

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

G39EU  
Revision 6  
Burkhart Grob  
Model G103 TWIN ASTIR  
Model G103 TWIN II  
Model G103A TWIN II ACRO  
Model G103C TWIN III ACRO  
February 24, 2004

TYPE CERTIFICATE DATA SHEET NO. G39EU

This Data Sheet, which is part of type Certificate No. G39EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder                      BURKHART GROB LUFT - UND  
    RAUMFAHRT GmbH & CO KG  
    Am Flugplatz  
    D-8939 Mattsies  
    Federal Republic of Germany

**I. Model G103 TWIN ASTIR (Utility Category), approved June 26, 1978.**

Airspeed Limits (I.A.S.)	<p>Maximum airspeeds In Calm Air</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-left: 20px;">Never exceed (<math>V_{NE}</math>)</td> <td style="text-align: center;">135 kts</td> <td style="text-align: center;">155 mph</td> <td style="text-align: center;">250 km/hr</td> </tr> <tr> <td style="padding-left: 20px;">With Airbrakes extended</td> <td style="text-align: center;">135 kts</td> <td style="text-align: center;">155 mph</td> <td style="text-align: center;">250 km/hr</td> </tr> <tr> <td style="padding-left: 20px;">In rough air (<math>V_S</math>)</td> <td style="text-align: center;">108 kts</td> <td style="text-align: center;">124 mph</td> <td style="text-align: center;">200 km/hr</td> </tr> <tr> <td style="padding-left: 20px;">Maneuvering (<math>V_A</math>)</td> <td style="text-align: center;">92 kts</td> <td style="text-align: center;">105 mph</td> <td style="text-align: center;">170 km/hr</td> </tr> <tr> <td style="padding-left: 20px;">Aero Tow (<math>V_T</math>)</td> <td style="text-align: center;">92 kts</td> <td style="text-align: center;">105 mph</td> <td style="text-align: center;">170 km/hr</td> </tr> <tr> <td style="padding-left: 20px;">Winch tow (<math>V_W</math>)</td> <td style="text-align: center;">64 kts</td> <td style="text-align: center;">74 mph</td> <td style="text-align: center;">120 km/hr</td> </tr> </table>	Never exceed ( $V_{NE}$ )	135 kts	155 mph	250 km/hr	With Airbrakes extended	135 kts	155 mph	250 km/hr	In rough air ( $V_S$ )	108 kts	124 mph	200 km/hr	Maneuvering ( $V_A$ )	92 kts	105 mph	170 km/hr	Aero Tow ( $V_T$ )	92 kts	105 mph	170 km/hr	Winch tow ( $V_W$ )	64 kts	74 mph	120 km/hr
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Aero Tow ( $V_T$ )	92 kts	105 mph	170 km/hr																						
Winch tow ( $V_W$ )	64 kts	74 mph	120 km/hr																						
C.G. Range	10.24 in to 18.11 in (260 mm to 460 mm) aft of datum.																								
Datum	Leading edge of wing at root.																								
Empty Weight	See Flight Handbook, Page 28.																								
Leveling Means	Flight Handbook, Chapter VI. Maintenance Handbook, Chapter IV.																								
Maximum Weight	1435 lbs (650 kg.) with or without water ballast.																								
No. of Seats	2-fixed seats with Seat 1 located 44.9 in (1140 mm) forward of datum and Seat 2 located 0.4 in (11 mm.) behind datum.																								
Water Ballast	2 wing water bags, each 45 liters (12 gal.) (100 lb.) at position 11.7 in. (297 mm) aft of datum.																								
Baggage	Maximum 22 lb. (10 kg) at C.G.																								

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## Control Surface Movements

Aileron	Up	3.541	±	0.394 in. (radius 8.19 in.)
	Down	1.77	±	0.31 in.
The Radius is the distance measured from the hingeline of the aileron at the inboard edge of the aileron.				
Elevator	Up	3.58	±	0.24 in. (radius 8.74 in.)
	Down	2.79	±	0.19 in.
The radius is the distance measured from the hingeline of the elevator at the elevator mid or center point.				
Rudder	Right	8.78	±	0.39 in. (radius 17.72 in.)
	Left	8.78	±	0.39 in.
The radius is the distance measured from the hingeline of the rudder at the base of the rudder.				
Airbrake				
At inner level	Up	7.0		in.

Rated load on Winch and  
Auto Tow (Weak Link)

Maximum 600 kg (1323 lb.)

**II. Model G103 TWIN II (Utility Category), Approved March 26, 1982.**

Airspeed Limits (I.A.S.)	Maximum Air Speeds In Calm Air			
	Never exceed ( $V_{NE}$ )			
	0 - 6500 ft alt	135 kts	155 mph	250 km/hr
	6501 - 10000 ft alt	128 kts	146 mph	237 km/hr
	10001 - 13000 ft alt	121 kts	139 mph	225 km/hr
	13001 - 16500 ft alt	115 kts	132 mph	213 km/hr
	16501 - 19000 ft alt	109 kts	125 mph	202 km/hr
	With Airbrakes extended	135 kts	155 mph	250 km/hr
	In rough air ( $V_S$ )	92 kts	105 mph	170 km/hr
	Maneuvering ( $V_A$ )	92 kts	105 mph	170 km/hr
	Aero Tow ( $V_T$ )	92 kts	105 mph	170 km/hr
	Winch tow ( $V_W$ )	65 kts	74 mph	120 km/hr
C.G. Range	+10.24 in. (260 mm) to +18.11 in. (460 mm) aft of datum.			
Datum	Leading edge of wing at root.			
Empty Weight	See Flight manual, Page 31.			
Leveling Means	Flight Manual, Chapter II.			
Maximum Weight	1279 lb (580 kg).			
No. of Seats	2-fixed seats with Seat 1 located 45.3 in (1150 mm) forward of datum and Seat 2 located 1.6 in. (40 mm) behind datum.			
Baggage	Maximum 22 lb. (10 kg) at C.G.			

## Control Surface Movements

Aileron                   Up 3.541 ± 0.394 in. (radius 8.19 in.)  
                               Down 1.97 ± 0.31 in.  
 The radius is the distance measured from the hingeline of the aileron at the inboard edge of the aileron.

Elevator                   Up 3.54 ± 0.24 in. (radius 8.35 in.)  
                               Down 2.76 ± 0.20 in.  
 The radius is the distance measured from the hingeline of the elevator at the elevator mid or center point.

With elevator No. 103A-3520 for gliders modified by TM 315-16

Up 3.82 ± 0.31 in. (radius 9.17 in.)  
 Down 2.99 ± 0.24 in.

The radius is the distance measured from the hingeline of the elevator at the elevator mid or center point.

For glider serial numbers 3730 through 3838 modified by AM 315-12

Up 3.82 ± 0.31 in. (radius 9.65 in.)  
 Down 2.99 ± 0.24 in.

The radius is the distance measured from the hingeline of the elevator at the elevator mid or center point.

For glider serial number 3839 and subsequent and gliders modified by AM 315-13/1, and for glider serial numbers 33879 and subsequent by AM 315-14 (spring trim system)

Up 3.74 ± 0.31 in. (radius 9.45 in.)  
 Down 2.92 ± 0.24 in.

The radius is the distance measured from the hingeline of the elevator at the elevator inboard edge.

Rudder                   Right 9.17 ± 0.39 in. (radius 17.72 in.)  
                               Left 9.17 ± 0.39 in.

The radius is the distance measured from the hingeline of the rudder at the base of the rudder.

## Airbrakes

At inner level           Up 7.0 in.

Rated Load on Winch and  
 Auto Tow (Weak Link)

Maximum 1323 lb. (600 kg).

**III. Model G103A TWIN II ACRO, (Utility and Aerobatic Categories), Approved April 2, 1984.**

(Similar to TWIN II except for: stronger spar in the wing)

Airspeed Limits (I.A.S.)  
 (for category utility)

Maximum Airspeed

In Calm Air

Never exceed ( $V_{NE}$ )

0 - 6500 ft alt	135 kts	155 mph	250 km/hr
6501 - 10000 ft alt	128 kts	146 mph	237 km/hr
10001 - 13000 ft alt	121 kts	139 mph	225 km/hr
13001 - 16500 ft alt	115 kts	132 mph	213 km/hr
16501 - 19000 ft alt	109 kts	125 mph	202 km/hr
With Airbrakes extended	135 kts	155 mph	250 km/hr
In rough air ( $V_S$ )	92 kts	105 mph	170 km/hr
Maneuvering ( $V_A$ )	92 kts	105 mph	170 km/hr
Aero Tow ( $V_T$ )	92 kts	105 mph	170 km/hr
Winch tow ( $V_W$ )	65 kts	74 mph	120 km/hr

Airspeed Limits (I.A.S.) (for category aerobatic)	Maximum Airspeed			
	In Calm Air			
	Never exceed ( $V_{NE}$ ) serial number 33879 and subsequent only.			
	0 - 6500 ft alt	135 kts	155 mph	250 km/hr
	6501 - 10000 ft alt	128 kts	146 mph	237 km/hr
	10001 - 13000 ft alt	121 kts	139 mph	225 km/hr
	13001 - 16500 ft alt	115 kts	132 mph	213 km/hr
	16501 - 19000 ft alt	109 kts	125 mph	202 km/hr
	With Airbrakes extended	135 kts	155 mph	250 km/hr
	In rough air ( $V_S$ )	98 kts	112 mph	180 km/hr
	Maneuvering ( $V_A$ )	98 kts	112 mph	180 km/hr
Aero Tow ( $V_T$ )	92 kts	105 mph	170 km/hr	
Winch tow ( $V_W$ )	65 kts	74 mph	120 km/hr	
C. G. Range	10.24 in. (260 mm) to 18.11 in (460 mm) aft of datum.			
Datum	Leading edge of wing at root.			
Empty Weight	See Flight Manual of G103 TWIN II, page 31.			
Leveling Means	Flight Manual, Chapter II.			
Maximum Weight	1279 lb (580 kg).			
No. of Seats	2- fixed seats with Seat 1 located 45.3 in. (1150 mm) forward of datum and Seat 2 located 1.6 in. (40 mm) behind datum.			
Baggage	Maximum 22 lb. (10 kg) at C.G.			
Control Surface Movements				
	Aileron	Up	3.541 ± 0.394 in. (radius 8.19 in.)	
		Down	1.97 ± 0.31 in.	
			The radius is the distance measured from the hingeline of the aileron at the inboard edge of the aileron.	
	Elevator	Up	3.82 ± 0.31 in. (radius 9.45 in.)	
		Down	2.99 ± 0.24 in.	
			The radius is the distance measured from the hingeline of the elevator at the elevator mid or center point.	
			For gliders serial numbers 3730-K through 3838-K	
		Up	3.82 ± 0.31 in. (radius 9.65 in.)	
		Down	2.99 ± 0.24 in.	
			The radius is the distance measured from the hingeline of the elevator at the elevator mid of center point.	
			For glider 3839-K and subsequent and those gliders modified by AM 315-13/1, and for glider serial numbers 33879 and subsequent by AM 315-14 (spring trim system)	
		Up	3.74 ± 0.31 in. (radius 9.45 in.)	
		Down	2.91 ± 0.24 in.	
			The radius is the distance measured from the elevator hingeline at the elevator inboard edge.	
	Rudder	Right	9.17 ± 0.39 in. (radius 17.72 in.)	
		Left	9.17 ± 0.39 in.	
			The radius is the distance measured from the hingeline of the rudder at the base of the rudder.	
	Airbrakes			
	At inner level	Up	7.0 in.	

Rated Load on Winch and  
Auto Tow (Weak Link) Maximum 1662 lb (754 kg).

**IV. Model G 103 C TWIN III ACRO (Aerobatic Category), Approved September 18, 1989.**

(Similar to TWIN II except for: wing)

Airspeed Limits (I.A.S.)	Maximum Airspeed In Calm Air Never exceed ( $V_{NE}$ )			
	0 - 6500 ft alt	151 kts	174 mph	280 km/hr
	6501 - 10000 ft alt	143 kts	165 mph	265 km/hr
	10001 - 16500 ft alt	130 kts	149 mph	240 km/hr
	16501 - 23000 ft alt	116 kts	134 mph	215 km/hr
	23001 - 29500 ft alt	103 kts	118 mph	190 km/hr
	With Airbrakes extended	151 kts	174 mph	280 km/hr
	In rough air ( $V_S$ )	108 kts	124 mph	200 km/hr
	Maneuvering ( $V_A$ )	100 kts	115 mph	185 km/hr
	Aero Tow ( $V_T$ )	100 kts	115 mph	185 km/hr
	Winch tow ( $V_W$ )	76 kts	87 mph	140 km/hr

C.G. Range 10.63 in. (270 mm) to 18.90 in. (480 mm) aft of datum.

Datum Wing leading edge at the root rib.

Empty Weight See Maintenance Manual of G 103 C Twin III ACRO Page 7.7

Leveling Means See Maintenance Manual Chapter 7.

Maximum Weight 1323 lb (600 kg)

No. of Seats 2-fixed seats with Seat 1 located 44.57 in. (1132 mm) forward of datum and Seat 2 located 1.38 in. (35 mm) behind datum.

Baggage Maximum 22 lb. (10 kg) at C.G. 31.89 in. (810 mm) aft of datum.

Control Surface Movements

Aileron	Up	2.95	±	0.31 in. (radius 8.46 in.)
	Down	1.97	±	0.20 in.
The radius is the distance measured from the hingeline of the aileron at the inboard edge of the aileron.				
Elevator	Up	4.02	±	0.31 in. (radius 9.45 in.)
	Down	2.91	±	0.24 in.
The radius is the distance measured from the hingeline of the elevator at the elevator inboard edge.				
Rudder	Right	9.17	±	0.39 in. (radius 17.72 in.)
	Left	9.17	±	0.39 in.
The radius is the distance measured from the hingeline of the rudder at the base of the rudder.				

Airbrakes

At inner level Up 5.0 in.

Rated Load on Winch and  
Auto Tow (Weak Link) Maximum 1863 lb (845 kg)

**DATA PERTINENT TO ALL MODELS.**

Serial Nos. Eligible                      See Import Requirements.

Certification Basis                      FAR 21.23 and FAR 21.29 effective February 1, 1965.

For Model G103 TWIN ASTIR:

Federal Republic of Germany Airworthiness Requirements for Sailplane and Powered Sailplanes (LFSM), dated October 1975.

Type Certificate G39EU issued June 26, 1978.

Date of Application for Type Certificate: December 30, 1976.

For Model G103 TWIN II:

Compliance with FAR 21.23 as revised by Amendment 21-53 has been shown utilizing the provisions of Advisory Circular 21.23-1 dated 12 January 1981, Section 5, paragraph a. The airworthiness requirements met under this provision are the Joint Airworthiness Requirement for Sailplane and Powered Sailplane (JAR-22) dated 1 April 1980 including Amendments 1 through 2, and Section 5, paragraph (e)(6) of Advisory Circular 21.23-1 dated 12 January 1981. Joint Airworthiness Requirements and Powered Sailplanes (JAR-22) dated 1 April 1980.

Type Certificate G39EU amended 26 March 1982.

Date of Application for amendment of the Type Certificate: 1 July 1980.

For Model G103A TWIN II ACRO:

Compliance with FAR 21.23 as revised by Amendment 21-53 has been shown utilizing the provisions of Advisory Circular 21.23-1 dated 12 January 1981, Section 5, paragraph a. The airworthiness requirements met under this provision are the Joint Airworthiness Requirement for Sailplanes and Powered Sailplanes (JAR-22) dated 1 April 1980 including Amendments 1 through 2, and Section 5, paragraph (e)(6) of Advisory Circular 21.23-1 dated 12 January 1981.

Type Certificate G39EU amended 2 April 1984.

Date of Application for amendment of the Type Certificate: 27 June, 1983.

For Model G103C TWIN III ACRO:

Compliance with FAR 21.23 as revised by Amendment 21-53 has been shown utilizing the provisions of Advisory Circular 21.23-1 dated 12 January 1981, Section 5, paragraph a. The airworthiness requirements met under this provision are the Joint Airworthiness Requirement for Sailplanes and Powered Sailplanes (JAR-22) dated 1 April 1980 including Amendments 1 through 2, and Section 5, paragraph (e)(6) of Advisory Circular 21.23-1 dated 12 January 1981.

Type Certificate G39EU amended September 18, 1989.

Date of Application for amendment of the type Certificate: 12 June 1989.

## Import Requirements

A U.S. Standard Airworthiness Certificate may be issued on the basis of a German Certificate of Airworthiness for Export signed by a representative of the Luftfahrt-Bundesamt (LBA), containing the following statement:

"The glider covered by this certificate has been examined, tested and found to comply with the type design approved under FAA Type Certificate No. G39EU and to be in a condition for safe operation."

a) For the Model G103 TWIN ASTIR:

GROB MODEL G103 TWIN ASTIR serial numbers 3002 through 3031 and subsequent are eligible for a U.S. Standard Airworthiness Certificate when:

- 1) The FAA inspector is provided with the original Export Certificate of Airworthiness issued by the LBA which certifies the glider conforms to the German type certificate, is in a condition for safe operation, and meets all special requirements established by the FAA.
- 2) The glider has been modified in accordance with the LBA-approved Grob Technical Information TM103-3, and
- 3) The glider is found to be in a condition for safe operation by the FAA inspector. Modifications pre-dating the issuance of this Type Certificate and not included in paragraph 1 and 2 of this note and modifications dated after the issuance of this Type Certificate not covered by the note contained in the Service Information paragraph of this Type Certificate must be assumed not to be approved under this Type Certificate.

b) For the Model G103 TWIN II:

GROB MODEL G103 TWIN II glider serial numbers 3543, 3601 through 3604, 3609, 3615, 3648, 3650, 3652 and 3664 are eligible for U.S. Standard Airworthiness Certificates when:

- 1) The FAA inspector is provided with the original Export Certificate of Airworthiness issued by the LBA which certifies the glider conforms to the German type certificate, is in a condition for safe operation, and meets all special requirements established by the FAA.
- 2) The glider has been modified in accordance with the LBA-approved Grob Technical Information TM315-14, and
- 3) The glider is found to be in a condition for safe operation by the FAA inspector. Modifications pre-dating this issuance of this Type Certificate and not included in paragraph 1 and 2 of this note and modifications dated after the issuance of this Type Certificate not covered by the note contained in the Service Information paragraph of this Type Certificate must be assumed not to be approved under this Type Certificate.

c) For the Model G103A TWIN II ACRO:

GROB MODEL TWIN II ACRO glider, serial numbers 3799-K-66, 3815-K-76, 3822-K-81, 3823-K-82, 3840-K-86, 3841-K-87, 3847-K-88, 3843-K-89, 3847-K-93, 3848-K-94, 3850-K-96, 3852-K-98, 3854-K-100, and 3855-K-101 are eligible for U.S. Standard Airworthiness Certificates when:

## Import Requirements (Cont'd)

- 1) The FAA inspector is provided with the original Export Certificate of Airworthiness issued by the LBA which certifies the glider conforms to the German type certificate, is in a condition for safe operation, and meets all special requirements established by the FAA.
- 2) The glider has been modified in accordance with the LBA-approved Grob Technical Information TM315-23, and
- 3) The glider is found to be in a condition for safe operation by the FAA inspector. Modifications pre-dating the issuance of this Type Certificate and not included in paragraph 1 and 2 of this note and modifications dated after the issuance of this Type Certificate not covered by the note contained in the Service Information paragraph of this Type Certificate must be assumed not to be approved under this Type Certificate.

d) For the Model G103C TWIN III ACRO:

GROB MODEL G103C TWIN III ACRO glider serial numbers 34101 and subsequent are eligible for U.S. Standard Airworthiness Certificates when:

- 1) The FAA inspector is provided with the original Export Certificate of Airworthiness issued by the LBA which certifies the glider conforms to the German type certificate, is in a condition for safe operation, and meets all special requirements established by the FAA.
- 2) The gliders with serial numbers 34107, 34110 and 34121 have been modified in accordance with the LBA-approved Grob Technical Information TM 315-44, and
- 3) The glider is found to be in a condition for safe operation by the FAA inspector. Modifications pre-dating the issuance of this Type Certificate and not included in paragraph 1 and 2 of this note and modifications dated after the issuance of this Type Certificate not covered by this note contained in the Service Information paragraph of this Type Certificate must be assumed not to be approved under this Type Certificate.

## Equipment

For the Model G103 TWIN ASTIR

The Required Equipment for the Kinds of Approved Operations are listed in the GROB Model G103 TWIN ASTIR Flight Manual LBA-approved 5 June 1978.

GROB MODEL G103 TWIN ASTIR Flight Manual, LBA-approved 5 June 1978.

For the Model G103 TWIN II

The Equipment Approved for the GROB Model G103 TWIN II is listed in the GROB Master Equipment List dated 24 September 1981.

The Required Equipment for the Kinds of Approved Operations are listed in the GROB Model G103 TWIN II Flight Manual, LBA-approved 17 March 1982.

GROB MODEL G103 TWIN II Flight Manual, LBA-approved 17 March 1982.

## Equipment (Cont'd)

For Model G103A TWIN II ACRO

The Equipment approved for the GROB Model G103A TWIN II ACRO is listed in the GROB Master Equipment List dated 22 June 1983.

The Required Equipment for the Kinds of Approved Operations are listed in the GROB Model G103A TWIN II ACRO Flight Manual, LBA-approved 12 July 1983.

GROB Model G103A TWIN II ACRO Flight Manual, LBA-approved 12 July 1983.  
GROB Model G103 TWIN II Flight Manual, LBA-approved 17 March 1982.

For Model G103C TWIN III ACRO

The Equipment approved for the GROB Model G103C TWIN III ACRO is listed in the GROB Master Equipment List dated June 1989.

The Required Equipment for the Kinds of Approved Operations are listed in the GROB Model G103C TWIN III ACRO Flight Manual, Revision 1, LBA-approved September 8, 1989.

## Service Information

GROB Technical Information (Service Bulletins), published in the English language for the U.S. Type Design that carry a statement "Approved by the Luftfahrt-Bundesamt (LBA)" may be interpreted as FAA-approved.

Available documents for GROB Model G103 TWIN ASTIR:

- Flight Manual, LBA-approved 5 June 1978.
- Maintenance Manual for GROB G103 TWIN ASTIR, LBA-approved 5 June 1978.
- Repair Instructions for the GROB G103 TWIN ASTIR, dated 5 June 1978.

Available documents for GROB Model G103 TWIN II:

- Flight Manual, LBA-approved 17 March 1982.
- Airworthiness Limitations (Section X) of the G103 TWIN II Maintenance Handbook, LBA-approved 17 March 1982.
- Repair Instructions for the GROB G103 TWIN II, dated September 1981.

Available documents for GROB Model G103A TWIN II ACRO:

- Flight Manual, dated 12 July 1983 and Model G103 TWIN II Flight Manual LBA-approved 17 March 1982.
- Airworthiness Limitations (Section X) of the G103 TWIN II Maintenance Handbook, LBA-approved 17 March 1982.
- Repair Instructions for the GROB G103 TWIN II, dated September 1981.

Available documents for GROB Model G103C TWIN III ACRO:

- Flight Manual, Revision 1, LBA-approved 8 September 1989.
- Maintenance Manual for GROB G103C TWIN III ACRO, LBA-approved January 1989.
- Airworthiness Limitations (Section XI, FAA) of the G103C TWIN III ACRO Maintenance manual, LBA-approved January 1989.
- Repair Instructions for the GROB G103C TWIN III ACRO, dated 26 May 1989.

## NOTES

NOTE 1. Current weight and balance report including list of equipment in certificated empty weight, and loading instructions, when necessary, must be provided for each glider at the time of original certification.

NOTE 2. All placards and markings listed in Section II of the LBA-approved Grob Flight Manual must be installed in the location defined.

- NOTE 3. LBA-approved Section XI of the GROB TWIN ASTIR Glider Maintenance Manual dated 5 June 1978 and LBA-approved Section X of the GROB Glider Maintenance Manual for Models  
-GROB G103 TWIN II LBA-approved 17 March 1982, and  
-GROB G103 TWIN II ACRO, LBA-approved 17 March 1982 and  
LBA-approved Section XI of the GROB G103C TWIN III ACRO Glider Maintenance Manual dated January 1989 specifies mandatory replacements times, structural inspection intervals, and related structural inspection procedures. These airworthiness limitations may not be changed without FAA approval.
- NOTE 4. All external portions of the glider exposed to sunlight must be painted white except wing tips, nose of fuselage and rudder.
- NOTE 5. Major airframe repairs must be accomplished at FAA certificated repair stations rated for composite construction of small aircraft, using Grob Werke repair methods for model of interest, approved by the FAA.
- NOTE 6. Tost release hooks for the Grob Model G103 TWIN III ASTIR to be maintained in accordance with Tost Manual E75 and Europa G73 published in May 1975.  
  
Tost release hooks for the Model G103C TWIN III ACRO to be maintained in accordance with Tost Manuals E85 published in March 1989 and Europa G88 published in February 1989.
- NOTE 7. G103 C TWIN III ACRO, Serial Number 34171 and up, incorporates the following improvements. The modifications are:
- a) Headrest, Part Number 103SL-7301/7302,
  - b) Main Landing Gear Frame Supports, Part Number 103SL-2017/2018;
  - c) Steerable Nose Landing Gear, Part Number 103SL-5100;
  - d) Rudder: Shape and Rudder Control Attachment, (Actuator Rib Part Number 103SL-3175)
  - e) Pedal Units, Part Number 103SL-4420 and 103SL-4800;
  - f) Airbrake Operating Rear Lever, Part Number 103SL-4412;
  - g) Horizontal Stabilizer Hinges, Part Number 115-1276 (one required) and 115-1278 (one required);
  - h) Elevator hinges, Part Number 103SL-3721 (two required);
  - i) Resin - hardener system:
    - 1) Resin: Type L285 from Martin G. Scheufler MGS Company
    - 2) Hardener: Type 285, 286 and 287 from MGS Company.

...END...