

Collective Main Rotor Controls - Adjustment / Test

5-1 Adjustment - Collective Stick Balance

A. Applicable Documents

- (1) Main information
 29-00-00, 2-1 Hydraulic Power Supply on the Ground
- (2) Conditional information
 53-51-00, 4-2 Removal / Installation - Lower Fairings
 62-11-00, 4-1 Removal / Installation - Main Rotor Blades
- (3) General information
 60-00-00, 3-1 General Safety Instructions - Mechanical Assemblies
 67-00-00, 3-1 General Safety Instructions - Flight Controls
 67-10-00, 4-1 Removal / Installation - Servo-control Input Rod
 67-12-00, 4-2 Removal / Installation - Collective Control Friction Mechanism

B. Special Tools

Commercial spring balance

C. Materials

None

D. Routine Replacement Parts

None

E. Job Set-up

- (1) Comply with the general safety Instructions for the mechanical assemblies (60-00-00, 3-1).
- (2) Comply with the general safety Instructions for the flight controls (67-00-00, 3-1).
- (3) Remove the rear lower fairing (53-51-00, 4-2).

F. Procedure

- (1) Adjustment with hydraulic power

Figure 501

- (a) Remove the main rotor blades (62-11-00, 4-1).
- (b) Remove the collective pitch lever boot which is attached with Velcro tape.
- (c) Move the boot towards the top of the stick.
- (d) Apply hydraulic power to the aircraft system (29-00-00, 2-1).
- (e) PRE MOD 073548

1 Fully loosen the friction device (2) for the collective channel.

- (f) POST MOD 073548
 - 1 Fully loosen the friction device (3) for the collective channel (67-12-00, 4-2).
 - (g) Check that the collective stick (1) remains stationary, irrespective of its position in its travel along the longitudinal axis.
 - (h) If this is not the case, modify the connection position of the end of the spring (4) on the support on the structure (5) so that the collective stick remains stationary irrespective of its position.
 - (i) Using a spring balance, make sure that the force measured in the middle of the collective pitch grip over the entire travel of the collective pitch lever (1) is as follows:
 - 1 Less than 8 N (1.79 lb.) in the high pitch to low pitch direction.
 - 2 Less than 8 N (1.79 lb.) in the fine pitch to high pitch direction.
- NOTE**
- *The force towards the coarse pitch position should be approximately the same as that towards the fine pitch position.*
- (j) If the forces measured are out of tolerance, change the anchoring position of the end of the spring (4) on the support on the structure (5) in order to obtain the desired force values, while still maintaining the adjustment for holding the required position.
 - (k) PRE MOD 073548
 - 1 Tighten the friction device (2) for the collective channel.
 - (l) POST MOD 073548
 - 1 Install the knurled knob of the friction device (3) (67-12-00, 4-2).
 - 2 Adjust the friction force (67-12-00, 4-2).
 - (m) Switch off both aircraft hydraulic systems (29-00-00, 2-1).
 - (n) Put the boot in position and attach it with Velcro tapes.
 - (o) Install the main rotor blades (62-11-00, 4-1).
- (2) Adjustment without hydraulic power
- (a) Disconnect the input rods at the servocontrols (67-10-00, 4-1).
 - (b) Remove the collective pitch lever boot which is attached with Velcro tape.
 - (c) Move the boot towards the top of the lever.
 - (d) PRE MOD 073548
 - 1 Fully loosen the friction device (2) for the collective channel.
 - (e) POST MOD 073548
 - 1 Fully loosen the friction device (3) for the collective channel (67-12-00, 4-2).

- 2 Remove the knurled knob of the friction device (67-12-00, 4-2).



DURING THE MANEUVERS OF THE FLIGHT CONTROLS, MAKE SURE THAT THERE IS NO INTERFERENCE OR OBSTACLE BETWEEN THE SERVOCONTROL INPUT RODS AND ANY OTHER PART OR SURFACE.

A MINIMUM OF TWO OPERATORS ARE REQUIRED FOR THE MANEUVERS.

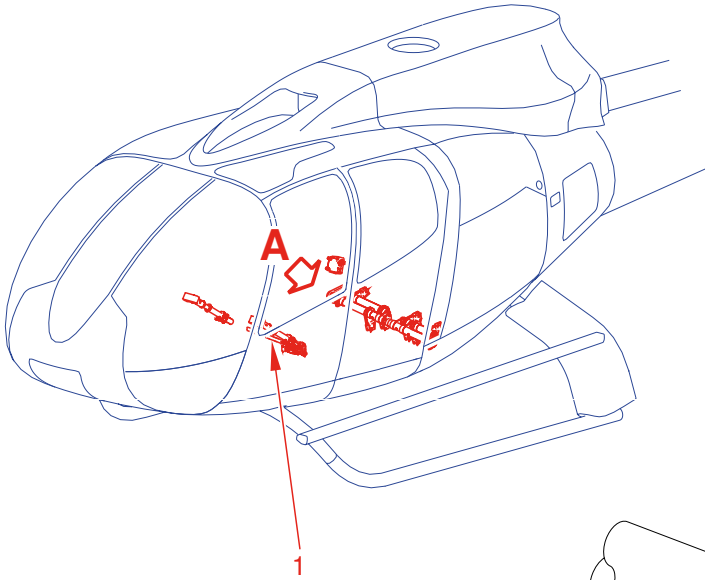
- (f) Make sure that the collective pitch lever (1) remains in place irrespective of its position over the entire travel along the longitudinal axis.
- (g) If this is not the case, change the anchoring position of the end of the spring (4) on the support on the structure (5) so that the collective lever remains in place irrespective of its position.
- (h) Using a spring balance, make sure that the force measured in the middle of the collective pitch grip over the entire travel of the collective pitch lever (1) is as follows:
 - 1 Less than 8 N (1.79 lb.) in the high pitch to low pitch direction.
 - 2 Less than 8 N (1.79 lb.) in the fine pitch to high pitch direction.

NOTE

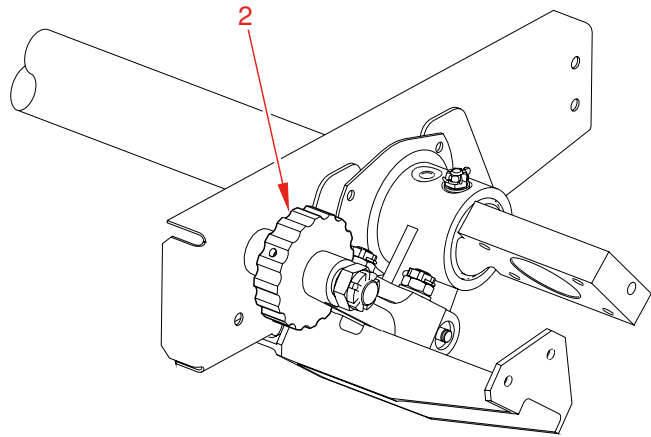
- *The force towards the coarse pitch position should be approximately the same as that towards the fine pitch position.*
- (i) If the forces measured are out of tolerance, change the anchoring position of the end of the spring (4) on the support on the structure (5) in order to obtain the desired force values, while still maintaining the adjustment for holding the required position.
 - (j) PRE MOD 073548
 - 1 Tighten the friction device (2) for the collective channel.
 - (k) POST MOD 073548
 - 1 Install the knurled knob of the friction device (3) (67-12-00, 4-2).
 - 2 Adjust the friction force (67-12-00, 4-2).
 - (l) Put the boot in position and attach it with Velcro tapes.
 - (m) Connect the input rods at the servocontrols (67-10-00, 4-1).

G. Close-up

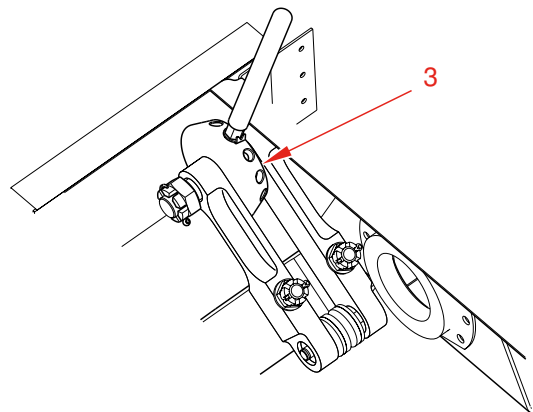
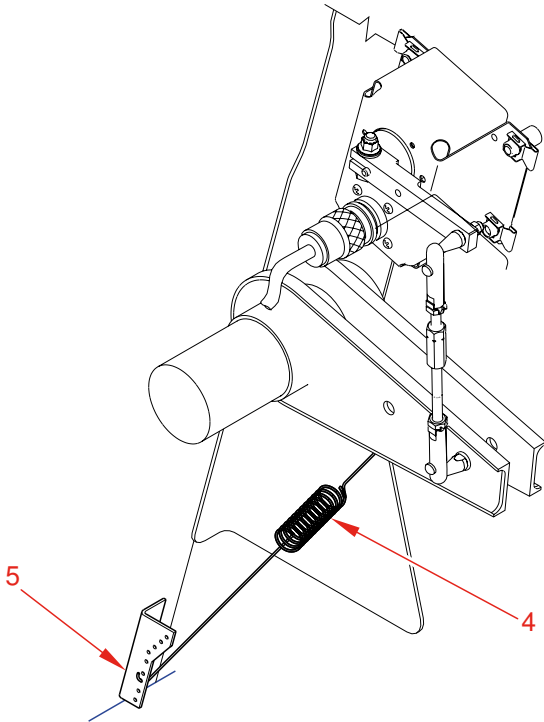
- (1) Install the rear lower fairing (53-51-00, 4-2).



PRE MOD 073548



POST MOD 073548



Adjustment - Collective Stick Balance
Figure 501