BOMBARDIER

SERVICE BULLETIN
REVISION TRANSMITTAL SHEET

MODEL CL−600−2B16

Discard the Revision 01 of this Service Bulletin dated Feb 05/2018, and replace in its entirety with this Revision 02.

Service Bulletin No. 604−32−029

Date of Basic Issue Dec 18/2017

Revision No. 01 Dated Feb 05/2018

Revision No. 02 Dated May 10/2018

This revision has no effect for aircraft on which the Basic Issue or Revision 01 of this Service Bulletin was done thus no other action is necessary. Do not sign the log book if you have not done this revision. Keep the previous log book entry. You may make an entry as "Not Applicable" for this revision.

This revision is issued to:

1. Change, in Paragraph 2.A.(5), the AMM reference to, AMM 12−00−04−862−804.
2. Change, in Paragraph 2.C.(1), the AMM reference to, AMM 07−10−01−581−801.
3. Change, in Paragraph 2.C.(3), the AMM reference to, AMM 12−20−04−640−802.
4. Make miscellaneous minor changes, as necessary, with no change of context.

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SERVICE BULLETIN SUMMARY

This Service Bulletin is available at:
my.businessaircraft.bombardier.com

MODEL CL−600−2B16

ATA 32−32

LANDING GEAR

SPECIAL CHECK/MODIFICATION - EXTENSION AND RETRACTION, MAIN GEAR - INSPECTION AND REPLACEMENT IF NECESSARY OF THE SIDE STAY ACTUATOR SPLIT BALL BEARING

The information below is provided for your reference. For full details, including labor and part coverage, please see corresponding paragraph contained within this bulletin.

RECOMMENDED SPECIFIED TIME COMPLIANCE	**COMPLIANCE TIME** Refer to Paragraph 1.D.
EFFECTIVITY: AC Serial No.**5301** to **5665**	
MANPOWER: PART A: 0.5 man−hour, PART B: Up to 6.5 man−hours	

CONTINUED AIRWORTHINESS (CAW) FLEET CAMPAIGN	YES	☐	NO	☒
TLMC, CH 5 AFFECTED	YES	☐	NO	☒
KITS and/or PARTS	YES	☒	NO	☐
TOOLING/GSE	YES	☒	NO	☐
PLANNING INFORMATION: See important information at the start of Paragraph 1.	YES	☒	NO	☐
DEDICATED SCHEDULE	YES	☒	NO	☐

PREREQUISITE SERVICE BULLETINS: N/A.

NOTE: This Service Bulletin may be subject to an Airworthiness Directive which will make it necessary to implement this Service Bulletin.

To place an order for parts or kits, please call Bombardier Aerospace Parts Services at: 514−855−2999 or 1−866−538−1247

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SERVICE BULLETIN

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MODEL CL−600−2B16

ATA 32−32

LANDING GEAR

SPECIAL CHECK/MODIFICATION - EXTENSION AND RETRACTION, MAIN GEAR - INSPECTION AND REPLACEMENT IF NECESSARY OF THE SIDE STAY ACTUATOR SPLIT BALL BEARING

1. PLANNING INFORMATION

NOTES:

1. **Before you do this bulletin, examine all STC, STA or equivalent action changes to make sure that this bulletin can be completed.**

2. This Service Bulletin is covered by a dedicated schedule. Dedicated schedules are used to reserve and manage inventory due to limited availability of rotable stock, parts and/or kits. Parts are limited, therefore, advance part scheduling with our In−Service Implementation Team (ISIT) is recommended prior to a maintenance visit. Please contact your Regional Manager (RM), Field Service Representative (FSR) or Customer Service Representative (CSR) to schedule your aircraft as there is a limited availability. The parts will be allocated on a first come first serve basis.

   For more information on dedicated schedules, refer to SB 604−00−002.

3. A completed Certificate of Scrap, for the removed split ball bearing, Part No. 104467672, must be submitted within six weeks of the incorporation of this Service Bulletin to Triumph Actuation Systems − Yakima.

   Send a scanned copy of the completed Certificate of Scrap by e−mail to: JLRoybal@triumphgroup.com and RFarabee@triumphgroup.com. Make sure to include the Part Number and Serial Number of the top assembly in the subject line of the e−mail.

   If the Certificate of Scrap is not received within six weeks of the incorporation of this Service Bulletin, the operator will be charged, by Triumph Actuation Systems − Yakima, for the replacement split ball bearing.

Refer to applicable governmental agency regulations and requirements and make sure that the work described in this Service Bulletin is performed in compliance with manufacturer's recommendations and/or acceptable industry standards.

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A. Effectivity

CL−600−2B16 aircraft Serial No. **5301** to **5665**

NOTE: The instructions given in this Service Bulletin are only applicable to the systems and parts installed at the time of delivery of the aircraft or as changed by Bombardier Aerospace Service Bulletin(s).

B. Reason

Bombardier Aerospace was informed by its supplier that some MLG side stay actuators were supplied with a non conforming split ball bearing, Part No. 104467672. Material properties of the non conforming split ball bearings do not meet the requirements of AMS4640H.

This Service Bulletin introduces a Special Check/Modification, that gives instructions to verify the serial number of both side stay actuators installed on the aircraft, and replace any non conforming split ball bearing if necessary. The replacement of the discrepant split ball bearings will greatly reduce the risk of bearing seizure. The benefits to the operator are improved reliability or reduced maintenance costs.

C. Description

This Service Bulletin gives instructions in PART A to:

- Verify the serial number of the LEFT and RIGHT side stay actuator, and
- Take the appropriate action.

This Service Bulletin gives instructions in PART B to:

- Remove the existing discrepant split ball bearing,
- Install a new split ball bearing, and
- Do the necessary tests to make sure the system operates correctly.

D. Compliance

Recommended at or before 3750 flight cycles or within 48 months from Service Bulletin release date (Basic Issue).

NOTES:
1. For units with more than 3350 flight cycles (since new) at the time of Service Bulletin release date (Basic Issue), comply within 12 months or 400 flight cycles, whichever comes first.

2. If it is not possible to complete all the instructions in this Service Bulletin because of the configuration of the aircraft, submit an SRPSA for analysis and get an approved disposition to complete this Service Bulletin.

E. Approval

The technical content of this Service Bulletin has been approved under the authority of Transport Canada Civil Aviation (TCCA) Design Approval Organization (DAO) No. DAO #93−Q−02.

NOTES: 1. The technical content of this Service Bulletin is accepted by the FAA under the Canada/USA bilateral Aviation Safety Agreement.

2. The technical content of this Service Bulletin is accepted by EASA under the Canada/EU bilateral Aviation Safety Agreement.

F. Manpower

NOTES: 1. The man−hours given are to help you schedule the tasks given in this bulletin. The man−hours are for direct labor performed by an experienced crew and do not include the time for familiarization, planning, aircraft preparation in hangar such as towing and positioning of scaffolds, removal of interior furnishings, repainting, supervision and inspection.

For more information related to the manpower, refer to SB 604−00−002.

2. This Service Bulletin may require consumable materials that have specific curing times (refer to Paragraph 3). The accumulated curing time is not included in the man−hours and should be considered for planning purposes before you schedule this Service Bulletin.

0.5 man−hour is necessary to do PART A of this Special Check/Modification.

Bombardier Aerospace does not pay for the labor to do PART A of this Special Check/Modification.

Up to 6.5 man−hours are necessary to do PART B of this Special Check/Modification and are divided as follows:

- 2.5 man−hours per side, and
- 1.5 man−hours for the testing.

The labor required to do PART B of this Special Check/Modification is at no cost if:

- the work is done at Bombardier Business Aviation Services (BBAS) or Authorized Service Facilities (ASF), and
- this Service Bulletin is scheduled at or before 3750 flight cycles or within 48 months from Service Bulletin release date (Basic Issue).

NOTE: For units with more than 3350 flight cycles (since new) at the time of Service Bulletin release date (Basic Issue), schedule within 12 months or 400 flight cycles, whichever comes first.

G. Material − Cost and Availability

No kit is necessary to do PART B of this. For material data, refer to Paragraph 3.

For the part necessary to do PART B of this Special Check/Modification, refer to Paragraph 3.B.

This part is available at no cost if:

− a no−charge purchase order is sent to Bombardier Aerospace in less than 48 months from this Service Bulletin release date (Basic Issue).

NOTE: For units with more than 3350 flight cycles (since new) at the time of Service Bulletin release date (Basic Issue), purchase order must be sent within 12 months from this Service Bulletin release date (Basic Issue).

This Service Bulletin is covered by a dedicated schedule. Dedicated schedules are used to reserve and manage inventory due to limited availability of rotable stock, parts and/or kits. Parts are limited, therefore, advance part scheduling with our In−Service Implementation Team (ISIT) is recommended prior to a maintenance visit. Please contact your Regional Manager (RM), Field Service Representative (FSR) or Customer Service Representative (CSR) to schedule your aircraft as there is a limited availability. The parts will be allocated on a first come first serve basis.

For more information on dedicated schedules, refer to SB 604−00−002.

A completed Certificate of Scrap, for the removed split ball bearing, Part No. 104467672, must be submitted within six weeks of the incorporation of this Service Bulletin to Triumph Actuation Systems − Yakima.

Send a scanned copy of the completed Certificate of Scrap by e−mail to: JLRoybal@triumphgroup.com and RFarabee@triumphgroup.com. Make sure to include the Part Number and Serial Number of the top assembly in the subject line of the e−mail.

If the Certificate of Scrap is not received within six weeks of the incorporation of this Service Bulletin, the operator will be charged, by Triumph Actuation Systems − Yakima, for the replacement split ball bearing.

For all parts transactions, Bombardier Aerospace’s current Spare Parts and Component Repair Price Catalogue General Terms and Conditions apply. These terms and conditions are found on the Bombardier Customer Portal at:

my.businessaircraft.bombardier.com

During or after the above free period, Smart Parts Plus does not pay for the parts.

H. Tooling

The equipment and tools listed below are necessary to do this Special Check/Modification:

GSE REFERENCE NO.	PART NO.	DESCRIPTION
07−10−01	G600−070001−1	Pad, Jacking
07−10−02	02−1036−0111	Jack, Main Wing
07−10−03	02−1032−0111	Jack, Fwd Fuselage
07−10−06	03−5800−8000	Support, Rear Fuselage
10−10−09	W88F36	Wheel Chocks, Rubber
24−00−24	S4933959−501	Tag, Circuit Breaker
Commercially Available	−	Wrench, Torque

Refer to the Standard Practices Manual (SPM), Wiring Manual (WM), Chapter 20, and the table that follows for the tools applicable to the wiring modification:

NOTES: 1. Refer to the CH 604 Illustrated Tool and Equipment Manual (ITEM) to make sure that you use the correct equipment configuration.

2. Refer to the Liability Statement in the ITEM for acceptable GSE equivalents.

I. Weight and Balance

No change.

J. Electrical Load Data

No change.

K. References

- Bombardier Aerospace, Restriction and/or Special Instruction (RSI), C−4230, Rev. A−1.
- Bombardier Aerospace, Standard Practices Manual (SPM), Chapter 20.
- Bombardier Aerospace, SB 604−00−002, Service Bulletin Description and Policy.
- Safran Landing Systems, Service Bulletin SB19010−32−003.
- Triumph Actuation Systems − Yakima, Service Bulletin 19011−32−1.
- Triumph Actuation Systems − Yakima, Certificate of Scrap (attached).
- CH 604 Aircraft Maintenance Manual (AMM), Chapters 6, 7, 24, 29 and 32.

L. Other Publications Affected

None.

M. Equivalent Service Bulletin

For the Challenger 605, refer to Service Bulletin 605−32−006.

For the Challenger 650, refer to Service Bulletin 650−32−002.

2. ACCOMPLISHMENT INSTRUCTIONS

NOTE: All references made to zones, access panels and/or doors, are from the CH 604 AMM, Chapter 6.

A. Aircraft Setup

NOTE: The steps in the Aircraft Setup section of this Service Bulletin are recommended steps. The steps give a recommendation to get access to the work area. This recommendation is to give a safe work area and to minimize possible damage to surrounding aircraft parts. Alternative steps can be used at the operator's discretion.

(1) Obey all electrical/electronic safety precautions. Refer to AMM 24−00−00−910−801.

(2) Obey all hydraulic safety precautions. Refer to AMM 29−00−00−910−801.

(3) Obey all hydraulic technical precautions. Refer to AMM 29−00−00−910−802.

(4) Obey all landing−gear safety precautions. Refer to AMM 32−00−00−910−801.

(5) Release the hydraulic pressure from system No. 3. Refer to AMM 12−00−04−862−804.

(6) Open and tag the circuit breakers that follow:

CB PANEL	CB NO.	NAME	ZONE
CBP−1	A2	HYD PUMP 3B	221
CBP−2	P2	HYD SYS AC PUMP CONT 3B	222
CBP−2	A2	HYD PUMP 3A	222
CBP−2	G4	HYD SYS AC PUMP CONT 3A	222

B. PART A − Special Check

(1) Verify the serial number of the LEFT and RIGHT MLG side stay actuator assemblies, Messier Bugatti Dowty (M−B−DT) Part No. 19010−103 and 19010−105 (Triumph Actuation Systems − Yakima (TASY), Part No. 19011−103 and 19011−105) for applicability.

(2) If the serial number is not listed in Table 1 or Table 2, no further action is required.

(3) If the serial number is listed in Table 1 or Table 2, continue to Paragraph 2.C.

TABLE 1 - SIDE STAY ACTUATOR ASSEMBLY M-B-DT, PART NO. 19010-103 (TASY PART NO. 19011-103) IMPACTED SERIAL NO.
00113, 00120, 00177, 00183, 00184, 00203, 00204, 00226, 00263, 00274, 00297, 00314, 00315, 00322, 00323, 00541

TABLE 2 - SIDE STAY ACTUATOR ASSEMBLY M-B-DT, PART NO. 19010-105 (TASY PART NO. 19011-105) IMPACTED SERIAL NO.
00222, 00312G, 00620, 00688, 00693G, 00755, 00766, 00857, 00882, 01092, 01341, 01344, 01354, 01359, 001361 to 01363, 01367, 01368, 01370, 01371, 01373 to 01376, 01382 to 01384, 01387, 01388, 01393, 01397, 01401, 01403 to 01406, 01409 to 01411, 01413 to 01421, 01423 to 01425, 01429, 01430, 01435, 01440,01442, 01446

C. PART B− Modification − Replacement of the Split Ball Bearing

NOTE: If it is not possible to complete all the instructions in this Service Bulletin because of the configuration of the aircraft, submit an SRPSA for analysis and get an approved disposition to complete this Service Bulletin.

(1) Lift the complete aircraft with jacks. Refer to AMM 07−10−01−581−801.

(2) Replace the split ball bearing as follows, refer to Figure 1:

(a) Remove and discard the cotter pin (1). Refer to SPM−MM 20−50−00−000−802.

(b) Remove and discard the nut (2).

(c) Remove and discard the washers (3) and (4).

(d) Support the MLG side brace actuator (7), per best shop practices.

(e) Remove the side brace pin assembly (6).

(f) Remove the split ball bearing, Part No. 104467672, from the rod end assembly and discard.

(g) Install the new split ball bearing, Part No. 104467672, in the rod end assembly. Make sure that the witness marks on the bearing faces are matched together.

(h) Apply a layer of grease on the side brace pin assembly (6).

(i) Install the side brace pin assembly (6) through the main fitting.

NOTE: Make sure the flat areas on the side brace pin assembly (6) line up with the flat areas in the lock plate (5).

(j) Hold the head of the side brace pin assembly (6) in position to prevent rotation and forward −and−aft movement.

(k) Install the new washers (3) and (4).

(l) Install the new nut (2).

(m) Torque the nut (2) from 20 to 40 lb ft (27.12 to 54.23 Nm). Refer to SPM−MM 20−21−00−910−801.

(n) Install the cotter pin (1). Refer to SPM−MM 20−50−00−400−802.

(3) Lubricate the spherical bearing. Refer to AMM 12−20−04−640−802.

(4) Identify the reworked Side Stay Actuator with the Service Bulletin identifier number (19011−32−1) with permanent ink per best shop practices. Refer to Figure 2.

(5) Apply one coat of polyurethane clear coat over the ink marking per best shop practices. Refer to Figure 2.

D. Testing

(1) Remove the tags and close the circuit breakers that follows:

CB PANEL	CB NO.	NAME	ZONE
CBP−1	A2	HYD PUMP 3B	221
CBP−2	P2	HYD SYS AC PUMP CONT 3B	222
CBP−2	A2	HYD PUMP 3A	222
CBP−2	G4	HYD SYS AC PUMP CONT 3A	222

(2) Do the Functional Test of the Extension and Retraction System. Refer to AMM 32−30−00−720−801

(3) Do the operational test of the Landing−Gear Emergency Extension. Refer to AMM 32−34−00−710−801.

E. Close−out

NOTE: The steps in the Close−out section of this Service Bulletin, except for the return−to−service tests, are recommended steps. The steps give a recommendation to install components removed during the Aircraft Setup. This recommendation is to make sure that the aircraft is safe and ready to return to service. Alternative steps can be used at the operator's discretion.

(1) Remove all tools, equipment and unwanted materials from the aircraft.

(2) Lower the complete aircraft. Refer to AMM 07−10−01−586−801.

F. Recording

When this Service Bulletin is completed, make an entry in the aircraft log and send the attached Incorporation Notice to Bombardier Business Aircraft Customer Services (BBACS).

In an effort to improve the quality of our technical communications, we are requesting your feedback. Please take a moment to fill out our easy on−line Service Bulletin survey:

http://csefeedback.aero.bombardier.com

3. MATERIAL INFORMATION

A. Kits

No kit required.

B. Parts

The part(s) that follow(s) may be necessary to do this Special Check/Modification and is/are available from Bombardier Aerospace Parts Services, Montreal:

NEW PART NO.	QTY	ITEM	USED PART NO.	INSTRUCTIONS - DISPOSITION
DMK379−101	Up to 2	Kit, Messier Dowty	–	–

NOTE: The part number(s) for the item(s) listed above are/is subject to change without revision to this Service Bulletin. In case of discrepancy between this list and any other list, the Illustrated Parts Catalog prevails and shall be used to determine the latest part number.

C. Material

The materials that follow, or equivalent, may be necessary to do this Special Check/Modification. These can be purchased from a local supplier. Bombardier Aerospace does not pay for this consumable.

DESCRIPTION	PART NO./NAME	SPECIFICATION	QUANTITY	SUPPLIER (SEE NOTE)
Clear Coat, Polyurethane CT: 4 hours	PF−6 Series PH36 or PG−6 Series	−	As Necessary	Code: A
Grease, Aircraft and Instrument, Gear and Actuator Screw	Aeroshell 33	MIL−PRF−23827C Type I	As Necessary	Code: B

NOTES: 1. Refer to the table that follows for each suppliers address listed by codes.

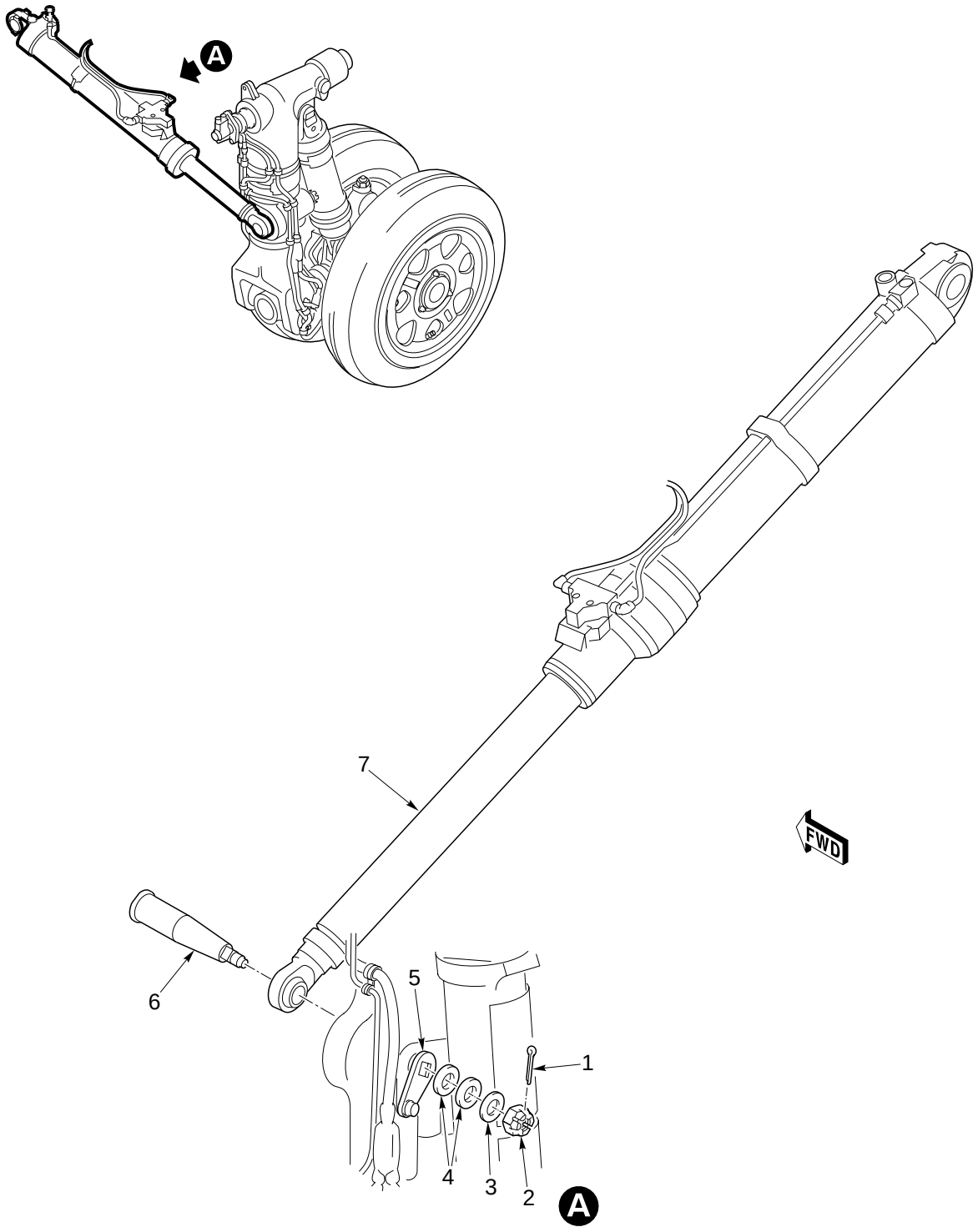
2. The Curing Time (CT), if applicable, for each consumable material is indicated with the description of each product.

3. At time of release of this Service Bulletin, the information on the supplier was valid and accurate. In the event that this information has changed, the operator is encouraged to use the World Wide Web to find a local supplier.

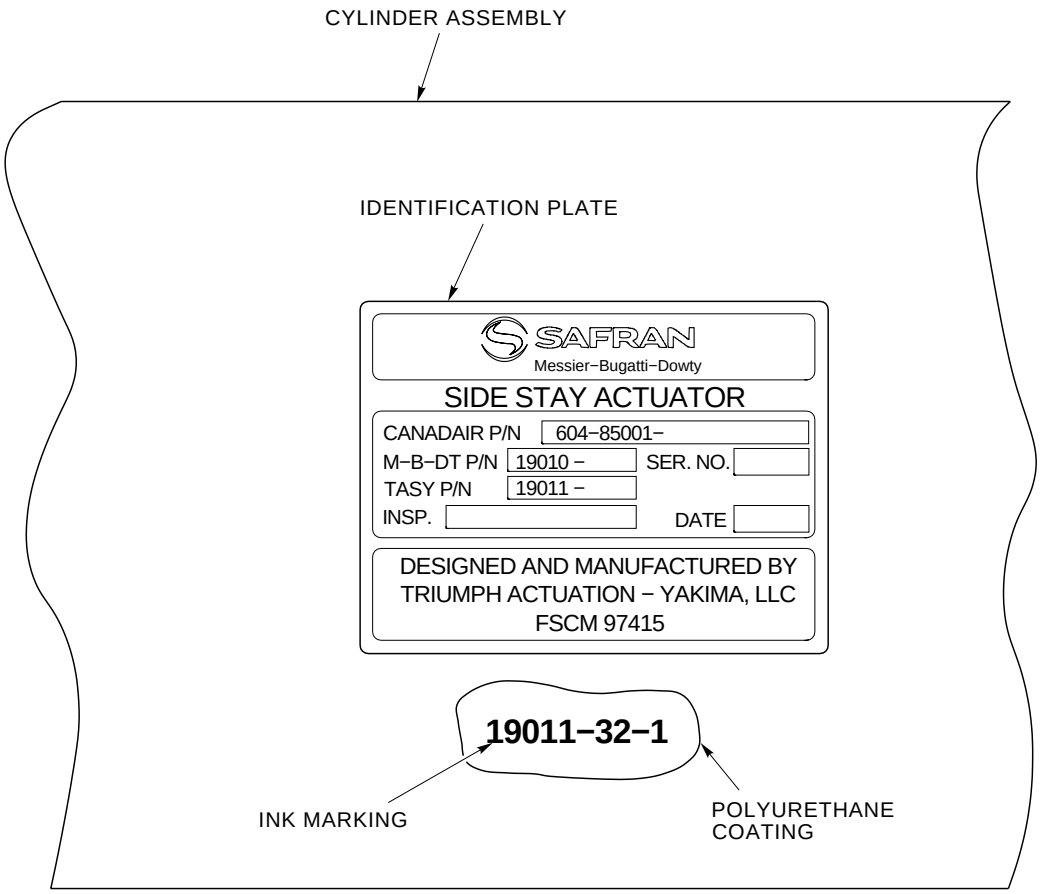
SUPPLIERS ADDRESSES BY CODES	
Code: A	**Code: B**
Axon Hentzen Aerospace 307 Echelon Road Greenville, SC,29605−5234 U.S.A. Tel.: 416−746−2233 www.hentzen.com	Shell Canada Limited 400 4th Avenue S.W. Calgary, Alberta Canada, T2P 0J4 Tel.: 1−877−656−3111 www.shell.ca

D. Publications

No publications required.



Split Ball Bearing Replacement
FIGURE 1



LSB3232_011

Ink Marking Detail
FIGURE 2

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SERVICE BULLETIN EVALUATION FORM

(Your ideas will help us provide better bulletins)

SERVICE BULLETIN:	604−32−029	**ISSUE:**	Rev. 02	**DATED:**	May 10/2018

TITLE: SPECIAL CHECK/MODIFICATION − EXTENSION AND RETRACTION, MAIN GEAR − INSPECTION AND REPLACEMENT IF NECESSARY OF THE SIDE STAY ACTUATOR SPLIT BALL BEARING

In an effort to improve the quality of our technical communications, we are replacing the standard **Service Bulletin Evaluation Form** with an on−line **Service Bulletin Survey** and we are requesting your feedback. Please take a moment to fill out our easy on−line Service Bulletin survey at:

http://csefeedback.aero.bombardier.com

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SERVICE BULLETIN INCORPORATION SHEET − "604−32−029"

BOMBARDIER SUBMISSION	Upon completion of the Service Bulletin, please fill−in, fax to (514) 855−8798 or e−mail to Fracas at fracas.montreal@aero.bombardier.com **If your aircraft is registered on CAMP and you are reporting to them, please do not send the incorporation sheet to Bombardier.** If your aircraft is on another tracking system, please contact Bombardier to make arrangements for automated data submission.

Service Bulletin Number	Rev.	* Parts Completed	COMPLIED WITH YES	NO	N/A	Remarks/Reason
604−32−029	02		☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	

Actual hours to accomplish Service Bulletin: _____

* NOTES:

1. Where the Service Bulletin is divided into a number of parts (e.g., PARTS A, B, C, D, etc.) which can be carried out separately, indicate only those parts completed at this time.
2. For repetitive checks (usually PART A) only the initial check should be reported unless otherwise stated in the Service Bulletin.
3. When more than one part is carried out at the same time, each part should be reported.

Aircraft Serial No. _____ Aircraft Reg. No. _____

Airframe Hours: _____ Airframe Landings _____

S.B. Incorporation Date _____ (dd/mm/yy) Service Order No. _____

Facility incorporating S.B. _____

Name _____ Signature _____ Date _____ (dd/mm/yy)

Signature not required if sent by E−Mail