
BOLLETTINO TECNICO

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N° **139-429**

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REV. /

Compliance with
this Bulletin is:

OPTIONAL

SUBJECT

WEIGHT EXTENSION 7000 KG

REASON

To provide all necessary instructions on how to increase the Gross Weight up to 7000 Kg with the installation of kit P/N 4G0000F00311.

HELICOPTERS AFFECTED

All AB/AW139 helicopters.

COMPLIANCE

At customer's option.

DESCRIPTION

This Bollettino Tecnico provides the instructions for the installation of the kit P/N 4G0000F00311 to increase the Gross Weight up to 7000 Kg.

NOTE

Supplement n°90 of RFM (Rotorcraft Flight Manual) is dedicated to kit weight extension 7000 kg and contains information about limitations, procedures and performance data.

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NOTE

As mandatory prerequisite of this Bollettino Tecnico, the helicopter has to be already compliant with mandatory BT 139-015 and BT 139-078.

NOTE

As mandatory prerequisite of this Bollettino Tecnico, the helicopter has to be already equipped with Phase 5.6 or subsequent.

Part I provides all necessary instructions on how to comply with prerequisites required for the installation of kit weight extension 7000 kg P/N 4G0000F00311 listed below:

- ✓ structural repair of frame STA3900 and frame STA5700 P/N 3G5306P08512 and P/N 3G5306P08513 (BT 139-089);
- ✓ MGB rod backup structure cruciform fitting retro modification P/N 3G5306P36711 (BT 139-244);
- ✓ rear fitting reinforcement retromodification P/N 3G5306P38811 (BT 139-418);
- ✓ tailboom structural reinforcement P/N 3G5309P01812 (BT 139-200);
- ✓ tail reinforcements P/N 3G5309P02711, P/N 3G5309P01511 and P/N 3G5350P00111 (BT 139-419);
- ✓ tail rotor pitch angle kit P/N 4G6722F00111 (BT 139-189).

Part II of this Bollettino Tecnico describes the operation necessary to install the kit 7000 Kg P/N 4G0000F00311 mainly composed by:

- ✓ improved park brake P/N 3G3240V00332;
- ✓ nose landing gear assy P/N 3G3220V00136;
- ✓ LH and RH Main Landing Gear Assy P/N 3G3210V00831 and P/N 3G3210V00931;
- ✓ VNE placard for operations above the already approved helicopter Weight vs Longitudinal CG envelope.

REQUIRED MANPOWER

To comply with this Bollettino Tecnico the following Maintenance-Man-Hours (MMH) are deemed necessary:

Part I: N.A.

Part II: approximately twenty-five (25) MMH.

Maintenance-Man-Hours are based on hands-on time and can change with personnel and facilities available.

WARRANTY

N.A.

REQUIRED MATERIALS

The following materials are required for compliance with this Bollettino Tecnico:

<u>P/N</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
4G0000F00311	KIT 7000 kg	REF	
Composed of:			
3G3220A00311	NOSE LANDING GEAR INSTALLATION	REF	
Composed of:			
3G3220A00151	Sleeve	..1	
3G3220L00151	NLG retracting actuator bolt	..1	
3G3220V00136	Nose landing gear assy	..1	
3G3230V00132	Nose retracting actuator assy	..1	(1)
999-0061-51-936	Laminated shim	..1	(2)
MS17825-12	Self-locking nut	..1	
MS20002C12	Washer	..1	
MS24665-374	Cotter pin	..1	
NAS1149F1290P	Washer	..1	
3G3210A00111	MAIN LANDING GEAR INSTALLATION	REF	
Composed of:			
3G3210L00151	MLG retracting actuator bolt	..2	
3G3210V00831	LH main landing gear assy	..1	
3G3210V00931	RH main landing gear assy	..1	
3G3230V00332	Main retracting actuator assy	..2	(1)

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<u>P/N</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
MS17825-12	Self-locking nut	..2	
MS20002C12	Washer	..2	
MS24665-360	Cotter pin	..2	
MS24665-374	Cotter pin	..2	
NAS1149F1232P	Washer	..2	
NAS1149F1290P	Washer	..2	
NAS6612D56	Bolt	..2	
3G1130A06211	VNE PLACARD INSTALLATION	REF	
Composed of:			
3G1130L00160	VNE placard illuminated (NVG)	..1	(3)
DM60000218-004	Performance Database CD	1	

Moreover the following consumable materials, or equivalent, are necessary to accomplish this Bollettino Tecnico:

<u>Spec./AW code number</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
199-05-002 Type II, Class 2 / Code No. 900004603 (MMM-A-132)	Adhesive EA934NA (C054)	AR	Local Supply
A-A-59503C Code No. 553250090	Nitrogen (C116)	AR	Local Supply
MS20995C32	Lock wire (C014)	1 m	Local Supply
Aeroshell 22 (MIL-PRF-81322F)	Grease (C009)	AR	Local Supply
P-D-680 Type II / Code No. 505405407 (MIL-PRF-680C, Type II)	Ardrox 5503, cleaning solvent (C010)	AR	Local Supply
CCC-C-46 / Code No. 42501025	Soft lint-free cloth (C011)	AR	Local Supply
Mobil 28 (MIL-PRF-81322F)	Grease (C187)	AR	Local Supply
MS20995C32	Lockwire (C014)	AR	Local Supply

SPECIAL TOOLS

The following special tools are required for compliance with this Bollettino Tecnico:

<u>P/N</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
RMGE-DS-06-2010-LH	Left deck servicing platform, (GG-01-00)	1	Local supply
3G0705G00232	Jack, hydraulic (HA-01-00)	1	
3G1205G00132	Adapters kit, servicing (BC-01-00)	1	
GB966-203-200	Trolley, L/G nitrogen charging (EA-01-00)	1	
3G3205G00151	Wrench, main landing gear (GF-42-00)	1	

NOTES:

- (1) Item to be ordered if not already installed on the helicopter.
- (2) P/N A864A2578E036T may be supplied as a valid alternative.
- (3) P/N 3G1130L00160 has to be ordered as alternative for helicopters equipped with kit FIPS P/N 4G3000F00211.

WEIGHT AND BALANCE CHANGES

N. A.

REFERENCES

- ✓ AW139 Aircraft Maintenance Publication (AMP).
- ✓ AW139 Aircraft Structural Repair Publication (ASRP).
- ✓ AW139 Aircraft Material Data Information (AMDI).
- ✓ AW139 Illustrated Tool and Equipment Publication (ITEP).

PUBLICATIONS AFFECTED

- ✓ N. A.

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COMPLIANCE INSTRUCTIONS

GENERAL NOTES

- a) Place an identification tag on all components that are re-usable, including the fastening hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.

Part I

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.

NOTE

Following steps 2 thru 4 are applicable to all AB139/AW139 helicopters from S/N 31005 to 31398 (except S/N 31007) and from S/N 41001 to S/N 41293.

2. If the helicopter is not already equipped with frame STA3900 and frame STA5700 structural repair retro modification P/N 3G5306P08512 or P/N 3G5306P08513, comply with *BT 139-089*.
3. If the helicopter is not already equipped with MGB rod backup structure cruciform fitting retro modification P/N 3G5306P36711, comply with *BT 139-244*.
4. If the helicopter is not already equipped with rear fitting reinforcement retro modification P/N 3G5306P38811, comply with *BT 139-418*.

NOTE

Following steps are applicable to helicopters NOT already equipped with the new tailboom assy P/N 3G5350A00136.

5. If the helicopter is not already equipped with tailboom structural reinforcement P/N 3G5309P01812, comply with *BT 139-200*.

6. If the helicopter is not already equipped with tail reinforcements P/N 3G5309P02711, P/N 3G5309P01511 and P/N 3G5350P00111, comply with BT 139-419.

NOTE

Following step 7 is applicable to AW139 helicopters not compliant with BT 139-140.

7. If the helicopter is not already equipped with tail rotor pitch change angle kit P/N 4G6722F00111, comply with BT 139-189 (latest release).
8. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, Section 6).
9. Return the helicopter to flight configuration and record for compliance with PART I of this Bollettino Tecnico on the helicopter log book.

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Part II

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-52-44-01-00A-520A-A, remove access panels 740AL, 740BL, 750AR and 750BR.
3. In accordance with AMP DM 39-A-52-44-03-00A-541A-A, open the access panel 473AL.
4. Gain access to the cockpit area and, if installed, remove the bulkhead between passengers cabin and cockpit area and the interseat console assy P/N 3G2510A01631 or P/N 3G2510A01632.
5. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and DM 39-A-52-44-01-00A-520A-A, remove the access panel 130ZL.
6. In accordance with AMP DM 39-A-07-11-00-00A-000A-A, lift the helicopter on jacks.
7. If installed, remove:
 - ✓ the left nose-landing-gear door according to AMP DM 39-A-52-81-01-00A-520A-K;
 - ✓ the right nose-landing-gear door according to AMP DM 39-A-52-81-02-00A-520A-K;
 - ✓ the left door-opening rod according to AMP DM 39-A-52-81-03-00A-520A-K;
 - ✓ the right door-opening rod according to AMP DM 39-A-52-81-04-00A-520A-K;
 - ✓ the left door-control rod according to AMP DM 39-A-52-81-05-00A-520A-K;
 - ✓ the right door-control rod according to AMP DM 39-A-52-81-06-00A-520A-K;
 - ✓ the main link according to AMP DM 39-A-52-81-07-00A-520A-K.

NOTE

Following step 8 is applicable only to helicopters equipped with snow ski kit.

8. In accordance with AMP DM 39-A-32-71-01-00A-520A-K, remove the existing nose landing gear snow ski.

NOTE

Following step 9 is applicable only to helicopters equipped with slump pads kit.

9. In accordance with AMP DM 39-A-32-72-01-00A-520A-K, remove the existing nose landing gear slump pad.
10. In accordance with AMP DM 39-A-32-21-01-00A-520A-A, remove the existing nose landing gear assy with the relevant n°2 wheel tire assemblies. Discard existing fastening hardware.

NOTE

When performing following step 11, if the nose landing gear actuator installed is P/N 3G3230V00132, keep it for later re-use in step 12.

11. In accordance with AMP DM 39-A-32-31-04-00A-520A-A, remove the existing nose landing gear actuator. Discard existing fastening hardware.

WARNINGS

The component includes a Vital Point (VP). During the procedure, follow the local regulations applicable to the Vital Points (ref. step 12).

CAUTION

In accordance with AMP DM 39-A-00-60-00-00A-010A-A, this component is a critical part. Examine the component for signs of structural damage before the installation on the helicopter (ref. step 12).

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NOTE

When performing following step 12, if necessary, add one or more washer P/N NAS1149F1290P under the nut to adjust the grip.

12. In accordance with AMP DM 39-A-32-31-04-00A-720A-A, install the nose landing gear actuator P/N 3G3230V00132 by means of NLG retracting actuator bolt P/N 3G3220L00151, countersunk washer P/N MS20002C12 (under bolt head), sleeve P/N 3G3220A00151, washer P/N NAS1149F1290P (under nut), nut P/N MS17825-12 and cotter pin P/N MS24665-374.
13. In accordance with AMP DM 39-A-32-21-01-00A-720A-A, install the nose landing gear P/N 3G3220V00136 by means of hardware provided by supplier of landing gear.

NOTE

Following step 14 is applicable only to helicopters equipped with snow ski kit.

14. In accordance with AMP DM 39-A-32-71-01-00A-720A-K, re-install the nose landing gear snow ski.

NOTE

Following step 15 is applicable only to helicopters equipped with slump pads kit.

15. In accordance with AMP DM 39-A-32-72-01-00A-720A-K, re-install the nose landing gear slump pad.
16. In accordance with AMP DM 39-A-12-20-01-00A-214A-A, inflate the n°2 nose/wheel tire assemblies P/N 3G3240V01831 with dry nitrogen (C116).
17. With reference to Figure 1 and in accordance with AMP DM 39-A-12-20-03-00A-214A-A, fill the nose landing gear shock absorber thru the charging valve P/N MS28889-2 with nitrogen (C116).
18. If previously removed, re-install:
 - ✓ the main link according to AMP DM 39-A-52-81-07-00A-720A-K;
 - ✓ the right door-control rod according to AMP DM 39-A-52-81-06-00A-720A-K;

- ✓ the left door-control rod according to AMP DM 39-A-52-81-05-00A-720A-K;
- ✓ the right door-opening rod according to AMP DM 39-A-52-81-04-00A-720A-K;
- ✓ the left door-opening rod according to AMP DM 39-A-52-81-03-00A-720A-K;
- ✓ the right nose-landing-gear door according to AMP DM 39-A-52-81-02-00A-720A-K;
- ✓ the left nose-landing-gear door according to AMP DM 39-A-52-81-01-00A-720A-K.

NOTE

Following step 19 is applicable only to helicopters equipped with snow ski kit.

19. In accordance with AMP DM 39-A-32-71-02-00A-520A-K, remove the left main landing gear snow ski.

NOTE

Following step 20 is applicable only to helicopters equipped with slump pads kit.

20. In accordance with AMP DM 39-A-32-72-02-00A-520A-K, remove the left main landing gear slump pad.
21. In accordance with AMP DM 39-A-32-11-01-00A-520A-A, remove the left main landing gear with the relevant wheel tire assembly. Discard existing fastening hardware.

NOTE

When performing following step 22, if the landing gear actuator installed is P/N 3G3230V00332, keep it for later re-use in step 31.

22. In accordance with AMP DM 39-A-32-31-05-00A-520A-A, remove the left main landing gear actuator. Discard existing fastening hardware.

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NOTE

Following step 23 is applicable only to helicopters equipped with snow ski kit.

23. In accordance with AMP DM 39-A-32-71-03-00A-520A-K, remove the right main landing gear snow ski.

NOTE

Following step 24 is applicable only to helicopters equipped with slump pads kit.

24. In accordance with AMP DM 39-A-32-72-03-00A-520A-K, remove the right main landing gear slump pad.
25. In accordance with AMP DM 39-A-32-12-01-00A-520A-A, remove the right main landing gear with the relevant wheel tire assembly. Discard existing fastening hardware.

NOTE

When performing following step 26, if the landing gear actuator installed is P/N 3G3230V00332, keep it for later re-use in step 27.

26. In accordance with AMP DM 39-A-32-31-06-00A-520A-A, remove the right main landing gear actuator. Discard existing fastening hardware.

WARNINGS

The component includes a Vital Point (VP). During the procedure, follow the local regulations applicable to the Vital Points (ref. step 27).

CAUTION

In accordance with AMP DM 39-A-00-60-00-00A-010A-A, this component is a critical part. Examine the component for signs of structural damage before the installation on the helicopter (ref. step 27).

NOTE

When performing following step 27, if necessary, add one or more washer P/N NAS1149F1290P under the nut to adjust the grip.

27. In accordance with AMP DM 39-A-32-31-06-00A-720A-A, install the right main landing gear actuator P/N 3G3230V00332 by means of following fastening hardware on the side between actuator and support: MLG retracting actuator bolt P/N 3G3210L00151, countersunk washer P/N MS20002C12 (under bolt head), washer P/N NAS1149F1290P (under nut), nut P/N MS17825-12 and cotter pin P/N MS24665-374.
28. In accordance with AMP DM 39-A-32-12-01-00A-720A-A, install the right main landing gear P/N 3G3210V00931.

NOTE

Following step 29 is applicable only to helicopters equipped with snow ski kit.

29. In accordance with AMP DM 39-A-32-71-03-00A-720A-K, re-install the right main landing gear snow ski.

NOTE

Following step 30 is applicable only to helicopters equipped with slump pads kit.

30. In accordance with AMP DM 39-A-32-72-03-00A-720A-K, re-install the right main landing gear slump pad.
31. In accordance with AMP DM 39-A-32-31-05-00A-720A-A, install the left main landing gear actuator P/N 3G3230V00332 by means of following fastening hardware on the side between actuator and support: MLG retracting actuator bolt P/N 3G3210L00151, countersunk washer P/N MS20002C12 (under bolt head), washer P/N NAS1149F1290P (under nut), nut P/N MS17825-12 and cotter pin P/N MS24665-374.
32. In accordance with AMP DM 39-A-32-11-01-00A-720A-A, install the left main landing gear P/N 3G3210V00831.

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NOTE

Following step 33 is applicable only to helicopters equipped with snow ski kit.

33. In accordance with AMP DM 39-A-32-71-02-00A-720A-K, remove the left main landing gear snow ski.

NOTE

Following step 34 is applicable only to helicopters equipped with slump pads kit.

34. In accordance with AMP DM 39-A-32-72-02-00A-520A-K, remove the left main landing gear slump pad.
35. In accordance with AMP DM 39-A-12-20-02-00A-214A-A, inflate the n°2 main wheel tire assemblies P/N 3G3240V01731 with dry nitrogen (C116).
36. In accordance with AMP DM 39-A-32-10-00-00A-362A-A, fill the main landing gear shock absorber P/N 3G3210V01031 thru charging valve P/N MS28889-2 with dry nitrogen (C116).
37. In accordance with AMP DM 39-A-07-11-00-00A-000A-A, lower the helicopter on the ground.

NOTE

If FIPS kit P/N 4G3000F00211 is installed, apply VNE placard P/N 3G1130L00161 performing following step 38.

38. In accordance with AMP DM 39-A-11-31-02-00A-921A-A, replace the existing number 2 VNE placard with the new one P/N 3G1130L00160.
39. In accordance with AMP DM 39-A-45-45-00-00A-75CC-A, load the performance database P/N DM60000218-004 on the helicopter.
40. In accordance with AMP DM 39-A-52-44-01-00A-720A-A, re-install access panels 740AL, 740BL, 750AR and 750BR.
41. In accordance with AMP DM 39-A-52-44-03-00A-741A-A, close the access panel 473AL.
42. If previously removed, re-install the bulkhead between passengers cabin and cockpit area.

43. Re-install the interseat console assy P/N 3G2510A01631 or P/N 3G2510A01632.
44. In accordance with AMP DM 39-A-52-44-01-00A-720A-A, re-install the access panel 130ZL.
45. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, Section 6).
46. Return the helicopter to flight configuration and record for compliance with PART II of this Bollettino Tecnico on the helicopter log book.

