6

11-16526

Squawk

Shop order#

Pursuant to Title 49 of United States Code § 44704 (b)(3) (Effective October 19, 1996),
CONCORDE BATTERY CORPORATION hereby licenses the holder to use the following listed STC
in the noted aircraft

Aircraft Registration No:	N186CA
Registered Owner:	UNIVERSITY OF NEBRASKA
	3835 HOLDREGE ST
	LINCOLN, NEBRASKA 68503-1435
Aircraft Manufacturer and Model No.:	PIPER PA-32R-301
Aircraft Serial No.:	32R-8013046
STC No.:	SA01147WI

— Battery Installed —

P/N. RG-35AXC

For

CONCORDE BATTERY CORPORATION

(Digitally Signed)

Shelley

Johnson

Digitally signed by Shelley
Johnson
DN: CN = Shelley Johnson, C
= US, O = Concorde Battery
Corp., OU = Director of
Customer Service
Date: 2011.11.03 15:12:34 -
07'00'

By: Roxane Montoya

Title: Customer Service

Per: Shelley Johnson
Director of Customer Service

S/N. 40451540

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

Number SA01147WI

This certificate issued to CONCORDE BATTERY CORPORATION
1632 South West Street
Suite 4
Wichita, KS 67213

*certifies that the change in the type design for the following product with the limitations and conditions
thereof as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations.*

Original Product: Type Certificate Number: * See attached FAA Approved Model List (AML) No. SA01147WI for
list of approved models and applicable airworthiness regulations

Make:
Model:

Description of Type Design Change:

Installation of Concorde FLA or VRSLA series batteries in the Piper Light Airplanes listed on the attached FAA Approved Model List (AML) No. SA01147WI, dated February 25, 2003, in accordance with Concorde Battery Corporation, Master Drawing List Dwg. No. 5-0157, revision A, dated 12/09/02, or later FAA Approved revision.

Limitations and Conditions:

Compatibility of this design with previously approved modifications must be determined by the installer.

If the holder of this STC 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 15, 2002

Date of issuance: February 25, 2003

Date reissued:

Date amended:

By direction of the Administrator

Harvey E. Nero
(Signature)

Harvey E. Nero
Program Manager
Wichita 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.
FAA FORM 8110-2 (10-68) PAGE 1 of 2 PAGES
This certificate may be transferred in accordance with FAR 21.47.

Reference STC # SA01147WI

CONCORDE
...the heart of your aircraft

CONCORDE BATTERY CORPORATION

March 27, 2006

Mr. Harvey Nero
ACO Manager
FAA (ACO) ACE-115W
1801 Airport Road, Rm 100
Wichita, KS 67209

THE FAA WICHITA AIRCRAFT CERTIFICATION
OFFICE, ACE-115W, ACKNOWLEDGES RECEIPT AND
☒ ACCEPTS THE APPROVAL
☐ CONCURS WITH THE RECOMMENDATION
☐ FOR COMMENTS SEE FAA LETTER

DATED: 1190 6-9-06
THIS DATA HAS BEEN ADDED TO OUR FILE
ENGINEER BRANCH DATE

Re. Concorde STC SA01147WI

Dear Mr. Nero:

Concorde would like to make a minor change to the referenced STC. We are adding a new battery type, the RG24-16. This battery is electrically identical to the RG24-15 which has been approved on the STC. The new battery has a slightly different plastic molded outer cover so that it will easily mate with aircraft built to accommodate the CB24-11 battery which has also been approved on the STC.

Concorde has determined that this change is minor within the context of FAR 21.93. We have had this change and Concorde's determination reviewed by Mr. John Newman, DER.

Attached you will find the following documents which need to be updated or added to our STC:

5-0157 Rev B (Master Drawing List, Piper, Light Aircraft, Multiple Models)
5-0156 Rev B (Applicability List, Piper, Light Aircraft, Multiple Models)
RG24-11 Rev B
RG24-15 Rev E
RG24-16 Rev NC

I have also attached copies of the latest revisions to our Instructions for Continued Airworthiness for the two types of batteries that are included in this STC. We would like to also update the STC to include these latest revisions to our recommended maintenance practices.

5-0142 Rev H (ICA Valve Regulated Main Battery)
5-0144 Rev E (ICA Flooded Main Battery)

1632 South West Street, Wichita, KS 67213 • Telephone 316-943-9200 • Fax 316-942-7819

3674-2006 1190 Nero

1190
Flows



CONCORDE BATTERY CORPORATION

Thank you for your assistance.

Sincerely,

John B. Timmons,
PE

Digitally signed by John B. Timmons, PE
DN: CN = John B. Timmons, PE, C = US, O =
Concorde Battery Corporation, OU = Vice
President Engineering
Reason: I am the author of this document
Date: 2006.03.28 16:35:41 -0500

John B. Timmons, PE
Vice President Engineering

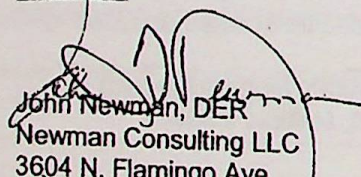
encl:

5-0157 Rev B (Master Drawing List, Piper, Light Aircraft, Multiple Models)
5-0156 Rev B (Applicability List, Piper, Light Aircraft, Multiple Models)
RG24-11 Rev B
RG24-15 Rev E
RG24-16 Rev NC
5-0142 Rev H (ICA Valve Regulated Main Battery)
5-0144 Rev E (ICA Flooded Main Battery)

Reviewed Concorde's determination of minor change per 14CFR21.93.

CONCUR

DO NOT CONCUR


John Newman, DER
Newman Consulting LLC
3604 N. Flamingo Ave
Bethany, OK 73008
(405) 789-8148

1632 South West Street, Wichita, KS 67213 • Telephone 316-943-9200 • Fax 316-942-7819

Master Drawing List

Drawing No.	Rev.	Date	Title
5-0156	A	3/27/06	APPLICABILITY LIST, PIPER, LIGHT AIRCRAFT, MULTIPLE MODELS
5-0158	NC	11/15/02	INSTALLATION INSTRUCTIONS, PIPER, LIGHT AIRCRAFT, MULTIPLE MODELS
5-0161	NC	11/6/02	INSTALLATION KIT, PIPER AEROSTAR
CB-25	B	1/15/02	BATTERY, LEAD ACID, 12 VOLT
CB-25XC	NC	1/15/02	BATTERY, LEAD ACID, 12 VOLT, PLATINUM SERIES
CB-35A	B	1/15/02	BATTERY, LEAD ACID, 12 Volt
CB-35AXC	NC	1/15/02	BATTERY, LEAD ACID, 12 VOLT, PLATINUM SERIES
CB24-11	B	2/5/02	BATTERY, LEAD ACID, 24 VOLT
CB24-11XC	NC	2/5/02	BATTERY, LEAD ACID, 24 VOLT, PLATINUM SERIES
CB24-11M	B	2/5/02	BATTERY, LEAD ACID, 24 VOLT
CB24-11MXC	NC	2/5/02	BATTERY, LEAD ACID, 24 VOLT, PLATINUM SERIES
RG-25	J	11/15/99	BATTERY, VRSLA, 12 VOLT, RG-25 SERIES
RG-35A	B	11/17/99	BATTERY, VRSLA, 12 VOLT, RG-35 SERIES
RG24-11	B	10/4/05	BATTERY, VRSLA, 24 VOLT
RG24-16	NC	1/25/06	BATTERY, VRSLA, 24 VOLT
RG24-11M	A	9/9/98	BATTERY, VRSLA, 24 VOLT
RG24-15	E	10/4/05	BATTERY, VRSLA, 24 VOLT
RG24-15M	C	9/2/99	BATTERY, VRSLA, 24 VOLT
RG24-20	B	1/19/01	BATTERY, VRSLA, 24 VOLT
5-0142	H	6/24/03	INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, VALVE REGULATED MAIN BATTERY
5-0144	E	10/27/04	INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, FLOODED MAIN BATTERY

Revisions

Rev.	Description	Date	Approved
A	Add drawing 5-0161	12/9/02	JBT
B	Add RG24-16, update drawing rev's RG24-11, RG24-15, ICA's	3/27/06	JBT

CONCORDE BATTERY CORPORATION, 2009 San Bernardino Road, West Covina, CA 91790

TITLE: Master Drawing List, Piper, Light Aircraft, Multiple Models		DWG NO. 5-0157		REV. B
DWG CODE: 53017	DRAWN: JBT 11/5/02	CHECKED: HRF 11/15/02	APPROVED: JBT 11/15/02	ISSUED: NS 3/27/06
				SHEET: 1 OF 1

Applicability List

Type Certificate	Certification Basis	Model No.	Serial No.
TC A-780	CAR 3	PA-12	12-1 and up
		PA-12S	12-1 and up
TC 1A2	CAR 3	PA 18	18-1 through 18-7632
		PA-19 (Army L-18C)	19-1 through 19-3
		PA-18 "125" (Army L-21B)	
		PA-18 "135" (Army L-21B)	
		PA-18A	
		PA-18A "135"	
		PA-18 "105" (Special)	
		PA-18S	
		PA-19S	
		PA-18S "125"	
		PA-18S "135"	
		PA-18AS "125"	
		PA-18AS "135"PA-18S "105"	
		PA-18 "150"	18-3771, 18-3781,through 18-9015
		PA-18A "150"	18-7309016 through 18-8309025
		PA-18S "150"	1809001 through 1809113
TC AR-7	CAR 8.10(b)	PA-18A	18-677, 18-770, and 18-262 through 18-3779
		PA-18A "135"	18-3786 through 18-9105 and 18-7309016 through
		PA-18A "150"	18-8309025
TC 1A4	CAR 3	PA-20	20-1 and up
		PA-20 "115"	20-1 and up
		PA-20S	
		PA-20S "115"	
		PA-20S "135"	
		PA-20 "135"	20-877 and up
TC 1A6	CAR 3	PA-22	22-1 and up
		PA-22-135	22-534 and up
		PA-22S-135	22-534 and up
		PA-22-150	22-2378, 22-2425 and up
		PA-22S-150	22-2378, 22-2425 and up
		PA-22-160	22-2378, 22-2425 and up

Type Certificate	Certification Basis	Model No.	Serial No.
TC 1A10	CAR 3I	PA-22S-160	22-2378, 22-2425 and up
		PA-22-108	22-8000 and up
		PA-23 APACHE	23-1 through 23-182
		PA-23-160	23-1177, 23-1183 through 23-2046
		PA-23-250 (Navy UO-1)	27-1 through 27-4916, 27-7304917 through 27-7554168
		PA-23-235	27-205 through 27-622
		PA-E23-250 AZTEC	27-2505 through 27-4916, 27-7304917 through 27-7554168
		PA-23-250	27-7654001 through 27-8154030
TC 1A15	CAR 3	PA-24 COMANCHE	24-1 through 24-3687
		PA-24-250	24-1, 24-103 through 24-3687
		PA-400	26-2 through 26-148
		PA-24-260	24-3642, 24-4000 through 24-5034
TC 2A8	CAR 3	PA-25 PAWNEE	25-1 through 25-731
		PA-25-235	25-02, 25-2000 through 25-5521 and 25-730552 through 25-8156024
		PA-25-260	25-4415 through 35-5521 and 25-730522 through 25-8156024
TC 2A10	CAR 8.10(b)	PA-25 PAWNEE	25-1 through 25-731
		PA-25-235	25-02, 35-2000 through 25-5521 and 25-7305522 through 25-8156024
		PA-25-260	25-4415 through 25-5521 and 25-7305522 through 25-8156024
TC 2A13	CAR 3	PA-28-160	28-03, 28-1 through 28-4377 and 28-1760A
		PA-28-150	28-03, 28-1 through 28-4377 and 28-1760A
		PA-28-180	28-03, 28-671 through 28-5859 and 28-7105001 through 28-7205318
		PA-28S-160	28-03, 28-1 through 28-1760 and 28-1760A
		PA-28-180	28-671 through 28-5859 and 28-7105001 through 28-7105234
		PA-28-235	28-10001 through 28-11378 and 28-7110001 through 28-7210020
		PA-28-140	28-20001 through 28-26946 and 28-7125001 through 28-7725290
		PA-28R-180	28R-30002 through 28R-31270 and 28R-7130001 through 28R-7130013

TITLE: Applicability List, Piper, Light Aircraft, Multiple Models			DWG. NO. 5-0156		REV. A
CAGE CODE: 63017					SHEET: 1 OF 6
TITLE: Applicability List, Piper, Light Aircraft, Multiple Models			DWG. NO. 5-0156		REV. A
CAGE CODE: 63017					SHEET: 2 OF 6

Type Certificate	Certification Basis	Model No.	Serial No.
		PA -28R-200	28R-35001 through 28R-35820 and 28R-7135001 through 28R-7135229
		PA-28R-200	28R-7235001 through 28R -7635545
		PA-28-180	28E-13, 28-7305001 through 28-7505260
		PA-28-235	28E11, 28-7310001 through 28-7710089
		PA-28-151	28-7415001 through 28-7715314
		PA-28-181	28-7690001 through 28-8690056, 28-8690061, 28-8690062, and 28-90001 through 2890205
		PA-28-181	28-90206 through 28-90231 and 2843001 and up
		PA-28-161	28-7716001 through 28-8216300 and 2841001 through 2841365
		PA-28-161	28-8116001 through 28-8616057 and 2816001 through 2816109
		PA-28-161	2816110 through 2816119 and 2842001 and up
		PA-28R-201	28R-7737002 through 28R-7837317, 2837001 through 2837061, and 2844001 and up
		PA-28R-201T	28R-7703001 through 28R-7803374 and 2803001 through 2803012
		PA-28-236	28-7911001 through 28-8611008, 2811001 through 2811050, and 2845001 and up
		PA-28RT-201	28R-7918001 through 28R-7918267
		PA-28RT-201	28R-8018001 through 28R-8218026
		PA-28RT-201T	28R-7931001 through 28R-8631005 and 2831001 through 2831038
		PA-28-201T	28-7921001 through 28-7921095
TC A20SO	CAR 3 / FAR 23	PA-31 NAVAJO	31-2 through 31-900, 31-7300901 through 31-8312019
		PA-31-300 NAVAJO	31-2 through 31-900, 31-7300901 through 31-8312019
		PA-31-350 CHIEFTAIN & T-1020	31-5001 through 31-5004, 31-7305005 through 31-8553002
		PA-31-325 NAVAJO C/R	31-7400990, 31-7512001 through 8312019
TC A3SO	CAR 3	PA-32-260	32-03, 32-04, 32-1 through 32-1297 and 32-7100001 through 32-7800008
		PA-32-300	32-15, 32-21, 4000 through 32-40974 and 32-7140001 through 32-7940290

TITLE: Applicability List, Piper, Light Aircraft, Multiple Models			DWG. NO. 5-0156	REV. A
CAGE CODE: 63017				SHEET: 3 OF 6

Type Certificate	Certification Basis	Model No.	Serial No.
		PA-32S-300	32S-15, 32S-40000 through 32S-40974 and 32S-7140001 through 32S-7240137
		PA-32R-300	32R-7680001 through 7880068
		PA-32RT-300	32R-7885002 through 32R-7985106
		PA-32RT-300T	32R-7787001, 32R-7887002 through 32R-7987126
		PA32R-301	32R-8013001 through 32R—8613006, 3213001 through 3213028 and 3213030 through 3213041
		PA-32R-301	3213029, 3213042 through 3213103 (14 volt) 3246001 through 3246017 (14 volt) and 3246018 and up (28 volt)
		PA -32R-301T	32R-8029001 through 32R-86-32009 and 3229001 through 3229003
		PA-32-301	32-8006002 through 32-8606023 and 3206001 through 3206019
		PA-32-301T	32-8024001 through 32-8424002
		PA-32R-301T	3257001 and up
C A9SO	FAR 23	PA-36-285	36-7360001 through 36-7660135
		PA-36-300	36-7560001 through 36-8160023
		PA-36-375	36-7802001 through 36-8302025
C A10SO	FAR 23	PA-36-285	36-7360001 through 36-7660135
		PA-36-300	36-7560001 through 36-8160023
		PA-36-375	36-7802001 through 36-8302025
C A18SO	FAR 23	PA-38-112 TOMAHAWK	38-78A0001 through 32-82A0122
C A19SO	FAR 23	PA-44-180 SEMINOLE	44-7995001 through 44-8195026
		PA-44-180 SEMINOLE	44-95001 through 44-95013, 44-96001 and up
		PA-44-180T TURBO SEMINOLE	44-8107001 through 44-8207020
C A25SO	FAR 23	PA-46-310P MALIBU	46-8408001 through 46-8408087 46-8508001 through 46-8508109 46-8608001 through 46-8608067 4608001 through 4608140
		PA-46-350P MALIBU MIRAGE	4622001 through 4622200 4636001 and up
TC A1EA	CAR 3 also FAR 23	PA-30 TWIN COMANCHE	30-1 through 30-2000
		PA-39 TWIN COMANCHE	39-1 through 39-162
		PA-40 TWIN COMANCHE	40-7400002
C A7SO	FAR 23	PA-34-200 SENECA	34-ER, 34-7250001 through 34-7450220
		PA-34-200T SENECA II	34-750001 through 34-8170092

TITLE: Applicability List, Piper, Light Aircraft, Multiple Models			DWG. NO. 5-0156	REV. A
CAGE CODE: 63017				SHEET: 4 OF 6

Type Certificate	Certification Basis	Model No.	Serial No.
		PA-34-220T SENECA III	34-8133001 through 34-8633031 (14V) 3433001 through 3433172 (14V) 3448001 through 3448037 (28V)
		PA-34-220T SENECA IV	3448038 through 3448079 3447001 through 3447029
		PA-34-220T SENECA V	3449001 and up.
A17WE	FAR 23	PA-60-600	60-0001 thru 60-0014, 60-0015-26 thru 60-0056-126, 60-013057 thru 60-0933-8161262, 60-8261001 and subsequent.
		PA-60-601	SN 61-0001 thru 61-0002-19 thru 61-0070-129, 61-0132-071 thru 61-0880-8162157, 60-82620001 and subsequent and 62-0001-013.
		PA-60-601P	61P-0157-001 thru 61P-0860-8163456, 60-8263001 and subsequent.
		PA-60-602P	62P-0750-8165001, 62(-0861-8165002 thru 62P-0932-8165056, 60-8265001 and subsequent.
		PA-60-700P	60-8223001, 60-8423001 and up.

Piper P/N	Concorde P/N	Ampere-Hour (AH) Capacity at the 1 hour rate (C1)	Weight (lbs.)
To replace the Piper 12 volt battery P/N 450-030	Concorde CB-25 Concorde CB-25XC Concorde RG-25 Concorde RG-25XC	20 AH 25 AH 22 AH 24 AH	22 lbs. 24.5 lbs. 22.75 lbs. 23.5 lbs.
To replace the Piper 12 volt battery P/N 450-022	Concorde RG-25	22 AH	22.75 lbs.
To replace the Piper 12 volt battery P/N 450-035	Concorde CB-35A Concorde CB-35AXC Concorde RG-35A Concorde RG-35AXC	29 AH 34 AH 29 AH 33 AH	28.5 lbs. 32.5 lbs. 29.5 lbs. 32 lbs.
To replace the Piper 24 volt manifold battery P/N 450-101	Concorde CB24-11M Concorde CB24-11MXC Concorde RG24-11M Concorde RG24-15M	10 AH 15 AH 11 AH 13.6 AH	28 lbs. 31 lbs. 26.5 lbs. 29.5 lbs.
The Concorde RG-24-11 or RG-24-15 can also be used as no venting is required. Cap and stow or remove the existing manifold vent line. Install NAS 43HT4-48 spacer or equivalent 3/4 inch spacer on hold down bolts to compensate for height differences in the batteries.			
To replace the Piper 24 volt battery P/N 450-027 or 450-032	Concorde CB24-11 Concorde CB24-11XC Concorde RG24-11 Concorde RG24-15 Concorde RG24-16	10 AH 15 AH 11AH 13.6 AH 13.6 AH	27 lbs. 31 lbs. 26.5 lbs. 29.5 lbs. 29.5 lbs.
To replace the Piper 24 volt battery P/N 450-028, or 450-031	Concorde RG24-20	19 AH	42 lbs.
To replace the Piper 24 volt battery P/N 450-029	Concorde RG24-20	19 AH	42 lbs.

The purpose of this report is to provide instructions for the replacement of the original equipment flooded lead acid battery with a Concorde Battery Corporation flooded lead acid or Valve Regulated Sealed Lead Acid (VRSLA) Battery in Piper Aircraft Corporation aircraft.

DESCRIPTION

The Concorde flooded lead acid or VRSLA RG series batteries referenced here are direct replacements for the flooded lead acid batteries originally installed in these aircraft. No mechanical or electrical modifications of the aircraft are required to install the Concorde battery. The Concorde VRSLA battery requires no venting.

A supplemental kit is required for the installation of the RG24-20 battery in place of Piper 450-029.

The Concorde batteries are compatible to all electrical specifications and operating procedures as specified in the Pilots Operating Handbooks and should be operated in exactly the same manner as the original battery. Any references to adding water can be ignored if the VRSLA battery is selected. Inspection and maintenance can be performed in any shop by reference to the latest revision of Concorde Battery Corp., Instructions for Continued Airworthiness (ICA).

The Concorde VRSLA Battery can be safely recharged in the aircraft by following the Concorde Instructions for Continued Airworthiness (ICA) that are part of this document.

The Concorde batteries offer the operator a choice of capacities to suit the particular mission.

TITLE: Applicability List, Piper, Light Aircraft, Multiple Models			DWG. NO. 5-0156	REV. A
CAGE CODE: 63017				SHEET: 5 OF 6

Prepared by Donald G. Grunke, BSEE, Concorde Battery Corp., Wichita, KS. (316) 943-9200

Checked by John Newman, DER Electrical, Newman Consulting LLC, Bethany, OK.. 73008 (405) 789-8148

Revisions							
Rev.	Description					Date	Approved
A	Add RG24-16 battery					3/27/06	JBT
TITLE: Applicability List, Piper, Light Aircraft, Multiple Models					DWG. NO. 5-0156		REV. A
CAGE CODE: 3017		DRAWN: DGG 11/5/02		CHECKED HRF 11/15/02		APPROVED JBT 11/15/02	
				ISSUED NS 3/27/06		SHEET: 6 OF 6	

PIPER INSTALLATION INSTRUCTIONS

1.0 REMOVAL

- 1.1 Assure that the "Battery Master Switch" is "OFF".
- 1.2 Gain access to the battery compartment and loosen the battery hold downs, if not secured by the battery box lid.
- 1.3 Disconnect the vent tubes if installed on the battery. Cap and stow if replacement battery is not manifold type.
- 1.4 Disconnect the battery cables. Always disconnect the Negative cable first and reconnect it last for safety reasons.
- 1.5 Remove the battery and **PROPERLY DISPOSE OF IT**.
- 1.6 Clean the battery compartment and inspect the cables and connector for airworthiness. Refer to applicable service manuals instructions for cleaning, repairs and/or preventive maintenance operations on battery compartment.

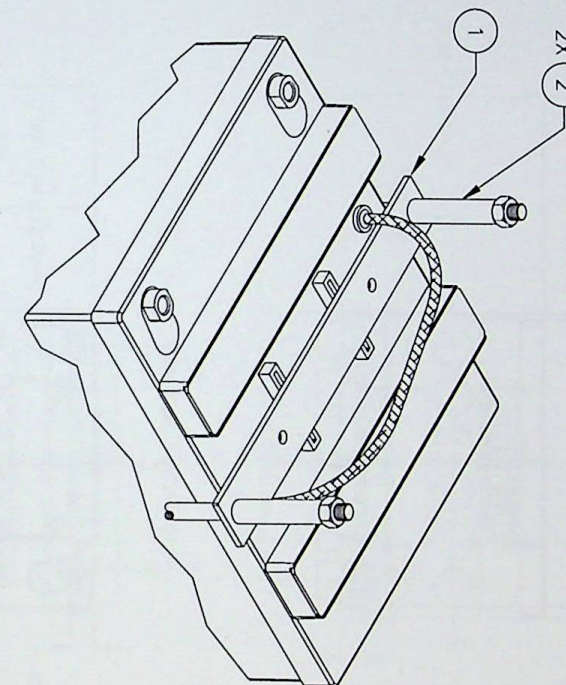
2.0 INSTALLATION

- 2.1 Install the fully charged Concorde Battery in the battery compartment. Engage the battery hold down if not secured by the battery box lid, tighten and safety wire. Reconnect battery cables, Negative cable last.
- 2.2 Installation of the Concorde RG-25 to replace the Piper 450-022 requires removing and stowing the drain tubing. Drain tubing is not required for a VRSLA battery.
- 2.3 Installation of the Concorde RG24-20 to replace the Piper 450-029 requires the supplemental installation kit shown in Concorde Drawing 5-0161.
- 2.4 Make entry into the aircraft records to show the accomplishment of this battery installation, including a change of the aircraft weight and balance if the replacement battery has a weight different from the battery being replaced. Refer to the flight manual or appropriate document to determine station number of battery location.

3.0 MAINTENANCE

- 3.1 The RG series battery requires no maintenance other than inspection of connections for security. This battery requires no added water.
- 3.2 Refer to the latest revision of Concorde Battery Corporation Instructions for Continued Airworthiness (ICA) for periodic inspection requirements and test procedures for the battery selected. The ICA is available on the Concorde battery web site at www.concordebattery.com

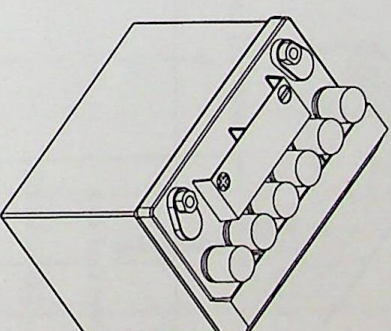
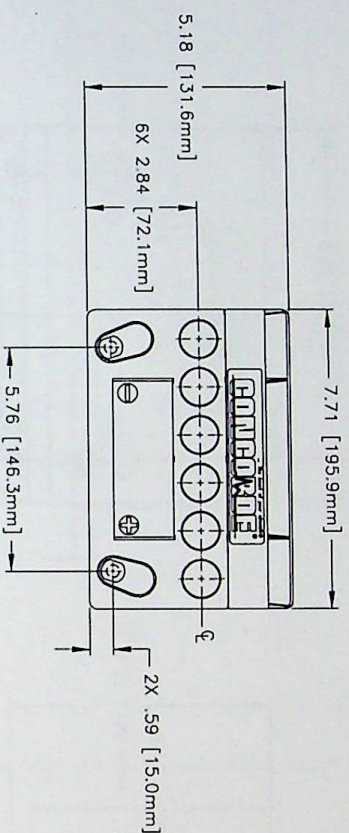
ENGINEERING COPY 08NOV02



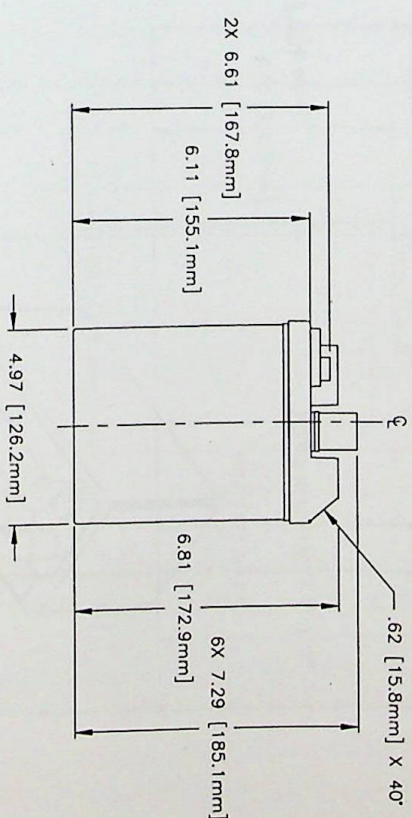
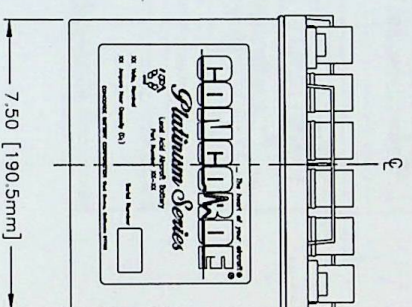
NOTES: UNLESS OTHERWISE SPECIFIED
1. KIT REQUIRED WHEN REPLACING PIPER P/N 450-029 WITH CONCORDE RG24-20

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

- NOTES: UNLESS OTHERWISE SPECIFIED
- BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
 - INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
 - SEE DRAWING NO. CB-00101 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
 - TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
 - BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STD. 952-1 UNLESS OTHERWISE SPECIFIED.
 - ALL DIMENSIONS ARE IN INCHES[MM].



REFERENCE VIEW

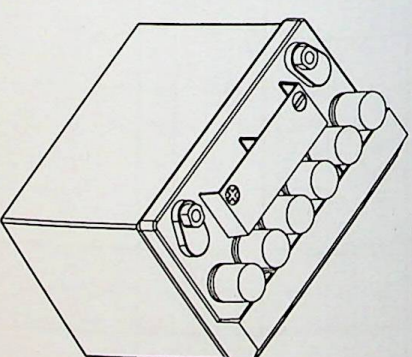
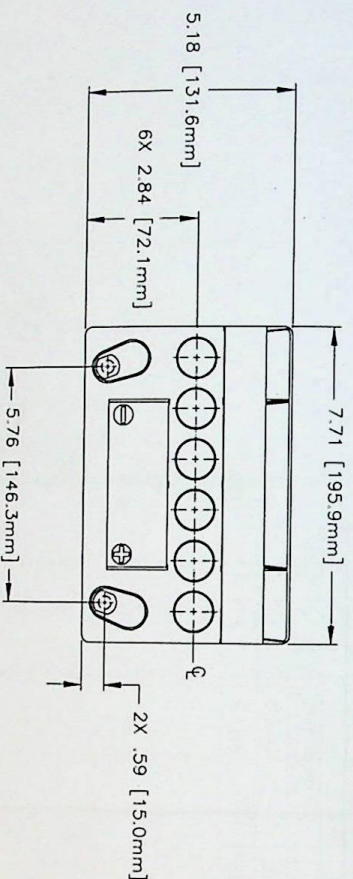


ENVELOPE DRAWING

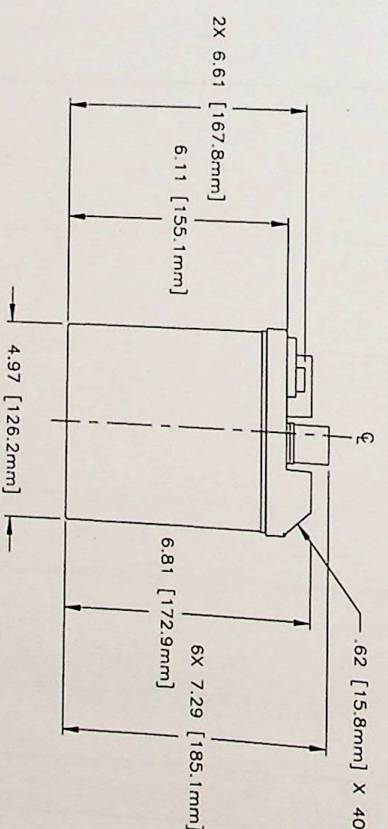
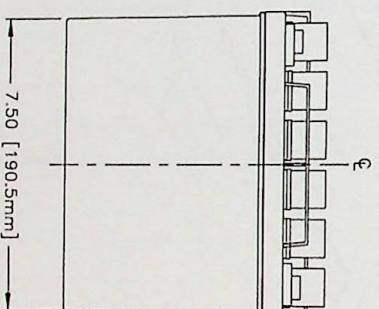
REV	DESCRIPTION	DATE	APPROVED
1	INITIALS		
2	DATE		
3	DATE		
4	DATE		
5	DATE		
6	DATE		
7	DATE		
8	DATE		
9	DATE		
10	DATE		
11	DATE		
12	DATE		
13	DATE		
14	DATE		
15	DATE		
16	DATE		
17	DATE		
18	DATE		
19	DATE		
20	DATE		
21	DATE		
22	DATE		
23	DATE		
24	DATE		
25	DATE		
26	DATE		
27	DATE		
28	DATE		
29	DATE		
30	DATE		
31	DATE		
32	DATE		
33	DATE		
34	DATE		
35	DATE		
36	DATE		
37	DATE		
38	DATE		
39	DATE		
40	DATE		
41	DATE		
42	DATE		
43	DATE		
44	DATE		
45	DATE		
46	DATE		
47	DATE		
48	DATE		
49	DATE		
50	DATE		
51	DATE		
52	DATE		
53	DATE		
54	DATE		
55	DATE		
56	DATE		
57	DATE		
58	DATE		
59	DATE		
60	DATE		
61	DATE		
62	DATE		
63	DATE		
64	DATE		
65	DATE		
66	DATE		
67	DATE		
68	DATE		
69	DATE		
70	DATE		
71	DATE		
72	DATE		
73	DATE		
74	DATE		
75	DATE		
76	DATE		
77	DATE		
78	DATE		
79	DATE		
80	DATE		
81	DATE		
82	DATE		
83	DATE		
84	DATE		
85	DATE		
86	DATE		
87	DATE		
88	DATE		
89	DATE		
90	DATE		
91	DATE		
92	DATE		
93	DATE		
94	DATE		
95	DATE		
96	DATE		
97	DATE		
98	DATE		
99	DATE		
100	DATE		

CAPACITY RATINGS	CBC-25XC
PART NUMBER	CBC-25XC
MAXIMUM WEIGHT	24.5 LBS [11.2 KG]
RATED CAPACITY, C ₁	25 AH
POWER RATING AT 23°C (74°F)	1pr 738 A, 1pp 895 A
POWER RATING AT -18°C (0°F)	1pr 513 A, 1pp 625 A
POWER RATING AT -30°C (-22°F)	1pr 371 A, 1pp 447 A

- SEE DRAWING NO. CB-00101 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
- INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
- TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
- BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STD. 952-1 UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS ARE IN INCHES[MM].



REFERENCE VIEW



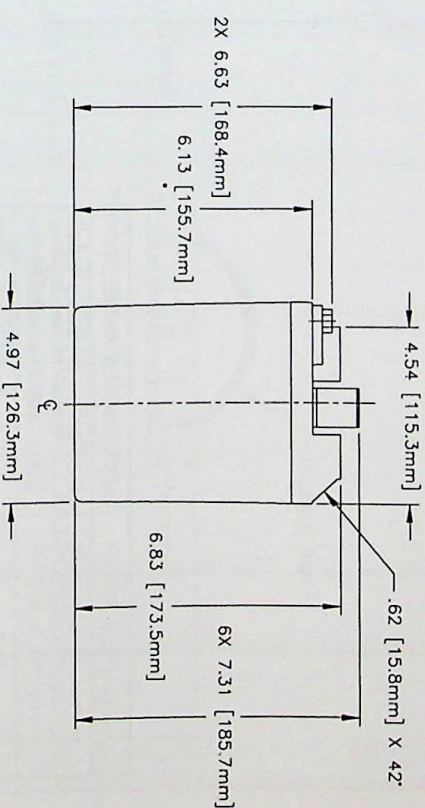
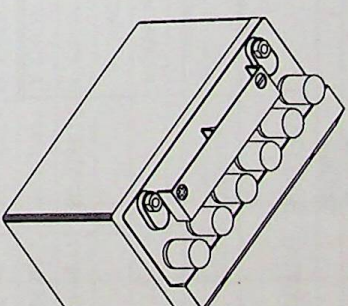
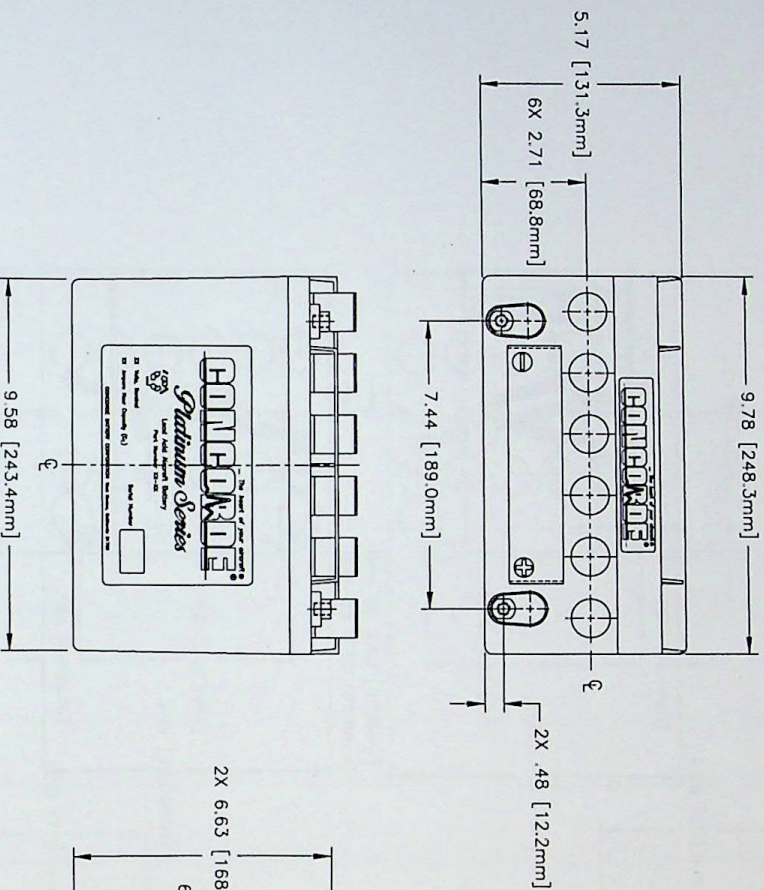
ENVELOPE DRAWING

REV	DESCRIPTION	DATE	APPROVED
1	INITIALS		
2	DATE		
3	DATE		
4	DATE		
5	DATE		
6	DATE		
7	DATE		
8	DATE		
9	DATE		
10	DATE		
11	DATE		
12	DATE		
13	DATE		
14	DATE		
15	DATE		
16	DATE		
17	DATE		
18	DATE		
19	DATE		
20	DATE		
21	DATE		
22	DATE		
23	DATE		
24	DATE		
25	DATE		
26	DATE		
27	DATE		
28	DATE		
29	DATE		
30	DATE		
31	DATE		
32	DATE		
33	DATE		
34	DATE		
35	DATE		
36	DATE		
37	DATE		
38	DATE		
39	DATE		
40	DATE		
41	DATE		
42	DATE		
43	DATE		
44	DATE		
45	DATE		
46	DATE		
47	DATE		
48	DATE		
49	DATE		
50	DATE		
51	DATE		
52	DATE		
53	DATE		
54	DATE		
55	DATE		
56	DATE		
57	DATE		
58	DATE		
59	DATE		
60	DATE		
61	DATE		
62	DATE		
63	DATE		
64	DATE		
65	DATE		
66	DATE		
67	DATE		
68	DATE		
69	DATE		
70	DATE		
71	DATE		
72	DATE		
73	DATE		
74	DATE		
75	DATE		
76	DATE		
77	DATE		
78	DATE		
79	DATE		
80	DATE		
81	DATE		
82	DATE		
83	DATE		
84	DATE		
85	DATE		
86	DATE		
87	DATE		
88	DATE		
89	DATE		
90	DATE		
91	DATE		
92	DATE		
93	DATE		
94	DATE		
95	DATE		
96	DATE		
97	DATE		
98	DATE		
99	DATE		
100	DATE		

CAPACITY RATINGS	CBC-25
PART NUMBER	CBC-25
MAXIMUM WEIGHT	22 LBS [10 KG]
RATED CAPACITY, C ₁	20 AH
POWER RATING AT 23°C (74°F)	1pr 525 A, 1pp 635 A
POWER RATING AT -18°C (0°F)	1pr 340 A, 1pp 395 A
POWER RATING AT -30°C (-22°F)	1pr 230 A, 1pp 270 A

NOTES: UNLESS OTHERWISE SPECIFIED

1. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. SEE DRAWING NUMBER CB-00243 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURE AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY
4. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS, CONICAL WASHERS, AND INSTRUCTION TAG.
5. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1 UNLESS OTHERWISE SPECIFIED.

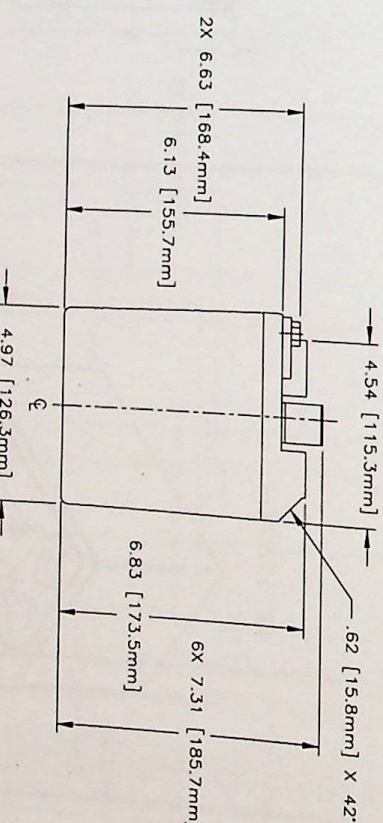
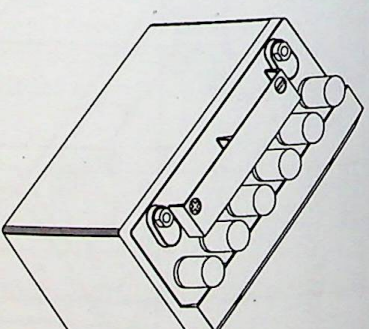
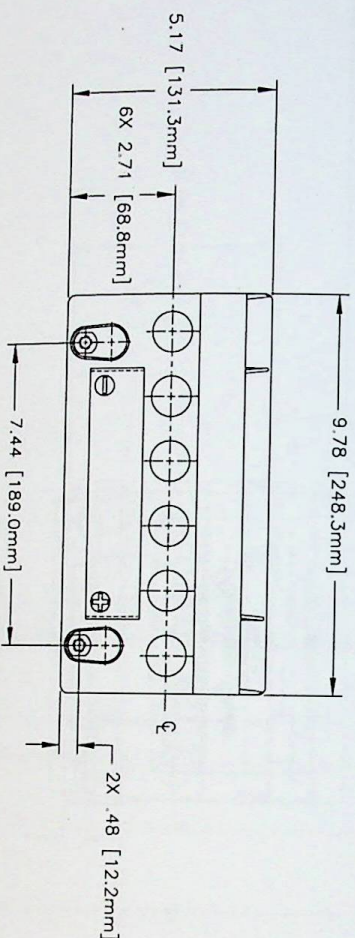


ENVELOPE DRAWING

REV	DESCRIPTION	DATE	APPROVED
1	CONCORDE BATTERY CORPORATION 2009 SAN BERNARDINO RD. W. COVINA, CA 91790		

1. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
2. SEE DRAWING NUMBER CB-00243 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURE AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY
3. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS, CONICAL WASHERS, AND INSTRUCTION TAG.
4. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1 UNLESS OTHERWISE SPECIFIED.

CAPACITY RATINGS	CAPACITY RATINGS
PART NUMBER	CB-35AXC
MAXIMUM WEIGHT	32.5 LBS [14.8 KG]
RATED CAPACITY, C ₁	34 AH
POWER RATING AT 23°C (74°F)	1pr 939 A, 1pp 1121 A
POWER RATING AT -18°C (0°F)	1pr 665 A, 1pp 818 A



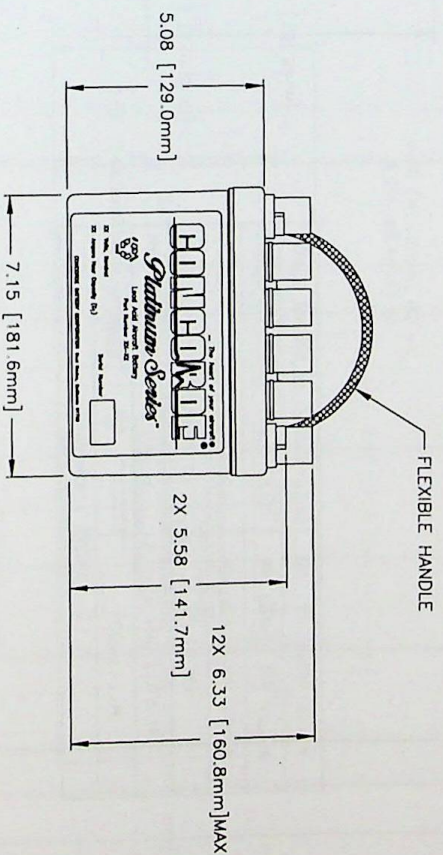
ENVELOPE DRAWING

CAPACITY RATINGS	CAPACITY RATINGS
PART NUMBER	CB-35A
MAXIMUM WEIGHT	28.5 LBS [13.0 KG]
RATED CAPACITY, C ₁	29 AH
POWER RATING AT 23°C (74°F)	1pr 725 A, 1pp 823 A
POWER RATING AT -18°C (0°F)	1pr 496 A, 1pp 600 A
POWER RATING AT -30°C (-22°F)	1pr 365 A, 1pp 441 A

REV	DESCRIPTION	DATE	APPROVED
1	CONCORDE BATTERY CORPORATION 2009 SAN BERNARDINO RD. W. COVINA, CA 91790		

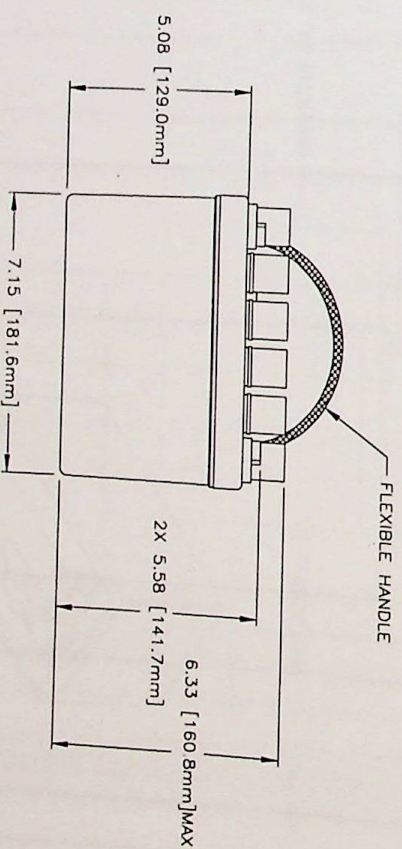
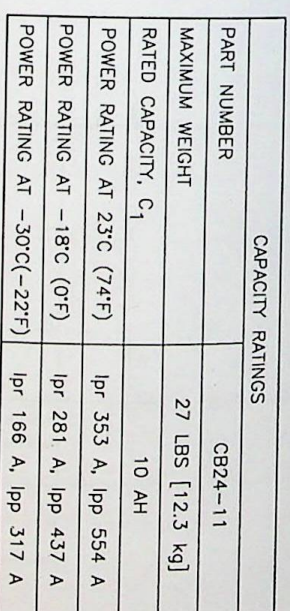
NOTES: UNLESS OTHERWISE SPECIFIED

1. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
2. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
3. SEE DRAWING NUMBER CB-00117 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PRECEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
4. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
5. BATTERIES ARE RATED IAW INTERNATIONAL ELECTRICAL COMMISSION STANDARD 952-1. UNLESS OTHERWISE SPECIFIED.
6. ALL DIMENSIONS ARE IN INCHES [MM].



ENVELOPE DRAWING

3. SEE DRAWING NUMBER CB-00117 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
4. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
5. ALL DIMENSIONS ARE IN INCH [MM].

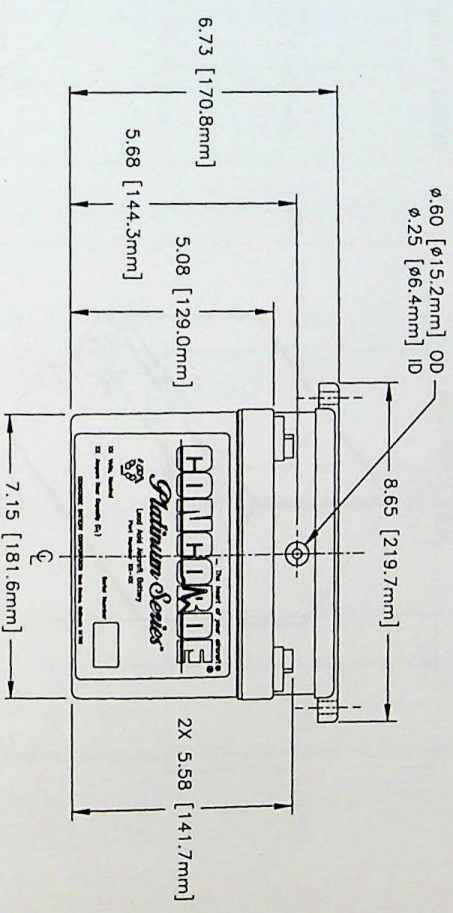
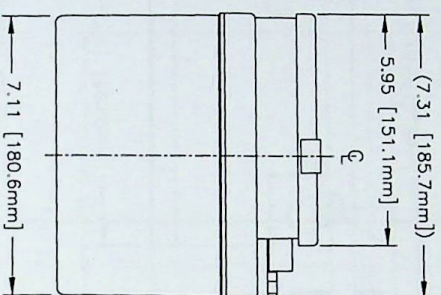
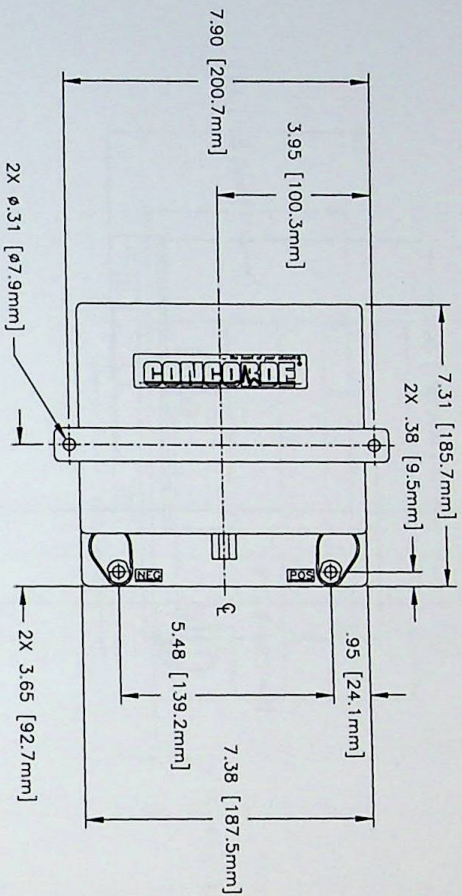
[illegible]

REVISIONS		
REV	DESCRIPTION	DATE

- NOTES: UNLESS OTHERWISE SPECIFIED
1. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
 2. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
 3. SEE DRAWING NUMBER CB-00118 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURE AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
 4. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS, CONICAL WASHERS AND INSTRUCTION TAG.
 5. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1 UNLESS OTHERWISE SPECIFIED.

6. ALL DIMENSIONS ARE IN INCHES [MM].

CAPACITY RATINGS	
PART NUMBER	CB24-11MXC
MAXIMUM WEIGHT	31 LBS [14.0 kg]
RATED CAPACITY, C ₁	15 AH
POWER RATING AT 23°C (74°F)	1pr 643 A, 1pp 1064 A
POWER RATING AT -18°C (0°F)	1pr 437 A, 1pp 684 A
POWER RATING AT -30°C (-22°F)	1pr 310 A, 1pp 533 A



ENVELOPE DRAWING

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

QTY	RECD	DATE	PART OR IDENTIFYING NO.	DESCRIPTION	REVISION	DATE

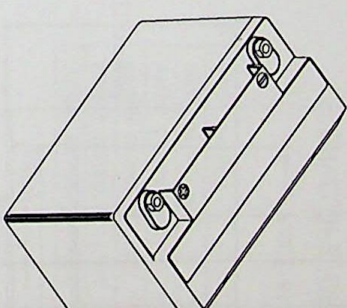
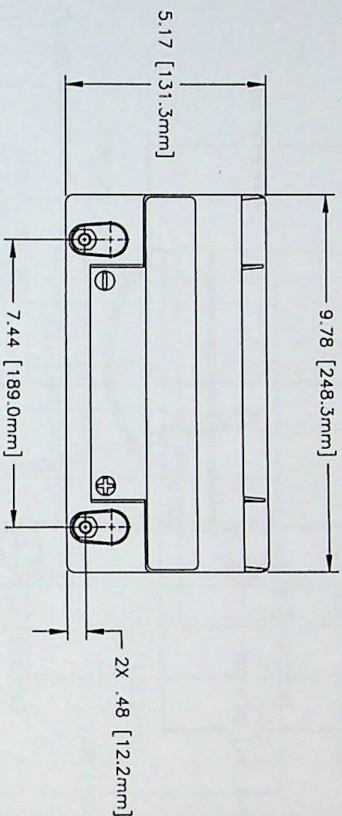
DATES OFFERING EXTENDED DATES ARE IN MONTHS TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± 1/32 ± .005 ± 1°		CONTRACT NO. NA		CONCORDE BATTERY CORPORATION 2009 SAN BERNARDINO RD. W. CORONA, CA 91790
QTY 200 ± .005 PART OR IDENTIFYING NO. 34-1000-0000 DESCRIPTION BATTERY, LEAD ACID, 24V, 100AH, 125°F,				

NOTES: UNLESS OTHERWISE SPECIFIED

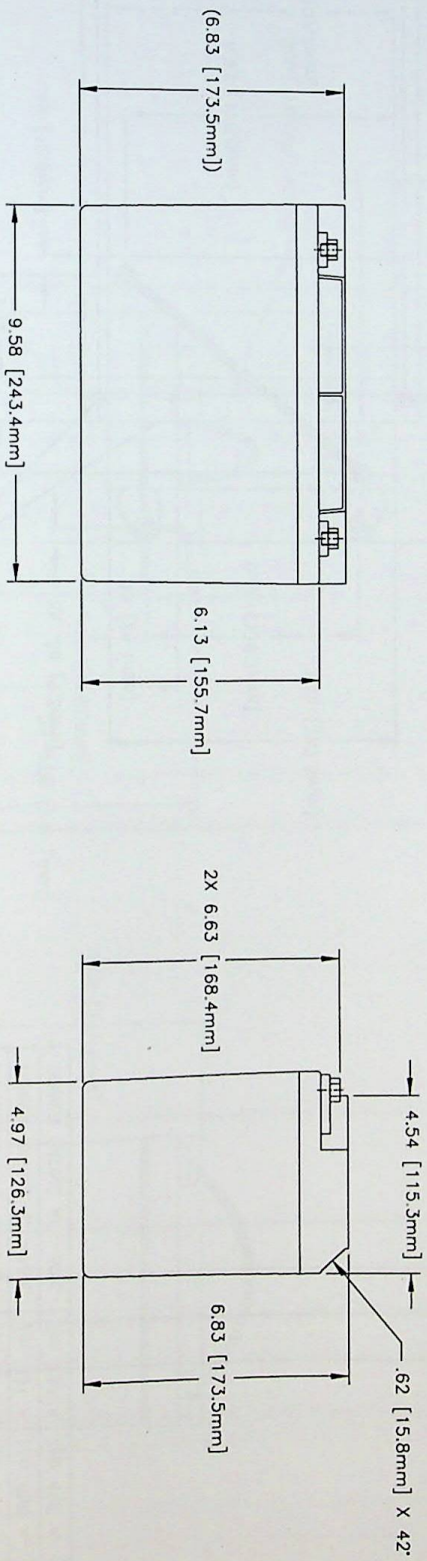
1. BATTERY CONFORMS TO THE REQUIREMENTS OF 14 CFR PART 25.1353.
2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. ABBREVIATION USED IN TITLE IS: VALVE REGULATED SEALED LEAD ACID (VRLA).
4. SEE DRAWING NUMBER CB-00242 AND PRODUCTION INSTRUCTION PI-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PRODUCTION INSTRUCTIONS AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.

5. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1, UNLESS OTHERWISE NOTED.
6. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.

REVISIONS			DATE	APPROVED
REV	DESCRIPTION			
A	ADDED 42° CHAMFER TO COVER		1/8/99	JBT
B	REVISED CAPACITY RATES		11/17/99	JBT



REFERENCE VIEW

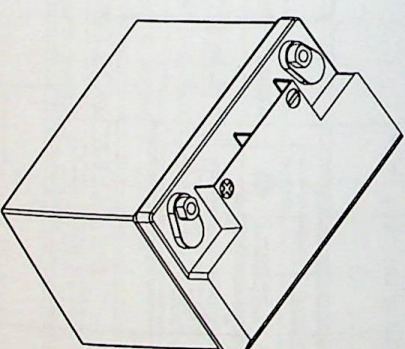
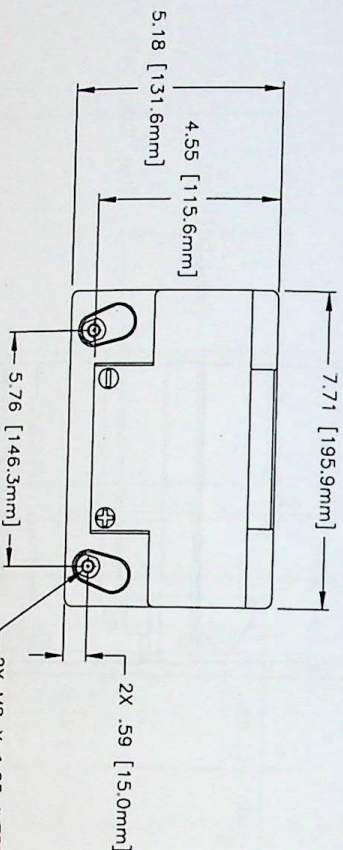


ENVELOPE DRAWING

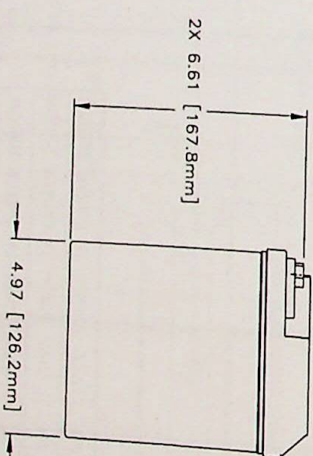
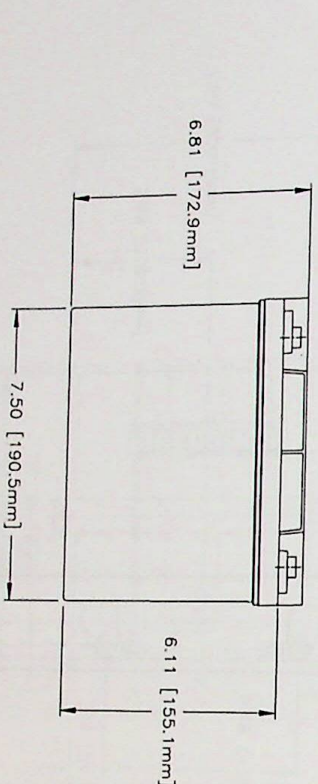
PART NUMBER	RG-35A	RG-35AXC
MAXIMUM WEIGHT	29.5 LBS [13.4 KG]	32 LBS [14.5 KG]
RATED CAPACITY, C ₁	29 AH	33 AH
POWER RATING AT 23°C	lpr 898 A, lpp 1323 A	lpr 1016 A, lpp 1343 A
POWER RATING AT -18°C	lpr 581 A, lpp 1247 A	lpr 718 A, lpp 1297 A

REV	DESCRIPTION	DATE	APPROVED
1	REVISED RG-25XC WEIGHT FROM 26.141 TO 24.141	11/15/99	JBT
2	REVISED RG-25XC WEIGHT FROM 23.0 TO 23.5	11/15/99	JBT

2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. ABBREVIATION USED IN TITLE IS: VALVE REGULATED SEALED LEAD ACID (VRLA).
4. RECOMMENDED SUBSTITUTE FOR OBSOLETE PN RG 25M (AC 54).
5. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
6. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1, UNLESS OTHERWISE NOTED.



REFERENCE VIEW



ENVELOPE DRAWING

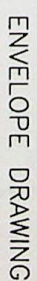
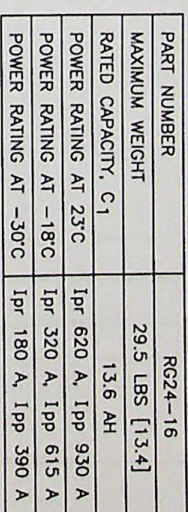
PART NUMBER	RG-25	RG-25XC
MAXIMUM WEIGHT	22.75 LBS [10.3 KG]	23.5 LBS [10.7 KG]
RATED CAPACITY, C ₁	22 AH	24 AH
POWER RATING AT 23°C	lpr 508 A, lpp 1278 A	lpr 597 A, lpp 846 A
POWER RATING AT -18°C	lpr 250 A, lpp 1254 A	lpr 375 A, lpp 536 A
POWER RATING AT -30°C	lpr 145 A, lpp 854 A	lpr 257 A, lpp 494 A

REV	DESCRIPTION	DATE	APPROVED
1	REVISED RG-25XC WEIGHT FROM 26.141 TO 24.141	11/15/99	JBT
2	REVISED RG-25XC WEIGHT FROM 23.0 TO 23.5	11/15/99	JBT

CONCORDE BATTERY CORPORATION	2009 SAN BERNARDINO RD., W. COVINA, CA 91790
BATTERY, VRLA, 12 VOLT, RG-25 SERIES	
RG-25	
1	

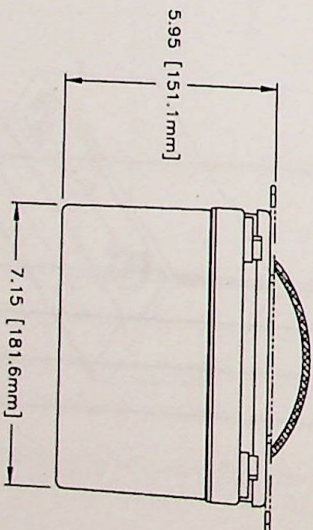
NOTES: UNLESS OTHERWISE SPECIFIED

1. ABBREVIATION USED IN TITLE IS: VALVE REGULATED SEALED LEAD ACID (VRLA).
2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PARTS 23.1353, 25.1353(c), 27.1353, 29.1353(c).
4. SEE DRAWING NUMBER CB-00350 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION, PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
5. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
6. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 60952-1, UNLESS OTHERWISE NOTED



COPY 03MAY06

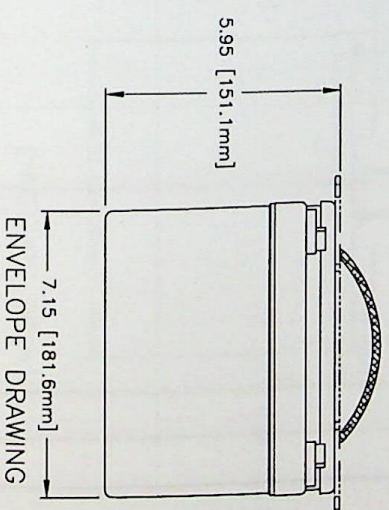
2. INSPECT PER IAN 41.30303(f) QUALITY SYSTEM.
3. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
4. SEE DRAWING NUMBER CB-00229 AND PRODUCTION INSTRUCTION PI-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PRODUCTION INSTRUCTIONS AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.



ENGINEERING COPY 04OCT05

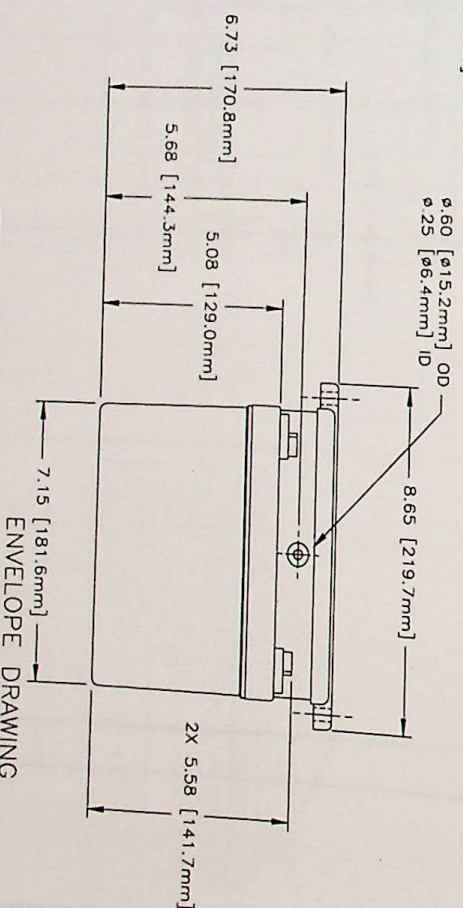
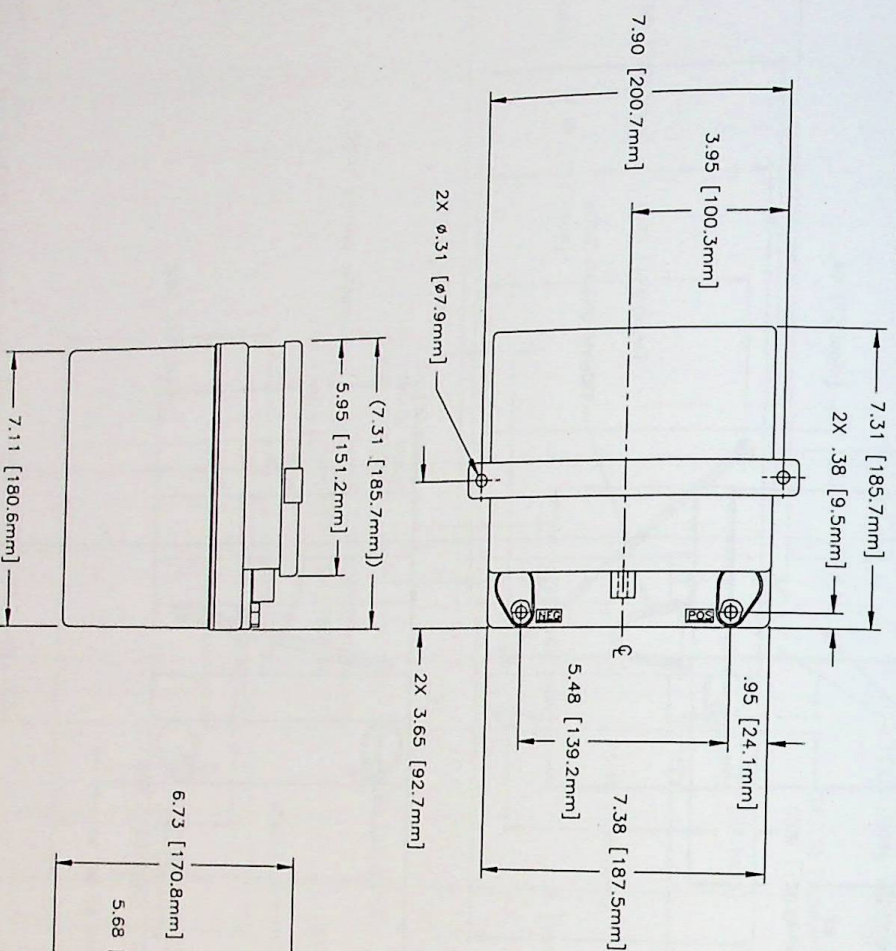
1. ABBREVIATION USED IN TITLE IS: VALVE REGULATED SEALED LEAD ACID (VRLA).
2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
4. SEE DRAWING NUMBER CR-00229 AND PRODUCTION
5. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.
6. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1, UNLESS OTHERWISE NOTED.

PART NUMBER	RG24-15
MAXIMUM WEIGHT	29.5 LBS [13.4]
RATED CAPACITY, C ₁	13.6 AH
POWER RATING AT 25°C	1Pr 620 A, 1Pr 930 A
POWER RATING AT -18°C	1Pr 320 A, 1Pr 615 A
POWER RATING AT -30°C	1Pr 180 A, 1Pr 390 A



2. INSPECT PER FAR 21.305(h) QUALITY SYSTEM.
3. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
4. SEE DRAWING NUMBER CB-00164 AND PRODUCTION INSTRUCTION PI-1000 FOR ASSEMBLY AND TEST INSTRUCTION PRODUCTION INSTRUCTIONS AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
5. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.

PART NUMBER	RG24-11M
MAXIMUM WEIGHT	26.5 LBS [12.0 KG]
RATED CAPACITY, C ₁	11 AH
POWER RATING AT 23°C	1pr 504 A, 1pp 859 A
POWER RATING AT -18°C	1pr 331 A, 1pp 654 A
POWER RATING AT -30°C	1pr 224 A, 1pp 495 A

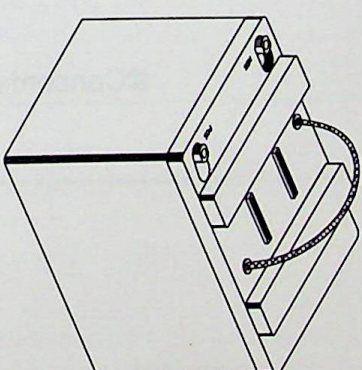


QTY	UNIT	CAGE CODE	PART OR IDENTIFYING NO.	MANUFACTURING OR PARTS LIST	MATERIAL SPECIFICATION	REV
UNITED STATES GOVERNMENT ACQUIRED DOCUMENTS CONTAINING INFORMATION CONCERNING MILITARY AND NAUTICAL FUNCTIONS DETAILS ANALYSIS				CONTRACT NO. APPROVALS DATE		
TREATMENT	BOX 1 00	DIAGN	AMIII	5/14/97	TITLE BATTERY, VRSLA, 24 VOLT	
THICKEN	NONE	CHECKED	AMIII	5/23/97	CONCORDE BATTERY CORPORATION 2009 SAN BERNARDINO RD. W. CONINA, CA 91790	
STANDARD TO	REF W/	DATE	APPROVED	5/23/97	SIZE D63017	
	REF W/	ISSUED	DR	9/10/98	DWG NO. RG24-11M	
					SCALE NONE	
					SHEET 1 OF 1	

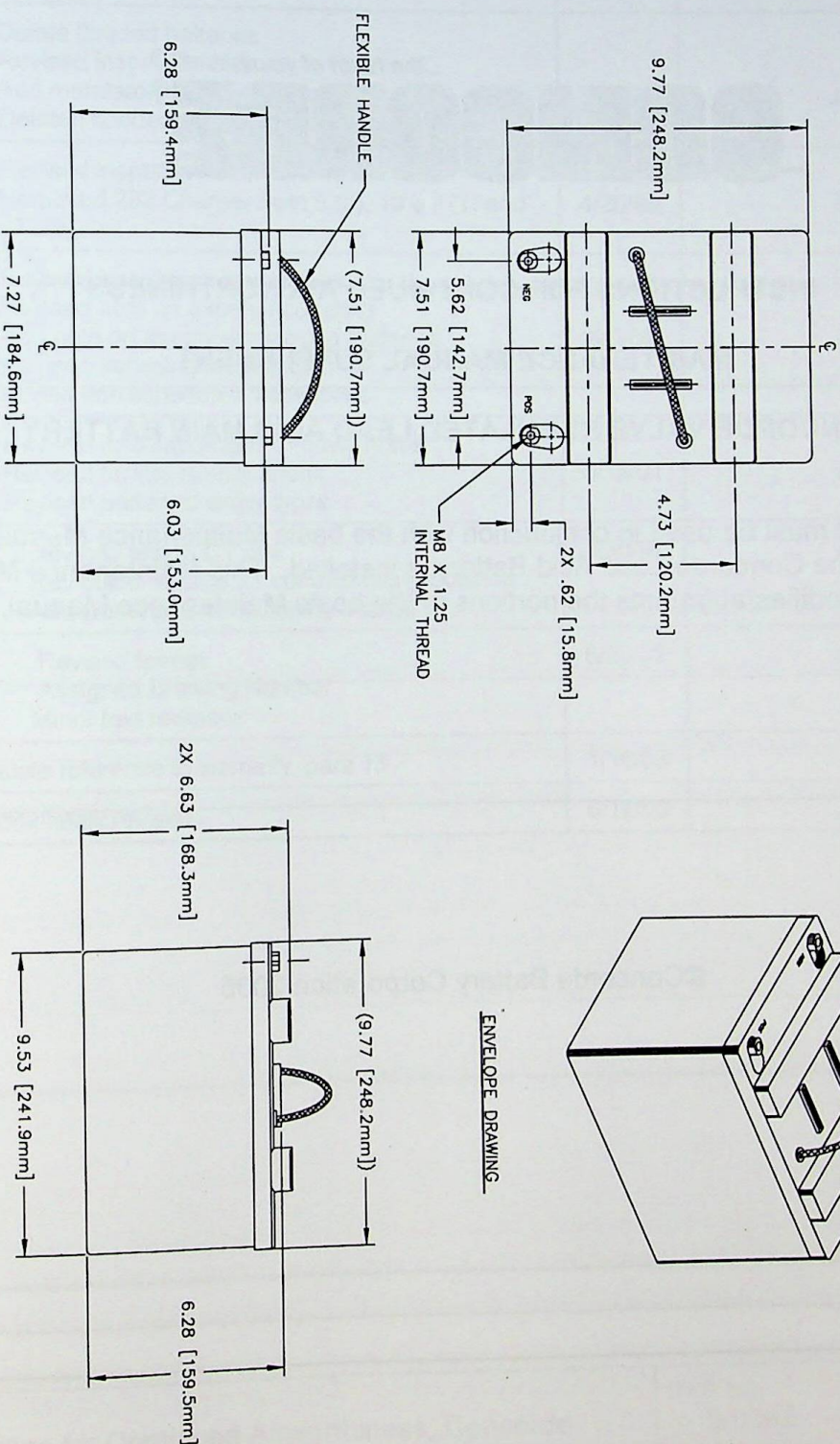
NOTES: UNLESS OTHERWISE SPECIFIED

1. BATTERY CONFORMS TO THE DESIGN REQUIREMENTS OF 14 CFR PART 25.1353(c).
2. INSPECT PER FAR 21.303(h) QUALITY SYSTEM.
3. ABBREVIATION USED IN TITLE IS: VALVE REGULATED SEALED LEAD ACID (VRLA).
4. SEE DRAWING NUMBER CB-00241 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
5. BATTERIES ARE RATED IAW INTERNATIONAL ELECTROTECHNICAL COMMISSION STANDARD 952-1, UNLESS OTHERWISE NOTED.
6. TERMINAL HARDWARE KIT (CBC PN 9586) CONTAINS M8 HEX HEAD SCREWS AND CONICAL WASHERS.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INC 8242 REV E CHANGES	6/7/99	JBT
B	REMOVED SLEEVE, REV, HT, OF CONTAINER (WAS) 6.250	1/19/01	JBT



ENVELOPE DRAWING



ENVELOPE DRAWING

PART NUMBER	RG24-20
MAXIMUM WEIGHT	42 LBS [19.1 KG]
RATED CAPACITY, C ₁	19 AH
POWER RATING AT 23°C	1pr 800 A, 1pp 1113 A

DATE	REV	DESCRIPTION	DATE	REV	DESCRIPTION
12/15/00	1	INITIALS, DIMENSIONS, SPECIFICATIONS, AND TOLERANCES ARE IN INCHES FRACTIONS DECIMALS ANGLES	12/15/00	1	INITIALS, DIMENSIONS, SPECIFICATIONS, AND TOLERANCES ARE IN INCHES FRACTIONS DECIMALS ANGLES
CONCORDE BATTERY CORPORATION 2009 SAN BERNARDINO RD, W. CONWAY, CA 91790					
BATTERY, VRLA, 24 VOLT					



INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

MAINTENANCE MANUAL SUPPLEMENT

CONCORDE VALVE REGULATED LEAD ACID MAIN BATTERY

This document must be used in conjunction with the basic Maintenance Manual for the aircraft when the Concorde Lead Acid Battery is installed. This Maintenance Manual Supplement modifies/augments the portions of the basic Maintenance Manual.

©Concorde Battery Corporation 2005

RECORD OF REVISIONS

Rev. No.	Description	Date	Appd
A	1. Delete flooded batteries 2. Revised inspection interval 3. Add mandatory removal interval 4. Deleted flooded battery facility requirement	2/16/99	JBT
B	1. Revised inspection interval 8 2. Removed 282 Charger from 8.(b). 10.b ii (1) and 13.C i (a)	4/20/99	JBT
C	1. Revised installation instructions 2. Revised note on experience rating 3. Add note on deeply discharged batteries 4. Revised servicing instructions 5. Added non scheduled inspections	9/5/00	JBT
D	1. Revised installation and removal notes 2. Revised torque specifications 3. Revised battery charger types	6/18/01	JBT
E	1. Rev cap test to C1 rate 2. Rev cutoff voltage for conditioning procedure 3. Add warning re conditioning charge	1/30/02	JBT
F	1. Revised format 2. Assigned Drawing Number 3. Minor text revisions	6/20/02	JBT
G	Delete reference to warranty, para 13	1/16/03	JBT
H	Completely revised	6/12/03	JBT

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery				DWG NO. 5-0142	REV H
CAGE CODE 63017	DRAWN JBT 6/20/02	CHECKED EFK 6/20/02	APPROVED JBT 6/20/02	ISSUED AT 6/24/03	SHEET 2 of 10

CONTENTS

1.Scope	4
2.Purpose	4
3.Application	4
4.Definitions	4
5.Precautions:	4
6.Airworthiness Limitations	5
7.Installation and Removal	5
8.Inspection Requirements and Overhaul Schedule:	6
9.Troubleshooting:	8
10.Servicing Discharged Batteries:	8
11.Repair / Replacement:	9
12.Facilities:	9
13.Storage Limitations:	9
14.Disposal:	10

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 3 of 10	

1. Scope: This Maintenance Manual Supplement provides the additional data required to insure satisfactory operation, maintenance, and repair of the Concorde valve regulated lead acid battery installation.
2. Purpose: This manual sets forth the instructions for determining continued airworthiness of a Concorde valve regulated lead acid battery.
3. Application: Concorde valve regulated aircraft batteries - RG series.
4. Definitions:
 - a. Valve regulated battery - A lead acid battery in which there is no free electrolyte. This battery requires no maintenance of the liquid level and recombines the gases formed on charge within the battery. The battery may be used in any attitude without danger of leakage or spilling of electrolyte.
 - b. Rated capacity C1 - Quantity of electricity in Ampere-hours (Ah) which the cell or battery is capable of delivering in 1 hr.
 - c. End Point Voltage (EPV) - Unless otherwise stated, during discharge the battery voltage corresponding to a mean voltage per cell of 1.67 Volts for lead-acid batteries. (10 EPV for 12 volt and 20 EPV for 24 volt batteries).
5. Precautions:
 - a. **CAUTION:** Aircraft batteries are certified to have certain minimum capacity for emergency operations in the event of a electrical generator system failure. Never "Jump Start" an aircraft that has a discharged or "Dead" battery.
 - b. **WARNING: ELECTRIC SHOCK HAZARD.** Do not touch uninsulated portion of the connector or the battery terminals. A possibility of serious electrical shock exists.
 - c. **WARNING: ELECTRIC SHOCK HAZARD.** Do not lay tools or other metal objects on the battery as arcing or explosion could occur. Remove conductive jewelry before working around battery, charger, or test equipment.
 - d. **CAUTION: ELECTRIC BURN HAZARD.** Do not wear conductive rings, belt buckles, or other jewelry when working with batteries, chargers, or test equipment. Do not lay tools or other metal objects on the battery as arcing and severe burns could occur.
 - e. **WARNING:** Batteries on charge or discharge produce hydrogen gas, which can explode if ignited. Do not smoke, use an open flame, or cause sparking near a battery. Charge, service or test a battery only in a well ventilated area. The use of exhaust fans may reduce the risk of explosion.
 - f. **WARNING:** Batteries contain sulfuric acid which will cause burns. **DO NOT TOUCH EYES AFTER TOUCHING BATTERY.** Do not get acid in your eyes, or on your skin, or clothing. In the event of acid in the eyes, flush thoroughly with clean cool water for several minutes. Get professional medical attention. Refer to battery MSDS for additional information.

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 4 of 10	

- g. **WARNING:** Wear proper eye, face and hand protection at all times when working with batteries. Know the location and use of emergency eyewash and shower nearest the battery charging area.
- h. **CAUTION:** To prevent damage to the 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.
- i. **CAUTION:** Batteries contain hazardous materials. Know the location and proper use of emergency response materials. Refer to battery Material Safety Data Sheet (MSDS) for additional information.
- j. **Caution / Warning:** Only constant potential charging may be done on the aircraft. DO NOT constant current charge a battery on the aircraft. There may be a serious risk of injury to personnel and / or damage to the aircraft or aircraft systems due to high voltage and generation of explosive gases when charging constant current.

6. Airworthiness Limitations: There are no airworthiness limitations associated with the installation of a Concorde valve regulated lead acid battery in an aircraft.

7. Installation and Removal:

NOTE: The following instructions are generic. See airframe manufacturer's maintenance manuals or STC for instructions specific to a particular aircraft model. For removal and replacement of a nickel cadmium battery, see airframe maintenance manual or STC.

a. Installation procedure:

i. Removal:

- (1) Set Master Switch to the **OFF** position.
- (2) Disconnect any external power supply.
- (3) Open battery compartment access panels.
- (4) Disconnect battery quick disconnect plug or remove terminal bolts and disconnect battery cables from battery terminals. Always disconnect the ground cable first and install the ground cable last.
- (5) Disconnect battery ventilation tubes, if any.
- (6) Unlock battery hold down clamps or remove battery hold down bars. Disengage battery.
- (7) Carefully remove battery.

WARNING: Batteries are heavy. Use appropriate lifting devices or equipment. Use battery handles where provided.

ii. Installation:

- (1) Inspect the battery for damage. Cracks in metal or plastic containers are not permitted. Dents in metal containers that

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery			DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 5 of 10		

- (2) impinge on the interior plastic container are not acceptable.
- (2) Set Master Switch to the **OFF** position.
- (3) Disconnect any external power supply.
- (4) Open battery compartment access panels.
- (5) Ensure the battery container or tray is clean and dry.
- (6) Install battery in battery container or tray.

WARNING: Batteries are heavy. Use appropriate lifting devices or equipment. Use battery handles where provided.

- (7) Engage battery hold down hardware, torque and safety wire per airframe manufacturer maintenance manual.
- (8) Connect battery vent tubes to aircraft ventilation system, if any.
- (9) Connect battery quick disconnect plug, any auxiliary connector or for ring terminals, install with bolt and bevel lock washer provided with the battery. Torque terminal bolts as noted on the battery label. Always disconnect the ground cable first and install the ground cable last.

CAUTION: Use an open end wrench on the flats of the battery terminal, where available, while torquing the terminal bolts. Failure to do so may result in the rupture of the battery seal at the terminal and premature failure of the battery.

CAUTION: Use only the hardware provided with the battery. Do not use stainless steel or steel washers between the ring terminal and the battery terminal.

- (10) Replace electrical compartment access panel.
- (11) Update aircraft weight and balance data, if necessary.
- (12) Perform an operational test.
- (13) Annotate log book with battery serial number and date of installation.

8. Inspection Requirements and Overhaul Schedule:

a. Scheduled inspections:

NOTE: If the battery is used to satisfy the essential power requirement, it must be capacity tested. If the battery is not used for essential power, there is no requirement for periodic capacity checks.

- i. If the battery is being used to start a turbine APU or a reciprocating engine, the battery can be operated for 24 months or 1200 hours of operation whichever occurs first before the initial capacity check. Subsequent capacity checks are due each additional 12 months or 200 hours of operation, whichever occurs first.
- ii. If the battery is used to start a Turbine engine, regardless of whether or not it is also being used to start a turbine APU, the initial capacity check is at 12 months or 600 hours of operation, whichever occurs first. Subsequent capacity checks are due each additional 3 months or 200 hours of operation whichever occurs first.

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 6 of 10	

- iii. Two (2) or more batteries operated in parallel should be replaced together for maximum reliability. Replacing only one battery in a parallel string results in unequal charge acceptance as the resistance of the new battery is much different than the resistance of the older battery.

NOTE: The initial recommended inspection schedule may be adjusted to coincide with the airframe or engine manufacturer's inspection interval so long as the operating time does not exceed the above limits by more than 10% or 60 hours. **The inspection schedule may be adjusted after the useful battery life is established in a particular operation. After the useful life of a battery is established for a particular aircraft or operating mode, the actual useful life period in months or hours may be substituted for the above schedule.**

- b. Non-scheduled Inspections:
 - i. Capacity check if abnormal slow engine starting performance is noted.
 - ii. Capacity check if abnormal high charging current is required to maintain the battery at buss voltage.
- c. Inspection Procedure:
 - i. Charge the battery:
 - (1) Special tools:
 - (a) Advanced Power Products Beta D-50 Aircraft Battery Analyzer, P/N 4126, or equal.
 - (b) Advanced Power Products Alpha C-25 Battery Charger, P/N 4142, or equal.
 - (c) Advanced Power Products CA-1550 Charger / Analyzer P/N 4159, or equal.

Warning: Contact Concorde for determination of equal test equipment. Some brands of battery chargers will destroy the battery.
 - (2) Depending on the type of charger available, charge the battery Constant Potential (CP). Charge at 14.1 volts for 12 volt batteries or 28.2 volts for 24 volt batteries until the charge current stabilizes for 1 hour.

Caution / Warning: Only constant potential charging may be done on the aircraft. DO NOT constant current charge a battery on the aircraft. There may be a serious risk of injury to personnel and / or damage to the aircraft or aircraft systems.
 - ii. Capacity test:
 - (1) Stabilize the battery at 15°C (59°F) or higher. The battery must be at the temperature for at least 24 hours.
 - (2) Discharge the battery at the C1 rate on the label to an end point voltage of 10 volts for 12 volt batteries or 20 volts for 24 volt batteries, or the rate and end point voltage (EPV) specified by the airframe manufacturer for essential power.
 - (3) Record the time to EPV.
 - (4) The battery is acceptable for continued use if the ampere hour

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 7 of 10	

capacity (actual hours of discharge x ampere rate of discharge) is greater than 85% of the nominal rated capacity (C1) shown on the label (i.e. 51 minutes or more). If the battery passes the capacity test return it to service. If the battery fails the capacity test perform a conditioning procedure (13. c.). After the battery has been conditioned perform a second capacity test. If the battery passes return it to service. If the battery fails replace it.

NOTE: Airframe or accessory equipment manufacturers may specify a different capacity requirement.

- iii. Return to service: Charge the battery as above. If the battery gets very hot (external case temperature greater than 55°C / 130°F) during charging, it should be replaced.
- d. Component Overhaul Schedule: No component overhaul required for this type product.

9. Troubleshooting:

Symptom	Probable Cause	Corrective Action
Low voltage / no voltage	Battery partially or fully discharged	Charge in accordance with Section 8
Battery does not hold charge	Battery beyond serviceable life	Replace battery
Battery gets hot while recharging	Battery beyond serviceable life	Replace battery

10. Servicing discharged batteries:

- a. Recharging dual (parallel) batteries on the aircraft should be done individually.
- b. Recharging a single battery on the aircraft:
 - i. Special tools:
 - (1) Advanced Power Products Activator 282 Battery Charger, P/N 4105, or equal constant potential charger.
 - (2) The Activator 282 is fully automatic. Connect to battery and initiate charging. If using a constant potential charger, follow instructions below.

Caution / Warning: Only constant potential charging may be done on the aircraft. Ensure the charging area is well ventilated. DO NOT constant current charge a battery on the aircraft. There may be a serious risk of injury to personnel and / or damage to the aircraft and aircraft systems.

Warning: Contact Concorde for determination of equal test equipment. Some brands of battery chargers will destroy the battery.

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 8 of 10	

- ii. Set the charger for 2.35 volts per cell (14.1 volts for a 12 volt battery, 28.2 volts for a 24 volt battery).
 - iii. Set the current limit to the C1 rate.
- NOTE:** If current on external power unit is not adjustable, do not charge the battery in the aircraft.
- iv. Initiate charging and continue to charge until the charge current stabilizes for 1 hour.

c. Uninstalled recharging:

- i. Remove the battery from the aircraft.

ii. Special tools:

- (1) Advanced Power Products Alpha C-25 Battery Charger, P/N 4142;
Advanced Power Products CA-1550 Charger / Analyzer P/N 4159;
or equal.

Warning: Contact Concorde for determination of equal test equipment. Some brands of battery chargers will destroy the battery.

- iii. Depending on the type of charger available, charge the battery Constant Potential (CP). Charge at 14.1 volts for 12 volt batteries or 28.2 volts for 24 volt batteries until the charge current stabilizes for 1 hour.

NOTE: Batteries that have been allowed to stand in a deeply discharged state may not accept a CP recharge. See conditioning procedure in paragraph 13.c for handling those batteries.

11. Repair / Replacement:

- a. Repairs should be performed only by a Concorde approved battery shop.
- b. Replacement may be made by removing and installing a new battery in accordance with the instructions in this supplement.
- c. The battery should be replaced after 3 years or 1800 hours of operation or whichever occurs first.

12. Facilities: Valve regulated batteries may be serviced in any battery facility, including nickel cadmium service facilities. The battery is sealed to prevent cross contamination of the electrolyte.

13. Storage Limitations:

- a. Batteries are serviced and charged at the factory prior to shipment.
 - i. For maximum battery life, boost charge when open circuit voltage is below 25.0 volts for 24 volt batteries and 12.5 volts for 12 volt batteries
 - ii. Batteries that have not been recharged when stored for long periods are to be conditioned (13.c) and tested (8.c) before being placed in service.
- b. Boost charging procedure:

i. Special tools:

1. Advanced Power Products Alpha C-25 Battery Charger, P/N 4142;
Advanced Power Products Activator 282 Battery Charger, P/N

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 9 of 10	

4105; Advanced Power Products CA-1550 Charger / Analyzer, P/N 4159; or equal.

- ii. Depending on the type of charger available, charge the battery Constant Potential (CP). Charge at 14.1 volts for 12 volt batteries or 28.2 volts for 24 volt batteries until the charge current stabilizes for 1 hour.

c. Conditioning procedure:

Warning: The battery must be removed from the aircraft prior to performing a conditioning charge.

i. Special tools:

1. Advanced Power Products Beta D-50 Aircraft Battery Analyzer P/N 4146 or 4159, or equal.
2. Advanced Power Products Alpha C-25 Battery Charger P/N 4142 or 4159, or equal.

Warning: Contact Concorde for determination of equal test equipment. Some brands of battery chargers will destroy the battery.

ii. Procedure:

1. Discharge the battery at the C1 rate to an end point voltage of 9 volts for 12 volt batteries and 18 volts for 24 volt batteries.
2. Constant current charge at the 1 /10 of the C1 rate for 16 hours.
WARNING: This procedure may damage the battery if performed on a repetitive basis.
3. Allow the battery to cool down for 8 hours.
4. Retest the battery following the inspection procedure (8.c).

14. Disposal:

- a. Batteries contain lead, sulfuric acid, and other hazardous materials. Dispose of all spent batteries in accordance with local laws and regulations. See battery Material Safety Data Sheet (MSDS) for additional information.

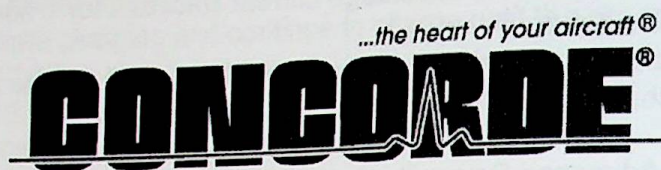
- b. Lead acid batteries are recyclable.

CAUTION: Some aircraft batteries are encased in aluminum containers. These containers must be removed prior to recycling.

©Concorde Battery Corporation 2005

CONCORDE BATTERY CORPORATION
2009 San Bernardino Road
West Covina, CA 91790
Tel. 626-813-1234
www.concordebattery.com

TITLE Instructions for Continued Airworthiness, Concorde Valve Regulated Lead Acid Main Battery		DWG NO. 5-0142	REV H
CAGE CODE 63017		SHEET 10 of 10	



INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
MAINTENANCE MANUAL SUPPLEMENT
CONCORDE FLOODED LEAD ACID MAIN BATTERY

This document must be used in conjunction with the basic Maintenance Manual for the aircraft when the Concorde Lead Acid Battery is installed. This Maintenance Manual Supplement modifies/augments the portions of the basic Maintenance Manual.

©Concorde Battery Corporation 2005

RECORD OF REVISIONS

Rev. No.	Description	Date	Appd
A	1. Corrected page number 2. Corrected metric torque 3. Deleted paragraph a, recharging on the aircraft	11/28/00	JBT
B	1. Add note on watering 2. Add hydrometer & SG readings	11/30/01	JBT
C	1. Revised format 2. Assigned drawing number 3. Minor text revisions 4. Add notes on inspection requirement	6/20/02	JBT
D	Completely revised	7/3/03	JBT
E	1. Rev activation instructions 2. Delete taper and CP charging 3. Rev CP charging voltage	10/19/04	JBT

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery				DWG NO. 5-0144	REV E
CAGE CODE 63017	DRAWN JBT 6/20/02	CHECKED EFK 6/20/02	APPROVED JBT 6/20/02	ISSUED AT 10/27/04	SHEET 2 OF 12

CONTENTS

1.Scope	4
2.Purpose	4
3.Application	4
4.Definitions	4
5.Precautions	4
6.Airworthiness Limitations	5
7.Activation of Dry Charged Batteries	5
8.Installation and Removal	6
9.Inspection Requirements and Overhaul Schedule	7
10.Troubleshooting	8
11.Servicing Discharged Batteries	8
12.Replacement / Repair	9
13.Facilities	10
14.Storage Limitations	10
15.Disposal	11

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 3 OF 12	

1. Scope: This Maintenance Manual Supplement provides the additional data required to insure satisfactory operation, maintenance, and repair of the Concorde flooded lead acid battery installation. Scope: This Maintenance Manual Supplement provides the additional data required to insure satisfactory operation, maintenance, and repair of the Concorde flooded lead-acid battery data required to insure satisfactory operation, maintenance, and repair of the Concorde flooded lead-acid battery installation.
2. Purpose: This manual sets forth the instructions for determining continued airworthiness of a Concorde flooded lead acid battery.
3. Application: Concorde dry charged (flooded) aircraft batteries - CB series.
4. Definitions:
 - a. Flooded battery - A lead acid battery that contains liquid electrolyte. For aircraft, these are equipped with aerobatic vent caps to prevent the spilling of acid during maneuvers requiring a change in attitude of the battery.
 - b. Rated capacity C1 - Quantity of electricity in Ampere-hours (Ah) which the cell or battery is capable of delivering in 1 h, throughout its normal service life, after full charge, under conditions defined with regard to temperature and end discharge voltage.
 - c. End Point Voltage (EPV) - Unless otherwise stated, during discharge the battery voltage corresponding to a mean voltage per cell of 1.67 Volts for lead-acid batteries.
5. Precautions:
 - a. **CAUTION:** Aircraft batteries are certified to have certain minimum capacity for emergency operations in the event of a electrical generator system failure. Never "Jump Start" an aircraft that has a discharged or "Dead" battery.
 - b. **WARNING: ELECTRIC SHOCK HAZARD.** Do not touch uninsulated portion of the connector or the battery terminals. A possibility of serious electrical shock exists.
 - c. **WARNING: ELECTRIC SHOCK HAZARD.** Do not lay tools or other metal objects on the battery as arcing or explosion could occur. Remove conductive jewelry before working around battery, charger, or test equipment.
 - d. **CAUTION: ELECTRIC BURN HAZARD.** Do not wear conductive rings, belt buckles, or other jewelry when working with batteries, chargers, or test equipment. Do not lay tools or other metal objects on the battery as arcing and severe burns could occur.
 - e. **WARNING:** Batteries on charge or discharge produce hydrogen gas,

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 4 OF 12	

which can explode if ignited. Do not smoke, use an open flame, or cause sparking near a battery. Charge, service or test a battery only in a well ventilated area. The use of exhaust fans may reduce the risk of explosion.

- f. **WARNING:** Batteries contain sulfuric acid which will cause burns. **DO NOT TOUCH EYES AFTER TOUCHING BATTERY.** Do not get acid in your eyes, or on your skin, or clothing. In the event of acid in the eyes, flush thoroughly with clean cool water for several minutes. Get professional medical attention. Refer to battery MSDS for additional information.
- g. **WARNING:** Wear proper eye, face and hand protection at all times when working with batteries. Know the location and use of emergency eyewash and shower nearest the battery charging area.
- h. **CAUTION:** To prevent damage to the 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.
- i. **CAUTION:** Batteries contain hazardous materials. Know the location and proper use of emergency response materials. Refer to battery Material Safety Data Sheet (MSDS) for additional information.
- j. **Caution / Warning:** Only constant potential charging may be done on the aircraft. **DO NOT** constant current charge a battery on the aircraft. There may be a serious risk of injury to personnel and / or damage to the aircraft or aircraft systems due to high voltage and generation of explosive gases when charging constant current.

6. Airworthiness Limitations: There are no airworthiness limitations associated with the installation of a Concorde flooded lead acid battery in an aircraft.

7. Activation of Dry Charged Batteries:

- a. Remove the sealing tape from the vents and remove the vent caps.
- b. Fill each cell with 1.285 SG electrolyte to a height just above the top of the plates and separators.
- c. Let the battery stand until it cools to room temperature or for one hour. Then, add more electrolyte to 1/4 inch above the top of the plates and separators. **Do not overfill.**
- d. Install vent caps.
- e. Boost charge the battery Constant Current (CI) charge at 1/10 of the C1 rate for 20 hours.

NOTE: The battery is fully charged when the voltage stabilizes or decreases slightly and the SG of the electrolyte stabilizes for three

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017	SHEET 5 OF 12		

successive readings taken at one hour intervals.

WARNING: Complete charging after activation is required for satisfactory performance. Do not allow the battery temperature to exceed 120° F. After the battery is fully charged, it may be necessary to adjust the electrolyte SG of each cell to 1.285 by diluting higher SG cells with approved water and by filling the lower SG cells with stronger electrolyte. Install vent caps.

NOTE: Add water only when the battery is warm, such as immediately after charge or flight. **Do not overfill.**

- g. Wash and dry outside of battery before installation.

8. Installation and Removal:

NOTE: The following instructions are generic. See airframe manufacturer's maintenance manuals or STC for instructions specific to a particular aircraft model. For removal and replacement of a nickel cadmium battery, see airframe maintenance manual or STC.

a. Installation procedure:

i. Remove old battery:

- (1) Set Master Switch to the **OFF** position.
- (2) Disconnect any external power supply.
- (3) Open battery compartment access panels.
- (4) Disconnect battery quick disconnect plug or remove terminal bolts and disconnect battery cables from battery terminals. Always disconnect the ground cable first.
- (5) Disconnect battery ventilation tubes, if any.
- (6) Unlock battery hold down clamps or remove battery hold down bars. Disengage battery.
- (7) Carefully remove battery.

WARNING: Batteries are heavy. Use appropriate lifting devices or equipment. Use battery handles where provided.

ii. Install new battery:

- (1) Set Master Switch to the **OFF** position.
- (2) Disconnect any external power supply.
- (3) Open battery compartment access panels.
- (4) Ensure the battery container or tray is clean and dry.
- (5) Install battery in battery container or tray.

WARNING: Batteries are heavy. Use appropriate lifting devices or equipment. Use battery handles where provided.

- (6) Engage battery hold down hardware, torque and safety wire per airframe manufacturer maintenance manual.
- (7) Connect battery vent tubes to aircraft ventilation system, if any.
- (8) Connect battery quick disconnect plug, or for ring terminals, install with bolt and bevel lock washer provided with the

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017	SHEET 6 OF 12		

battery. Torque terminal bolts as noted on the battery label.
Always install the ground cable last.

CAUTION: Use an open end wrench on the flats of the battery terminal while torquing the terminal bolts. Failure to do so may result in the rupture of the battery seal at the terminal and premature failure of the battery.
CAUTION: Use only the hardware provided with the battery. Do not place any stainless steel or steel washers between the ring terminal and the battery terminal.

- (9) Replace electrical compartment access panel.
- (10) Update aircraft weight and balance data, if necessary.
- (11) Perform an operational test.
- (12) Annotate log book with battery serial number and date of installation.

9. Inspection Requirements and Overhaul Schedule:

a. Inspection Requirements:

NOTE: If the battery is used to satisfy the essential power requirement, it must be capacity tested. If the battery is not used for essential power, there is no requirement for periodic capacity checks.

i. Scheduled inspections:

- (1) An initial check of the emergency capacity is required 12 months after installation or after 600 hours of operation, whichever occurs first.
- (2) After the initial check, a check of emergency capacity is required after 12 months or after every additional 200 hours of operation.

NOTE: The inspection schedule may be adjusted after the useful battery life is established in a particular operation. After the useful life of a battery is established for a particular aircraft or operating mode, the actual useful life period in months or hours may be substituted for the above schedule.

b. Inspection Procedure:

i. Charge the battery:

(1) Special tools:

- (a) Advanced Power Products Beta D-50 Aircraft Battery Analyzer, P/N 4126 or equal.
- (b) Advanced Power Products Alpha C-25 Battery Charger, P/N 4142 or Advanced Power Products Activator 282 Battery Charger, P/N 4105 or equal.
- (c) Advanced Power Products CA-1550 Charger / Analyzer P/N 4159 or equal.
- (d) Hydrometer P/N 9295 or equal.

- (2) Depending on the type of charger available, charge the battery Constant Potential (CP). Charge at 14.4 volts for 12

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 7 OF 12	

volt batteries or 28.8 volts for 24 volt batteries until the charge current stabilizes for 1 hour.
(3) The battery is fully charged when the voltage stabilizes or decreases slightly and the SG of the electrolyte stabilizes for three consecutive successive readings taken at one hour intervals.

ii. Capacity test:

- (1) Stabilize the battery at 15°C (59°F) or higher. The battery must be at the temperature for at least 24 hours.
- (2) Discharge the battery at the C1 rate to an end point voltage of 10 volts for 12 volt batteries or 20 volts for 24 volt batteries, or the rate and end point voltage (EPV) specified by the airframe manufacturer for essential power.
- (3) Record the time to EPV.
- (4) The battery is acceptable for continued use if the ampere hour capacity (actual hours of discharge x ampere rate of discharge) is greater than 85% of the nominal rated capacity (C1) shown on the label (i.e. 51 minutes or more). If the battery passes return it to service. If the battery fails replace it.

NOTE: Airframe or accessory equipment manufacturers may specify a higher capacity requirement.

- (5) If the battery gets very hot (external case temperature greater than 55°C / 130°F) during charging, it should be replaced.

c. Overhaul Schedule: No component overhaul required for this type product.

10. Troubleshooting:

Symptom	Probable Cause	Corrective Action
Low voltage / no voltage	Battery partially or fully discharged	Charge in accordance with Section 11
Battery does not hold charge	Battery beyond serviceable life	Replace battery
Battery gets hot while recharging	Battery beyond serviceable life	Replace battery

11. Servicing discharged batteries:

- a. Recharging dual (parallel) batteries on the aircraft should be done individually.
- b. Recharging a single battery on the aircraft:

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 8 OF 12	

- i. Special tools:
 - (1) Advanced Power Products Activator 282 Battery Charger, P/N 4105, or equal constant potential charger.
 - (2) The Activator 282 is fully automatic. Connect to battery and initiate charging. If using a constant potential charger, follow instructions below.

Caution / Warning: Only constant potential charging may be done on the aircraft. Ensure the charging area is well ventilated. DO NOT constant current charge a battery on the aircraft. There may be a serious risk of injury to personnel and / or damage to the aircraft and aircraft systems.

- ii. Set the charger for 2.4 volts per cell (14.4 volts for a 12 volt battery, 28.8 volts for a 24 volt battery).
- iii. Set the current limit to the C1 rate.

NOTE: If current on external power unit is not adjustable, do not charge the battery in the aircraft

- iv. The battery is fully charged when the voltage stabilizes or decreases slightly and the SG of the electrolyte stabilizes for three consecutive successive readings taken at one hour intervals.

c. Uninstalled recharging:

- i. Remove the battery from the aircraft.
- ii. Special tools:
 - (1) Advanced Power Products Alpha C-25 Battery Charger, P/N 4142; Advanced Power Products CA-1550 Charger / Analyzer P/N 4159; or equal.
- iii. Depending on the type of charger available, charge the battery Constant Potential (CP), Constant Current (CI), or with a taper charger
 - (1) If Constant Potential, charge at 14.4 volts for 12 volt batteries or 28.8 volts for 24 volt batteries until the charge current stabilizes for 1 hour.

NOTE: Batteries that have been allowed to stand in a deeply discharged state may not accept a CP recharge. See conditioning procedure in paragraph 14.c for handling those batteries.

- (2) If Constant Current, the maximum charge rate in Amperes is the C1 rate on the label divided by 3.

Warning: Constant current charging must be monitored. Charge current must be reduced or charging discontinued when the battery gets hot. Electrolyte lost due to charging must be replaced with water.

- iv. The battery is fully charged when the voltage stabilizes or decreases slightly and the SG of the electrolyte stabilizes for three consecutive successive readings taken at one hour intervals.

12. Replacement / Repair:

- a. Repairs should be performed only by a Concorde approved battery shop.

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 9 OF 12	

- b. Replacement may be made by removing and installing a new battery in accordance with the instructions in this supplement.

13. Facilities:

- a. Flooded lead-acid batteries must be serviced in a shop designated for lead-acid servicing.

14. Storage Limitations:

- a. Batteries should be stored in a cool and dry place.
- b. Dry charged batteries may be stored for an indefinite period prior to activation.
- c. After activation,
 - i. For maximum battery life, boost charge when open circuit voltage is below 25.0 volts for 24 volt batteries and 12.5 volts for 12 volt batteries.
 - ii. Batteries that have not been recharged when stored for long periods are to be conditioned (14.e) and tested (9.b.ii) before being placed in service.
- d. Boost charging procedure:
 - i. Special tools:
 - (1) Advanced Power Products Alpha C-25 Battery Charger, P/N 4142; Advanced Power Products Activator 282 Battery Charger, P/N 4105; Advanced Power Products CA-1550 Charger / Analyzer, P/N 4159; or equal.
 - ii. Depending on the type of charger available, charge the battery Constant Potential (CP). Charge at 14.4 volts for 12 volt batteries or 28.8 volts for 24 volt batteries until the charge current stabilizes for 1 hour.
- e. Conditioning procedure:

Warning: The battery must be removed from the aircraft prior to performing a conditioning charge.

- i. Special tools:
 - (1) Advanced Power Products Beta D-50 Aircraft Battery Analyzer P/N 4126 or equal.
 - (2) Advanced Power Products Alpha C-25 Battery Charger P/N 4142 or equal.

- ii. Procedure:
 - (1) Discharge the battery at the C1 rate to an end point voltage of 9 volts for 12 volt batteries and 18 volts for 24 volt batteries.
 - (2) Constant current charge at 1 /10 of the C1 rate for 16 hours.

WARNING: This procedure may damage the battery if performed on a repetitive basis.

- (3) Adjust the electrolyte level by adding approved water only.

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 10 OF 12	

- (4) Allow the battery to cool down for 8 hours.
- (5) Test the battery following the inspection procedure (9.b.ii).

15. Disposal:

- a. Batteries contain lead, sulfuric acid, and other hazardous materials.
- b. Lead acid batteries are recyclable.
CAUTION: Some aircraft batteries are encased in aluminum containers. These containers must be removed prior to recycling.
- c. Dispose of all spent batteries in accordance with local laws and regulations. See battery Material Safety Data Sheet (MSDS) for additional information.

©Concorde Battery Corporation 2005

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 11 OF 12	

**CONCORDE BATTERY
CORPORATION**
2009 San Bernardino Road
West Covina, CA 91790
Tel. 626-813-1234
Fax. 626-813-1235
www.concordebattery.com

TITLE Instructions for Continued Airworthiness, Concorde Flooded Lead Acid Main Battery		DWG NO. 5-0144	REV E
CAGE CODE 63017		SHEET 12 OF 12	



Transport
Canada

Transports
Canada

Aircraft Certification Division
800-1601 Airport Road NE
Calgary, Alberta, Canada
T2E 6Z8

August 26, 2008

Concorde Battery Corp.
2009 San Bernardino Rd.
West Covina, CA
USA 919790

Attention: Ramuntxo Duhart

Subject: Notification of Transport Canada Acceptance of FAA STC SA01147WI
Aircraft: Piper PA-25 Pawnee Series and PA-36 Pawnee Brave Series Agricultural
Aircraft per Canadian Type Certificates A-118 and A-228
Title: Concorde FLA or VRSLA Series Batteries in accordance with Concorde Battery
Corporation Master Drawing List No. 5-0157, Rev A or later FAA Approved Revision

This will notify you that Transport Canada has reviewed and accepted FAA STC SA01147WI in respect to the PA-25 and PA-36 series agricultural aircraft in accordance with the Bilateral Aviation Safety Agreement between the US and Canada without the issue of a corresponding Canadian STC.

All other aircraft types listed in the Approved Model List (AML) are automatically accepted in Canada without review because they are small (CAR 3 / FAR 23), non-restricted category US State of Design aircraft covered by a US STC.

This STC will be added to the Transport Canada listing of FAA STC's which have been accepted or familiarized in Canada. This listing is available on the TC Web Site at:
http://www.tc.gc.ca/aviation/applications/nico-celn/en/adv_search.asp?x_lang=e

This letter confirms formal acceptance of the referenced STC by Transport Canada.

Dennis Hoepfner, P. Eng.
Senior Engineer - Aircraft Certification

cc:
Federal Aviation Administration
Wichita Aircraft Certification Office
1801 Airport Road, Room 100
Wichita, Kansas
USA 67209
Attention – Harvey Nero, Program Manager

Canada

Your file Votre référence

Our file Notre référence
File: NAPA C-08-0724

Phone: 403-292-4145
FAX: 403-292-4992
email: hoepnd@tc.gc.ca