Single Engine

Service Bulletin

October 27, 2003

TITLE

HONEYWELL KS 270C, KS 271C AND KS 272C SERVO FRICTION INSPECTION

EFFECTIVITY

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REASON

To transmit Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 which require an inspection of the KS 270C pitch servo, KS 271C roll servo, KS 271C yaw servo and KS 272C pitch trim servo.

DESCRIPTION

Honeywell has determined that added friction may be present and caused by the build-up of tolerances between the servo and the servo mount. Non-compliance with this Service Bulletin may allow increased friction to cause the autopilot to disengage during flight and could lead to accelerated failure of the autopilot servo(s).

COMPLIANCE

Recommended; should be accomplished within the next 200 hours of operation or by June 15, 2004, whichever occurs first.
APPROVAL

Refer to the attached Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions).

MANPOWER

Refer to Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions).

REFERENCES

Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions).


NOTE: Make sure all publications used are complete and current.

NOTE: This information shall be considered an amendment to the Cessna Manufacturer’s Service/Maintenance Manual and should be accomplished within the specified time requirement.

OTHER PUBLICATIONS AFFECTED

Model 172R and Model 172S Illustrated Parts Catalog

Model 182S/182T/T182T Illustrated Parts Catalog

Model 206H and Model T206H Illustrated Parts Catalog

NOTE: Make sure all publications used are complete and current.

MATERIAL PRICE AND AVAILABILITY

Not applicable

CREDIT INFORMATION

Refer to Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions).

ACCOMPLISHMENT INSTRUCTIONS

Weight And Balance Information

WEIGHT CHANGE  ................. Negligible

NOTE: Refer to the attached Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions).
Instructions

1. Electrically ground the airplane and turn all switches to the "OFF" position. If external power is connected to the airplane, disconnect external power from receptacle.

2. Disconnect the airplane battery. (Refer to the applicable airplane Maintenance Manual, Chapter 24, Electrical Power.)

3. Attach maintenance warning tags to the battery and external power receptacle with the following instruction: **DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS.**

4. Do the checks in the attached Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6.

5. If removal was required, install the applicable servo(s). (Refer to applicable sections of the applicable airplane Maintenance Manual.)

6. Install any removed interior furnishings and access panels. (Refer to applicable sections of the appropriate airplane Maintenance Manual.)

7. Remove maintenance warning tags and reconnect the airplane battery.

8. Do the function tests as described in the attached Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 (or latest revisions) to make sure the system operation is acceptable. (Refer to applicable sections of the appropriate airplane Maintenance Manual.)


**OWNER NOTIFICATION**

On November 7, 2003 the following Owner Advisory message will be sent to applicable owners of record in SB03-34-01A.

Dear Cessna Owner:

This Owner Advisory is to inform you that Service Bulletin SB03-34-01 has been issued to transmit Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 which require an inspection of the KS 270C pitch servo, KS 271C roll servo, KS 271C yaw servo and KS 272C pitch trim servo. Honeywell has determined that added friction may be present and caused by the build-up of tolerances between the servo and the servo mount. Non-compliance with Service Bulletin SB03-34-01 may allow increased friction to cause the autopilot to disengage during flight and could lead to accelerated failure of the autopilot servo(s).

Compliance is recommended; should be accomplished within the next 200 hours of operation or by June 15, 2004, whichever occurs first.

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual and should be accomplished within the specified time requirement.

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have Cessna Service Bulletin SB03-34-01/Honeywell Service Bulletins KS 270C-7, KS 271C-8 and KS 272C-6 accomplished on your airplane.

* * * * * * * * *
BULLETIN NO: KS 270C-7
KS 270C Servo

EFFECTIVITY

KS 270C Servos P/N 065-00178-0100, -0200, -0300, -2100, -2200, -2300, -2400, and -2500, all units S/N 5069 through 5749.

KS 270C Servos P/N 065-00178-0100, -0200, -0300, -2100, -2200, -2300, -2400, and -2500, any unit below S/N 5069 with Mod 5 installed prior to December 2002.

Units below S/N 5069 that are without Mod 5 in December 2002 would be eligible for Mod 5. Mod 7 would not be applicable for those serial numbers, but should be marked on the serial number tag when the Mod 5 procedure is completed.

REASON

To check for added friction caused by the servo and servo mount tolerance build-up.

DESCRIPTION

Mod 7 checks the gear backlash gap between the KS 270C Servo and the KM 275 Servo Mount. This is accomplished by inspecting for added friction when operating control surfaces and, if needed, checking the rotation of the servo capstan.

COMPLIANCE

Recommended at the next scheduled maintenance period.

WARRANTY INFORMATION

Warranty credit or payment will be issued for any KS 270C units with the serial numbers listed above if the inspection is completed by an appropriately rated Honeywell Service Center by 15 June 2004, or during the original warranty period (whichever is longer).

Warranty credit or payment will be issued for any KS 270C, serial number 5069 through 5749, requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Step 1.A. by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two-tenths (0.2) hours labor must be submitted.
Warranty credit or payment will be issued for any unit below serial number 5069 with Mod 5 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1 and 2.B.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two and one-half (2.5) hours labor must be submitted.

Warranty credit or payment will be issued for any unit below serial number 5069 with Mod 5 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1, 2.B.(1), and 2.D.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for three and one-half (3.5) hours labor must be submitted.

Warranty credit or payment will not be issued for any unit below serial number 5069 without Mod 5 installed prior to December 2002. The appropriately rated Honeywell Service Center must submit a warranty claim for Mod 5 for warranty credit or payment to be issued.

**APPROVAL**

This modification does not affect the original approval.

**MANPOWER**

Two-tenths (0.2) hours to complete Step 1 only.

OR

Two and one-half (2.5) hours to complete Steps 1 through 2.B.(1).

OR

Three and one-half (3.5) hours to complete Steps 1, 2.B.(1), and 2.D.(1).

Refer to SB KS 270C-5 for the hours needed to complete Mod 5.

**REFERENCES**

Aircraft-specific STC installation manual and/or the aircraft manufacturer's maintenance manual. Service Bulletin KS 270C-5, P/N 600-01514-005X.

**PROCEDURE**

1. Exercise the control surfaces by moving them through the full range of motion. The control surfaces should be free of added friction (stiction).

   A. If the control surfaces are free of added friction, the inspection is complete. Stamp an X or make a permanent mark on the modification section of the Unit Serial Tag to indicate that Mod 7 is complete. No further action is necessary.

   B. If added friction is noticed, proceed to step 2.
2. Access the servo for further testing.

   A. Remove the bridle cable.

   B. Spin the servo capstan; it should rotate freely.

      (1) If the capstan rotates freely, reinstall the bridle cable and reset the
tension to the TC holder's specification (or consult the STC installation
manual). The inspection is complete. Stamp an X or make a permanent
mark on the modification section of the Unit Serial Tag to indicate that
Mod 7 is complete. No further action is necessary.

      (2) If the capstan did not rotate freely, remove the servo and install or
reinstall Mod 5. Refer to SB KS 270C-5.

   C. After Mod 5 is completed and recorded on the unit serial tag, stamp an X or
make a permanent mark on the Unit Serial Tag to indicate that Mod 7 is
complete also. Reinstall the servo.

   D. Spin the servo capstan; it should rotate freely.

      (1) If the capstan rotates freely, reinstall the bridle cable and reset the
tension to the TC holder's specification (or consult the STC installation
manual). The inspection is complete.

      (2) If the servo still fails after installing Mod 5, contact Honeywell Customer
Support Engineering at 1-800-257-0726.

**IDENTIFICATION PROCEDURE**

Identification of Mod 7 was accomplished as appropriate in Steps 1.A, 2.B.(1), or 2.C.

**TESTING PROCEDURE**

If the unit passed Step 1 of the inspection, no further testing is needed.

If the unit failed Step 1 of the inspection and Step 2 was necessary, then a ground test
is required. Apply avionics power and complete the automated preflight test
successfully. Also, consult the Flight Manual Supplement for additional tests that might
be required.

**MATERIAL INFORMATION**

No parts are needed to complete Mod 7.
BULLETIN NO: KS 271C-8
KS 271C Servo

EFFECTIVITY
KS 271C Servos P/N 065-00179-0100, -0200, -0300, -0400, -0500, and -0600, all units S/N 7049 through 7728.

KS 271C Servos P/N 065-00179-0100, -0200, -0300, -0400, -0500, and -0600, any unit below S/N 7049 with Mod 7 installed prior to December 2002.

Units below S/N 7049 that are without Mod 7 in December 2002 would be eligible for Mod 7. Mod 8 would not be applicable for those serial numbers but should be marked on the serial number tag when the Mod 7 procedure is completed.

REASON
To check for added friction caused by the servo and servo mount tolerance build-up.

DESCRIPTION
Mod 8 checks the gear backlash gap between the KS 271C Servo and the KM 275 Servo Mount. This is accomplished by inspecting for added friction when operating control surfaces and, if needed, checking the rotation of the servo capstan.

COMPLIANCE
Recommended at the next scheduled maintenance period.

WARRANTY INFORMATION
Warranty credit or payment will be issued for any KS 271C units with the serial numbers listed above if the inspection is completed by an appropriately rated Honeywell Service Center by 15 June 2004, or during the original warranty period (whichever is longer).

Warranty credit or payment will be issued for any KS 271C, serial number 7049 through 7728, requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Step 1.A. by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two-tenths (0.2) hours labor must be submitted.
Warranty credit or payment will be issued for any unit below serial number 7049 with Mod 7 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1 and 2.B.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two and one-half (2.5) hours labor must be submitted.

Warranty credit or payment will be issued for any unit below serial number 7049 with Mod 7 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1, 2.B.(1), and 2.D.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for three and one-half (3.5) hours labor must be submitted.

Warranty credit or payment will not be issued for any unit below serial number 7049 without Mod 7 installed prior to December 2002. The appropriately rated Honeywell Service Center must submit a warranty claim for Mod 7 for warranty credit or payment to be issued.

**APPROVAL**

This modification does not affect the original approval.

**MANPOWER**

Two-tenths (0.2) hours to complete Step 1 only.

OR

Two and one-half (2.5) hours to complete Steps 1 through 2.B.(1).

OR

Three and one-half (3.5) hours to complete Steps 1, 2.B.(1), and 2.D.(1).

Refer to SB KS 271C-7 for the hours needed to complete Mod 7.

**REFERENCES**

Aircraft-specific STC installation manual and/or the aircraft manufacturer's maintenance manual. Service Bulletin KS 271C-7, P/N 600-01516-007X.

**PROCEDURE**

1. Exercise the control surfaces by moving them through the full range of motion. The control surfaces should be free of added friction (stiction).
   
   A. If the control surfaces are free of added friction, the inspection is complete. Stamp an X or make a permanent mark on the modification section of the Unit Serial Tag to indicate that Mod 8 is complete. No further action is necessary.

   B. If added friction is noticed, proceed to step 2.
2. Access the servo for further testing.
   A. Remove the bridle cable.
   B. Spin the servo capstan; it should rotate freely.
      (1) If the capstan rotates freely, reinstall the bridle cable and reset the tension to the TC holder's specification (or consult the STC installation manual). The inspection is complete. Stamp an X or make a permanent mark on the modification section of the Unit Serial Tag to indicate that Mod 8 is complete. No further action is necessary.
      (2) If the capstan did not rotate freely, remove the servo and install or reinstall Mod 7. Refer to SB KS 271C-7.
   C. After Mod 7 is completed and recorded on the unit serial tag, stamp an X or make a permanent mark on the Unit Serial Tag to indicate that Mod 8 is complete also. Reinstall the servo.
   D. Spin the servo capstan; it should rotate freely.
      (1) If the capstan rotates freely, reinstall the bridle cable and reset the tension to the TC holder's specification (or consult the STC installation manual). The inspection is complete.
      (2) If the servo still fails after installing Mod 7, contact Honeywell Customer Support Engineering at 1-800-257-0726.

**IDENTIFICATION PROCEDURE**

Identification of Mod 8 was accomplished as appropriate in Steps 1.A, 2.B.(1), or 2.C.

**TESTING PROCEDURE**

If the unit passed Step 1 of the inspection, no further testing is needed.

If the unit failed Step 1 of the inspection and Step 2 was necessary, then a ground test is required. Apply avionics power and complete the automated preflight test successfully. Also, consult the Flight Manual Supplement for additional tests that might be required.

**MATERIAL INFORMATION**

No parts are needed to complete Mod 8.
Honeywell

Service Bulletin

BULLETIN NO:  KS 272C-6
KS 272C Servo

EFFECTIVITY

| KS 272C Servos P/N 065-00180-0400, -0600, -0800, -1400, -2700, and -3500, all units S/N 4773 through 5442. |
| KS 272C Servos P/N 065-00180-0400, -0600, -0800, -1400, -2700, and -3500, any unit below S/N 4773 with Mod 5 installed prior to December 2002. |

Units below S/N 4773 that are without Mod 5 in December 2002 would be eligible for Mod 5. Mod 6 would not be applicable for those serial numbers, but should be marked on the serial number tag when the Mod 5 procedure is completed.

REASON

To check for added friction caused by the servo and servo mount tolerance build-up.

DESCRIPTION

Mod 6 checks the gear backlash gap between the KS 272C Servo and the KM 275 Servo Mount. This is accomplished by inspecting for added friction when operating control surfaces and, if needed, checking the rotation of the servo capstan.

COMPLIANCE

Recommended at the next scheduled maintenance period.

WARRANTY INFORMATION

Warranty credit or payment will be issued for any KS 272C units with the serial numbers listed above if the inspection is completed by an appropriately rated Honeywell Service Center by 15 June 2004, or during the original warranty period (whichever is longer).

Warranty credit or payment will be issued for any KS 272C, serial number 4773 through 5442, requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Step 1.A. by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two-tenths (0.2) hours labor must be submitted.

Date:  Dec/02
Rev. 2:  Mar/03
P/N:  600-01518-0062
Warranty credit or payment will be issued for any unit below serial number 4773 with Mod 5 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1 and 2.B.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for two and one-half (2.5) hours labor must be submitted.

Warranty credit or payment will be issued for any unit below serial number 4773 with Mod 5 installed prior to December 2002 requiring this modification if the modification is completed by 15 June 2004. If the unit is inspected only per Steps 1, 2.B.(1), and 2.D.(1) by an appropriately rated Honeywell Service Center, a properly completed warranty claim for three and one-half (3.5) hours labor must be submitted.

Warranty credit or payment will not be issued for any unit below serial number 4773 without Mod 5 installed prior to December 2002. The appropriately rated Honeywell Service Center must submit a warranty claim for Mod 5 for warranty credit or payment to be issued.

APPROVAL

This modification does not affect the original approval.

MANPOWER

Two-tenths (0.2) hours to complete Step 1 only.

OR

Two and one-half (2.5) hours to complete Steps 1 through 2.B.(1).

OR

Three and one-half (3.5) hours to complete Steps 1, 2.B.(1), and 2.D.(1).

Refer to SB KS 272C-5 for the hours needed to complete Mod 5.

REFERENCES

Aircraft-specific STC installation manual and/or the aircraft manufacturer’s maintenance manual. Service Bulletin KS 272C-5, P/N 600-01518-005X.

PROCEDURE

1. Exercise the control surfaces by moving them through the full range of motion. The control surfaces should be free of added friction (stiction).

   A. If the control surfaces are free of added friction, the inspection is complete. Stamp an X or make a permanent mark on the modification section of the Unit Serial Tag to indicate that Mod 6 is complete. No further action is necessary.

   B. If added friction is noticed, proceed to step 2.
2. Access the servo for further testing.
   A. Remove the bridle cable.
   B. Spin the servo capstan; it should rotate freely.
      (1) If the capstan rotates freely, reinstall the bridle cable and reset the tension to the TC holder's specification (or consult the STC installation manual). The inspection is complete. Stamp an X or make a permanent mark on the modification section of the Unit Serial Tag to indicate that Mod 6 is complete. No further action is necessary.
      (2) If the capstan did not rotate freely, remove the servo and install or reinstall Mod 5. Refer to SB KS 272C-5.
   C. After Mod 5 is completed and recorded on the unit serial tag, stamp an X or make a permanent mark on the Unit Serial Tag to indicate that Mod 6 is complete also. Reinstall the servo.
   D. Spin the servo capstan; it should rotate freely.
      (1) If the capstan rotates freely, reinstall the bridle cable and reset the tension to the TC holder's specification (or consult the STC installation manual). The inspection is complete.
      (2) If the servo still fails after installing Mod 5, contact Honeywell Customer Support Engineering at 1-800-257-0726.

**IDENTIFICATION PROCEDURE**

Identification of Mod 6 was accomplished as appropriate in Steps 1.A, 2.B.(1), or 2.C.

**TESTING PROCEDURE**

If the unit passed Step 1 of the inspection, no further testing is needed.

If the unit failed Step 1 of the inspection and Step 2 was necessary, then a ground test is required. Apply avionics power and complete the automated preflight test successfully. Also, consult the Flight Manual Supplement for additional tests that might be required.

**MATERIAL INFORMATION**

No parts are needed to complete Mod 6.