



Installation Instruction

## **SEARCH LIGHT**

**for AIRBUS helicopters**  
**H120 (EC120), H125 (AS350), H135 (EC135)**

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## Part 0 Manual Administration

### 0.1 Document Approval

This document has been established in accordance with an alternative procedure to DOA approved under EASA AP429.

This Installation Instruction is applicable for the following **Airbus helicopter** models: **Airbus H120 (EC120), H125 (AS350) and H135 (EC135).**

Compiled by:  \_\_\_\_\_ 30. Jun. 2023  
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Approved by: \_\_\_\_\_ 30. Jun. 2023  
Georg Hartl  
Head of DO, Aveo Engineering Group, s.r.o.

## 0.2 Amendment Record Procedure

The master copy of this document shall be kept electronically as a read only document under the control of Aveo Engineering Group, s.r.o. as Master Copy.

**ALL** amendments to this manual will initiate a raise of issue.

The original issue will be identified by "01", and subsequent issues will be numbered sequentially from 02 to 99 in Table 01 - **Issue No.** column.

**ALL** issues of this document will be approved by Head of DO.

Issue No.	Details	Date	Affected Pages
01	Initial Issue	24 Sept 2018	ALL
02	Add limitation section	28.Jan.2019	5
03	Add statement	9.Sep.2019	19
04	Add statement for NVIS operation Addition of more versions to the lights Aveo Sapphire Remove LS400 and Omega	30.Jun 2023	5 6-55

**Table 01: Record of Document Amendments**

## 0.3 Affected Pages Procedure

ALL pages affected by ANY raise of issue of this document will be listed in Table 01 - **Affected Pages** Column.

Changes from the previous issue are shown as follows:

- a) new text is highlighted with yellow shading: **new**
- b) deleted text is shown with yellow shading and a strike through: ~~deleted~~

## Part 1 Installation Instruction

### 1.1 General

This installation is to be performed in accordance to common practice as described in *Advisory Circulars of FAA Regulations*:

- FAR AC 43.13-2B Chapter 4
- FAR AC 43.13 1B Chapter 11 Section 15 (Bonding)

and in general practice section of the **Airbus H120 (EC120), H125 (AS350), H135 (EC135)** *Aircraft Maintenance Manual (AMM)*.

The installer is responsible to follow the installation instructions in the latest revision of the following *installation manuals*:

- AVE-SLSA46-IM
- AVE-SLSA64-IM

All drawings applicable for this change are listed in the Drawing List:

- AVE-MOD-022-DL

The change is to be performed using the document AVE-MOD-022-MCS in the latest issue.

The aircraft modified according to this instruction may not be released back to service without the EASA design approval certificate being provided.

### 1.2 Continued Airworthiness

The aircraft manuals remain fully valid. The inspection intervals and the procedures of the aircraft override the general statements in the component manuals as listed under §1.1.

For inspection of the new lights themselves follow the procedure of the Aveo Installation Manuals referenced above.

### 1.3 Airworthiness Limitations

No airworthiness limitations result from this modification.

This modification is about the search light installation only. The search light is usually not included in the NVIS compatibility. The light is NVIS compatible. Hence the installation does not jeopardize NVIS operation. It may be necessary that a NTO or an inclusion into the NVIS certification is required.

**The airworthiness limitation section is approved and variations must also be approved.**

## 1.4 Description

This modification rests in the replacement of searchlight with lights of LED type.

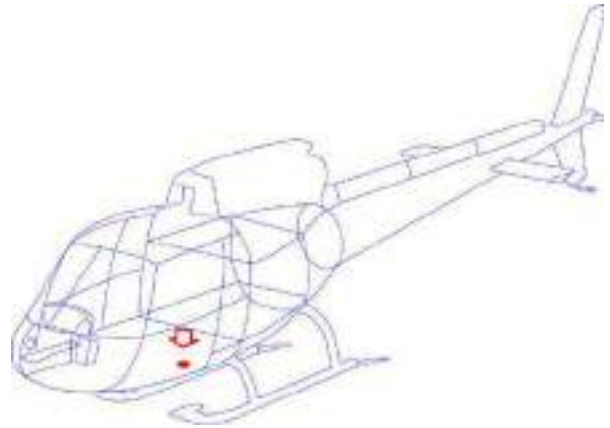
### 1.4.1 Searchlights

Two options are available for installation of searchlights.

Both **Aveo Sapphire S46** and **Aveo Sapphire S64** can be operated:

- either in a **single mode** – white,
- or in a **dual mode** – white and infrared.
- **Aveo Sapphire S46 or Aveo Sapphire S64** - is a 360 degree, full swiveling, single- or dual-mode searchlight available with different deployment angles controlled by firmware and mechanical limitations. **Aveo added a dual version with an additional dimming function and versions with increased intensity (WarpSpeed).**

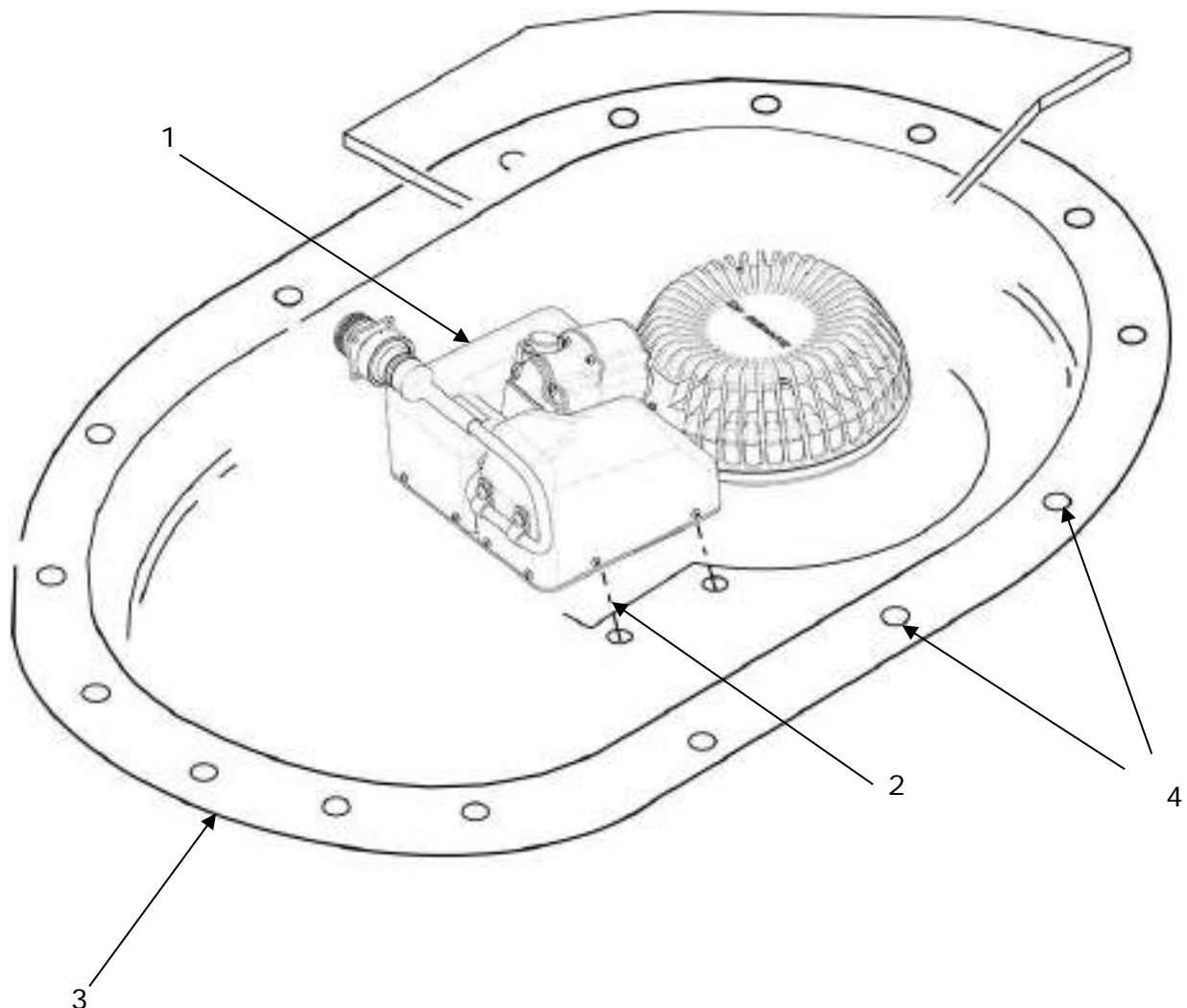
## 1.5 Search Lights Installation – H125



### Option A – Searchlight

**KIT Numbers:**

- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

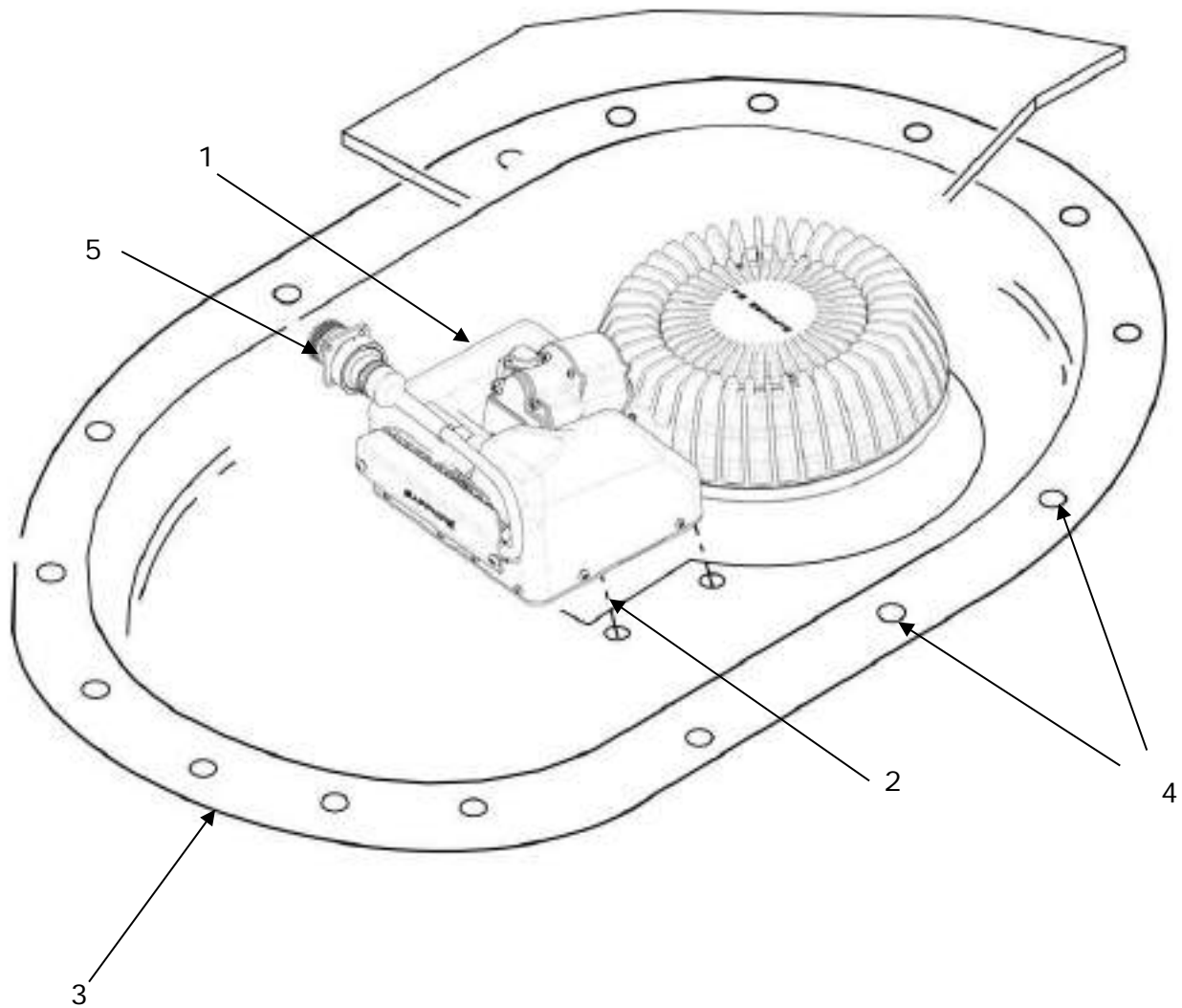
**KIT Numbers:**

**ARBC-05** – Sapphire S64 White

**ARBC-06** – Sapphire S64 Dual

**ARBC-07** – Sapphire S64 WarpSpeed

**ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

- ARBC-09** – Sapphire S46 White
- ARBC-10** – Sapphire S46 Dual
- ARBC-11** – Sapphire S46 WarpSpeed
- ARBC-12** – Sapphire S46 WarpSpeed Dual

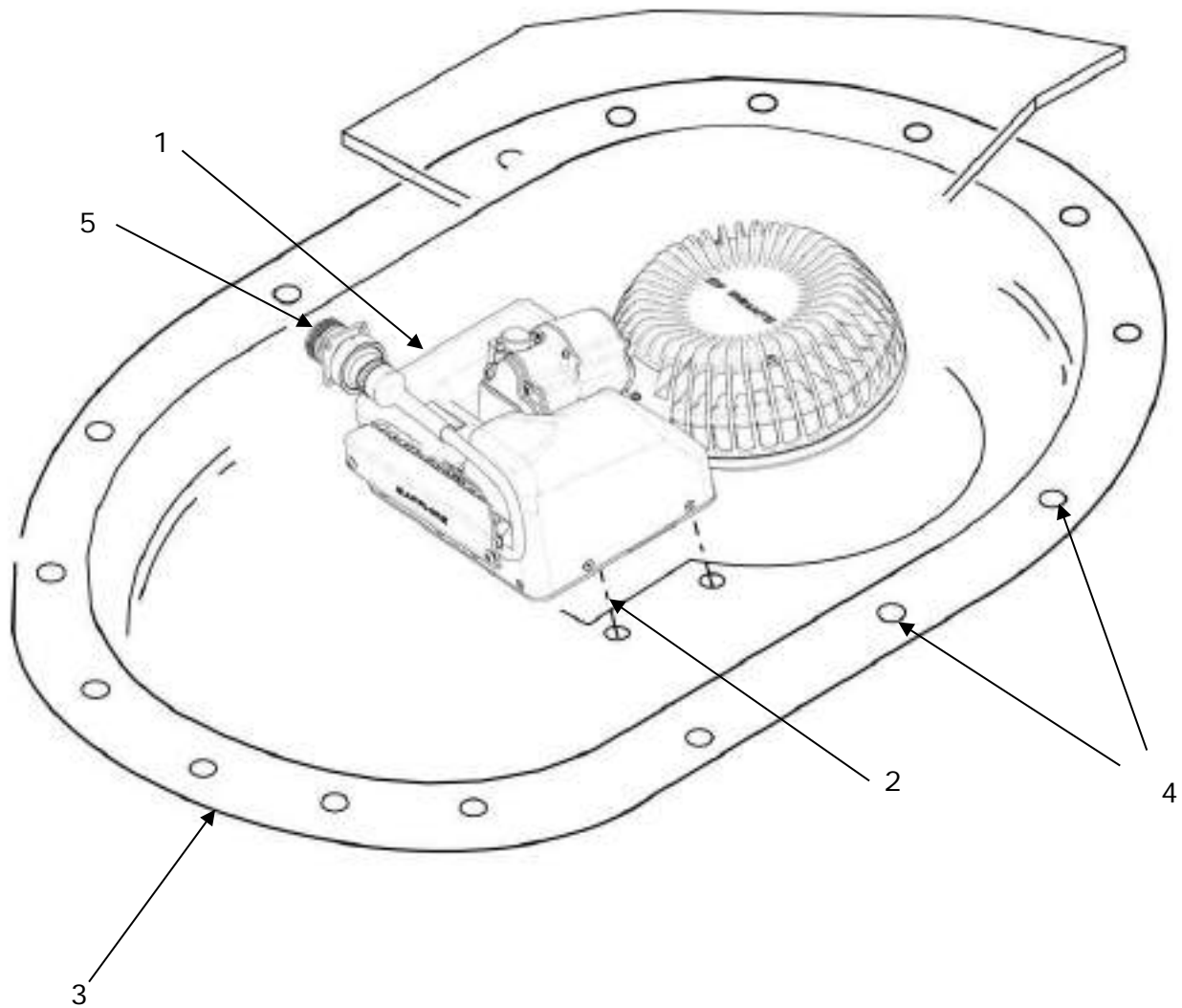


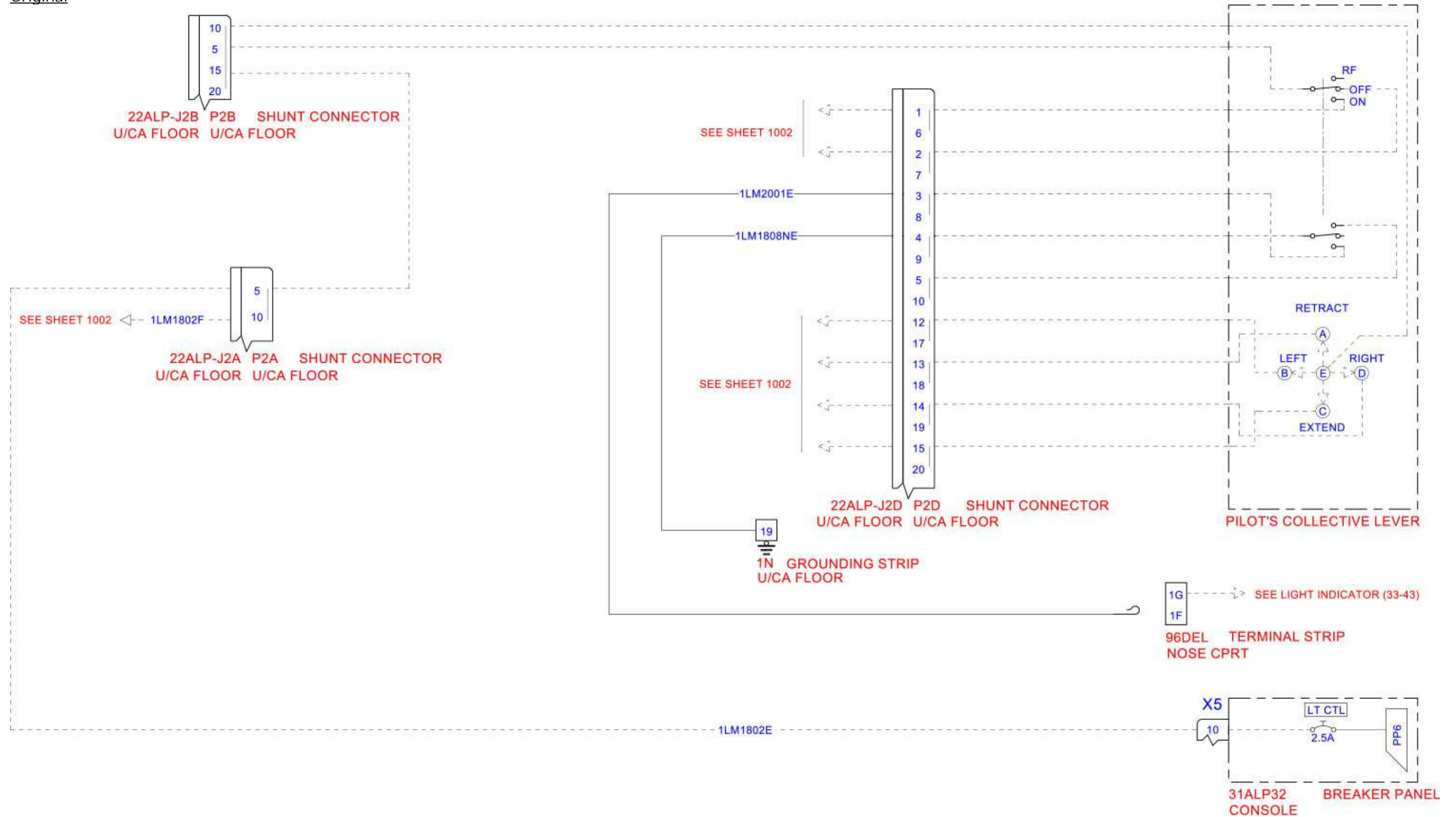
FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	KIT NUMBER	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1  5	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)	<b>1</b>
<b>Option C</b> 1  5	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)	<b>1</b>
----- Original parts -----				
<b>Options A,B,C</b>				
2	MS35265-45	Screw, Fillister Head		4
	23111AG040LE	Washer, Flat		4
3	355A64-7049-21	Mount		1
4	22271BC050014L	Screw		13
	23111AG050LE	Washer, Flat		13
	SL210M5-1	Nut		13

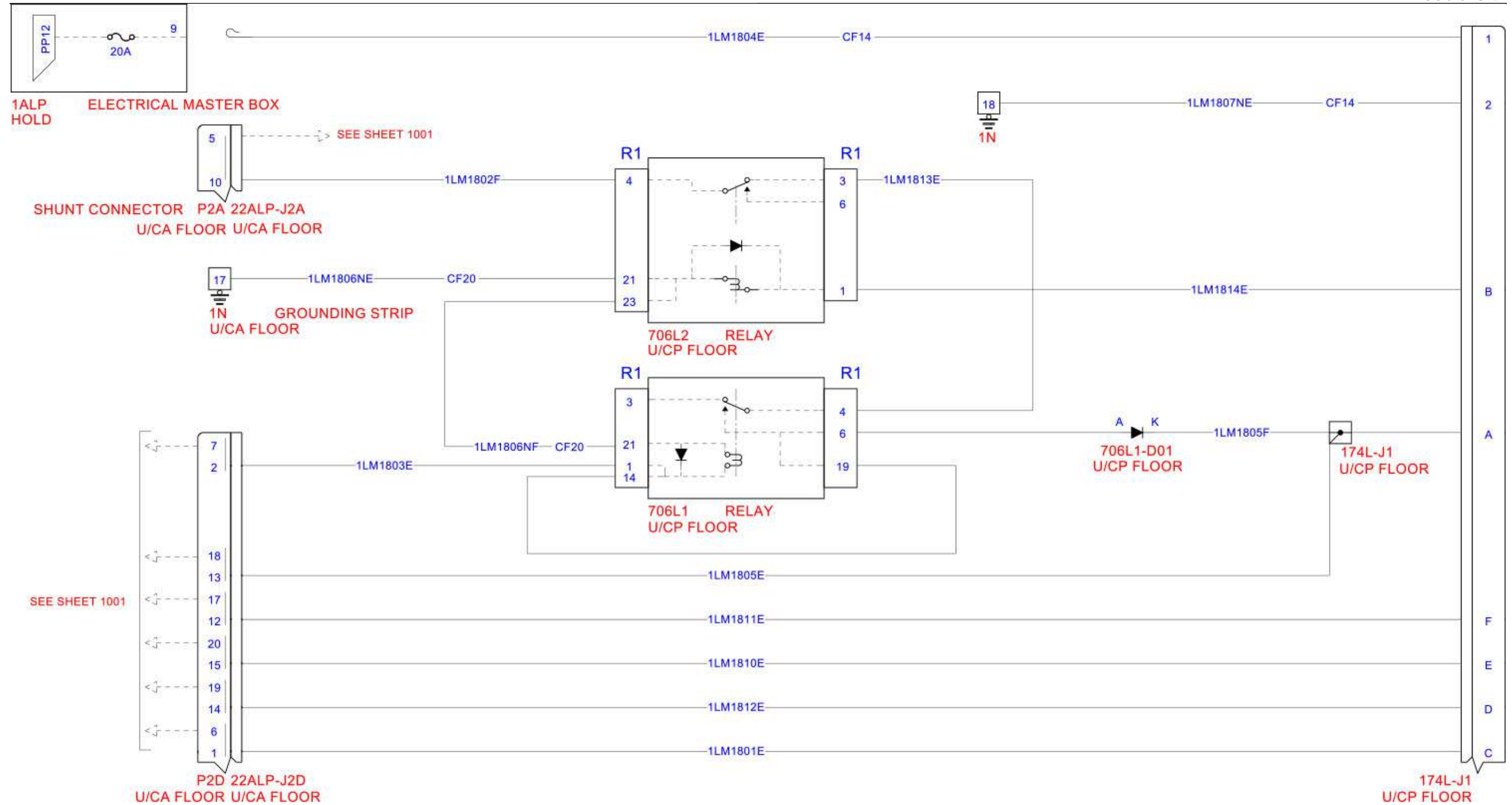
NOTES

1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

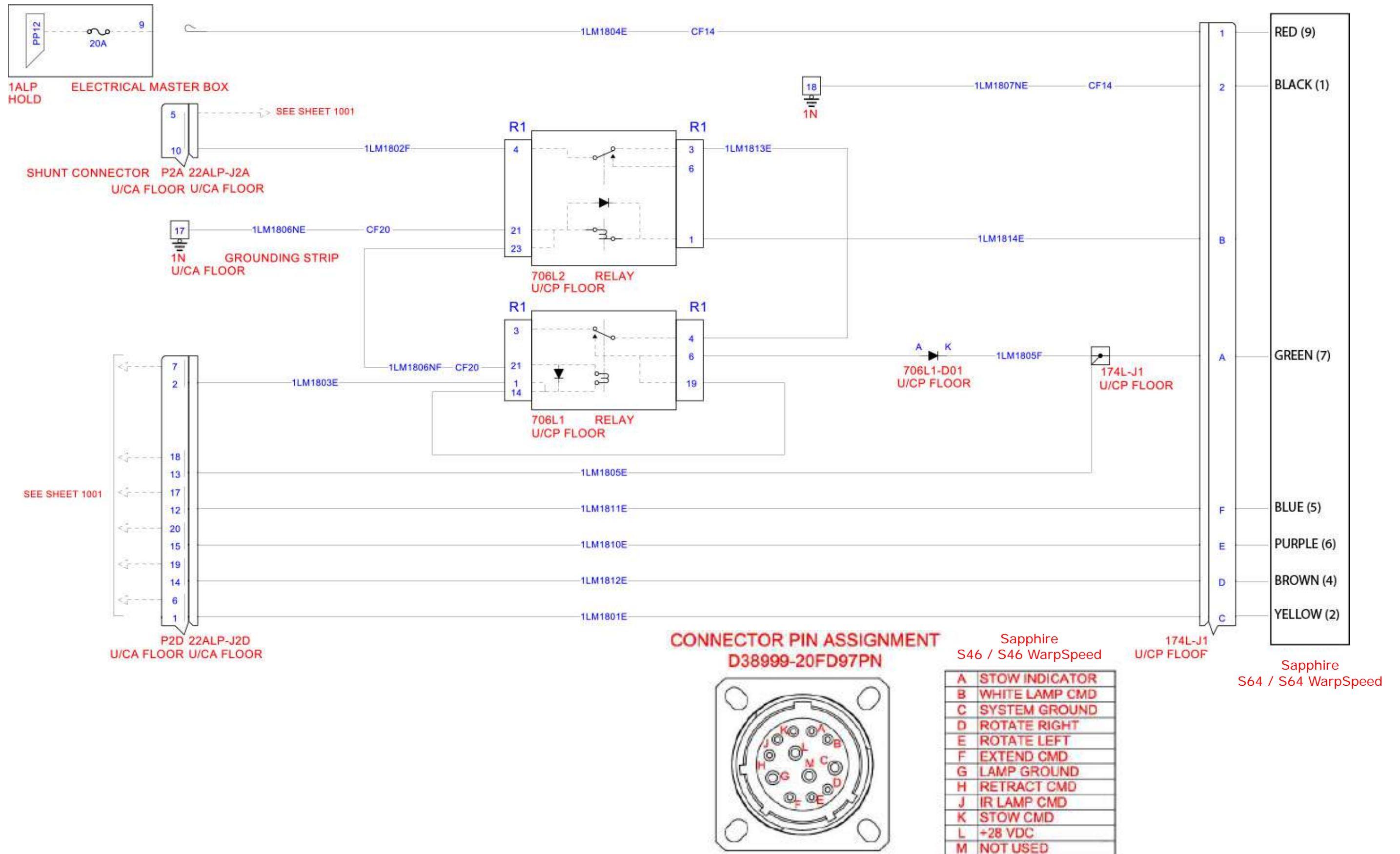
1.5.1 Wiring diagrams – single mode (white only)

Original





Sapphire S46 / S46 WarpSpeed / S64 / S64 WarpSpeed

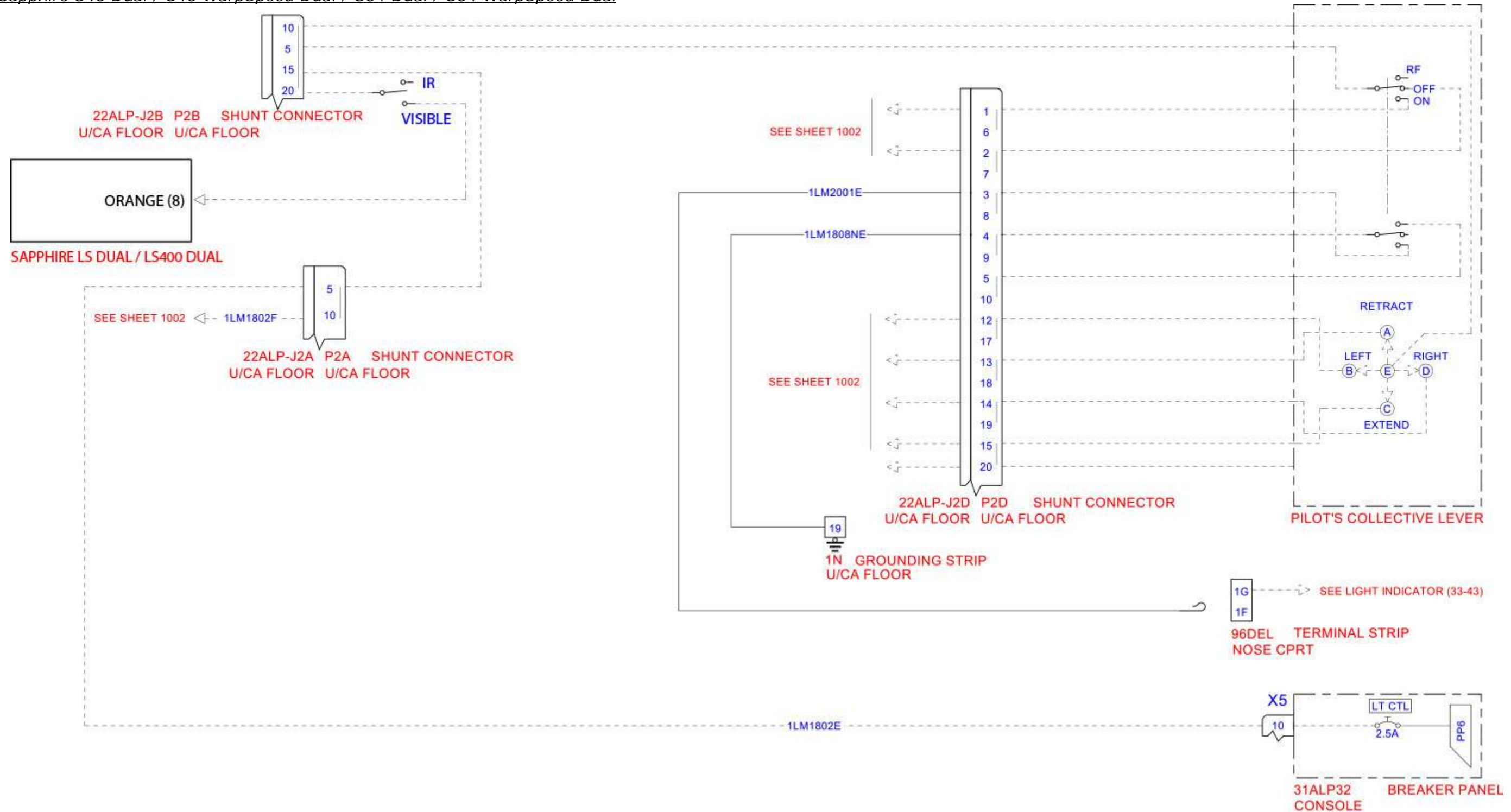


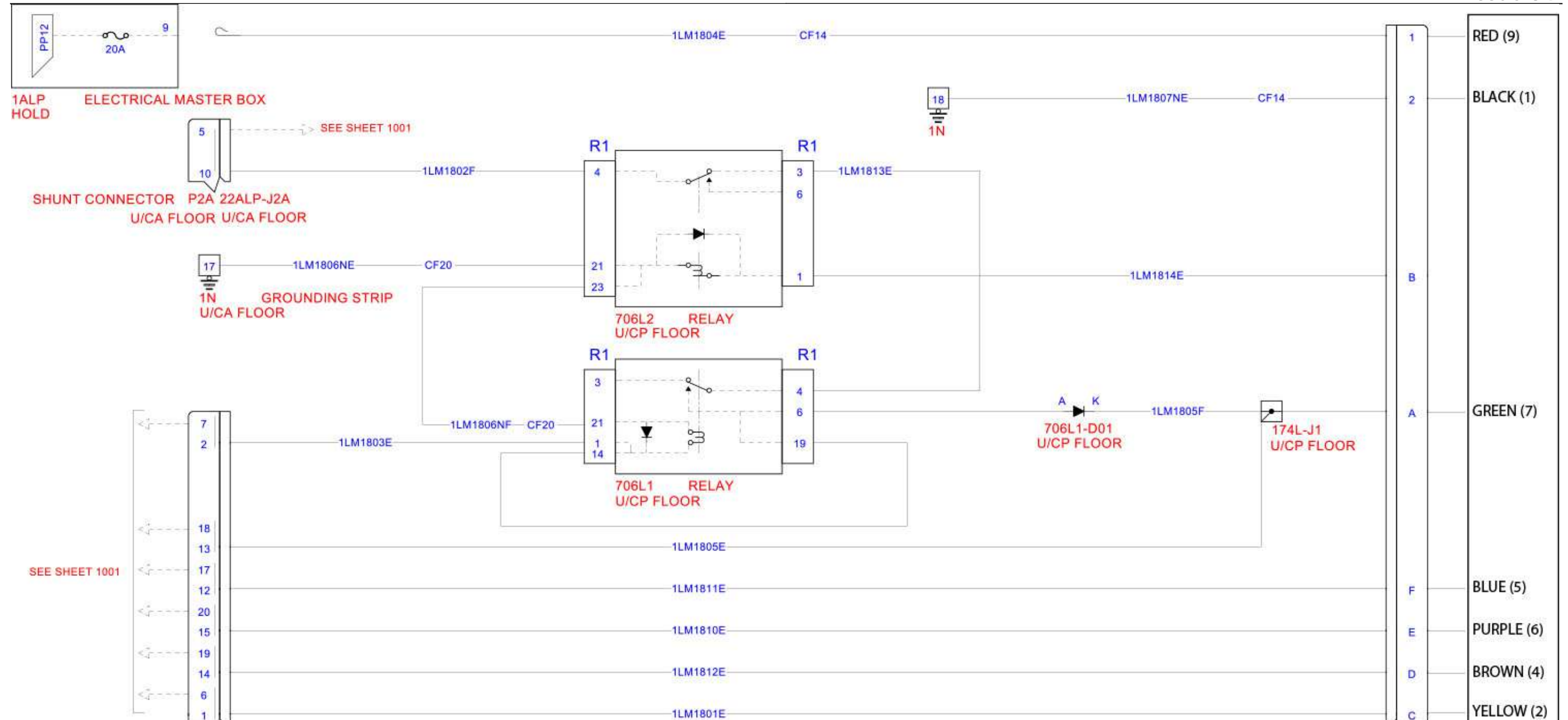
1.5.2 Wiring diagrams – dual mode (white/IR)

Original

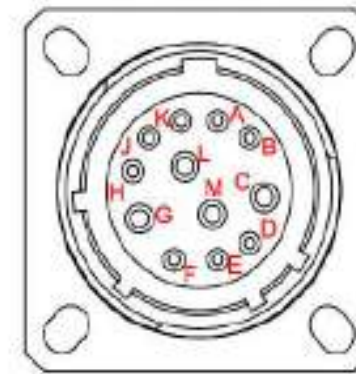
The same diagram as in section 1.5.1.

Sapphire S46 Dual / S46 WarpSpeed Dual / S64 Dual / S64 WarpSpeed Dual





**CONNECTOR PIN ASSIGNMENT**  
D38999-20FD97PN



Sapphire  
S46 Dual / S46 WarpSpeed Dual

A	STOW INDICATOR
B	WHITE LAMP CMD
C	SYSTEM GROUND
D	ROTATE RIGHT
E	ROTATE LEFT
F	EXTEND CMD
G	LAMP GROUND
H	RETRACT CMD
J	IR LAMP CMD
K	STOW CMD
L	+28 VDC
M	NOT USED

174L-J1  
U/CP FLOOR

Sapphire S64  
Dual / WarpSpeed Dual

## 1.6 Search Lights Installation – H135

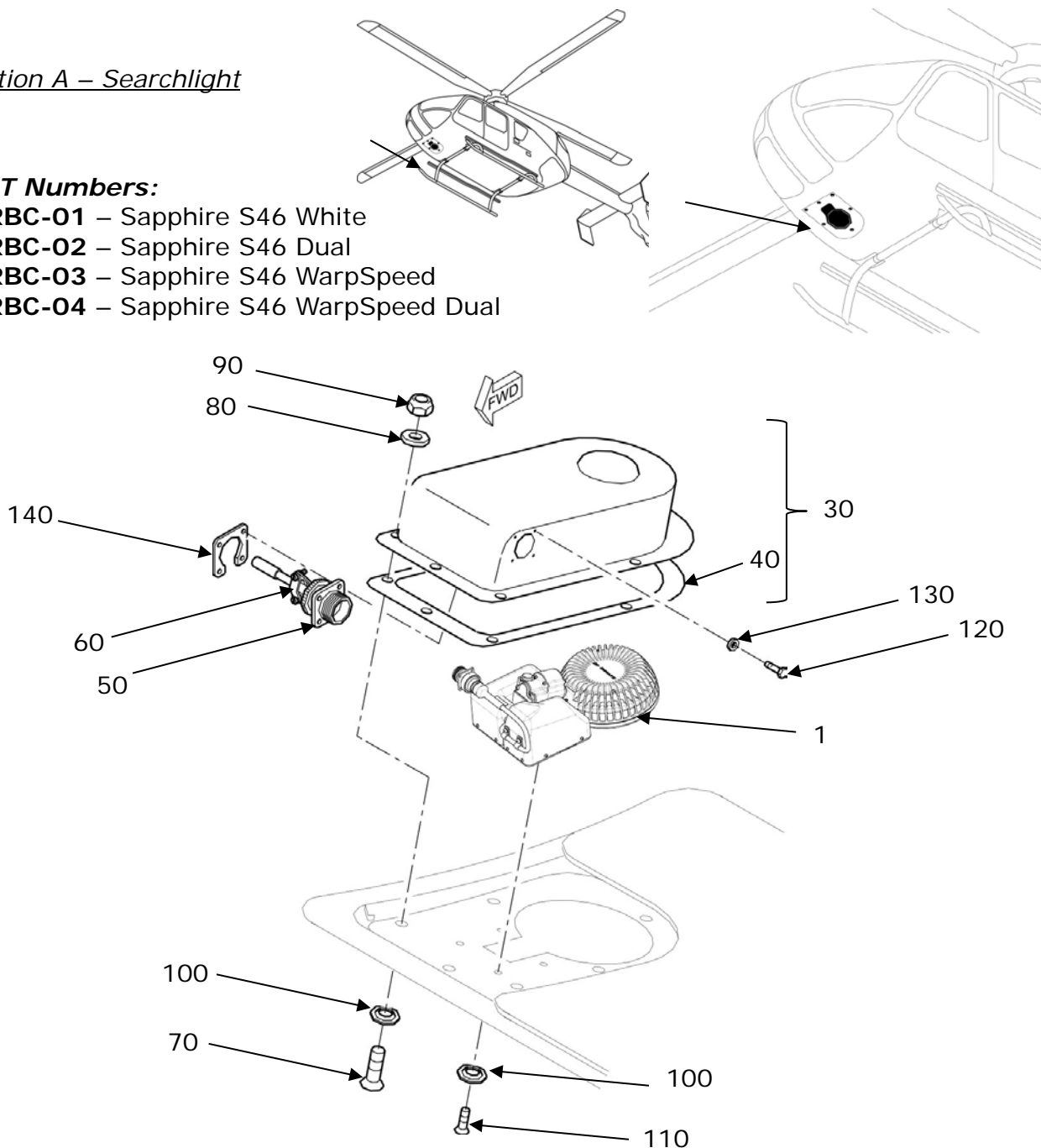
For S/N not listed below the installer may check which provision is applicable. This modification is applicable for all S/N as long as a search light provision of the OEM Airbus Helicopters is installed.

**S/N:** 0005-0007, 0012-0017, 0020-0021, 0023-0024, 0026-0027, 0029, 0031-0045, 0048-0049, 0051-0052, 0055-0056, 0058, 0062-0063, 0065-0067, 0071, 0077, 0079, 0081-0088, 0090, 0094, 0101, 0105, 0107, 0109, 0112, 0115, 0118, 0120, 0122, 0124, 0126, 0131-0133, 0135, 0137, 0141-0144, 0147, 0149, 0151, 0153-0155, 0157, 0159, 0161-0167, 0170, 0172, 0174-0175, 0178-0179, 0184-0186, 0188, 0190-0193, 0195, 0197-0198, 0204, 0209, 0212-0213, 0215, 0218-0219, 0222-0224, 0226-0229, 0231-0232, 0235-0236, 0238-0239, 0241-0246, 0248-0255, 0259-0260, 0267-0268, 0270-0272, 0274-0277, 0279-0280, 0283-0285, 0288-0289, 0291-0293, 0300, 0303, 0306-0307, 0309, 0311-0312, 0314, 0316-0317, 0319-0323, 0330-0333, 0335, 0337, 0341, 0345, 0347, 0354, 0360, 0363, 0370-0371, 0374-0376, 0380-0381, 0383, 0388-0389, 0391-0392, 0394, 0396-0397, 0400, 0406-0408, 0410-0411, 0416-0417, 0420, 0422, 0427, 0429, 0432-0433, 0436-0437, 0442-0443, 0446-0449, 0455, 0458, 0463, 0467-0470, 0472-0473, 0479, 0481, 0484, 0488, 0491, 0496, 0498, 0501, 0511, 0515, 0517, 0520, 0522, 0524, 0527-0528, 0532, 0534, 0538, 0541, 0543, 0550, 0561-0562, 0567-0569, 0574, 0579, 0581, 0583, 0587, 0590, 0596, 0601, 0604-0607, 0616, 0620, 0624, 0630-0632, 0634-0635, 0637, 0640, 0643, 0649-0650, 0652, 0655-0656, 0658, 0660-0662, 0664-0665, 0668, 0672-0673, 0680-0682, 0686-0688, 0691, 0694-0695, 0698-0700, 0702-0705, 0711-0715, 0718, 0720-0721, 0723, 0732, 0740-0741, 0743-0746, 0750-0751, 0753-0754, 0759, 0761-0762, 0765-0766, 0768-0771, 0773, 0781, 0785-0786, 0788-0789, 0796, 0799, 0803-0804, 0810-0811, 0813-0815, 0819, 0822, 0824, 0827-0829, 0833, 0835-0838, 0840, 0842, 0846, 0848, 0851-0853, 0855, 0860-0861, 0863, 0865-0866, 0868, 0872-0873, 0879-0880, 0883, 0885, 0889, 0892-0895, 0898-0899

### Option A – Searchlight

#### **KIT Numbers:**

- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

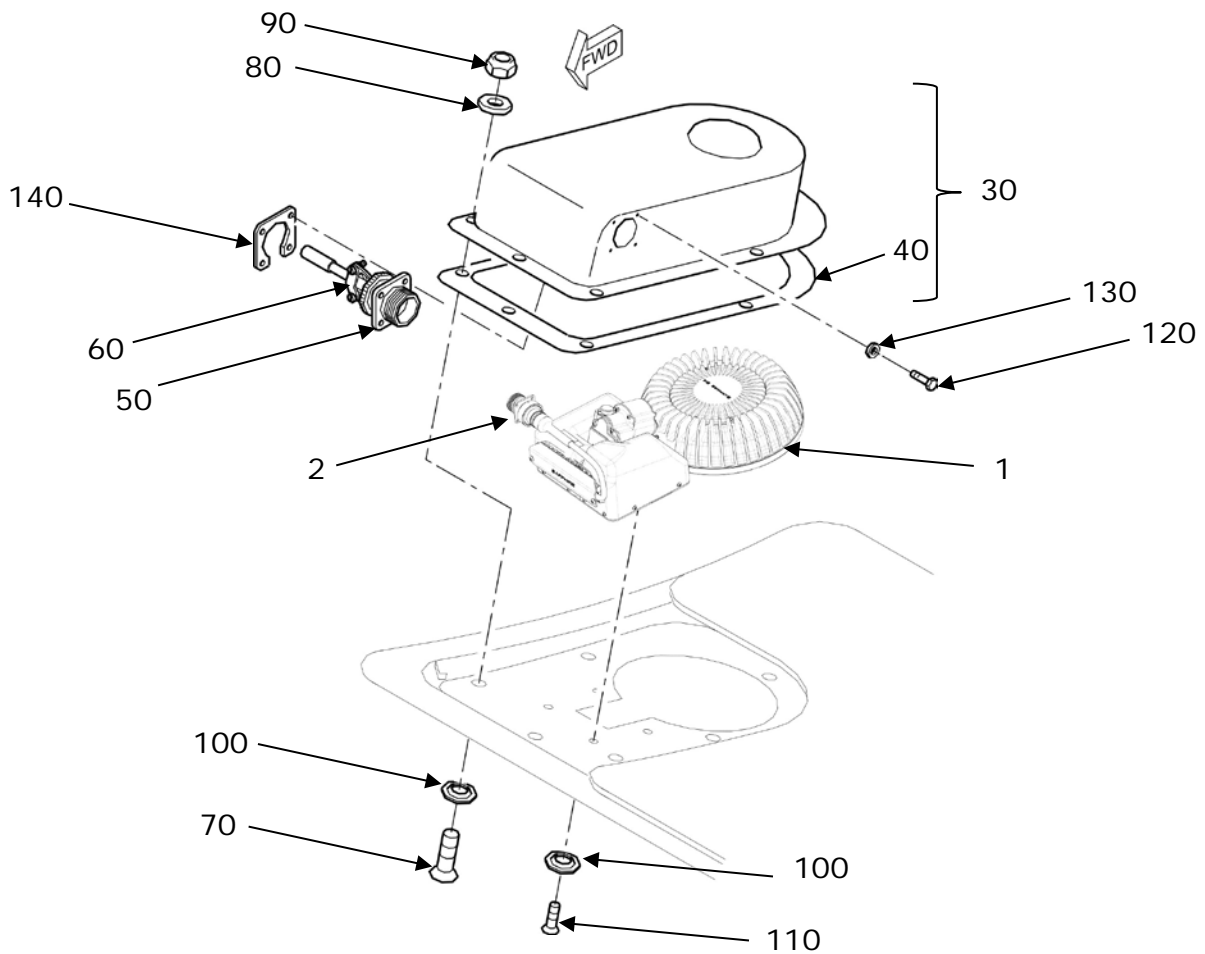
**KIT Numbers:**

**ARBC-05** – Sapphire S64 White

**ARBC-06** – Sapphire S64 Dual

**ARBC-07** – Sapphire S64 WarpSpeed

**ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

**ARBC-09** – Sapphire S46 White

**ARBC-10** – Sapphire S46 Dual

**ARBC-11** – Sapphire S46 WarpSpeed

**ARBC-12** – Sapphire S46 WarpSpeed Dual

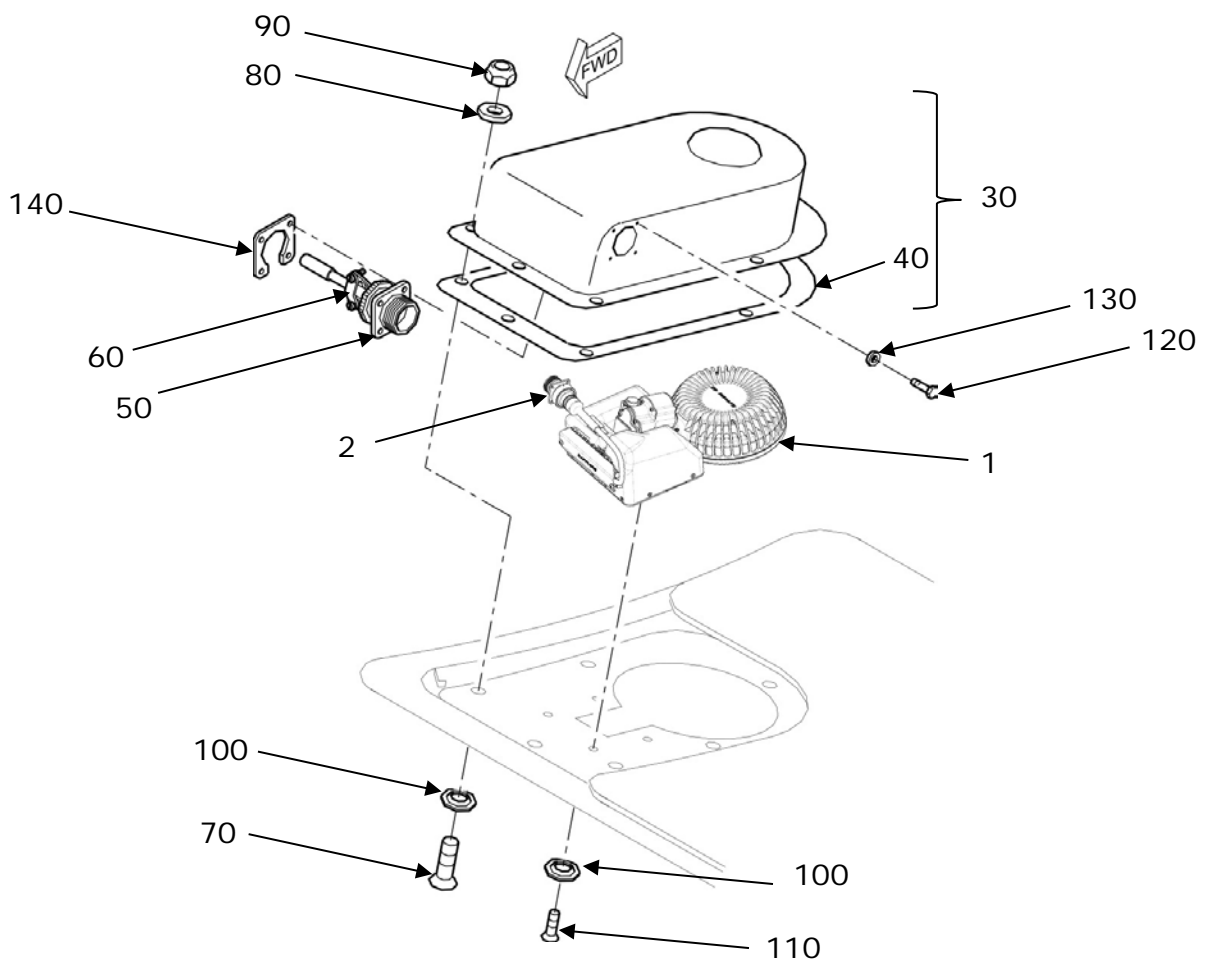


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)
<b>Option C</b> 1	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)
----- <i>Original parts</i> -----				
<b>Options A,B,C</b>				
30	L334M3804101	Cover Assy		1
30A	L334M3844101	Cover Assy		1
40	L334M3804205	Sealing (Appl. to item 30A)		1
50	D38999-20FD97PN	Receptacle		1
60	M85049/14S15N	Backshell		1
70	EN3760-040020A	Screw, Countersunk Head		6
80	EN2914-04010	Washer		6
90	EN3536-040	Nut		6
100	EN3835-040	Washer		10
110	NAS1102-08-10	Bolt, Shear-hexagon		4
120	LN9139M3X8	Round head screw		4
120A	EN3308-030010F	Bolt, Hex. Head		4
130	EN2914-03010	Washer		4
140	MBBN3331AJ16	Nut Plate		1

NOTES

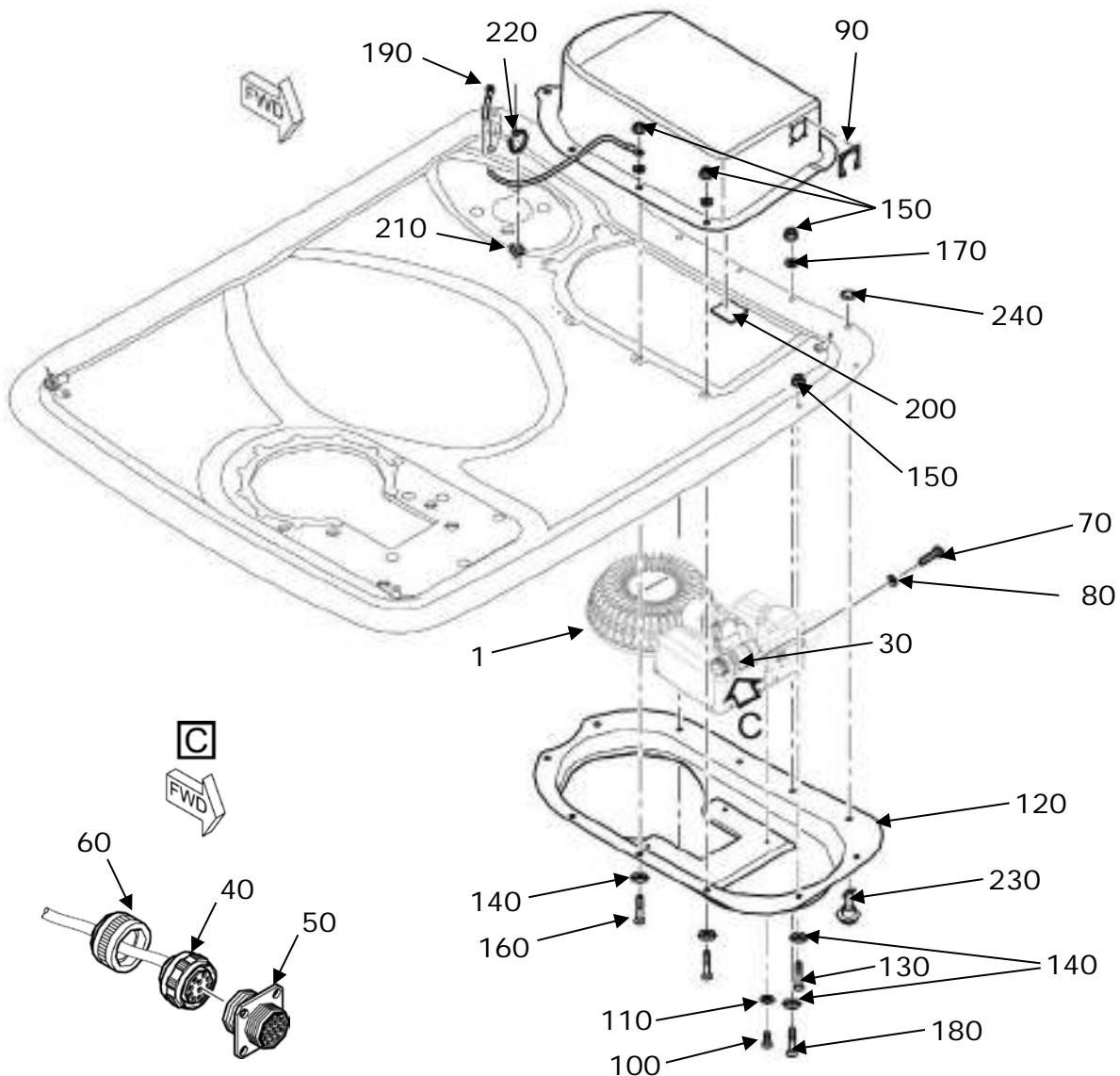
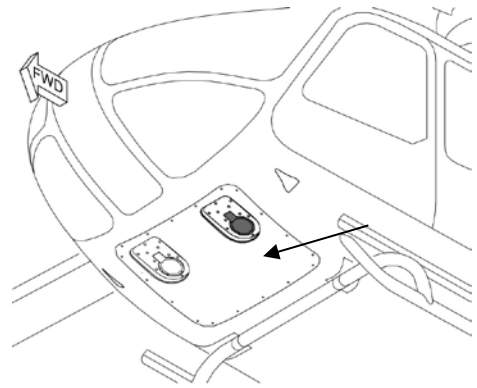
1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

**S/N:** 1168-1170, 1206-1209, 1235, 1255

Option A – Searchlight

**KIT Numbers:**

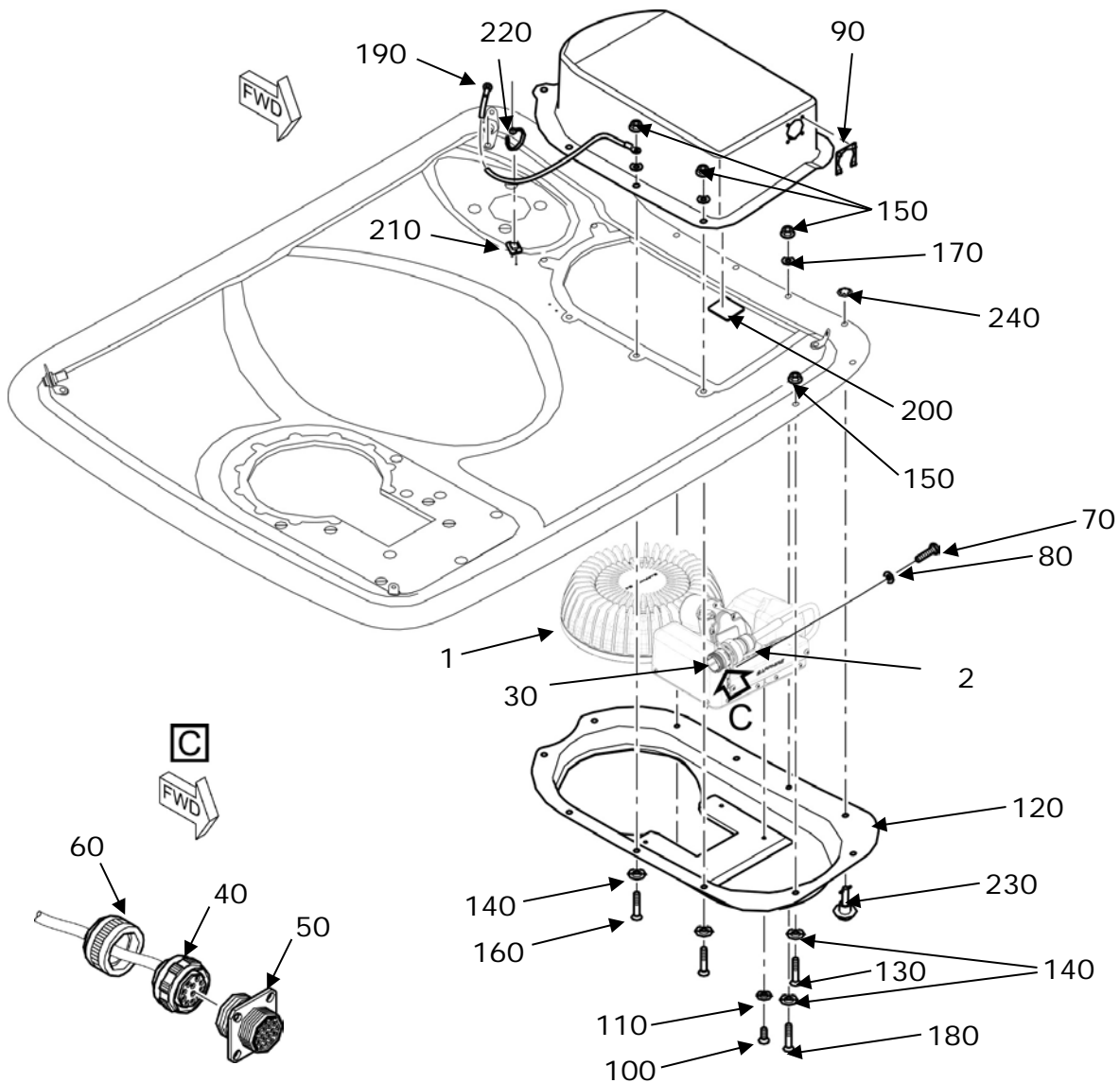
- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

**KIT Numbers:**

- ARBC-05** – Sapphire S64 White
- ARBC-06** – Sapphire S64 Dual
- ARBC-07** – Sapphire S64 WarpSpeed
- ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

- ARBC-09** – Sapphire S46 White
- ARBC-10** – Sapphire S46 Dual
- ARBC-11** – Sapphire S46 WarpSpeed
- ARBC-12** – Sapphire S46 WarpSpeed Dual

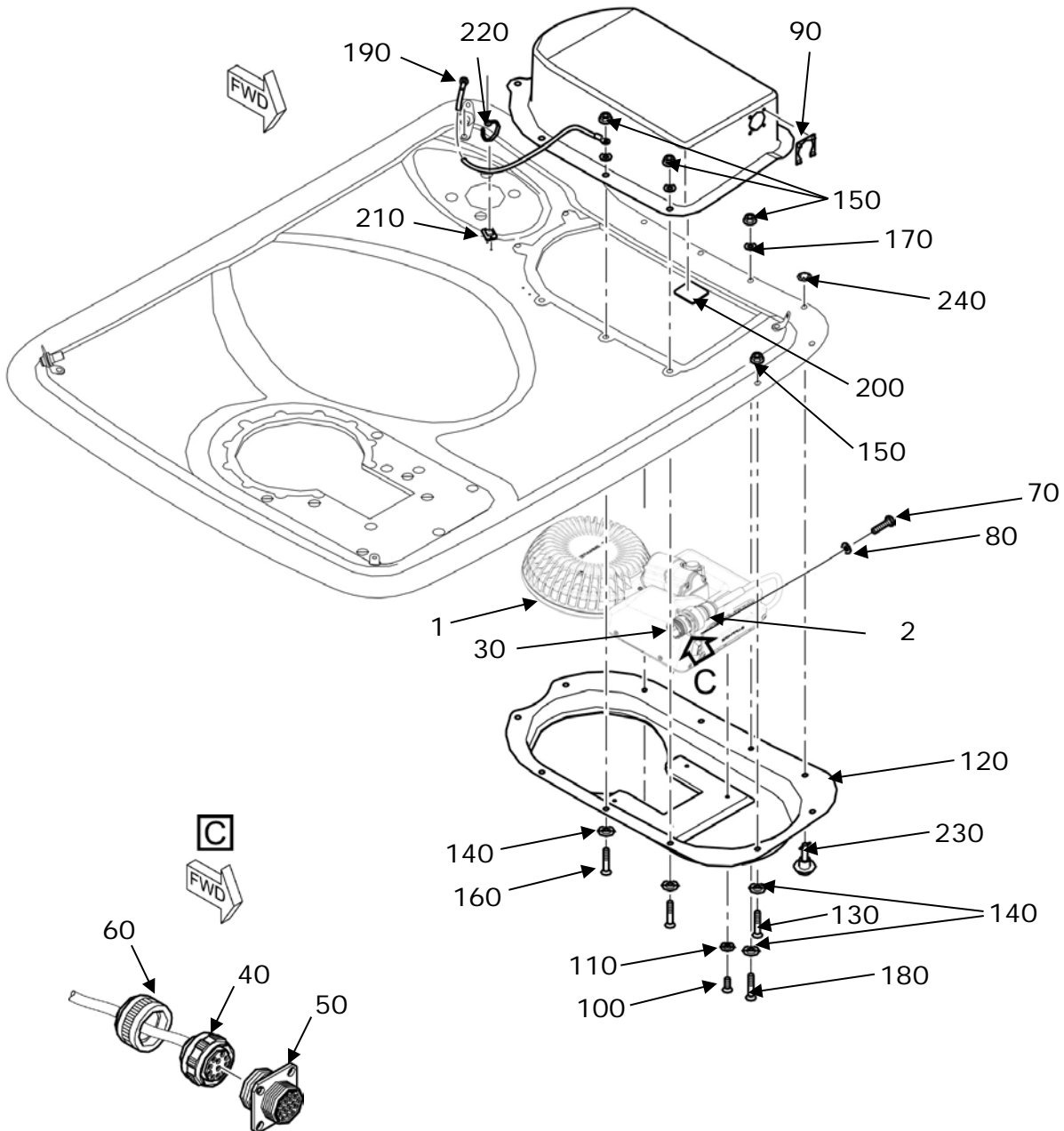


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1  2	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)	<b>1</b>
<b>Option C</b> 1	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)	<b>1</b>
----- <i>Original parts</i> -----				
<b>Options A,B,C</b>				
30	L882M1830140	WH 30VB Adapter 2nd Light		1
40	EN3645F0DN97AN	Connector, MIL-C-38999 III		1
50	D38999-20FD97PN	Receptacle		1
60	M85049/14S15N	Backshell		1
70	EN3308-030010F	Bolt, Hex. Head		4
80	EN2914-03010	Washer		4
90	MBBN3331AJ16	Nut Plate		1
100	NAS1102-08-10	Bolt, Shear-hexagon		4
110	EN3835-040	Washer		4
120	L334M3857103	Hood Landing Light LH		1
130	LN9438AM5X10	Countersunk Screw		1
130A	EN3760-050010A	Countersunk Screw		1
140	EN3835-050	Washer		8
150	EN3723-050	Nut, Hexagon Self Locking		8

160	LN9438AM5X20	Countersunk Screw		5
160A	EN3760-050020A	Countersunk Screw		5
170	EN2914-05010	Washer		7
180	LN9438AM5X14	Countersunk Screw		2
180A	EN3760-050014A	Screw Countersunk		2
190	MBBN3318-4-55-450	Grounding Strip		1
200	TY8G1	Support		1
210	TY3G1	Fastener		2
220	E0043-1A9P	Banding Clamp		2
230	26S51-11	Stud		3
240	2600-LW-7	Retaining Washer		3

**NOTES**

1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

S/N: 0831, 0864, 0870, 0882, 0891, 0900, 0902, 0912, 1155, 1235, 1255

Option A – Searchlight

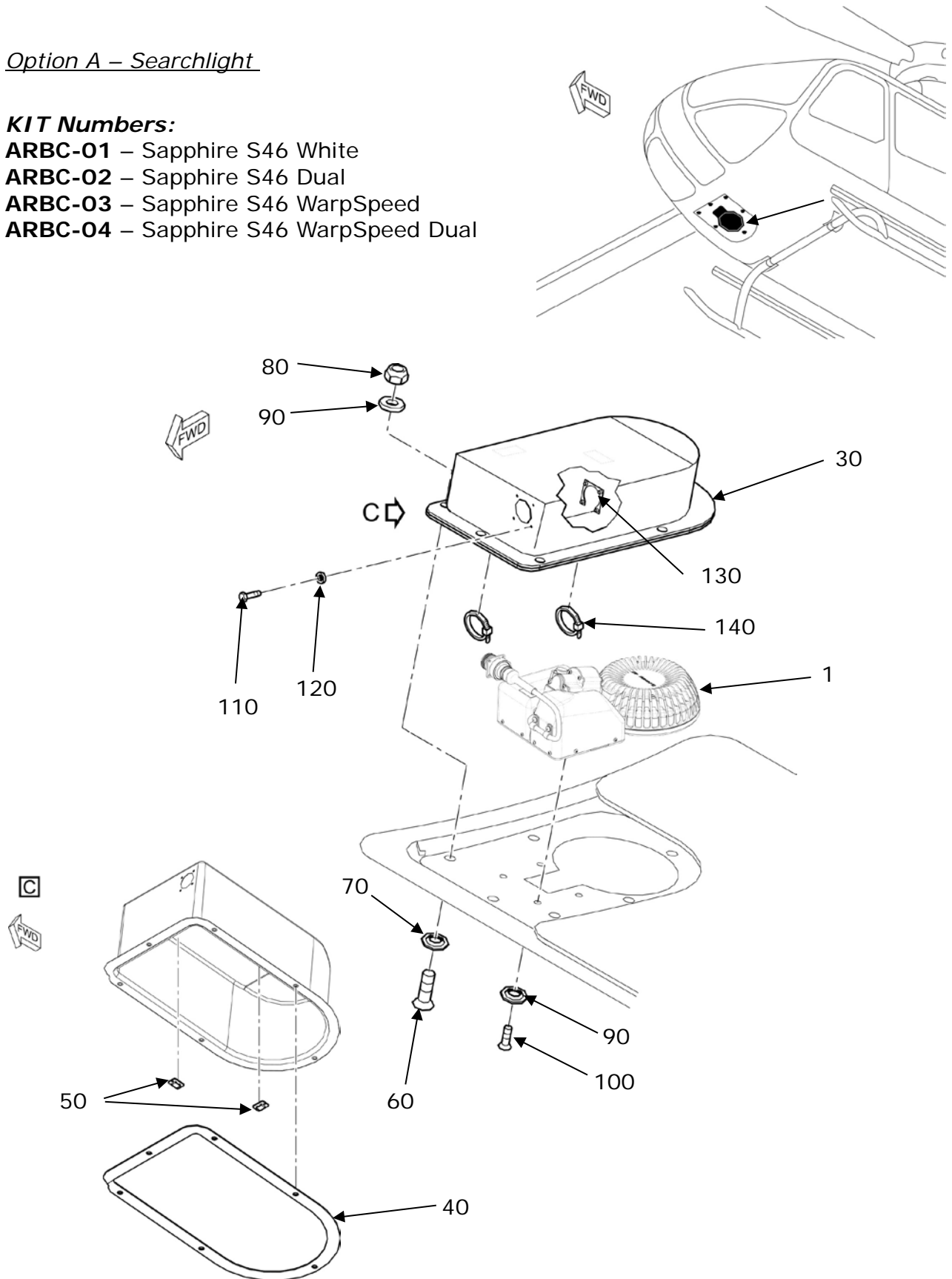
**KIT Numbers:**

**ARBC-01** – Sapphire S46 White

**ARBC-02** – Sapphire S46 Dual

**ARBC-03** – Sapphire S46 WarpSpeed

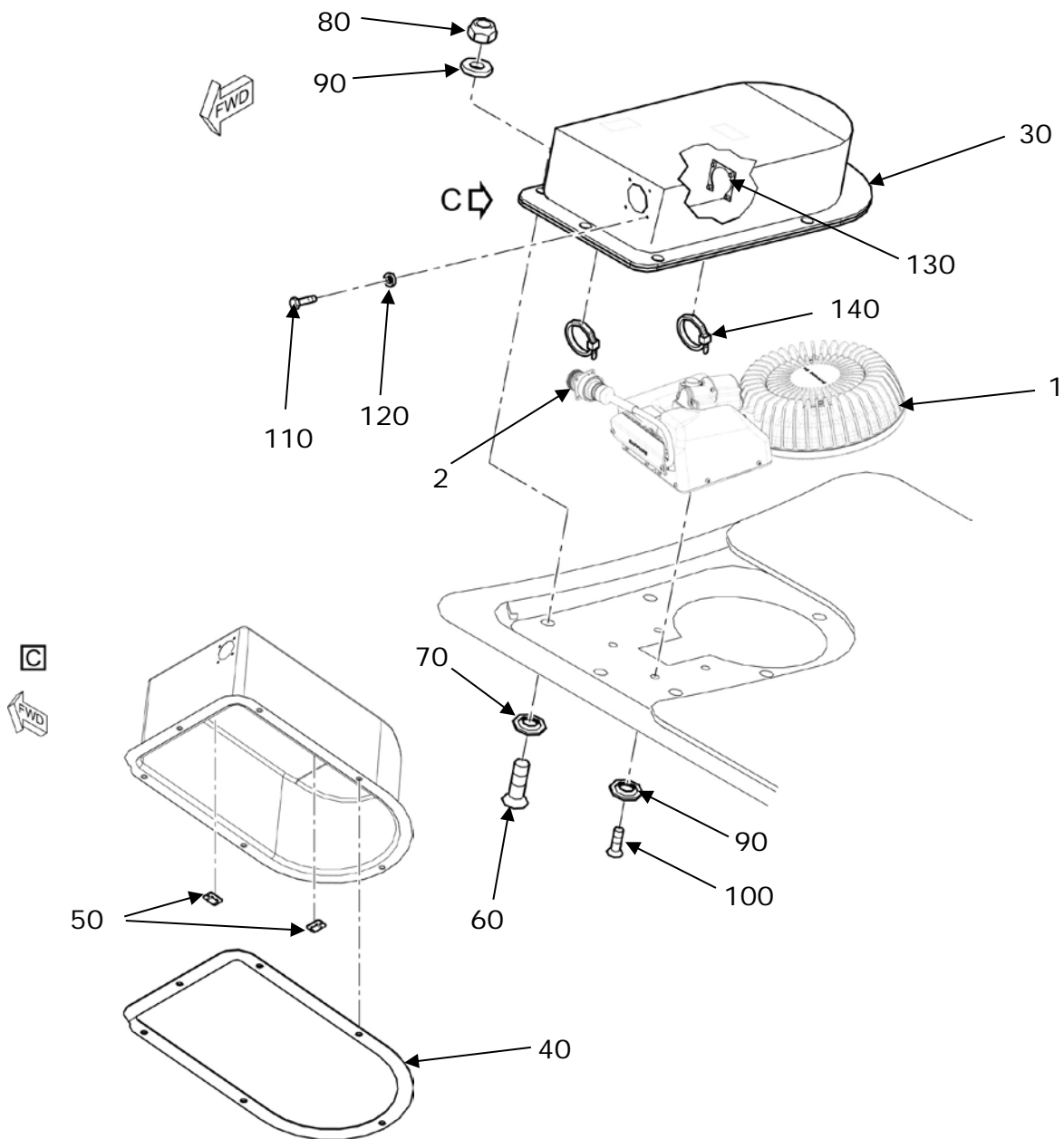
**ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

**KIT Numbers:**

- ARBC-05** – Sapphire S64 White
- ARBC-06** – Sapphire S64 Dual
- ARBC-07** – Sapphire S64 WarpSpeed
- ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

**ARBC-09** – Sapphire S46 White

**ARBC-10** – Sapphire S46 Dual

**ARBC-11** – Sapphire S46 WarpSpeed

**ARBC-12** – Sapphire S46 WarpSpeed Dual

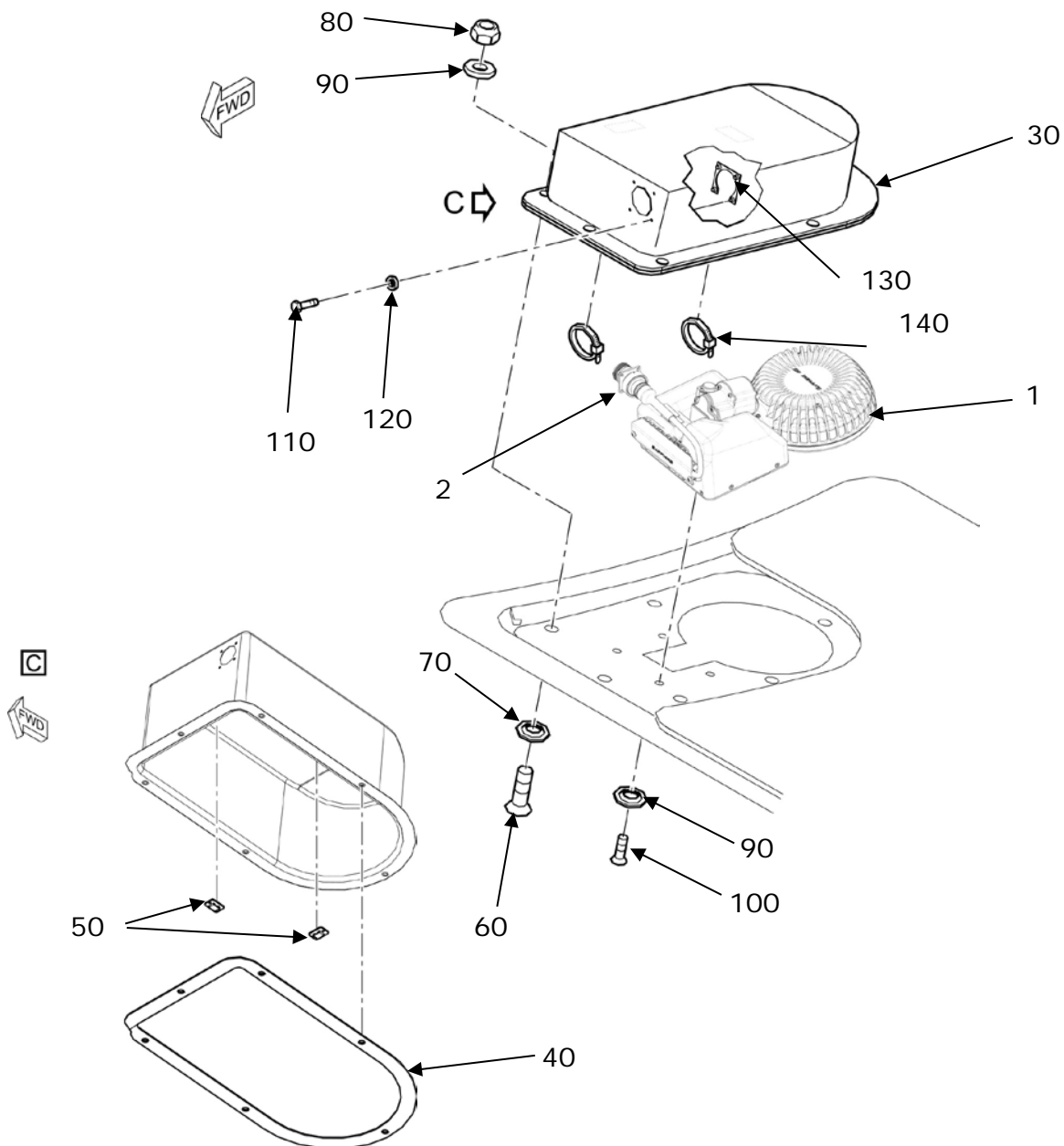


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)
<b>Option C</b> 1	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)
----- <i>Original parts</i> -----				
<b>Options A,B,C</b>				
30	L334M3844101	Cover Assy		1
30A	L334M3844102	Cover Assy		1
40	L334M3804205	Sealing		1
40A	L334M3804206	Sealing Cover		1
50	TY3G1	Fastener		2
60	EN3760-040020	Screw		6
60A	EN3760-040020A	Screw, Countersunk Head		6
70	EN2914-04010	Washer		6
80	EN3536-040	Nut		6
80A	EN3723-040	Nut, Hexagon Self Locking		6
90	EN3835-040	Washer		10
100	NAS1102-08-10	Bolt, Shear-Hexagon		4
110	LN9139M3X8	Round Head Screw		4
110A	EN3308-030010F	Bolt, Hex. Head		4
120	EN2914-03010	Washer		4

130	MBBN3331AJ16	Nut Plate		1
140	EN4056-003B1R9A	Cable Tie		2
140A	E0043-5B0P	Banding Clamp		2

**NOTES**

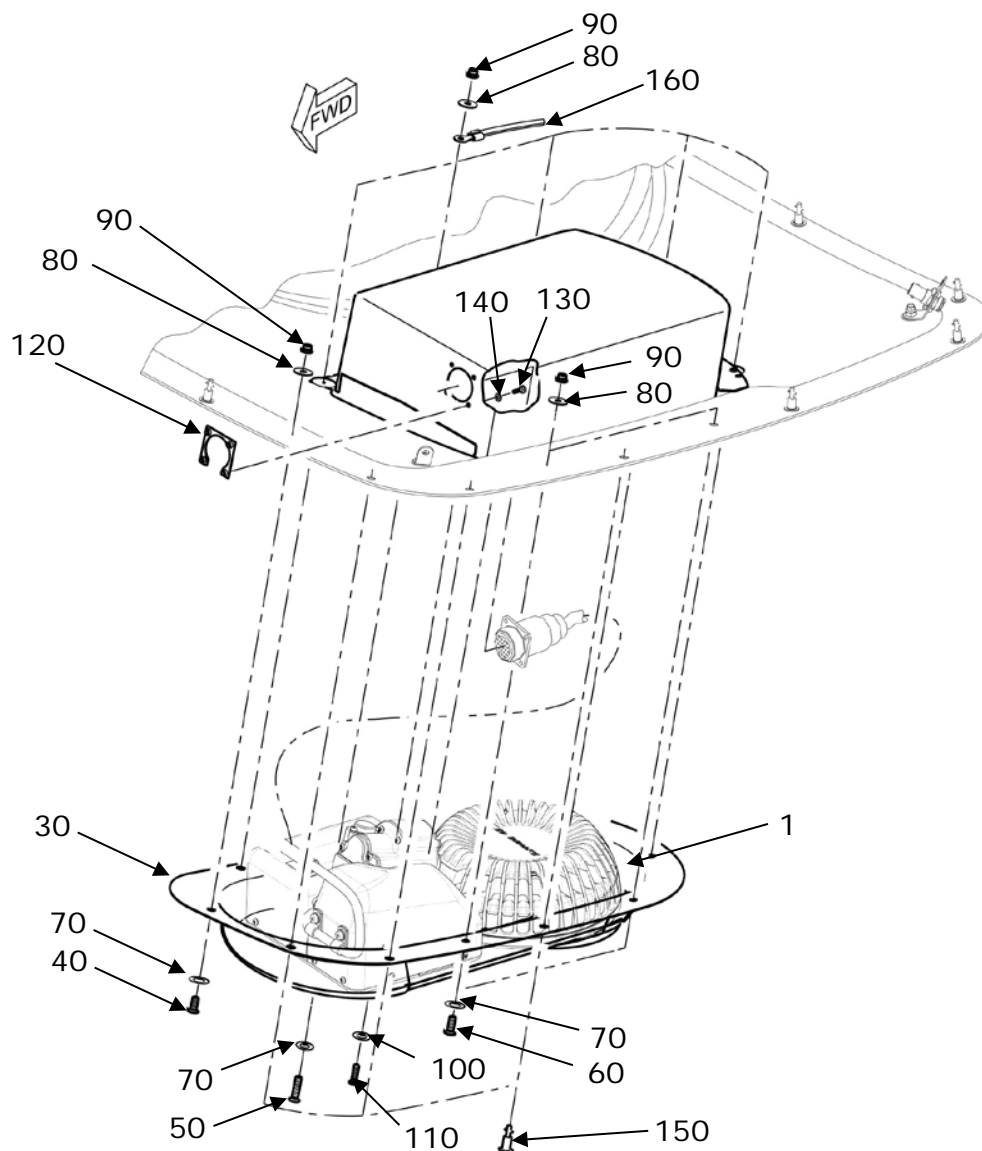
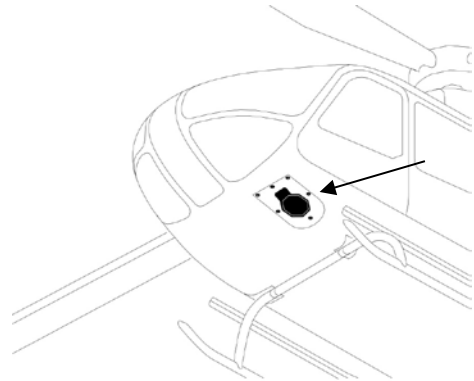
1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

**S/N:** 0168, 0181-0182, 0187, 0196, 0199, 0205, 0210, 0220-0221, 0233-0234, 0257, 0290, 0297, 0302, 0305, 0308, 0310, 0313, 0325, 0327-0328, 0334, 0336, 0338, 0340, 0343, 0348, 0352, 0355, 0358-0359, 0361-0362, 0364-0366, 0368-0369, 0372-0373, 0377-0379, 0386-0387, 0395, 0398, 0401-0403, 0409, 0413-0415, 0418-0419, 0423-0426, 0428, 0430-0431, 0434-0435, 0438-0439, 0441, 0445, 0450-0453, 0456-0457, 0459-0462, 0464, 0471, 0474, 0477-0478, 0480, 0486-0487, 0489-0490, 0499-0500, 0503, 0505, 0507, 0509-0510, 0513-0514, 0518-0519, 0521, 0523, 0525-0526, 0530-0531, 0533, 0536, 0540, 0544-0547, 0551, 0555-0557, 0559, 0565-0566, 0571-0573, 0576-0577, 0584-0585, 0588-0589, 0593, 0597, 0599-0600, 0602, 0609-0615, 0618, 0622-0623, 0625-0626, 0628, 0633, 0636, 0638-0639, 0641, 0646, 0651, 0653, 0657, 0663, 0666-0667, 0670-0671, 0674-0675, 0677-0678, 0683-0684, 0690, 0692, 0697

Option A – Searchlight

**KIT Numbers:**

- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

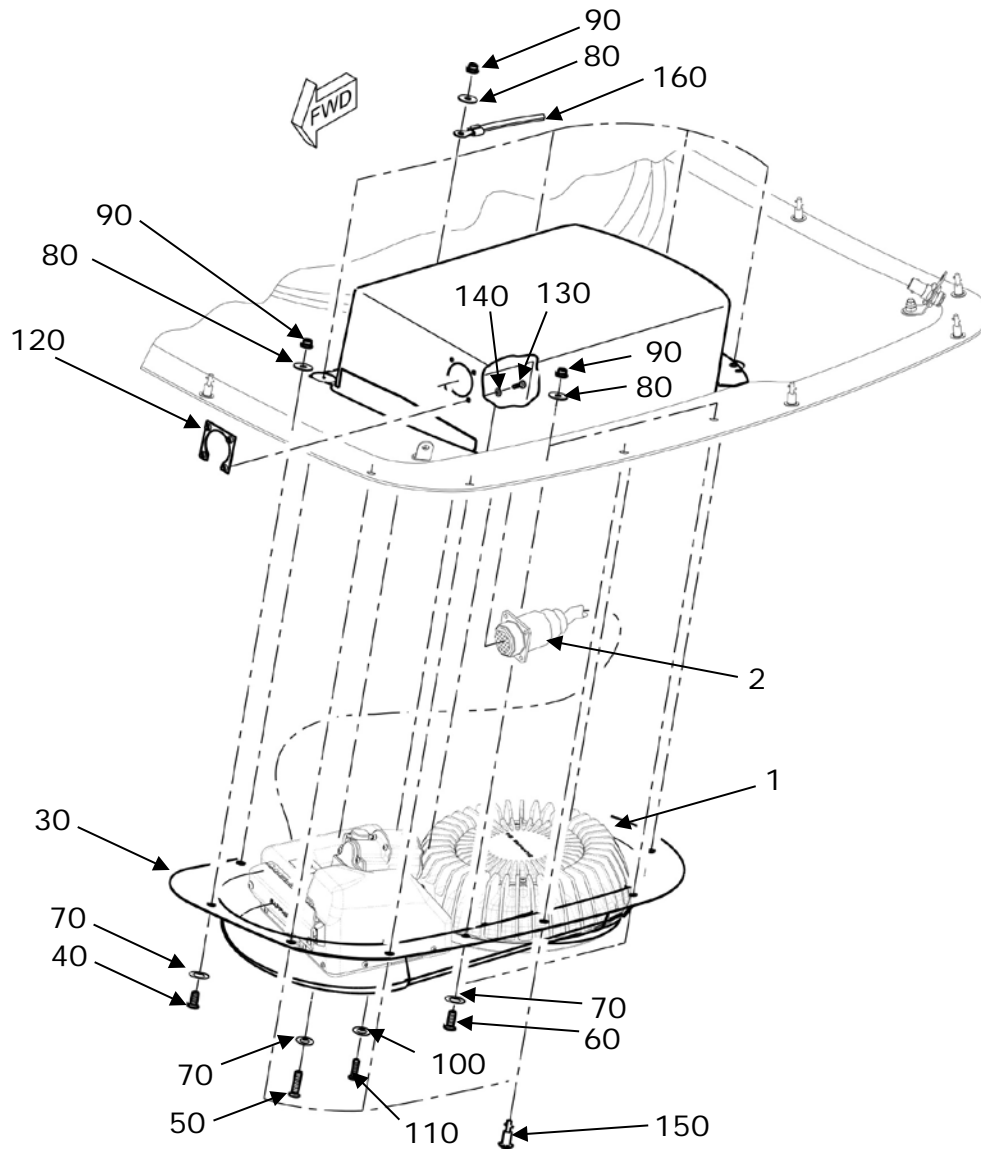
**KIT Numbers:**

**ARBC-05** – Sapphire S64 White

**ARBC-06** – Sapphire S64 Dual

**ARBC-07** – Sapphire S64 WarpSpeed

**ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

- ARBC-09** – Sapphire S46 White
- ARBC-10** – Sapphire S46 Dual
- ARBC-11** – Sapphire S46 WarpSpeed
- ARBC-12** – Sapphire S46 WarpSpeed Dual

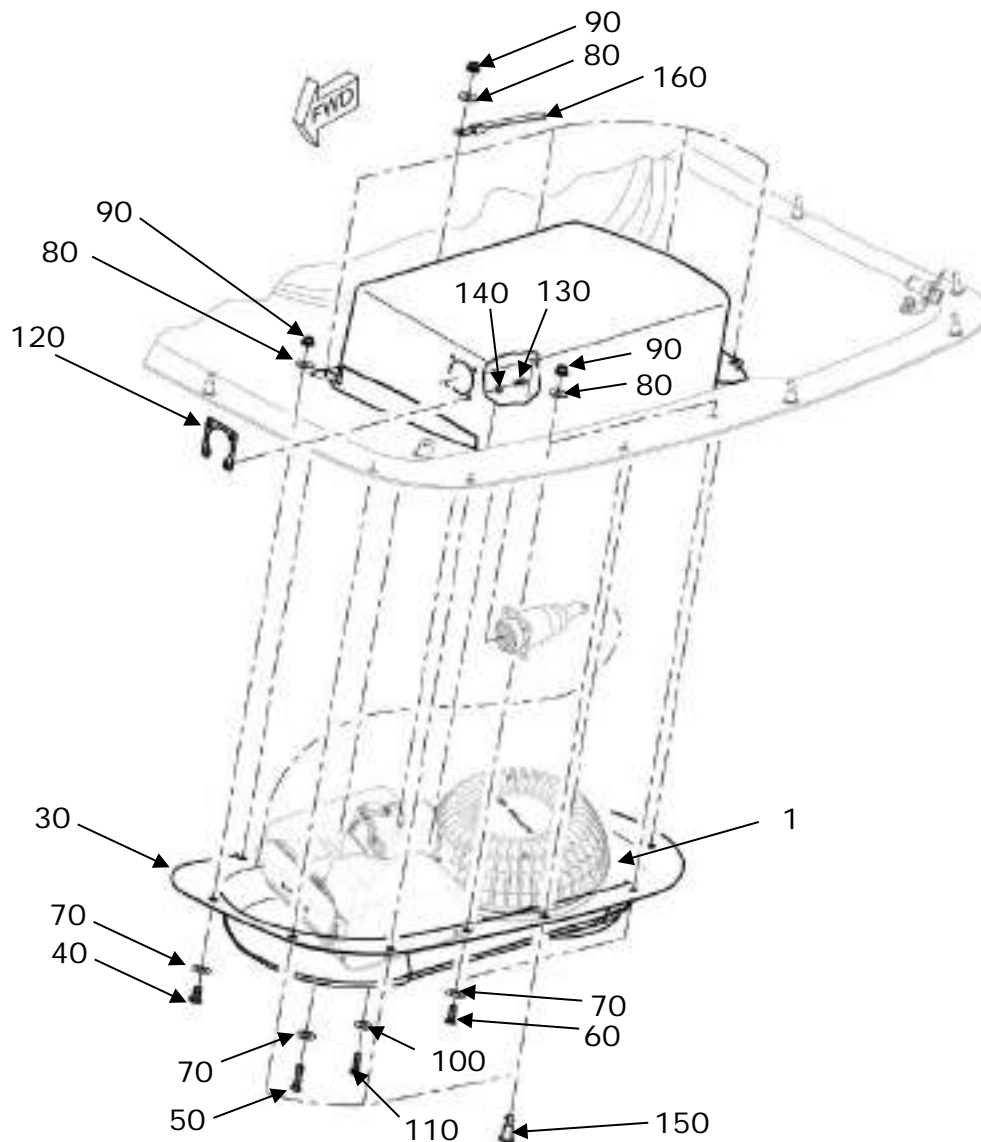


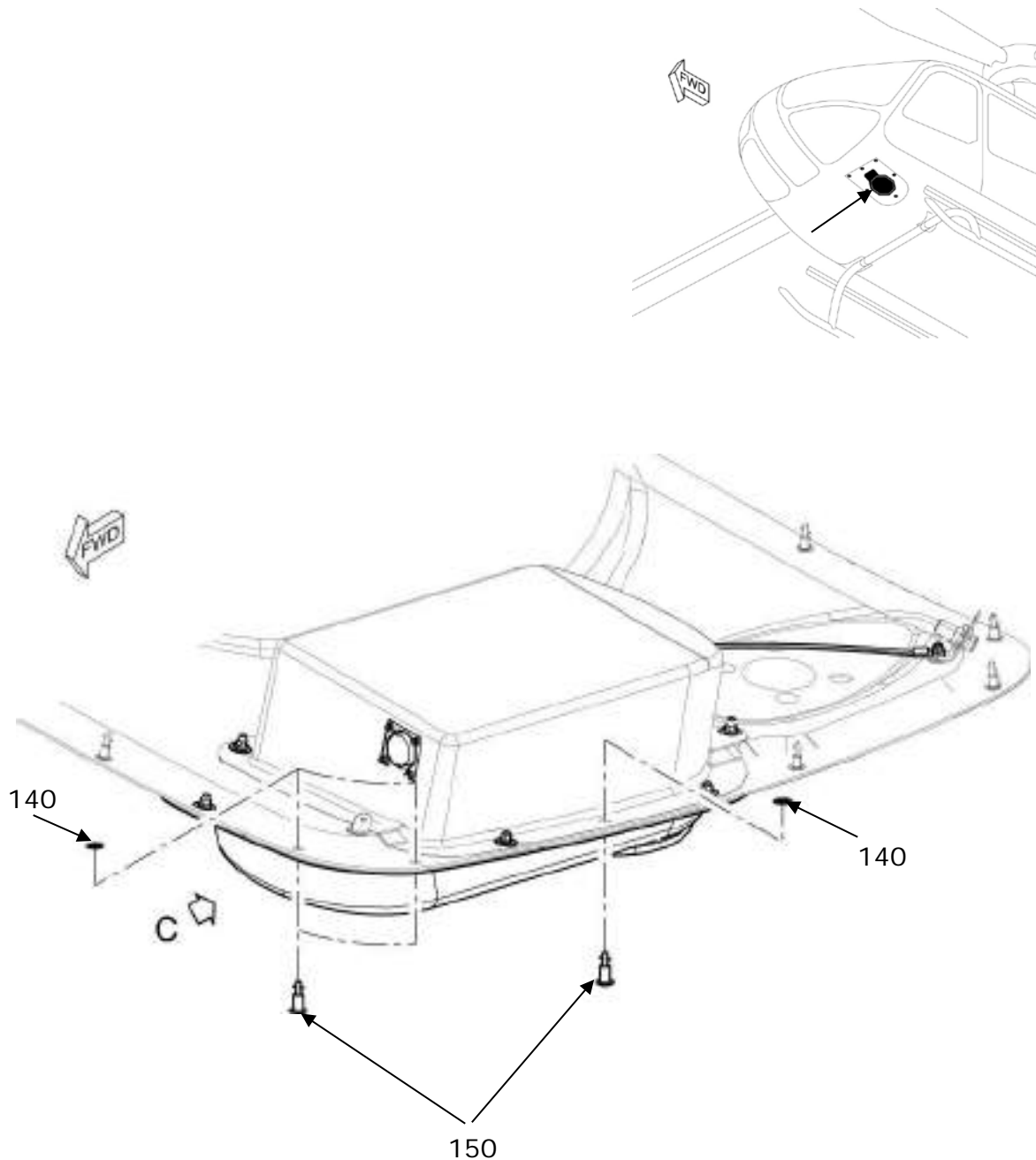
FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1  2	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)	<b>1</b>
<b>Option C</b> 1	<b>AVE-SLOA46W-M21.1</b>	<b>Landing Light – Omega 46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLOA46WI-M21.1</b>	<b>Landing Light – Omega 46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLOWA46W-M21.1</b>	<b>Landing Light – Omega 46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLOWA46WI-M21.1</b>	<b>Landing Light – Omega 46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)	<b>1</b>
----- <i>Original parts</i> -----				
<b>Options A,B,C</b>				
30	L334M3857101	Hood Landing Light LH		1
30A	L334M3857102	Hood Landing Light LH		1
40	LN9438AM5X10	Countersunk Screw		1
50	EN3760-050020A	Countersunk Screw		5
50A	LN9438AM5X20	Countersunk Screw		5
60	LN9438AM5X12	Countersunk Screw		2
70	EN3835-050	Washer		8
80	EN2914-05010	Washer		8
90	EN3536-050	Nut, Hexagon Self Locking		8
100	EN3835-040	Washer		4
110	NAS1102-08-10	Bolt, Shear-Hexagon		4
120	MBBN3331AJ16	Nut Plate		1
130	EN3308-030010F	Bolt, Hex. Head		4
140	EN2914-03010	Washer		4
150	2600-9	Stud		3
160	MBBN3318-4-55-450	Grounding Strip		1

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**NOTES**

1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

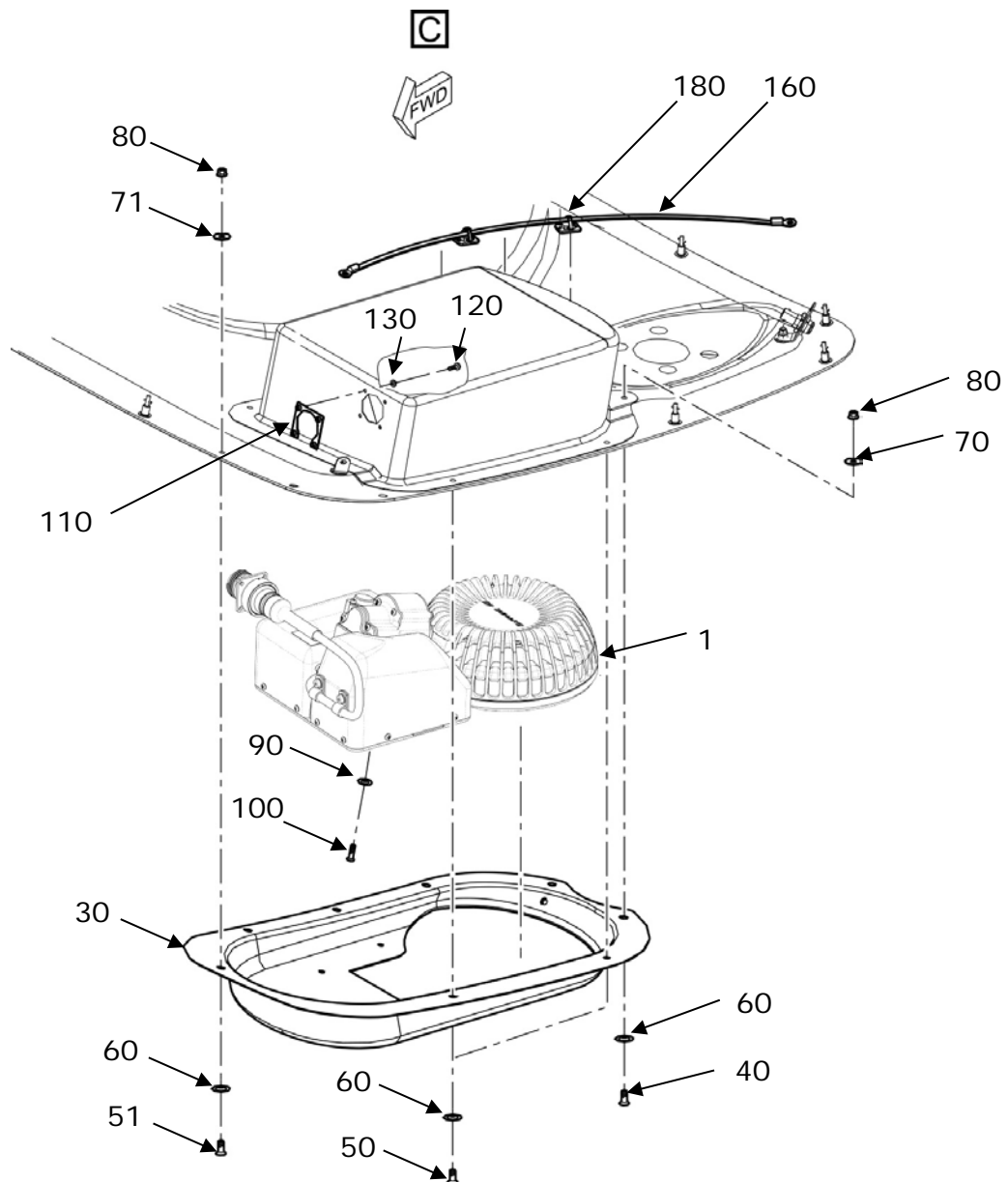
**S/N:** 0701, 0706-0707, 0709-0710, 0716, 0719, 0724-0726, 0729-0731, 0733-0735, 0737-0739, 0748-0749, 0752, 0755, 0758, 0760, 0763-0764, 0775-0779, 0782-0784, 0790, 0792-0795, 0798, 0800-0801, 0805, 0807-0809, 0816-0818, 0821, 0823, 0825, 0830, 0834, 0839, 0841, 0843, 0847, 0849-0850, 0854, 0856, 0859, 0862, 0871, 0874-0878, 0881, 0887-0888, 0890, 0896-0897, 0908-0909, 0913-0915, 0920, 0923, 0928, 0937, 0940, 0942, 0946, 0948, 0950, 0956, 0959, 0972-0974, 0976, 0978, 0982, 0985-0987, 0991, 0996, 0999



Option A – Searchlight

**KIT Numbers:**

- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

**KIT Numbers:**

- ARBC-05** – Sapphire S64 White
- ARBC-06** – Sapphire S64 Dual
- ARBC-07** – Sapphire S64 WarpSpeed
- ARBC-08** – Sapphire S64 WarpSpeed Dual

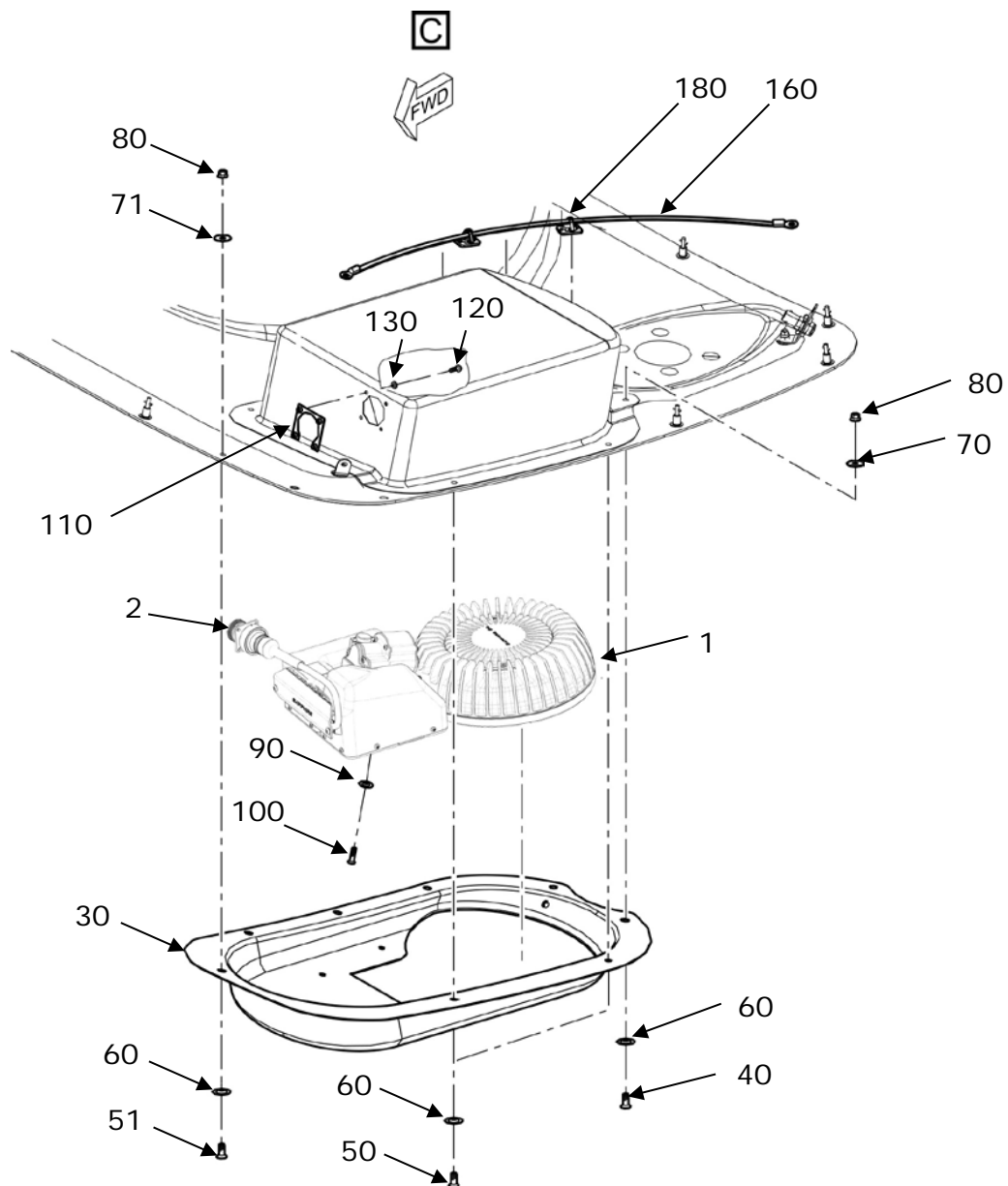




FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)	<b>1</b>
<b>Option C</b> 1	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
2	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)	<b>1</b>
----- Original parts -----				
<b>Options A,B,C</b>				
30	L334M3857103	Hood Landing Light LH		1
40	EN3760-050020A	Countersunk Screw		5
40A	LN9438AM5X20	Countersunk Screw		5
50	LN9438AM5X12	Countersunk Screw		2
51	LN9438AM5X12	Countersunk Screw		1
60	EN3835-050	Washer		8
70	EN2914-05010	Washer		7
71	EN2914-05010	Washer		1
80	EN3536-050	Nut, Hexagon Self Locking		8
90	EN3835-040	Washer		4
100	NAS1102-08-10	Bolt, Shear-Hexagon		4
110	MBBN3331AJ16	Nut Plate		1
120	EN3308-030010F	Bolt, Hex. Head		4
130	EN2914-03010	Washer		4
140	26S51-11	Stud		3

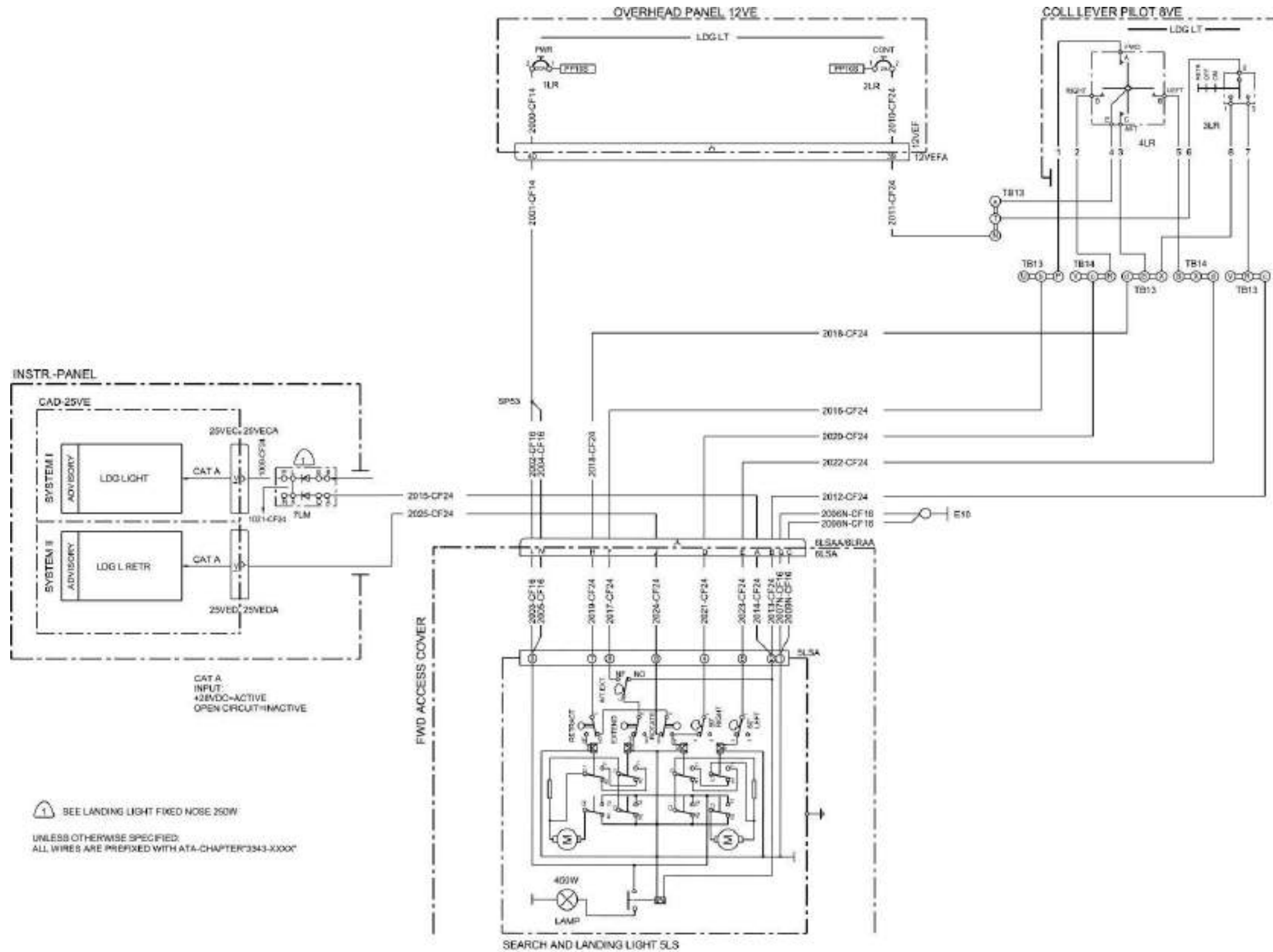
150	2600-LW-7	Retaining Washer		3
160	MBBN3318-4-55-450	Grounding Strip		1
170	TY8G1S	Socket		1
180	TY3G1	Fastener		2

**NOTES**

1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

1.6.1 Wiring diagrams – single mode (white only)

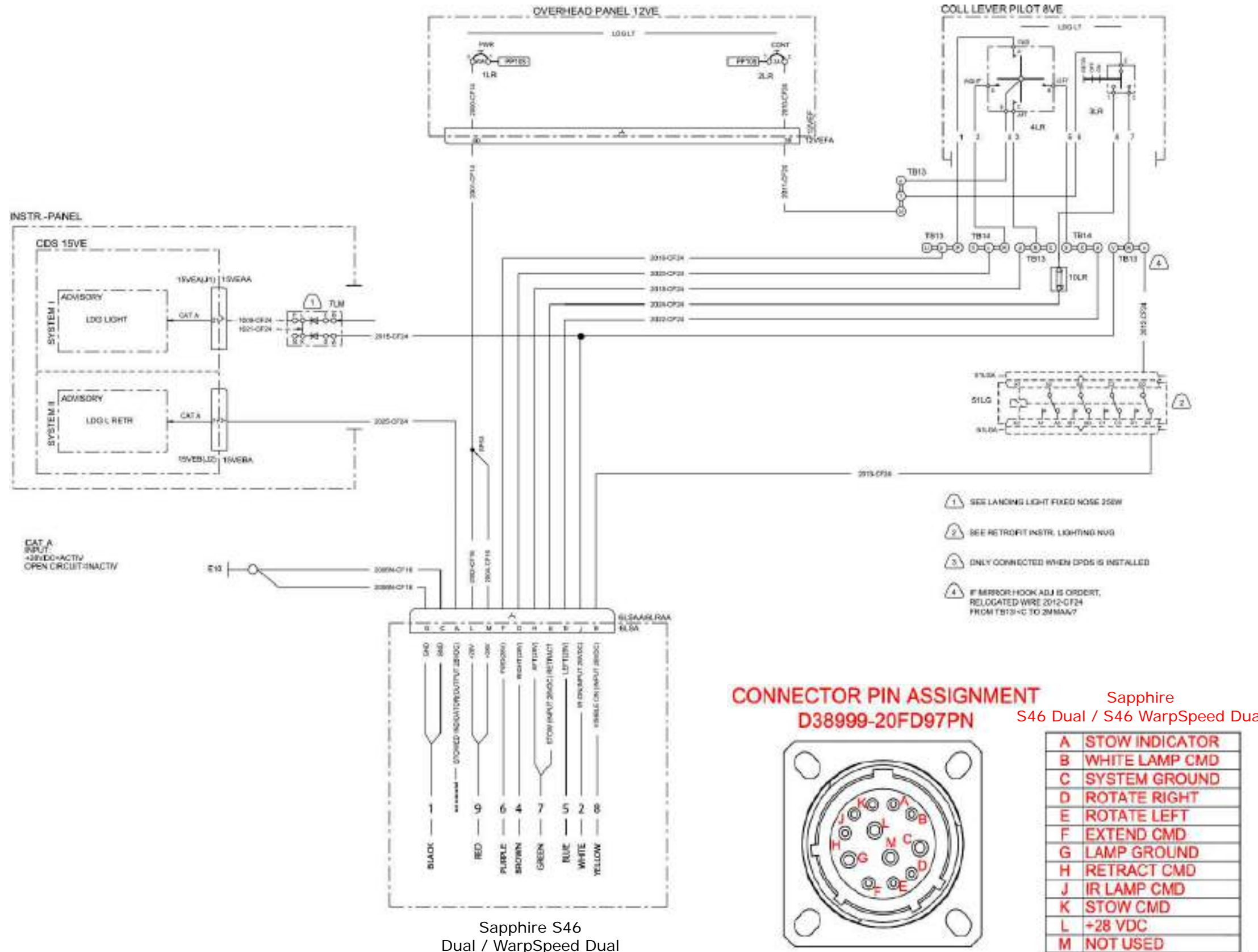
Original







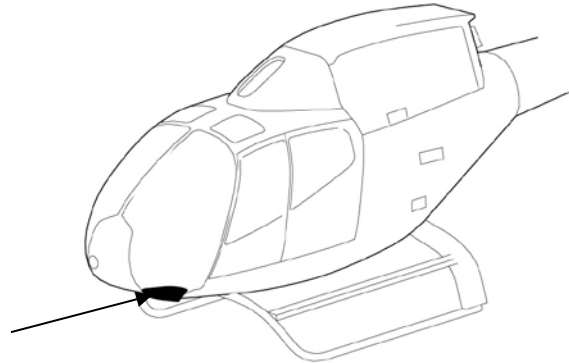
*Sapphire S46 Dual / S46 WarpSpeed Dual / S64 Dual / S64 WarpSpeed Dual*



Sapphire S46  
Dual / WarpSpeed Dual  
Sapphire S64  
Dual / WarpSpeed Dual

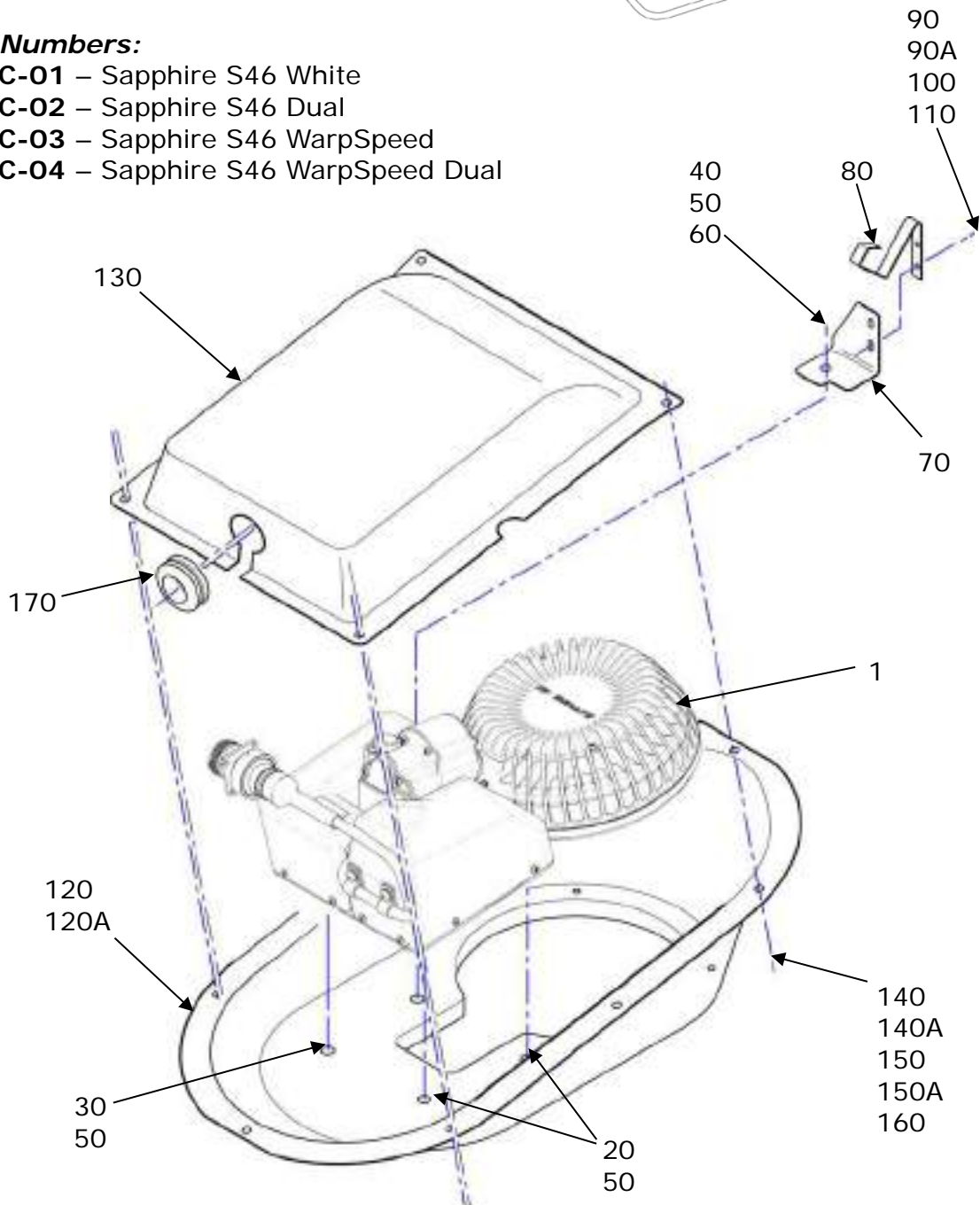
## 1.7 Search and Landing Lights Installation – H120

### Option A – Searchlight



**KIT Numbers:**

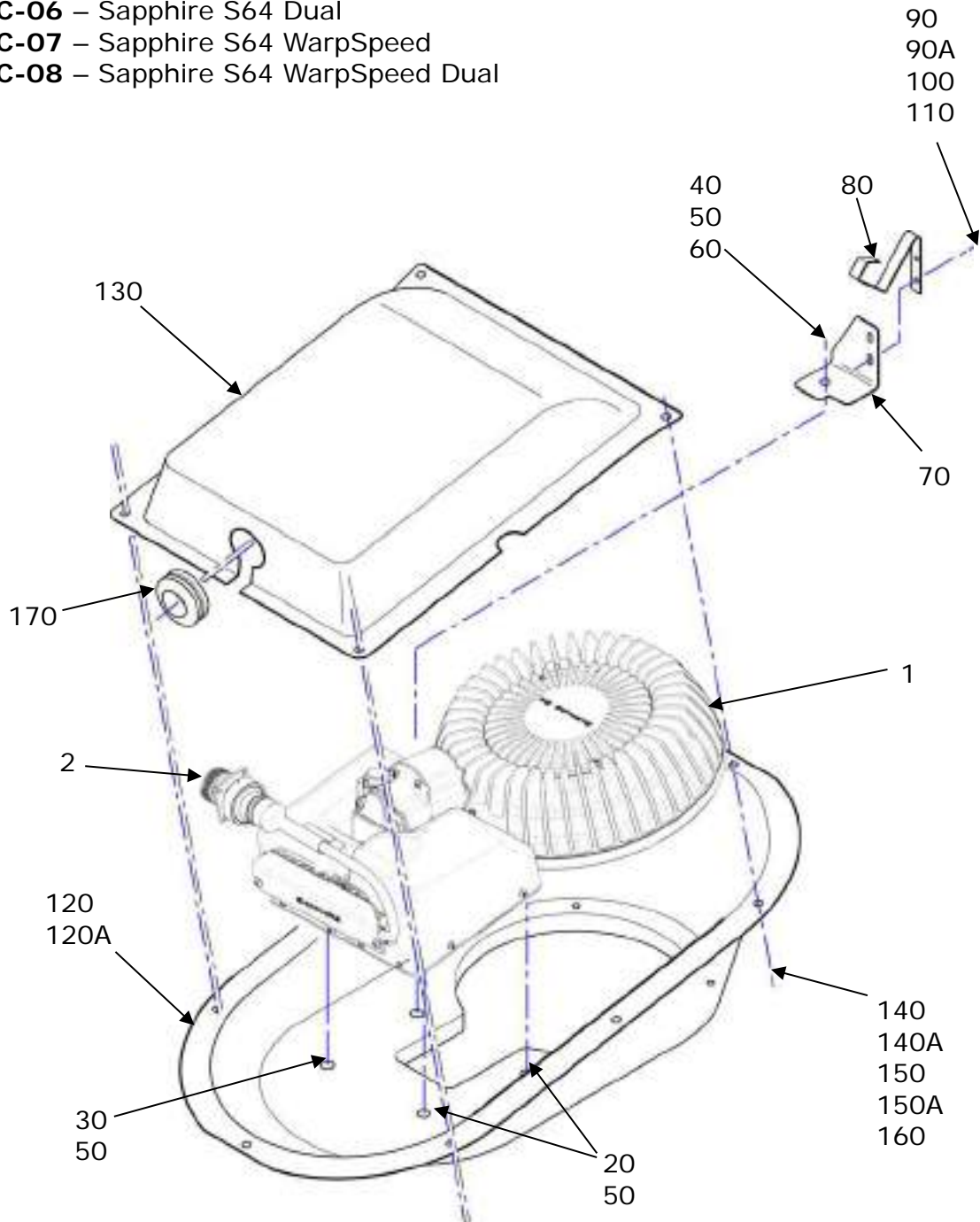
- ARBC-01** – Sapphire S46 White
- ARBC-02** – Sapphire S46 Dual
- ARBC-03** – Sapphire S46 WarpSpeed
- ARBC-04** – Sapphire S46 WarpSpeed Dual



Option B – Searchlight

**KIT Numbers:**

- ARBC-05** – Sapphire S64 White
- ARBC-06** – Sapphire S64 Dual
- ARBC-07** – Sapphire S64 WarpSpeed
- ARBC-08** – Sapphire S64 WarpSpeed Dual



Option C – Searchlight

**KIT Numbers:**

- ARBC-09** – Sapphire S46 White
- ARBC-10** – Sapphire S46 Dual
- ARBC-11** – Sapphire S46 WarpSpeed
- ARBC-12** – Sapphire S46 WarpSpeed Dual

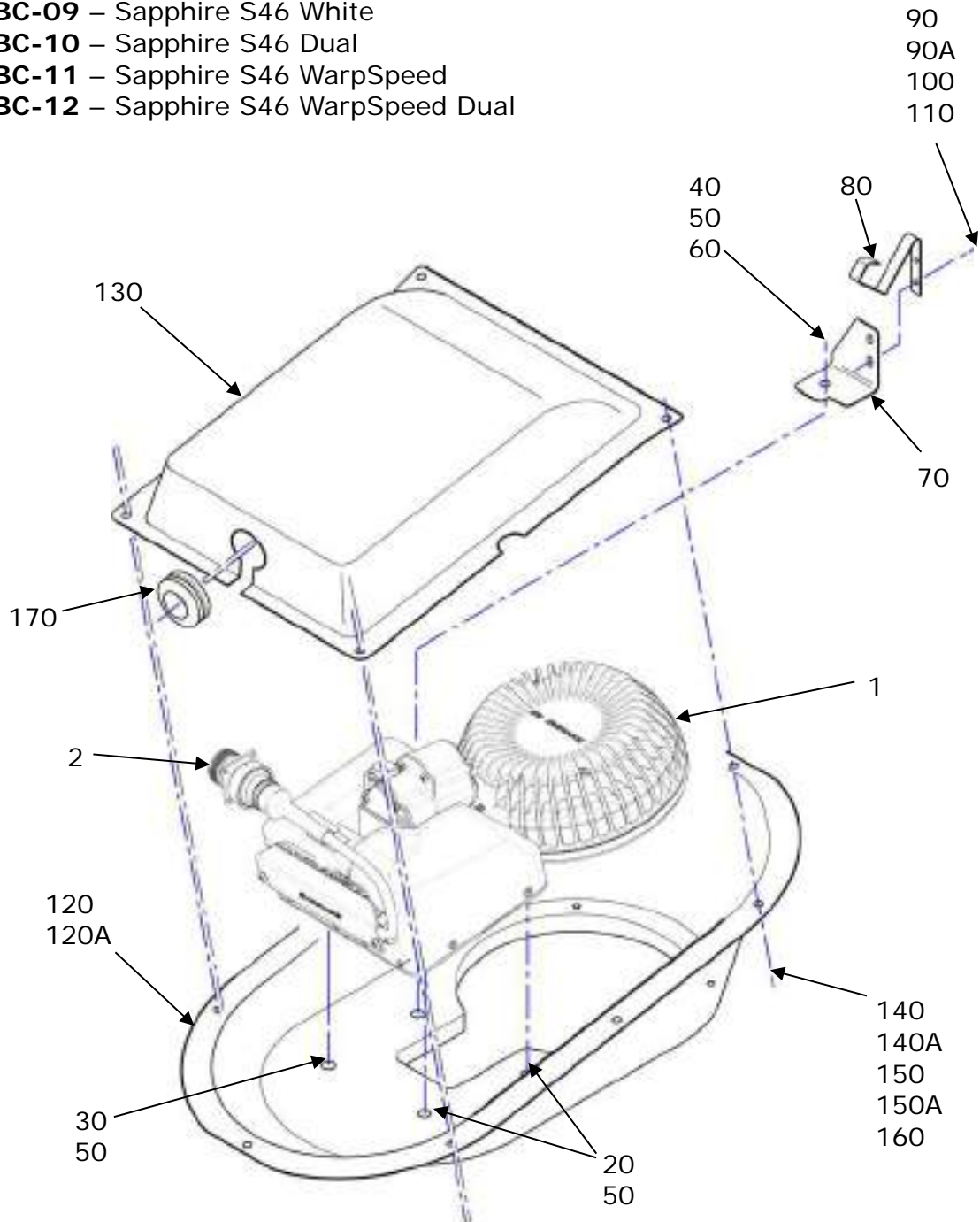


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>Option A</b> 1	<b>AVE-SLSA46W-M21.1</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-01	<b>1</b>
	<b>AVE-SLSA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-02	<b>1</b>
	<b>AVE-SLSWA46W-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-03	<b>1</b>
	<b>AVE-SLSWA46WI-M21.1</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-04	<b>1</b>
<b>Option B</b> 1	<b>AVE-SLSA64W- M10.0</b>	<b>Searchlight – Sapphire S64 White</b>	ARBC-05	<b>1</b>
	<b>AVE-SLSA64WI-M10.0</b>	<b>Searchlight – Sapphire S64 Dual</b>	ARBC-06	<b>1</b>
	<b>AVE-SLSWA64W- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed</b>	ARBC-07	<b>1</b>
	<b>AVE-SLSWA64WI- M13.0</b>	<b>Searchlight – Sapphire S64 WarpSpeed Dual</b>	ARBC-08	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 05, 06, 07, 08)	<b>1</b>
<b>Option C</b> 1	<b>AVE-SLSA46W-M20</b>	<b>Searchlight – Sapphire S46 White</b>	ARBC-09	<b>1</b>
	<b>AVE-SLSA46WI-M20</b>	<b>Searchlight – Sapphire S46 Dual</b>	ARBC-10	<b>1</b>
	<b>AVE-SLSWA46W-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed</b>	ARBC-11	<b>1</b>
	<b>AVE-SLSWA46WI-M20</b>	<b>Searchlight – Sapphire S46 WarpSpeed Dual</b>	ARBC-12	<b>1</b>
	<b>AVS -HSL0110442-A00</b>	<b>External Cable</b>	(included in 09, 10, 11, 12)	<b>1</b>
----- Original parts -----				
<b>Options A,B,C</b>				
20	MS35265-43	Screw, Fillister Head		2
30	MS35265-45	Screw, Fillister Head		1
40	MS35265-46	Screw, Fillister Head		1
50	23111AG040LE	Washer, Flat		5
60	MS35649-286T	Nut		1
70	C334A4107201	Angle		1
80	C334A4108201	Spring		1
90	22125BC040012L	Screw		2
90A	22125BC040008L	Screw		2
100	23111AG040LE	Washer, Flat		2
110	ASN52320BH040N	Nut		2
120	C334A4102801	Support Landing Light / Searchlight		1
120A	C334A4102202	Support Landing Light / Searchlight		1
130	C334A4101101	Cover		1
140	A0164TK050S014X	Screw		8

140A	22272BC050014L	Screw		8
150	23111AG050LE	Washer, Flat		8
150A	23116AG050LE	Washer		16
160	ASN52320BH050N	Nut		8
170	DHS751-160.54	Grommet		1

**NOTES**

1. Remove the original light from helicopter according to AMM.
2. Inspect the installation location for corrosion and, if necessary, repair according to the original structural repair manual.
3. In case the S64 is installed in the location where previously the size 46 had been installed then trim the cutout for the light according to the SCD drawing for the S64.
4. Install the new Aveo light by using original fasteners as listed and depicted above.
5. Connect the wiring by using the respective wiring diagram which is included in this document in accordance with the standard practice of the aircraft maintenance manual and if not specified there, then according to the common practice referenced in § 1.1. Use the original type of connector.

### **1.7.1 Wiring diagrams**

See sections 1.5.1 and 1.5.2.

## Part 2 Compliance Demonstration

This document is in relation to the certification program AVE-MOD-022-PFC.  
The compliance is demonstrated for the following certification specification:

Requirements	MoC	Statement of Compliance
CS 27.609 Protection of structure	MoC 0	(a) All parts installed are verified to be suitable. The installation instruction requests the aircraft structure to be inspected for probable corrosion before installing the new lights. (b) Not applicable
CS 27.1301 Function and installation	MoC 0	(a) The lights are based on the Aveo Samson added to the folding mechanism. The basics Samson light is qualified according to RTCA DO160 as per AVE-S45-CCL. (b) Not applicable as the function is as original installation. (c) All equipment is installed within their limits. (d) The proper function is determined in a ground check as per MCS.
CS 27.1383 Taxi and landing lights	MoC 0	(a) The configuration of the original installation is not changed. (b) (1) and (2) are not affected as the installation is not changed. (3) is improved as the new lights are brighter than the originally installed. (c) The landing light switches and the landing light configuration are not modified.
CS 27.1529 Instructions for Continued Airworthiness	MoC 0	The modification does not require any changes to the aircraft maintenance procedure which is clearly stated in §1.1 General.