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**Registration no 2002/022837/07**  
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## **SERVICE BULLETIN**

#0020 Revision 1

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**(Sling Aircraft (Pty) Ltd considers compliance with all Service Bulletins mandatory)**

**NOTE – THIS SERVICE BULLETIN REPLACES SERVICE BULLETIN #0020 REVISION 0 IN ITS ENTIRETY**

**SERVICE BULLETIN #0020 REVISION 0 IS ACCORDINGLY CANCELLED WITH EFFECT FROM 05/08/2022**

**RELEASE DATE:** 07/09/2022

**EFFECTIVE DATE:** 07/09/2022

**SUBJECT:** Eyebolt inspection and conditional replacement

### **MODELS AFFECTED:**

<b>Models Affected</b>	<b>Serial Numbers</b>
Sling 2	All aircraft
Sling LSA	All aircraft
Sling 4	All aircraft
Sling 4 TSi	All aircraft

(The purpose of this revision is to update the affected aircraft from specific serial numbers and models to include all aircraft and models.)

**COMPLIANCE TIME:** Next MPI (Mandatory Periodic Inspection) or annual inspection, whichever comes first.

**LABOUR TIME:** 1 hour to 10 hours, conditionally

## 1 DESCRIPTION AND PURPOSE:

It has been found that the eyebolts fitted in the control system of certain Sling aircraft may fail to meet the manufacturers specification in regard to fatigue life. Such eyebolts are identifiable, inter alia, by the narrowness of the neck of the eyebolt above the bolt thread. This service bulletin details the procedures for inspection and replacement of such eyebolts where found in the various control systems.

There are 4 types of eyebolts used in the various control systems of the affected aircraft. For the purposes of this document, they will be referred to as: *type 1*, *type 2*, *type 3* and *type 4*. Section 3.1 explains how to identify and differentiate between the different eyebolts.

All aircraft will need to be inspected during the next MPI (or annual inspection, whichever is reached first). If it is found that *type 3* or *type 4* eyebolts have been supplied and used, they must be replaced with either *type 1* or *type 2*. Any kits still under construction will need to be inspected and required replacements must be made before the aircraft's first flight.

Read this document in its entirety and ensure you have a complete understanding before attempting to carry out the inspection and, where required, replacement of the non-compliant eyebolts.

### Note:

- *The applicable aircraft Maintenance Manual and Construction Manual must be adhered to at all times.*
- *Refer to AC 43- Aircraft Inspection and Repair, when inspecting and replacing components.*
- *If the aircraft has already undergone Service Bulletin 20 revision 0 and is compliant to Service Bulletin 20 revision 0, the aircraft does not need to undergo the actions as specified in this new revision.*

### 1.1. MASS DATA:

Ensure a mass and balance is completed after the eyebolts have been replaced.

### 1.2. ELECTRICAL LOAD DATA:

N/A

### 1.3. INSTRUMENTATION CALIBRATION:

If a magnetic compass is used on the aircraft, perform a compass swing after the eyebolts have been replaced.

### 1.4. SUPPLEMENTARY DOCUMENTATION:

Refer to the current issue of the various aircraft manuals, as necessary:

- a) DC-MAM-002-X-B – Sling 2 and Sling LSA Maintenance Manual
- b) DC-MAM-001-X-C – Sling 4 Maintenance Manual
- c) DC-MAM-001-X-F – Sling 4 TSi Maintenance Manual
- d) DC-KAI-008-X-A – Sling 2 Finishing Construction Manual (must be used for Sling LSA as well)
- e) DC-KAI-008-X-C – Sling 4 Finishing Construction Manual
- f) DC-KAI-008-X-F – Sling 4 TSi Finishing Construction Manual

### 1.5. PUBLICATIONS AFFECTED:

Service Bulletin #0020 Revision 0

## **2. MATERIAL INFORMATION:**

### **2.1. PARTS AND CONSUMABLES LIST:**

Sling 2 and Sling LSA:

- a) 12 x  $\frac{1}{4}$ " eyebolts (right hand thread, HW-EYB-001-R-A-0)
- b) 10 x  $\frac{1}{4}$ " eyebolts (left hand thread, HW-EYB-001-L-A-0)
- c) 2 x  $\frac{5}{16}$ " eyebolts (2 left hand thread, HW-EYB-002-L-A-0)

Sling 4 and Sling 4 TSi:

- d) 13 x  $\frac{1}{4}$ " eyebolts (right hand thread, HW-EYB-001-R-A-0)
- e) 11 x  $\frac{1}{4}$ " eyebolts (left hand thread, HW-EYB-001-L-A-0)
- f) 2 x  $\frac{5}{16}$ " eyebolts (2 left hand thread, HW-EYB-002-L-A-0)

### **2.2. TOOLS REQUIRED:**

- a)  $\frac{7}{16}$ " spanner/ wrench
- b)  $\frac{1}{2}$ " spanner/ wrench
- c) Socket wrench
- d)  $\frac{7}{16}$ " Socket
- e) Socket extender (at least 230 mm [9.06 inches] long)

### **2.3. LABOUR RESPONSIBILITY:**

Sling Aircraft AMO 1264 (Johannesburg, South Africa) is available to perform the required work on all aircraft delivered to its premises.

Person(s) implementing the work are required to follow instructions set out below and refer to the supplementary documentation listed in paragraph 1.4 as needed. Sling Aircraft cannot accept any responsibility for the quality of work performed in implementing this service bulletin, if the work is not performed by Sling Aircraft AMO 1264 (Johannesburg, South Africa).

All work carried out on the aircraft with respect to this service bulletin (Service Bulletin 20) must be performed by an appropriately rated person/ persons as per the legal requirements of the governing aviation authority of the country where the actions, as detailed by this service bulletin, are to be carried out.

### **2.4. MATERIAL RESPONSIBILITY:**

Sling Aircraft will cover the hardware cost (specifically the new eyebolts) if replacement is required. Sling Aircraft will only cover the labour costs for inspecting and replacing the required eyebolts on aircraft still under warranty, as detailed by this service bulletin.

Sling Aircraft is not responsible for costs related to shipping, downtime, loss of income, etc.

### **2.5. COMPANY SUPPORT INFORMATION:**

Make use of the following contact details for any related queries: [airworthiness@slingaircraft.com](mailto:airworthiness@slingaircraft.com) or [technical@slingaircraft.com](mailto:technical@slingaircraft.com).

### 3. INSTRUCTIONS:

All eyebolts must be inspected at the aircraft's next MPI or annual inspection. This is applicable to aircraft that are already flying. Any aircraft still under construction must be inspected prior to its first flight. The various eyebolt types can be seen in Figure 1, Figure 2, Figure 3 and Figure 4 respectively. If *type 3 or 4* eyebolts have been supplied, they must be replaced.

#### 3.1. EYEBOLT IDENTIFICATION:

As seen below, the main difference between *type 3 and 4*, and the other two eyebolt types is the brass ring and shape of the neck of the eyebolt.

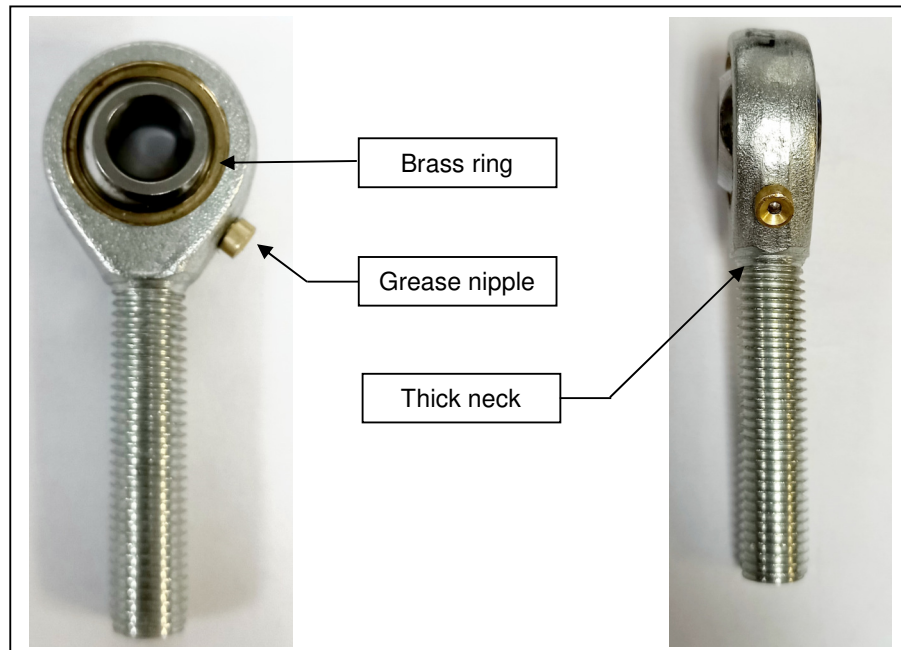


Figure 1: Type 1 Eyebolt

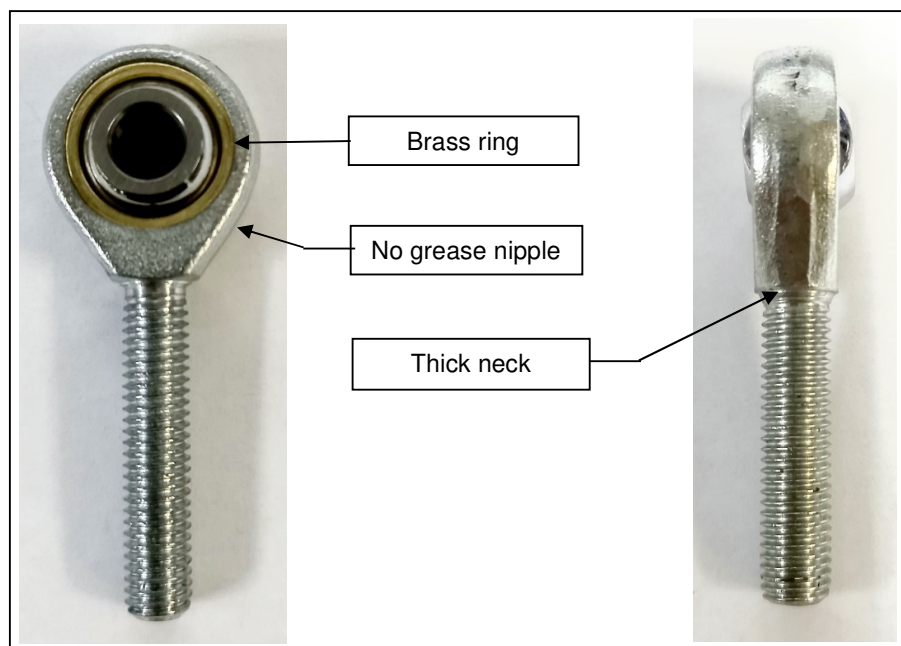


Figure 2: Type 2 Eyebolt

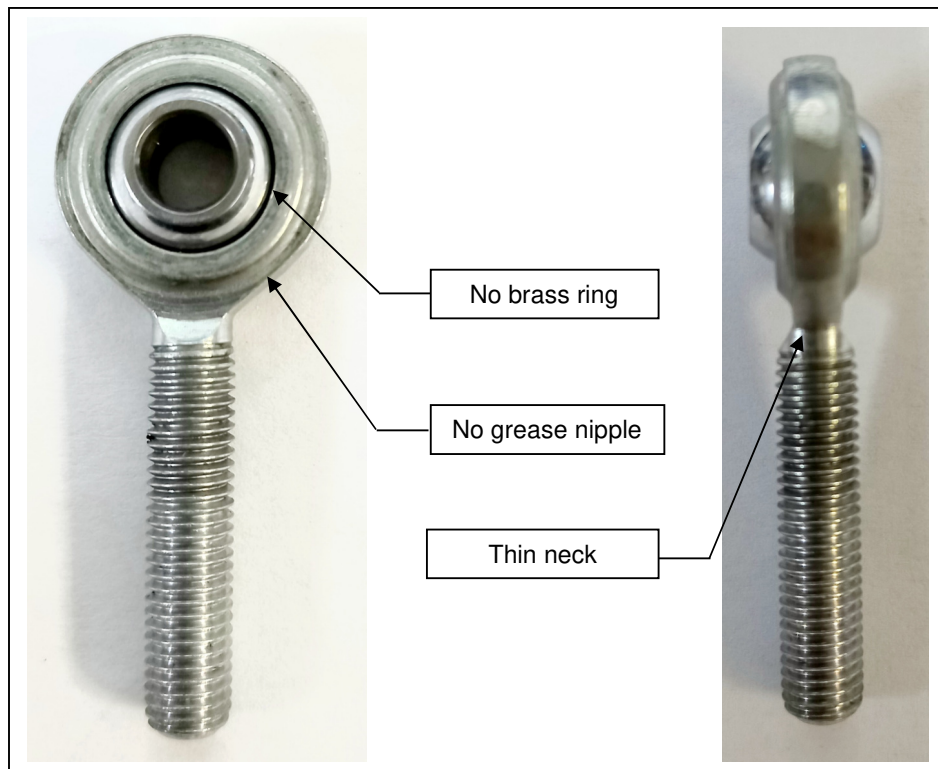


Figure 3: Type 3 Eyebolt

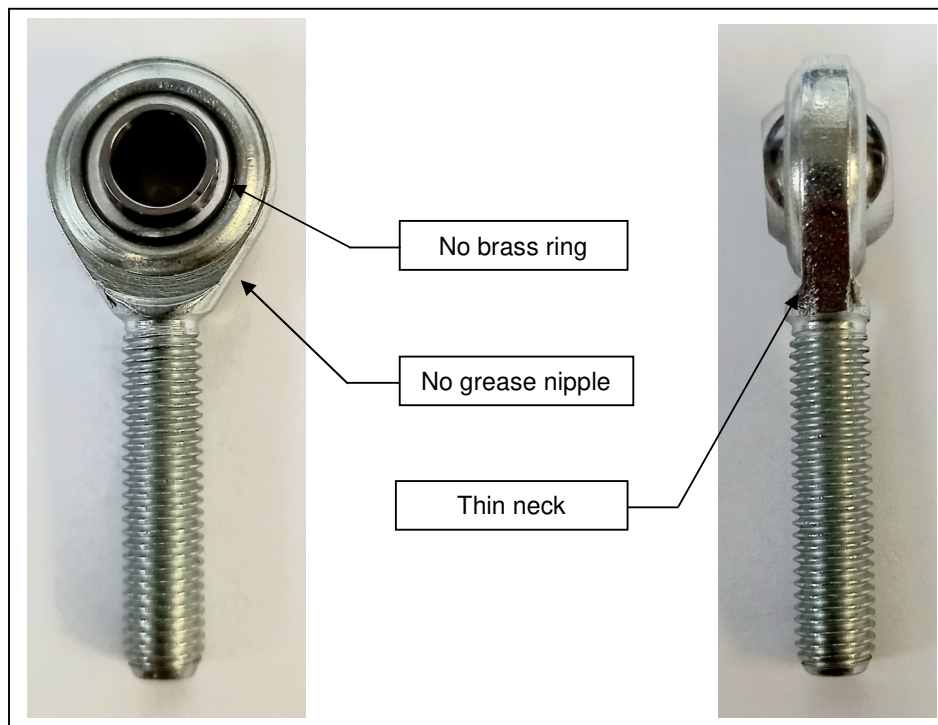


Figure 4: Type 4 Eyebolt

The following section (3.2) details which eyebolts must be checked in the various aircraft models.

Refer to the applicable construction manuals for the anatomy of pushrods and how to install eyebolts (referred to as rose-joints in certain manuals).

*Note:*

- *When reinstalling the pushrods, ensure the control sticks, nose gear, pedals and rudder are all in the neutral position.*
- *Ensure that once the eyebolts are installed on the control rods that at least half of the thread is engaged.*
- *If another type of eyebolt (that is not a type 1 or type 2 eyebolt) is found to be installed on the aircraft, it must be replaced. If there is a concern about if an eyebolt should be replaced or not contact Sling Aircraft using the contact details specified in Section 2.5.*

### 3.2. EYEBOLT LOCATIONS:

This section outlines where to find all the eyebolts in the Sling 2, Sling LSA, Sling 4 and Sling 4 TSi. The aircraft all follow similar control layouts for the flaps and nose gear-rudder controls, so they have the eyebolts located in the same positions. Due to this the replacement procedures for the Sling LSA, Sling 2, Sling 4 and Sling 4 TSi will be addressed in the same sections. The aileron and the elevator control inspection and replacement procedures for the Sling 2, Sling LSA, Sling 4 and Sling 4 TSi will be separate procedures. Once inspected, it is compulsory to replace all noncompliant eyebolts (eyebolts that are not *type 1* or *type 2*).

The table below outlines the sections that are applicable to the different aircraft models:

Section	Applicable Aircraft	Section Description
3.1.1	Sling 2, Sling LSA, Sling 4, Sling 4 TSi	Nose wheel and rudder control system
3.1.2	Sling 2, Sling LSA, Sling 4	Aileron control system
3.1.3	Sling 4 TSi	Aileron control system
3.1.4	Sling 2, Sling LSA, Sling 4, Sling 4 TSi	Flap control system
3.1.5	Sling 2, Sling LSA	Elevator control system
3.1.6	Sling 4, Sling 4 TSi	Elevator control system

Refer to the respective Maintenance Manuals where needed. The Maintenance Manual must always be adhered to.

In the Appendix there are two diagrams, one for the Sling 2 and Sling LSA and another for the Sling 4 and Sling 4 TSi. These diagrams can be used to help keep track of the different eyebolts that have been checked and replaced. There are empty blocks where marks/notes can be made to indicate if the eyebolt has been checked and replaced.

### 3.2.1. NOSE WHEEL AND RUDDER CONTROLS FOR ALL AIRCRAFT:

The eyebolts used in the rudder and nose wheel control arm assembly can be seen in Figure 5. The eyebolts need to be inspected and replaced where *noncompliant* eyebolts have been installed.

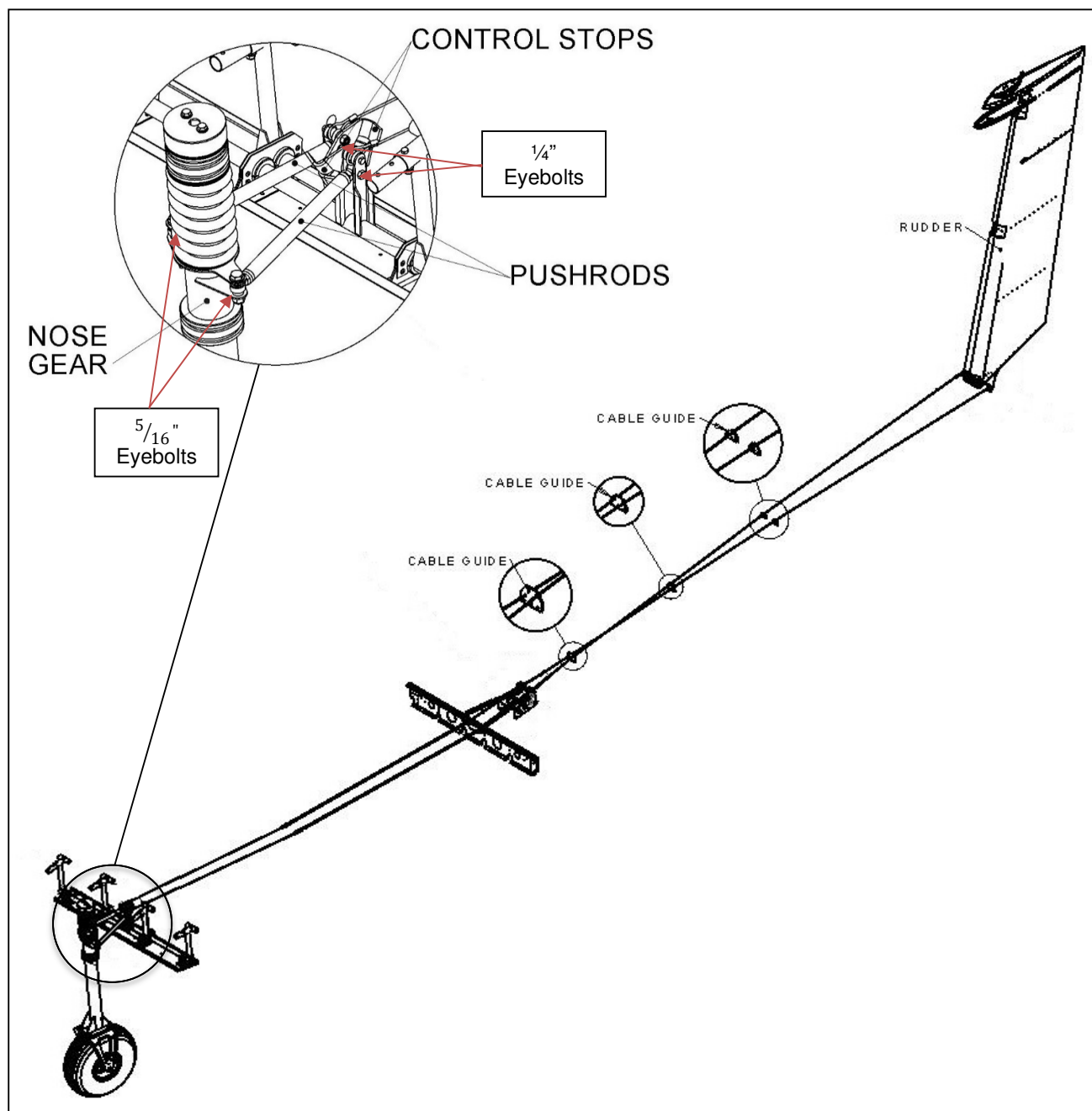


Figure 5: Rudder and Nose Wheel Controls

Use the following procedure to replace the eyebolts if required.

- Step 1. Remove the cowling around the engine, to expose the nose gear. To do this follow the instructions in the applicable Maintenance Manual (MAM) shown in the table below:

Aircraft	Manual	Applicable Section(s)
Sling 2 and Sling LSA	DC-MAM-002-X-B	5.1.1
Sling 4	DC-MAM-001-X-C	5.2
Sling 4 TSi	DC-MAM-001-X-F	5.1.1



- Step 2. Disconnect the rudder cables from the rudder control horn so that the nose gear pushrods can be moved easily. To do this follow the applicable instructions in the MAM shown in the table below.

Aircraft	Manual	Applicable Section(s)	MAM Section Step(s)
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.2.2.2	1
Sling 4	DC-MAM-001-X-C	4.2.11	1
Sling 4 TSi	DC-MAM-001-X-F	4.3.2.2	1

- Step 3. In order to remove the 5/16" eyebolts, attached to the nose gear pushrods, disconnect the pushrods from the nose gear. To do this follow the applicable instructions in the MAM shown in the table below.

Aircraft	Manual	Applicable Section(s)	MAM Section Step(s)
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.4.2.5	1, 3
Sling 4	DC-MAM-001-X-C	4.4.2.5	1, 3
Sling 4 TSi	DC-MAM-001-X-F	4.4.2.5	1, 3

- Step 4. Install new 5/16" eyebolts, either a *type 1* or *type 2* eyebolt, on the pushrods. To do this, reverse the procedure performed in Step 1.
- Step 5. Remove the 1/4" eyebolts, these are located on the rudder pedal assembly as shown in Figure 5, and can be accessed from inside the cabin. By referring to Figure 6, remove the AN4 locknut and AN4 bolt. The 1/4" eyebolt can now be uninstalled from the pushrod.
- Step 6. Replace the 1/4" eyebolts with the correct type (either *type 1* or *type 2* may be used), reinstall them onto the pushrod and connect them to the rudder pedal assembly once more. Refer to Figure 6 for the way in which the components fit together.

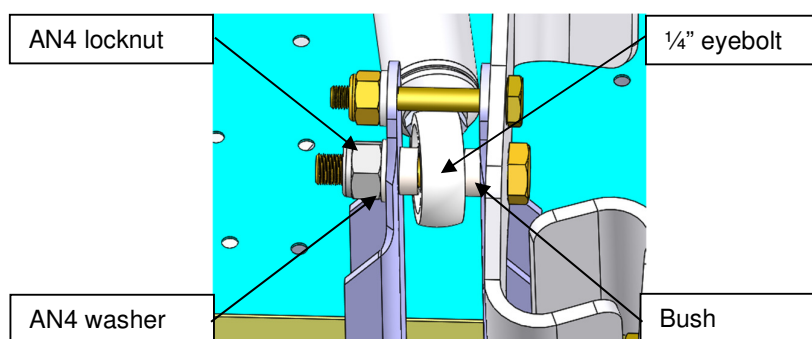


Figure 6: 1/4" eyebolt rudder pedal assembly

- Step 7. Reconnect the rudder control cables to the rudder control horn. To do this reverse the procedure performed in Step 2.
- Step 8. After reinstallation of the pushrods, adjust the pushrods accordingly to ensure at least half the threaded section of the eyebolt shaft is threaded into the pushrod.
- Step 9. Once the eyebolts have been replaced, you will have to adjust the rudder controls to ensure correct rudder deflection. To do this follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Section(s)
Sling 2 and Sling LSA	DC-MAM-002-X-B	1.13 & 4.2.2.5
Sling 4	DC-MAM-001-X-C	1.13 & 4.2.14
Sling 4 TSi	DC-MAM-001-X-F	1.13 & 4.3.2.5

- Step 10. Reinstall the cowling around the engine.

*Note: When reinstalling the pushrods, ensure the control sticks, pedals, nose gear and rudder are all in the neutral position.*

### 3.2.2. AILERON CONTROLS FOR SLING 2, SLING LSA AND SLING 4:

The eyebolts used in the aileron control assembly can be seen in Figure 7. These can be inspected using the inspection hatches located on the wing. Due to symmetry only one aileron has been shown. The same eyebolts will be found on the other side of the aircraft. The eyebolts need to be inspected and replaced where *noncompliant* eyebolts have been installed.

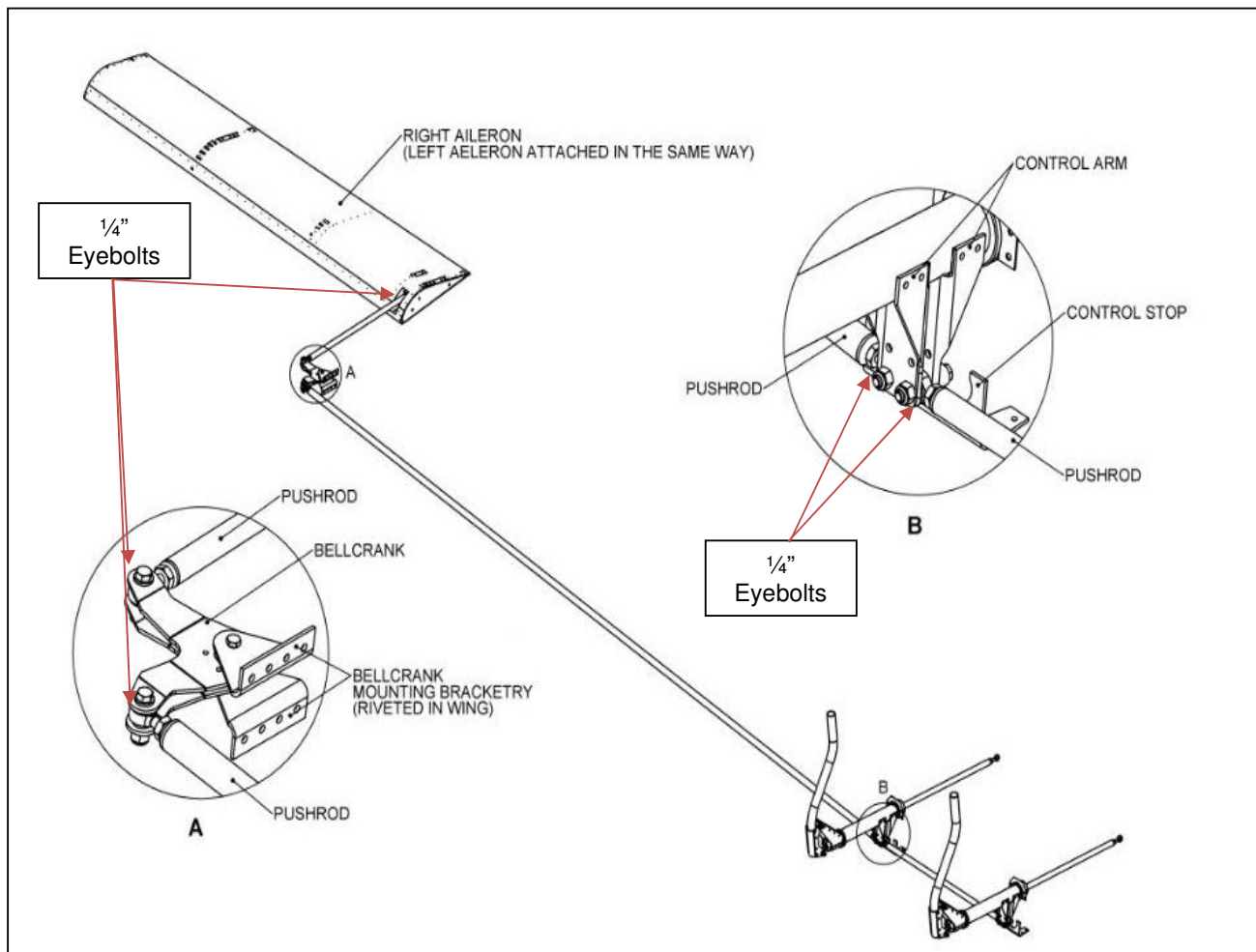


Figure 7: Aileron Controls

Use the following procedure to inspect the eyebolts used in the aileron controls, and replace if required:

- Step 1. In order to remove the eyebolts seen in Detail B refer to the steps in the applicable MAM shown in the table below.

Aircraft	Manual	Applicable Section	MAM Section Steps
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.1.1.1	3, 10
Sling 4	DC-MAM-001-X-C	4.1.2	3, 5 and 12

- Step 2. Ensure both eyebolts that are connected to the control arm in Detail B are replaced, with either a *type 1* or *type 2* eyebolt, if *noncompliant* eyebolts have been used.
- Step 3. Reverse the procedure in Step 1 to reinstall the eyebolt assembly.
- Step 4. To replace the eyebolts seen in Detail C of Figure 8, remove the AN4 locknut (13) and bolt (16). The eyebolt should now be uninstalled from the pushrod (5). A *type 1* or *type 2* eyebolt should then be installed on the pushrod.

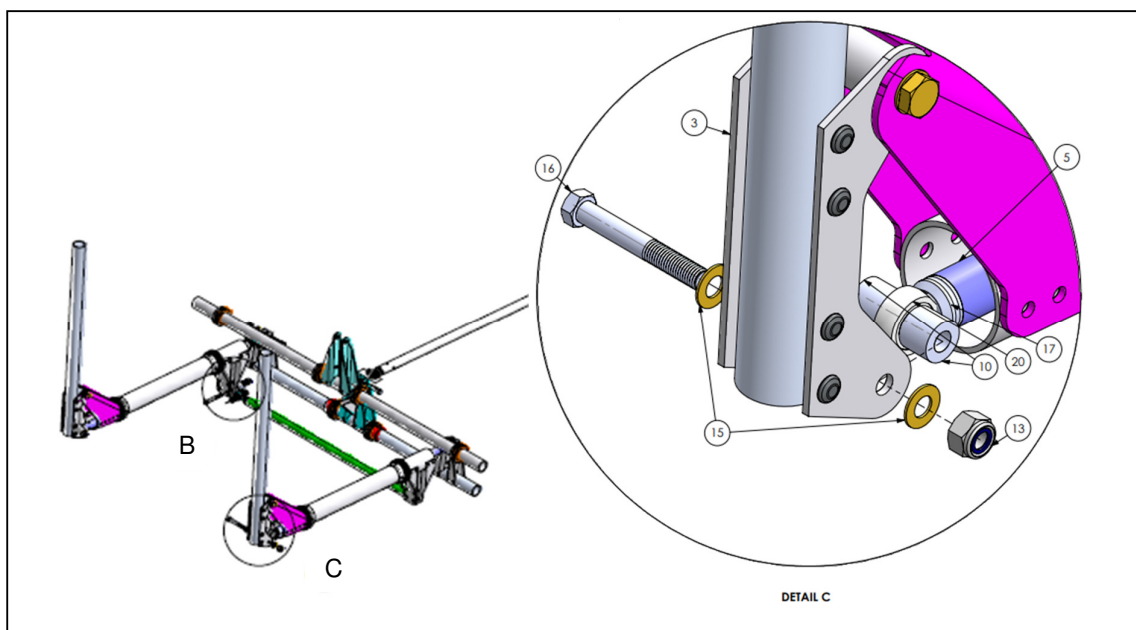


Figure 8: Eyebolt assembly, Detail C

- Step 5. Reassemble the eyebolt assembly, refer to Figure 8 for component placement.
- Step 6. Repeat Step 4 and Step 5 for the same eyebolt assembly on the other side of the aircraft.
- Step 7. Do not replace the seats that were removed in Step 1 until the required eyebolts shown in Section 3.2.5 (for Sling 2 and Sling LSA) and Section 3.2.6 (for Sling 4) have been inspected and replaced, if required.
- Step 8. The eyebolts used in the aileron bell-crank also need to be inspected and replaced if *noncompliant* eyebolts have been installed. These must be replaced with either *type 1* or *type 2* eyebolts. Remove the outboard inspection hatches on both wings, to expose the bell-cranks.

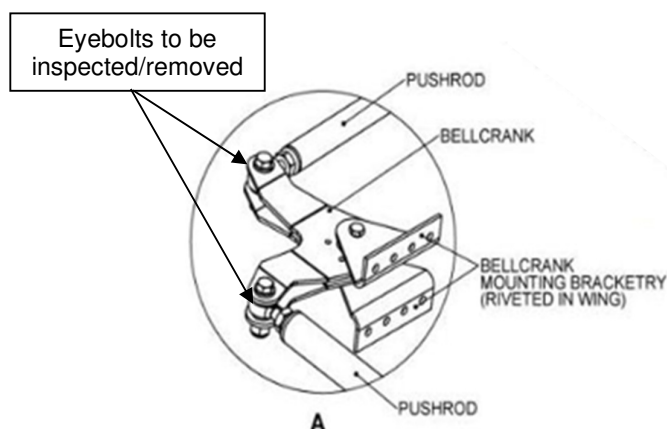


Figure 9: Aileron bell-crank assembly

- Step 9. Refer to Figure 9 and remove the AN4 locknuts and bolts.
- Step 10. The eyebolts can now be removed and replaced with either *type 1* or *type 2* eyebolts, if required.
- Step 11. Reinstall the eyebolts to the bell-crank assembly, by reversing the procedure in Step 9 . Refer to the installation procedure in the manual shown in the table below for component placement:

Aircraft	Manual	Applicable Section	MAM Figure Number
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.1.2.2	Figure 11
Sling 4	DC-MAM-001-X-C	4.1.5	Figure 11

- Step 12. Close the outboard inspection hatch.

- Step 13. For the eyebolts located at the ailerons leading edge, remove the AN4 bolt (9) shown in Figure 10. To access this bolt, you will need to drop the flap. To do this follow steps 1 and 2 *only*, of the flap removal procedure (Option1). This procedure can be found in the applicable MAM shown in the table below. Remember to support the flap during this step as it may drop.

Aircraft	Manual	Applicable Section	MAM Section Steps
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.1.3.2	1, 2
Sling 4	DC-MAM-001-X-C	4.1.10	1, 2

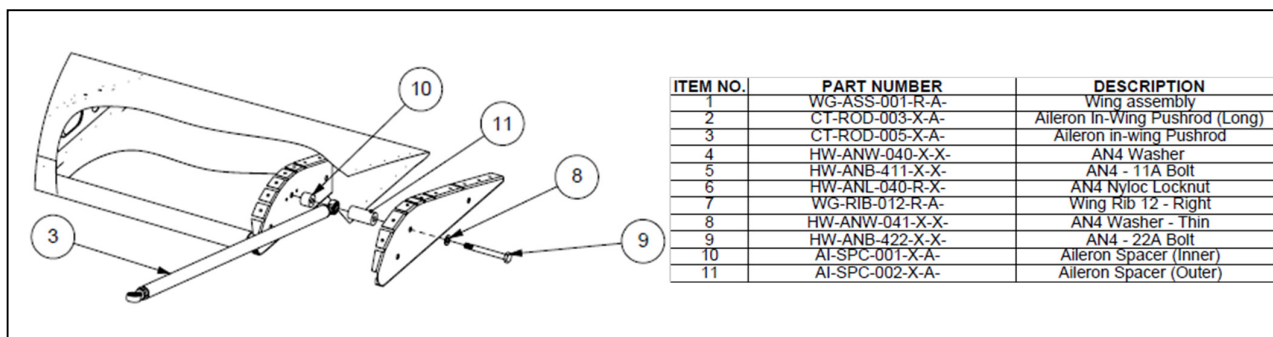


Figure 10: Aileron leading edge eyebolt assembly

- Step 14. After bolt (9) has been removed, the eyebolt can be replaced with either a *type 1* or *type 2* eyebolt. Reconnect it to the aileron and pushrod (3), as shown in Figure 10. Support the aileron during this step as it may drop once the eyebolt has been removed.
- Step 15. Reattach the flap by reversing the procedure followed in Step 13.
- Step 16. Repeat Step 9 to Step 15 to remove the eyebolts used in the aileron control assembly on the other side of the aircraft.
- Step 17. You will need to adjust the ailerons once the new eyebolts have been installed, to ensure correct aileron deflection. To do this, follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Sections
Sling 2 and Sling LSA	DC-MAM-002-X-B	1.13 & 4.1.2.3
Sling 4	DC-MAM-001-X-C	1.13 & 4.16

### 3.2.3. AILERON CONTROLS FOR SLING 4 TSi:

The eyebolts used in the aileron control assembly can be seen in Figure 11. These can be inspected using the inspection hatches located on the wing. Due to symmetry only one aileron has been shown. The same eyebolts will be found on the other side of the aircraft. The eyebolts need to be inspected and replaced where *noncompliant* eyebolts have been installed.

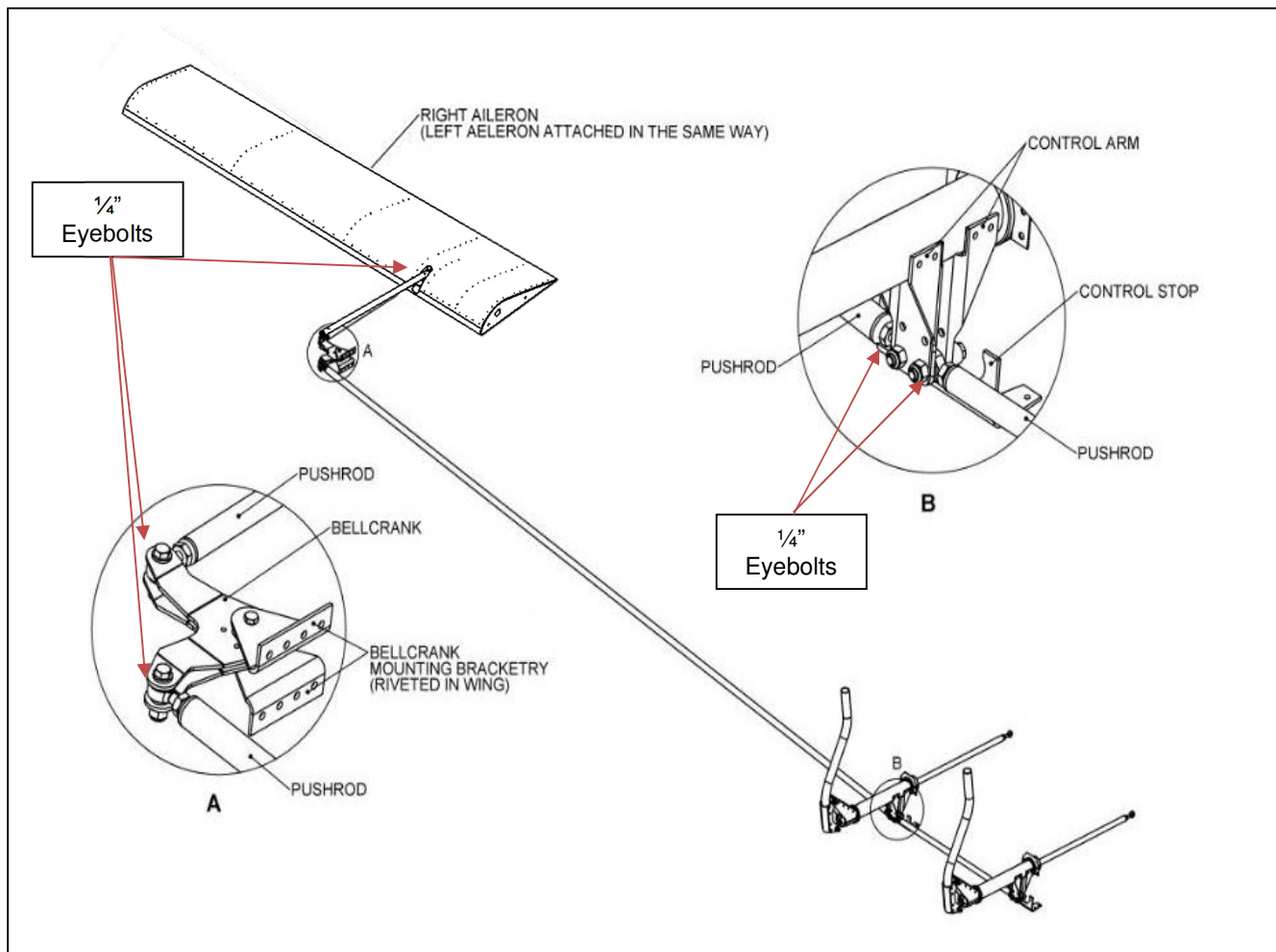


Figure 11: Aileron Controls

Use the following procedure to inspect the eyebolts used in the aileron controls, and replace if required:

- Step 1. In order to remove the eyebolts seen in Detail B refer to the applicable MAM shown in the table below, to remove the necessary components to expose the eyebolts. This must be completed for both sides of the aircraft.

Aircraft	Manual	Applicable Section	MAM Section Steps
Sling 4 TSi	DC-MAM-001-X-F	4.1.1.1	3,4, 5 and 12

- Step 2. A *type 1* or *type 2* eyebolt should then be installed in place of the *noncompliant* eyebolt, if required. Ensure both eyebolts that are connected to the control arm in Detail B are replaced, if *noncompliant* eyebolts have been used.
- Step 3. Reverse the procedure in Step 1 to reinstall the eyebolt assembly. Do not replace the seats and control covers that were removed in Step 1 until the required eyebolts shown in Section 3.2.6 have been inspected and replaced, if required.

- Step 4. To replace the eyebolts seen in Detail C of Figure 12, remove the AN4 locknut (13) and bolt (16). The eyebolt should then be uninstalled from the pushrod (5). A *type 1* or *type 2* eyebolt should then be installed on the pushrod.

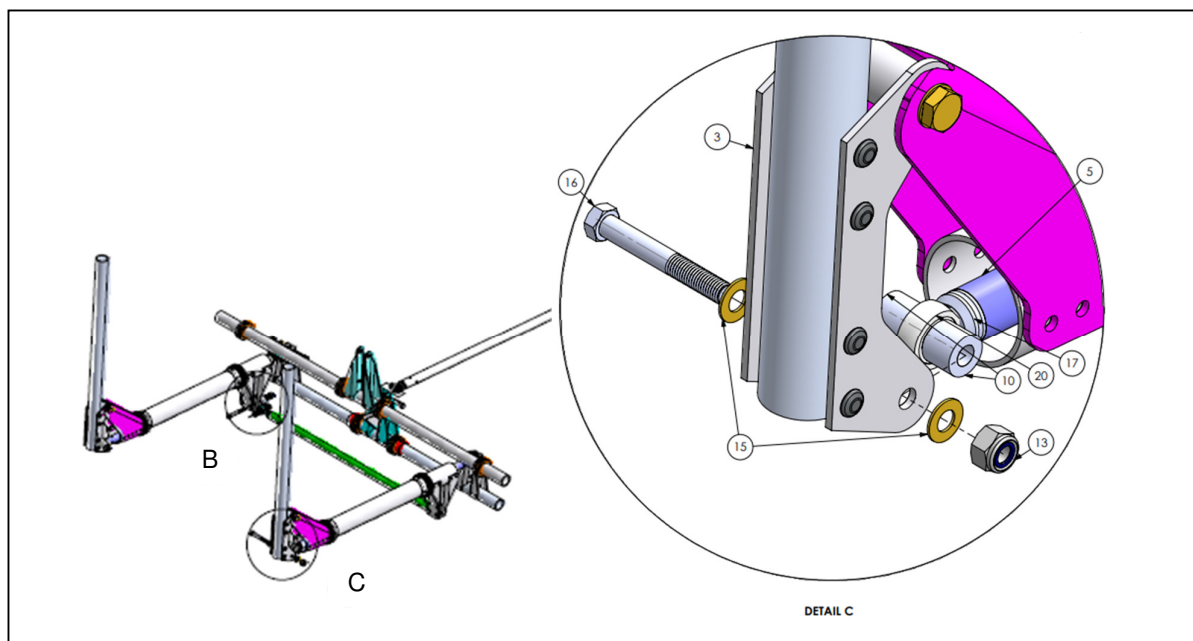


Figure 12: Eyebolt assembly, Detail C

- Step 5. Reassemble the eyebolt assembly by reversing the procedure in Step 4, refer to Figure 12 for component placement.
- Step 6. The eyebolts used in the aileron bell-crank also need to be inspected and replaced if *noncompliant* eyebolts have been installed. These must be replaced with either *type 1* or *type 2* eyebolts. Remove the outboard inspection hatches on both wings, to expose the bell-cranks.

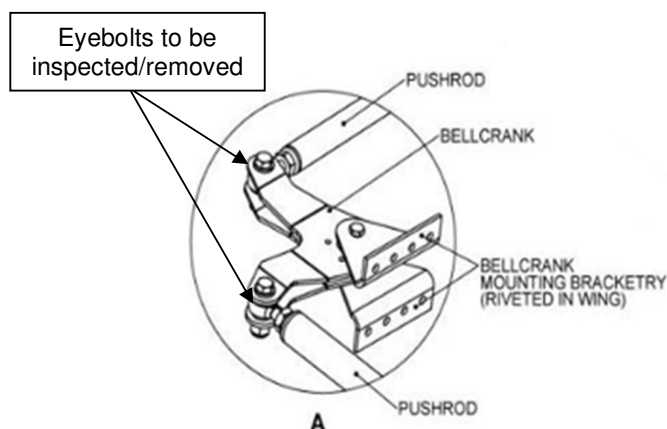


Figure 13: Aileron bell-crank assembly

- Step 7. Refer to Figure 13 and remove the AN4 locknuts and bolts.
- Step 8. The eyebolts can now be removed and replaced with either *type 1* or *type 2* eyebolts, if required.



Step 9. Reinstall the eyebolts to the bell-crank assembly. Refer to the installation procedure in the manual, shown in the table below, for component placement:

Aircraft	Manual	Applicable Section	MAM Figure Number
Sling 4 TSi	DC-MAM-001-X-F	4.1.2.2	Figure 12

Step 10. Close the outboard inspection hatch.

Step 11. For the eyebolts located at the ailerons leading edge, remove the AN4 bolt (9) shown in Figure 14. To access this bolt, you will need to drop the flap. To do this follow steps 1 and 2 *only*, of the Flap removal procedure (Option1). This procedure can be found in Section 4.1.3.2 of manual DC-MAM-001-X-F. Remember to support the aileron and flap during this step as they may drop.

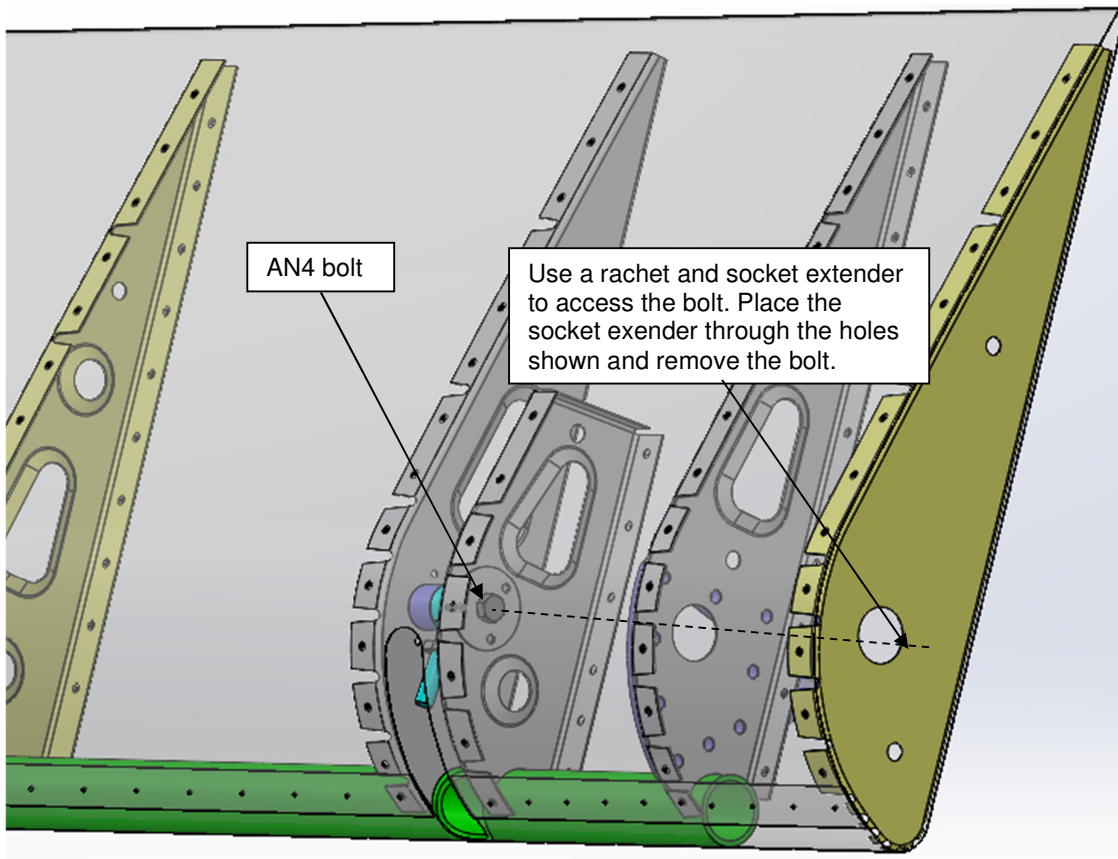


Figure 14: Aileron leading edge eyebolt assembly

Step 12. After the bolt has been removed, the eyebolt can be replaced with either a *type 1* or *type 2* eyebolt. It should then be reconnected to the aileron and pushrod, as shown in Figure 15.

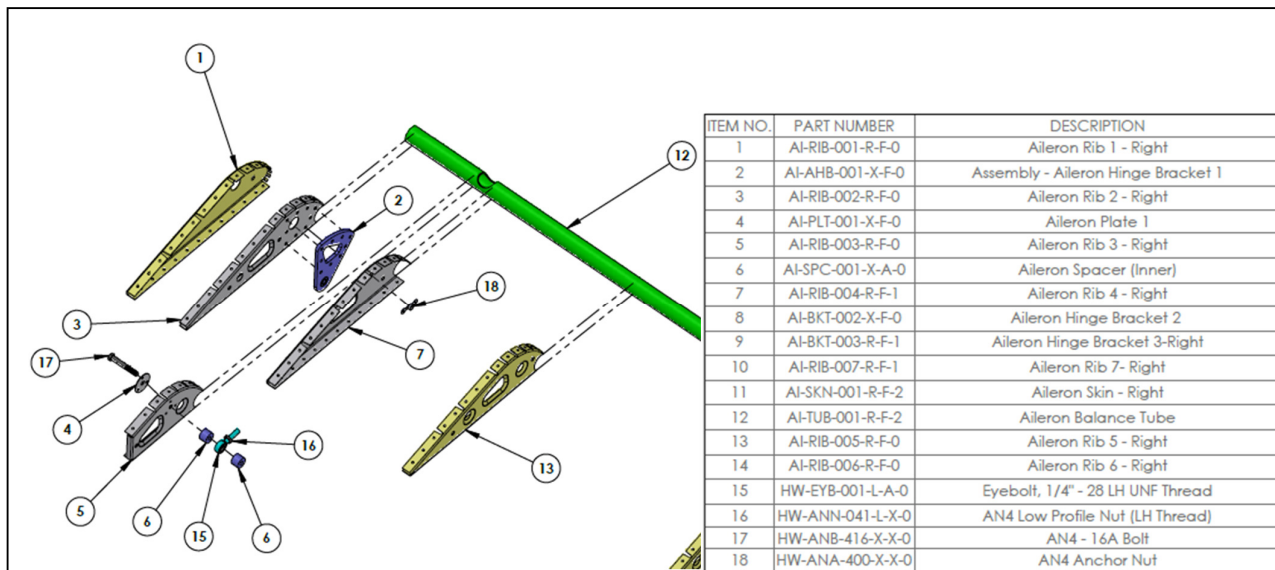


Figure 15

- Step 13. Reconnect the flap by reversing the procedure followed in Step 11.
- Step 14. Repeat Step 6 to Step 13 to remove the eyebolts used in the aileron control assembly on the other side of the aircraft.
- Step 15. You will need to adjust the ailerons once the new eyebolts have been installed, to ensure correct aileron deflection. To do this, follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Sections
Sling 4 TSi	DC-MAM-001-X-F	1.13 & 4.1.2.3



### 3.2.4. FLAP CONTROLS FOR ALL AIRCRAFT:

The eyebolts used in the flap control assembly can be seen in Figure 16. These can be inspected using the inspection hatches located on the wing. Due to symmetry only one flap has been shown. The same eyebolts will be found on the other side of the aircraft. The eyebolts need to be inspected and replaced where *noncompliant eyebolts* have been installed.

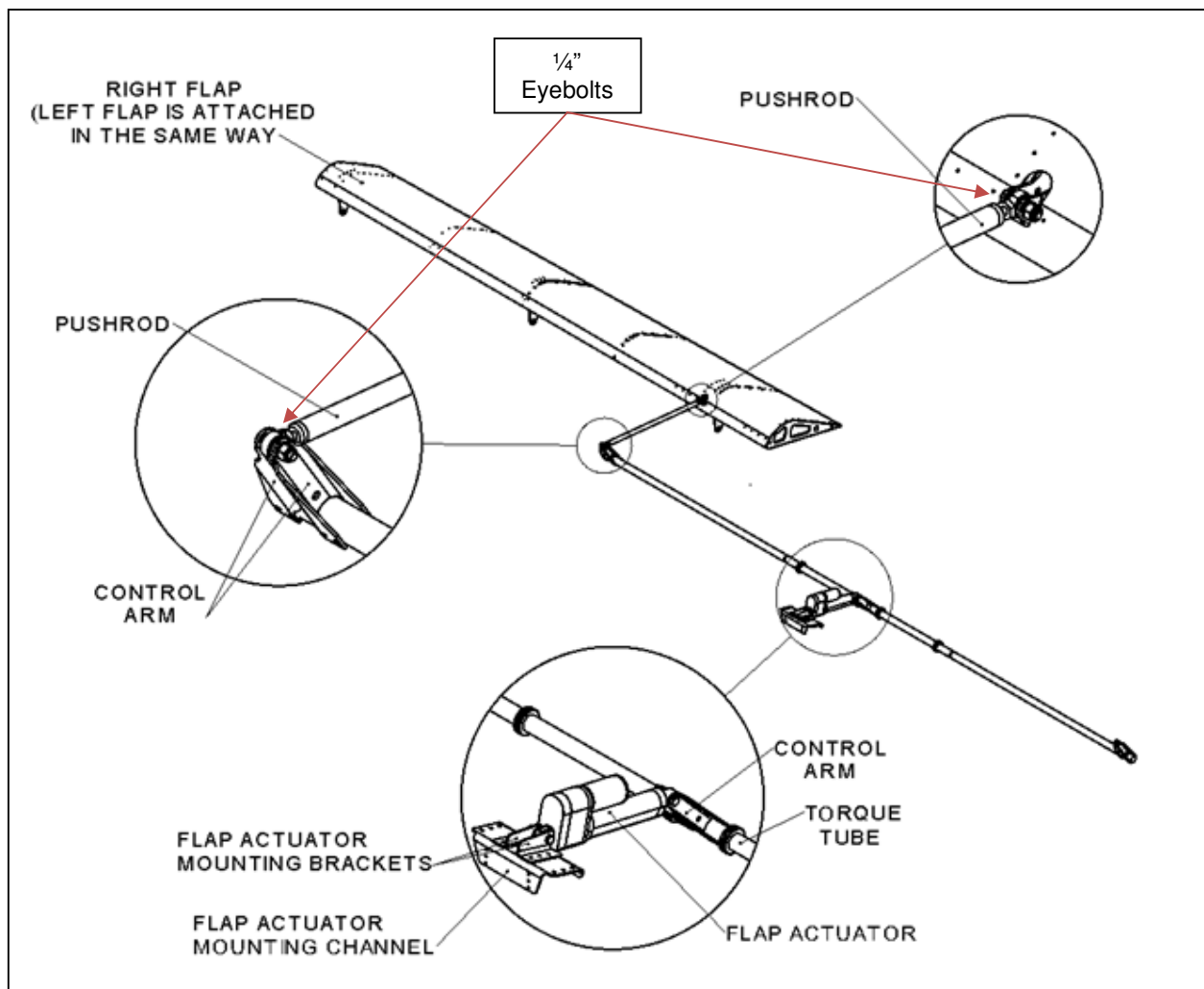


Figure 16: Flap Controls

Use the following procedure to inspect, and replace the eyebolts if they are *noncompliant*:

- Step 1. To remove the eyebolt in the flaps' leading edge, follow steps 1 and 2 in the removal procedure (option 1) with reference to the following manual sections:

Aircraft	Manual	Applicable Section(s)	MAM Section Steps
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.1.3.2	1 and 2
Sling 4	DC-MAM-001-X-C	4.1.10	1 and 2
Sling 4 TS <i>i</i>	DC-MAM-001-X-F	4.1.3.2	1 and 2

- Step 2. The eyebolt can then be replaced with a *type 1* or *type 2* eyebolt if required.  
Step 3. Reverse the procedure in Step 1, to reinstall the eyebolts in the flap's leading edge.

- Step 4. To remove the eyebolt in the flaps' control arm, follow steps 1 & 2 in the removal procedure (option 2) with reference to the following manual sections:

<b>Aircraft</b>	<b>Manual</b>	<b>Applicable Section(s)</b>	<b>MAM Section Steps</b>
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.1.3.2	1 and 2
Sling 4	DC-MAM-001-X-C	4.1.10	1 and 2
Sling 4 TSi	DC-MAM-001-X-F	4.1.3.2	1 and 2

- Step 5. The eyebolt can then be replaced with a *type 1* or *type 2* eyebolt if required.
- Step 6. Reverse the procedure in Step 4 to reconnect the eyebolt to the control arm.
- Step 7. Repeat Step 1 to Step 6 to replace the eyebolts on the other side of the aircraft.
- Step 8. You will need to adjust the flaps once the new eyebolts are installed, to ensure correct flap deflection. To do this follow the instructions in the applicable MAM shown in the table below, and ensure correct flap deflection:

<b>Aircraft</b>	<b>Manual</b>	<b>Applicable Section(s)</b>
Sling 2 and Sling LSA	DC-MAM-002-X-B	1.13 & 4.1.3.3
Sling 4	DC-MAM-001-X-C	1.13 & 4.1.11
Sling 4 TSi	DC-MAM-001-X-F	1.13 & 4.1.3.3

- Step 9. Close all flap inspection hatches on the wings.

### 3.2.5.ELEVATOR CONTROLS SLING 2 & SLING LSA:

This section is only applicable to the Sling 2 and Sling LSA. The eyebolts used in the Sling 2 and Sling LSA elevator controls can be seen in Figure 17.

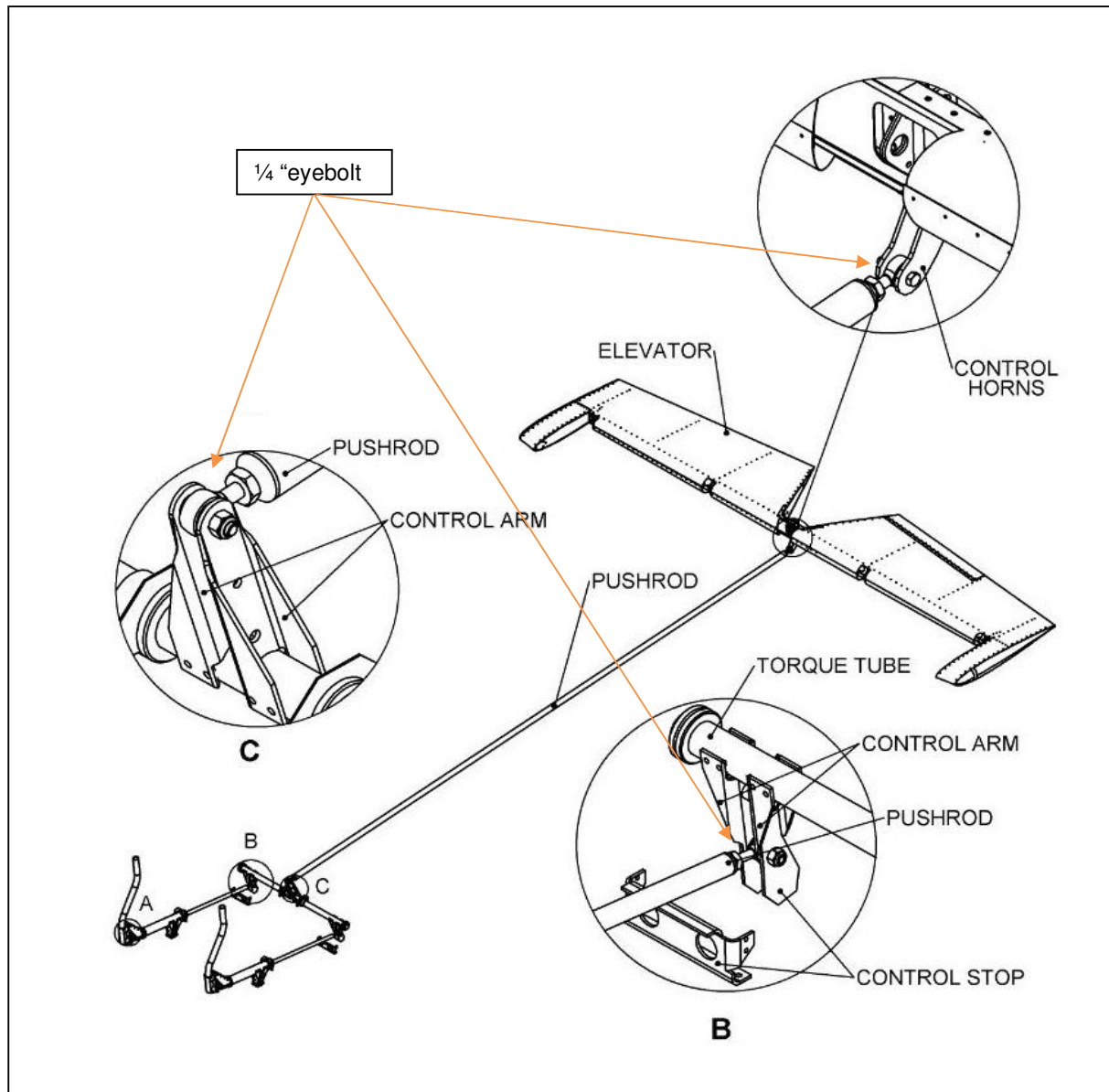


Figure 17: Sling 2 and Sling LSA elevator control system

Use the following procedure to inspect the eyebolts, and replace if *noncompliant*:

- Step 1. Ensure the seats and control covers have been removed, as stated in Section 3.2.2.
- Step 2. Inspect the eyebolts seen in Detail C of Figure 17. An exploded view of Detail C can be seen in Figure 18.

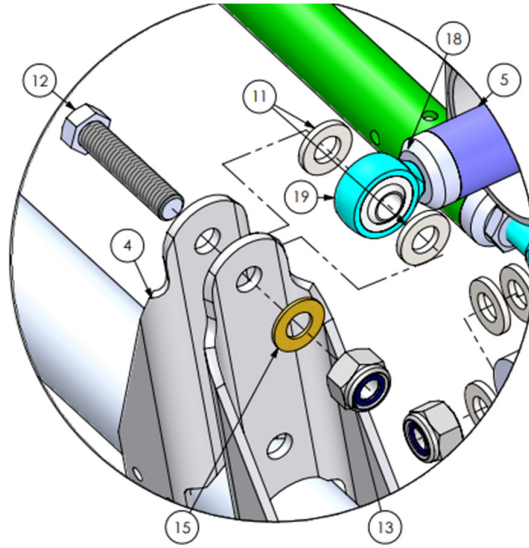


Figure 18: Eyebolt assembly, Detail C

- Step 3. Refer to Figure 18. If a *noncompliant* eyebolt has been used, it must be replaced (with either a *type 1* or *type 2*). To do this, remove the AN4 locknut (13) and bolt (12). The eyebolt can now be uninstalled from the pushrod and a new one can be installed.
- Step 4. Once the new eyebolt has been installed onto the pushrod, reconnect the eyebolt assembly. Refer to Figure 18 for part layout.
- Step 5. Next, the eyebolts seen in Detail B of Figure 17 will need to be inspected and replaced if found to be *noncompliant*.
- Step 6. An enlarged view of Detail B can be seen in Figure 19.

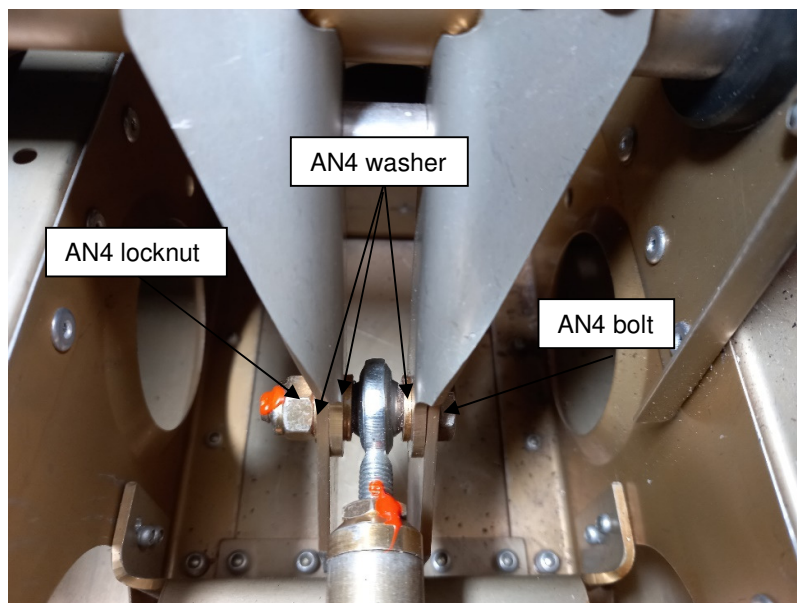


Figure 19: Enlarged view of eyebolt assembly of Detail B

- Step 7. Refer to Figure 19 and remove the locknut and bolt.
- Step 8. Replace the *noncompliant* eyebolt with a *type 1* or *type 2*.
- Step 9. Reinstall the components, as shown in Figure 19.
- Step 10. Repeat Step 7 to Step 9 for the corresponding eyebolt assembly on the other side of the aircraft.

- Step 11. The last eyebolt that needs to be inspected and replaced is the one connected to the elevator horn in detail G of Figure 20.

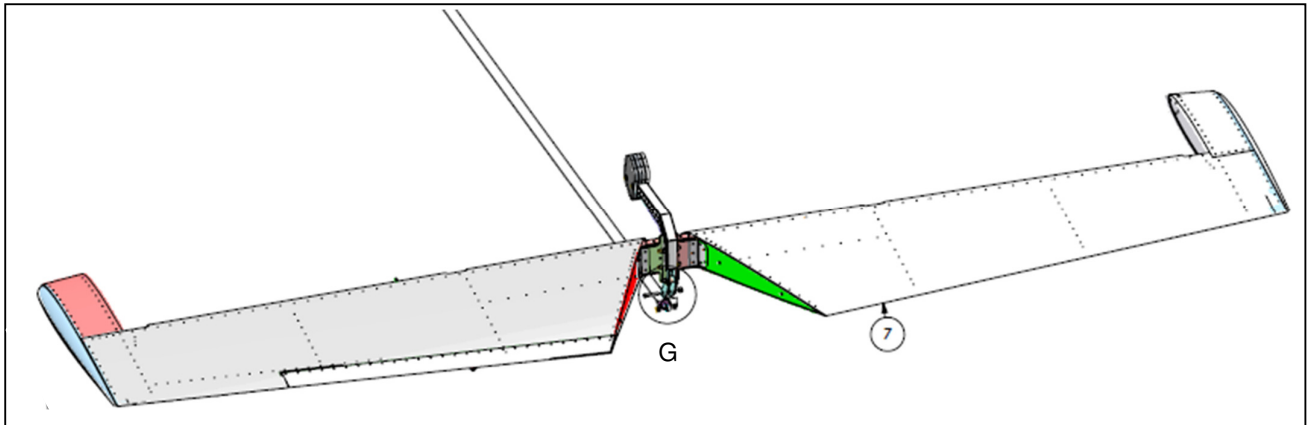


Figure 20

- Step 12. To access this, you will need to remove the fairings (2) & (3) in Figure 21. The eyebolts shown in Figure 20 can be accessed without removing the tail.

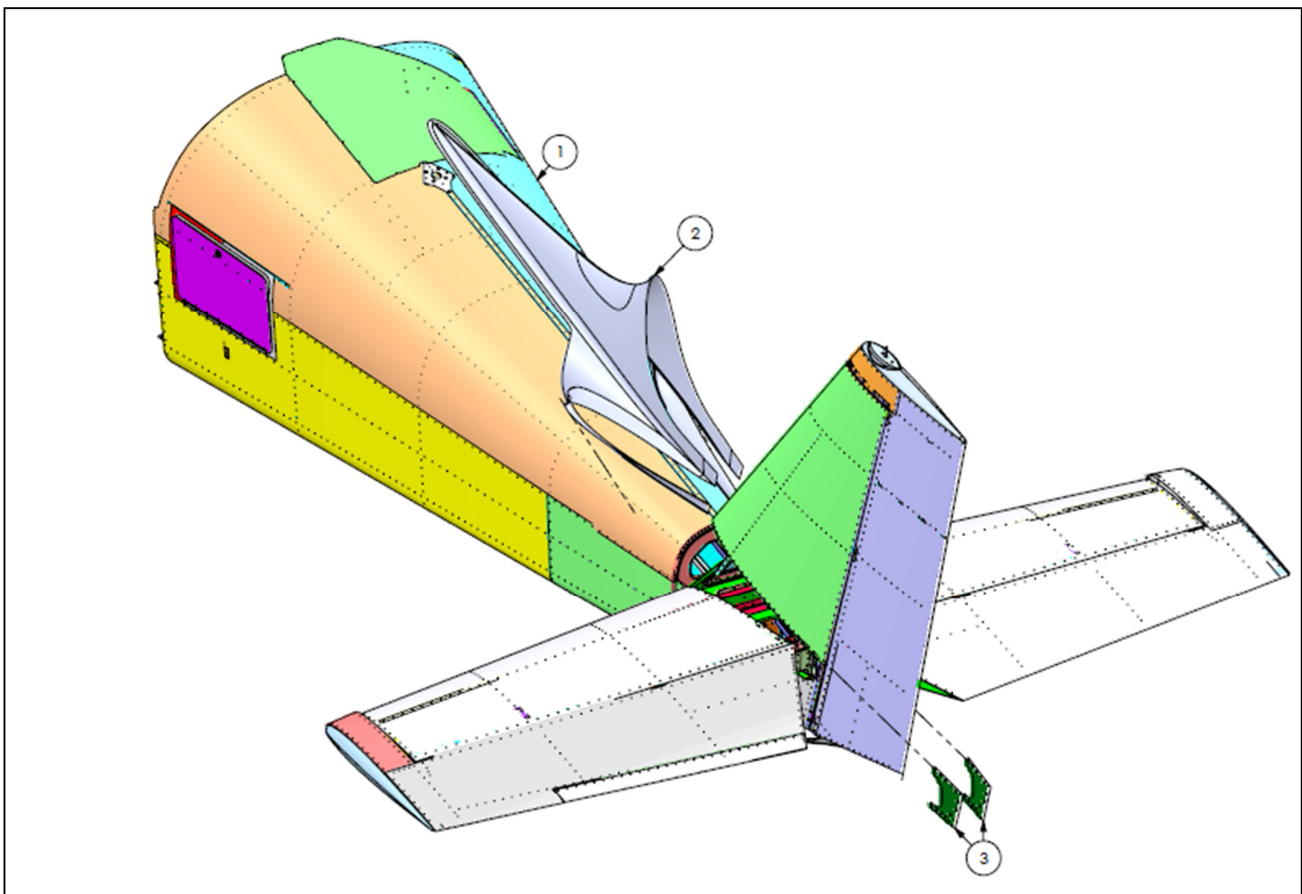


Figure 21: Fairing removal

- Step 13. Remove the AN4 locknut (3) and bolt (4), shown in Figure 22.

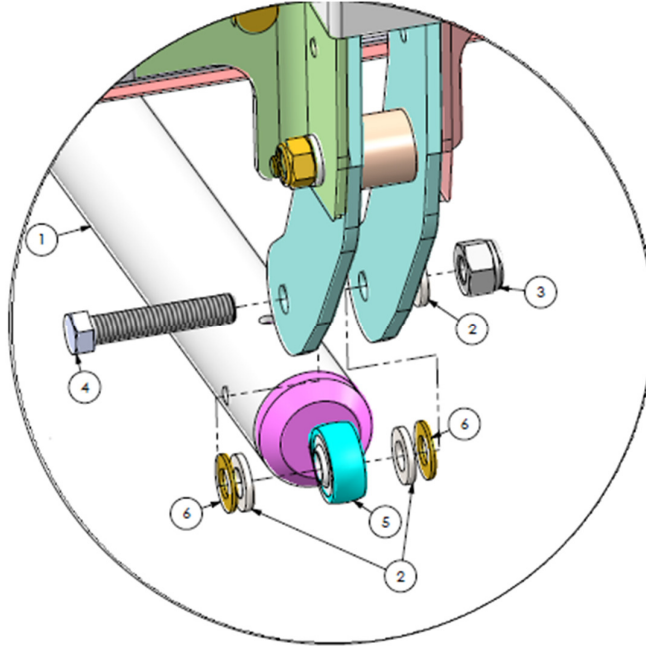


Figure 22: Detail G

- Step 14. Replace the *noncompliant* eyebolt (5) with either a *type 1* or *type 2*.  
 Step 15. Reassemble the eyebolt assembly as seen in Figure 22.  
 Step 16. You will need to adjust the elevator once the new eyebolts are installed to ensure correct elevator deflection. To do this follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Sections
Sling 2 and Sling LSA	DC-MAM-002-X-B	1.13 & 4.2.1.5

- Step 17. Replace the control cover that was removed in Section 3.2.2.  
 Step 18. Replace the seats. To do this follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Section
Sling 2 and Sling LSA	DC-MAM-002-X-B	4.3.2.1

### 3.2.6. ELEVATOR CONTROLS SLING 4 AND SLING 4 TSi:

This section is only applicable to the Sling 4 and Sling 4 TSi. The eyebolts used in the elevator controls can be seen in Figure 23. The eyebolts need to be inspected and replaced where *noncompliant* eyebolts have been installed.

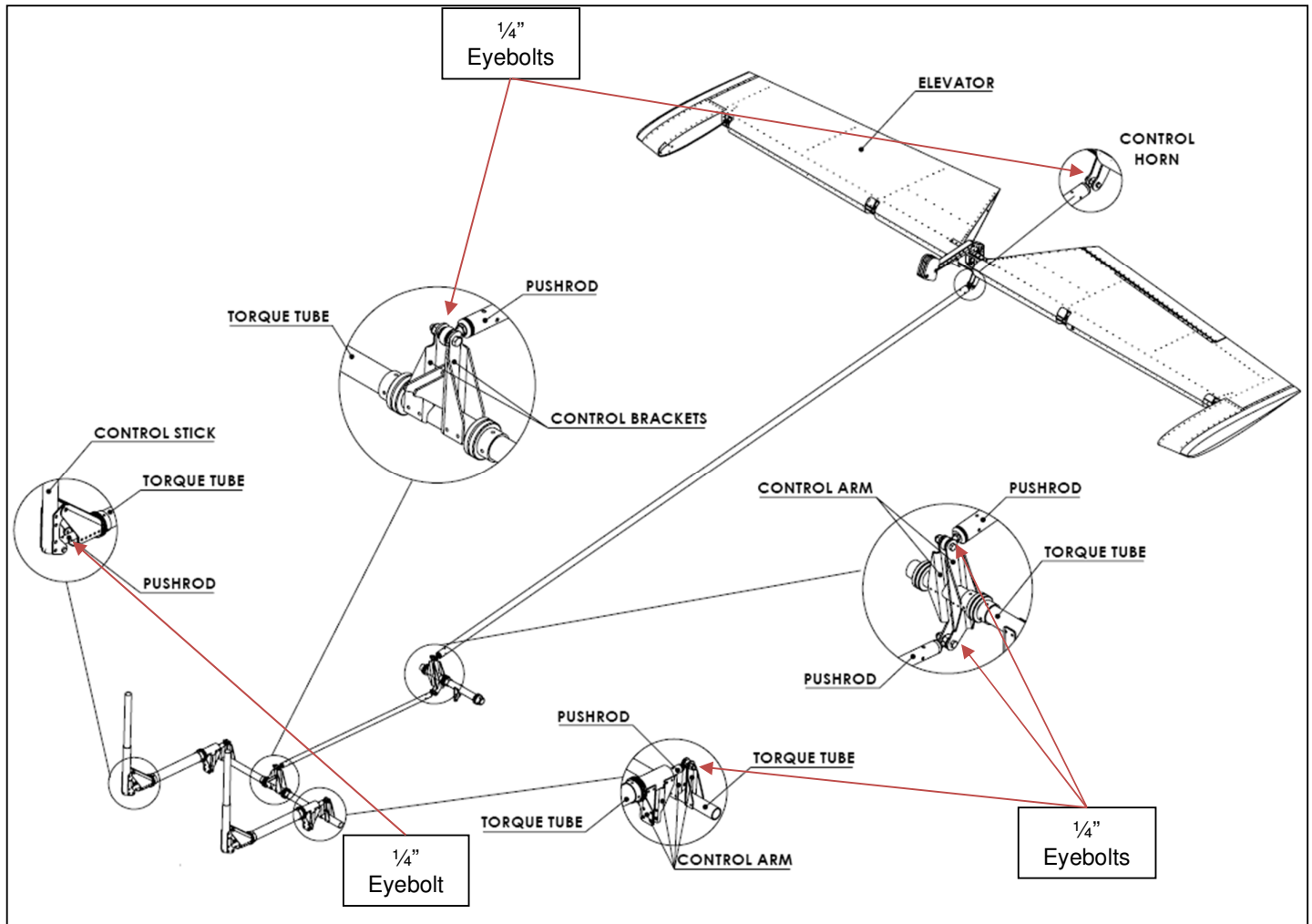


Figure 23

Use the following procedure to inspect the eyebolts, and replace if of *type 3*:

- Step 1. Ensure the front seats and control covers have been removed as stated in Section 3.2.2 (sling 4) and Section 3.2.3 (Sling 4 TSi).
- Step 2. Inspect the eyebolts seen in Detail A of Figure 24.



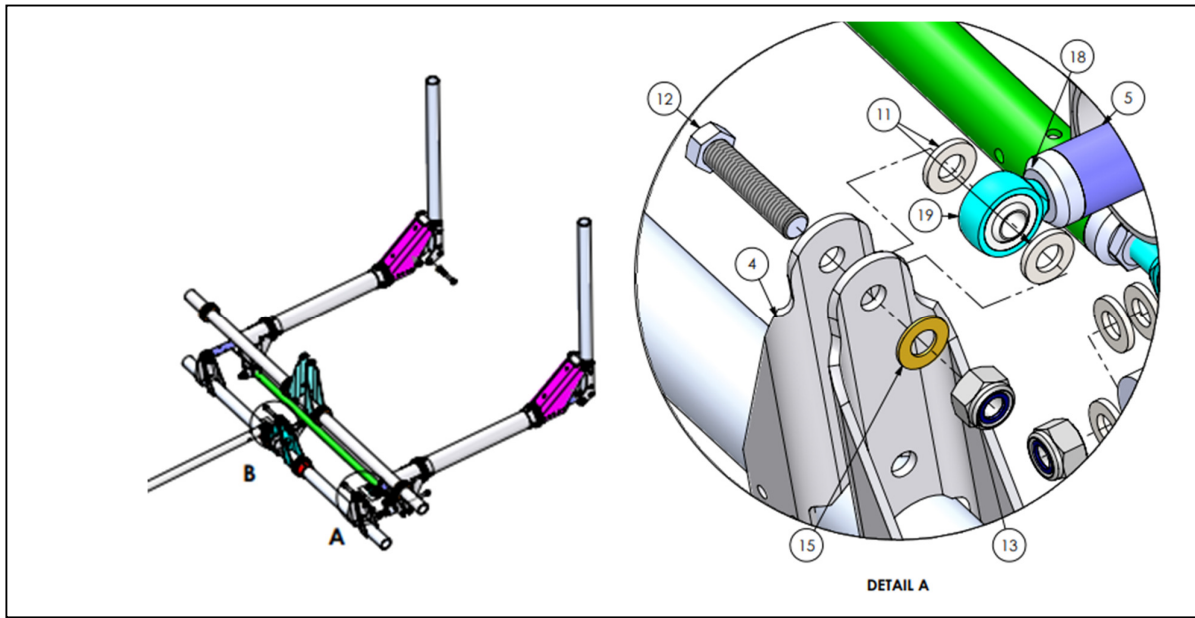


Figure 24: Eyebolt assembly, Detail A

- Step 3. If *noncompliant* eyebolts have been used, they must be replaced (with either *type 1* or *type 2*). To do this remove the AN4 locknut (13) and bolt (12), as seen in Figure 24. The eyebolt can now be uninstalled from the pushrod. Once uninstalled, install a new one of either *type 1* or *type 2*.
- Step 4. Once the eyebolt has been installed onto the pushrod, reconnect the eyebolt assembly. Refer to Figure 24 for the way the assembly fits together.
- Step 5. Next inspect the eyebolts seen in Detail B of Figure 25.

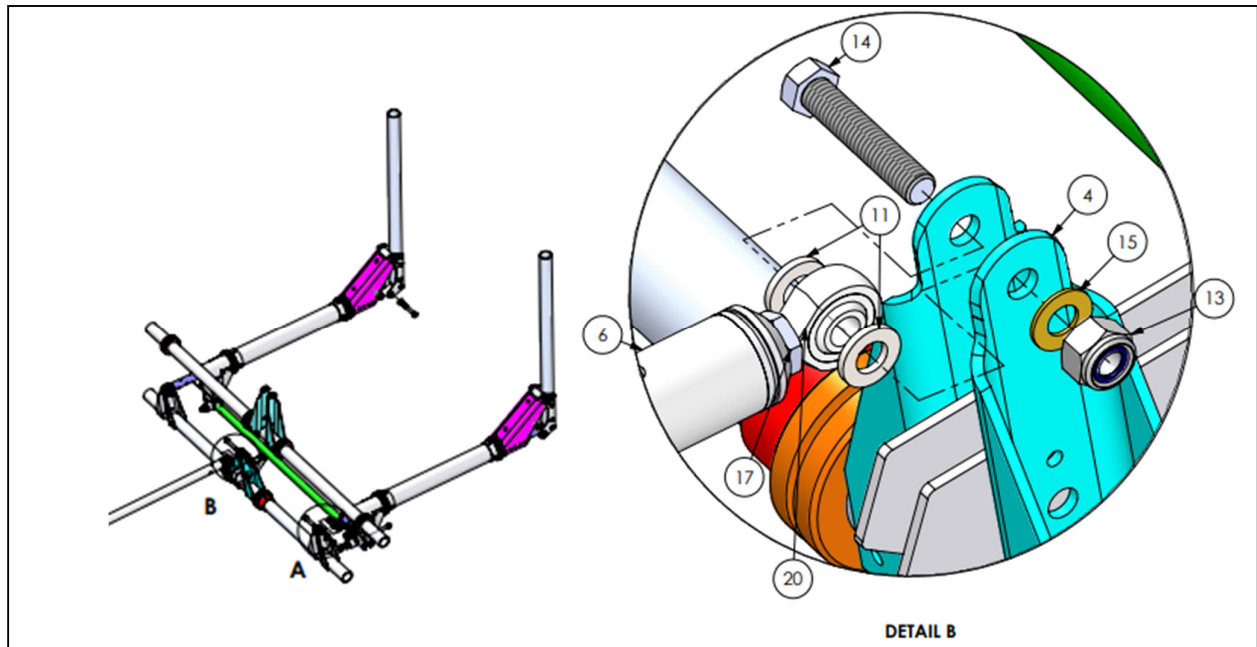


Figure 25: Eyebolt assembly, Detail B

- Step 6. Remove the AN4 locknut (13) and bolt (14), as seen in Figure 25. Once removed the eyebolt can be uninstalled and an eyebolt of *type 1* or *type 2* can be reinstalled.
- Step 7. Reassemble the eyebolt assembly, refer to Figure 25 for part placement.



Step 8. Next, the eyebolts seen in Detail E and F in Figure 26 will need to be inspected and replaced if found to be of *noncompliant*. To access these in the Sling 4 TSi, remove the rear seats. To do this follow the instructions in the applicable MAM shown in the table below:

Aircraft	Manual	Applicable Section
Sling 4	DC-MAM-001-X-C	4.3.4
Sling 4 TSi	DC-MAM-001-X-F	4.2.2.2

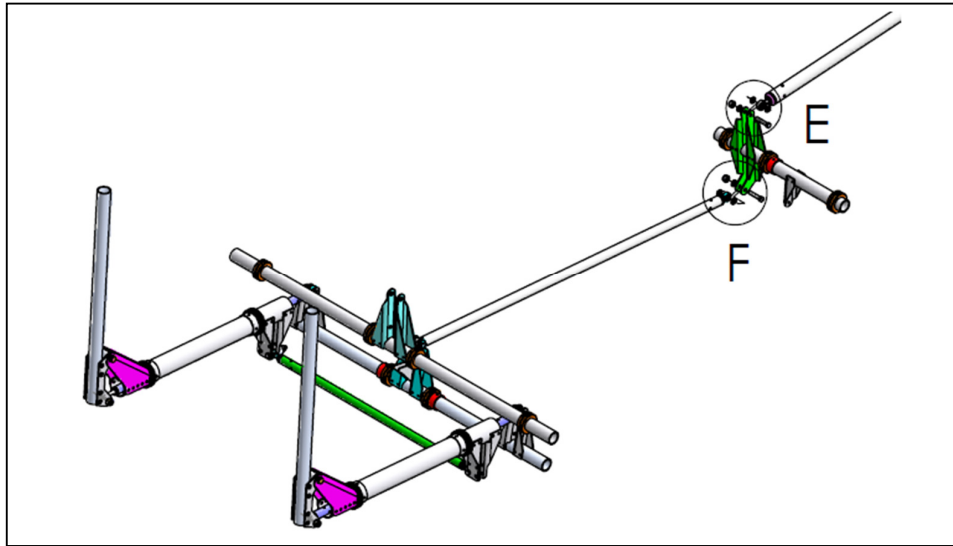


Figure 26

Step 9. To replace the eyebolt seen in Figure 27, remove the AN4 locknut (13) and bolt (12). Replace the *noncompliant* eyebolt (20) with either a *type 1* or *type 2* eyebolt.

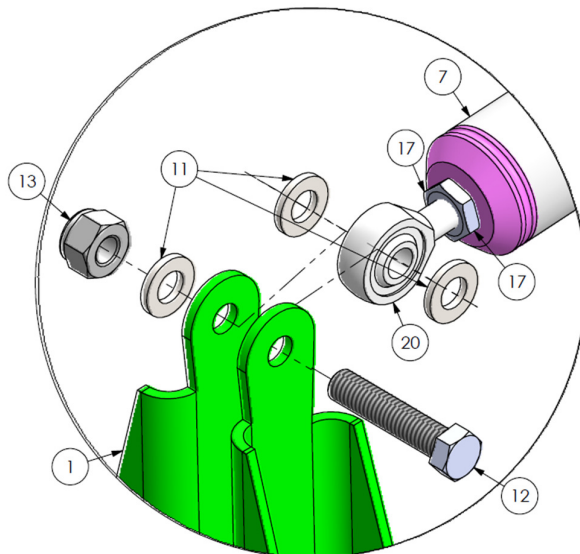


Figure 27: Eyebolt assembly, Detail E

Step 10. Once the eyebolt has been replaced, reassemble the eyebolt assembly. Refer to Figure 27 for component positions.

Step 11. To replace the eyebolt seen in Figure 28, remove the AN4 locknut (13) and bolt (12). Replace the *noncompliant* eyebolt with either a *type 1* or *type 2* eyebolt.

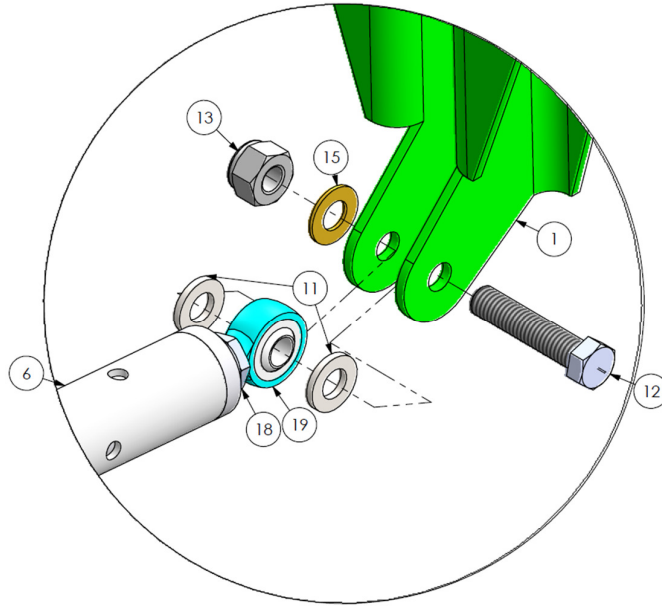


Figure 28: Eyebolt assembly, Detail F

- Step 12. Once the eyebolt has been replaced, reconstruct the eyebolt assembly. Refer to Figure 28 for component layout.
- Step 13. The last eyebolt that needs to be inspected and replaced is the one connected to the elevator horn, located in detail G of Figure 29.

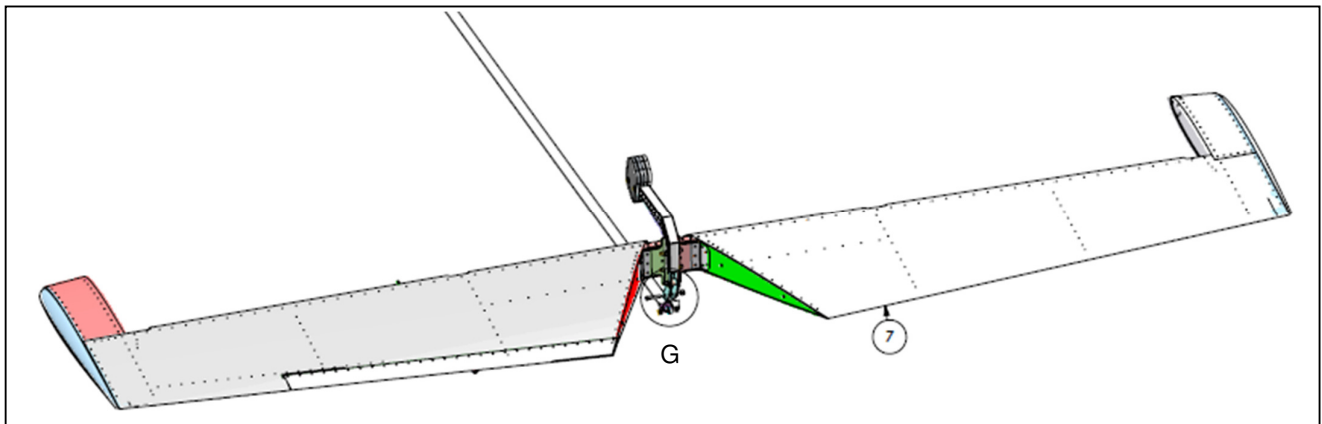
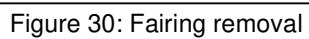


Figure 29

- Step 14. To access this, you will need to remove the fairings (2) & (3) in Figure 30. The eyebolt shown in Figure 31 can be accessed without removing the tail.



This diagram shows an exploded view of a mechanical assembly. The components are numbered as follows:

- 1:** A long threaded rod or bolt.
- 2:** A small cylindrical component, possibly a bush or spacer.
- 3:** A hexagonal nut.
- 4:** A hexagonal head of the bolt.
- 5:** A large blue cylindrical component, likely a pulley or wheel.
- 6:** Two smaller yellow cylindrical components, possibly spacers or washers.
- 7:** A green L-shaped bracket or frame.

The diagram illustrates how these parts fit together to form a complete assembly.

Step 16. Replace the eyebolt (5) with either a *type 1* or *type 2*.

- Step 17. Reassemble the eyebolt assembly as seen in Figure 31.
- Step 18. You will need to adjust the elevator once the new eyebolts are installed to ensure correct elevator deflection. To do this follow the instructions in the applicable MAM shown in the table below:

<b>Aircraft</b>	<b>Manual</b>	<b>Applicable Section(s)</b>
Sling 4	DC-MAM-001-X-C	1.13 & 4.2.6
Sling 4 TSi	DC-MAM-001-X-F	1.13 & 4.3.1.5

- Step 19. Replace the control cover that was removed in Section 3.2.2 (Sling 4) and Section 3.2.3 (Sling 4 TSi).
- Step 20. Replace the seats. To do this follow the instructions in the applicable MAM shown in the table below:

<b>Aircraft</b>	<b>Manual</b>	<b>Applicable Section(s)</b>
Sling 4	DC-MAM-001-X-C	4.3.3 & 4.3.4
Sling 4 TSi	DC-MAM-001-X-F	4.2.2.1 and 4.2.2.2

Signed on this the 7 day of September 2022



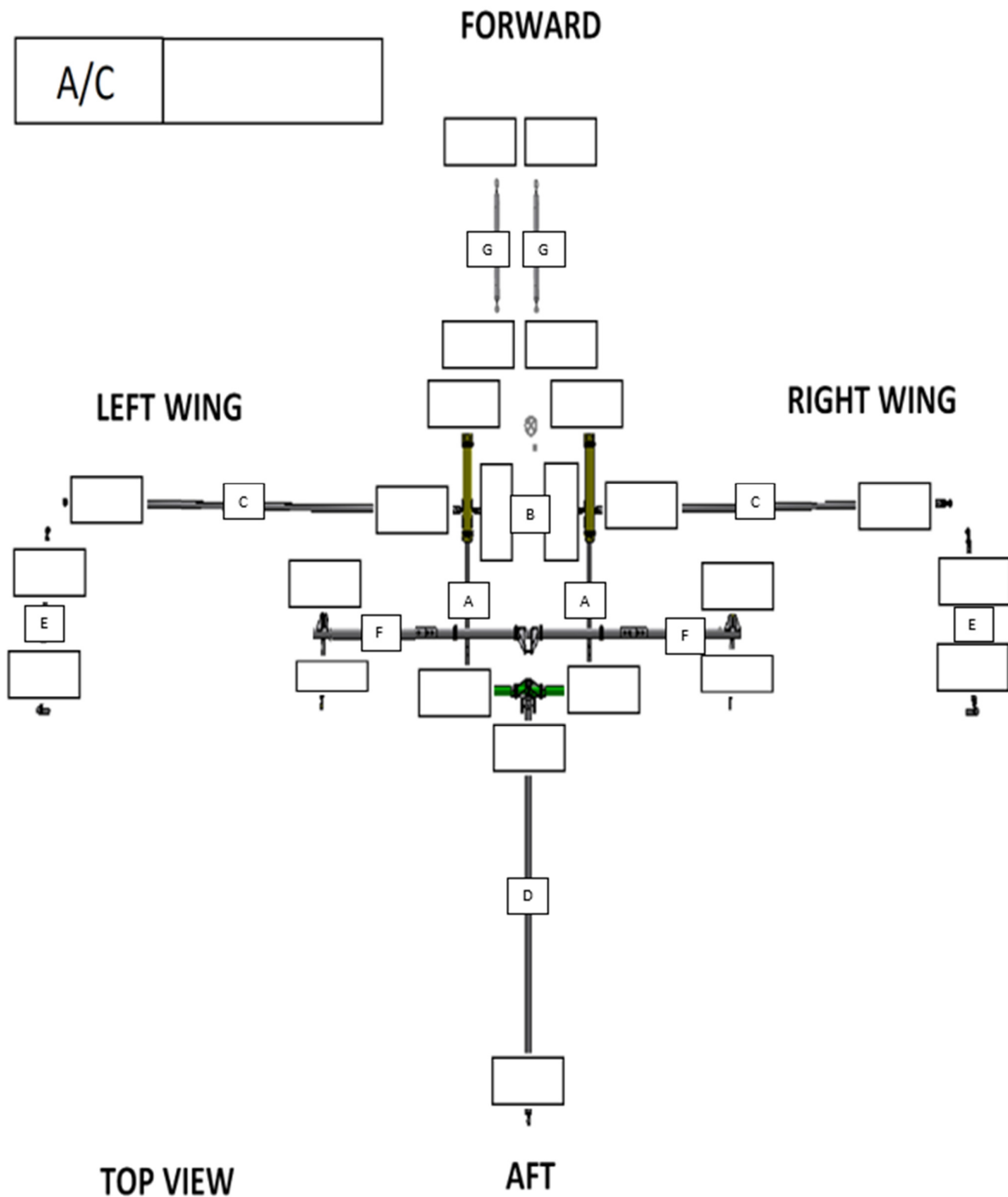
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**ACCOUNTABLE MANAGER**  
**JAMES PITMAN**

## APPENDIX:

Use the following diagrams to help track which eyebolts have been checked and replaced on the aircraft (A/C)

### *Sling 2 & Sling LSA Control Overview:*



*Sling 4 & Sling 4 TSi Control Overview:*

