Service Kit

FAA/DER APPROVED

Service Kit: SK-EC130-202-1

Title: Eurocopter EC130 Air Conditioner Condenser Relocation Instructions.

Date: November 10, 2006

Applicability: All Eurocopter Model EC130 Helicopters equipped with the Air Comm Corporation Air Conditioner System, Part Number EC130-200.

Reference: STC SR00543DE, Cabin Air Conditioning System.
EC130-200, General Arrangement Drawing
EC130-202, General Arrangement Drawing
EC130-500, Refrigerant Plumbing Installation Drawing
EC130-502, Refrigerant Plumbing Installation Drawing
EC130-700, Condenser Installation Drawing
EC130-702, Condenser Installation Drawing
EC130-800, Electrical Installation Drawing
EC130-802, Electrical Installation Drawing
EC130-200M, Instructions for continued airworthiness
SK-EC130-7540-1 Drawing

Compliance: Optional, at the discretion of the operator.

Purpose: The purpose of this document is to relocate the air conditioner condenser assembly from the bottom of the aircraft, to the new configuration which is defined by drawing EC130-202, and locates the condenser to the upper section of the left hand cargo compartment.

Discussion: The purpose of this document is to relocate the air conditioner condenser assembly from the bottom of the aircraft to the LH cargo compartment. This configuration is defined by drawing EC130-202.

Instructions:
Remove and replace those components listed in the Bill of Materials section of this document using the reference documents listed above.

Bill of Materials (Items to be removed)

Item	Qty.	Description **Refrigerant Plumbing**	Part Number to be **Removed**
1	1	Tube Assy.	EC130-5020-T1
2	1	Tube Assy.	EC130-5020-T2
3	1	Tube Assy.	EC130-5020-T3
4	1	Tube Assy.	EC130-5020-T4
5	1	Tube Assy.	EC130-5020-T5
6	1	Tube Assy.	EC130-5020-T6
7	1	Tube Assy.	EC130-5020-T7
8	1	Tube Assy.	EC130-5020-T8
9	1	Tube Assy.	EC130-5020-T9
10	1	Tube Assy.	EC130-5020-T12
11	1	Tube Assy.	EC130-5020-T13
12	1	Tube Assy.	EC130-5020-T15
13	1	Hose Assy.	EC130-5012-H2
14	1	Hose Assy.	EC130-5012-H3
15	1	Closeout	EC130-7506-2
16	1	Tee	A119-5020-3
17	1	Y-Fitting	EC120-5008-1
18	1	Binary Pressure Switch	ES57008-2
19	1	Receiver Drier Bottle	ES43030-5
20	2	#6 Bulkhead Fitting	ES40630-6LD
21	1	#8 Bulkhead Fitting	ES40630-8LD
22	2	Clamp	MS21919WDG-48
*	*	**Condenser Components**	*
1	1	Condenser Assy.	EC130-7000-1
2	1	Fwd Inbd Mount	EC130-7500-2
3	1	Fwd Outbd Mount	EC130-7500-3
4	1	Fwd Mount	EC130-7500-16
5	1	Closeout Assy.	EC130-7506-1
6	1	Closeout Assy.	EC130-7506-13
*	*	**Electrical Components**	*
1	1	Wire (22 Gauge)	ACCA13A22
2	1	Wire (22 Gauge)	ACCA14A22
3	1	Wire (14 Gauge)	ACCA26A14
4	1	Wire (14 Gauge)	ACCA27A14N
5	1	Relay Panel	EC130-8420-1
6	1	50 Amp Fuse	ANL50

Continued

Instructions continued:

Bill of Materials (Items to be Installed)

Item	Qty.	Description **Refrigerant Plumbing**	Part Number to be **Installed**
1	1	Hose Assy.	EC130-5012-H7
2	1	Hose Assy.	EC130-5012-H8
3	1	Hose Assy.	EC130-5012-H9
4	1	Hose Assy.	EC130-5012-H10
5	1	Hose Assy.	EC130-5012-H11
6	1	Hose Assy.	EC130-5012-H12
7	1	Hose Assy.	EC130-5012-H13
8	1	Y-Fitting	EC130-5032-1
9	1	Binary Pressure Switch	ES57010-1
10	1	#6 Bulkhead fitting	ES40630-6LD
11	1	Nut	ES40630-26D
12	10	O-ring #6 Torq-Lok	2-012-N1173
13	7	O-ring #8 Torq-Lok	2-014-N1173
14	16"	Spiral Wrap	SW12BK
15	12	Nut	MS21042L3
16	5	Clamp	MS21919WCH-10
17	6	Clamp	MS21919WCH-12
18	1	Clamp	MS21919WCH-14
19	2	Clamp	MS21919WCH-24
20	1	Screw	MS27039-1-08
21	9	Screw	MS27039-1-09
22	2	Bracket	MS9592-024
23	2	Spacer	NAS43DD3-59
24	15	Washer	NAS1149F0332P
25	2	Washer	NAS1149F1232P
26	1	Cover	SK-EC130-7540-1
27	1	Drawing	EC130-502
*	*	**Condenser Components**	*
1	1	Condenser Assy.	EC130-7030-1
2	1	Mount Angle, Blower	EC130-7530-16
3	2	Mount Clip, Blower	EC130-7530-17
4	1	Mount Plate, Blower	EC130-7530-18
5	1	Duct, Blower Outlet	EC130-7534-1
6	1	Tool (condenser blower outlet)	EC130-7528-1
7	1	Cutout Disc	EC130-7522-2
8	1	Foam Ring	EC130-7524-1
9	1	Closeout -Cutout	EC130-7526-1
10	1	Screen	EC130-7526-2

Continued

Instructions Continued:
Bill of materials continued:

Item	Qty.	Description **Condenser Components**	Part Number to be **Installed**
11	8	Angle	EC135-7014-4
12	8	Rivet	CCR264CS-3-4
13	8	Rivet	CR3212-4-02
14	14	Rivet	MS20470AD3-3
15	20	Rivet	MS20470AD3-4
16	8	Rivet (Alt: AA23R)	A-32-100
17	9	Bolt	AN3-3A
18	11	Bolt	AN3-4A
19	17	Washer	NAS1149F0332P
20	7	Nut	MS21042L3
21	1	Cover Plate	EC130-7540-1
22	30	Rivet	CR3213-4-03
23	1	Drawing	EC130-702
*	*	**Electrical Components**	*
1	1	Wire (12 Gauge)	ACCA36A12N
2	1	Wire (12 Gauge)	ACCA26A12
3	1	Wire (12 Gauge)	ACCA27A12
4	1	Wire (12 Gauge)	ACCA33A12N
5	1	Relay Panel	EC130-8422-2
6	2	Terminal	36160
7	1	60 Amp Fuse	ANL60
8	1	Drawing	EC130-802
9	1	Drawing	EC130-202

Removal:

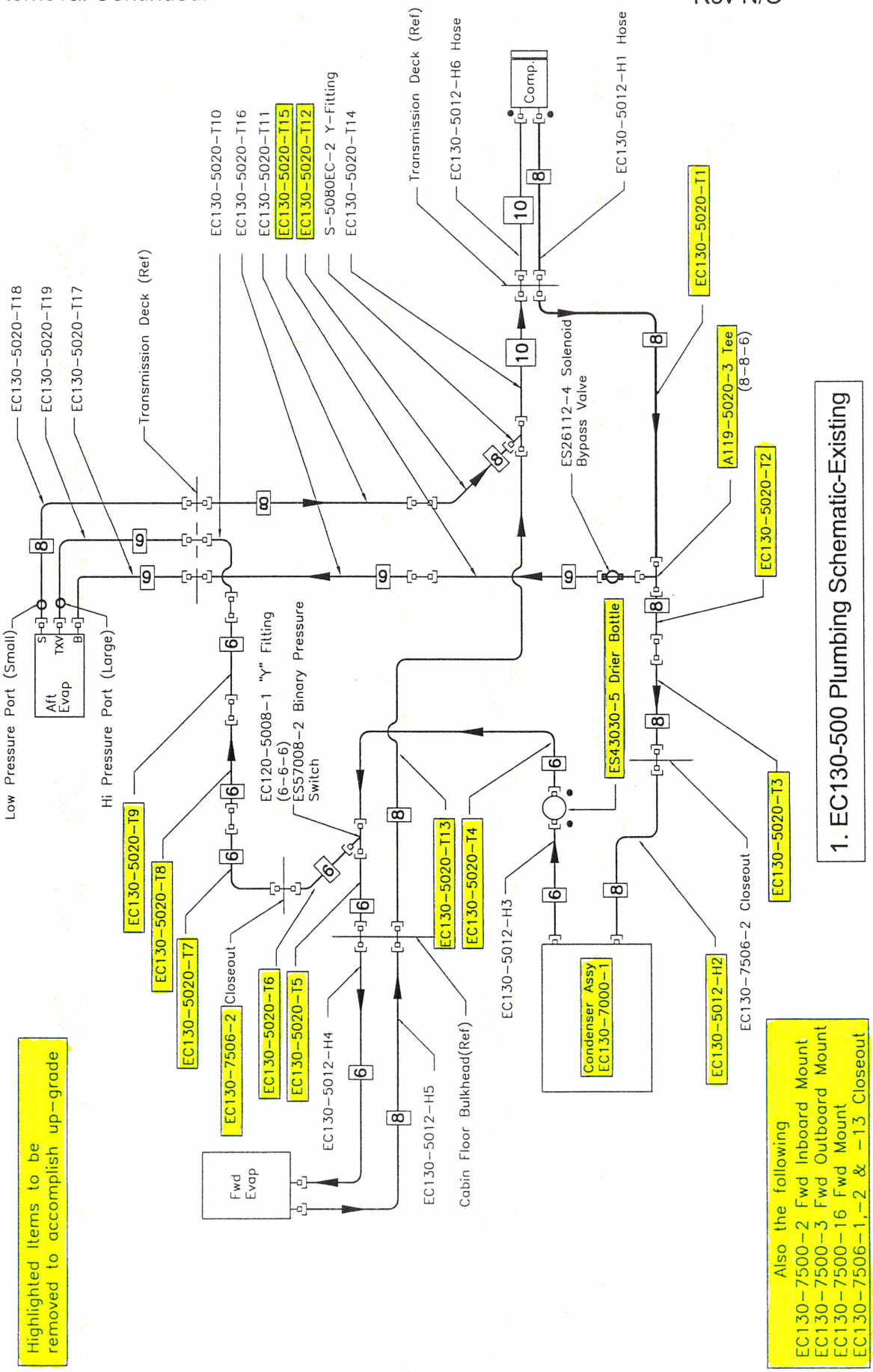
CAUTION
Disconnect battery and external power prior to starting work.

NOTE
Any repairs or alterations to the airframe or its components not specifically covered in this document or specified in the ACC / FAA approved documents listed on page 1, shall revert to *AC43-13 Standard Practices*, and/or the *EC130 Structural Repair Manual* to complete the necessary removal and replacement of the condenser, plumbing, and electrical systems.

NOTE
It will be necessary to lower L/H belly panel to access the existing air conditioner condenser assembly, and Lower refrigerant plumbing.

Continued

Removal Continued:

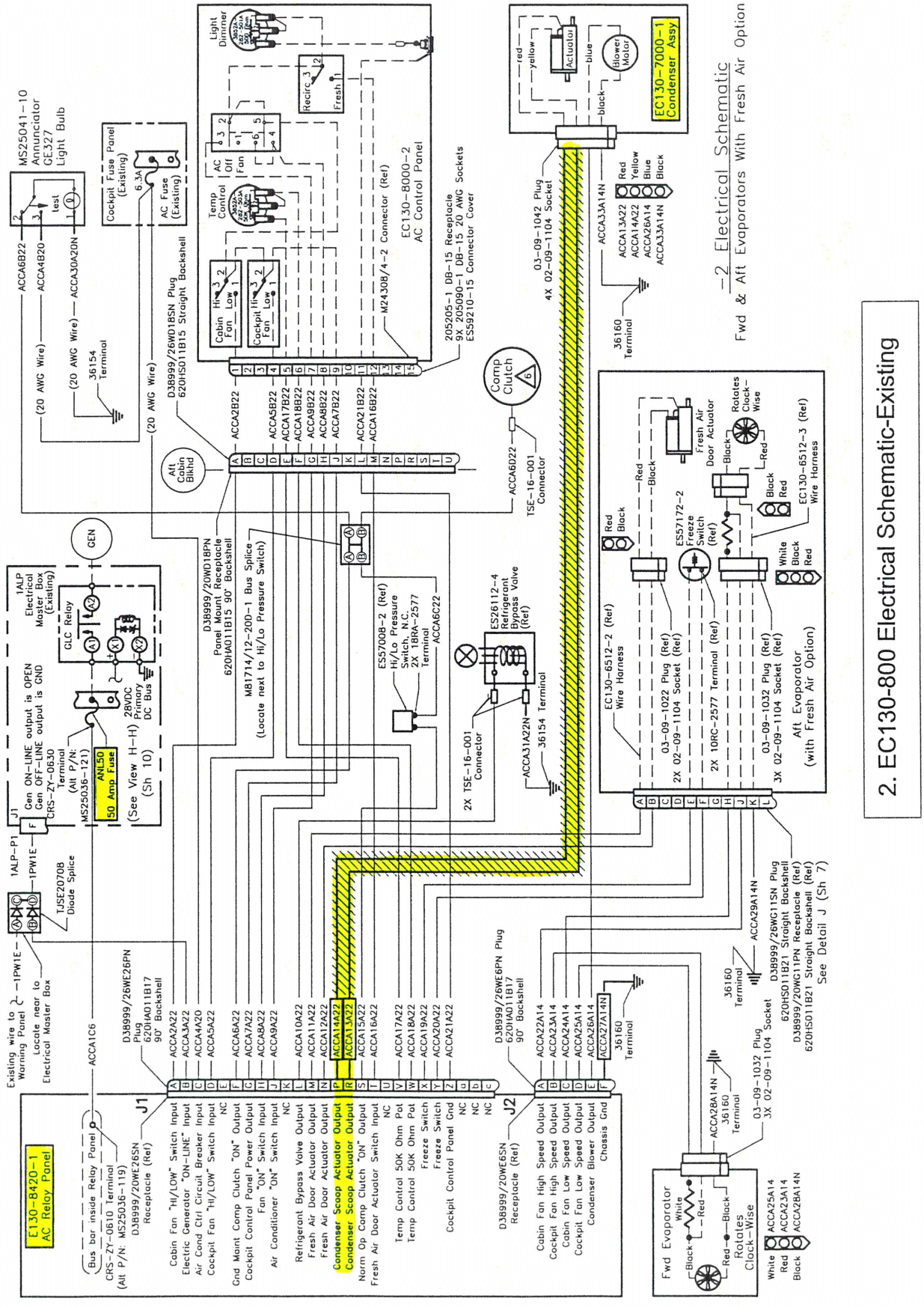


1. EC130-500 Plumbing Schematic-Existing

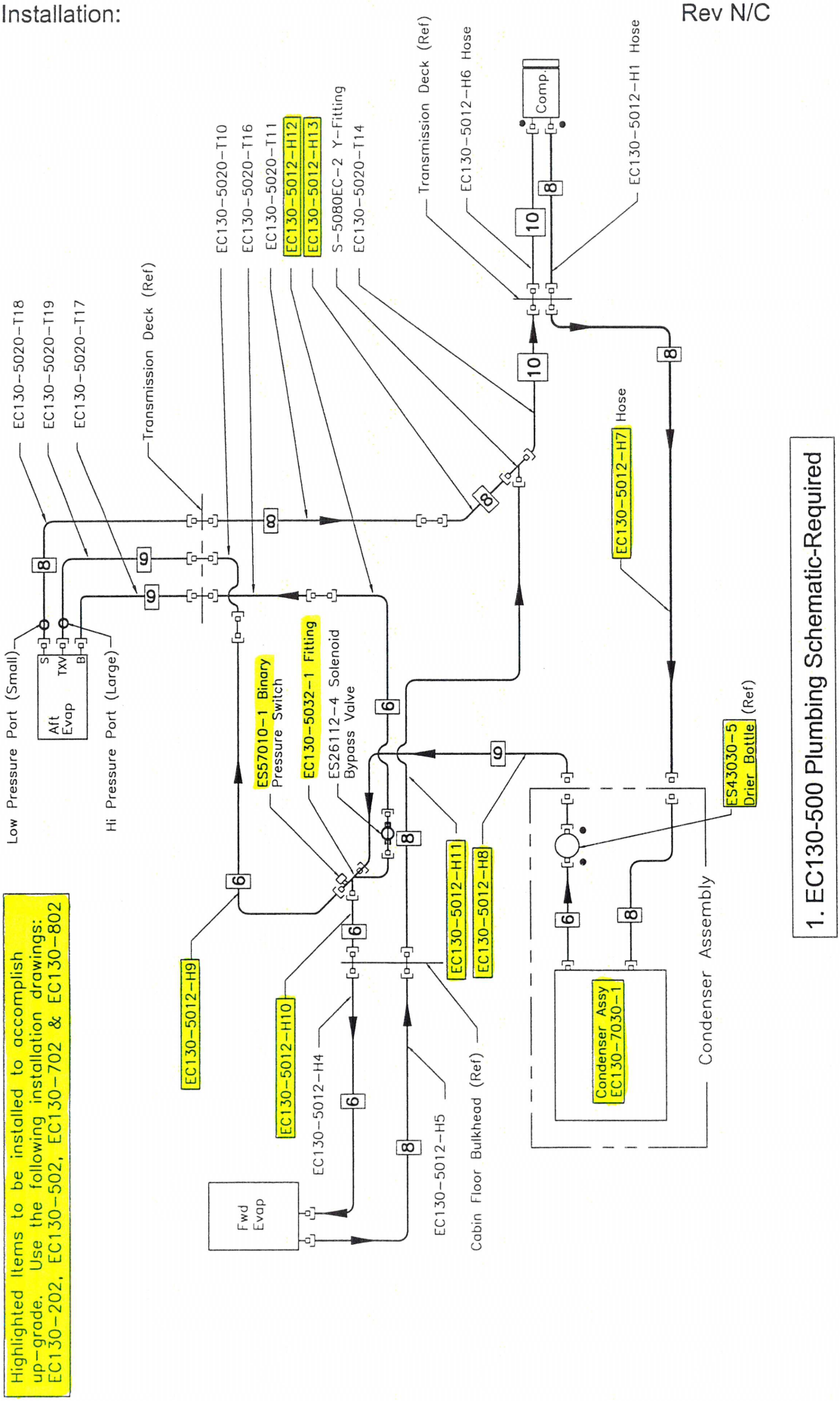
Highlighted Items to be removed to accomplish up-grade

Also the following
EC130-7500-2 Fwd Inboard Mount
EC130-7500-3 Fwd Outboard Mount
EC130-7500-16 Fwd Mount
EC130-7506-1,-2 & -13 Closeout

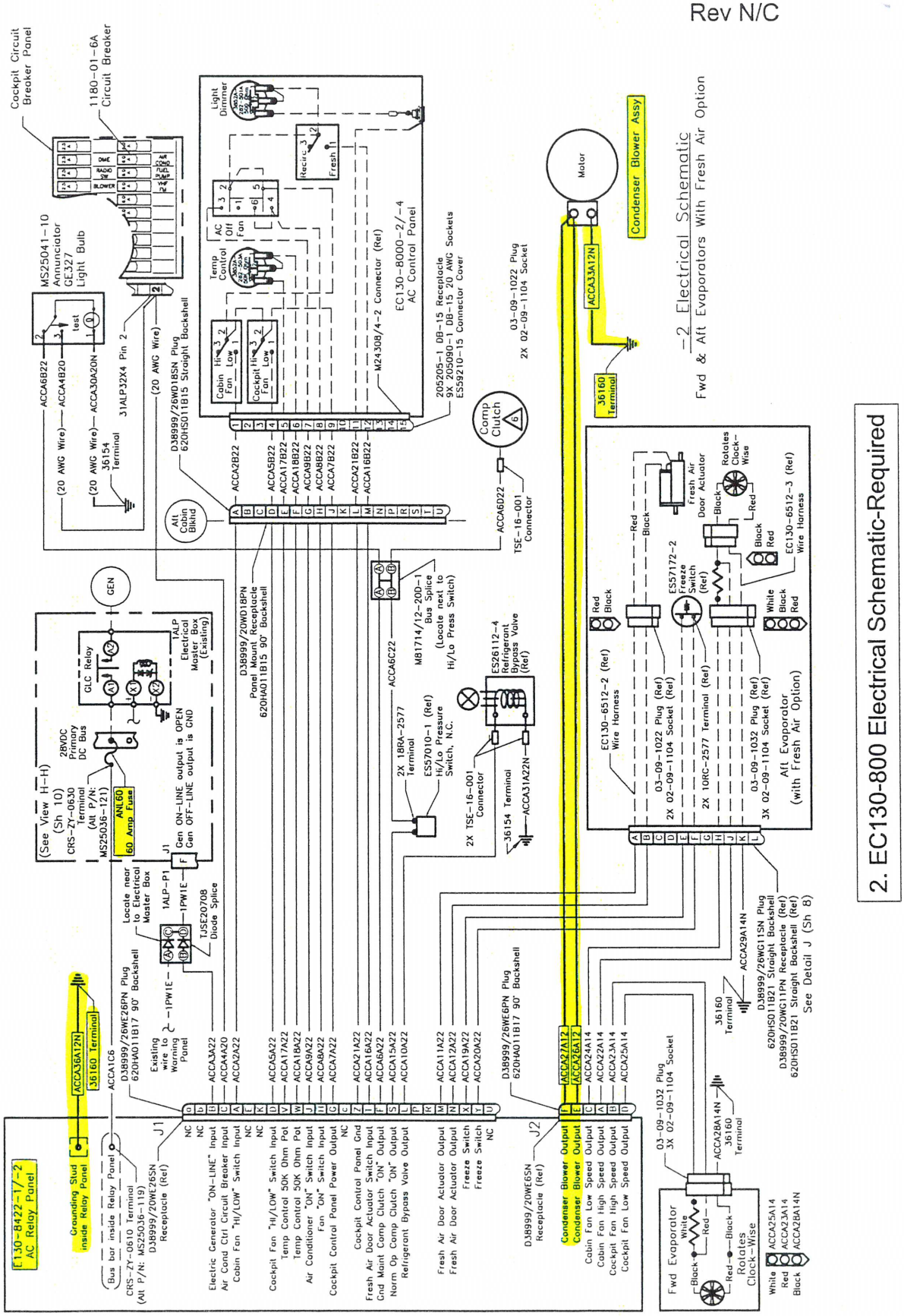
Removal continued:



Installation:



Installation continued:



2. EC130-800 Electrical Schematic-Required

Installation continued:

1. Remove the existing EC130-7508-1 Closeout from the bottom fairing.

2. Install SK-EC130-7540-1 Cover Plate over the condenser cutout in the EC130-7500-30 Doubler installed on the bottom fairing using (24) CR3213-4-3 Rivets. (See Figure 1-1).

NOTE

Apply a thin coating of Pro-seal or equivalent to the faying surfaces of the EC130-7500-30 Doubler and the EC130-7540-1 Cover plate prior to riveting these parts together.

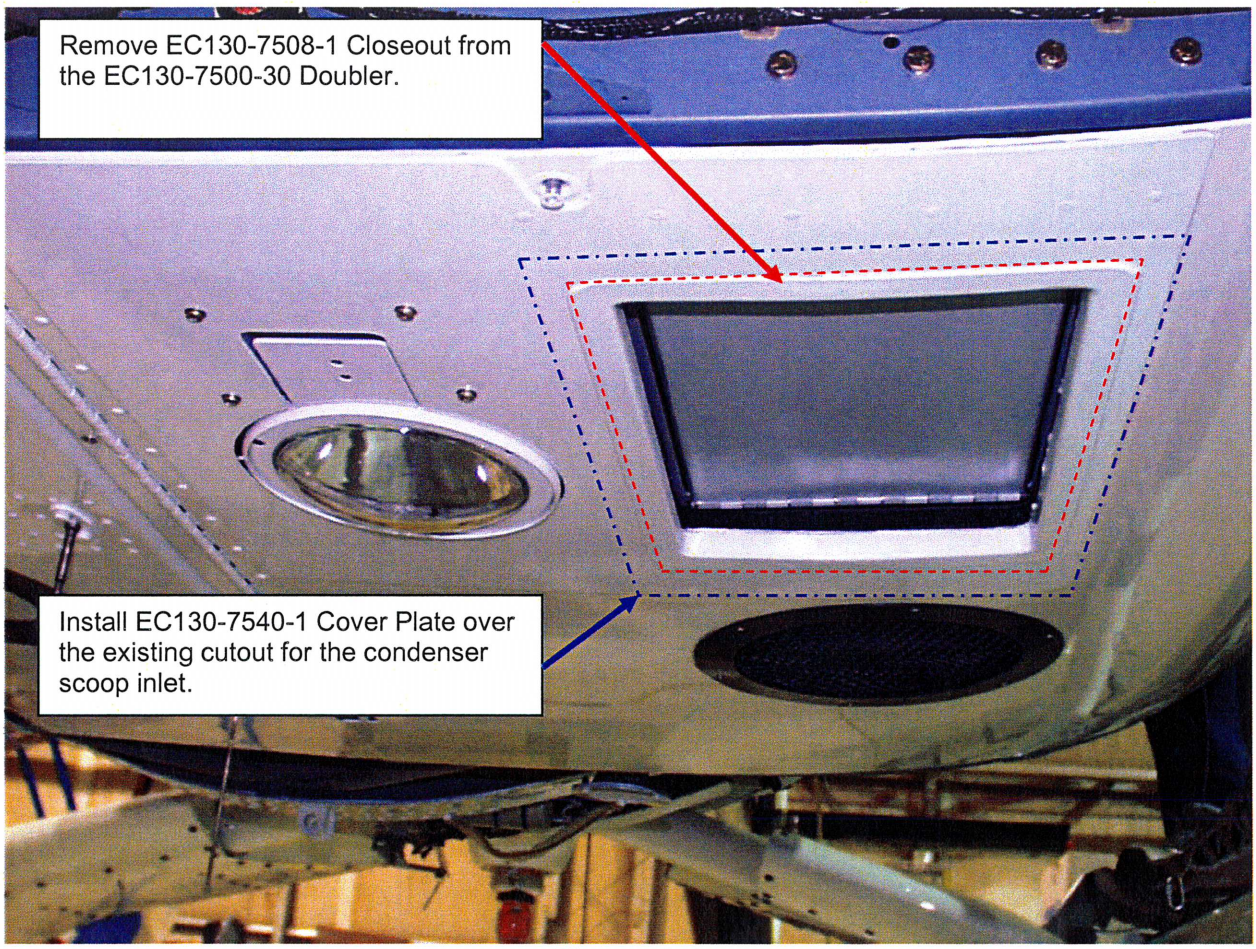


Figure 1-1

View looking up at the existing condenser cutout in the belly fairing.

Weight and Balance:

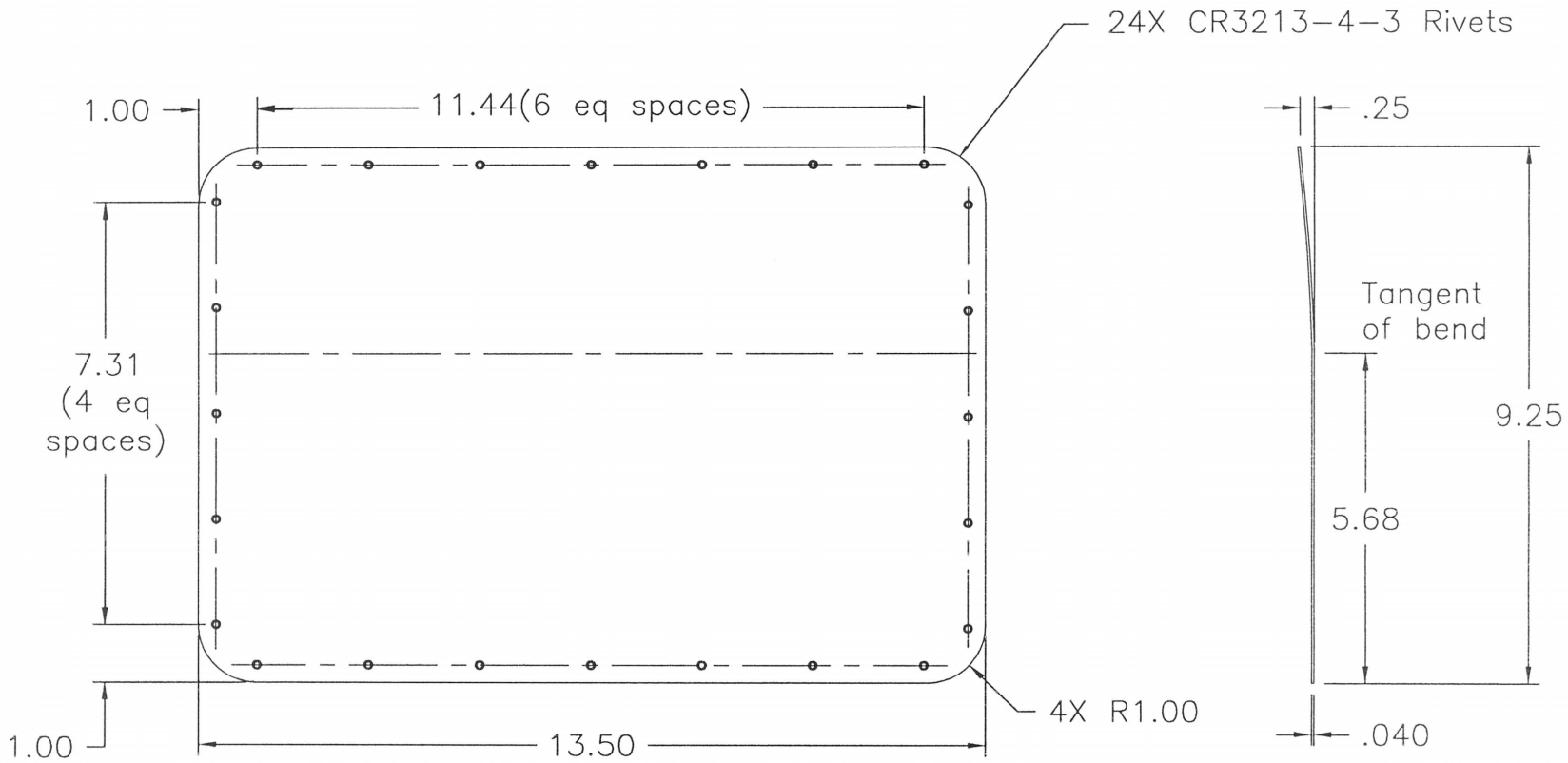
Weight breakdown – Eurocopter EC130B Air Conditioner System:

Ref. Dwg. **EC130-200 (Belly mounted condenser)**

Item	Wt. (lbs)	X-Arm (in)	X-M (in-lb.)	Y-Arm (in)	Y-M (in-lb)
Total EC130B with Single Forward & Aft Evaporator (with fresh air option)	88.40	99.01	8,752	-3.30	-292
Total EC130B with Single Forward & Aft Evaporator (with out fresh air option)	86.40	98.50	8,510	-2.83	-244

Ref. Dwg. **EC130-202 (L/H Baggage compartment condenser)**

Item	Wt. (lbs)	X-Arm (in)	X-M (in-lb.)	Y-Arm (in)	Y-M (in-lb)
Total EC130B with Single Forward & Aft Evaporator (with fresh air option)	83.34	105.42	8,786	-1.22	-102.02
Total EC130B with Single Forward & Aft Evaporator (with out fresh air option)	81.34	105.08	8,547	-.66	54.02



SK-EC130-7540-1 Cover Plate, Doubler

(Matl: .040 6061-T6 Al)
(Finish: Iridite(Yellow)per MIL-C-5541, Class 1A
Prime Epoxy Polymide(Yellow)per MIL-PRF-23377,
Type 1, Class1)