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Service Bulletin

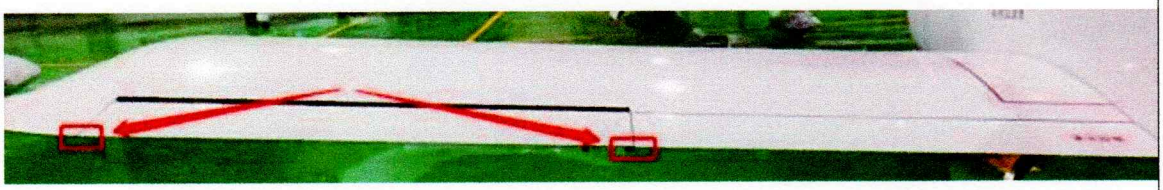
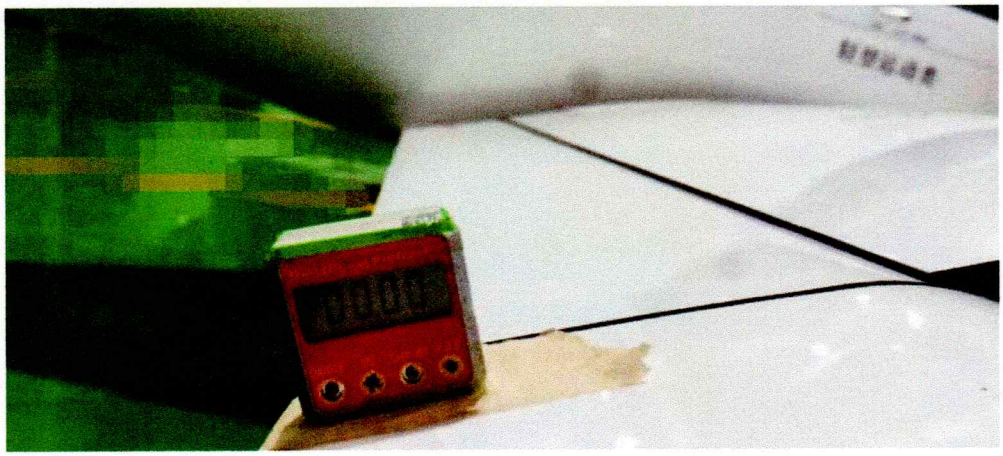
Starair Aircraft Co.,Ltd.

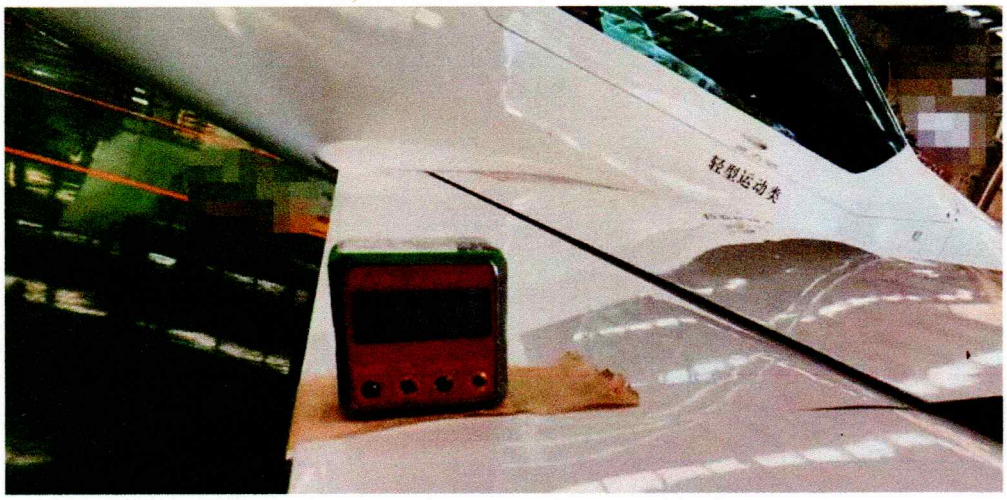
Document No.: 2023-SA60L-27-01

Ver.: 01

Date: October 28, 2023

Subjct	**Inspection and replacement of flap motor**
Category	Important
Applicability	This bulletin applies to the Aurora SA60L light sport aircraft listed in Attached Table 1.
Finish Time	Aircraft within the scope of application must be done the inspection work in Article (1) of the Required Action(s) completly before the next flight. Aircraft within the scope of application must be done the work required by this service bulletin completly before December 20, 2023.
Reason	According to the flap motor supplier, Some flap motors(Part Number : SP12C17A08-06-CAA) used in some Aurora SA60L aircraft (see Attached Table 1 for details) , may experience abnormal slipping of potentiometer components under certain usage conditions due to inadequate installation of related components during product assembly. Through internal analysis by our company, this situation may lead to a larger angle when the flaps are extended, leading to potential unsafe conditions. To avoid uncontrollable risks, the aircraft operator is required to inspect the aircraft within the scope of application as required and pay attention to the changes of the flap angle during flight. After receiving the parts sent by Starair Aircraft Co., Ltd., the operator is required to replace the flap motor and return the original flap motor to Starair Aircraft Co., Ltd.. Issue Date: October 28, 2023 Effective Date: October 28, 2023

Required Action(s)	**1. Before the first flight of the aircraft within the scope of application after receiving this service bulletin, the following steps should be followed to inspect and decide whether to recalibrate the flap position based on the angle deviation. This inspection should be performed again for each subsequent flight until the completion of Article (2) of this bulletin.** 1.1 Before takeoff, the aircraft needs to be checked the 0° position of the flaps according to the following steps, and can only fly after passing the inspection 1.1.1 Align the aileron surface with the rear surface of the wing tip so that the aileron surface is completely parallel to rear surface of the wing tip ; 1.1.2 Set the flap switch to position 0° and observe if the flap surface can be completely parallel to the aileron surface. If they are parallel, the 0° position is qualified, as shown in the following figure;  1.1.3 If they are not parallel, place the inclinometer on the aileron surface and set the reading of inclinometer to 0° with the aileron aligned with the rear surface of the wing tip, as shown in the following figure;  1.1.4 Move the inclinometer to the flap surface and check the reading of inclinometer , as shown in the following figure;



1.1.5 If the reading of inclinometer is less than 1.5° , the flap position is qualified, otherwise it is not qualified.

1.2 If the reading of inclinometer exceeds 1.5° , it is necessary to recalibrate the four flap positions according to the following steps, and verify them the four flap positon before flying.

1.2.1 Preparation

1) Remove the rear cover inside the cabin and the flap control box cover to expose the flap controller;

2) Fix the inclinometer on the flap control surface, keeping the aileron control surface completely parallel to the rear surface of the wing tip.

1.2.2 Calibration of flap position 0°

1) Power on the aircraft, open the flap circuit breaker, and Set the flap switch to position 0° ;

2) After the motor stops, press and hold the ENTER key (middle button) on the flap controller until the red light on the flap controller goes out, then press the UP and DOWN keys to adjust the motor extension length until the flap surface is completely parallel to the aileron surface and the rear surface of the wing tip. Press and hold the ENTER key again until the red light on the flap controller comes back on, and set the the reading of inclinometer to 0° .

1.2.3 Calibration of flap position 15°

1) Set the flap switch to position 15° ;

2) After the motor stops , press and hold the ENTER key on the flap controller

until the red light on the flap controller goes out. Then, press the UP and DOWN keys to adjust the motor extension length until the reading of inclinometer ~~reads~~ is 15° . Press and hold the ENTER key again until the red light on the flap controller comes on again.

1.2.4 Calibration of flap position 30°

1) Set the flap switch to position 30° ;

2) After the motor stops , press and hold the ENTER key on the flap controller until the red light on the flap controller goes out. Then, press the UP and DOWN keys to adjust the motor extension length until the reading of inclinometer is ~~reads~~ 30° . Press and hold the ENTER key again until the red light on the flap controller comes on again.

1.2.5 Calibration of flap position 45°

1) Set the flap switch to position 45° ;

2) After the motor stops , press and hold the ENTER key on the flap controller until the red light on the flap controller goes out. Then, press the UP and DOWN keys to adjust the motor extension length until the reading of inclinometer ~~reads~~ is 44.3° -44.5° . Press and hold the ENTER key again until the red light on the flap controller comes on again.

1.2.6 Verification

1) Set the flap switch to position 0° , check the reading of inclinometer ~~reading~~ after the motor stops, and it is qualified if the reading range is within ±0.5° ;

2) Set the flap switch to position 15° , 30° , 45° , 30° , 15° , 0° in sequence, and check if the readings of inclinometer for each position are accurate after the motor stops. The allowable deviations for 15° and 30° are ±1° , and the allowable deviation for 45° is ±1.5° . If there is a certain position deviation that is not qualified, recalibrate the position according to the above steps.

1.2.7 End

1) Remove the inclinometer and fixing magnet from the flap;

2) After checking and ensuring that there are no missing tools or materials inside the fuselage, reinstall the flap controller cover, secure the flap control box, and then

cover and secure the rear cover plate inside the cabin.

1.3 When flying after passing the inspection, it is necessary to pay attention to the results of flap movement when Set the flap switch to other position (especially position 0° and 45°). If it is found that the flap angle significantly increases (not parallel to the horizontal aileron) during level flight at 0° flap position, or the motor continues to make abnormal noise at flap position 45° , or the descent rate significantly increases at flap position 30° or 45° , it indicates that the flap angle increases too much during the flight. When landing, Attention should be paid to changes in airspeed and altitude descent rate, and reasonable selection of flap position should be made.

2. The aircraft within the scope of application must replace the flap motor according to the following steps after receiving the parts sent by Starair Aircraft Co., Ltd.. The dismantled original parts must be accompanied by the aircraft serial number and flight hour information, and sent back to Starair Aircraft Co., Ltd.. This work must be completed before December 20, 2023.

2.1Set the flap switch to position 0° , 15° , 30° , and 45° in sequence, and adjust the extension length of the motor rod to be within the range of 50-150mm. （This step is implemented by engineer of Starair Aircraft Co., Ltd. before the motor being sent out）

2.2 Refer to 8168AAFJ0002 "Aurora SA60L&Aurora SA60L-iS Maintenance Manual" A0 version, Chapter 7.2 Flap Motor, 7.2.1 Assembly and Disassembly for replacement of the flap motor.

2.3 After completing the motor replacement, the four positions of the flaps must be recalibrated in accordance with Article 1.2 of the Required Action(s) of this service bulletin.

2.4 Time limit for use of flap motor: accumulate on the original hours in use.

3. Materials required to implement this service bulletin

3.1 Dismantled parts：

No.	Material No.	Name	quantity	notes
1	730250000001J	Flap control electric motor SP12C17A08-06-CAA	1piece	Original part
2	701703002003	Pin 2X10 GB/T 91	2piece	Original part

3.2 Replacement parts:

No.	Material No.	Name	quantity	notes
1	730250000001J	Flap control electric motor SP12C17A08-06-CAA	1piece	Sent by Starair Aircraft Co., Ltd.
2	701703002003	Pin 2X10 GB/T 91	2piece	Sent by Starair Aircraft Co., Ltd.

Reference Documents	8168AAFJ0002 "Aurora SA60L&Aurora SA60L-iS Maintenance Manual" A0 version.		
Tools	electrical inclinometer, magnet, Paper tape, screwdriver, allen key, diagonal pliers, Needle nose pliers.		
Weight and Balance Impact	None		
Special tools and equipment	None		
Contact Information	contacts: Peng Liang	phone number: 4006635288	mail address: safety@sunward.cc
Approval	This service bulletin has been approved by the airworthiness management department of Civil Aviation Administration of China.		

Attached Table1: Aircraft with the Serial Number listed below are affected

No.	S/N	No.	S/N	No.	S/N
1	SA60LS00107	16	SA60LS00323	31	SA60LS00342
2	SA60LS00197	17	SA60LS00325	32	SA60LS00343
3	SA60LS00218	18	SA60LS00326	33	SA60LS00346
4	SA60LS00221	19	SA60LS00327	34	SA60LS00349
5	SA60LS00310	20	SA60LS00328	35	SA60LS00350
6	SA60LS00311	21	SA60LS00329	36	SA60LS00355
7	SA60LS00312	22	SA60LS00330		------ END -------
8	SA60LS00313	23	SA60LS00331		
9	SA60LS00315	24	SA60LS00333		
10	SA60LS00317	25	SA60LS00335		
11	SA60LS00318	26	SA60LS00336		
12	SA60LS00319	27	SA60LS00337		
13	SA60LS00320	28	SA60LS00338		
14	SA60LS00321	29	SA60LS00339		
15	SA60LS00322	30	SA60LS00341		