Service Bulletin No:	**35-008**	**Ref No:**	**233**
Modification No:	**EC-20-0537**	**ATA Chapter:**	**35**

OXYGEN - EMERGENCY OXYGEN SYSTEM
MODIFICATION TO THE EMERGENCY REGULATOR CONNECTOR TO INTRODUCE A NEW MAXIMUM PRESSURE RELIEF VALVE

1. Planning Information

A. Effectivity

MSN 101, MSN 103 thru MSN 313.

The following ejection seats, held as spare or in stock:

- Ejection seat, front - P/N 959.30.06.261 and 959.30.06.433
- Ejection seat, rear - P/N 959.30.06.262 and 959.30.06.434.

Emergency Regulator Connectors (ERC) (P/N 957.12.10.661) held as spare or in stock that are not installed on the ejection seats.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

The manufacturer has identified a design deficiency in the Max Pressure Relief Valve (MPRV) located in the OBOGS Panel Mounted Regulator (PMR) outlet. This can result in the inability to relieve excess pressure that the PMR can potentially deliver to the pilots oxygen mask.

(2) Solution

The Emergency Regulator Connector (ERC) is modified to introduce an additional MPRV so if the PMR malfunctions, leading to an overpressure situation, the MPRV on the ERC will open and relieve the excessive pressure to the cockpit.

PC-21 operators can either introduce SB 35-008 (Mandatory) to modify the ERC by embodiment of Mod Kit P/N 500.50.21.251 or by incorporating Pilatus SB 34-012 (Werterhalt program modification to introduce the OBOG system designed by Cobham). This latter option will affect the Swiss PC-21 fleet only.

D. Description

This Service Bulletin gives the data and instructions necessary to modify the Emergency Regulator Connector (ERC) to introduce an additional MPRV at the elbow of the connector installed on the LH side of the ejection seat.

The instructions given in this Service Bulletin provide the required instructions to bring the ERC into the Honeywell Service Bulletin 3526W-35-132 configuration.

Revision No. 1 is issued to introduce the provision to modify ERCs held as spare or in stock that are not installed on the ejection seats and correct the consumable material number for adhesive from P08-082 to P08-079.

No further work is required on aircraft that had this Service Bulletin accomplished in accordance with the initial revision.

E. Compliance

Mandatory.

Accomplishment required not later than two years after the effective date of this Service Bulletin.

F. Approval

The technical content of this Service Bulletin is approved under the authority of Letter of DOA Acceptance ref. FOCA.21J.002.

PILATUS advises Operators/Owners to check with their designated Airworthiness Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

G. Copyright Information

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H. Manpower

	Man-Hours On Aircraft	Man-Hours Spares/Stock
Preparation	0.50	-
Modification	2.00	2.00
Close Up	1.50	-
TOTAL MAN-HOURS	**4.00**	**2.00**

I. Weight and Balance

(1) Weight Change

Negligible.

(2) Moment Change

Negligible.

J. Electrical Load Data

Not applicable.

K. Software

Not applicable.

L. References

Aircraft Maintenance Manual (AMM): 00-50-00-00A-013A-A, 24-40-00-00A-331A-A, 24-40-00-00A-332A-A, 35-00-00-00A-012A-A, 35-00-00-00A-525A-A, 35-00-00-00A-344A-A, 35-10-03-02A-520A-A, 35-10-03-02A-720A-A, 95-00-00-00A-012A-A, 95-00-00-00A-525A-A.

Martin Baker MB 531 Flightline Maintenance Manual (FMM).

M. Publications Affected

Illustrated Parts Data (IPD): 21-B-95-10-00-010-941A-A, 21-B-95-10-00-020-941A-A, 21-C-95-10-00-01C-941A-A, 21-C-95-10-00-02C-941A-A, 21-D-95-10-00-01D-941A-A, 21-D-95-10-00-02D-941A-A, 21-E-95-10-00-01E-941A-A, 21-E-95-10-00-02E-941A-A, 21-F-95-10-00-01F-941A-A, 21-F-95-10-00-02F-941A-A, 21-G-95-10-00-01G-941A-A, 21-G-95-10-00-02G-941A-A, 21-H-95-10-00-01H-941A-A, 21-H-95-10-00-02H-941A-A, 21-J-95-10-00-01J-941A-A, 21-J-95-10-00-02J-941A-A, 21-K-95-10-00-01K-941A-A, 21-K-95-10-00-02K-941A-A.

N. Interchangeability of Parts

Not applicable.

2. Material Information

A. Material - Price and Availability

Modification kit 500.50.21.251 is necessary to do this Service Bulletin.

Operators who require further information should contact their Customer Liaison Manager at:

Pilatus Aircraft Ltd,
6371 Stans,
Switzerland.

Operators are requested to advise Pilatus Aircraft Ltd. of the Manufacturer's Serial Number (MSN), the flying hours and landings of aircraft which are allocated for this Service Bulletin using the Service Bulletin Evaluation Form.

B. Material Necessary for Each Aircraft

(1) Material to be Procured

Two emergency regulator connector modification kits, P/N 500.50.21.251, are necessary to do this Service Bulletin.

Pos. No.	Description	Old Part No.	Qty	Disp. Code	Fig. No.	Item No.
10	EMERGENCY REGULATOR CON, MOD KIT		1	N	-	-
Disposition Codes: D - Discard / N - New						

The kit has these Honeywell Aerospace parts:

New part No.	Description	Qty	Disp. code	Fig	Item
77302051-4001	Elbow Assembly	1	N	1	6
77302069-5001	Modification Label	1	N	1	9
77302071-5001	Laminate, Clear Matte	1	N	-	-
MS9386-018	Packing, Preformed	1	N	1	7
NAS1352C04-12	Screw, Cap, Socket Head	1	N	1	8

Disposition Codes: D - Discard / N - New

(2) Consumable Materials (Ref. AMM 00-50-00-00A-013A-A)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-035	SOLVENT (ALCOHOL)	A/R	Isopropanol, P/N 908.21.21.018
P02-041	LINT-FREE CLEANING CLOTH	A/R	P/N 904.49.73.008
P04-044	LUBRICANT	A/R	OT20, P/N 959.30.06.330
P06-004	LEAK DETECTOR SPRAY	A/R	ECO leak finder, P/N 907.12.11.005
P08-079	ADHESIVE	A/R	Loctite Grade 222, P/N 910.42.12.132
P08-097	SEALER	A/R	Paint, edge seal, 3950, 1K, transparent, P/N 910.04.04.354
-	PERMANENT INK PEN	1	Local supply
-	PAINT BRUSH	1	Local supply

C. Material Necessary for Each Spare

One emergency regulator connector modification kit, P/N 500.50.21.251, is necessary to do this Service Bulletin for each ERC.

Pos. No.	Description	Old Part No.	Qty	Disp. Code	Fig. No.	Item No.
10	EMERGENCY REGULATOR CON, MOD KIT		1	N	-	-
Disposition Codes: D - Discard / N - New						

The kit has these Honeywell Aerospace parts:

New part No.	Description	Qty	Disp. code	Fig	Item
77302051-4001	Elbow Assembly	1	N	1	6
77302069-5001	Modification Label	1	N	1	9
77302071-5001	Laminate, Clear Matte	1	N	-	-
MS9386-018	Packing, Preformed	1	N	1	7
NAS1352C04-12	Screw, Cap, Socket Head	1	N	1	8

Disposition Codes: D - Discard / N - New

D. Re-identified Parts

None.

E. Tooling - Cost and Availability

TOOL No.	**DESCRIPTION**	**QTY**	**REMARKS**
T00-066	TOOL KIT, MECHANIC	1	P/N 990.00.02.004
T35-001	TEST AIR ADAPTER	1	P/N 513.35.09.001
T35-003	TEST ORIFICE	1	P/N 513.35.21.020
-	TEST ORIFICE BLANK	2	P/N 513.35.21.028

3. Accomplishment Instructions (On Aircraft)

WARNING: READ AND OBEY THE SAFETY PRECAUTIONS AT THE START OF CHAPTER 95, CREW ESCAPE AND SAFETY, BEFORE YOU GO IN OR NEAR TO THE COCKPIT. IF THE EJECTION SEAT AND THE CANOPY FRACTURING SYSTEM (CFS) OPERATE ACCIDENTALLY OR INCORRECTLY THEY CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

WARNING: KEEP ALL HYDROCARBONS (FUELS, LUBRICANTS, ETC.) AWAY FROM ALL SOURCES OF OXYGEN. IF THE OXYGEN TOUCHES THE HYDROCARBONS AN EXPLOSION CAN OCCUR. AN EXPLOSION CAN CAUSE AN INJURY TO PERSONNEL AND CAN CAUSE DAMAGE TO THE EQUIPMENT.

WARNING: BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURERS' HEALTH AND SAFETY INSTRUCTIONS AND ALL THE APPLICABLE LOCAL INSTRUCTIONS. CONSUMABLE MATERIALS CAN BE DANGEROUS AND CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

NOTE: For the safety precautions for the ejection seat and the CFS, refer to AMM, 95-00-00-00A-012A-A.

NOTE: This Service Bulletin can be incorporated on aircraft or in an ejection seat maintenance bay.

A. Preparation

(1) Do the safety procedures for the crew escape and safety system, before you do work for the crew escape and safety system, refer to AMM 95-00-00-00A-012A-A.

(2) Do the safety procedures for the oxygen system, before you do work on the oxygen system, refer to AMM 35-00-00-00A-012A-A.

(3) Energize the aircraft electrical system, refer to AMM 24-40-00-00A-331A-A.

(4) Operate the seat lift/lower actuator switch to fully raise the front and rear ejection seats for access.

(5) De-energize the aircraft electrical system, refer to AMM 24-40-00-00A-332A-A.

(6) Remove the backrests from the front and rear ejection seats, refer to Martin Baker MB531 FMM, Section 3, Chapter 11.

B. Modification (Ref. Fig. 1)

(1) Do a check of the ERC assembly (4) part number.

(a) Find the identification plate on the ERC assembly (4) and do a check of the part number.

(b) If the part number for the ERC assembly (4) is visible on the identification plate, and is 3526W000-002, this Service Bulletin is not applicable.

(c) If a modification label (9) is present on the transfer pipe assembly (5) this Service Bulletin is not applicable.

(d) If the ERC assembly (4) part number '3526W000-001' is visible on the identification plate and there is no modification label on the transfer pipe assembly (5), this Service Bulletin is applicable.

(2) Remove the old oxygen inlet elbow (1).

(a) On aircraft and if installed, disconnect the oxygen hose from the oxygen inlet elbow (1), refer to AMM 35-10-03-02A-520A-A.

(b) Use the lint free cloth (Material No. P02-041) made moist with solvent (Material No. P01-035) and fully clean the area where the work is to be done.

(c) Let the solvent (Material No. P01-035) dry.

(d) Hold the oxygen inlet elbow (1) and remove and discard the screw (3) from the transfer pipe assembly (5).

(e) Remove the oxygen inlet elbow (1) with the O-ring (2) from the transfer pipe assembly (5).

(f) Discard the oxygen inlet elbow (1) and the O-ring (2).

(3) Install the new oxygen inlet elbow (6).

NOTE: The new parts used in the installation procedure are part of the emergency regulator connector, mod kit (POS. No. 10).

(a) Use the lint free cloth (Material No. P02-041) made moist with solvent (Material No. P01-035) to clean:

- The new oxygen inlet elbow (6)
- The transfer pipe assembly (5).

(b) Let the solvent (Material No. P01-035) dry.

(c) Apply a thin layer of the lubricant (Material No. P04-044) to the new O-ring (7).

(d) Put the O-ring (7) on the new oxygen inlet elbow (6).

(e) Carefully put the new oxygen inlet elbow (6) in the transfer pipe assembly (5).

(f) Make sure that the new oxygen inlet elbow (6) is correctly and fully in the transfer pipe assembly (5) and hold in position.

(g) Apply the adhesive (Material No. P08-079) to the first two threads of the new screw (8).

NOTE: The new screw (8) engages in a groove in the new oxygen inlet elbow (6).

(h) Loosely install the new screw (8) through the transfer pipe assembly (5) and into the groove in the new oxygen inlet elbow (6).

(i) Make sure that new oxygen inlet elbow (6) can turn freely and cannot be pulled out of the transfer pipe assembly (5).

(j) Torque the new screw (8) to between 0,56 and 0,68 Nm (5.0 and 6.0 lbf in).

(k) Make sure that new oxygen inlet elbow (6) can turn freely and cannot be pulled out of the transfer pipe assembly (5).

(l) On aircraft, connect the oxygen hose to the oxygen inlet elbow (6), refer to 35-10-03-02A-720A-A.

(4) Install the new modification Label (9).

NOTE: The new label and matte laminate are part of the emergency regulator connector, mod kit (POS. No. 10).

(a) Use the lint free cloth (Material No. P02-041) made moist with solvent (Material No. P01-035) to clean label installation area on the transfer pipe assembly (5).

(b) Let the solvent (Material No. P01-035) dry.

(c) Use a permanent ink pen and mark the date of the modification on the new self adhesive modification label (9), use the date format DD/MM/YY.

(d) Install the new self adhesive modification label (9) on the transfer pipe assembly (5).

(e) Remove the backing film and put the clear matte laminate over the new modification label (9).

NOTE: Make sure there is an even overlap on all four edges of the laminate over the new modification label (9).

(f) Apply sealer (Material No. P08-097) to seal the edge of the clear matte laminate.

(g) Allow the sealer (Material No. P08-097) to cure for 10 minutes before you touch the installation area of the modification label (9).

C. Test

(1) Do the post installation test of the ERC.

(a) Connect the air supply and do the set-up for the test, refer to AMM 35-00-00-00A-344A-A, work-steps 4 thru 7.

(b) In the front cockpit, on the OXYGEN REGULATOR panel, set the OXYGEN switch to the ON position.

(c) Make sure there is an air flow through the test orifice (Tool No. T35-003).

(d) Press and hold the TEST button on the OXYGEN REGULATOR panel to increase the pressure in the air flow.

(e) Make sure there is an increased air flow from the test orifice (Tool No. T35-003).

(f) If the flow from the test orifice (Tool No. T35-003) does not increase, do the following:

1 Release the TEST button on the OXYGEN REGULATOR panel and set the OXYGEN switch to the OFF position.

2 Do the work-steps C.(1)(b) thru (e) again.

3 If the air flow does not increase, report this problem to Pilatus.

(g) Remove the test orifice (Tool No. T35-003) from the oxygen mask connection.

(h) Install the test orifice blank (P/N 513.35.21.028) to the oxygen mask connection.

(i) Do the leak test of the oxygen inlet elbow, refer to AMM 35-00-00-00A-344A-A, work-step 8.7 thru 8.9.

(j) Disconnect the air supply and do the test close-up, refer to AMM 35-00-00-00A-344A-A, work-step 11.

(k) Remove the test orifice blank (P/N 513.35.21.028) from the oxygen mask connection.

D. Close Up

(1) Remove all equipment, materials and tools from the work area. Make sure that the work area is clean.

(2) Install the backrests on the front and rear ejection seats, refer to Martin Baker MB531 FMM, Section 3, Chapter 12.

(3) Do the close up procedures for the oxygen system, refer to AMM 35-00-00-00A-525A-A.

(4) Do the close up procedures for the crew escape and safety system, refer to AMM 95-00-00-00A-525A-A.

E. Documentation

(1) Make an entry in the Aircraft Logbook that this Service Bulletin has been incorporated.

(2) Use the Service Bulletin Evaluation Sheet and report your results and the serial number of the aircraft to Pilatus.

4. Accomplishment Instructions - (Ejection Seats and/or ERCs Held as Spares or in Stock)

A. Modification

(1) Do the modification to the ejection seat and/or ERC, refer to Para. 3.B.

NOTE: One emergency regulator connector modification kit, P/N 500.50.21.251, is necessary to do this Service Bulletin on each ejection seat and/or each ERC.

(2) Do the post installation test of the ERC when the ejection seat is installed on aircraft and/or the ERC is installed on the ejection seat and the ejection seat is installed on aircraft, refer to Para. 3.C.

B. Documentation

(1) Make an entry on the equipment label that this Service Bulletin has been accomplished.

(2) Use the Service Bulletin Evaluation Sheet and report your results.

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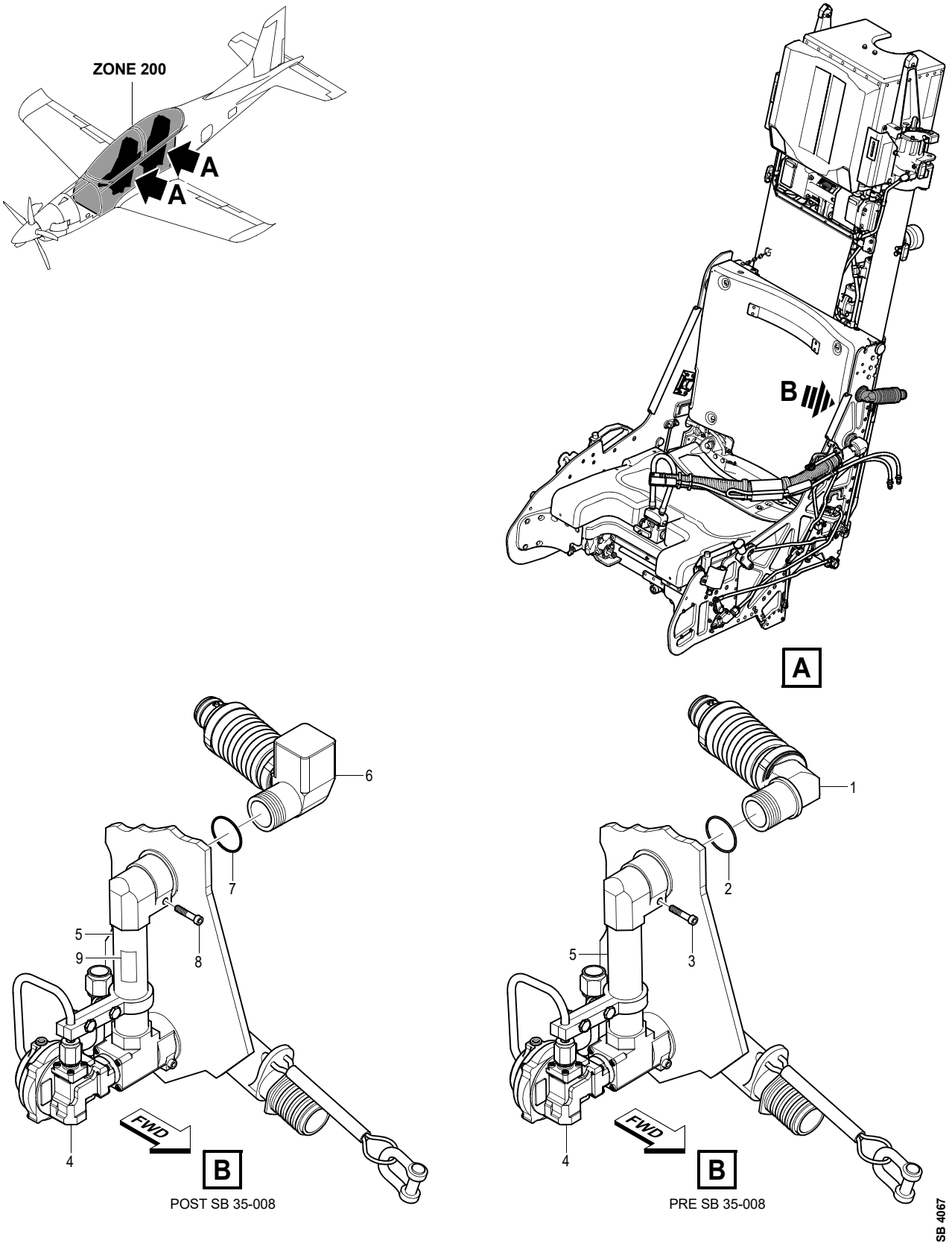

Replacement of the Top Elbow of the Emergency Regulator Connector
Figure 1

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SERVICE BULLETIN EVALUATION SHEET FOR SB No. 35-008				
Title	**Oxygen - Emergency Oxygen System Modification to the Emergency Regulator Connector to Introduce a New Maximum Pressure Relief Valve**			
Customer				
Service Center				
EMBODIMENT REPORTING				
This SB has been embodied:			**On the entire fleet**	
			Only partially	
Provide embodiment details per aircraft (use additional copies of this table, if necessary)				
MSN	**Flying Hours**	**MSN**	**Flying Hours**	
Additional embodiment comments/findings				
EDITORIAL COMMENTS (procedure, kit quality, suggested improvements, etc.)				
Name	Signature	Date		

Please complete and forward this form to:

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SERVICE BULLETIN EVALUATION SHEET

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