



Installation Instruction
Bombardier Dash 8
Q300 & 400
Cabin Lights

Table of Contents


PART 0	MANUAL ADMINISTRATION	3
0.1	DOCUMENT APPROVAL	3
0.2	AMENDMENT RECORD PROCEDURE	4
0.3	EFFECTED PAGES PROCEDURE	4
PART 1	INSTALLATION INSTRUCTION	5
1.1	GENERAL	5
1.2	CONTINUED AIRWORTHINESS	5
1.3	DESCRIPTION	5
1.4	CABIN CEILING LIGHTS INSTALLATION RH	7
1.5	CABIN SIDEWALL LIGHTS INSTALLATION RH	10
1.6	CABIN CEILING LIGHTS INSTALLATION LH	12
1.7	CABIN SIDEWALL LIGHTS INSTALLATION LH	15
1.8	BALLAST UNIT REPLACEMENT	17
PART 2	COMPLIANCE DEMONSTRATION	19

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 Bombardier Dash 8 Q300 & Q400 series.

Compiled by: 
_____ 15. – Nov. - 2017
Peter Nezval
Engineer, Aveo Engineering Group, s.r.o.

Approved by: _____ 15. – Nov. - 2017
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

ALL raises of issue will be given a sequential Alphabetic Issue Ident sequentially from 01 to 99 in Table 01 - **Issue No:** Column– Initial Issue of Document will be **"01"**

ALL Issues of this document will be approved by Head of DO

Issue No.	Details	Date	Effected Pages
01	Initial Issue		ALL

Table 01: Document Amendment Record Table

0.3 Effected Pages Procedure

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

The reason(s) for ALL raise of issue and description of change due to raise of issue will be provided for ALL raises of issue in Table 01 - *Details* Column.

Changes from the previous issue are highlighted by **YELLOW HIGHLIGHTING** over new content. AND **YELLOW HIGHLIGHTING** AND CROSSING OUT of deleted content.

Example (~~CROSSING OUT~~)

Part 1 Installation Instruction

1.1 General

This installation is to be performed in accordance to the Aircraft Maintenance Manual AMM.

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

- None

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

- AVE-MOD-015-DL, issue 01

The following appliances carry an ETSO authorization:

- None

The change is to be performed using the document AVE-MOD-015-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 Description

This modification is the replacement of the fluorescents lights of the cabin side wall and the ceiling, both installed in the overhead bins.

The lights are direct replacements and do not require any structural change on the A/C side. The modification requires the removal of the ballast units which are replaced by a bracket / connector assembly. With that no wire change and no change to the structure is necessary.

The number of total units is depending on the aircraft type (Q300 or Q400). Start at one end of the cabin and first replace the ballast units by the ballast unit replacements. Then replace the light assemblies as described below. Each original light unit is connected at two with two wires each. The new light assembly has two wires at on end. Both of the open splices can be used to splice the new unit. The other splice is to be caped and stowed. The wires of the splice have one color (both grey or both white). As the ballast unit replacement is installed, one of the wires is connected to ground and to be marked with a black tape. The other wire is open and to be marked with red tape as this one will carry 28V DC.

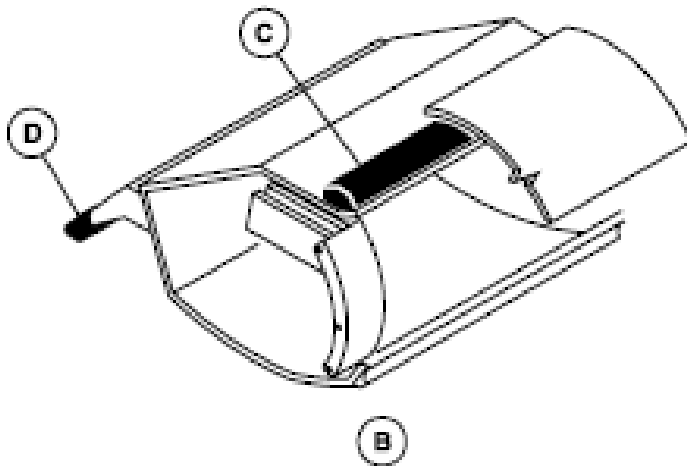
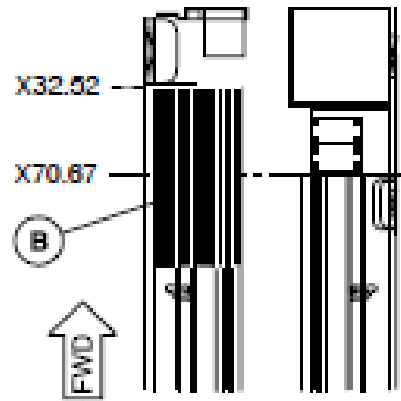
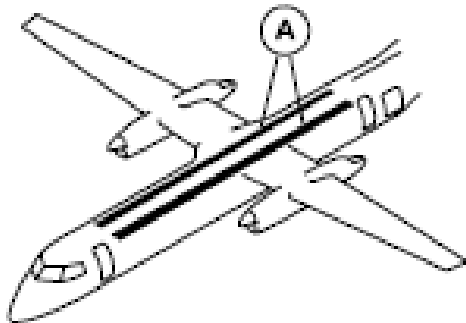
The plastic lenses which have been removed according to AMM can be reinstalled as

Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions

AVE-MOD-015-INS

Issue 01

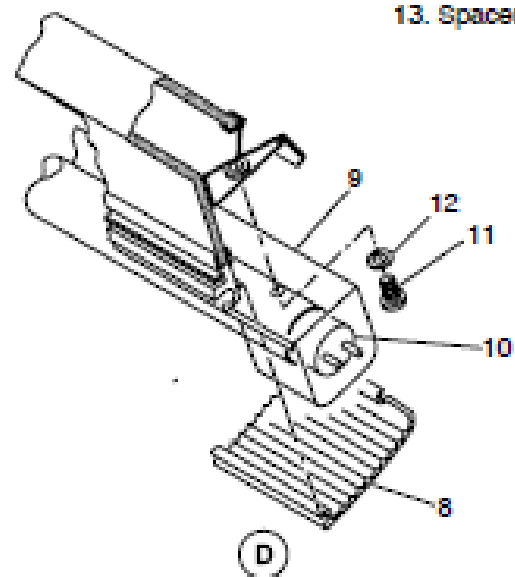
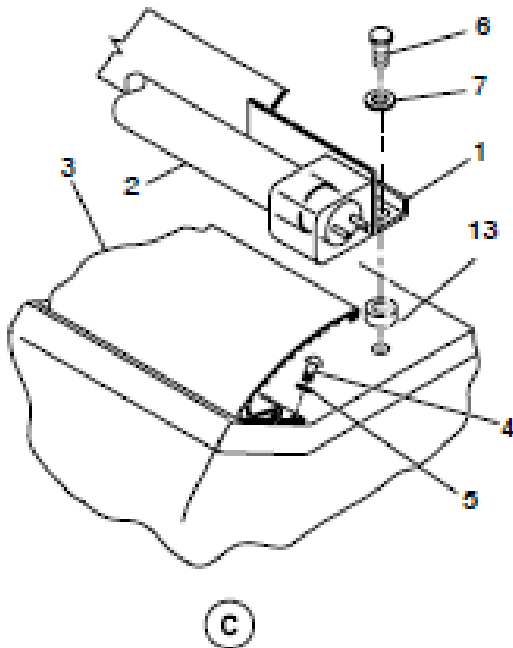
per AMM but due to the light unit neither being hot, breakable nor connected to high voltage the lenses are not required anymore. So with this modification the lenses may be removed if not required for optical reasons.



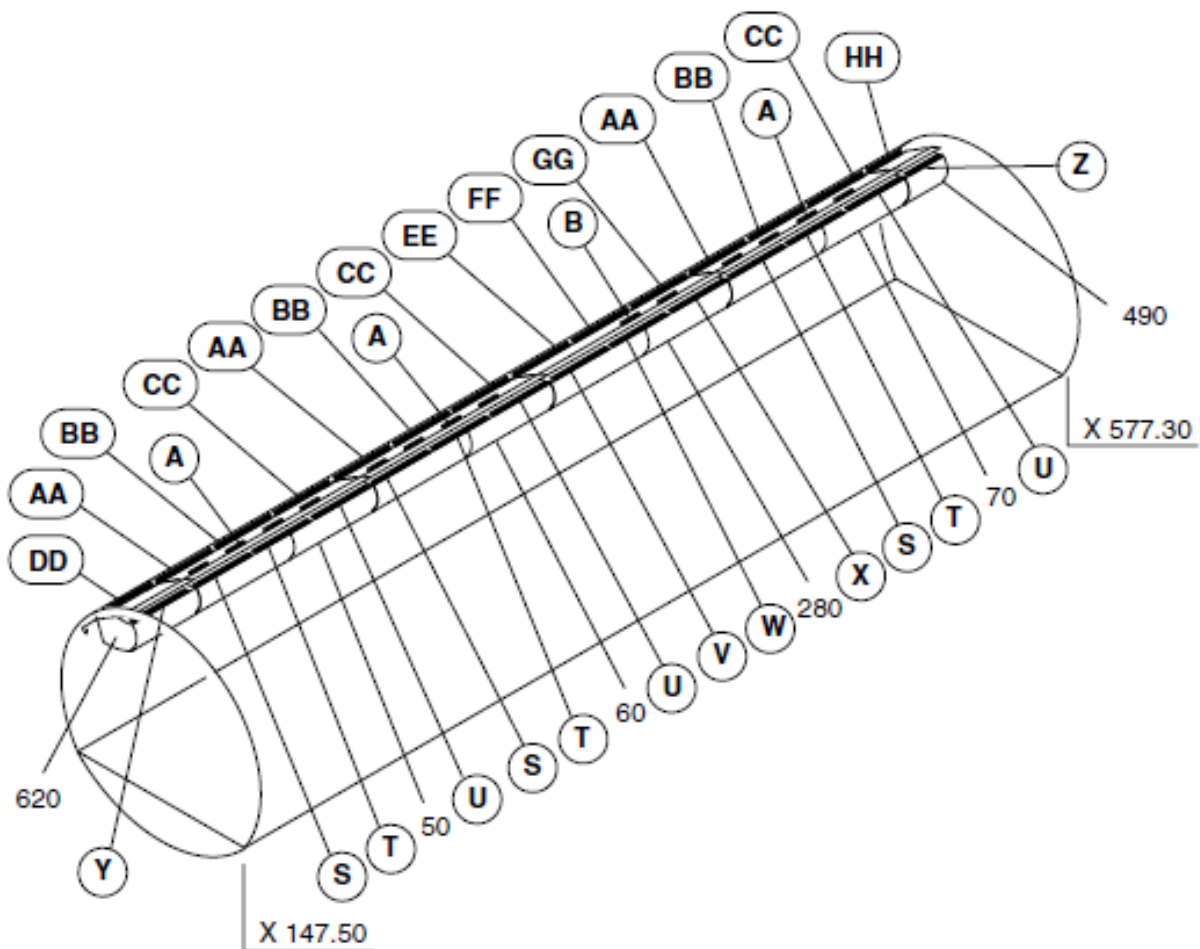
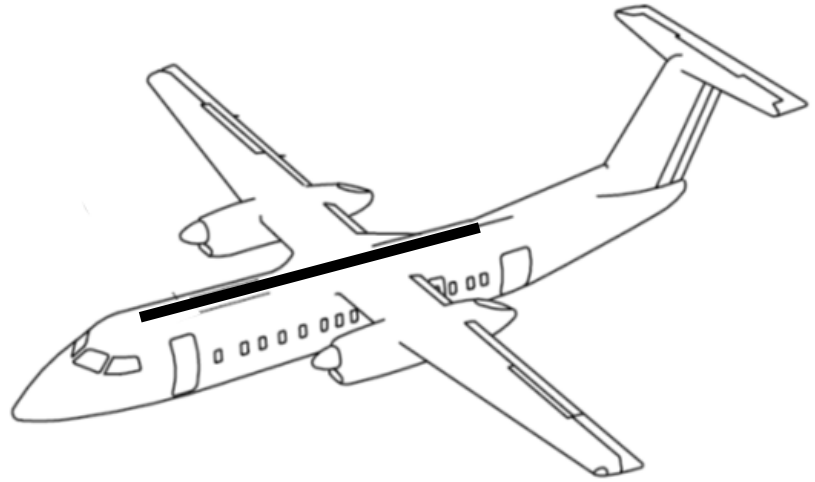
(A)

LEGEND

1. Lamp carrier.
2. Light tube.
3. Lens.
4. Screw.
5. Washer.
6. Screw.
7. Washer.
8. Lens.
9. Lamp carrier.
10. Light tube.
11. Screw.
12. Washer.
13. Spacer.

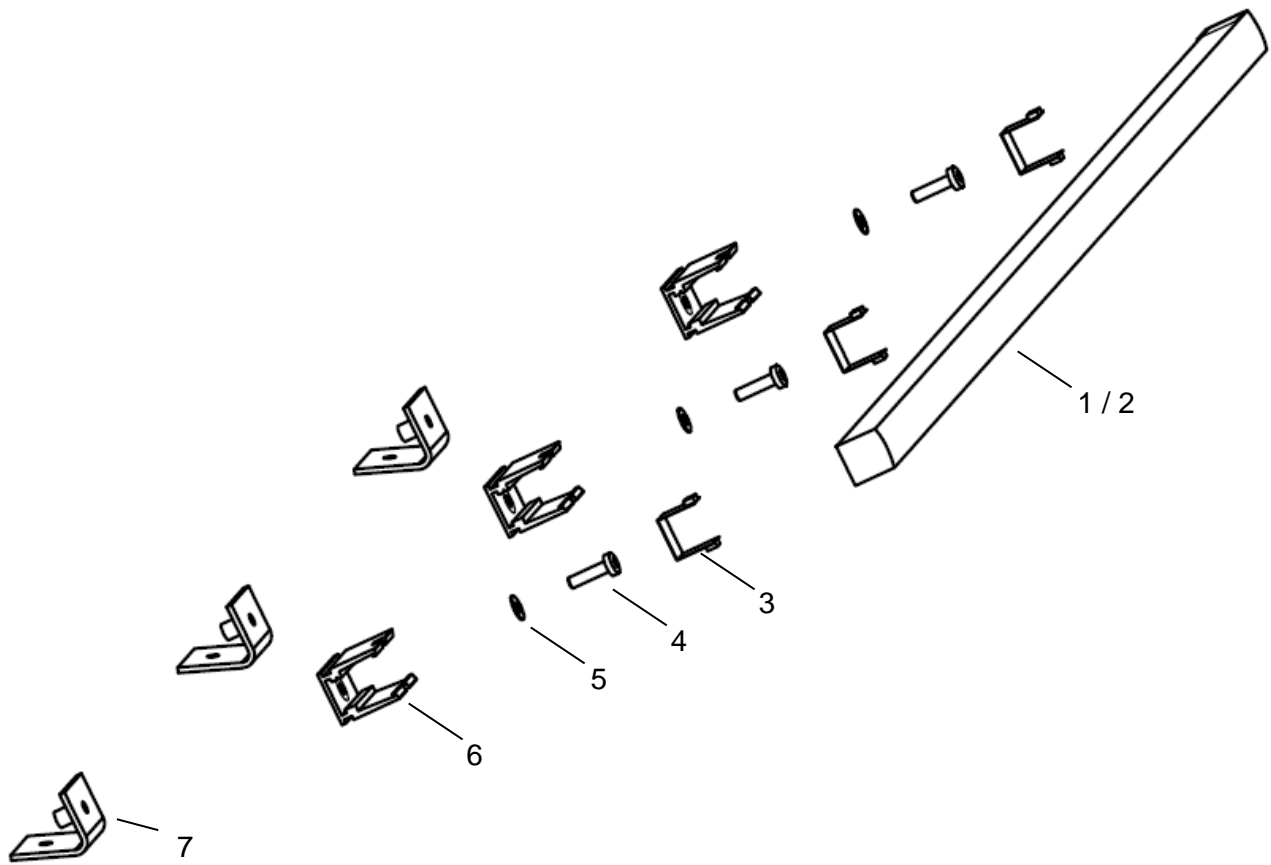
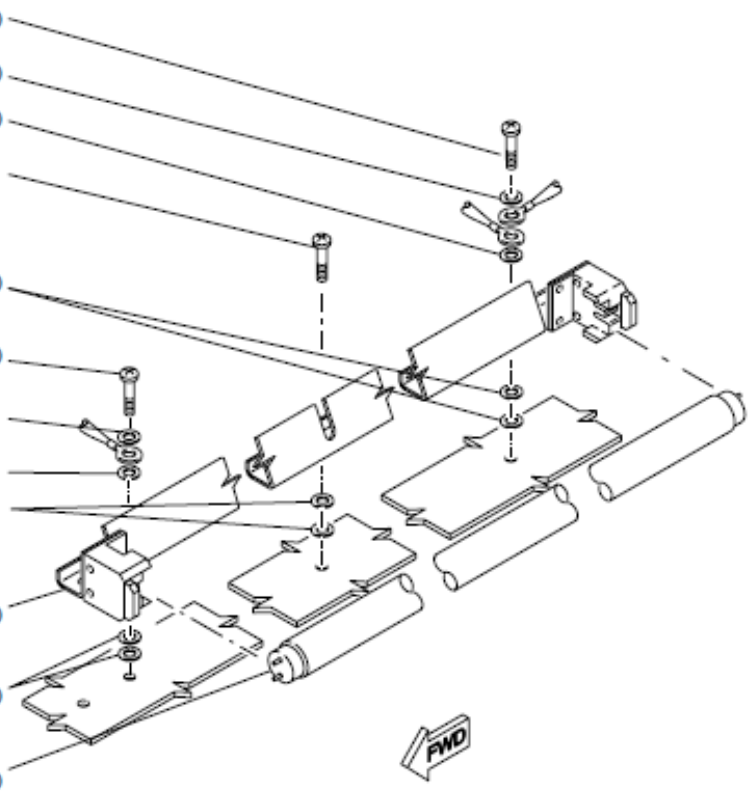


1.4 Cabin Ceiling Lights Installation RH



(S) (T) (U) (V) (W) (X) (Y) (Z)

- 170 180 160 380 390 370 660 530
- 190 190 400 400 670 540
- 200 200 410 410 680 550
- 160 160 160 370 370 370 650
- 200 200 200 410 410 410 680 550
- 160 170 170 370 380 380 650 520
- 190 190 400 400
- 200 200 410 410
- 200 200 200 410 410 410 680
- 150 150 150 360 360 360 640 510
- 200 200 200 410 410 410 680 550
- 80 80 80 290 290 290 630 500



Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions
AVE-MOD-015-INS
Issue 01

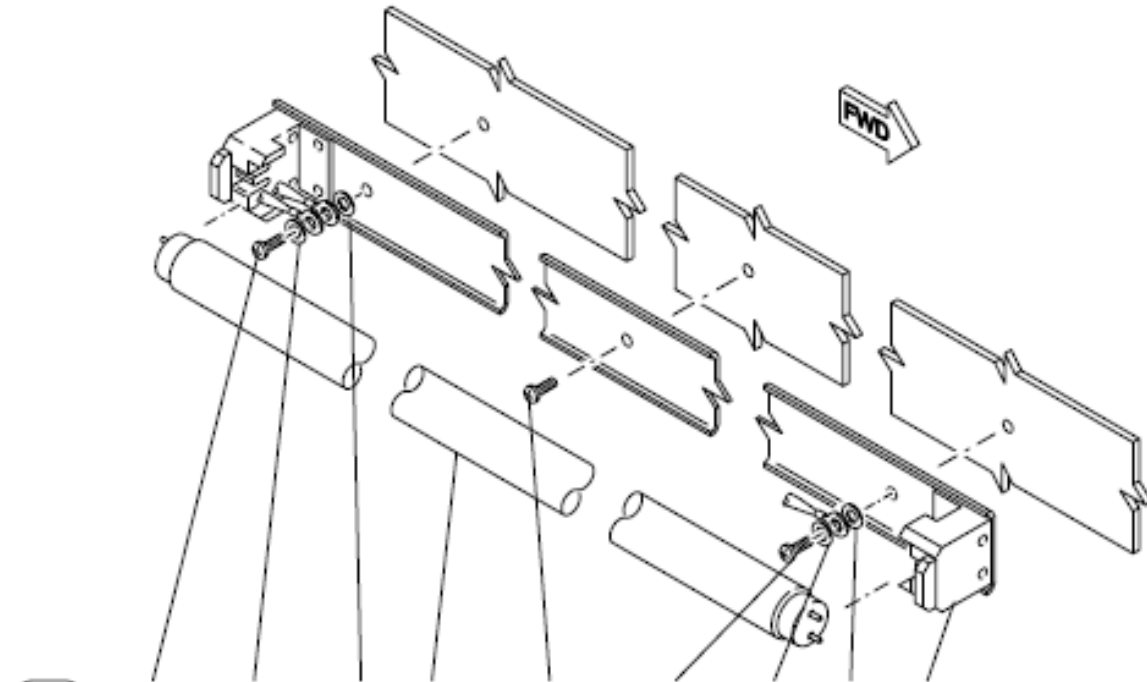
Figure and Index Number	Part Number	Description	Parts Avail.	QTY. Per assy.
1	AVE-L020106400-A00	LightMoods F22 L766		1
2	AVE-L020106401-A00	LightMoods F22 L310		1
3	AVS-P000106402-A00	Clip		3
4	MS35206-246	Screw		3
5	AN960-8	Washer		3
6	AVS-P000106403-A00	Clamp Profile 35 mm		3
7	AVS-P000106405-A60	Angle assembly 35 mm		3

	Original parts			
80	6510794	Lamp Tube (replaced by item 1)		
150	4048-10	Carrier Lamp (replaced 3x by item 7)		
160	MS35206-241	Screw		
170	MS35206-242	Screw		
180	MS35206-244	Screw		
190	AN960-8	Washer		
200	AN960D8	Washer		
290	6510794	Lamp Tube (replaced by item 1)		
360	4048-10	Carrier Lamp (replaced 3x by item 7)		
370	MS35206-241	Screw		
380	MS35206-242	Screw		
390	MS35206-244	Screw		
410	AN960D8	Washer		
500	6510795	Lamp Tube (replaced by item 2)		
510	H82520619-003	Carrier Lamp (replaced 3x by item 7)		
530	MS35206-242	Screw		
550	AN960D8	Washer		
630	6510794	Lamp Tube (replaced by item 1)		
640	4048-10	Carrier Lamp (replaced 3x by item 7)		
660	MS35206-242	Screw		
680	AN960D8	Washer		

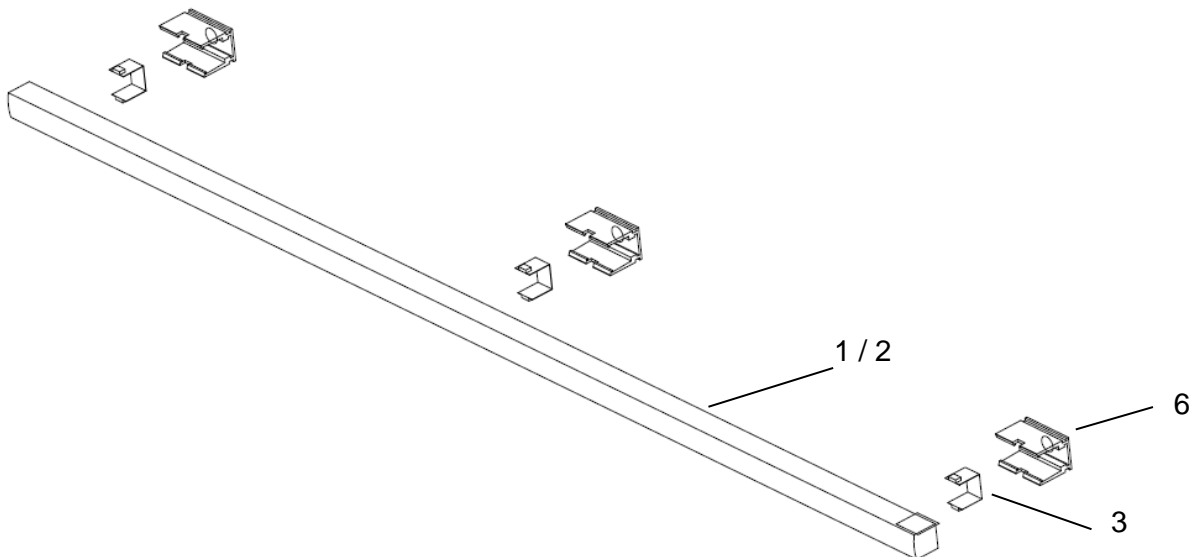
NOTES

1. Remove lamp carrier, items 150, 360, 640 and 510 as per AMM.
2. Disconnect the wire at the splice location.
3. Install angle assembly, item 7, 3x in the location of the 3 attachment positions originally used to attach the lamp carrier.
4. Install items 4, 5 and 6 as described.
5. Verify polarity of the nearest splice and mark wires with tape (red Vcc, black GND)
6. Cap and stow unused splice.
7. Splice the new light's wires into the marked splice as per marked polarity
8. Install item 1 or 2 (depending of the location) by pushing the clip, item 3, over the LightMoods module at the intended location and then feed it into the installed attachment holder. Do one clip after the next from one side to the other.

1.5 Cabin Sidewall Lights Installation RH



AA	220	240	250	80	230	230			210
BB	220	240	250	80	230	220	240	250	210
CC	230			80	230	220	240	250	210
DD	700	720	730	630	710	710			690
EE	430	450	460	290	440	440			420
FF	430	450	460	290	440	430	450	460	420
GG	440			290	440	430	450	460	420
HH	570	590	600	500		580			560



Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions
AVE-MOD-015-INS
Issue 01

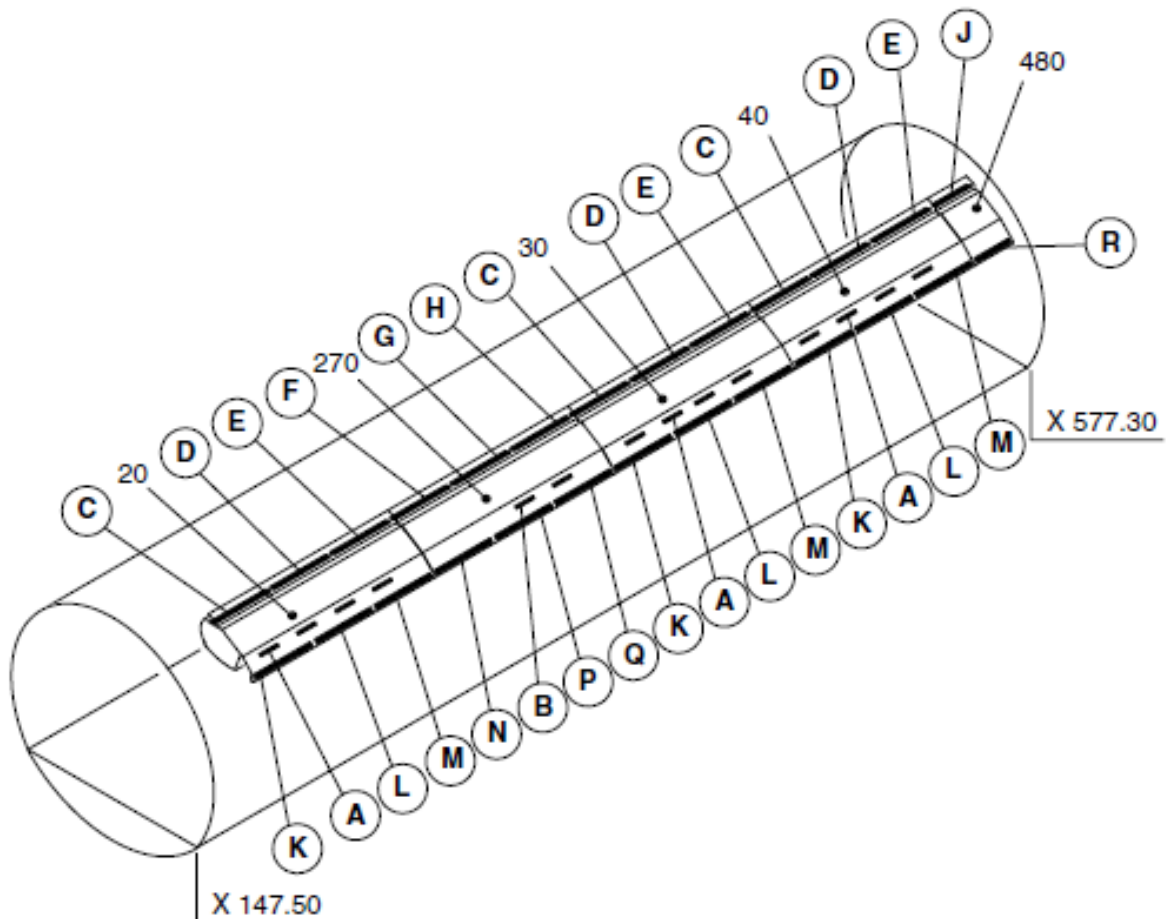
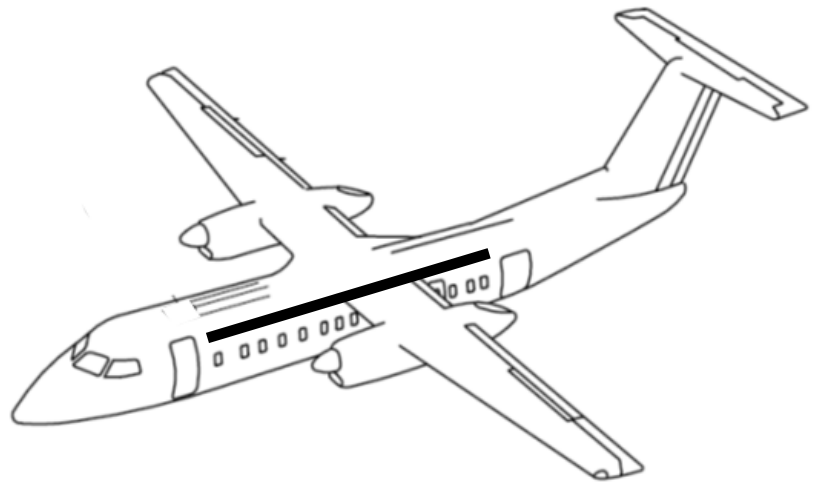
Figure and Index Number	Part Number	Description	Parts Avail.	QTY. Per assy.
1	AVE-L020106400-A00	LightMoods F22 L766		1
2	AVE-L020106401-A00	LightMoods F22 L310		1
3	AVS-P000106402-A00	Clip		3
6	AVS-P000106403-A00	Clamp Profile 35 mm		3

	Original parts			
80	6510794	Lamp Tube (replaced by item 1)		
210	4048-10	Carrier Lamp (replaced 3x by item 7)		
220	MS35206-241	Screw		
230	MS35206-239	Screw		
240	AN960-8	Washer		
250	AN960D8	Washer		
290	6510794	Lamp Tube (replaced by item 1)		
420	4048-10	Carrier Lamp (replaced 3x by item 7)		
430	MS35206-241	Screw		
440	MS35206-239	Screw		
450	AN960-8	Washer		
460	AN960D8	Washer		
500	6510795	Lamp Tube (replaced by item 2)		
560	H82520619-003	Carrier Lamp (replaced 3x by item 7)		
570	MS35206-241	Screw		
580	MS35206-239	Screw		
590	AN960-8	Washer		
550	AN960D8	Washer		
630	6510794	Lamp Tube (replaced by item 1)		
690	4048-10	Carrier Lamp (replaced 3x by item 7)		
700	MS35206-241	Screw		
710	MS35206-239	Screw		
720	AN960-8	Washer		
730	AN960D8	Washer		

NOTES

1. Remove lamp carrier, items 201, 420, 560 and 690 as per AMM.
2. Disconnect the wire at the splice location.
3. Install clamp profile, item 6, 3x in the location of the 3 attachment positions originally used to attach the lamp carrier.
4. Verify polarity of the nearest splice and mark wires with tape (red Vcc, black GND)
5. Cap and stow unused splice.
6. Splice the new light's wires into the marked splice as per marked polarity
7. Install item 1 or 2 (depending of the location) by pushing the clip, item 3, over the LightMoods module at the intended location and then feed it into the installed attachment holder. Do one clip after the next from one side to the other.

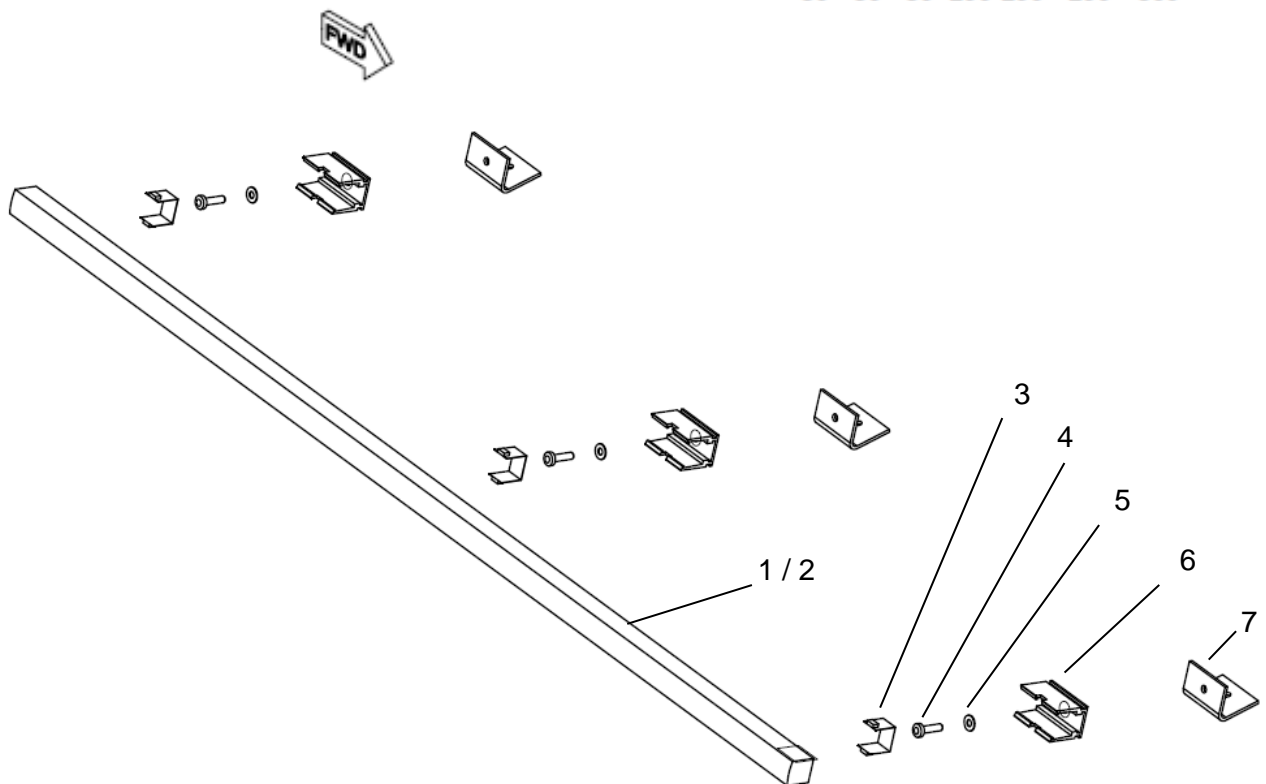
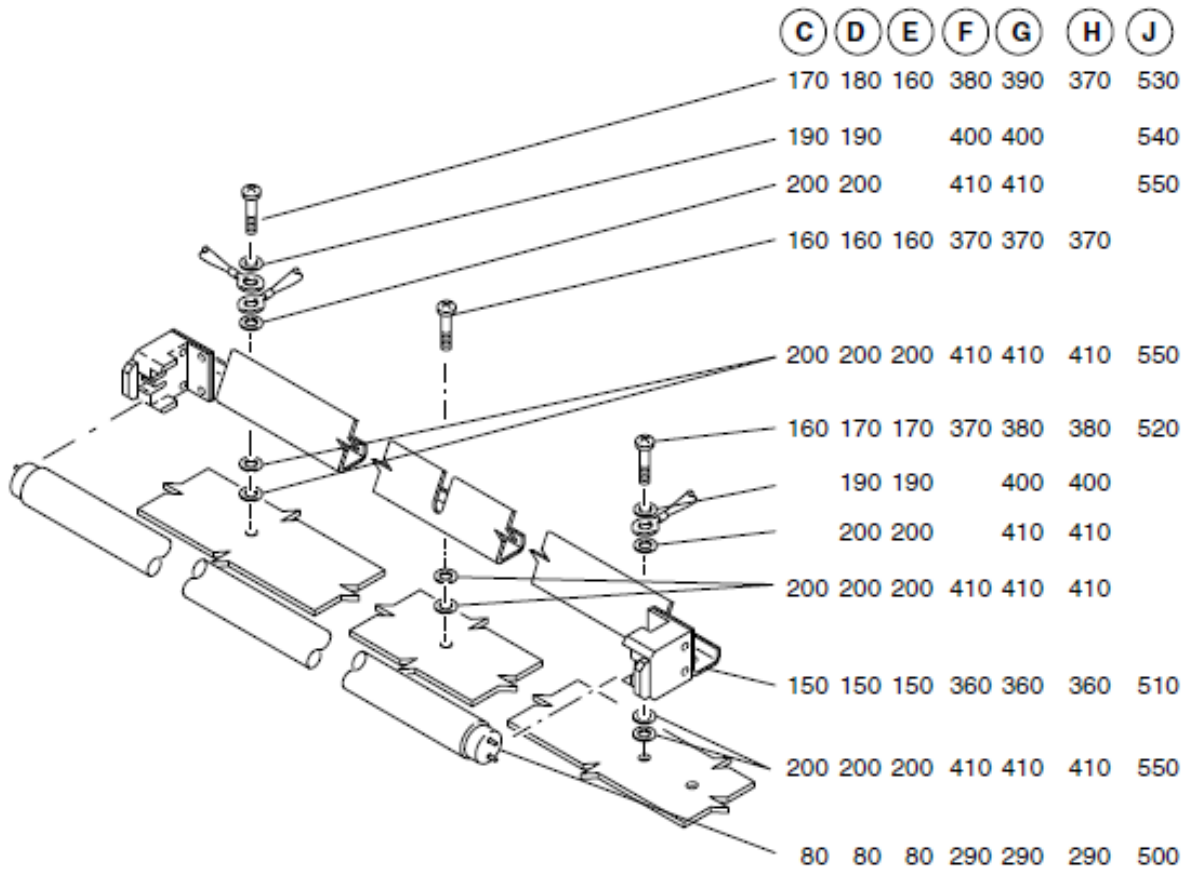
1.6 Cabin Ceiling Lights Installation LH



Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions

AVE-MOD-015-INS

Issue 01



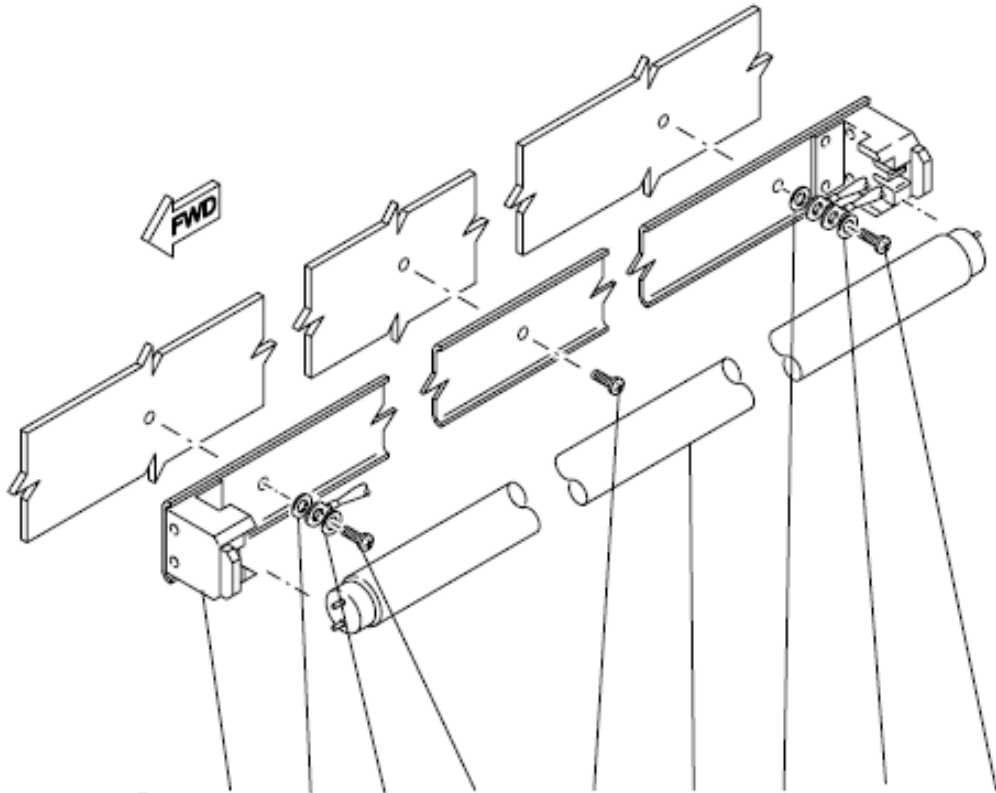
Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions
AVE-MOD-015-INS
Issue 01

Figure and Index Number	Part Number	Description	Parts Avail.	QTY. Per assy.
1	AVE-L020106400-A00	LightMoods F22 L766		1
2	AVE-L020106401-A00	LightMoods F22 L310		1
3	AVS-P000106402-A00	Clip		3
4	MS35206-246	Screw		3
5	AN960-8	Washer		3
6	AVS-P000106403-A00	Clamp Profile 35 mm		3
7	AVS-P000106405-A00	Angle assembly 35 mm		3
-----	-----	-----	-----	-----
	Original parts			
80	6510794	Lamp Tube (replaced by item 1)		
150	4048-10	Carrier Lamp (replaced 3x by item 7)		
160	MS35206-241	Screw		
170	MS35206-242	Screw		
180	MS35206-244	Screw		
190	AN960-8	Washer		
200	AN960D8	Washer		
290	6510794	Lamp Tube (replaced by item 1)		
360	4048-10	Carrier Lamp (replaced 3x by item 7)		
370	MS35206-241	Screw		
380	MS35206-242	Screw		
390	MS35206-244	Screw		
410	AN960D8	Washer		
500	6510795	Lamp Tube (replaced by item 2)		
510	H82520619-003	Carrier Lamp (replaced 3x by item 7)		
530	MS35206-242	Screw		
550	AN960D8	Washer		
630	6510794	Lamp Tube (replaced by item 1)		
640	4048-10	Carrier Lamp (replaced 3x by item 7)		
660	MS35206-242	Screw		
680	AN960D8	Washer		

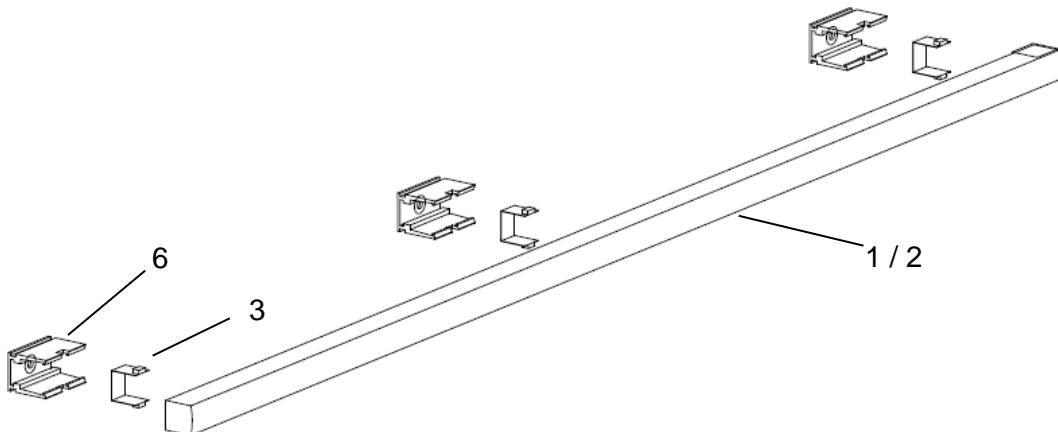
NOTES

1. Remove lamp carrier, items 150, 360, 640 and 510 as per AMM.
2. Disconnect the wire at the splice location.
3. Install angle assembly, item 7, 3x in the location of the 3 attachment positions originally used to attach the lamp carrier.
4. Install items 4, 5 and 6 as described.
5. Verify polarity of the nearest splice and mark wires with tape (red Vcc, black GND)
6. Cap and stow unused splice.
7. Splice the new light's wires into the marked splice as per marked polarity
8. Install item 1 or 2 (depending of the location) by pushing the clip, item 3, over the LightMoods module at the intended location and then feed it into the installed attachment holder. Do one clip after the next from one side to the other.

1.7 Cabin Sidewall Lights Installation LH



(K)	210			230	230	80	250	240	220
(L)	210	250	240	220	230	80	250	240	220
(M)	210	250	240	220	230	80			230
(N)	420			440	440	290	460	450	430
(P)	420	460	450	430	440	290	460	450	430
(Q)	420	460	450	430	440	290			440
(R)	560			580		500	600	590	570



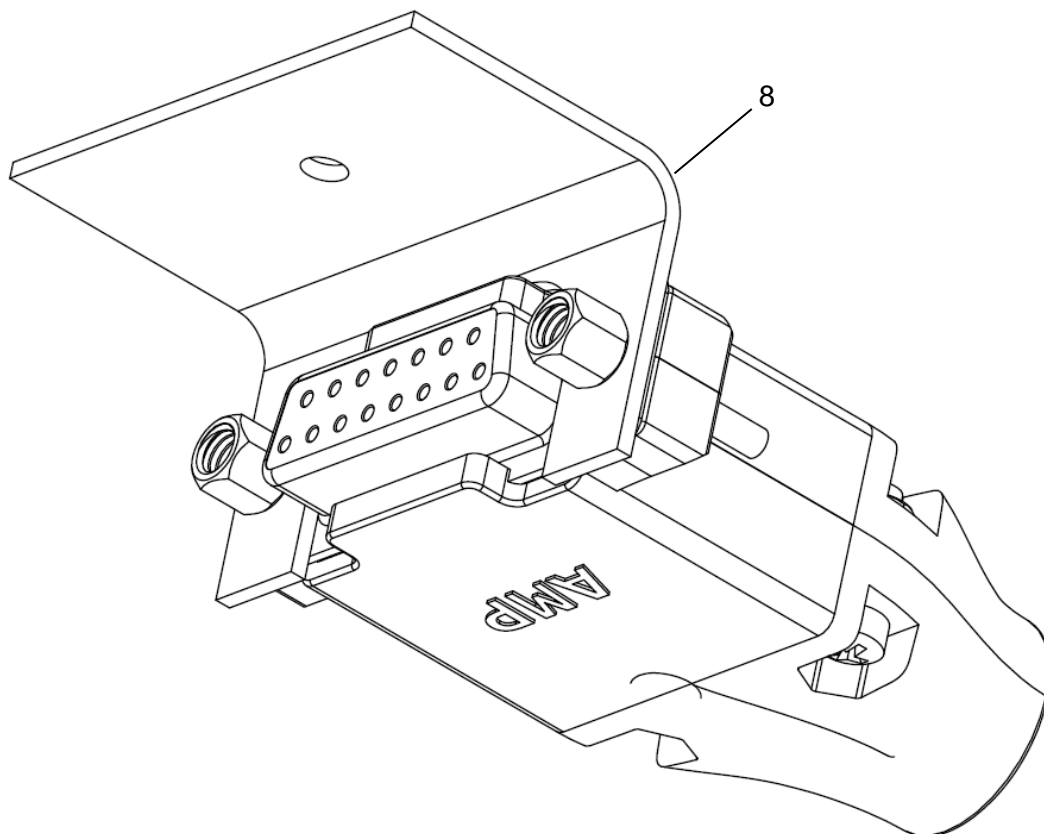
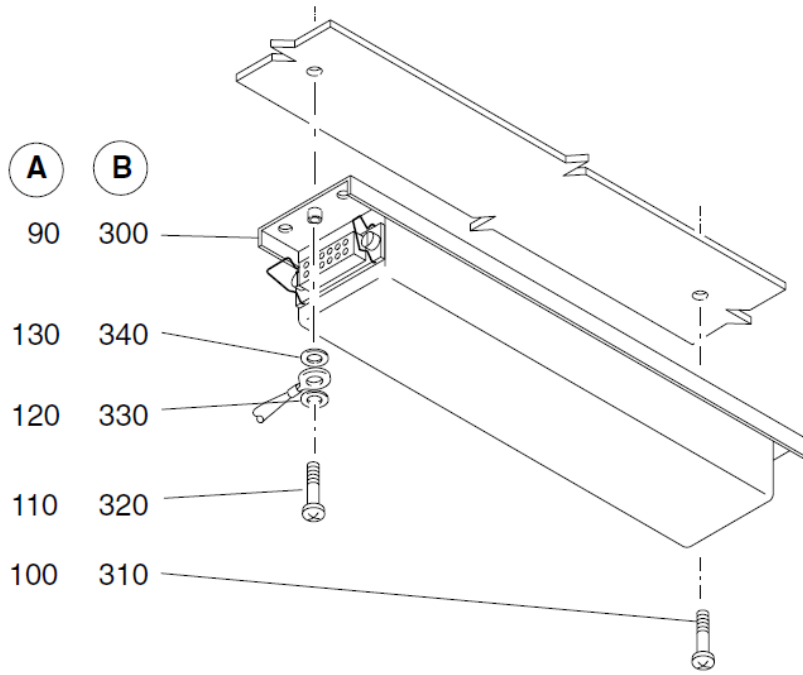
Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions
AVE-MOD-015-INS
Issue 01

Figure and Index Number	Part Number	Description	Parts Avail.	QTY. Per assy.
1	AVE-L020106400-A00	LightMoods F22 L766		1
2	AVE-L020106401-A00	LightMoods F22 L310		1
3	AVS-P000106402-A00	Clip		3
6	AVS-P000106403-A00	Clamp Profile 35 mm		3
-----	-----	-----	-----	-----
	Original parts			
80	6510794	Lamp Tube (replaced by item 1)		
210	4048-10	Carrier Lamp (replaced 3x by item 7)		
220	MS35206-241	Screw		
230	MS35206-239	Screw		
240	AN960-8	Washer		
250	AN960D8	Washer		
290	6510794	Lamp Tube (replaced by item 1)		
420	4048-10	Carrier Lamp (replaced 3x by item 7)		
430	MS35206-241	Screw		
440	MS35206-239	Screw		
450	AN960-8	Washer		
460	AN960D8	Washer		
500	6510795	Lamp Tube (replaced by item 2)		
560	H82520619-003	Carrier Lamp (replaced 3x by item 7)		
570	MS35206-241	Screw		
580	MS35206-239	Screw		
590	AN960-8	Washer		
600	AN960D8	Washer		
630	6510794	Lamp Tube (replaced by item 1)		
690	4048-10	Carrier Lamp (replaced 3x by item 7)		
700	MS35206-241	Screw		
710	MS35206-239	Screw		
720	AN960-8	Washer		
730	AN960D8	Washer		

NOTES

1. Remove lamp carrier, items 201, 420, 560 and 690 as per AMM.
2. Disconnect the wire at the splice location.
3. Install clamp profile, item 6, 3x in the location of the 3 attachment positions originally used to attach the lamp carrier.
4. Verify polarity of the nearest splice and mark wires with tape (red Vcc, black GND)
5. Cap and stow unused splice.
6. Splice the new light's wires into the marked splice as per marked polarity
7. Install item 1 or 2 (depending of the location) by pushing the clip, item 3, over the LightMoods module at the intended location and then feed it into the installed attachment holder. Do one clip after the next from one side to the other.

1.8 Ballast Unit Replacement



Bombardier Dash 8 Q300 & 400 Cabin Lights Installation Instructions
AVE-MOD-015-INS
Issue 01

Figure and Index Number	Part Number	Description	Parts Avail.	QTY. Per assy.
8	AVE-P000106407-A00	Ballast Unit replacement		AR
-----	-----	-----	-----	-----
	Original parts			
90	3367-10	Ballast (VD1347)(replaced by item 8) 4x		
100	MS35206-226	Screw (to be removed)		
110	MS35206-224	Screw		
120	AN960-6	Washer		
130	AN960-6D	Washer		
300	3367-10	Ballast (VD1347)(replaced by item 8) 2x		
310	MS35206-226	Screw (to be removed)		
320	MS35206-224	Screw		
330	AN960-6	Washer		
340	AN960-6D	Washer		
NOTES				
<ol style="list-style-type: none"> 1. Remove Ballast Units, items 90 and 300 as per AMM. 2. Install ballast unit replacement, item 8, using screw item 110 or 320 as appropriate with original hardware. Screws items 100 and 310 are removed from aircraft. 3. Connect aircraft wiring as per AMM. 				

Part 2 Compliance demonstration

This document is in relation to the certification program AVE-MOD-007-PFC.
The compliance is demonstrated for the following certification specification:

Requirements	MoC	Statement of Compliance
CS 25.609 Protection of structure	MoC 0	(a) All parts installed are verified to be suitable. (b) Not applicable
CS 25.1301 Function and installation	MoC 0	(a) In the document Equipment Qualification is demonstrated that the equipment is appropriate for the intended function. (b) The equipment is labeled with the voltage range applicable. (c) The equipment is installed within its limits. (d) The proper function is determined in an aircraft inspection as per MCS.