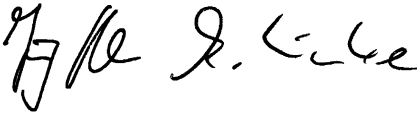




## P U B L I C A T I O N     T R A N S M I T T A L

The technical information contained in this document is approved under the authority of EASA Design Organisation Approval No. EASA.21J.065.

Signed  Date Apr.18/13

Printed in Great Britain

### BR700 SERIES PROPULSION SYSTEM SERVICE BULLETIN

This document transmits Revision 3 of Service Bulletin SB-BR700-72-101805.

**NOTE:** If any of the previous issues of this Service Bulletin is already incorporated, no further Operator action is required with this Revision.

This Service Bulletin can be embodied "In Service" or "At Overhaul/Shop Visit".

#### Document History

#### Service Bulletin Revision Status

Initial Issue	Aug.17/12
Revision 1	Aug.30/12
Revision 2	Oct.16/12

#### Service Bulletin Revision 3

Remove	Incorporate	Reason for change
All pages of the Service Bulletin.	Pages 1 to 14 of the Service Bulletin.	To update paragraph 1.A. Effectivity to include the engine serial numbers and the Service Bulletin standards for which this Service Bulletin is applicable and to change the estimated man-hours in paragraph 1.G. Manpower.

# SB-BR700-72-101805

Transmittal - Page 1 of 1





# BR700 Series

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## ENGINE - ACCESSORY GEARBOX MODULE - INTRODUCTION OF A NEW STANDARD OF PRESSURE RELIEF VALVE (PRV)

### 1. Planning Information

#### A. Effectivity

(1) BR700-710A1-10 Engines.

R For engines prior to Engine Serial Number 11510.

R For engines which have the Service Bulletin SB-BR700-72-100114 standard  
R incorporated but do not have the Service Bulletin SB-BR700-72-100262  
R standard incorporated and for engines which have the Service Bulletin  
R SB-BR700-72-100560 standard incorporated.

Modules M61-158, M61-162, M61-168, M61-176, M61-179, M61-184, M61-190,  
M61-195, M61-196, M61-197 and M61-203 (Accessory Gearbox Module).

(2) BR700-710A2-20 Engines.

R For engines prior to Engine Serial Number 22204, from Engine Serial  
R Number 22206 to 22210 and from Engine Serial Number 22214 to 22224.

R For engines which do not have the Service Bulletin SB-BR700-72-100263  
R standard incorporated and for engines which have the Service Bulletin  
R SB-BR700-72-100600 standard incorporated.

Modules M61-149, M61-163, M61-171, M61-177, M61-180, M61-185, M61-198,  
M61-199 and M61-204 (Accessory Gearbox Module).

(3) BR700-710C4-11 Engines.

(a) For engines which have hardware configuration standard 710C4-11  
engraved on the engine data plate (Service Bulletin  
SB-BR700-72-101466 standard not incorporated).

R Prior to Engine Serial Number 15937.

Modules M61-187 and M61-205 (Accessory Gearbox Module).

(b) For engines which have hardware configuration standard 710C4-11/10  
engraved on the engine data plate (Service Bulletin  
SB-BR700-72-101466 standard incorporated).

R Prior to Engine Serial Number 15937.

Module M61-202 (Accessory Gearbox Module).

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R

R NOTE: According to Rolls-Royce Deutschland information the new Pressure  
R Relief Valve (PRV) introduced with this Service Bulletin cannot be  
R installed into the accessory gearboxes with the serial numbers that  
R follow:

R For BR700-710A1-10 Engines:

R  
R  
R  
R  
R  
R  
R  
R  
R

GV101	GV102	GV103	GV104	GV105	GV107	GV108	GV109	GV110
GV111	GV112	GV114	GV115	GV116	GV117	GV119	GV120	GV121
GV122	GV124	GV125	GV126	GV127	GV128	GV129	GV130	GV132
GV133	GV134	GV135	GV136	GV137	GV138	GV140	GV141	GV142
GV144	GV145	GV146	GV147	GV148	GV149	GV150	GV152	GV153
GV154	GV155	GV156	GV158	GV159	GV160	GV161	GV164	GV165
GV166	GV167	GV168	GV169	GV170	GV171	GV172	GV173	GV174
GV175	GV176	GV177	GV178	GV179	GV180	GV181	GV182	GV184
GV185	GV186	GV187	GV188	GV189	GV190	GV191	GV192	GV193

R For BR700-710A2-20 Engines:

R  
R  
R  
R  
R

GX101	GX102	GX103	GX104	GX105	GX106	GX107	GX108	GX109
GX110	GX111	GX112	GX113	GX114	GX115	GX116	GX117	GX118
GX119	GX120	GX121	GX122	GX123	GX124	GX125	GX126	GX127
GX128	GX129	GX130	GX131	GX132	GX133	GX134	GX135	GX136
GX137	GX138	GX139						

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B. Concurrent Requirements

None.

C. Reason

(1) Problem

Some BR710 engines have unwanted oil loss, along with oil stains on the engine cowls. The cause of this has been identified as a malfunction of the oil tank Pressure Relief Valve (PRV), which causes over pressurization of the oil tank.

(2) Evidence

This was identified on accessory gearboxes in service.

(3) Substantiation

The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis and tests. This Service Bulletin complies with the applicable engine certification basis.



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## (4) Objective

Introduction of this Service Bulletin is designed to avoid unwanted oil loss and oil staining of the engine cowls and to ensure a correct functionality of the PRV.

## (5) Effect of Bulletin on:

### (a) Operation

Not affected.

### (b) Maintenance

Not affected.

### (c) Overhaul

Not affected.

### (d) Repair Schemes

Not affected.

### (e) Interchangeability

Not affected.

### (f) Fits and Clearances

Not affected.

Revision 1 of this Service Bulletin had been issued to include minor wording corrections in the Reason.

R Revision 2 of this Service Bulletin had been issued to extend the Effectivity of the Service Bulletin to include the BR700-710C4-11 engines which have the Service Bulletin SB-BR700-72-101466 standard incorporated.

R Revision 3 of this Service Bulletin has been issued to update paragraph 1.A.  
R Effectivity to include the engine serial numbers and the Service Bulletin  
R standards for which this Service Bulletin is applicable and to change the  
R estimated man-hours in paragraph 1.G. Manpower.



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## D. Description

This Service Bulletin introduces a new standard of oil tank PRV.

The changes are as follows:

- (1) The new PRV comprises a stem poppet with a centered pin, which is guided in the bore of the housing plug and avoids tight gaps between the poppet and the housing.
- (2) The only contact between the poppet and the housing body is the sealing seat. The nominal diametral clearance between the sliding surfaces of the poppet and the plug is increased.
- (3) The material for some components is changed.
- (4) The poppet stem design utilizes a significantly higher length to diameter ratio relative to the old standard.
- (5) A screwed in plug design is used, with a decreased housing length.
- (6) The distance of the second seal ring from the PRV body flange is increased. This increase in seal offset deletes the need to rework the accessory gearbox housings with casting variation in the housing.
- (7) The PRV characteristics are slightly changed.

The accessory gearbox assembly part number does not change with incorporation of this Service Bulletin.

R This Service Bulletin cannot be incorporated in accessory gearboxes, which  
R have an additional sleeve installed in the pressure relief valve bore  
R according to Service Bulletin SB-BR700-72-100262 standard for BR700-710A1-10  
R engines or according to Service Bulletin SB-BR700-72-100263 standard for  
R BR700-710A2-20 engines. This Service Bulletin can be incorporated in accessory  
R gearboxes, which have this additional sleeve deleted again from the pressure  
R relief valve bore according to Service Bulletin SB-BR700-72-100560 standard  
R for BR700-710A1-10 engines or according to Service Bulletin SB-BR700-72-100600  
R standard for BR700-710A2-20 engines. Because of this, certain  
R engines/accessory gearboxes are excluded from paragraph 1.A. Effectivity of  
R this Service Bulletin.

NOTE: The Accomplishment Instruction of this Service Bulletin is divided into two INSTRUCTIONS as follows:

INSTRUCTION I - Applicable for engines "In Service".

INSTRUCTION II - Applicable for engines "At Overhaul/Shop Visit".



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## E. Compliance

OPTIONAL

This Service Bulletin introduces a new part, which should be used when stocks of the pre Service Bulletin part have been used up.

## F. Approval

The technical content of this document is approved under the authority of EASA Design Organisation Approval No. EASA.21J.065.

## G. Manpower

Estimated Man-hours:

(1) In Service

3 hours.

(2) At Overhaul/Shop Visit

Applicable (Hours not affected).

## H. Material Price and Availability

A modification kit is not required; parts are supplied as single line items.

For actual prices and availability of spares, contact:

Rolls-Royce Deutschland Ltd & Co KG  
Spares Business  
Eschenweg 11, Dahlewitz  
15827 Blankenfelde-Mahlow  
Germany

Fax: +49 (0) 33 7086 3028

## I. Tooling Price and Availability

New tools are not required.

## J. Industry Support Information

The incorporation of this Service Bulletin is not free of charge.

**NOTE:** For further information contact your Rolls-Royce Regional Customer Manager (RCM).



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## K. Weight and Balance

### (1) Weight Change

Plus 0,076 kg (0.2 lb).

### (2) Moment Arm

160 mm (6.3 in.) rearward of datum.

### (3) Datum

ES2540 (PPS100).

## L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

## M. Software Accomplishment Summary

Not applicable.

## N. References

For BR700-710A1-10 Engines:

- R (1) Modification Bulletin 72-101805 Issue 04 dated Mar.20/13.
- (2) Engine Maintenance Manual - M-710-1BR, Chapters 71-10-00 and 72-61-01.
- (3) Engine Manual - E-710-1BR, Chapter 72-61-00.
- (4) Service Bulletin SB-BR700-72-100114
- ENGINE - ACCESSORY GEARBOX - INTRODUCTION OF GEARBOX (FROM NEW SUPPLIER)  
WITH IMPROVED FEATURES AND RELATED DRESSINGS/ATTACHMENTS/PIPEWORK CHANGES
- R (5) Service Bulletin SB-BR700-72-100262
- R ENGINE - ACCESSORY GEARBOX - INTRODUCTION OF A SLEEVE IN THE PRESSURE  
R RELIEF VALVE BORE
- R (6) Service Bulletin SB-BR700-72-100560
- R ENGINE - ACCESSORY GEARBOX - INTRODUCTION OF A NEW STANDARD OF MAIN  
R HOUSING AND ASSOCIATED ASSEMBLY IMPROVEMENTS

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For BR700-710A2-20 Engines:

- R (1) Modification Bulletin 72-101805 Issue 04 dated Mar.20/13
- (2) Engine Maintenance Manual - M-710-2BR, Chapters 71-10-00 and 72-61-01.
- (3) Engine Manual - E-710-2BR, Chapter 72-61-00.
- R (4) Service Bulletin SB-BR700-72-100263
- R ENGINE - ACCESSORY GEARBOX - INTRODUCTION OF A SLEEVE IN THE PRESSURE  
R RELIEF VALVE BORE
- R (5) Service Bulletin SB-BR700-72-100600
- R ENGINE - ACCESSORY GEARBOX - INTRODUCTION OF A NEW STANDARD OF MAIN  
R HOUSING AND ASSOCIATED ASSEMBLY IMPROVEMENTS

For BR700-710C4-11 Engines which do not have the Service Bulletin  
SB-BR700-72-101466 standard incorporated:

- R (1) Modification Bulletin 72-101805 Issue 04 dated Mar.20/13.
- (2) Engine Maintenance Manual - M-710-4BR, Chapters 71-10-00 and 72-61-01.
- (3) Engine Manual - E-710-4BR, Chapter 72-61-00.

For BR700-710C4-11 Engines which have the Service Bulletin SB-BR700-72-101466  
standard incorporated:

- R (1) Modification Bulletin 72-101805 Issue 04 dated Mar.20/13.
- (2) Engine Maintenance Manual - M-710-4BR, Chapters 71-10-00 and 72-61-01.
- (3) Supplementary Engine Manual - E-710-5BR, Chapter 72-61-00.



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## O. Other Publications Affected

For BR700-710A1-10 Engines:

- (1) Illustrated Parts Catalog - S-710-1BR, Chapter 72-61-00.
- (2) Component Maintenance Manual - 72-61-51.

For BR700-710A2-20 Engines:

- (1) Illustrated Parts Catalog - S-710-2BR, Chapter 72-61-00.
- (2) Component Maintenance Manual - 72-61-52.

For BR700-710C4-11 Engines which do not have the Service Bulletin SB-BR700-72-101466 standard incorporated:

- (1) Illustrated Parts Catalog - S-710-4BR, Chapter 72-61-00.
- (2) Component Maintenance Manual - 72-61-51.

For BR700-710C4-11 Engines which have the Service Bulletin SB-BR700-72-101466 standard incorporated:

- (1) Supplementary Illustrated Parts Catalog - S-710-5BR, Chapter 72-61-00.
- (2) Component Maintenance Manual - 72-61-54.

## P. Interchangeability of Parts

Not affected.

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## 2. Material Information

### A. Parts required to accomplish this Service Bulletin (In addition to Parts in 2.B., 2.C. and 2.E.)

None.

### B. Parts to be Reworked

None.

### C. New Production Parts

IPC Fig/Item No.	New Part No.	Unit Price (US Dollars)	Qty Per Eng.	Key Word	Old Part No.	Instructions/ Dispositions
72-61-00						
01-760	39556600	P.O.A.	1	Pressure Relief Valve (PRV)	39504500	(1)

### D. Redundant Parts

None.

### E. Expendable Parts

Refer to the related Manual tasks given in the Accomplishment Instruction of this Service Bulletin.

### F. Instruction/Disposition Codes

- (1) The old and new parts are interchangeable, but once the new part has been installed it is recommended not to re-install the old part.

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## 3. Accomplishment Instruction

INSTRUCTION I – APPLICABLE FOR ENGINES "IN SERVICE"

### A. General

**NOTE:** In order to reduce the potential for multiple-engine in-flight shutdown, power loss, or other anomaly due to maintenance error, Rolls-Royce Deutschland recommends that Operators avoid performing maintenance on multiple engines installed on the same aircraft at the same time. If it is not possible to avoid maintenance on more than one engine of an aircraft at the same time, Rolls-Royce Deutschland recommends that additional controls are applied in order to ensure that maintenance tasks have been completed as defined.

**WARNING:** YOU MUST BE CAREFUL WHEN YOU DO WORK ON THE ENGINE PARTS AFTER THE ENGINE IS STOPPED. THE ENGINE PARTS CAN STAY HOT FOR ALMOST ONE HOUR.

**WARNING:** DO NOT TOUCH HOT PARTS WITHOUT APPLICABLE GLOVES. HOT PARTS CAN CAUSE AN INJURY. IF YOU GET AN INJURY, PUT IT IN COLD WATER FOR TEN MINUTES AND GET MEDICAL AID.

(1) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.

(2) Consumable Materials

(a) Refer to the related Manual tasks given in this instruction.

(3) Tools and Equipment

(a) Refer to the related Manual tasks given in this instruction.

B. Get access to Pressure Relief Valve (PRV) that is installed on the rear face of the accessory gearbox

(1) Open the applicable cowl doors (Refer to the Engine Maintenance Manual, Chapter 71-10-00, PB201/TASK 71-10-00-010-801).

C. Remove the old PRV (72-61-00, 01-760), P/N 39504500 from the accessory gearbox (Refer to the Engine Maintenance Manual, Chapter 72-61-01, PB401/TASK 72-61-01-000-802).

D. Install the new PRV (72-61-00, 01-760), P/N 39556600 on the accessory gearbox (Refer to the Engine Maintenance Manual, Chapter 72-61-01, PB401/TASK 72-61-01-400-802).

E. Make sure that the work area is clean and clear of tools, equipment and other unwanted materials.

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F. Close the access to the PRV

- (1) Close the cowl doors (Refer to the Engine Maintenance Manual, Chapter 71-10-00, PB201/TASK 71-10-00-410-801).

G. A record of accomplishment is required. Rolls-Royce Deutschland suggests to put an entry into the engine log book

- (1) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the Engine Service Record.
- (2) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the Service Record of the Module 61 Log Card.
- (3) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the Service Bulletins List of the Module 61 Log Card.



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## INSTRUCTION II – APPLICABLE FOR ENGINES "AT OVERHAUL/SHOP VISIT"

### H. General

(1) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.

(2) Consumable Materials

(a) Refer to the related Manual tasks given in this instruction.

(3) Tools and Equipment

(a) Refer to the related Manual tasks given in this instruction.

I. Get access to the Pressure Relief Valve (PRV) that is installed on the rear face of the accessory gearbox.

J. Remove the old PRV (72-61-00, 01-760), P/N 39504500 from the accessory gearbox

(1) For BR700-710A1-10 Engines:

Refer to the Engine Manual, Chapter 72-61-00, PB501/TASK  
72-61-00-040-001.

(2) For BR700-710A2-20 Engines:

Refer to the Engine Manual, TASK 72-61-00-000-001.

(3) For BR700-710C4-11 Engines which do not have the Service Bulletin SB-BR700-72-101466 standard incorporated:

Refer to the Engine Manual, Chapter 72-61-00, PB501/TASK  
72-61-00-000-801.

(4) For BR700-710C4-11 Engines which have the Service Bulletin SB-BR700-72-101466 standard incorporated:

Refer to the Supplementary Engine Manual, Chapter 72-61-00, PB501/TASK  
72-61-00-000-801.

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K. Install the new PRV (72-61-00, 01-760), P/N 39556600 on the accessory gearbox

(1) For BR700-710A1-10 Engines:

Refer to the Engine Manual, Chapter 72-61-00, PB1001/TASK  
72-61-00-440-001.

(2) For BR700-710A2-20 Engines:

Refer to the Engine Manual, TASK 72-61-00-400-001.

(3) For BR700-710C4-11 Engines which do not have the Service Bulletin  
SB-BR700-72-101466 standard incorporated:

Refer to the Engine Manual, Chapter 72-61-00, PB1001/TASK  
72-61-00-400-801.

(4) For BR700-710C4-11 Engines which have the Service Bulletin  
SB-BR700-72-101466 standard incorporated:

Refer to the Supplementary Engine Manual, Chapter 72-61-00, PB1001/TASK  
72-61-00-400-801.

L. Make sure that the work area is clean and clear of tools, equipment and other  
unwanted materials.

M. A record of accomplishment is required. Rolls-Royce Deutschland suggests to  
put an entry into the engine log book

(1) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the  
Engine Service Record.

(2) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the  
Service Record of the Module 61 Log Card.

(3) Record the incorporation of Service Bulletin SB-BR700-72-101805 in the  
Service Bulletins List of the Module 61 Log Card.



## SERVICE BULLETIN FEEDBACK FORM

Please use this form to give feedback on the quality of this Service Bulletin. The input you provide will be used to analyse areas of improvement and to take action to further improvement on the quality of our Service Bulletins.

We thank you for the time you spent in completing this form.

Please rate on a scale of 1 to 5, with 5 being the highest score:

- General quality rating of this Service Bulletin	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Quality rating of the Accomplishment Instructions	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Quality rating of the Illustration	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Is this Service Bulletin easy to understand ?	<input type="checkbox"/> Yes		<input type="checkbox"/> No		

If you have had difficulties to perform this Service Bulletin please quote below the area(s) and give a short description of the issue:

Planning Information Section:		Material Information Section:	Accomplishment Instruction Section:
<input type="checkbox"/> 1.A.	<input type="checkbox"/> 1.I.	<input type="checkbox"/> 2.A.	<input type="checkbox"/> General
<input type="checkbox"/> 1.B.	<input type="checkbox"/> 1.J.	<input type="checkbox"/> 2.B.	<input type="checkbox"/> Get Access
<input type="checkbox"/> 1.C.	<input type="checkbox"/> 1.K.	<input type="checkbox"/> 2.C.	<input type="checkbox"/> Removal/Installation
<input type="checkbox"/> 1.D.	<input type="checkbox"/> 1.L.	<input type="checkbox"/> 2.D.	<input type="checkbox"/> Inspection
<input type="checkbox"/> 1.E.	<input type="checkbox"/> 1.M.	<input type="checkbox"/> 2.E.	<input type="checkbox"/> Test
<input type="checkbox"/> 1.F.	<input type="checkbox"/> 1.N.	<input type="checkbox"/> 2.F.	<input type="checkbox"/> Close the Access
<input type="checkbox"/> 1.G.	<input type="checkbox"/> 1.O.		<input type="checkbox"/> Log Book Entry
<input type="checkbox"/> 1.H.	<input type="checkbox"/> 1.P.		

Explanatory notes:

Operator:	Overhaul Site:
Name/Title:	Date:

Please send the completed Service Bulletin Feedback Form to Rolls-Royce Deutschland, Service Bulletin Group.

Email: <mailto:RRD.SERVICE.BULLETINS@ROLLS-ROYCE.COM>