Temporary Maintenance Instruction
TMI 189-047

Main rotor and tail rotor tracking check procedures

All AW189 Helicopters

2021-02-03

Introduction

The purpose of this Temporary Maintenance Instruction is to give you the evidence of the updated procedures for the tracking check of Main Rotor (MR) and Tail Rotor (TR) with HUMS kit P/N 8G3130F00111 and 8G3130F00411.

All the information reported in the subsequent pages will be updated in the IETP revision 21, Data Modules as follows:

ANNEX	DATA MODULE CODE	DATA MODULE TITLE
Annex 1	89-A-18-10-01-00A-373C-A	Main rotor - Tracking check
Annex 2	89-A-18-10-02-00A-373C-A	Tail rotor - Tracking check

Main rotor and tail rotor tracking check procedures

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Annex 1
Main rotor - Tracking check

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Table 1 References

Data Module	Title
89-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
89-A-46-21-00-00A-55AA-A	Aircraft mission management system - Data downloading
89-A-46-21-05-00A-55AA-A	Data transfer device (DTD) - Data downloading
89-A-60-80-00-02A-913A-A	Attaching parts protective layer - General maintenance procedure
89-A-67-11-00-00A-271A-A	Collective control system - Adjust
89-A-67-12-00-00A-271A-A	Cyclic control system - Adjust
89-A-67-13-00-00A-271A-A	Mixing control system - Adjust

Table 2 Access points

Access Panel / Door Id	Data Module
None	

Table 3 Zones

Zone ID	Data Module
410, 420	89-A-06-30-00-00A-010A-A

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance.	89-A-00-20-00-00A-120A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform	GG-02-00	1
Plastic scraper	ZZ-00-00	1
MR blade trim tab bending kit	GF-51-00	1
Torque wrench	ZZ-00-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Cleaning solvent	C010	AR
Lint-free cloth	C011	AR
Safety wire	C014	AR
Corrosion inhibitor	C385	AR

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
Balance weight	62-11-00-01 -007	AR
Balance weight	62-11-00-01 -008	AR

Safety Conditions

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WARNING

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The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- **The Cleaning solvent (C010)**

- **The Corrosion inhibitor (C385) .**

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Procedure

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1   **Preliminary operations.**

1.1   Make sure that the total weight of the helicopter is less than 7000 kg (15432 lbs).

1.2   Make sure that the helicopter is parked with the nose that points to the direction of the wind.

1.3   Make sure that the sun is not in front of the tracking camera, at 45 degrees on the left of the aircraft or with an angle of less than 25 °.

1.4   Get access to the landing gear control panel on the interseat console. Then do the operations that follow:

1.4.1   Push the NOSE WHEEL LOCK button and lock the nose wheel in its center position.

1.4.2   Operate the PARK BRAKE lever and apply the parking brake.

1.4.3   Put the Platform (GG-02-00) adjacent to the right side of the fuselage.

1.4.4   Remove the protective layer from all the bolts (3, Figure 1) and their plug (1) and nut. Refer to 89-A-60-80-00-02A-913A-A.

1.4.5   Remove the platform from the right side of the fuselage.

1.4.6   On the ECDU, do the selection of the MISC option. Then make sure that the RTB CAMERA is set to ON.

1.5   Get access to the rotor brake lever on the cockpit roof and set it to OFF.

2   **On ground check (FPOG).**

2.1   Start one engine and stabilize it at 102% NR. Refer to the Rotorcraft Flight Manual.

2.2   Make sure that the IAS is -20 thru +25 knots.

2.3   On the MCDU, do the operations that follow:

2.3.1   Push the MENU button.

2.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

2.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

2.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

2.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

2.5   Record the data on the MR balance chart (Figure 3).

2.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

2.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

2.6.2   Do again the selection of the RTB CYC.

> **Note**
>> The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

2.7   If one of the condition that follows occurs on the MCDU, do the step 2.8:

- The ACCEL FAIL message indicates an incorrect Built In Test for one of the accelerometers used for RTB acquisitions

- The TIMEOUT message indicates that the signal acquisition procedure is not completed in the approved time, usually because of the missing rotor 1xRev signal

- The NO CAMERA message indicates that there is no communication between the Number 2 Aircraft Mission Management Computer (AMMC2) and the Tracking Camera.

Differently, continue with the steps that follow.

2.8   Do the operations that follow:

2.8.1   Stop the engine. Then let the rotors stop.

2.8.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files. Refer to 89-A-46-21-00-00A-55AA-A.

2.8.3   Do the necessary fault isolation procedure.

2.9   If one of the condition that follows occurs on the MCDU, do the step 2.10:

- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition

- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low

- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition

- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

2.10   Do again the data acquisition and then continue with the procedure of the RTB data collection.

2.11   Record the data on the Table and MR balance chart (Figure 3).

2.12   Make sure that:

- The 1R LAT is less than 0.5 IPS

- The 1R VERT is less than 0.5 IPS.

2.13 If all the measures are in the limits go to step 2.14 . Differently, do the operations that follow:

2.13.1 Stop the engine. Then let the rotors stop.

2.13.2 Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

2.13.3 On Heliwise or, as an alternative, on the MR balance chart (Figure 3), find the adjustments.

2.13.4 Do the adjustments. Refer to step 7.

2.14 Put the Platform (GG-02-00) adjacent to the right side of the fuselage.

2.15 Examine the check nuts (5, Figure 1) and (7) of all the five pitch links (6). Make sure that the safety wire is correctly installed. Do the steps that follow for each check nut (5) or (7) without the safety wire:

2.15.1 Torque the check nut (5) and (7) to 84 thru 90 N m (62 thru 66 lbf ft) with the Torque wrench (ZZ-00-00) .

2.15.2 Safety the check nuts (5) and (7) with the new Safety wire (C014) .

2.16 Remove the platform from the right side of the fuselage.

2.17 Continue with the step 3.

3 **Hovering check.**

3.1 Hover the helicopter out of ground effect at a minimum altitude of 70 ft. Refer to the Rotorcraft Flight Manual.

3.2 Make sure that the IAS is -20 thru +40 knots.

3.3 On the MCDU, do the operations that follow:

3.3.1 Push the MENU button.

3.3.2 Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

3.3.3 Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

3.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page.. The MCDU will show the RTB CYC RESULTS page.

3.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

3.5   Record the data on the MR balance chart (Figure 4).

3.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

3.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

3.6.2   Do again the selection of the RTB CYC.

> **Note**
> The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

3.7   If one of the condition that follows occurs on the MCDU, do the step 3.8:

- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition

- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low

- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition

- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

3.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

3.9   Record the data on the table and MR balance chart (Figure 4).

3.10   Make sure that:

- The 1R LAT is less than 0.5 IPS

- The 1R VERT is less than 0.5 IPS.

3.11   If all the measures are in the limits you can go to step 4. Differently, do the operations that follow:

3.11.1   Land the helicopter then stop the engines. Let the rotors stop.

3.11.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:

- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.

- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

3.11.3   On Heliwise or, as an alternative, on the MR balance chart (Figure 4), find the adjustments.

3.11.4   Do the adjustments. Refer to step 7.

4   90 KIAS check.

4.1   Do a level flight at 90 knots, at an altitude of more than 100 ft.

4.2   Make sure that the IAS is 80 thru 100 knots.

4.3   On the MCDU, do the operations that follow:

4.3.1   Push the MENU button.

4.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

4.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

4.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

4.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

4.5   Record the data on the MR balance chart (Figure 5).

4.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

4.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

4.6.2   Do again the selection of the RTB CYC.

   Note
      The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

4.7   If one of the condition that follows occurs on the MCDU, do the step 4.8:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition

- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

4.8 Do again the data acquisition and then continue with the procedure of the RTB data collection.

4.9 Record the data on the table and MR balance chart (Figure 5).

4.10 Make sure that:
- The 1R LAT is less than 0.5 IPS
- The 1R VERT is less than 0.5 IPS.

4.11 If all the measures are in the limits you can go to step 5. Differently, do the operations that follow:

4.11.1 Land the helicopter then stop the engines. Let the rotors stop.

4.11.2 Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

4.11.3 On Heliwise or, as an alternative, on the MR balance chart (Figure 5), find the adjustments.

4.11.4 Do the adjustments. Refer to step 7.

5 **135 KIAS check.**

5.1 Do a level flight at 135 knots, at an altitude of more than 100 ft.

5.2 Make sure that the IAS is 110 thru 140 knots.

5.3 On the MCDU, do the operations that follow:

5.3.1 Push the MENU button.

5.3.2 Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

5.3.3 Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

5.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page.. The MCDU will show the RTB CYC RESULTS page.

5.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

5.5   Record the data on the MR balance chart (Figure 5 and Figure 6).

5.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

5.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

5.6.2   Do again the selection of the RTB CYC.

    Note

    The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

5.7   If one of the condition that follows occurs on the MCDU, do the step 5.8:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition
- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

5.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

5.9   Record the data on the table and MR balance chart (Figure 5 and Figure 6).

5.10   Make sure that:
- The 1R LAT is less than 0.5 IPS
- The 1R VERT is less than 0.5 IPS.

5.11   If all the measures are in the limits you can go to step 6. Differently, do the operations that follow:

5.11.1   Land the helicopter then stop the engines. Let the rotors stop.

5.11.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.

- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

5.11.3   On Heliwise or, as an alternative, on the MR balance chart (Figure 5 and Figure 6), find the adjustments.

5.11.4   Do the adjustments. Refer to step 7.

6   **VH check.**

Note
During the data acquisition the minimum IAS must be more than 145 knots.

6.1   Make sure that the VH is more than 150 Knots. Differently go to the step 6.10.

6.2   Do a level flight at the VH.

6.3   On the MCDU, do the operations that follow:

6.3.1   Push the MENU button.

6.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

6.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

6.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page.. The MCDU will show the RTB CYC RESULTS page.

6.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

6.5   Record the data on the MR balance chart (Figure 5 and Figure 6).

6.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

6.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

6.6.2   Do again the selection of the RTB CYC.

6.7   If one of the condition that follows occurs on the MCDU, do the step 6.8:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

6.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

6.9   Record the data on the table and MR balance chart (Figure 5 and Figure 6).

6.10   Land the helicopter then stop the engines. Let the rotors stop.

6.11   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
  -     Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
  -     Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

6.12   On Heliwise or, as an alternative, on the MR balance chart (Figure 5 and Figure 6), find the adjustments.

6.13   Make sure that all the measures are in the limits of Table 8.

Table 8 MR track and balance limits

Measure	FPOG	HOVER OGE	90 Kias	135 Kias	Vh (if data available)
MR TRCK (Track Split)	40 mm	40 mm	40 mm	40 mm	50 mm
1R LAT	0.35 IPS	0.15 IPS	0.15 IPS	0.15 IPS	0.15 IPS
1R VERT	0.2 IPS	0.2 IPS	0.2 IPS	0.2 IPS	0.2 IPS

6.14   If necessary, do the adjustments. Refer to step 7.

6.15   Do again the step 2 thru step 6. Make sure that all the measures are in the limits of Table 8.

7   **Do the adjustments as follows:**

7.1   When you do the adjustments, obey the instructions that follow:

7.1.1   Do not turn the body of the pitch change link (6, Figure 1) more than six graduation signs.

7.1.2   Do not install more than 0.4 kg (0.88 lb) of balance weights (2) in each bolt (3) (0.8 kg (1.76 lb) for each blade).

7.1.3   Do not bend the trim tab (4) more than ±5º from the un-deformed position. Refer to Figure 6.

7.1.4   If you must do adjustments that are more than these limits, do the operations that follow:

7.1.4.1   Do the adjust of the collective control system. Refer to 89-A-67-11-00-00A-271A-A.

7.1.4.2   Do the adjust of the cyclic control system. Refer to 89-A-67-12-00-00A-271A-A.

7.1.4.3   Do the adjust of the mixing control system. Refer to 89-A-67-13-00-00A-271A-A.

7.1.5   Put the Platform (GG-02-00) adjacent to the right side of the fuselage.

7.1.6   Do the necessary adjustment:
            -       To install the balance weights, refer to step 7.2.
            -       To adjust the pitch change link, refer to step 7.3.
            -       To bend the trim tabs, refer to step 7.4.

7.2   Install the Balance weight (62-11-00-01 -007) or the Balance weight (62-11-00-01 -008) on the related blade as follows:

7.2.1   Cut and remove the wire from the plug (1).

7.2.2   Remove the plug (1) from the bolt (3).

7.2.3   Add or remove the balance weights (2) to get the correction you find after the vibration analysis.

7.2.4   Install the plug (1) on the bolt (3).

7.2.5   Torque the plug (1) to 2.9 thru 3.9 N m (26 thru 35 lbf in) with the Torque wrench (ZZ-00-00) .

7.2.6   Safety the plug (1) with the new Safety wire (C014) .

7.3   Adjust the pitch change link (6) to lift or lower the related blade as follows:

7.3.1   Cut and remove the wire from the check nuts (5) and (7). Discard the wire.

7.3.2   Remove the sealing compound from the top of the check nut (5) with the Plastic scraper (ZZ-00-00) .

7.3.3   Clean the check nuts (5) and (7) with the Lint-free cloth (C011) and the Cleaning solvent (C010) .

7.3.4   Dry the part you cleaned with a clean Lint-free cloth (C011) .

7.3.5   Hold the pitch change link (6) in its position and loosen the check nuts (5) and (7).

7.3.6   Turn the body of the pitch change link (6) as written on the pitch change link (6) to increase or decrease the length of the pitch change link.

7.3.7   Hold the pitch change link (6) in its position.

7.3.8   Torque the check nut (5) to 84 thru 90 N m (62 thru 66 lbf ft) with the Torque wrench (ZZ-00-00) .

7.3.9   Torque the check nut (7) to 84 thru 90 N m (62 thru 66 lbf ft) with the Torque wrench (ZZ-00-00) .

7.3.10   Safety the check nuts (5) and (7) with the new Safety wire (C014) .

7.3.11   Do a check on the check nuts (5) and (7) of the other four pitch links. Make sure that they are tightened and safe with the wires.

7.3.12   Record the color of the blades on which you adjusted the pitch link (6). This is necessary to complete the installation after the tracking check.

7.4   Bend the trim tab (4) as follows:

7.4.1   Identify the blade that you must adjust.

7.4.2   Use the MR blade trim tab bending kit (GF-51-00) to bend the related trim tab (4) as follows:
-        If the blade is low, bend the trim tab up
-        If the blade is high, bend the trim tab down.

7.5   Remove the platform from the right side of the fuselage.

8   Make an entry in the helicopter logbook. Use the form in Figure 2.

9   Put the Platform (GG-02-00) adjacent to the right side of the fuselage.

10   Examine the check nuts (5) and (7) of the five pitch links (6). Make sure that all the pitch links (6) are correctly sealed. Do the steps that follow for each pitch link (6) that is not sealed:

10.1   Get access to the pitch link (6) that you must seal.

10.2   Do a check of the check nuts (5) and (7). Make sure that they are tightened and safe with the wires.

10.3   Apply the Corrosion inhibitor (C385) to the parts that follow:
-        The threads (8) of the top rod end
-        The top check nut (5)
-        The index washer (9)
-        The hexagon flats (10)
-        The bottom check nut (7)
-        The threads (11) of the bottom rod end.

10.4   Do again the step 10.1 thru step 10.3 for all the pitch links (6) that are not sealed.

11   Apply the protective layer to all the bolts (3) and their plug (1) and nut. Refer to 89-A-60-80-00-02A-913A-A.

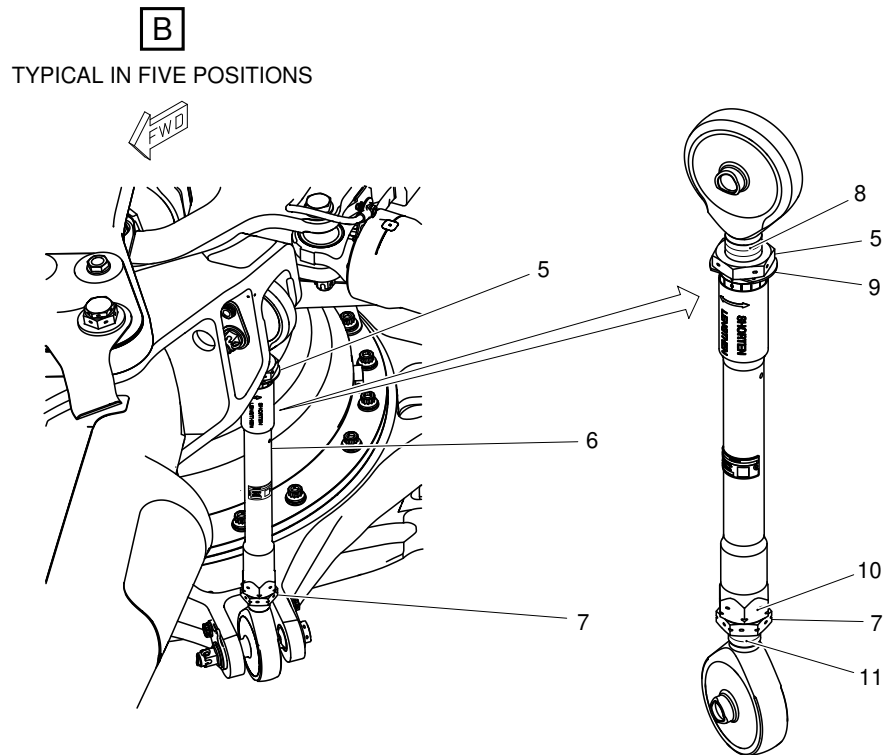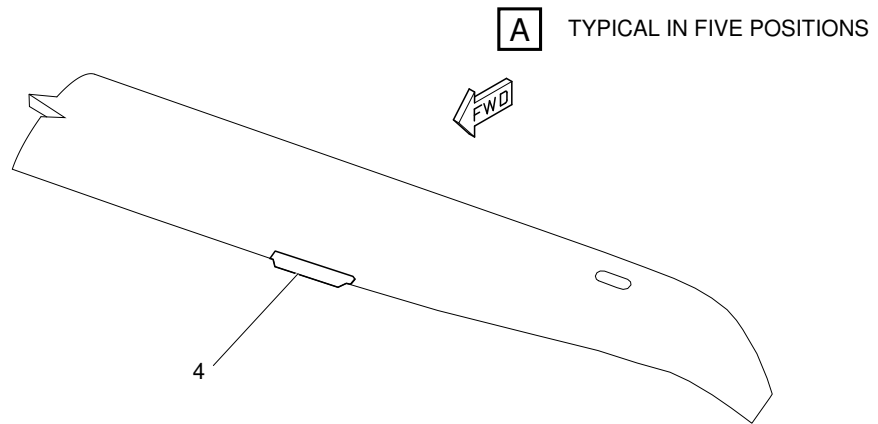| 12 | Remove the platform from the right side of the fuselage. |

Requirements After Job Completion

1   Remove all the tools and the other items from the work area. Make sure that the work area is clean.
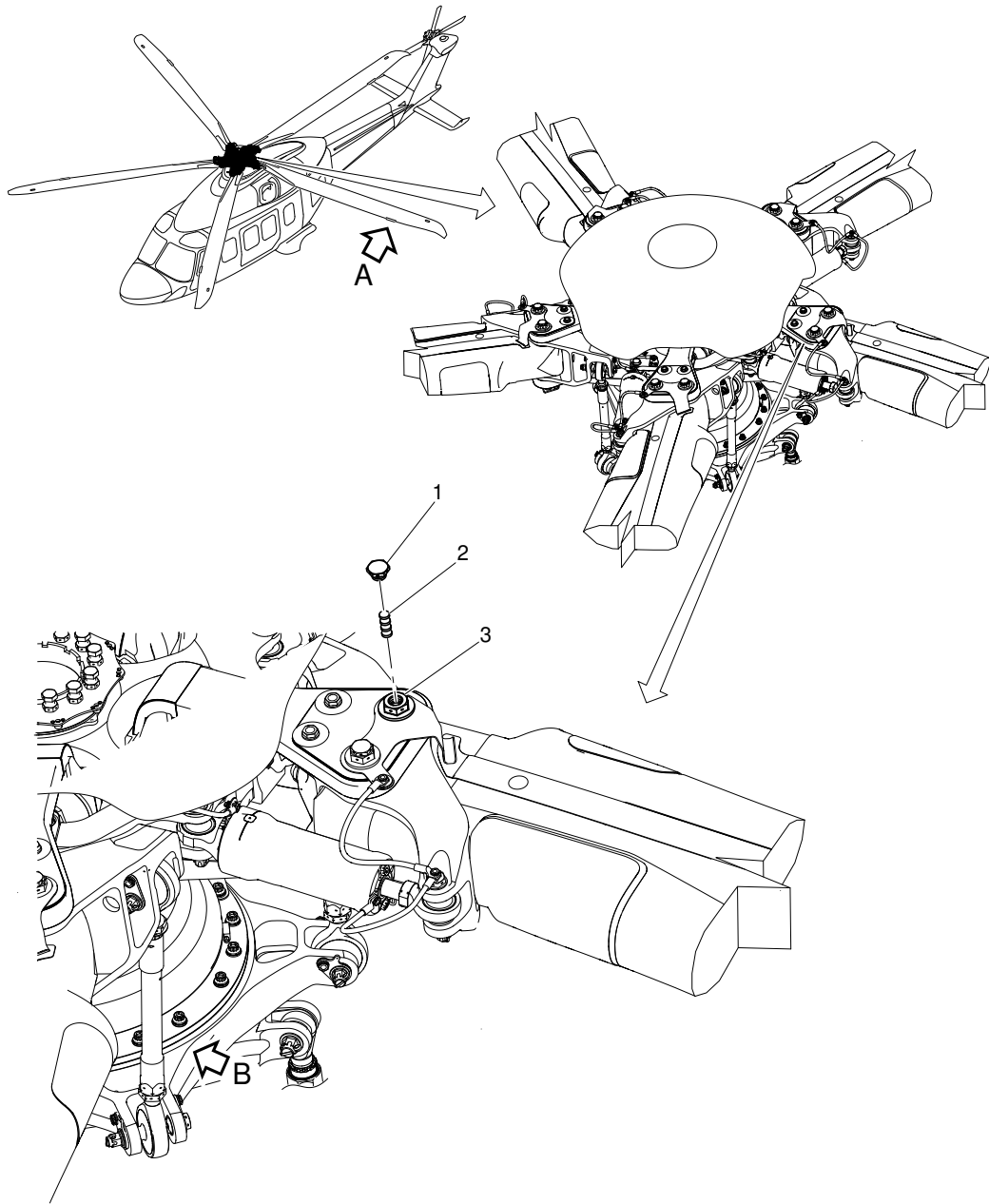
ICN-89-A-181001-G-00001-00186-A-001-01

Figure 1 (Sheet 1 of 2) Main rotor - Tracking check

A TYPICAL IN FIVE POSITIONS

B TYPICAL IN FIVE POSITIONS

ICN-89-A-181001-G-00001-00187-A-002-01

Figure 1 (Sheet 2 of 2) Main rotor - Tracking check

Date:			

Final Rotors correction

	Main Rotor		
	Weight (grams)	Pitch Link (Marks)	TAB (degree)
Red			
Black			
White			
Yellow			
Blue			

	Tail Rotor	
	Weight (grams)	Pitch Link (Bolt Face)
White		
Blue		
Yellow		
Red		

Final Reading

	Main Rotor		
	Lateral	Vertical	Split
FPOG			
HOVER			
90 Knt			
135 Knt			
Vh			

	Tail Rotor	
	Lateral	Vertical
FPOG		
HOVER		
90 Knt		
135 Knt		
Vh		

ICN-89-A-181001-G-00001-07394-A-001-01

Figure 2 Adjustment log

Aircraft_____ s/n _____   Date _____

Rotor Speed 102%   Page _____ of _____

		RUN						
Axial	ips							
	phase							
Radial	ips							
	phase							

Maximum weight

800 g/Blade
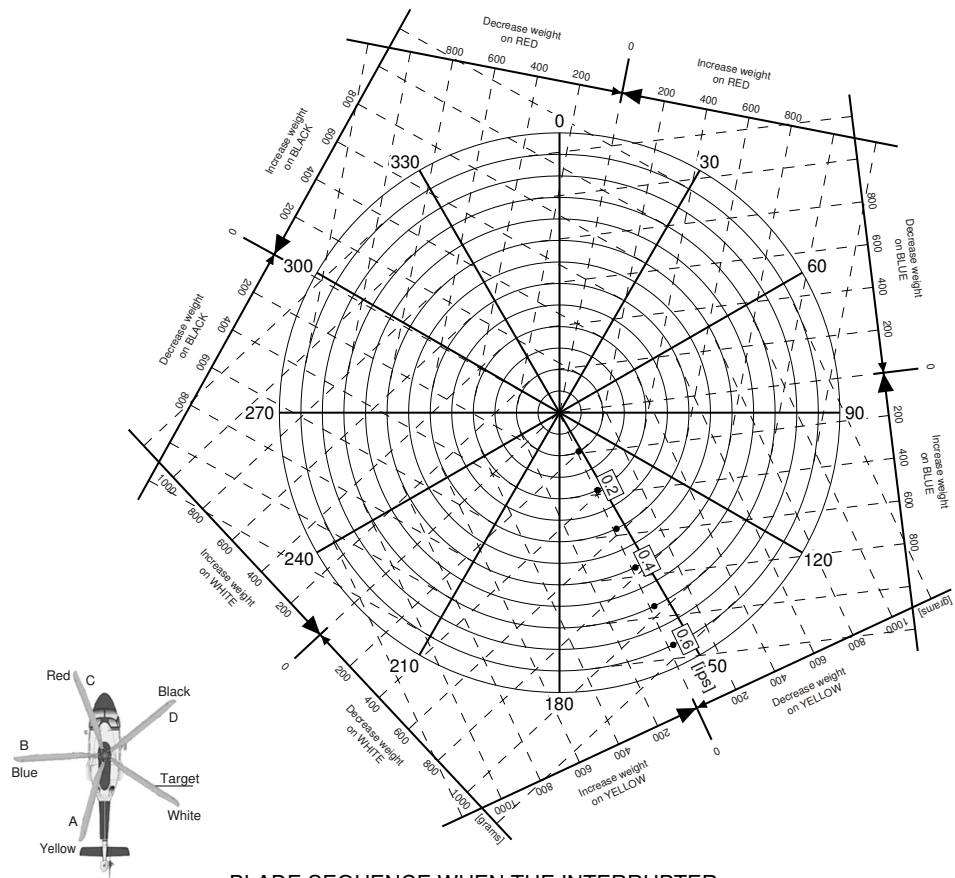
Blade & changes

BLADE SEQUENCE WHEN THE INTERRUPTER
IS SET OVER THE MAGNETIC PICK-UP

ICN-89-A-181001-G-00001-07885-A-001-01

Figure 3 MR balance chart

Figure 4 MR balance chart - Hovering

ICN-89-A-181001-G-00001-07886-A-001-01

BLADE SEQUENCE WHEN THE INTERRUPTER
IS SET OVER THE MAGNETIC PICK-UP

ICN-89-A-181001-G-00001-07887-A-001-01

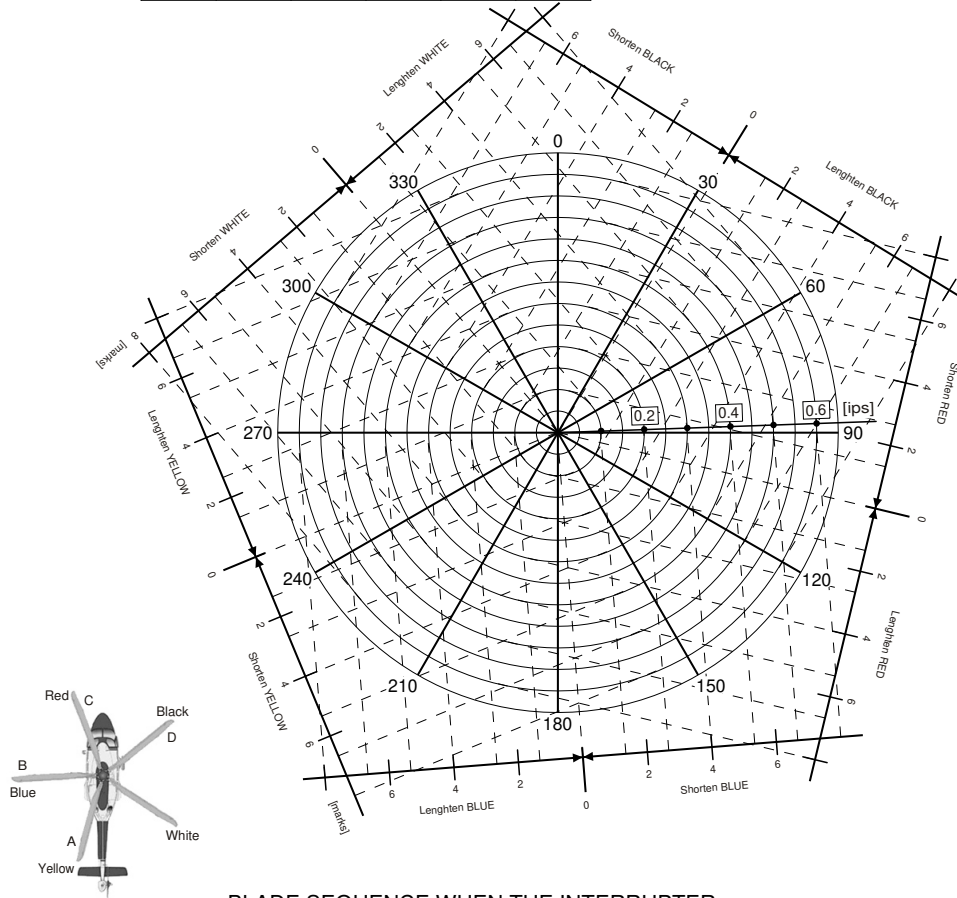*Figure 5 MR balance chart - Level flight*

Aircraft_____ s/n _____   Date _____

Rotor Speed 102%   Page ____ of ____

	RUN							
Axial	ips							
	phase							
Radial	ips							
	phase							

Blade & changes					

Maximum PL

± 5 degrees/blade

BLADE SEQUENCE WHEN THE INTERRUPTER
IS SET OVER THE MAGNETIC PICK-UP
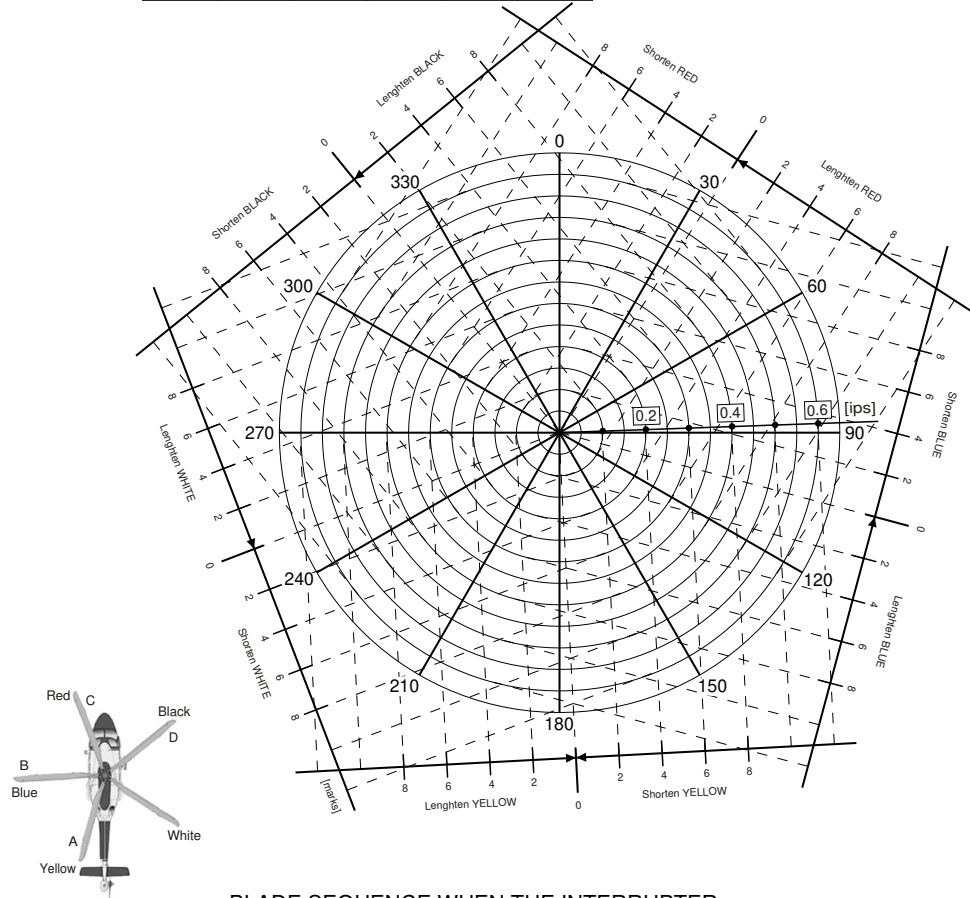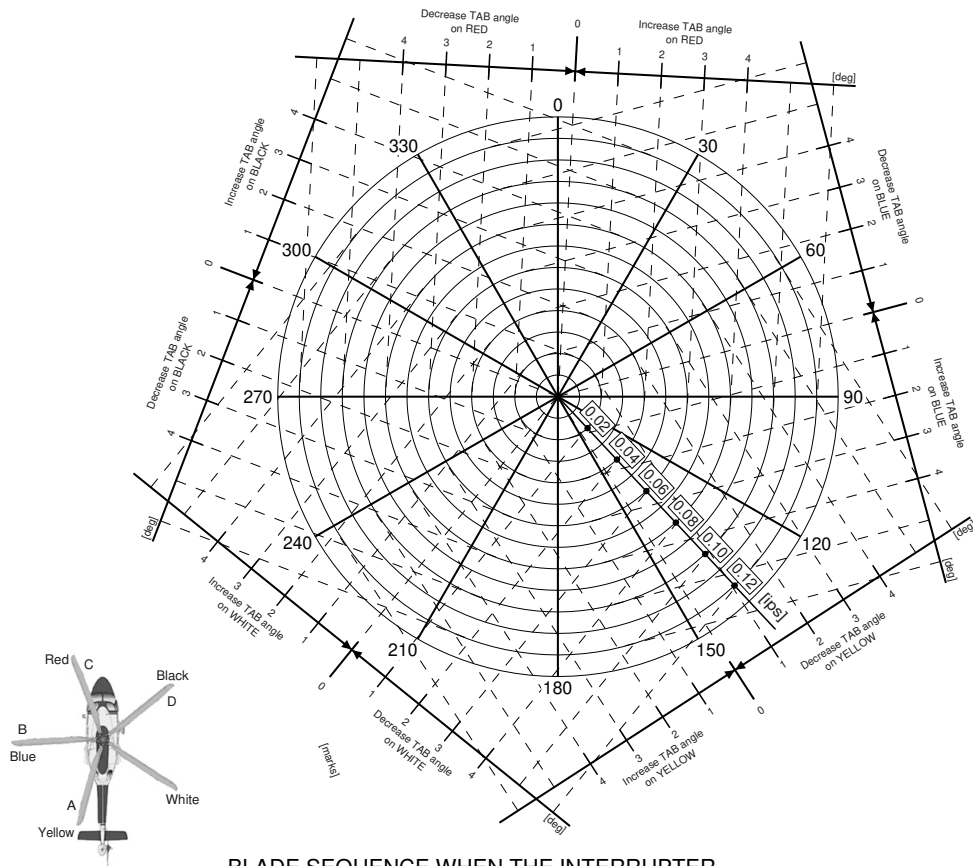
ICN-89-A-181001-G-00001-07888-A-001-01

Figure 6 MR balance chart - Level flight - Tabs

End of Data Module

Annex 2
Tail rotor - Tracking check

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References

Table 1 References

Data Module	Title
89-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
89-A-46-21-00-00A-55AA-A	Aircraft mission management system - Data downloading

Table 1 References

Data Module	Title
89-A-46-21-05-00A-55AA-A	Data transfer device (DTD) - Data downloading
89-A-60-80-00-02A-913A-A	Attaching parts protective layer - General maintenance procedure
89-A-67-21-00-00A-271A-A	Tail rotor control system - Adjust

Table 2 Access points

Access Panel / Door Id	Data Module
None	

Table 3 Zones

Zone ID	Data Module
430	89-A-06-30-00-00A-010A-A

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance.	89-A-00-20-00-00A-120A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform	GG-03-00	1
Torque wrench	ZZ-00-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Cleaning solvent	C010	AR

Table 6 Supplies

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Safety wire	C014	AR
Cheesecloth	C028	AR
Corrosion preventive compound	C075	AR

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
Balance weight	64-11-00-01 -041	AR

Safety Conditions

WARNING

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- **The Cleaning solvent (C010)**

- **The Corrosion preventive compound (C075) .**

Procedure

1	**Preliminary operations.**	

1.1   Make sure that the total weight of the helicopter is less than 7000 kg (15432 lbs).

1.2   Make sure that the helicopter is parked with the nose that points to the direction of the wind.

1.3   Make sure that the sun is not in front of the tracking camera, at 45 degrees on the left of the aircraft or with an angle of less than 25 °.

1.4   Get access to the landing gear control panel on the interseat console. Then do the operations that follow:

1.4.1   Push the NOSE WHEEL LOCK button and lock the nose wheel in its center position.

1.4.2   Operate the PARK BRAKE lever and apply the parking brake.

1.4.3   Put the Platform (GG-03-00) adjacent to the tail rotor.

1.4.4   Remove the protective layer from all the blade bolts (4, Figure 1) and their plug (1) and nut. Refer to 89-A-60-80-00-02A-913A-A.

1.4.5   Remove the platform from the tail rotor.

1.4.6   On the ECDU, do the selection of the MISC option. Then make sure that the RTB CAMERA is set to ON.

1.5   Get access to the rotor brake lever on the cockpit roof and set it to OFF.

2   **On ground check (FPOG).**

2.1   Start one engine and stabilize it at 102% NR. Refer to the Rotorcraft Flight Manual.

2.2   Make sure that the IAS is -20 thru +25 knots.

2.3   On the MCDU, do the operations that follow:

2.3.1   Push the MENU button.

2.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

2.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

2.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

2.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

2.5   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

2.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

2.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

2.6.2   Do again the selection of the RTB CYC.

> **Note**
> The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

2.7   If one of the condition that follows occurs on the MCDU, do the step 2.8:
- The ACCEL FAIL message indicates an incorrect Built In Test for one of the accelerometers used for RTB acquisitions
- The TIMEOUT message indicates that the signal acquisition procedure is not completed in the approved time, usually because of the missing rotor 1xRev signal
- The NO CAMERA message indicates that there is no communication between the Number 2 Aircraft Mission Management Computer (AMMC2) and the Tracking Camera.

Differently, continue with the steps that follow.

2.8   Do the operations that follow:

2.8.1   Stop the engine. Then let the rotors stop.

2.8.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files. Refer to 89-A-46-21-00-00A-55AA-A.

2.8.3   Do the necessary fault isolation procedure.

2.9   If one of the condition that follows occurs on the MCDU, do the step 2.10:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition
- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

2.10   Do again the data acquisition and then continue with the procedure of the RTB data collection.

2.11   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

2.12   Make sure that:
- The 1T RAD is less than 0.5 IPS
- The 1T AXL is less than 0.5 IPS.

2.13   If all the measures are in the limits you can go to step 3. Differently, do the operations that follow:

2.13.1   Stop the engine. Then let the rotors stop.

2.13.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

2.13.3   On Heliwise or, as an alternative, on the TR balance chart (Figure 3 or Figure 4), find the adjustments.

2.13.4   Do the adjustments. Refer to step 7.

3   **Hovering check.**

3.1   Hover the helicopter out of ground effect at a minimum altitude of 70 ft. Refer to the Rotorcraft Flight Manual.

3.2   Make sure that the IAS is -20 thru +40 knots.

3.3   On the MCDU, do the operations that follow:

3.3.1   Push the MENU button.

3.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

3.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

3.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

3.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

3.5   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

3.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

3.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

3.6.2   Do again the selection of the RTB CYC.

     Note
       The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

3.7   If one of the condition that follows occurs on the MCDU, do the step 3.8:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition
- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

3.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

3.9   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

3.10   Make sure that:
    -    The 1T RAD is less than 0.5 IPS
    -    The 1T AXL is less than 0.5 IPS.

3.11   If all the measures are in the limits you can go to step 4. Differently, do the operations that follow:

3.11.1   Land the helicopter then stop the engines. Let the rotors stop.

3.11.2   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
    -    Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
    -    Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

3.11.3   On Heliwise or, as an alternative, on the TR balance chart (Figure 3 or Figure 4), find the adjustments.

3.11.4   Do the adjustments. Refer to step 7.

4   **90 KIAS check.**

4.1   Do a level flight at 90 knots, at an altitude of more than 100 ft.

4.2   Make sure that the IAS is 80 thru 100 knots.

4.3   On the MCDU, do the operations that follow:

4.3.1   Push the MENU button.

4.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

4.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

4.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

4.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

4.5	Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

4.6	If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

4.6.1	Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

4.6.2	Do again the selection of the RTB CYC.

Note

The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

4.7	If one of the condition that follows occurs on the MCDU, do the step 4.8:

- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition

- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low

- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition

- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

4.8	Do again the data acquisition and then continue with the procedure of the RTB data collection.

4.9	Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

4.10	Make sure that:

- The 1T RAD is less than 0.5 IPS
- The 1T AXL is less than 0.5 IPS.

4.11	If all the measures are in the limits you can go to step 5. Differently, do the operations that follow:

4.11.1	Land the helicopter then stop the engines. Let the rotors stop.

4.11.2	Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:

- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.

- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

4.11.3 On Heliwise or, as an alternative, on the TR balance chart (Figure 3 or Figure 4), find the adjustments.

4.11.4 Do the adjustments. Refer to step 7.

5 **135 KIAS check.**

5.1 Do a level flight at 135 knots, at an altitude of more than 100 ft.

5.2 Make sure that the IAS is 110 thru 140 knots.

5.3 On the MCDU, do the operations that follow:

5.3.1 Push the MENU button.

5.3.2 Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

5.3.3 Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

5.3.4 Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

5.4 When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

5.5 Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

5.6 If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

5.6.1 Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

5.6.2 Do again the selection of the RTB CYC.

Note
The MCDU automatically shows the RTB CYC RESULTS page that shows the results of the RTB acquisition.

5.7 If one of the condition that follows occurs on the MCDU, do the step 5.8:
- The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
- The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
- The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
- The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition

- The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

5.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

5.9   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

5.10   Make sure that:
- The 1T RAD is less than 0.5 IPS
- The 1T AXL is less than 0.5 IPS.

5.11   If all the measures are in the limits you can go to step 6. Differently, do the operations that follow:

5.11.1 Land the helicopter then stop the engines. Let the rotors stop.

5.11.2 Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
- Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
- Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

5.11.3 On Heliwise or, as an alternative, on the TR balance chart (Figure 3 or Figure 4), find the adjustments.

5.11.4 Do the adjustments. Refer to step 7.

6   **VH check.**

Note
During the data acquisition the minimum IAS must be more than 145 knots.

6.1   Make sure that the VH is more than 150 Knots. Differently go to the step 6.10.

6.2   Do a level flight at the VH.

6.3   On the MCDU, do the operations that follow:

6.3.1   Push the MENU button.

6.3.2   Do the selection of the MAINTENANCE option in the MENU page. The MCDU will show the MAINTENANCE page.

6.3.3   Do the selection of the VIBR MON option in the MAINTENANCE page. The MCDU will show the VIBRATION MONITORING page.

6.3.4   Do the selection of the RTB ACQ option in the VIBRATION MONITORING page. The MCDU will show the RTB CYC RESULTS page.

6.4   When the helicopter is in the correct condition for the data acquisition, do the selection of RTB CYC in the RTB CYC RESULTS page to start the manual acquisition. This will start the data acquisition.

6.5   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

6.6   If the "FUNCTION IN USE" message comes in view on the MCDU, do the steps that follow:

6.6.1   Wait until the fields of VDAM1 ST and VDAM2 ST become AUTO.

6.6.2   Do again the selection of the RTB CYC.

6.7   If one of the condition that follows occurs on the MCDU, do the step 6.8:
-    The UNST COND message comes in view if the system identifies the Flight Condition window not correct during the acquisition
-    The CONV FAIL message is shown if the convergence is not got with at least one of the two accelerometer signals. This message shows that the vibrations of the rotor are not stable. You must ignore this condition when the rotor vibration values are low
-    The ACC LOW message comes in view if the signal level is very low. The signal is found with at least one of the two accelerometer signals for the RTB acquisition
-    The A/D SAT comes in view if there is the saturation of the A/D converter. You can find this condition with at least one of the two accelerometers for the RTB acquisition
-    The TRCK FAIL comes in view when the Tracking Camera cannot supply tracking data. The incorrect light conditions can give this message (the sun in the camera field of the view, H/C on ground on a reflective surface).

Differently, continue with the steps that follow.

6.8   Do again the data acquisition and then continue with the procedure of the RTB data collection.

6.9   Record the data on the TR balance chart. Refer to Figure 3 or Figure 4.

6.10   Land the helicopter then stop the engines. Let the rotors stop.

6.11   Do the HUMS data download procedure. To do this do the download of the Monitoring and Diagnostic System (MDS) files as follows:
-    Download the MDS data from the Aircraft Mission Management Computer (AMMC) to the Data Transfer Device (DTD). Refer to 89-A-46-21-00-00A-55AA-A.
-    Download the MDS data from the Data Transfer Device (DTD) to the computer. Refer to 89-A-46-21-05-00A-55AA-A.

6.12   On Heliwise or, as an alternative, on the TR balance chart (Figure 3 or Figure 4), find the adjustments.

6.13   Make sure that all the measures are in the limits of Table 8.

Table 8 TR track and balance limits

Measure	FPOG	HOVER OGE	90 Kias	135 Kias	Vh
1T RAD	0.2 IPS	0.2 IPS	0.3 IPS	0.3 IPS	0.3 IPS
1T AXL	N/A	0.25 IPS	0.3 IPS	0.3 IPS	0.5 IPS

6.14   If necessary, do the adjustments. Refer to step 7. Then do again the step 2 thru step 6 until all the measures are in the limits of Table 8.

7   Do the adjustments as follows:

7.1   When you do the adjustments, obey the instructions that follow:

7.1.1   Do not turn the sleeve (9, Figure 1) more than four faces of the hexagon.

7.1.2   Do not install, on each blade, balance weights for more than 0.148 kg (0.326 lbs).

7.1.3   If you must do adjustments that are more than these limits, do the adjust of the tail rotor control system. Refer to 89-A-67-21-00-00A-271A-A.

7.1.4   Put the Platform (GG-03-00) adjacent to the tail rotor.

7.1.5   Do the necessary adjustment:
-      To install the balance weights, refer to step 7.2.
-      To adjust the pitch change link, refer to step 7.3.

7.2   Install the balance weight on the related blade as follows:

7.2.1   Cut the wire that safety the plug (1) to the blade bolt (4). Discard the wire.

CAUTION

The blade bolt (4) has a layer of solid film lubricant on it. Touch the blade bolt (4) with a Cheesecloth (C028) . This is to prevent damage to the solid film lubricant.

7.2.2   Remove the plug (1) from the blade bolt (4).

7.2.3   Cut the wire end (5) that attach the balance weights (3) to the cotter pin (6).

7.2.4   Remove the balance weights (3) with the safety wire from the blade bolt (4).

7.2.5   Measure and record the Dimension Z of the braid (2). Then cut the braid (2) and remove the balance weights (3). Discard the braid.

7.2.6   Get a piece of Safety wire (C014) of a length sufficient to assemble the balance weights (3).

7.2.7	Make a new braid (2) of the same length of that you recorded in step 7.2.5.
7.2.8	Install and safety the Balance Weights (3) on the new braid (2). Make sure that the total mass of the balance weights (3) agrees with the balance weight you find during the vibration analysis.
7.2.9	Install the balance weights (3) in the blade bolt (4).
7.2.10	Safety the balance weights (3) to the cotter pin (6).
7.2.11	Carefully clean the threads and the mating surfaces of the plug (1) with the blade bolt (4) with the Cleaning solvent (C010) and the Lint-free cloth (C011) .
7.2.12	Install the plug (1) on the blade bolt (4).
7.2.13	Torque the plug (1) to 3.0 thru 4.0 Nm (27 thru 35 lbf in) with the Torque wrench (ZZ-00-00) .
7.2.14	Record the color of the blades on which you adjusted the weight of the blade bolt (4). This is necessary to complete the installation after the tracking check.
7.3	Adjust the pitch change link (7) as follows:
7.3.1	Record the data of the change link (7) on the TR balance chart. Refer to Figure 3 or Figure 4.
7.3.2	Cut and remove the wire from the check nuts (12) and (10) of the applicable pitch link (7). Discard the wire.
7.3.3	Hold the sleeve (9) in its position and loosen the check nuts (12) and (10).
7.3.4	Turn the sleeve (9) as written on the sleeve (9) to increase or decrease the length of the pitch change link.
7.3.5	Hold the sleeve (9) in its position then torque the check nuts (12) and (10) to 19.0 thru 21.0 N m (168 thru 186 lbf in) with the Torque wrench (ZZ-00-00) .
7.3.6	Safety the check nuts (12) and (10) with the new Safety wire (C014) . Bend the tab of the lock washers (8) and (11) on the related check nut only at the end of the track check.
7.4	Remove the platform from the tail rotor.
8	Make an entry in the helicopter logbook. Use the form in Figure 2.
9	Put the Platform (GG-03-00) adjacent to the tail rotor.
10	If you adjusted the balance weight on one or more blade bolts (4), do the steps that follow:
10.1	Get access to the blade bolt (4) that you adjusted before.
10.2	Remove the plug (1) from the blade bolt (4).

10.3   Apply the Corrosion preventive compound (C075) to the threads and the mating surfaces of the plug (1) with the blade bolt (4).

10.4   Install the plug (1) on the blade bolt (4).

10.5   Torque the plug (1) to 3.0 thru 4.0 Nm (27 thru 35 lbf in) with the Torque wrench (ZZ-00-00) .

10.6   Safety the plug (1) to the blade bolt (4) with the Safety wire (C014) .

10.7   Do again the step 10.2 thru step 10.6 for all the blade bolt (4) you adjusted before. Make sure that you apply the corrosion preventive compound on all the blade bolts (4) you recorded during the adjustment.

10.8   Make sure that all the plugs (1) are safe with the safety wire.

11   Apply the protective layer to all the bade bolts (4) and their plug (1) and nut. Refer to 89-A-60-80-00-02A-913A-A.

12   Remove the platform from the tail rotor.

Requirements After Job Completion

1   Remove all the tools and the other items from the work area. Make sure that the work area is clean.

B

TYPICAL IN FOUR POSITIONS

A

TYPICAL IN FOUR POSITIONS

DIMENSION Z

SECTION X-X
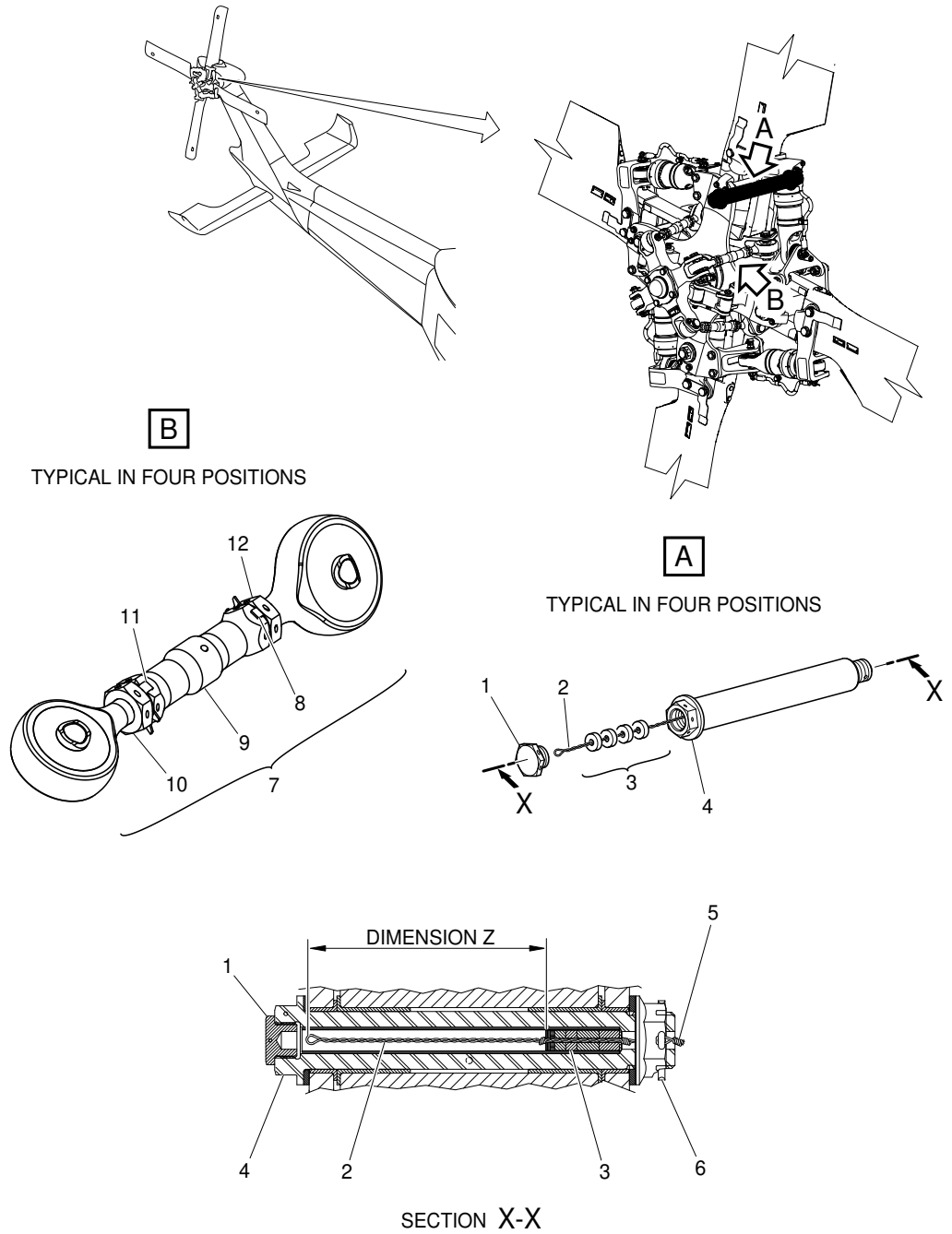
ICN-89-A-181002-G-00001-00194-A-002-01

Figure 1 Tail rotor - Tracking check

Date:		
Final Rotors correction		

Main Rotor

	Weight (grams)	Pitch Link (Marks)	TAB (degree)
Red			
Black			
White			
Yellow			
Blue			

Tail Rotor

	Weight (grams)	Pitch Link (Bolt Face)
White		
Blue		
Yellow		
Red		

Final Reading

Main Rotor

	Lateral	Vertical	Split
FPOG			
HOVER			
90 Knt			
135 Knt			
Vh			

Tail Rotor

	Lateral	Vertical
FPOG		
HOVER		
90 Knt		
135 Knt		
Vh		

ICN-89-A-181001-G-00001-07394-A-001-01

Figure 2 Adjustment log

Figure 3 [Without K134] TR Track and balance chart

Aircraft_____ s/n _____   Date _____

Rotor Speed 102%   Page _____ of _____

	RUN					
Axial	ips					
	phase					
Radial	ips					
	phase					

| Blade & changes | | | | | |

Max Weight
150 g/blade

Max PL
± 4 degrees/blade
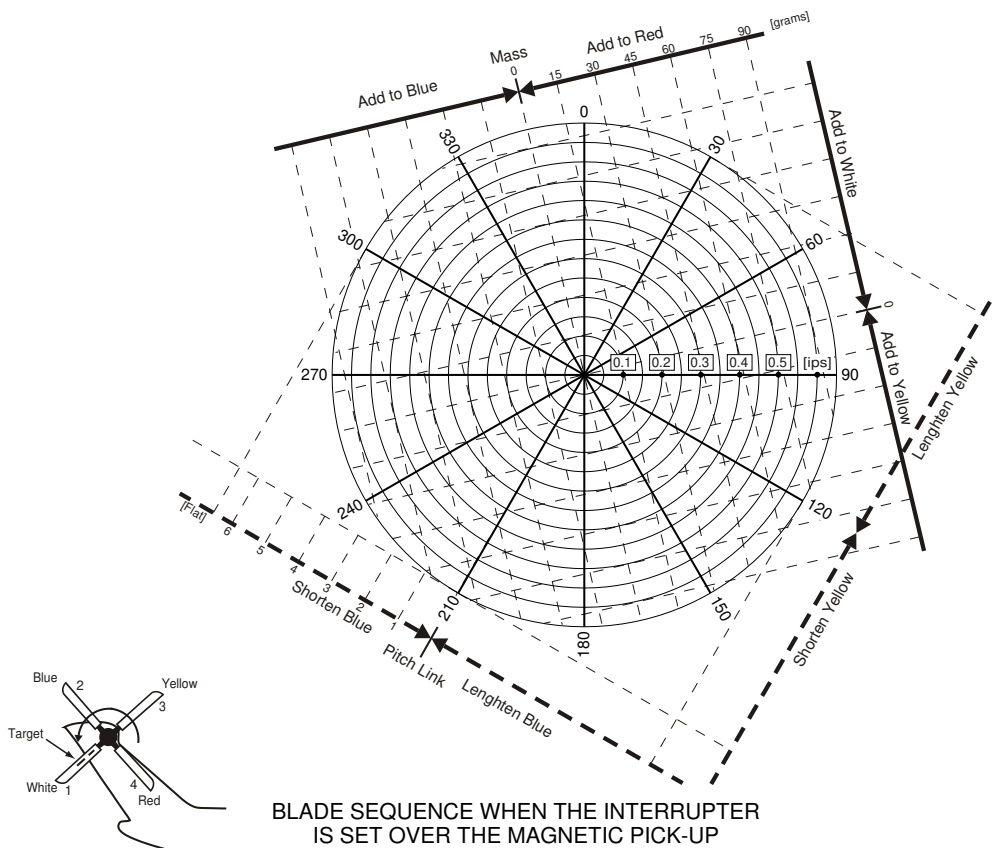
BLADE SEQUENCE WHEN THE INTERRUPTER
IS SET OVER THE MAGNETIC PICK-UP

ICN-89-A-181002-G-00001-07890-A-001-01

Figure 4 [K134] TR Track and balance chart

End of Data Module