



**SEALED LEAD ACID BATTERY
PART No. 9750U0544**

**COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST**

**DOCUMENT No.
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COMPONENT MAINTENANCE MANUAL
9750U0554

RECORD OF REVISIONS

REV No.	ISSUE DATE	INSERT DATE	BY	REV No.	ISSUE DATE	INSERT DATE	BY
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RECORD OF TEMPORARY REVISIONS

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SERVICE BULLETIN LIST

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PRODUCT IMPROVEMENTS

Product improvements have been incorporated using service bulletins entered in the service bulletin list. Service bulletin highlights are as follows:



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INTRODUCTION

The instructions in this manual provide the information necessary for an experienced shop mechanic to service and if required, re-block batteries with no specialised training.

The manual is divided into separate sections:

- | | |
|----------------------------|--------------------------------|
| 1. Title page | 4. Table of Contents |
| 2. Record of revision | 5. Introduction |
| 3. List of Effective Pages | 6. Procedures and IPL Sections |

The disassembly, repair and assembly sections generally contain only specific instructions to be used on the equipment covered herein. Most standard aerospace practices are not described herein.

An explanation of the use of the illustrated Parts List (IPL) is provided in the introduction to that section.

All weights and measurements in the manual are in English units, unless otherwise stated.

The Faclon 6X battery 9750U0544 is manufactured by:

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DESCRIPTION & OPERATION

1. Description

The Falcon 6X battery is a 24Volt 37Ah Valve Regulated Lead Acid Battery (VRLA) comprising of 2 x 12Volt 37 Ah monoblocs connected in series, a heater assembly and two PT100 temperature sensors housed within an aluminium case and lid.

The purpose of the battery is to:

- Provide electrical power when no other electrical power is available whilst on the ground.
- Provide power to aircraft systems during the APU start.
- Act as the emergency power supply to the aircraft essential equipment in the event of a total loss of electrical power.
- Act as buffer in the event of short electrical power interruption or A/C network voltage transient.

Each Monobloc incorporates resealing safety valves to guard against the effects of abusive use of the battery.

As the Falcon 6X battery is sealed, there are no restrictions as to transportation. The batteries are classified as non-hazardous cargo when transported by air, land or sea.

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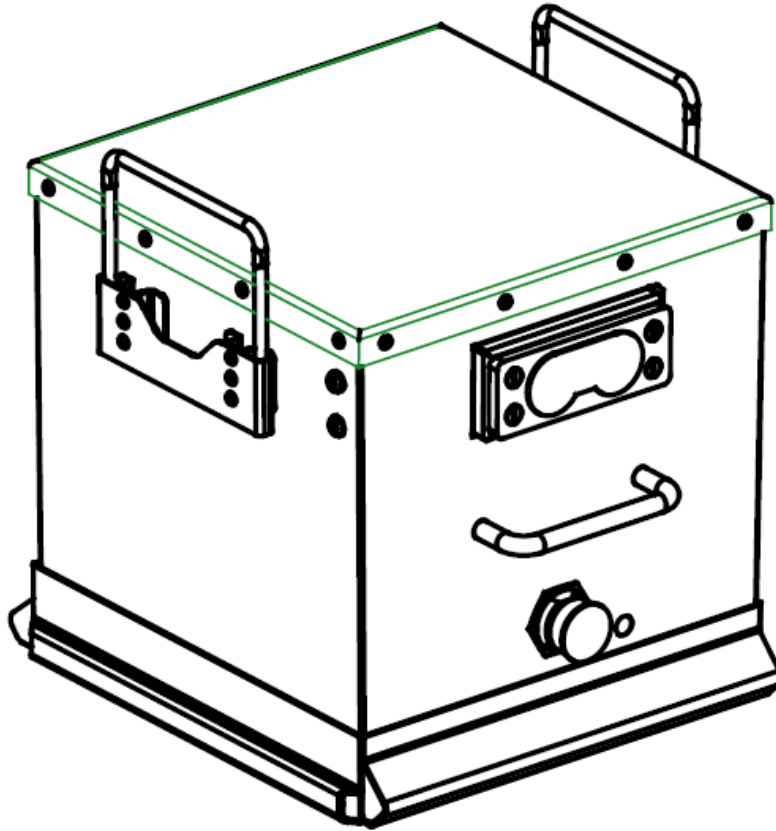


Figure 1 - Falcon 6X Battery



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2. Operation

A Condition of battery on receipt

All batteries are dispatched from the manufacturer in a fully charged condition, the date of the latest charge being marked on the outer packaging

CAUTION : The battery is maintenance free. Under no circumstances should any attempt be made to introduce any substances, e.g., acid, distilled water or alkali, to the battery.

B Temperature Effect

The ideal environmental temperature for battery operation is 23°C (73°F) to 25°C (77°F). Long-term exposure to temperatures above 30°C (86°F) can shorten the life of the battery.

As the temperature falls, the available capacity of the battery is reduced, which causes a reduction in performance. However, this is not a permanent condition and the capacity will be restored as the temperature rises. Long-term exposure to low temperatures will not damage the battery.



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C State of Charge

The battery is designed to commence discharge when the open circuit voltage (OCV) is within the 80 - 100% of nominal capacity range. At no time should the battery OCV be below 25.4 volts.

The graph in figure 2 demonstrates the effect of temperature on battery capacity at various discharge rates.

**DISCHARGE PERFORMANCE (SELECTED DISCHARGE RATINGS)
AS A FUNCTION OF TEMPERATURE**

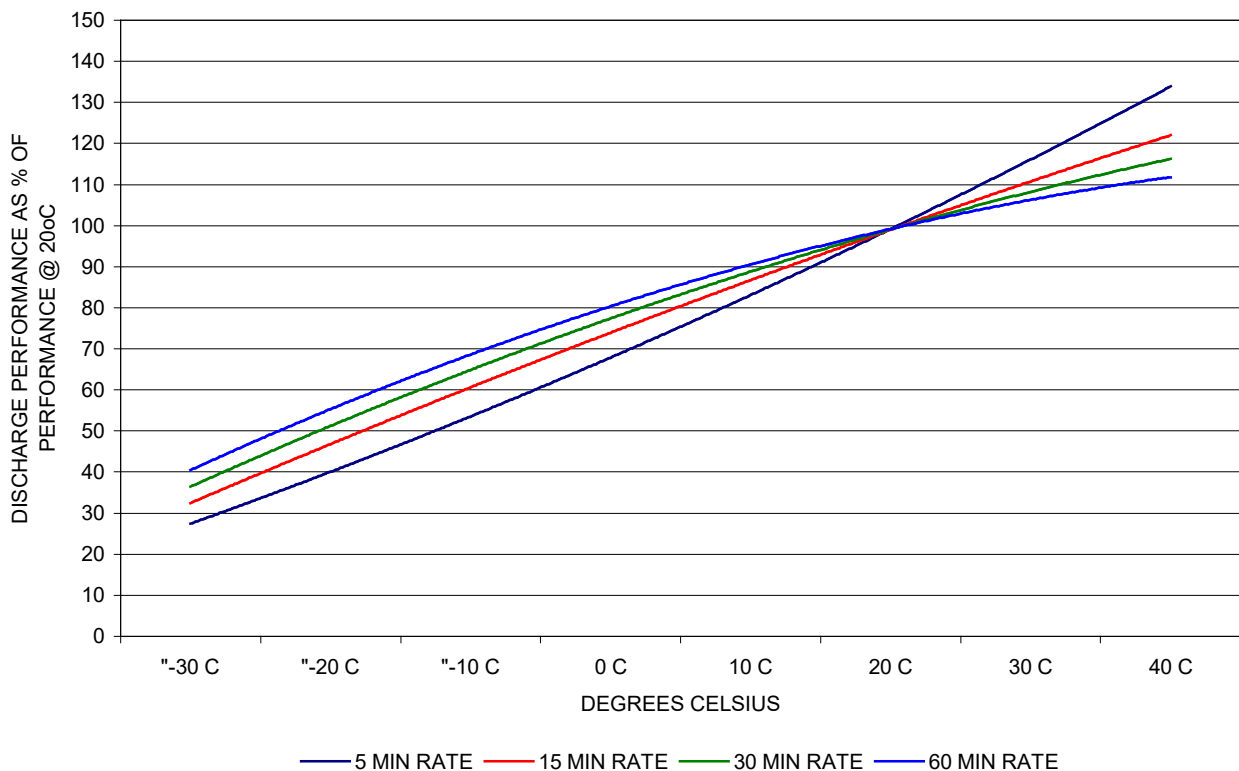


Figure 2 - Variation in Performance with Discharge Temperature



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General Information

Battery Voltage:	Nominal 24.0 Volts	
Battery Weight:	39 Kg Max	
Dimensions:	Overall Height	265 mm Max.at corners 267 mm Max at centre of battery
	Overall Width	265 mm Max.
	Overall Length	293.7 mm Max.
Main Connector:	MIL-PRF-18148/3 type: MS 3509	
Auxiliary Connector:	MIL-DTL-38999/24WD19PN.	
Rated Capacity:	37 ampere-hours at the one-hour rate	
Battery Case Material:	Aluminium 5052 H32	

Figure 3 - Leading Particulars



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TESTING AND FAULT ISOLATION

1. General

This section contains battery functional tests and fault isolation information. Trouble shooting is presented in chart form (Ref. Fig.8).

2. Required Test Equipment (Ref. Fig. 4).

NOTE: Test equipment having equivalent specifications can be used.

<i>NOMENCLATURE</i>	<i>MFR</i>	<i>MODEL/PN</i>	<i>APPLICATION</i>
Battery Charger / Analyser	Christie	RF80K	Testing
DC Voltmeter Precision ($\pm 0.5\%$) 0 to 50V	Fluke	Fluke 85	Testing
Infrared temperature Gun	-	-	Testing

Figure 4 -Required Test Equipment

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3. Test Equipment Set Up

A. Capacity Testing

Connect the battery to the Charger / Analyser in accordance with figure 5.

B. Recharging

Connect the battery to the Charger / Analyser in accordance with figure 5.

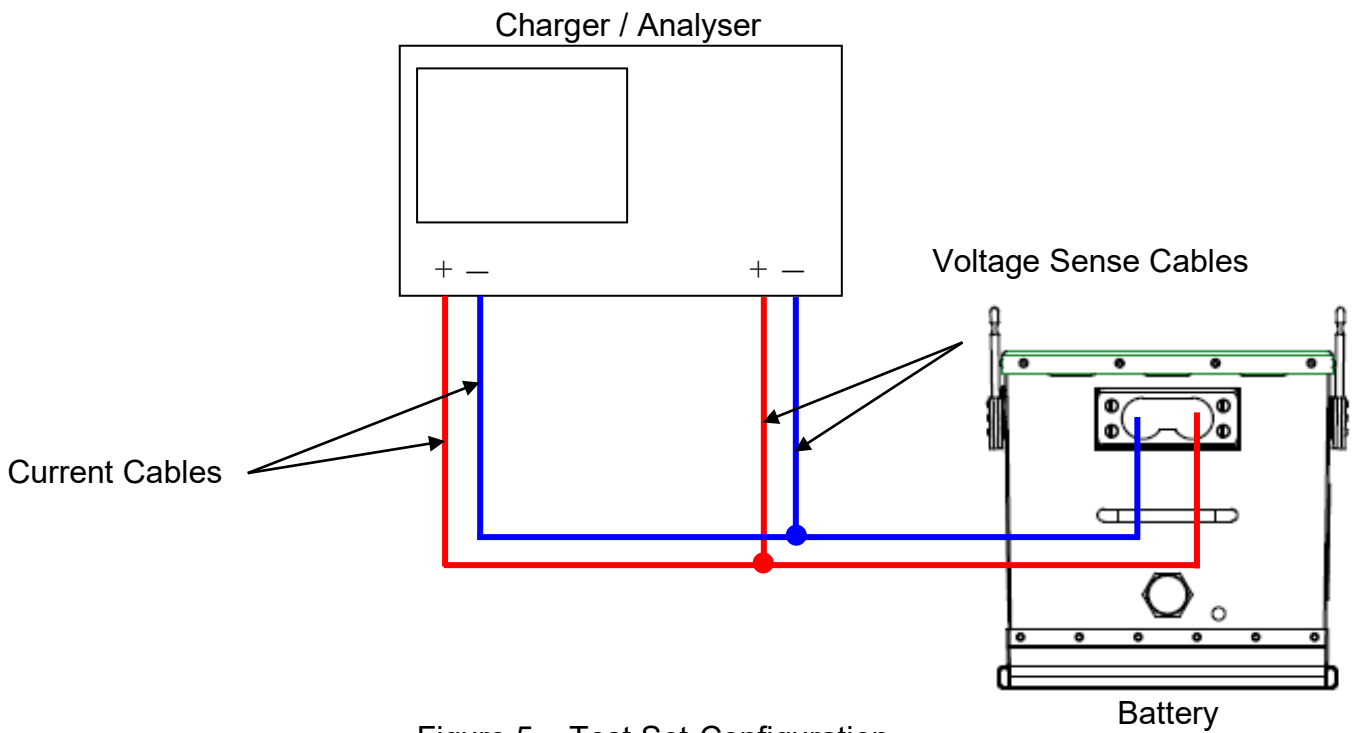


Figure 5 – Test Set-Configuration



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4. Testing

A. Test Equipment

Refer to Figure 4 for test equipment recommendations.

B. Condition of Batteries on Receipt

All batteries are despatched from manufacturer in a fully charged condition, the date of the latest charge being marked on the outer packaging.

C. Unpacking and Acceptance Checks

NOTE: The only acceptance check required immediately upon receipt is to look for signs of damage in transit. Unpacking and detailed examination is unnecessary and should be left until the battery is removed from storage.

D. Storage

The battery should be stored, fully charged, in a cool dry place, ideally below 25°C. The battery charge retention will be reduced, and possible performance degradation will occur if it is subjected to long-term exposure well in excess of this temperature.

The battery has a maximum inspection-free storage life of two (2) years, if stored at or below 20°C, after which a boost charge should be administered in accordance with Section H. However, it is advisable to conduct an inspection and open circuit voltage check after 12 months and top-up charge in accordance with Section 4.H if necessary.

The battery may be stored up to five (5) years without degradation of performance provided that an inspection and open circuit voltage check is conducted every 12 months. When stored in temperatures in excess of 25°C the battery should be inspected every 6 months, and top-up charged in accordance with Section H should the open circuit voltage fall below 25.5 volts.

Should the battery be returned to storage following in-service use, it must be fully recharged in accordance with Section 4.H and if possible packed in original packaging.

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E. State of Charge

The open circuit voltage of the battery prior to service can be used as an approximate guide to the state of charge of the battery. Figure 7 shows the relationship between open-circuit voltage and the state of charge of a new battery after 24 hours or more after recharge.

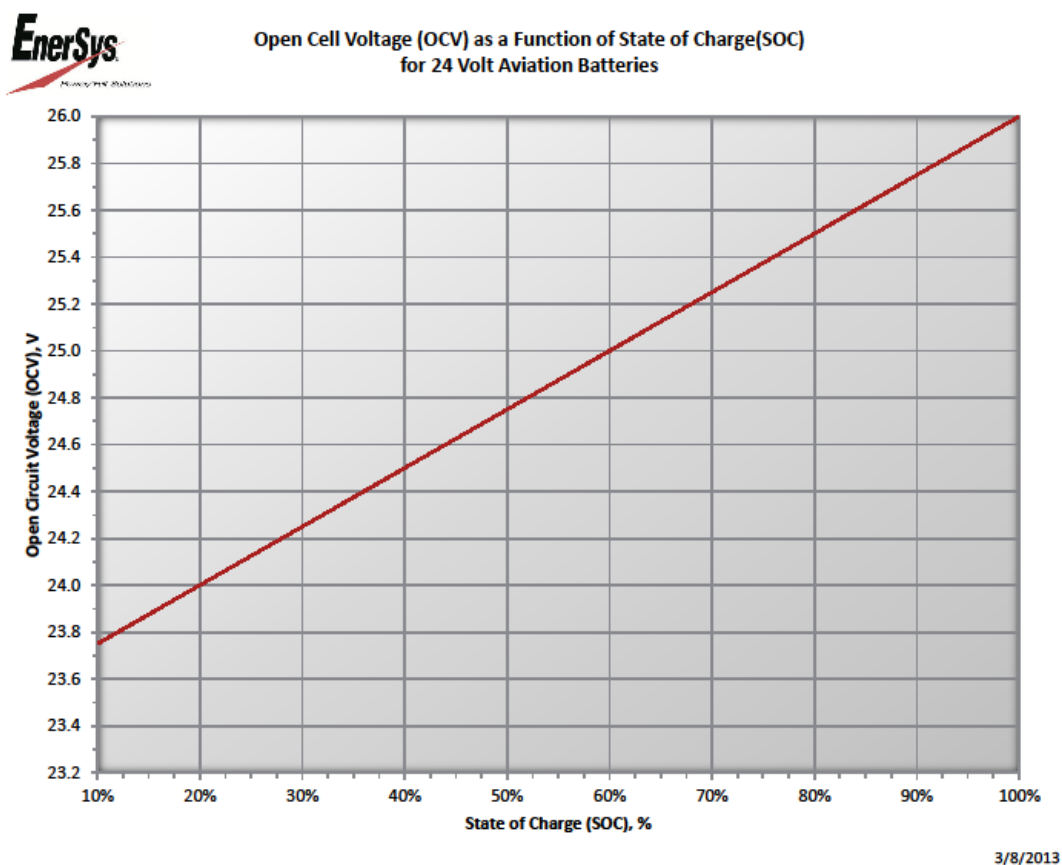


Figure 6 - Open Circuit Voltage as a function of State of Charge

Note!

That state of charge is not the same as available capacity. A battery at end-of-life and fully charged will show an OCV of 26.0V approximately but have an available capacity of 80% of rated capacity.



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- F. Commissioning Procedure (*Refer to Figure 7 – Battery commissioning flowchart*)

NOTE

A dedicated lead acid battery charging room is not required for battery commissioning. A normal electrical workshop may be used, and the battery can even be commissioned in a Nickel Cadmium battery room without fear of contamination.

1. Visual Inspection
 - 1.1. Visually inspect the exterior of the battery and receptacles for signs of damage, cracks or corrosion. If any defects are found, pack the battery in its original packaging and reject the battery in accordance with Section J
2. Voltage checks
 - 2.1. Measure the open circuit voltage (OCV).
 - 2.1.1. If the OCV is in greater than or equal to 25.5 volts, the capacity is at least 80% and the battery can be issued for service.
 - 2.1.2. If the OCV is greater than 25.3 volts but lower than 25.5 volts.
 - 2.1.2.1. Charge the battery in accordance with Section 4.H.
 - 2.1.2.2. On completion of the recharge, allow the battery to stand open circuit for a minimum of 4 hours for the battery voltage to stabilise.
 - 2.1.2.3. If the open circuit voltage equals 25.5 volts or greater the battery can be issued for service.
 - 2.1.3. If the open circuit voltage is less than 25.3 volts, the battery needs to be charged.
 - 2.1.3.1. Charge the battery in accordance with Section 4.H.



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- 2.1.3.2. On completion of the recharge, allow the battery to stand open circuit for a minimum of 4 hours for the battery voltage to stabilise.
- 2.1.3.3. Perform a capacity test, in accordance with Section 4.G
- 2.1.3.4. If the battery achieves at least 80% capacity:
 - 2.1.3.4.1. Record the capacity and date of test.
 - 2.1.3.4.2. Issue the battery to service

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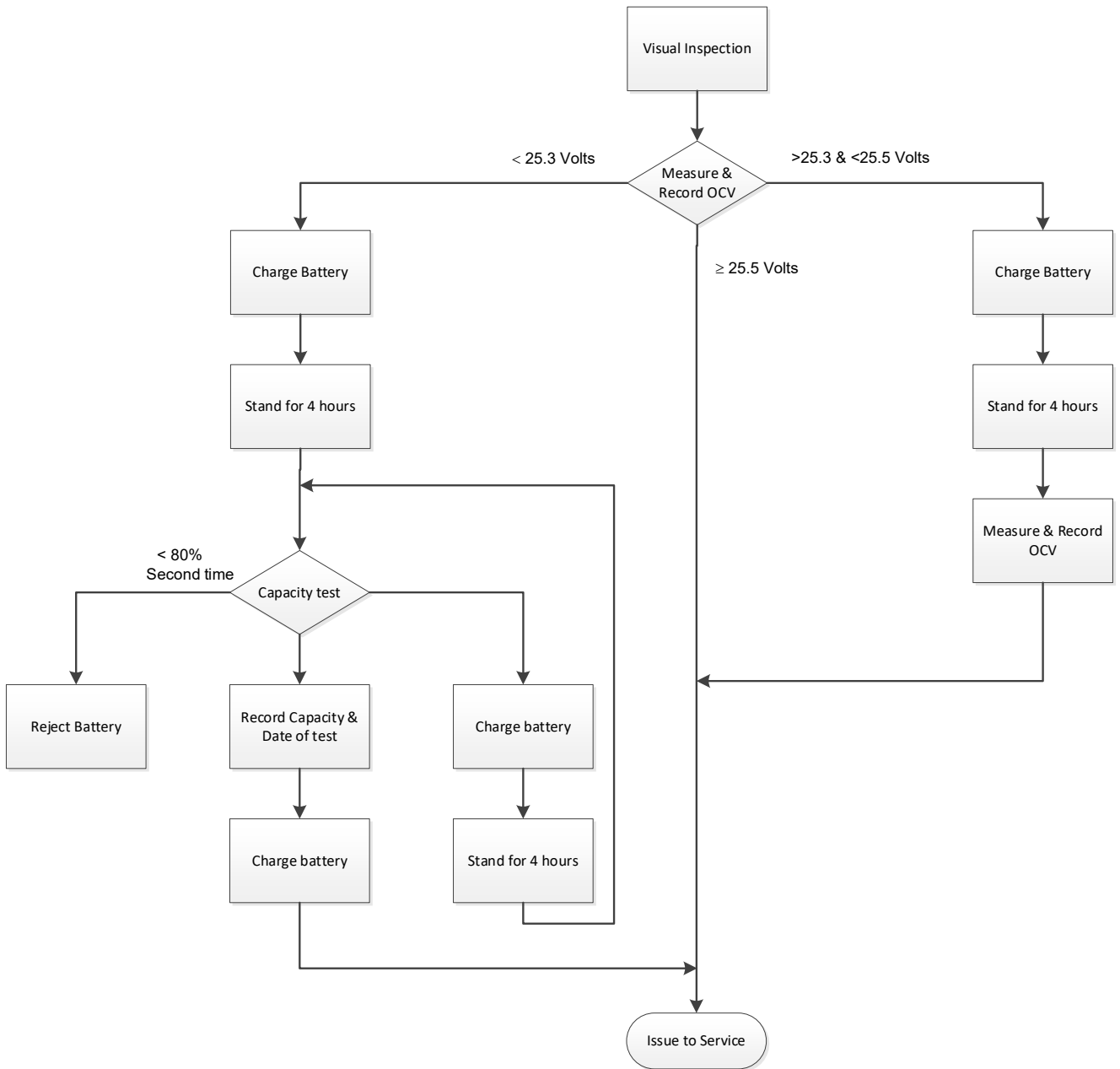


Figure 7 – Battery Commissioning Flowchart



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G Scheduled/Unscheduled Maintenance (Refer to figure 8 for Scheduled/Unscheduled maintenance flowchart)

In normal service the battery may be installed on the aircraft up to a maximum of 12 months, after which it should be removed and subjected to scheduled maintenance.

1. Visual Inspection.
 - 1.1. Visually inspect the exterior of the battery casing for signs of damage and cracks. Examine the battery terminal and heater connector. for signs of damage, corrosion, and water/dirt ingress; clean as necessary.
2. Insulation Resistance
 - 2.1. Measure and record the insulation resistance between the negative terminal and the battery case.
 - 2.2. The minimum resistance value shall be 250K Ω before cleaning and a 10M Ω after cleaning.
3. Earthing Bonding
 - 3.1. Using a Milli-ohmmeter, measure and record the resistance between the Pin (V) of receptacle J2 and the unpainted area on the front face of the battery.
 - 3.2. The resistance shall be less than 50 m Ω .
 - 3.3. If the resistance value is greater than 50m Ω , clean grounding surface and repeat 1.3.1
 - 3.4. If resistance is still greater than 50m Ω , refer to REPAIR.
4. Heater Assembly
 - 4.1. Using a multimeter, measure and record the resistance between the following pins of receptacle J2



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Heater	Pin	Pin	Resistance (Ω)
A – B	B	C	219 to 241
A – C	B	P	219 to 241
B – C	C	P	219 to 241
D	D	E	72 to 80

4.2. If the values measured or outside the specified range, refer to REPAIR.

5. PT100 Temperature Sensor

5.1. Using a multimeter, measure and record the resistance between the following pins of receptacle J2

Temperature Sensor	Pin	Pin
T1	J	K
T2	L	M

5.2. Using the table in figure 8, check the measure resistance values of each temperature sensor against the specified lower/ upper temperature limits.

5.3. Measure and record the temperature on the top surface of the PT100 sensors using a calibrated IR meter.



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Measured Resistance Ohms	Lower Temperature Tolerance °C	Upper Temperature Tolerance °C	Measured Resistance Ohms	Lower Temperature Tolerance °C	Upper Temperature Tolerance °C	Measured Resistance Ohms	Lower Temperature Tolerance °C	Upper Temperature Tolerance °C
105	11.70	14.72	108.4	20.43	23.53	111.7	28.92	32.10
105.1	11.96	14.98	108.5	20.69	23.79	111.8	29.18	32.36
105.2	12.22	15.24	108.6	20.94	24.05	111.9	29.44	32.62
105.3	12.47	15.50	108.7	21.20	24.30	112	29.70	32.88
105.4	12.73	15.76	108.8	21.46	24.56	112.1	29.95	33.14
105.5	12.99	16.02	108.9	21.71	24.82	112.2	30.21	33.40
105.6	13.24	16.27	109	21.97	25.08	112.3	30.47	33.66
105.7	13.50	16.53	109.1	22.23	25.34	112.4	30.73	33.92
105.8	13.76	16.79	109.2	22.49	25.60	112.5	30.98	34.18
105.9	14.01	17.05	109.3	22.74	25.86	112.6	31.24	34.44
106	14.27	17.31	109.4	23.00	26.12	112.7	31.50	34.70
106.1	14.52	17.57	109.5	23.26	26.38	112.8	31.76	34.96
106.2	14.78	17.83	109.6	23.51	26.64	112.9	32.02	35.22
106.3	15.04	18.09	109.7	23.77	26.90	113	32.27	35.48
106.4	15.29	18.34	109.8	24.03	27.16	113.1	32.53	35.74
106.5	15.55	18.60	109.9	24.29	27.42	113.2	32.79	36.00
106.6	15.81	18.86	110	24.54	27.68	113.3	33.05	36.26
106.7	16.06	19.12	110.1	24.80	27.94	113.4	33.31	36.52
106.8	16.32	19.38	110.2	25.06	28.20	113.5	33.56	36.78
106.9	16.58	19.64	110.3	25.32	28.46	113.6	33.82	37.04
107	16.83	19.90	110.4	25.57	28.72	113.7	34.08	37.30
107.1	17.09	20.16	110.5	25.83	28.98	113.8	34.34	37.56
107.2	17.35	20.42	110.6	26.09	29.24	113.9	34.60	37.82
107.3	17.60	20.68	110.7	26.35	29.50	114	34.86	38.08
107.4	17.86	20.93	110.8	26.60	29.76	114.1	35.11	38.34
107.5	18.12	21.19	110.9	26.86	30.02	114.2	35.37	38.61
107.6	18.37	21.45	111	27.12	30.28	114.3	35.63	38.87
107.7	18.63	21.71	111.1	27.38	30.54	114.4	35.89	39.13
107.8	18.89	21.97	111.2	27.63	30.80	114.5	36.15	39.39
107.9	19.14	22.23	111.3	27.89	31.06	114.6	36.40	39.65
108	19.40	22.49	111.4	28.15	31.32	114.7	36.66	39.91
108.1	19.66	22.75	111.5	28.41	31.58	114.8	36.92	40.17
108.2	19.92	23.01	111.6	28.66	31.84	114.9	37.18	40.43

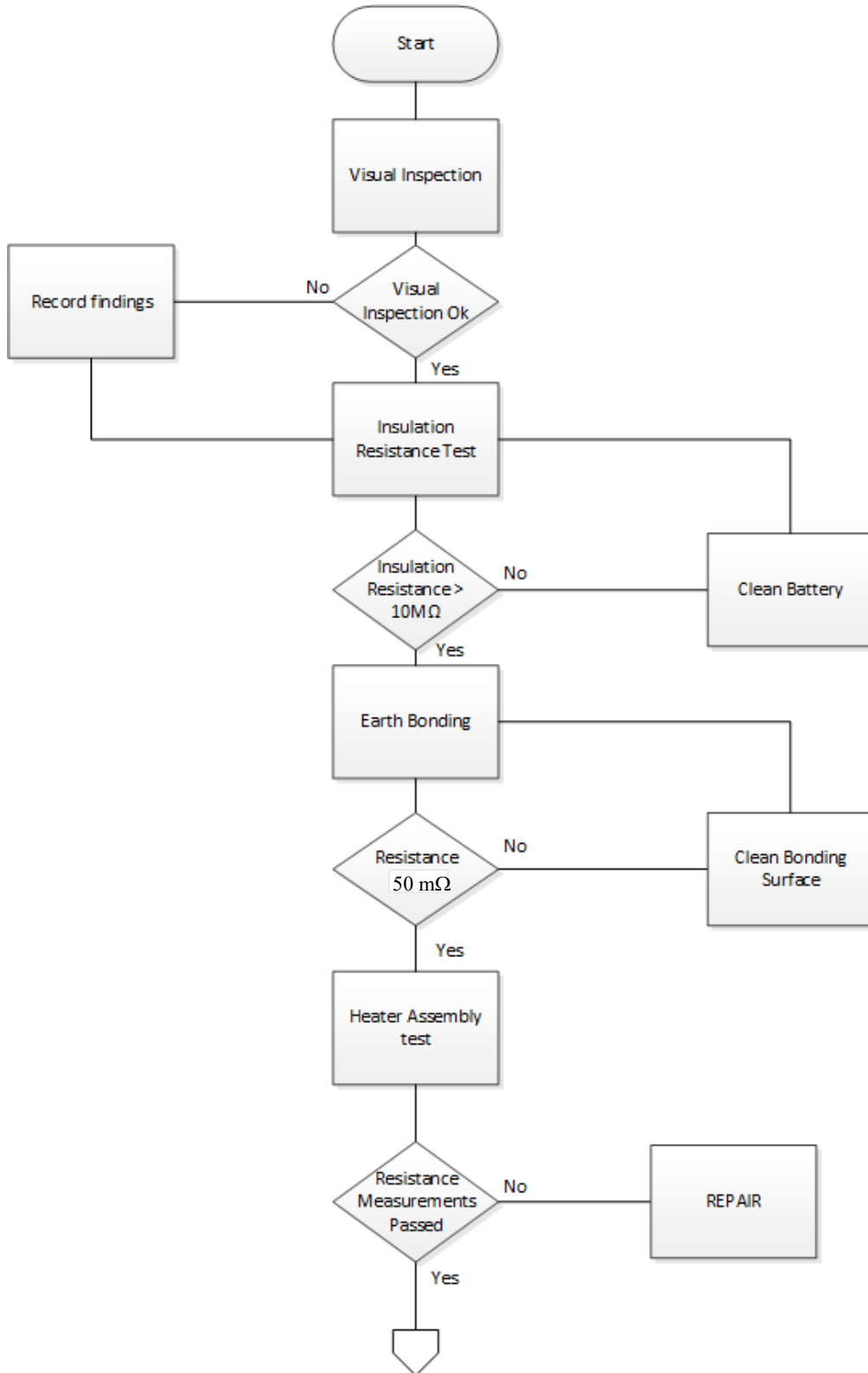
Figure 8 – PT100 Temperature range v/s Resistance



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- 5.4. If the values measured or outside the specified range, refer to REPAIR
6. Open circuit Voltage (OCV)
 - 6.1. Measure and record the OCV using a digital multi-meter.
 - 6.1.1. If the OCV is greater than 25.5 Volts, test the battery in the "as found" condition and continue with capacity test (4.G.7).
 - 6.1.2. If the OCV measures greater than 20.0 Volts but less than 25.5 Volts, charge the battery per Section 4.H. On completion of the charge, allow the battery to stand open circuit for a minimum of 4 hours for the battery voltage to stabilise before continuing with capacity test (4.G.7).
 - 6.1.3. If the OCV measures 20.0 Volts or less the battery procedure with Deep discharge recovery procedure 9602-6298 as the battery is considered to be in a deeply discharge state.
7. Capacity Test
 - 7.1. Perform a capacity test per Section 4.H.
 - 7.1.1. If the result of the capacity test is greater than 80%, Record the capacity and date of test on the battery label.
 - 7.2. Recharge battery per Section 4.I.
 - 7.3. Ensure the battery is clean and return the battery to service

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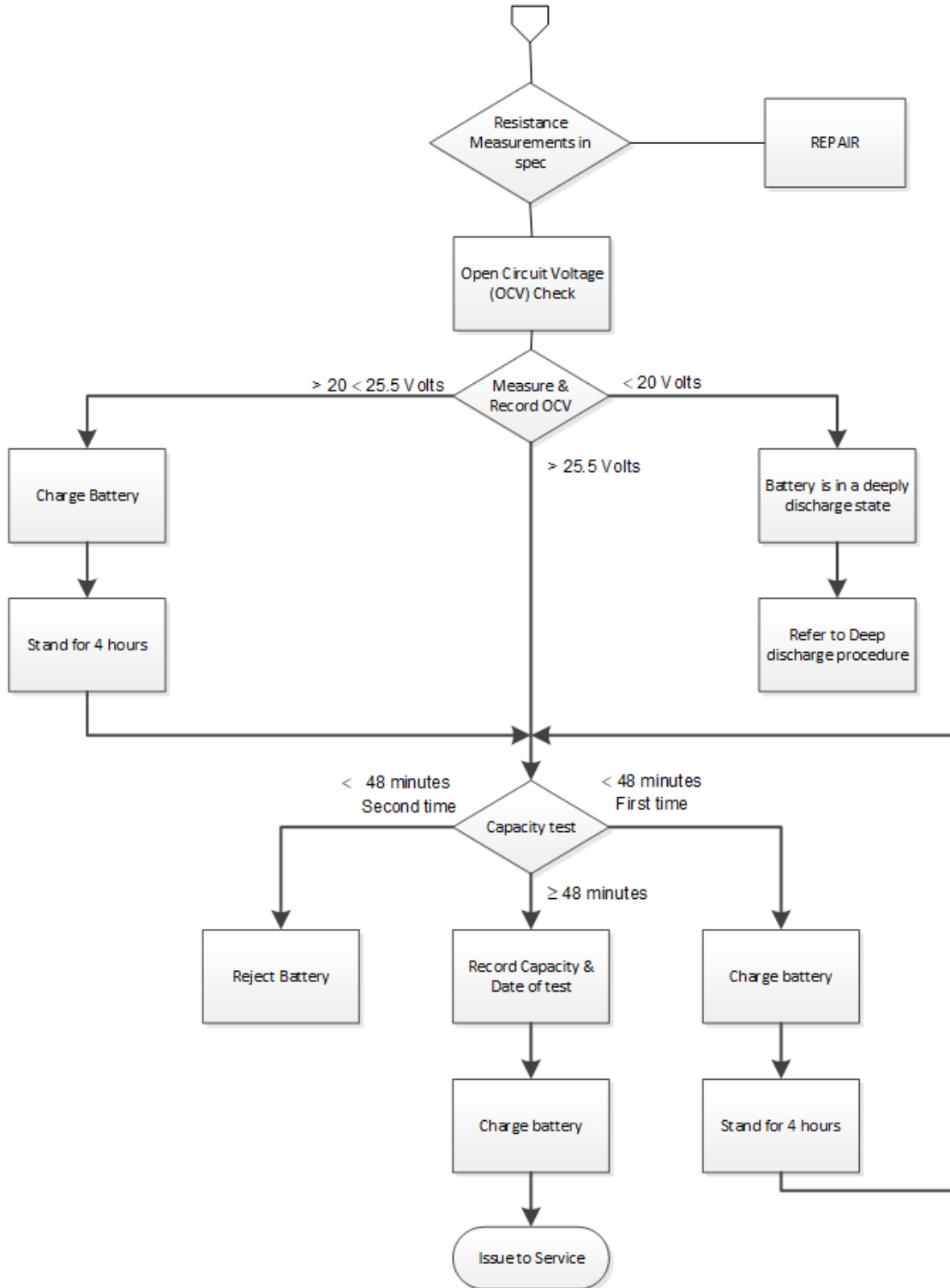


Figure 8 – Scheduled/Unscheduled Maintenance flowchart



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H Capacity Test

Capacity testing is performed by discharging the battery with a constant current load at the one- hour rate and measuring the time required (in minutes) to reach the cut off voltage.

1. Connect the battery to the charger / Analyser as per figure 5.
2. Discharge the battery at a constant current of 37 amps to an end voltage of 20.0 volts.
3. Calculate the capacity of the battery using this equation:

$$\text{Capacity\%} = (\text{Run Time} / 60) \times 100$$

- 3.1. If the discharge duration is greater than 80% i.e. 48 minutes, recharge the battery in accordance with Section I.

Note: The minimum allowable capacity for flight is 80% or 48 minutes

- 3.2. If the discharge duration is less than 80%:

- 3.2.1. Recharge the battery in accordance with Section H.
- 3.2.2. On completion of the charge, allow the battery to stand open circuit for a minimum of 4 hours for the battery voltage to stabilise.
- 3.2.3. Conduct a further discharge test Discharge the battery at a constant current of 37 amps to an end voltage of 20.0 volts.
 - 3.2.3.1. If the discharge duration is now in excess of 80%, recharge the battery in accordance with Section 4.I.
 - 3.2.3.2. If the discharge duration is still below 80%, reject the battery in accordance with Section 4.J.



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I Charging

This manual only covers Constant Voltage (CV) charging since CV charging is the preferred method. If constant current charging is the only available option, please contact EnerSys Technical Support for guidance.

Note:

Charging should be performed in the battery work shop where the ambient temperature is maintained between 20°C and 30°C. The battery may be charged outside this temperature window if a temperature compensated charger is used.

1. Charge the battery at a constant voltage of 28.5Volts with a charger capable of delivering a **minimum** of 20Amps using the set-up illustrated in figure 5 for a minimum charge duration of 6 hours).



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J Rejection Procedure

1. If the exterior of the battery and receptacles for signs of damage, cracks or corrosion during commission, contact either manufacture of the battery.
2. If the battery fails to attain a 48-minute run time (80% capacity) after two discharge tests, it is acceptable to reblock the battery on two occasions by an approved EASA Part 145 Organisation. If the battery has already been reblocked on two occasions and fails to meet the release to service criteria, then the battery should be decommissioned and replaced.



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5. Fault Isolation

Trouble shooting information is presented in Figure 8 as a guide in locating a cause of malfunction and isolating the cause to a specific component.

<i>TROUBLE</i>	<i>PROBABLE CAUSE</i>	<i>REMEDY</i>
Zero battery voltage	Broken or loose terminal connections.	Repair per repair instructions.
Low battery capacity	In service charging malfunction.	Run electrical test. Check aircraft charger.
	Defective cell	Run electrical test
	Defective Heater(s)	Check heater assembly
Low voltage output	Defective Temperature Sensors	Check PT100 temperature sensors
	In service charger malfunction, loose terminal connection.	Run electrical test. Check aircraft charger.

Figure 9 - Fault Isolation



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DISASSEMBLY

1. General

This section describes and provides the information necessary for an experienced shop mechanic to re-block batteries with no specialised training.

2. Safety

WARNING: Caution shall be exercised when testing, building and handling batteries, as monoblocs are fully charged and any short circuit condition may result in injury.

WARNING: To avoid risk of injury, care shall be taken when wearing jewellery such as rings, bracelets, metal watchstraps, necklaces and belt buckles.

CAUTION: Any such items shall if possible, be removed prior to working on monoblocs or batteries to avoid risk of injury.

CAUTION: All tools coming into contact with the monobloc terminals shall be fully insulated to prevent the risk of a short circuit condition.



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3. Detailed Instructions

NOTE: The () part identification numbers herein are detailed in IPL, Fig.1 item numbers.

- A. Remove cover (30) by carefully drilling out the 16 rivet fastenings (40).
- B. Remove the two holddown blocks (100)
- C. Remove the four monobloc terminal nut covers (80).
- D. Remove and the binx nuts (70), plain washers (60), from the rear lamination (50).
- E. Remove the binx nut (70), plain washer (60), from the positive terminal lamination.
- F. Remove the binx nut (70), plain washer (60), and from the negative terminal lamination.

Note Do not remove the front laminations from the main battery connector.

Note All Binx nuts and washers should be discarded together with the rear laminations and holddown blocks.

- G. Disconnect the internal heater connector
- H. Carefully remove the two PT100 sensors (150) from the surface of the monobloc assembly.
- I. Remove screws (110) and washers (120), securing thermostat bracket (190) to the battery case.
- J. Carefully position the positive and negative laminations, PT100 temperature sensors (150) and thermostat bracket (190) so that they do not become trapped during the removal of the monobloc and heater assembly
- K. Carefully invert the battery onto a polystyrene block (40mm thick), or other non-conductive material and carefully remove the battery case.

Note Care must be taken to avoid shorting terminals during this procedure

Note Position the front of the case so that it is clear of the polystyrene block to avoid damaging the laminations, internal wiring, PT100 sensors and thermostat assembly.



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CLEANING

1. General

- A. The following item is required to perform the cleaning procedure.

Soft clean dry cloth

2. Disassembled Battery

- A. Ensure that no particles from the drilled rivets remain in the case.
- B. Wipe the inside of the case and underside of lid with soft clean dry cloth to remove dust or dirt particles.



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CHECK

1. General

A. Battery case and lid. Examine for:

- 1) Cleanliness
- (2) Cracking
- (3) Corrosion

B. Rubber components: Examine for the following defects:

- (1) Signs of perishing
- (2) Deterioration

C. All other components.

- (1) Renew if damaged or showing signs of deterioration.



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REPAIR

1. Unserviceable Monoblocs

NOTE:

Monoblocs are serial numbered in pairs; the two units carry the same serial number as is shown on the label on the battery container. When re-blocking, the existing label should be removed from the battery container and replaced by a new label carrying the appropriate new serial number.

Re-blocking kits can be purchased directly from EnerSys Ltd or an approved distributor. The reblocking procedure shall be carried out by an EASA approved Part 145 Organisation.

2. Zero Battery Voltage

If the open circuit voltage is recorded as zero, either,

i) Repair unit

or

ii) Return manufacturer

If repaired unit in i) still records open circuit voltage as zero, return battery to address in Section 1 for an inspection by the manufacturer to determine the cause of failure.

To replace a pair of cell blocks, proceed as follows: -

- a. Remove unserviceable monoblocs (see Disassembly).
- b. Renew unserviceable monoblocs (see Assembly)
- c. Carry out capacity test (see Testing)



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3. Heater Mats

If the resistance measurements are not within the defined criteria, then the heater mats and monoblocs should be replaced as a sub assembly as per the reblocking kit (140)

4. PT100 Temperature Sensor(s)

If one or both PT100 temperature sensors resistance measurements fail to meet the defined criteria, replace as required.

5. Earth Bonding

If the resistance measurement is not within the defined criteria, then clean the surface area and repeat the measurement.

RE-BLOCKING

1. General

Following a schedule or unscheduled removal from aircraft there might be a need to reblock the battery. The Falcon 6X battery can be reblocked with new monoblocs up to a maximum of two times

2. Records

Each time a re-blocking procedure is performed the date of the re-block is to be recorded on the label attached to the battery case. Furthermore, full details including the date and the serial numbers of the monoblocs are to be recorded in the booklet accompanying each new battery. This booklet should be held in the battery shop where the re-block will take place.

3. Procedure

Detailed instructions of how to disassemble, check and reassemble the battery are given in the appropriate sections of this manual.



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ASSEMBLY

1. General

This section describes and provides information for an experienced shop mechanic to assemble batteries with no specialised training.

2. Safety

Same as disassembly.

WARNING: Caution shall be exercised when testing, building and handling batteries, as monoblocs are fully charged and any short circuit condition may result in injury.

WARNING: To avoid risk of injury, care shall be taken when wearing jewellery such as rings, bracelets, metal watchstraps necklaces and belt buckles.

CAUTION: Any such items shall if possible, be removed prior to working on monoblocs or batteries to avoid risk of injury.

CAUTION: All tools coming into contact with the monobloc terminals shall be fully insulated to prevent the risk of a short circuit condition.

NOTE: The () part identification numbers herein are IPL, Figure 1 item numbers.



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3. Detailed Instructions

Note:

The () part identification numbers herein are detailed in IPL, Fig.1 item numbers.

A. Verify both new monoblocs are properly matched pairs:

- Same manufacturer
- Same part number
- Open circuit voltage is within 1%
- Date Codes or Date of Manufacture

B. Carefully invert monobloc and heater assembly (20) onto a polystyrene block (40mm thick), or other non-conductive material.

Note Position the positive and negative laminations, PT100 temperature sensors (150) and thermostat bracket (190) so that they do not become trapped during the installation of the new monobloc/heater assembly

Note Care must be taken to avoid shorting terminals during this procedure

C. Carefully slide the battery case down over the new monobloc/heater assembly (20).

D. Carefully turn over the assembled battery into the upright orientation.

Note: Care must be taken to ensure there are no wires trapped under the front laminations during the assembly process.

Note Wires are not permitted between the front laminations and the surfaces of the monobloc.

E. Connect the monobloc/heater assembly connector to its mating half.

Note Ensure the clip on the connector is positively located

F. Applying a small amount of LOCTite (130) to the threads of screws (110) before securing the thermostat bracket (190) to the battery case, with washers (120), tightened to 2.0Nm.

Note: Ensure that the front surface of the thermostats are in contact with the front face of the monobloc.

G. Position the positive terminal lamination at the front of the battery over the positive monobloc terminal. Fit plain washer (60) and Binx nut (70) over positive terminal and tighten to 3.9Nm and install terminal nut cover (80).

Note Over tightening the terminal nuts may result in fracturing of the terminal posts.



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- H. Position the negative terminal lamination at the front of the battery over the negative monobloc terminal. Fit plain washers (60) and Binx nuts (70) over positive terminal and tighten to 3.9Nm and install terminal nut covers (80).
- I. Fit rear lamination (50) between the rear positive and negative terminals of the monobloc assembly. Fit the plain washers (60) and Binx nuts (70) and tighten to 3.9Nm and install terminal nut covers (80).
- J. Install holddown blocks (100) to the outer edges of the monoblocs.
- K. Re fit temperature PT100 (150) Temperature sensors to surface of monoblocs. Use contact adhesive (180) to ensure good adhesion with monobloc surface,
- L. Fit lid (30) and secure lid to container with 16 off Pop Rivets (30)



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SPECIAL TOOLS, FIXTURES AND EQUIPEMENT

1. Special Tools

NOTE: Equivalent substitutes may be used for listed items.

A. The equipment detailed in Figure 10 is required to disassemble, test and reassemble batteries.

ITEM NUMBER	ITEM	PART NUMBER
10	Drill	
20	3.2mm (.125") Drill Bit	
30	Torque Spanner & 7mm (.276") Socket	
40	Pop Rivet Gun, Textron G2 with 1/8" AI MBC Nose Assembly or Handtool 7166 with 1/8" Nose Assembly	

Special Tools, Fixtures and Equipment

Figure 10



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ILLUSTRATED PARTS LIST

1. Introduction

A. Purpose

- (1) This section provides illustrations and parts breakdown of the Falcon 6X battery, which can be disassembled, repaired or replaced and reassembled.

B. Explanation and Usage of Section

- (1) Assembly Order Indenture Section

The Indenture System used in the parts list shows the relationship of one part to another. For a given item, the number of indentures depicts the relationship of the item to the associated next higher assembly.

- (2) Effectivity Code

Reference letters (A, B, C etc) are assigned in the EFF code column to each top assembly. The reference letter of the applicable top assembly is also shown in the EFF CODE column for each detail part and subassembly except that no reference letter is shown for detail parts and subassemblies used on all top assemblies.

- (3) Quantity Per Assembly

The UNITS PER ASSY column shows the total number of units required per assembly, per subassembly, and per sub subassembly as applicable. The letters REF indicate the item is listed for reference purposes.

- (4) Parts Replacement Data

Interchangeability information will be provided in a future manual revision if it becomes applicable.



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(5) Service Bulletin Incorporation

Service Bulletin incorporation information applicable to the parts list will be provided in a future manual revision if it becomes applicable.

(6) Items Not Illustrated

(a) Items not illustrated are indicated by a dash (-) ahead of the item numbers in the FIG, and ITEM NO. column.

(7) Alpha Variant Item Numbers

(a) Alpha variants A-Z (except I and O) are assigned to existing item numbers where necessary to show:

1. Added Items
2. Service Bulletin Configurations
3. Configuration differences
4. Optional parts
5. Product improvement parts (non-service bulletin)

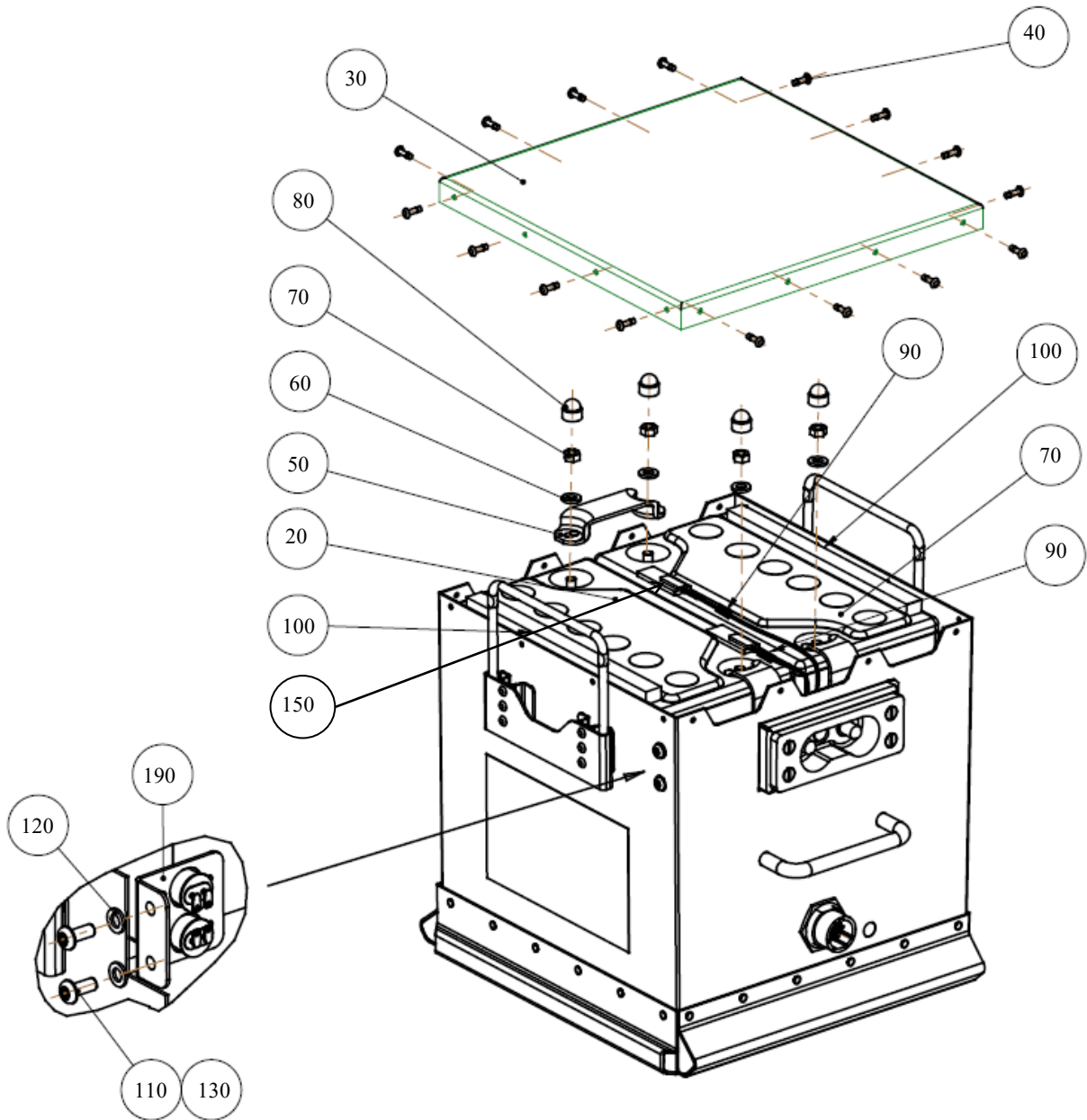
view the (b) Alpha variant item numbers are not shown on the exploded when the appearance and location of the alpha variant item is same as the basic item.

(8) Vendors

The vendor of all parts shown in the parts list is as follows:

<u>VENDOR CODE</u>	<u>NAME/ADDRESS</u>
U6335	EnerSys Ltd Stephenson Street NEWPORT South Wales NP19 4XJ U.K.

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Battery, Exploded View

Figure 1



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ILLUSTRATED PARTS LIST

FIG.	ITEM	PART NUMBER	NOMENCLATURE	EFF. CODE	UNITS PER ASSY
			1 2 3 4 5 6 7		
1	-10	9750U0554	SEALED LEAD ACID BATTERY		RF
	20	3212-9899	MONOBLOC & HEATER SUB ASSEMBLY		1
	30	3106-9919	LID ASSEMBLY, COVER		1
	40	2207-8667	POP RIVET 1/8" UNIV HEAD		16
	50	2207-0117	LAMINATIONS, REAR, INSULATED		1
	60	2207-9905	M6 PLAIN WASHER		4
	70	2207-9488	M6 BINX NUT		4
	80	2201-9558	INSULATING NUT COVER, M6		4
	90	2107-9761	CABLE TIE		2
	100	2210-9717	HOLD DOWN BLOCK		2
	110	2207-7671	M5 X 12 TAMPERPROOF SCREW		2
	120	2207-7670	M5 PLAIN WASHER		2
	130	2290-9993	ADHESIVE, LOCTITE 222		AR
	-140	9250-0194	REBLOCKING KIT		1
	150	3212-9900	PT100 SENSOR ASSEMBLY		1
	-160	2205-9796	CRIMP TERMINAL		4
	-170	2202-9971	HEAT SHRINK		AR
	-180	2202-9919	CONTACT ADHESIVE		AR
	190	2207-7712	THERMOSTAT BRACKET		1

- DENOTES NOT ILLUSTRATED

AR – As required