



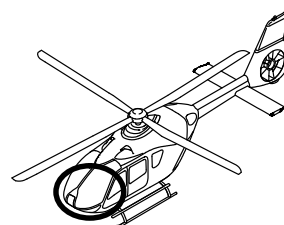
### SB EC135-31-091

Valid for Version(s): T1, T2, T2+, T3, P1, P2, P2+, P3, 635 T1, 635 T2+, 635 T3, 635 P2+, 635 P3

# SERVICE BULLETIN

## PRODUCT IMPROVEMENT

### INDICATING AND RECORDING SYSTEMS - Instrument Panels Replacement of switches on the switch unit 20VE



Revision No.	Date of issue
Revision 0	2020-11-04

#### Summary:

With this Service Bulletin (SB), Airbus Helicopters offers improved engine switches for the switch unit 20VE.

#### Compliance:

Compliance with this SB is optional.

## 1 PLANNING INFORMATION

### 1.A EFFECTIVITY

#### 1.A.1 Helicopters/installed equipment and parts

- a) EC135 T1, T2, T2+, T3, P1, P2, P2+, P3, 635 T1, 635 T2+, 635 T3, 635 P2+, 635 P3, S/N 0001 up to S/N 1999.
- b) Switch unit 20VE
- P/N L311M1009150  
P/N L311M1009155  
P/N L311M1009160  
P/N L311M1034150  
P/N L311M1034155  
P/N L311M1075107  
P/N L311M1075150  
P/N L311M1075155  
P/N L311M1085150  
P/N L311M1085155  
P/N L311M1085160  
P/N L311M1085165  
P/N L311M1085170  
P/N L311M1085175  
P/N L311M1085180  
P/N L311M1085185  
P/N L311M1085190

PRE SB		POST SB	
1	Engine switch 945UN01Q4AA8B	1	Engine switch ECS7064Q8Y

#### 1.A.2 Non-installed equipment and parts

See Section 1.A.1.b.

#### 1.B ASSOCIATED REQUIREMENTS

None.

#### 1.C REASON

With this SB, Airbus Helicopters offers improved engine switches for the switch unit 20VE.

#### 1.D DESCRIPTION

Remove the existing engine switches from the switch unit 20VE. Install the improved engine switches on the switch unit 20VE.

#### 1.E COMPLIANCE

##### 1.E.1 Compliance at H/C manufacturer level

Helicopters/installed equipment and parts:

Not affected.

Non-installed equipment and parts:

Not affected.

##### 1.E.2 Compliance in service

Helicopters/installed equipment and parts:

Compliance with this SB is optional.

Non-installed equipment and parts:

Compliance with this SB is optional.

#### 1.F APPROVAL

Approval of modification(s):

The information or instructions contained in this document refer to change no. 6645. The change is approved under the authority of DOA No. EASA.21J.700.

#### 1.G MANPOWER

Qualification	Mechanic	Electrician	Pilot	Others
Estimated Man-hours	-	approx. 3 h*	-	-

\*Per switch.

#### 1.H WEIGHT AND BALANCE

No effect on weight and balance.

#### 1.I POWER CONSUMPTION

No affected.

#### 1.J SOFTWARE UPGRADES/UPDATES

Not changed.

#### 1.K REFERENCES

AMM EC135, AMM EC135/635, EC135, IPC EC635 and Standard Practices Manual (MTC).

#### 1.L OTHER AFFECTED PUBLICATIONS

##### Publications to be updated:

The changes to IPC EC135, IPC EC635 which are required as a result of this SB will be incorporated with one of the next revisions.

#### 1.M INTERCHANGEABILITY OR MIXABILITY OF PARTS

##### Interchangeability:

Each old switch unit 20VE can be exchanged with the corresponding new switch unit 20VE without any restrictions, refer to Section 3.C for the P/N pairing. In the new switch units 20VE, the improved engine switches P/N ECS7064Q8Y are already installed.

After accomplishment of this SB, the existing engine switches P/N 945UN01Q4AA8B must not be installed again.

##### Mixability:

Mixed installation of existing engine switches P/N 945UN01Q4AA8B and improved engine switches P/N ECS7064Q8Y is not authorized.

## 2 MATERIAL INFORMATION

### 2.A MATERIAL: PRICE - AVAILABILITY - PROCUREMENT

Information on price and availability of required material kit SB-135-31-091-2C will be provided by Airbus Helicopters, Dept. Spares Order Administration on request.

### 2.B LOGISTIC INFORMATION

None.

### 2.C MATERIAL REQUIRED PER HELICOPTER/COMPONENT

Material kit to be ordered for one helicopter:

Material kit SB-135-31-091-2C in accordance with design document L311M1075888.

No.	Keyword	Qty	New P/N	Old P/N	Rem.
1	Toggle switch	2	ECS7064Q8Y	-	-
		2	-	945UN01Q4AA8B	A

Remark:

A = Airbus Helicopters does not take back parts with old part numbers.

Consumables to be ordered separately:



**WARNING**

**RESPECT THE SAFETY DATA SHEET OF THE MANUFACTURER.**

No.	Keyword	Qty. (approx.)	Specification **	CM	Rem.
1	Paint	a.n.*	-	421	-

\* a.n. = as needed

\*\* For specification, refer to AMM 01-00-00, 2-1.

The consumables can be ordered separately from the following companies:

Aviatec global aviation

Website: <https://www.aviatec.net>

Telephone: +33 1.34.46.45.24 or  
+49 4193.8803.630

Fax: +33 1.34.46.45.26 or  
+49 4193.8803.699

AOG: +49 4193.8803.660

AOG email: [aog@aviatec.aero](mailto:aog@aviatec.aero)

BDSI

Website: <https://www.boeingdistribution.com>

Telephone: +1.305.925.2600

Fax: +1.305.507.7191

AOG: +1.305.471.8888

AOG email: [AOGdesk@boeingdistribution.com](mailto:AOGdesk@boeingdistribution.com)

Gaches chimie

Website: <https://www.gaches.com>

Telephone: +33 5.61.31.64.45

Fax: +33 5.61.40.98.63

AOG email: [marketplace@gaches.com](mailto:marketplace@gaches.com)

Special tools:

Keyword	P/N	Electrical identification	Contact
Insertion/extraction tool	M81969/14-11	104KA, 204KA	EN3155-016M2018

## 2.D MATERIAL TO BE RETURNED

None.

## 3 ACCOMPLISHMENT INSTRUCTIONS

### 3.A GENERAL

Obey the “General recommendations for working on helicopter” (AMM 03-10-02, 2-1).

### 3.B WORK STEPS

#### 3.B.1 Procedure

1. Replacement of the engine switches (1, Fig. 1):

**NOTE** The wires and sealing plugs disconnected from the existing engine switches must be installed in the improved engine switches at the contacts with the same identification.

- a. Remove and discard the existing engine switches (1) 104KA and 204KA from the switch unit 20VE (2) (AMM 31-11-20, 4-3). Respect the MTC 20-80-20-101 during the disconnection of the concerned wires.



#### **CAUTION**

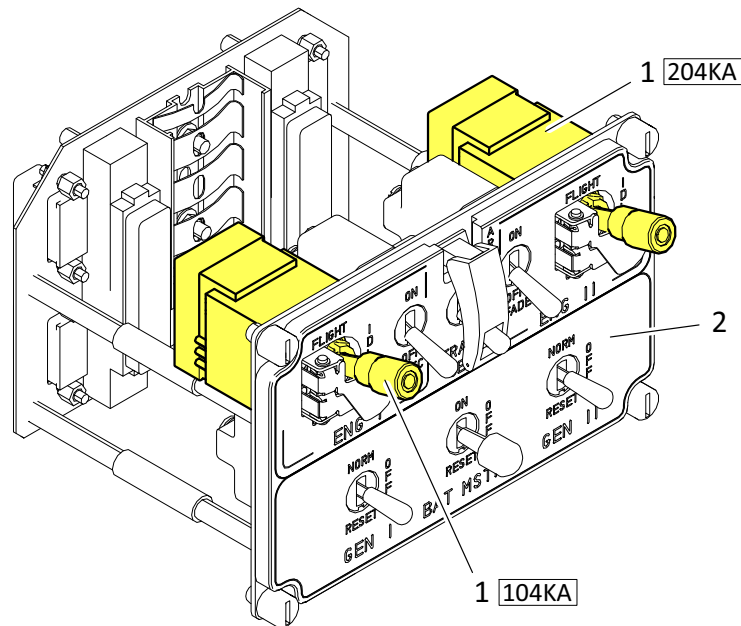
**WHEN INSTALLING THE WIRES ON THE ENGINE SWITCHES, MAKE SURE TO INSTALL THEM WITHOUT TENSION ON THE WIRES (MTC 20-80-20-441 AND MTC 20-80-20-603).**

**MAKE SURE THAT THE CONTACTS ARE PROPERLY INSERTED ON THE ENGINE SWITCHES (MTC 20-80-20-101).**

**NOTE** Fig. 1 and Fig. 2 show the replacement of the engine switches (1) for helicopters with standard switch unit 20VE (2). The replacement for helicopters with switch unit 20VE (2) with an additional row is identical (See IPC 31-11-80-01).

**NOTE** Although AMM 31-11-20, 4-3 describes the installation of the switch unit 20VE (6), it must not be installed until step 3.B.1.3.

- b. Install the improved engine switches (1) 104KA and 204KA on the switch unit 20VE (2) (AMM 31-11-20, 4-3). Respect the MTC 20-80-20-101 during the connection of the concerned wires.



**Pre SB**  
SWITCH PIN ASSIGNMENT

A	C	E	G
○ 1	○ 1	○ 1	○ 1
○ 3	○ 3	○ 3	○ 3
○ 2	○ 2	○ 2	○ 2
2	2	2	2
3	3	3	3
1	1	1	1
B	D	F	H

**Post SB**  
SWITCH PIN ASSIGNMENT

3	○	○	○	○
2	○	○	○	○
1	○	○	○	○
A	C	E	G	
B	D	F	H	
1	○	○	○	○
2	○	○	○	○
3	○	○	○	○

1 Engine switch

ECS7064Q8Y <sup>1</sup>

<sup>1</sup> Post SB.

945UN01Q4AA8B <sup>2</sup>


<sup>2</sup> Pre SB.

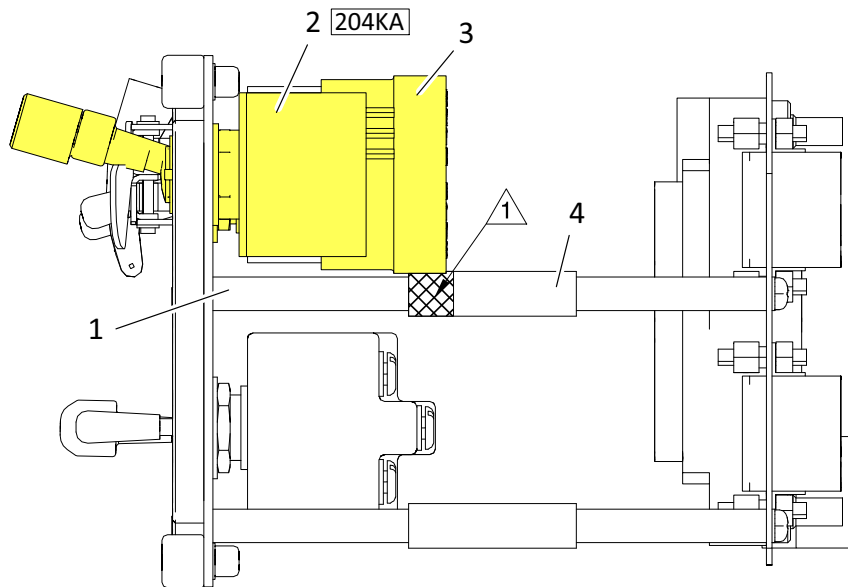
2 Switch unit 20VE

Replacement of the engine switches  
Figure 1


- c. Make sure that the heat-shrinkable sleeves (4, Fig. 2) on the LH and RH struts (1) do not come into contact with the silicone sealing (3) of the improved engine switches (2) 104KA and 204KA.



- d. If one or both of the heat-shrinkable sleeves (4, Fig. 2) do contact the silicone sealing (3) of either improved engine switch (2), shorten the affected heat-shrinkable sleeve (4, ) in such a way that the silicone sealing (3) of the improved engine switch (2) does not touch the heat-shrinkable sleeve (4) any longer.



- 1 Strut
- 2 Engine switch ECS7064Q8Y
- 3 Silicone sealing
- 4 Heat-shrinkable sleeve

-  Remove the heat-shrinkable sleeve (4) if it touches the silicone sealing (3) of the engine switch (2).

Replacement of the engine switches  
(only RH side shown, LH side is identical)  
Figure 2

2. Reidentification of the switch unit 20VE (2, Fig. 1):
  - a. Use a water-resistant pen and cross out the last digit of the old P/N of the switch unit 20VE (2) in such a way, that it is still legible.
  - b. Use a water-resistant pen and add the new last digit after the crossed out digit of the switch unit 20VE (2), refer to Section 3.C.
  - c. Protect the inscription with paint (CM 421). Let the paint dry, refer to the manufacturer instructions.
3. Install the switch unit 20VE (AMM 31-11-20, 4-1).

### 3.B.2 Tests

Do a functional test of the switch unit 20VE (AMM 31-11-20, 5-1).

### 3.C COMPLIANCE CONFIRMATION

#### Compliance with this document:

Record full compliance with this SB, with the revision number, in the helicopter documents.

Record full compliance with this SB, with the revision number, in the log card of the equipment.

Please confirm compliance with this SB (see IN 3447-I-00 for details):

QR-Code or hypertext link



[SB EC135-31-091](#)

#### NOTE

*The recording of compliance with SB in the R-TeX tool does not replace the recording in the helicopter documents*

#### Identification of modifications on equipment or parts:

Keyword	Old P/N	New P/N	MOD	Marking Type
Switch unit 20VE	L311M1009150	L311M10091501	-	Water-resistant pen
Switch unit 20VE	L311M1009155	L311M10091556	-	Water-resistant pen
Switch unit 20VE	L311M1009160	L311M10091601	-	Water-resistant pen
Switch unit 20VE	L311M1034150	L311M10341501	-	Water-resistant pen
Switch unit 20VE	L311M1034155	L311M10341556	-	Water-resistant pen
Switch unit 20VE	L311M1075150	L311M10751501	-	Water-resistant pen
Switch unit 20VE	L311M1075155	L311M10751556	-	Water-resistant pen
Switch unit 20VE	L311M1075107	L311M107510760	-	Water-resistant pen
Switch unit 20VE	L311M1085150	L311M10851501	-	Water-resistant pen
Switch unit 20VE	L311M1085155	L311M10851556	-	Water-resistant pen
Switch unit 20VE	L311M1085160	L311M10851601	-	Water-resistant pen

Keyword	Old P/N	New P/N	MOD	Marking Type
Switch unit 20VE	L311M1085165	L311M10851656	-	Water-resistant pen
Switch unit 20VE	L311M1085170	L311M10851701	-	Water-resistant pen
Switch unit 20VE	L311M1085175	L311M10851756	-	Water-resistant pen
Switch unit 20VE	L311M1085180	L311M10851801	-	Water-resistant pen
Switch unit 20VE	L311M1085185	L311M10851856	-	Water-resistant pen
Switch unit 20VE	L311M1085190	L311M10851901	-	Water-resistant pen

### 3.D OPERATING AND MAINTENANCE INSTRUCTIONS

None.

### 4 APPENDIX

None.