

Z 143 L

AIRPLANE MAINTENANCE MANUAL

Doc. No.: 005.022.1

Production No:

Registration Mark:

Manufacture: Moravan Aviation Ltd. Otrokovice
Czech Republic

THIS MANUAL INCLUDES THE MAINTENANCE INFORMATION REQUIRED TO BE AVAILABLE BY FAR PART 23.

THIS MANUAL REPLACES MAINTENANCE MANUAL OF Z 143 L AIRCRAFT, PART I (Doc. No. 005.022); MAINTENANCE MANUAL OF Z 143 L AIRCRAFT, PART II (Doc. No. 005.032) AND Z 143 L AIRCRAFT TABLE OF DIMENSIONS, LIMITS AND PLAYS.

Copyright © 1998
Moravan Aviation Ltd.
765 81 OTROKOVICE
Czech Republic

Date of issue : 1998-06-30

Date of revision : 2007-11-20



MANUFACTURERS

AIRPLANE MANUFACTURER:

Moravan Aviation Ltd.
765 81 Otokovice
Czech Republic

Tel.: +420 57 608 3900

Fax.: +420 57 608 3929

ENGINE MANUFACTURER:

TEXTRON Lycoming
Williamsport
Pennsylvania 17701
U.S.A.

PROPELLER MANUFACTURER:

MT - Propeller Entwicklung GmbH
Airport Straubing-Wallmühle
94348 Atting
Germany

PROPELLER GOVERNOR MANUFACTURER:

WOODWARD Governor Company
Rockford, Illinois
U.S.A.

NOSE LANDING GEAR MANUFACTURER:

AXL Ltd.
513 01 Semily
Czech Republic

EFFECTIVITY:

All

01-20-00

Revision No. 10
page 01 - 3
2007-11-20



Z 143 L

AIRPLANE MAINTENANCE MANUAL

MANUAL DESCRIPTION

The **Z 143L AIRPLANE MAINTENANCE MANUAL** complies with GAMA specification providing instruction for preparation and edition of less complicated instruction books for general aviation airplane. The GAMA specification utilizes ATA 100 specification.

LIST OF EFFECTIVE PAGES

Chapter Section/Subsection Item	Page	Date	Effectivity
	title	2007-11-20	all
01 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
01-00-00	01-1	2003-11-20	all
01-10-00	01-2	1998-06-30	all
01-20-00	01-3	2007-11-20	all
01-30-00	01-4	1998-06-30	all
01-31-00	01-5	1998-06-30	all
01-32-00	01-6	1998-06-30	all
01-33-00	01-7	1998-06-30	all
01-34-00	01-8	1998-06-30	all
	01-9	1998-06-30	all
01-40-00	01-10	1998-06-30	all
01-50-00	01-11	2007-11-20	all
	01-12	2007-11-20	all
	01-13	2007-11-20	all
	01-14	2003-11-20	all
	01-15	2007-11-20	all
	01-16	2007-11-20	all
	01-17	2002-07-09	all
	01-18	2003-11-20	all
	01-19	2007-11-20	all
	01-20	2007-11-20	all
	01-21	2007-11-20	all
	01-22	2007-11-20	all
	01-23	2007-11-20	all
	01-24	2007-06-08	all
	01-25	2001-04-20	all
	01-26	2002-07-09	all
	01-26A	2002-07-09	all
	01-26B	2001-04-20	all
	01-27	2001-04-20	all
	01-28	1998-06-30	all
01-60-00	01-29	1998-06-30	all
	01-30	1998-06-30	all
01-61-00	01-31	1998-06-30	all
	01-32	1998-06-30	all
01-62-00	01-33	2001-04-20	all
	01-34	2002-07-09	all
	01-35	2007-11-20	all
	01-36	2003-11-20	all
04 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
04-00-00	04-1	1998-06-30	all
04-10-00	04-2	2007-11-20	all
04-20-00	04-3	1998-06-30	all
	04-4	1998-06-30	all

EFFECTIVITY:

All

Revision No. 10

Page 01 - 11

2007-11-20

01-50-00



Z 143 L

AIRPLANE MAINTENANCE MANUAL

Chapter Section/Subsection Item	Page	Date	Effectivity
05 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
05-00-00	05-1	1998-06-30	all
05-10-00	05-2	2001-04-13	all
05-20-00	05-3	1998-06-30	all
05-21-00	05-4	1998-06-30	all
	05-5	1998-06-30	all
	05-6	1998-06-30	all
	05-7	1998-06-30	all
	05-8	1998-06-30	all
	05-9	1998-06-30	all
	05-10	1998-06-30	all
	05-11	1998-06-30	all
	05-12	1998-06-30	all
05-22-00	05-13	1998-06-30	all
	05-14	1998-06-30	all
	05-15	1998-06-30	all
	05-16	1998-06-30	all
	05-17	2005-01-14	all
	05-18	2005-01-14	all
	05-19	2000-04-20	all
	05-20	2007-11-20	all
	05-21	1998-06-30	all
	05-22	2003-11-20	all
	05-23	2003-11-20	all
	05-24	2001-04-20	all
	05-25	1998-06-30	all
	05-26	1998-06-30	all
	05-27	2000-04-20	all
	05-28	2007-06-08	all
	05-29	2000-04-20	all
	05-30	1998-06-30	all
	05-31	2000-04-20	all
	05-32	1998-06-30	all
	05-33	1998-06-30	all
	05-34	1998-06-30	all
05-50-00	05-35	1998-06-30	all
05-51-00	05-36	1998-06-30	all
05-52-00	05-37	1998-06-30	all
05-53-00	05-38	1998-06-30	all
	05-39	1998-06-30	all
	05-40	1998-06-30	all
06 - CONTENT			
06-10-00	1	1998-06-30	all
06-20-00	2	1998-06-30	all
	06-1	1998-06-30	all
	06-2	1998-06-30	all
	06-3	1998-06-30	all
	06-4	1998-06-30	all
07 - CONTENT			
07-00-00	1	1998-06-30	all
07-10-00	2	1998-06-30	all
07-11-00	07-1	1998-06-30	all
07-12-00	07-2	1998-06-30	all
	07-3	1998-06-30	all
	07-4	1998-06-30	all



Chapter Section/Subsection Item	Page	Date	Effectivity
08 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
08-00-00	08-1	1998-06-30	all
08-10-00	08-2	1998-06-30	all
08-11-00	08-3	1998-06-30	all
	08-4	1998-06-30	all
08-12-00	08-5	1998-06-30	all
	08-6	1998-06-30	all
	08-7	1998-06-30	all
08-20-00	08-8	1998-06-30	all
	08-9	1998-06-30	all
	08-10	1998-06-30	all
	08-11	1998-06-30	all
	08-12	1998-06-30	all
	08-13	1998-06-30	all
	08-14	1998-06-30	all
09 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
09-00-00	09-1	1998-06-30	all
09-10-00	09-2	1998-06-30	all
09-20-00	09-3	1998-06-30	all
	09-4	1998-06-30	all
10 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
10-00-00	10-1	2007-11-20	all
10-10-00	10-2	1998-06-30	all
10-20-00	10-3	1998-06-30	all
	10-4	1998-06-30	all
10-30-00	10-5	1998-06-30	all
	10-6	1998-06-30	all
11 - CONTENT	1	2000-09-15	all
	2	1998-06-30	all
11-00-00	11-1	1998-06-30	all
11-20-00	11-2	1998-06-30	all
	11-3	2000-09-15	all
	11-4	2000-09-15	all
	11-5	2000-09-15	all
	11-6	2000-09-15	all
11-30-00	11-7	2000-09-15	all
	11-8	2001-04-20	all
	11-9	2000-09-15	all
	11-10	2001-04-20	all
	11-11	2001-04-20	all
	11-11A	2001-04-20	all
	11-11B	2001-04-20	all
	11-12	2000-09-15	all
	11-13	2007-11-20	all
	11-14	2004-05-18	all
	11-15	2000-09-15	all
	11-16	2000-09-15	all
12 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
12-00-00	12-1	1998-06-30	all

EFFECTIVITY:
All

01-50-00

Revision No. 10
Page 01 - 13
2007-11-20



Z 143 L

AIRPLANE MAINTENANCE MANUAL

Chapter Section/Subsection Item	Page	Date	Effectivity
12-10-00	12-2	2003-11-20	all
	12-3	2003-11-20	all
	12-4	2003-11-20	all
	12-5	1998-06-30	all
	12-6	1998-06-30	all
	12-7	1998-06-30	all
	12-8	1998-06-30	all
	12-20-00	12-9	1998-06-30
12-30-00	12-10	1998-06-30	all
20 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
20-00-00	20-1	1998-06-30	all
20-10-00	20-2	1998-06-30	all
20-20-00	20-3	1998-06-30	all
20-21-00	20-4	1998-06-30	all
20-22-00	20-5	1998-06-30	all
	20-6	1998-06-30	all
20-23-00	20-7	1998-06-30	all
	20-8	1998-06-30	all
	20-9	1998-06-30	all
20-24-00	20-10	1998-06-30	all
21 - CONTENT	1	2000-04-20	all
	2	1998-06-30	all
21-00-00	21-1	2000-04-20	all
	21-2	1998-06-30	all
21-40-00	21-3	1998-06-30	all
	21-4	1998-06-30	all
	21-5	1998-06-30	all
21-50-00	21-6	1998-06-30	all
	21-7	1998-06-30	all
21-51-00	21-8	2000-04-20	all
21-52-00			
23 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
23-00-00	23-1	2000-04-20	all
	23-2	1998-06-30	all
23-10-00	23-3	1998-06-30	all
	23-4	1998-06-30	all
23-11-00	23-5	1998-06-30	all
	23-6	1998-06-30	all
23-40-00	23-7	1998-06-30	all
	23-8	1998-06-30	all
	23-9	1998-06-30	all
	23-10	1998-06-30	all
	23-11	1998-06-30	all
	23-12	1998-06-30	all
	23-13	1998-06-30	all
	23-14	1998-06-30	all
	23-15	1998-06-30	all
	23-16	1998-06-30	all
23-50-00	23-17	1998-06-30	all
	23-18	1998-06-30	all
23-60-00			



Chapter Section/Subsection Item	Page	Date	Effectivity
24 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
24-00-00	24-1	1998-06-30	all
24-30-00	24-2	1998-06-30	all
24-31-00	24-3	1998-06-30	all
	24-4	2001-04-20	all
	24-5	2001-04-20	all
	24-6	1998-06-30	all
24-32-00	24-7	1998-06-30	all
	24-8	1998-06-30	all
	24-9	1998-06-30	all
	24-10	2007-11-20	all
	24-11	1998-06-30	all
24-33-00	24-12	1998-06-30	all
	24-13	1998-06-30	all
	24-14	1998-06-30	all
24-40-00	24-15	1998-06-30	all
	24-16	1998-06-30	all
24-50-00	24-17	2001-04-20	up to S/N 0045 incl.
	24-17A	2001-04-20	from S/N 0046 incl.
	24-17B	2001-04-20	all
	24-18	2000-04-20	all
	24-19	2007-11-20	all
	24-20	2001-04-20	all
	24-21	2001-04-20	all
	24-22	1998-06-30	all
	24-23	2001-04-20	all
	24-24	1998-06-30	all
25 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
25-00-00	25-1	1998-06-30	all
25-10-00	25-2	1998-06-30	all
	25-3	1998-06-30	all
	25-4	1998-06-30	all
	25-5	1998-06-30	all
	25-6	1998-06-30	all
25-20-00	25-7	1998-06-30	all
	25-8	1998-06-30	all
	25-9	1998-06-30	all
25-50-00	25-10	1998-06-30	all
25-60-00	25-11	1998-06-30	all
	25-12	1998-06-30	all
26 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
26-00-00	26-1	1998-06-30	all
26-20-00	26-2	1998-06-30	all
	26-3	1998-06-30	all
	26-4	1998-06-30	all
27 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
27-00-00	27-1	1998-06-30	all

EFFECTIVITY:
All



Chapter Section/Subsection Item	Page	Date	Effectivity	
27-10-00	27-2	1998-06-30	all	
	27-3	1998-06-30	all	
	27-4	1998-06-30	all	
	27-5	1998-06-30	all	
	27-6	1998-06-30	all	
	27-7	1998-06-30	all	
	27-8	1998-06-30	all	
	27-9	1998-06-30	all	
	27-10	1998-06-30	all	
	27-11	1998-06-30	all	
	27-12	1998-06-30	all	
	27-13	1998-06-30	all	
	27-14	1998-06-30	all	
	27-15	2007-11-20	all	
	27-16	1998-06-30	all	
	27-17	1998-06-30	all	
	27-20-00	27-18	1998-06-30	all
27-19		1998-06-30	all	
27-20		1998-06-30	all	
27-21		1998-06-30	all	
27-22		1998-06-30	all	
27-23		1998-06-30	all	
27-24		1998-06-30	all	
27-25		1998-06-30	all	
27-26		1998-06-30	all	
27-27		1998-06-30	all	
27-21-00	27-28	1998-06-30	all	
	27-29	1998-06-30	all	
27-30-00	27-30	1998-06-30	all	
	27-31	1998-06-30	all	
	27-32	1998-06-30	all	
	27-33	1998-06-30	all	
	27-34	1998-06-30	all	
	27-35	1998-06-30	all	
	27-36	1998-06-30	all	
	27-37	1998-06-30	all	
	27-31-00	27-38	1998-06-30	all
		27-39	1998-06-30	all
27-40		1998-06-30	all	
27-41		1998-06-30	all	
27-42		1998-06-30	all	
27-43		1998-06-30	all	
27-44		1998-06-30	all	
27-45		1998-06-30	all	
27-46		1998-06-30	all	
27-47		1998-06-30	all	
27-48		1998-06-30	all	



Chapter Section/Subsection Item	Page	Date	Effectivity	
32-41-00	32-34	1998-06-30	all	
	32-35	1998-06-30	all	
	32-36	2007-11-20	all	
	32-37	2007-11-20	all	
	32-38	1998-06-30	all	
	32-39	2007-11-20	all	
	32-40	2007-11-20	all	
	32-41	2007-11-20	all	
	32-41a	2007-11-20		
	32-41b	2007-11-20		
	32-42	1998-06-30	all	
	32-43	1998-06-30	all	
	32-44	2000-04-20	all	
	32-45	1998-06-30	all	
	32-46	1998-06-30	all	
	32-47	1998-06-30	all	
	32-42-00	32-48	2007-11-20	all
		32-49	1998-06-30	all
		32-50	1998-06-30	all
		32-51	2007-11-20	all
		32-52	1998-06-30	all
32-53		1998-06-30	all	
32-54		2000-04-20	all	
32-55		1998-06-30	all	
32-56		1998-06-30	all	
32-57		1998-06-30	all	
32-43-00	32-58	1998-06-30	all	
	27-59	1998-06-30	all	
	27-60	1998-06-30	all	
	27-61	1998-06-30	all	
	27-62	1998-06-30	all	
	27-63	1998-06-30	all	
	27-64	1998-06-30	all	
	32-65	1998-06-30	all	
	32-66	1998-06-30	all	
	32-67	1998-06-30	all	
	32-68	1998-06-30	all	
	32-69	1998-06-30	all	
	32-70	1998-06-30	all	
32-44-00	32-71	1998-06-30	all	
	32-72	1998-06-30	all	
32-50-00	32-73	1998-06-30	all	
	32-74	1998-06-30	all	
	32-75	1998-06-30	all	
	32-76	1998-06-30	all	
33 - CONTENT	1	1998-06-30	all	
	2	1998-06-30	all	
33-00-00	33-1	1998-06-30	all	
33-10-00	33-2	1998-06-30	all	
	33-3	2001-04-20	all	
	33-4	1998-06-30	all	
	33-5	1998-06-30	all	

EFFECTIVITY:
All

01-50-00

Revision No. 10
Page 01 - 19
2007-11-20



Z 143 L

AIRPLANE MAINTENANCE MANUAL

Chapter Section/Subsection Item	Page	Date	Effectivity	
33-40-00	33-6	1998-06-30	all	
	33-7	1998-06-30	all	
	33-8	1998-06-30	all	
	33-9	1998-06-30	all	
	33-10	1998-06-30	all	
	33-11	1998-06-30	all	
33-50-00	33-12	1998-06-30	all	
	33-13	2001-04-20	all	
	33-14	1998-06-30	all	
34 - CONTENT	1	1998-06-30	all	
	2	1998-06-30	all	
34-00-00	34-1	2007-11-20	all	
34-10-00	34-2	1998-06-30	all	
	34-3	1998-06-30	all	
	34-4	1998-06-30	all	
	34-5	1998-06-30	all	
	34-6	1998-06-30	all	
	34-7	1998-06-30	all	
	34-8	1998-06-30	all	
	34-9	1998-06-30	all	
34-11-00	34-10	2000-04-20	all	
34-12-00	34-11	1998-06-30	all	
	34-12	1998-06-30	all	
34-20-00	34-13	1998-06-30	all	
	34-14	2001-04-20	all	
	34-15	1998-06-30	all	
	34-16	1998-06-30	all	
	34-17	1998-06-30	all	
	34-18	1998-06-30	all	
	34-19	1998-06-30	all	
	34-20	1998-06-30	all	
37 - CONTENT	1	1998-06-30	all	
	2	1998-06-30	all	
37-00-00	37-1	1998-06-30	all	
37-10-00	37-2	1998-06-30	all	
	37-3	1998-06-30	all	
	37-4	1998-06-30	all	
	37-5	1998-06-30	all	
	37-6	1998-06-30	all	
	37-7	1998-06-30	all	
	37-8	1998-06-30	all	
	37-9	1998-06-30	all	
	37-11-00	37-10	1998-06-30	all
		37-11	1998-06-30	all
37-12		1998-06-30	all	
37-13		1998-06-30	all	
37-14		1998-06-30	all	
37-15		1998-06-30	all	
37-16		1998-06-30	all	
37-17		1998-06-30	all	
37-18		1998-06-30	all	



Chapter Section/Subsection Item	Page	Date	Effectivity
51 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
51-00-00	51-1	1998-06-30	all
51-10-00	51-2	1998-06-30	all
51-11-00	51-3	1998-06-30	all
51-12-00	51-4	2007-11-20	all
	51-5	1998-06-30	all
	51-6	1998-06-30	all
51-13-00	51-7	1998-06-30	all
	51-8	1998-06-30	all
51-30-00	51-9	1998-06-30	all
	51-10	1998-06-30	all
	51-11	1998-06-30	all
51-70-00	51-12	1998-06-30	all
51-71-00	51-13	1998-06-30	all
	51-14	1998-06-30	all
	51-15	1998-06-30	all
	51-16	1998-06-30	all
51-72-00	51-17	1998-06-30	all
	51-18	1998-06-30	all
51-80-00	51-19	1998-06-30	all
	51-20	1998-06-30	all
52 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
52-00-00	52-1	1998-06-30	all
52-10-00	52-2	1998-06-30	all
	52-3	1998-06-30	all
	52-4	1998-06-30	all
	52-5	1998-06-30	all
52-20-00	52-6	1998-06-30	all
	52-7	1998-06-30	all
	52-8	1998-06-30	all
	52-9	1998-06-30	all
52-40-00	52-10	1998-06-30	all
	52-11	1998-06-30	all
	52-12	1998-06-30	all
53 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
53-00-00	53-1	1998-06-30	all
53-10-00	53-2	1998-06-30	all
	53-3	2001-04-20	up to S/N 0045 incl.
	53-3A	2001-04-20	from S/N 0046 incl.
	53-3B	2001-04-20	all
	53-4	1998-06-30	all
	53-5	1998-06-30	all
	53-6	1998-06-30	all
	53-7	1998-06-30	all
	53-8	1998-06-30	all
	53-9	2001-04-20	up to S/N 0045 incl.
	53-9A	2001-04-20	from S/N 0046 incl.
	53-9B	2001-04-20	all
	53-10	1998-06-30	all
	53-11	1998-06-30	all
	53-12	1998-06-30	all
53-20-00	53-13	1998-06-30	all
	53-14	1998-06-30	all

EFFECTIVITY:
All

01-50-00

Revision No. 10
Page 01 - 21
2007-11-20



Chapter Section/Subsection Item	Page	Date	Effectivity	
53-40-00	53-15	1998-06-30	all	
	53-16	1998-06-30	all	
	53-17	1998-06-30	all	
	53-18	1998-06-30	all	
	53-19	1998-06-30	all	
	53-20	1998-06-30	all	
55 - CONTENT	1	1998-06-30	all	
	2	1998-06-30	all	
55-00-00	55-1	1998-06-30	all	
55-10-00	55-2	1998-06-30	all	
	55-3	1998-06-30	all	
	55-4	1998-06-30	all	
	55-5	1998-06-30	all	
	55-6	1998-06-30	all	
	55-7	1998-06-30	all	
	55-8	1998-06-30	all	
	55-9	1998-06-30	all	
	55-10	1998-06-30	all	
	55-20-00	55-11	1998-06-30	all
		55-12	1998-06-30	all
		55-13	1998-06-30	all
		55-14	1998-06-30	all
		55-15	1998-06-30	all
		55-16	1998-06-30	all
		55-17	1998-06-30	all
		55-18	1998-06-30	all
55-19		1998-06-30	all	
55-20		2007-11-20	all	
55-30-00	55-21	1998-06-30	all	
	55-22	1998-06-30	all	
55-40-00	55-23	1998-06-30	all	
	55-24	1998-06-30	all	
	55-25	1998-06-30	all	
	55-26	1998-06-30	all	
	55-27	1998-06-30	all	
	55-28	1998-06-30	all	
	55-29	1998-06-30	all	
	55-30	1998-06-30	all	
	56 - CONTENT	1	1998-06-30	all
		2	1998-06-30	all
56-00-00	56-1	1998-06-30	all	
56-10-00	56-2	1998-06-30	all	
	56-3	1998-06-30	all	
56-20-00	56-4	1998-06-30	all	
	56-5	1998-06-30	all	
	56-6	1998-06-30	all	
57 - CONTENT	1	1998-06-30	all	
	2	1998-06-30	all	
57-00-00	57-1	1998-06-30	all	



Chapter Section/Subsection Item	Page	Date	Effectivity
57-10-00	57-2	1998-06-30	all
	57-3	1998-06-30	all
	57-4	1998-06-30	all
	57-5	1998-06-30	all
	57-6	1998-06-30	all
	57-7	1998-06-30	all
	57-8	1998-06-30	all
	57-9	1998-06-30	all
	57-10	1998-06-30	all
	57-11	1998-06-30	all
	57-12	1998-06-30	all
	57-40-00	57-13	1998-06-30
57-14		1998-06-30	all
57-15		1998-06-30	all
57-16		2007-11-20	all
57-17		2007-11-20	all
57-18		2007-11-20	all
57-19		1998-06-30	all
57-20		1998-06-30	all
57-21		1998-06-30	all
57-22		1998-06-30	all
57-23		1998-06-30	all
57-24		1998-06-30	all
57-50-00	57-25	1998-06-30	all
	57-26	1998-06-30	all
	57-27	1998-06-30	all
	57-28	1998-06-30	all
	57-29	1998-06-30	all
	57-30	1998-06-30	all
	57-31	1998-06-30	all
	57-32	1998-06-30	all
	57-33	1998-06-30	all
	57-34	1998-06-30	all
	57-35	1998-06-30	all
	57-36	1998-06-30	all
61 - OBSAH	1	1998-06-30	all
	2	1998-06-30	all
61-00-00	61-1	1998-06-30	all
61-10-00	61-2	1998-06-30	all
	61-3	1998-06-30	all
61-20-00	61-4	1998-06-30	all
	61-5	1998-06-30	all
	61-6	1998-06-30	all
	61-7	1998-06-30	all
	61-8	1998-06-30	all
	61-9	1998-06-30	all
	61-10	1998-06-30	all
	61-11	1998-06-30	all
	61-12	1998-06-30	all
	61-13	1998-06-30	all
	61-14	1998-06-30	all

EFFECTIVITY:
All

01-50-00

Revision No. 10
Page 01 - 23
2007-11-20



Z 143 L

AIRPLANE MAINTENANCE MANUAL

Chapter Section/Subsection Item	Page	Date	Effectivity
71 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
71-00-00	71-1	1998-06-30	all
71-10-00	71-2	1998-06-30	all
	71-3	1998-06-30	all
	71-4	1998-06-30	all
	71-5	1998-06-30	all
71-20-00	71-6	1998-06-30	all
	71-7	1998-06-30	all
	71-8	1998-06-30	all
	71-9	1998-06-30	all
	71-10	1998-06-30	all
	71-11	1998-06-30	all
	71-12	1998-06-30	all
71-30-00	71-13	1998-06-30	all
71-60-00	71-14	1998-06-30	all
	71-15	1998-06-30	all
	71-16	1998-06-30	all
72 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
72-00-00	72-1	1998-06-30	all
72-10-00	72-2	1998-06-30	all
	72-3	1998-06-30	all
	72-4	1998-06-30	all
	72-5	1998-06-30	all
	72-6	1998-06-30	all
	72-7	1998-06-30	all
	72-8	2000-04-20	all
	72-9	1998-06-30	all
	72-10	1998-06-30	all
	72-11	2000-04-20	all
	72-12	1998-06-30	all
74 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
74-00-00	74-1	1998-06-30	all
74-10-00	74-2	1998-06-30	all
	74-3	1998-06-30	all
	74-4	2001-04-20	all
	74-5	1998-06-30	all
	74-6	2000-04-20	all
75 - CONTENT	1	1998-06-30	all
	2	1998-06-30	all
75-00-00	75-1	1998-06-30	all
75-10-00	75-2	1998-06-30	all
	75-3	1998-06-30	all
	75-4	1998-06-30	all
	75-5	1998-06-30	all
	75-6	1998-06-30	all
	75-7	2007-06-08	all
	75-7A	2007-06-08	all
	75-7B	2007-06-08	all
	75-8	2007-06-08	all
75-20-00	75-9	1998-06-30	all
	75-10	1998-06-30	all

LIST OF ALTERATIONS

No. of alteration	Reason of ALTERATION	Altered pages		Date of issue	Date of introduction of alteration
		Chapter/ Section/ Subsection/ Item	Page		
6.	On condition operation for nose landing gear type 793-HPK-185-19, 793-HPK-185-19-7	01-00-00 01-50-00 01-62-00 04-10-00 05-22-00 12-10-00 32-20-00	01-1 01-11; 01-12; 01-14; 01-18 01-35; 01-36 04-2 05-17; 05-18; 05-22; 05-23 12-2; 12-3; 12-4 32-16; 32-17; 32-22; 32-23; 32-24	2003-11-20	
7.	Permission of six-turn spins performance in utility category (apply for all aircraft, except aircraft operated in GFR)	01-50-00 01-62-00 11-30-00	01-11; 01-13 01-35 11-13; 11-14	2004-05-18	
8.	Revision of operation on condition of the nose landing gear type 793-HPK-185-19, 793-HPK-185-19-7.	01-50-00 01-62-00 05-22-00	01-11; 01-12 01-35 05-17; 05-18	2005-01-14	
9.	Check of cleanness of carburettor heating system	01-50-00 01-62-00 05-22-00 75-10-00	01-11; 01-12; 01-24 01-35 05-28 75-7; 75-7A; 75-7B; 75-8	2007-06-08	
10.	Formal arrangements of accompanying documentation - implementation of requirements detected in aircraft operation	01-20-00 01-50-00 01-62-00 04-10-00 05-22-00 10-00-00 11-30-00 24-32-00 24-50-00 27-10-00 32-41-00 32-42-00 34-00-00 51-12-00 55-20-00 57-40-00	Title; 01-3 01-11; 01-12; 01-13; 01-15; 01-16; 01-19; 01-20; 01-21; 01-22; 01-23 01-35 04-2 05-20 10-1 11-13 24-10 24-19 27-15 32-36; 32-37; 32-39; 32-40; 32-41; 32-41a; 32-41b; 32-48; 32-51 34-1 51-4 55-20 57-16; 57-17; 57-18	2007-11-20	

EFFECTIVITY:
All

Revision No. 10
Page 01 - 35
2007-11-20

01-62-00



LIST OF ALTERATIONS

No. of alteration	Reason of ALTERATION	Altered pages		Date of issue	Date of introduction of alteration
		Chapter/ Section/ Subsection/ Item	Page		



GENERAL

This chapter contains list of parts subject to mandatory overhauls and parts with limited life time.
Replacement and refurbishment of remaining parts is subject to actual condition.

EFFECTIVITY:

All

04-00-00

page 04-1
1998-06-30



LIST OF PARTS TO BE OVERHAULED

The parts listed in the table should after stated limits undergo overhaul.

Item	Overhaul after	Notes
Engine	According to engine manufacturer	
Engine aggregates	Together with engine	
Magnetoes	According to engine manufacturer	
Propeller	According to propeller manufacturer	
Propeller governor	According to propeller governor manufacturer	

NOTE

The manufacturer specifications are issued in pertinent manuals, bulletines, and service instructions.



PERIODIC INSPECTION AFTER 100 FLIGHT HOURS AND AFTER 1 YEAR OPERATION

Airplane production No.: _____ Registration Mark: _____

Total flight hours: _____ Inspection made out: 100 h 1 year *

Page 1 of 11

Chap.	Procedures	Flight hrs		Calendar period		Note	Carried out by	Supervised by
		100	Spec.	1 year	Spec.			
-	PREPARATORY WORKS Check airplane document and record entered to airplane, engine, and propeller logbooks. Check bulletins accomplishment. Clean cabine and engine, and wash surface of airplane. Remove access port covers and lids to enable maintenance (inspections)..	o		o				
21	ENVIRONMENTAL SYSTEMS Check serviceability of cockpit heating including its controls and heat exchangers. Check free movement of cockpit heating control. Check serviceability of cabin venting and its control. Check free movement of cabin venting controls.			o				
23	COMMUNICATIONS Check serviceability of communication transceiver and communication with ground station. Test ELT batteries. Check serviceability of ELT. Check fixing of communication equipment. Check outer appearance of antennas and antenna cables, and antenna connection. Check electric harness of communication equipment. Check electric harness shielding. Check power and SRW of communication transceiver. Check service life of ELT batteries. Check outer appearance of static discharge wicks.	o		o				
24	ELECTRICAL POWER Check outer appearance and fixing of alternator, tightening of alternator drive belt, and connection of electric harness. Check serviceability of emergency battery. Check fusible cut-out. Check and maintain board battery. Check battery fixing and make sure its surrounding is not traced with electrolite.	o		o				
		o		o		***		
		o		o		see NOTE		
		o		o		see NOTE		

* Delete what is not applicable.

** The battery service life is issued in section 05-10-00.

*** Check and maintain the battery if the period of last made maintenance is 3 month. This period may be prolonged to maximum 6 months if ambient air temperature was mostly less than 25°C. The battery fixing and surrounding should be checked in the same period.

EFFECTIVITY:

All

Revision No. 1

Page 05 - 19

2000-04-20

05-22-00



PERIODIC INSPECTION AFTER 100 FLIGHT HOURS AND AFTER 1 YEAR OPERATION

Chap.	Procedures	Flight hrs		Calendar period		Note	Carried out by	Super-vised by
		100	Spec.	1 year	Spec.			
24	ELECTRICAL POWER (continue)							
	Check electric bonding.			o				
	Check and adjust alternator voltage if necessary.			o		*		
	Check board battery capacity.			o				
	Check condition of ELT battery.			o				
	Check capacity of emergency battery.			o		**		
	Check emergency battery service life.			o		**		
	Check emergency switches of audio annunciators.			o		*		
25	EQUIPMENT/FURNISHINGS							
	Make outer appearance check of seats.	o		o				
	Check serviceability of seat setting mechanism.	o		o				
	Check serviceability of fwd seat tilting mechanism.	o		o				
	Make outer appearance check and serviceability of seat safety belts.	o		o				
	Check fixing and locking crash hammer.	o		o				
26	FIRE PROTECTION							
	Check service life of board fire extinguisher.			o				
	Make outer appearance check, sealing and fixing of board fire extinguisher.			o				
27	FLIGHT CONTROLS							
	In case there's installed S-TEC system 55 Autopilot, check:							
	a) servos: condition, nuts securing, operation looseness	o		o		*****		
	b) rope tightening: 13 – 17 lbs (60 – 80 N)	o		o		*****		
	c) force for moment couplings overcoming	o		o		*****		
	d) quick disconnection of autopilot	o		o		*****		
	e) disconnection of trim servo	o		o		*****		
	f) condition of electric installation	o		o		*****		
	Check serviceability, and free and correct movement of manual and pedal controls within their full deflections.	o		o				
	Check the outer appearance of flight control elements including control stops, consoles, and pulleys.	o		o				
	Check cables of rudder control.							
	a) broken cable wires mainly in the vicinity of pulleys,	o		o		****		
	b) cable tension.		500					

- * This work is recommended.
- ** The battery service life is issued in section 05-10-00.
- *** The calendar service life of first aid tool kit elements should not be expired.
- **** Replace cable even if only one cable wire is detected broken.
- ***** Inspection according to Supplement No. 15.
- ***** Inspection according to Supplement No. 15.1.
- ***** Inspection according to Supplement No.15 and Supplement No. 15.1.



GENERAL

During short term parking the brake should be applied (section 32-44-00).

During airplane parking the chocks should be inserted under the main landing gear wheel.

In case of airplane parking in the open it should be moored by cables or chains using mooring eyes.

EFFECTIVITY:
All

10-00-00

Revision No. 10
Page 10 - 1
2007-11-20



PARKING

Hints for airplane parking:

CAUTION

CANOPY FABRIC COVER SHOULD BE FIT ON WITH CARE TO PREVENT DAMAGE OF COCKPIT GLAZING

NOTE

The post-flight inspection carried out after the last flight.

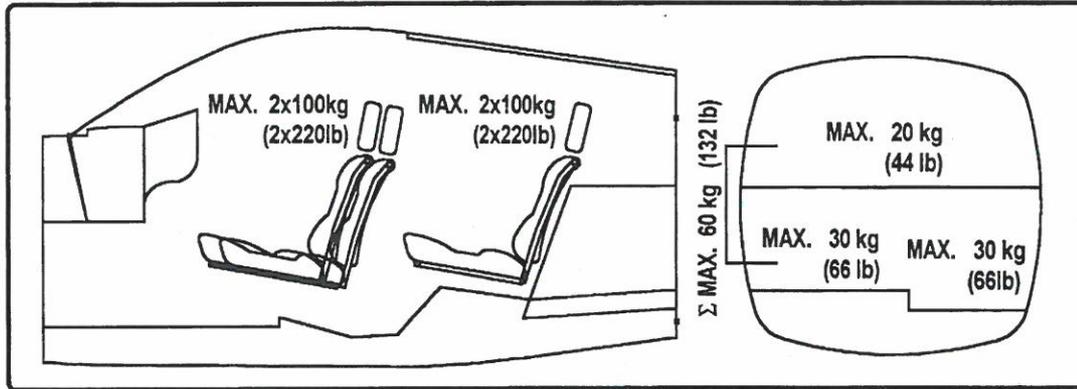
- 1) Make sure fuel shut-off valve is shut, all switches and master switch are turned off
- 2) Make sure the manual airplane control is locked.
- 3) Shut and lock cockpit canopy.
- 4) Check
 - if pitot tube is provided with cover;
 - if stall warning probe and static pressure probes are plugged (section 34-10-00).
- 5) Fit chokes under the main landing gear wheel (see NOTE)
- 6) Carry, in case of long term parking, out:
 - a) Engine
In case the airplane should be out of operation for more than 30 days it is necessary to preserve the engine according to procedure issued in section 72-10-00.
 - b) Propeller
Wash propeller blades with car shampoo and polish with polishing wax.
 - c) Board battery
Maintenance of board battery is described in section 24-32-00.
- 7) In case of long term parking and in winter weather conditions protect following parts of airplane:
 - a) Provide engine nacelle with canvas cover (NOTE);
 - b) Provide cockpit canopy with fabric cover (NOTE).

NOTE

Chokes; winter engine nacelle canvas cover and fabric cover of cockpit canopy are supplied optionally.



c) Placard in cargo bay upon the access door:



d) Manufacturer label (original or new) upon left floor of upper cargo bay:

 MORAVAN Inc. MADE IN CZECH REPUBLIC	TYPE	
	PROD. Nr.	SERIES
	PROD. YEAR	MAX. WEIGHT
	EMPTY WEIGHT	MAX. V. LOAD

 Moravan Aviation s.r.o. MADE IN CZECH REPUBLIC	TYPE	
	PROD. NUMBER	
	PROD. YEAR	

7) Placards upon sliding cockpit canopy:

a) Placard in pilot's sight of view:

THIS AIRPLANE MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE PLACARDS AND IN THE AIRPLANE FLIGHT MANUAL.				
EXCEPT AS MAY BE OTHERWISE INDICATED ON A PLACARD THE MARKINGS AND PLACARDS INSTALLED IN THIS AIRPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THE UTILITY CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THIS CATEGORY OR IN THE NORMAL CATEGORY ARE CONTAINED IN THE AIRPLANE FLIGHT MANUAL.				
DESIGN MANEUVERING SPEED V_A IAS	121 knots (224 km/h)			
FORTAKE-OFF WEIGHT	1080 kg (2380 lbs)			
INTENTIONAL SPINS WITH WING FLAPS EXTENDED ARE PROHIBITED.				
RECOVERY FROM SPINS: 1. APPLY FULL RUDDER OPPOSITE TO THE DIRECTION OF ROTATION. 2. CONTROL STICK - PUSH.				
APPROVED ACROBATIC MANEUVERES AND RECOMMENDED ENTRY SPEEDS (IAS)				
	<table border="0"> <tr> <td></td> <td style="text-align: center;">knots</td> <td style="text-align: center;">km/h</td> </tr> </table>		knots	km/h
	knots	km/h		
STEEP TURN (ANGLE OF BANK >60°, max. 90°)	min 108	(200)		
LAZY EIGHT (ANGLE OF BANK >60°, max. 90°)	min 119	(220)		
CHANDELLE (ANGLE OF BANK >60°, max. 90°)	min 119	(220)		
SPIN	67	(125)		
THE AIRPLANE MAY BE OPERATED IN FOLLOWING KINDS OF OPERATION, WHEN THE APPROPRIATE EQUIPMENT IS INSTALLED AND OPERABLE.				
1. VFR DAY 2. VFR NIGHT 3. IFR				
FLIGHT INTO KNOWN ICING CONDITIONS IS PROHIBITED.				

EFFECTIVITY:
All



Z 143 L

AIRPLANE MAINTENANCE MANUAL

or (airplane registered in USA)

THIS AIRPLANE MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE PLACARDS AND IN THE AIRPLANE FLIGHT MANUAL.

EXCEPT AS MAY BE OTHERWISE INDICATED ON A PLACARD THE MARKINGS AND PLACARDS INSTALLED IN THIS AIRPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THE UTILITY CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THIS CATEGORY OR IN THE NORMAL CATEGORY ARE CONTAINED IN THE AIRPLANE FLIGHT MANUAL.

DESIGN MANEUVERING SPEED V_A IAS	121 knots (224 km/h)
FOR TAKE-OFF WEIGHT	1080 kg (2380 lbs)

INTENTIONAL SPINS WITH WING FLAPS EXTENDED ARE PROHIBITED.

RECOVERY FROM SPINS:
1. APPLY FULL RUDDER OPPOSITE TO THE DIRECTION OF ROTATION.
2. CONTROL STICK - PUSH.

APPROVED UTILITY CATEGORY MANEUVERES AND RECOMMENDED ENTRY SPEEDS (IAS)

		knots	km/h
STEEP TURN (ANGLE OF BANK > 60°)	min	108	(200)
LAZY EIGHT (ANGLE OF BANK > 60°)	min	119	(220)
CHANDELLE (ANGLE OF BANK > 60°)	min	119	(220)
SPIN		67	(125)

THE AIRPLANE MAY BE OPERATED IN FOLLOWING KINDS OF OPERATION, WHEN THE APPROPRIATE EQUIPMENT IS INSTALLED AND OPERABLE.

1. VFR DAY
2. VFR NIGHT
3. IFR

FLIGHT INTO KNOWN ICING CONDITIONS IS PROHIBITED.

or (airplane registered in GFR)

DIESES FLUGZEUG MUß UNTER EINHALTUNG DER AUF DEN SCHILDERN UND IM FLUGHANDBUCH ANGEgebenEN BETRIEBSGRENZEN BETRIEBEN WERDEN.

FALLS AUF DEN SCHILDERN NICHT ANDERS ANGEgeben, BEINHALTEN DIE IN DIESEM FLUGZEUG ANGEBRACHTEN MARKIERUNGEN UND SCHILDER BETRIEBSGRENZEN, DIE BEI BETRIEB DIESES FLUGZEUGS IN DER KATEGORIE NUTZFLUG (U) EINZUHALTEN SIND. ANDERE GRENZEN, DIE IN DIESER KATEGORIE ODER IN DER KATEGORIE NORMAL (N) EINGEHALTEN WERDEN MÜSSEN, SIND DEM FLUGHANDBUCH ZU ENTNEHMEN.

MANÖVERGESCHWINDIGKEIT V_A IAS	121 kt (224 km/h)
FÜR STARTGEWICHT	1080 kg

ABSICHTLICHES TRUDELN IST VERBOTEN

TRUDELNAUSLEITEN:

1. SEITENRUDERPEDAL-VOLLENTGEGEN DER DREHRICHTUNG
2. STEUERKNÜPPEL-DRÜCKEN

GENEHMIGTE MANÖVER IN DER KATEGORIE NUTZFLUG (U) UND EMPFOHLENE EINTRITTSGESCHWINDIGKEITEN (IAS)

		kt	km/h
STEILKURVE (NEIGUNGSWINKEL > 60°)	min	108	(200)
LAZY EIGHT (NEIGUNGSWINKEL > 60°)	min	119	(220)
CHANDELLE (NEIGUNGSWINKEL > 60°)	min	119	(220)

FAHRMESSERMARKIERUNGEN GELTEN FÜR DIE KATEGORIE NORMALFLUG (N)



SERVICING

MAINTENANCE

BOARD BATTERY STORAGE

- a) The storage of new board battery without electrolyte is unlimited. It is to be stored in dry place at temperature below +27 °C.
- b) Store the battery filled with electrolyte only properly charged. This battery (charged) should be checked once per three months according to INSPECTION/CHECK paragraph. In case the ambient air does not exceed +25 °C it is possible to prolong period of battery check to six month.

BOARD BATTERY FILLING AND CHARGING

- a) Remove venting plugs from all the cells of board battery (Fig. 24-3, item 5).
- b) Prepare new board battery without electrolyte for charging:
 - Puncture the pressed in hermetic diaphragm in each cell port by artificial piercer supplied with battery.
 - Fill each cell with sulfuric acid diluted to 1.285 g/cm³ up to the horizontal line that is in cell port.
 - Let the battery at rest for about 1 hour and refill the sulfuric acid if needed to maintain acid level.Charge filled in battery according to point c) at last within 10 hours since the time of battery filling.
- c) Charge battery for about 12 hours with 3 A. Check during charging the electrolyte temperature. Reduce charging current in case the electrolyte temperature reaches during charging 43 °C. The battery charging is finished if the voltage during four measurements 10 minutes one after the other remains the same and electrolyte density is 1.285 g/cm³.

NOTE

Check the board battery, being installed to airplane after more than a week since the last charging, and recharge it if necessary according to section INSPECTION/CHECK.

EFFECTIVITY:

All



REMOVAL AND INSTALLATION

REMOVAL OF BOARD BATTERY

Preparatory works

- a) Turn off Master and **BATTERY** switches.
- b) Open left engine cowling (Fig. 71-1, item 4).

Removal of board battery

- a) Unlock and unscrew the butterfly nuts of holders (fig. 24-3, item 4).
- b) Tilt the holders (4) of upper lid (3) and remove upper lid from battery carrier (2).
- c) Disconnect the cables from battery terminals (1).
- d) Remove board battery (1) from battery carrier (2).

INSTALLATION OF BOARD BATTERY

- a) Remove dirt from the battery terminals (1) and battery connecting cables contact. Clean and thoroughly degease the contact surfaces of terminals (1) and cable contact.
- b) Make sure, before battery installation, the Master and **BATTERY** switches are off.
- c) Fit the board battery to battery carrier (2) and connect cable contacts to battery terminals. Make sure the polarity (+, -) of cables and battery (1) terminals are correct.

CAUTION:

BE SURE IF THE BATTERY IS CORRECT CONNECT (CORRECT POLARITY). OTHERWISE IMPEDENCE OF THE BATTERY DAMAGE.

- d) Apply thin layer of preservation grease upon contacts and terminals after tightening the cable clips.
- e) Fit upper lid (3) upon battery carrier (2), insert holders (4) into the cut-outs of upper lid reinforcement (3), provide holders (4) with washers, and screw the butterfly nut upon holders.
- f) Lock butterfly nuts with safety wire after their tightening.

Final works

- a) Shut left engine cowling (Fig. 71-1, item 4).



Survey of switches

Item	Switch label:	Purpose of switch:
A3	BATTERY	Switches board battery to board electric network
A7	GENER.	Switches alternator to board electric network
A22	EXT POW. SOURCE	Switches board electric network to GPU
B1	FUEL PUMP	Switches electric fuel booster pump
C1	LIGHTING.	Switches illumination of instruments and placards
C5	LANDING LIGHT	Switches landing light
C6	TAXI LIGHT	Switches taxi light
C69	POSITION LIGHTS	Switches position (navigation) lights
C200	STROBE LIGHTS	Switches strobe lights - if installed
D1	PITOT HEATING	Switches pitot head and stall warning sensor heating
D19	STATIC HEATING	Switches static vent heating
E1	BEACON	Switches anti-collision beacon and auxiliary lamp
L1	FLIGHT INSTR.	Switches artificial horizon(s) (attitude indicator), turn-and-bank indicator(s), directional gyro, check of light annunciation panel, stall warning annunciation, warning on disconnection of stall warning circuit, warning of low fuel level, and warning of low oil pressure.
M30	ENGINE INSTR.	Switches quadruple fuel quantity gauge, quadruple engine indicator, and engine run counter - if installed.

NOTE

The characters in **Item** column mark the electric circuit the switches belong to.

CONTROL UNIT

The Control Unit serves for light dimming of three independent circuits if instrument lighting. It also contains test circuit of stall warning locking micro-switch and board network voltage comparator set to 26.2 V annunciating the moment the board battery is not charged and from and including S/N 0053 it is possible to adjust the indication of remaining fuel quantity in left hand and right hand main fuel tanks.

The wiring diagram of The Control Unit is issued in sections 91-10-00, 91-30-00, 91-40-00 and from and including S/N 0053 91-80-00 in section 91-11-00.

FUSES

The fuses serve for protection of electric circuits or instruments. The fuses are located in the panel under the instrument panel. The IP 250 fuse is located on the left side of firewall in front of instrument panel. The wiring diagram of fuses is issued in chapters 91 and 85 (Diagram of circuit F). Up to and including S/N 0045, each fuse is provided with a label marking current load and protected circuit (instrument). Spare fuses are stored in a pocket on cockpit side. The fuse cap is provided with a thread to screw into holder, or with a bayonet closure.

From and including S/N 0046 are fuses replaced by ETA 1110 circuit breakers. Each circuit breaker is provided with a label marking protected circuit (instrument). Current load is marked on the circuit breaker.

CAUTION

MAKE SURE THE REPLACED FUSE IS OF CORRECT CURRENT VALUE

EFFECTIVITY:

All

Revision No. 10

Page 24 - 19

2007-11-20

24-50-00



Survey of fuses

Item	Fuse label		Protected circuit or instrument
	Up to S/N 0045 incl.	From S/N 0046 incl.	
A13	EXCIT 4 A	EXCIT	Alternator exciting
A17	ANN. PAN. 2 A	ANN. PAN.	Light annunciation panel
A18	SIGNALLIG CHECK 1 A	SIGNALLIG CHECK	Control unit
A19, A20	VA METER 1 A, 1 A	VA METER	VA-METER
A23	-	-	Board battery
B7	STARTER 2 A	STARTER	Engine starter
C58	INT. LIGHT 1 A	INT. LIGHT	Cockpit illumination
C68	PLACARDS 1 A	PLACARDS	Placard illumination
C70	INST. LGT 3,15 A	INST. LGT	Instrument illumination
C72	C. U. LIGHT 1 A	C. U. LIGHT	Auxiliary lamp
D18	STALL. W. 2 A	STALL. W.	Stall warning
F115	COMM 1 6,3 A	COMM 1	Communication transceiver 1
F116	COMM 2 6,3 A	COMM 2	Communication transceiver 2
F117	MKR 1 A	-	MKR beacon receiver
F117	-	HSI	HSI
F123	AUDIO 2 A	AUDIO	Audio control unit
F201	ADF 1 A	ADF	Automatic direction finder
F401	NAV 3,15 A	-	Navigation equipment
	NAV 1 3,15 A	-	Doubled navigation equipment
	NAV 2 3,15 A	-	
F502	XPDR 3,15 A	XPDR	Transponder
F601	DME 6,15 A	DME	Distance measuring equipment
F701	GPS 3,15 A	GPS1	Global position system 1
F702	GIC 4 A	GIC	Flux gate gyro compass
F801	-	NO CON.	
F802	-	EXT. GPS	
F803	-	NO CON.	
F805	RAD. ALT. 2 A	-	Radar altimeter
F901	ELT 1 A	ELT	Emergency locator transmitter
F902		GPS2	Global position system 2
L7	ATT. GYR. 1 A	ATT. GYR.	Attitude indicator (Artificial horizon)
L8	DIR. GYR. 1 A	DIR. GYR.	Directional gyro
L9	TURN C. 1 A	TURN C.	Turn-and-bank indicator
L11	BATTERY 3,15 A	BATTERY	Charging of battery of emergency source of electric energy
M19	FUEL IND. R 1 A	FUEL IND. R	Fuel quantity indicator of wing tanks (R)
M20	ENG. IND. 2 A	ENG. IND.	Engine instruments
M21	FUEL IND. L 1 A	FUEL IND. L	Fuel quantity indicator of wing tanks (L)
M25	VERG. TEMP. 1 A	VERG. TEMP. 1 A	Quadruple engine indicator
M26	KRAFTST. DR. 1 A	KRAFTST. DR. 1 A	
M27	ÖLDRUCK 1 A	ÖLDRUCK 1 A	
M28	ÖLTEMP. 1 A	ÖLTEMP. 1 A	

NOTE

The characters in ITEM column mark electric circuit the fuses are used in.
The fuses M25 through M28 are used in airplanes registered in FRG only.



Control stick suspension

Position of Control Stick	Measurement	Adjustment
LEFT deflection	Distance between left control stick and left port side of fuselage: minimum 180 mm (7.1 in).	Two stops upon control stick mechanism
RIGHT deflection	Distance between right control stick and right port side of fuselage: minimum 180 mm (7.1 in).	
PUSHED	Distance between control stick and instrument panel: minimum 40 mm (1.6 in).	One stop upon the pushrod under fwd seats; one stop upon main fuselage beam.
PULLED	Distance of control stick from the front seat in very fwd position: minimum 5 mm (0,2 in).	

NOTE

Divide control stick deflections symmetrically between both limit positions maintaining the required aileron and elevator deflections.

Check if both ailerons are in the middle position when the control stick is in neutral position.

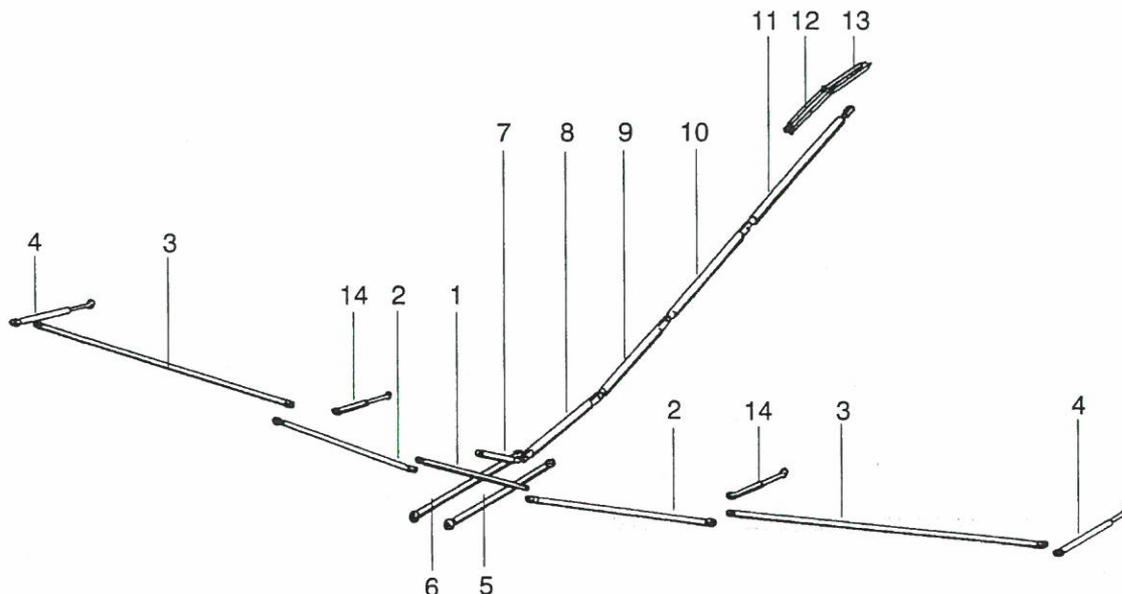
EFFECTIVITY:
All

27-10-00

Revision No. 10
Page 27 - 15
2007-11-20



Length of control pushrods

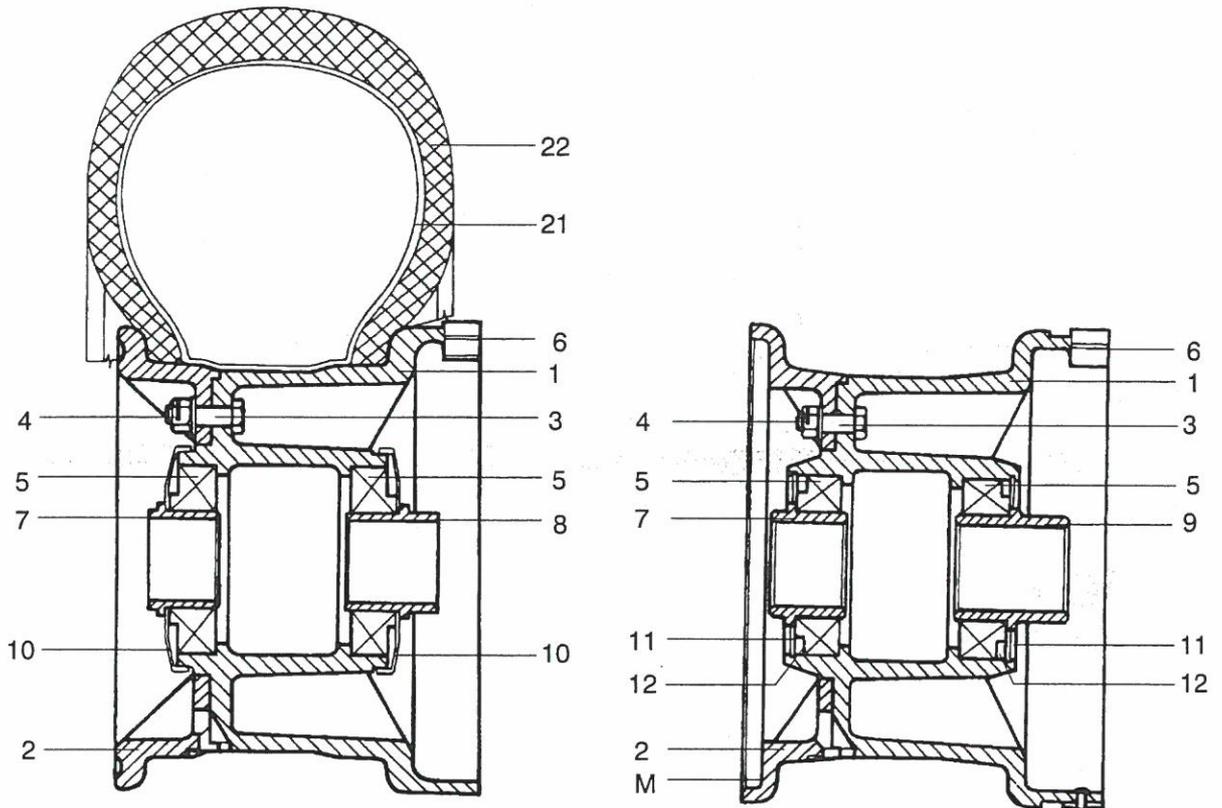


Item	Length of push-rod		Adjustable range of pushrod		Recommended tightening torque				Note		
	[mm]	[in]	[mm]	[in]	Lock nut of adjust-able fork		Joining nut of pushrod				
					[Nm]	[lbf ft]	[Nm]	[lbf ft]			
1	520	20.472	± 8	±0.32	20	14.8	9.5 to 11.5	7 to 8.5	Aileron control		
2	1208	47.590	± 8	±0.32	20	14.8					
3	1579	62.165	----	----	----	----					
4	581	22.874	----	----	----	----					
5	765	30.118	± 8	±0.32	20	14.8			6 to 7.2	4.43 to 5.31	Rudder control (section 27-20-00)
6	725	28.543	± 8	±0.32	20	14.8					
7	203	7.992	----	----	----	----					
8	795	31.300	± 8	±0.32	20	14.8					
9	1187	46.732	----	----	----	----					
10	1306	51.417	----	----	----	----					
11	1200	47.244	± 8	±0.32	20	14.8	9.5 to 11.5	7 to 8.5	Elevator control (section 27-30-00)		
12	334	13.150	----	----	----	----					
13	355.5	14.000	+13.5 -2.5	+5.32 -0.10	6 to 7.2	4.4 to 5.3			Pitch trim (subsection 27-31-00)		
14	559	22.008	----	----	----	----			Wing flap control (section 27-50-00)		

Fig. 27-7. Control Pushrods

K 22-0100-7 Wheel

K 22-3100-7 Wheel



- 1 ... Wheel hub
- 2 ... Removable rim
- 3 ... Bolts - 6 pcs
- 4 ... Nuts
- 5 ... Bearing
- 6 ... Brake disk driver
- 7 ... Bushing
- 8 ... Bushing
- 9 ... Insertion piece
- 10 ... Lid
- 11 ... Locking ring
- 12 ... Sealing
- M ... Red K 22-3100-7 wheel heaviest spot mark (without tire)

For information only:

- 21 ... Tube
- 22 ... Tire

Fig. 32-11. Cutaway View of main Landing Gear Wheel

EFFECTIVITY:
All



MAINTENANCE

REMOVAL AND INSTALLATION

REMOVAL OF WHEEL OF MAIN LANDING GEAR

Preparatory Works

a) Lift the airplane by jacks to have wheels at least 5 cm above the ground.

1. Removal of Fairing of Man Landing Gear Wheel

- a) Unscrew screws (7) to remove scraper (Fig. 32-12, item 4).
- b) Unscrew screws (6) from the wheel fairing holder (2).
- c) Unscrew screw (5) from the nut (Fig. 32-13, item (3) in wheel axle and remove wheel fairing (Fig. 32-12, item 1).

2. Removal of Wheel of Main Landing Gear

- a) Bend off the safety tap (Fig. 32-13, item 2) from the nut edge (3).
- b) Unscrew nut (3) from wheel axle and remove washer (1).
- c) Remove wheel from the wheel axle of main landing gear.

3. Disassembly of Wheel Set

- a) Deflate tire.
- b) Remove internal bearing rings:
 - K 22-0100-7 wheel:
 - remove bushings (Fig. 32-11, item 7; 8) with lids (10) and internal bearing rings from the wheel.
 - K 22-3100-7 wheel:
 - remove safety rings (11), sealing (12), bushing (7) with internal bearing ring and insertion piece (9) from the wheel..
- c) Unscrew nuts (4) of bolts (3) by means of two wrenches and remove nut, bolt and washers from the wheel.

Recommendation

Let one or tw bolts (3) tightened until the beads are loose from rim. Remove last bolt(s).

d) Push the tire beads from the rim.

Recommendation

Use K 47-7130.00 or K 51-7110.00 fixture to push off the tire beads from wheel rim. It is recommended to push the GOODYEAR 6.00-6.5 tire from the K 22-0100-7 wheel rim by removing fixture that is pushing the bead from the rim all along the wheel periphery. In order that the beads may be pushed from the rim it is necessary to use removal drum of at least 75 mm (2,95 in) depth (Fig. 32-14, dimension a).

Procedure of use of K 47-7130.00 fixture:

- place wheel on base (Fig. 32-14, item 5) so that the guide pin (4) passes through wheel axis
- set the lever (3) and pusher (2) to initial position according to tire dimension to have the pusher in vertical position and lever (3) is inclined to base plane at 15° to 30°
- push off gradually the tire bead by applying force upon lever (3) until the bead is free of rim all along the periphery
- turn the wheel round to push off the wheel bead on the other side of wheel.

Procedure of use of K 51-7110.00 fixture:

- put the wheel with tire to the stand (Fig. 32-14b, item 6) so that the removable side rim is up (effective only for K 22-3100-7 wheel).
- put disc (3) or (4).
- tighten with the bolt (1) to loose the head along the whole periphery.
- unscrew the bolt (1); remove the rim
- turn the wheel round and repeat the procedure on the opposite side.

- e) Remove remaining bolts (Fig. 32-11, item 3) with nuts (4) and washer.
- f) Remove gradually wheel hubs (1), removable rims (2) and tube.
- g) Wash the tire by detergent water solution or soap. Wash remaining disassembled parts with suitable degreasing agent and dry by compressed air.

NOTE

In case the wheel check is not carried out immediately after disassembly it is recommended not to degrease the internal bearing ring with cage and tapered rolls. Wash the external bearing rings and as soon as dried with compressed air preserve them with grease.

Wash the preserved bearings immediately before check with suitable degreasing agent and dry them with compressed air.

- h) Remove, if needed, the external bearing ring.

Recommendation

Use K 49-7110.00 fixture to remove external bearing ring:

- heat the wheel part with external bearing ring (Fig. 32-15, item 11) in electric oven to max. 120°C (248 °F)
 - insert support (1) through the center wheel section and fit bolt (3), screwed in transversal piece (2), into the recess of support
 - insert teeth of remover (5) under the external bearing ring (11) and turning the bolt (3) by rod (4) get the tooth of remover tight to the external bearing ring
 - center the fixture properly and remove while turning the bolt (3) uniformly the external bearing ring from the wheel section.
- i) Mark the new bearing ring before installation by electric marker the same way as the original one, i.e. to be identical with wheel hub it is installed in. Press the external bearing into the pertinent heated wheel section up to the very bottom of bearing recess..

EFFECTIVITY:

All

Revision No. 10

page 32 - 37

2007-11-20

32-41-00

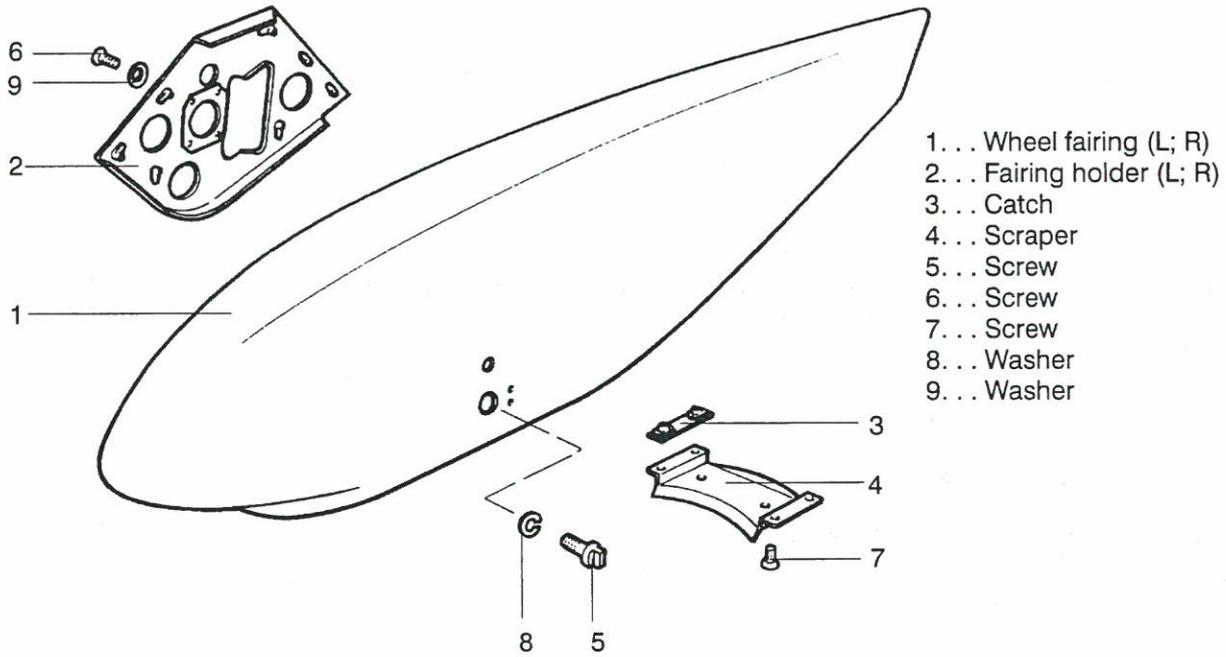


Fig. 32-12. Fairing of Main Landing Gear Wheel
 (left wheel fairing in view)

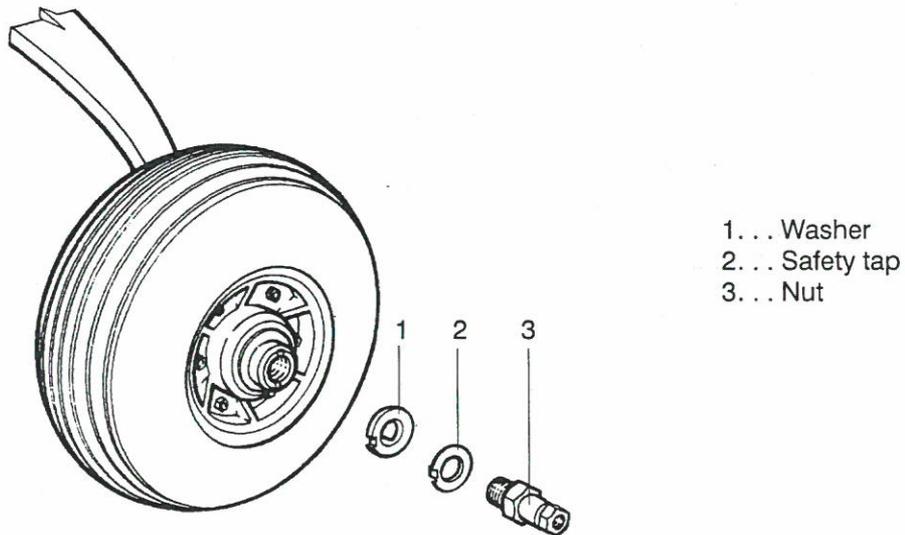
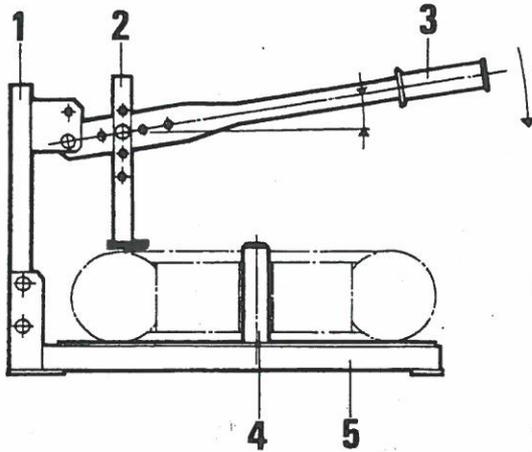


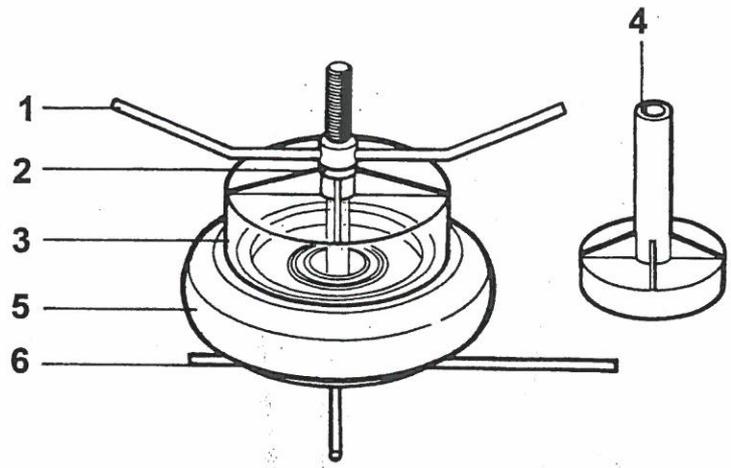
Fig. 32-13. Wheel of Main Landing Gear

A K 47-7130.00 FIXTURE

B K 51-7110.00 FIXTURE

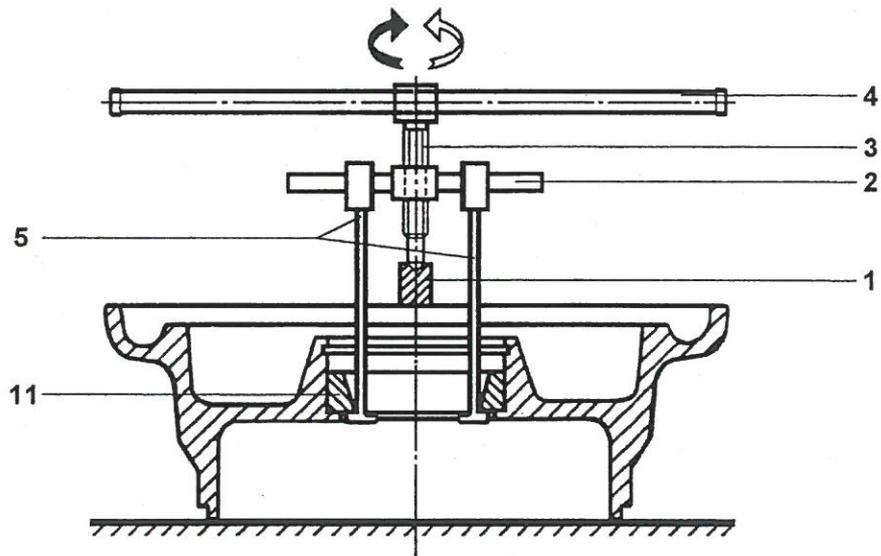


- 1 ... web
- 2 ... push bar
- 3 ... lever
- 4 ... pilot
- 5 ... plate



- 1 ... bolt
- 2 ... washer
- 3 ... disc for K 22 wheels
- 4 ... disc for K 51 wheels
- 5 ... tire
- 6 ... stand

Fig. 32-14 Tire Removing Fixtures



- 1 ... support
- 2 ... transversal piece
- 3 ... bolt
- 4 ... rod
- 5 ... puller (2 pcs)
- For information only:
- 11 ... external bearing ring

Fig. 32-15 K 49-7110.00 Fixture for Removing the External Bearing Ring

EFFECTIVITY:
All

INSTALLATION OF WHEEL OF MAIN LANDING GEAR

1. Assembly of Wheel Set

CAUTION

MAKE SURE DURING WHEEL ASSEMBLY TO HAVE THE NUMBER INSCRIBED UPON INTERNAL BEARING RING THE SAME AS THAT INSCRIBED UPON WHEEL HUB THE BEARING IS INSTALLED TO.

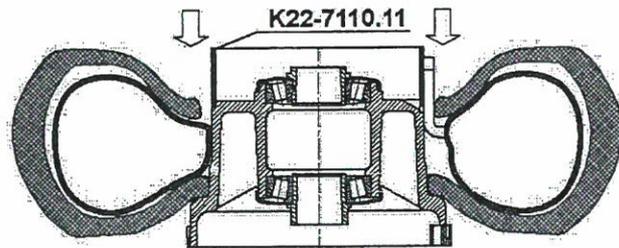
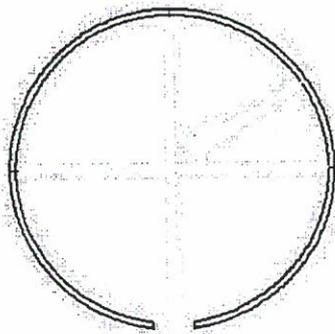
THE TIRE INSTALLED UPON K 22-3100-7 WHEEL SHOULD BE SET WITH ITS RED MARK (LIGHTEST SPOT OF TIRE) OPPOSITE TO RED MARK (Fig. 32-11, mark M) UPON REMOVABLE RIM (HEAVIEST SPOT OF WHEEL).

- a) Apply talc upon the internal surface of tire.
- b) Insert the tube into the tire and place the tire upon clean flat place.
- c) Inflate tube partially.
- d) Insert removable rim (Fig. 32-11, item 2) into the tire such a way that the inflation valve of tube passes through hole for valve.

NOTE

To facilitate the assembly, there is a possibility to insert K 22-7110.11 auxiliary ring hub (1) shoulder – locate ring slit to tube.

It is possible to order K 22-7110.11 auxiliary ring at airplane manufacturer.



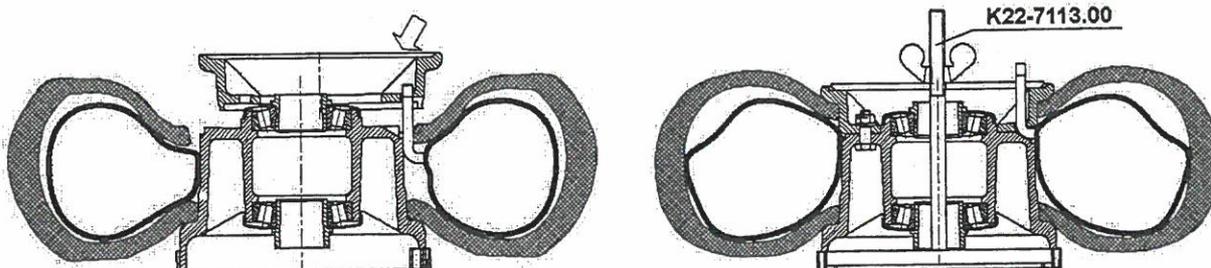
- e) Press the tire down to get tire bead below division plane of the wheel and keep pressed down.
- f) Take off auxiliary ring (if used).
- g) Fit the tire with removable rim (2) upon the wheel hub (1) that is placed with the brake disc drivers (6) downwards.
- h) Turn the assembled wheel round to have the wheel hub upwards and insert two bolts (3) with greased threads into the holes of wheel hub and removable rim (2).
- ch) Push the removable rim and wheel hub one to the other, provide bolts (3) with washers and screw the nuts (4) upon bolts. Install remaining four bolts (3).
- i) Tighten the nuts (4) uniformly crosswise with 15 to 18 Nm (11,0 to 13,2 lbft) torque.

Recommendation

Use MoN 1931 wrench with Nm-scale or MoN 1931.1 wrench with lbft-scale to tighten nuts (4).

**NOTE**

To facilitate the screw assembly, it is possible to use K 22-7113.00 fixture to fasten removable side rim (2) to wheel hub (1). It is possible to order K 22-7113.00 fixture at airplane manufacturer.



- j) Inflate tire to 250 ± 10 kPa (36 ± 2 p.s.i.) operation pressure and check serviceability of inflation valve.
- k) Degrease the threads of bolts (3) and nuts (4) and paint them with, e.g. S 2003 primer and then with 2029/9110 aluminium shade fast drying lacquer.
- l) Mark out tire position upon wheel rim by 10x30 mm (0,4x1,2 in) strip made by epoxy lacquer to detect tire skidding in airplane operation.
- m) Clean bearings and grease them. Install internal bearing rings into the wheel as follows:
 - K 22-0100-7 wheel:
 - insert bushings (7; 8) into the wheel with internal bearing rings and lids (10)
 - K 22-3100-7 wheel:
 - insert bushings (7) and insertion pieces (9) with internal bearing rings into the wheel
 - cover bearing (5) by sealing (12)
 - lock the sealing (12) by safety rings (11).

NOTE

In case of storing the assembled wheel before its installation to airplane it is necessary to protect bearings against dirt.

2. Installation of Main Landing Gear Wheel

- a) Apply grease in light layer upon wheel axle (subsection 05-21-00).
- b) Insert wheel upon wheel axle so that the brake disc drivers (Fig. 32-24, item 3) engage to drivers of wheel hub (11).
- c) Insert washer (Fig. 32-13, item 1) and tap washer (2) upon wheel axle.
- d) Screw nut (3) into the wheel axle.
- e) In order that the axial play in bearings may be removed it is necessary to tighten the nut (3) until the resistance to wheel revolving is detectable and then the nut should be released for 10° to 17° , i.e. for 4 to 6 mm (0,16 to 0,24 in) at the periphery of nut head. This ensures bearing play from 0,04 to 0,07 mm (0,0016 to 0,0028 in).
- f) Make sure the wheel revolves freely and then lock the nut (3) by bending the tab washer (4)

EFFECTIVITY:
All

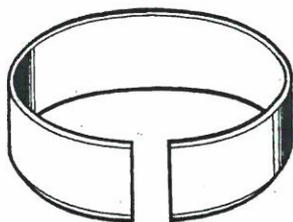
3. Installation of Fairing of Main Landing Gear Wheel

- a) Fit wheel fairing (Fig. 32-12, item 1) to wheel, and join scraper (4) to holders (3) by screws (7).
- b) Fix the wheel fairing (1) to the fairing holder (2) by screws (6) with washers (9) and to the nuts (Fig. 32-13, item 3) in wheel axis with bolt (Fig. 32-12, item 5) provided with washers (8). Lock the bolt (5) with safety wire to the hole in wheel fairing.
- c) Check gap between scraper (4) and wheel that should be from 8 to 10 mm (0,32 to 0,40 in).

Final Works

- a) Down the airplane to ground.

A K 22-7110.11 FIXTURE



B K 22-7113.00 FIXTURE

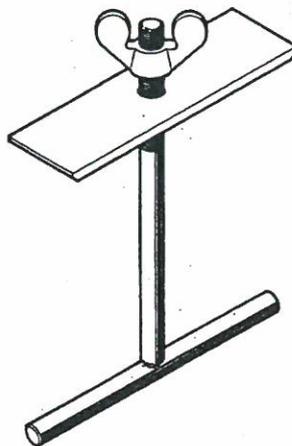


Fig. 32-15a Facilitate the Assembly Fixtures



INTENTIONALLY LEFT BLANK

EFFECTIVITY:
All

32-41-00

Revision No. 10
page 32 - 41b
2007-11-20



INSPECTION AND CHECK

CHECK OF CONVERGENCE OF MAIN LANDING GEAR

Preparatory Works

- a) Remove bottom fuselage panel (Fig. 52-5, item 24) and fairings of main landing gear wheels (subsection 32-41-00, REMOVAL AND INSTALLATION).
- b) Lift the airplane by fuselage jacks and set it to horizontal position. In longitudinal direction use for leveling NiB points 2 and 3 and in lateral direction use NiB 6 (Fig. 06-3).

NOTE

Check wheel convergence in shut hangar.

Procedure of Convergence Measurement of Main Landing Gear Wheels

- a) Mark out the longitudinal axis of airplane as follows:
 - Fix holder (Fig. 32-16, item 1) by nut to front bolt of middle bushings (11) of pedal mechanism;
 - Suspend clip (2) into the hole in tail skid hole.

NOTE

Make holder (1) from the sheet and clip (2) from string according to details A and B.

- Suspend plumb bobs (3) upon holder (1) and clip (2).
- Stretch string between plumb bobs (4) to pass under the plumb bob tips (3).
- b) Fit the ruler (6) upon the wheel rim to be in touch with its stops with peripheral points of rim while in horizontal level.
- c) Measure the distance of end points of ruler (a, b) from longitudinal axis of airplane;
- d) Calculate "a - b" difference and determine convergence angle α from below table:

a-b		α												
[mm]	[in]													
1	0.04	0°03'	9	0.35	0°31'	17	0.67	0°58'	25	0.98	1°26'	33	1.30	1°53'
2	0.08	0°07'	10	0.39	0°34'	18	0.72	1°01'	26	1.02	1°29'	34	1.34	1°57'
3	0.12	0°10'	11	0.43	0°38'	19	0.76	1°05'	27	1.06	1°33'	35	1.38	2°00'
4	0.16	0°14'	12	0.47	0°41'	20	0.80	1°09'	28	1.10	1°36'	36	1.42	2°04'
5	0.20	0°17'	13	0.51	0°44'	21	0.84	1°12'	29	1.14	1°40'	37	1.46	2°07'
6	0.24	0°20'	14	0.55	0°48'	22	0.88	1°15'	30	1.18	1°43'	38	1.50	2°11'
7	0.27	0°24'	15	0.59	0°51'	23	0.92	1°19'	31	1.22	1°46'	39	1.54	2°14'
8	0.31	0°27'	16	0.63	0°55'	24	0.96	1°22'	32	1.26	1°50'	40	1.57	2°18'

5) Bolts (3)

Fault	Remedy
1) Faulty thread or shank, deformation, and/or excessive corrosion.	Replace faulty bolts.
2) Light corrosion.	Grind the defects off with emery paper and repair the paint (section 32-40-00, PAINT RENEWAL).

6) Nuts (4)

Fault	Remedy
1) Faulty thread, deformation, and/or excessive corrosion.	Replace faulty nuts.
2) Reduced self-locking ability.	Insert 0.2 mm (0.008 in) thick sheet into the nut groove and lightly hammer or press thinner side of nut.
3) Light corrosion.	Grind off the defect with fine emery paper and repair paint (section 32-40-00, PAINT RENEWAL).

7) Sealing (12) – K 22-3100-7 wheel

Fault	Remedy
1) Cracks, deformation, and/or excessive denting or wear.	Replace faulty sealing.

8) Safety rings (11) – K 22-3100-7 wheel

Fault	Remedy
1) Cracks, deformation, and/or excessive corrosion	Replace faulty safety rings.
2) Light corrosion.	Grind the defect with fine emery paper and repair paint (section 32-40-00, PAINT RENEWAL).

EFFECTIVITY:

All



WHEEL OF NOSE LANDING GEAR

DESCRIPTION AND FUNCTION

The airplane may be equipped with following wheels, tubes and tires of nose landing gear:

Mark		
Wheel	Tube	Tire
K 23-0000-7	BARUM 350 x 135 V 561	BARUM 350 x 135
K 51-1100-7	or	BARUM 350 x 135
	GOODYEAR 5.00-5 TR 67	or
		GOODYEAR 5.00 - 5 505 C61-6
		or
		GOODYEAR 5.00 - 5 505 C61-8

Inflation pressure of BARUM and GOODYEAR tires of nose landing gear: 250 ± 10 kPa (36 ± 2 p.s.i.).

The left side of wheel rim (Fig. 32-19, item 1) is joined with the right side wheel rim (2) with three bolts (3) provided with washers and nuts (4). The wheel revolves in two bearings (5) protected against dirt. The nose is not equipped with brake..

- d) Push the tirebeads from rim.

Recommendation

Use K 47-7130.00 or K 51-7110.00 fixture to push the tire beads off the rim (subsection 32-41-00).

- e) Remove last bolt (3) with nut (4) and washer.
f) Remove gradually left and right side of wheel (1; 2) and tube from the tire.
g) Wash the tire with water solution of detergent or with soap. Wash other parts of nose wheel with degreasing agent and blow them dry with compressed air.

NOTE

In case the wheel is to be stored before its check do not wash the internal bearing ring with cage and bearing tapered rollers. Wash the external bearing ring, blow it dry with compressed air, and preserve it with grease.

Wash all the bearing parts before check with suitable degreasing agent and blow them dry with compressed air.

- h) Remove if necessary the external bearing ring.

Recommendation

Use K 49-7110.00 fixture to remove external bearing ring (subsection 32-41-00).

- i) Mark the new bearing rings during replacement with electric marker to have the same designation mark as wheel hub they are used in. Press the internal bearing ring into the heater part of wheel rim up to the very bottom of bearing recess.

EFFECTIVITY:

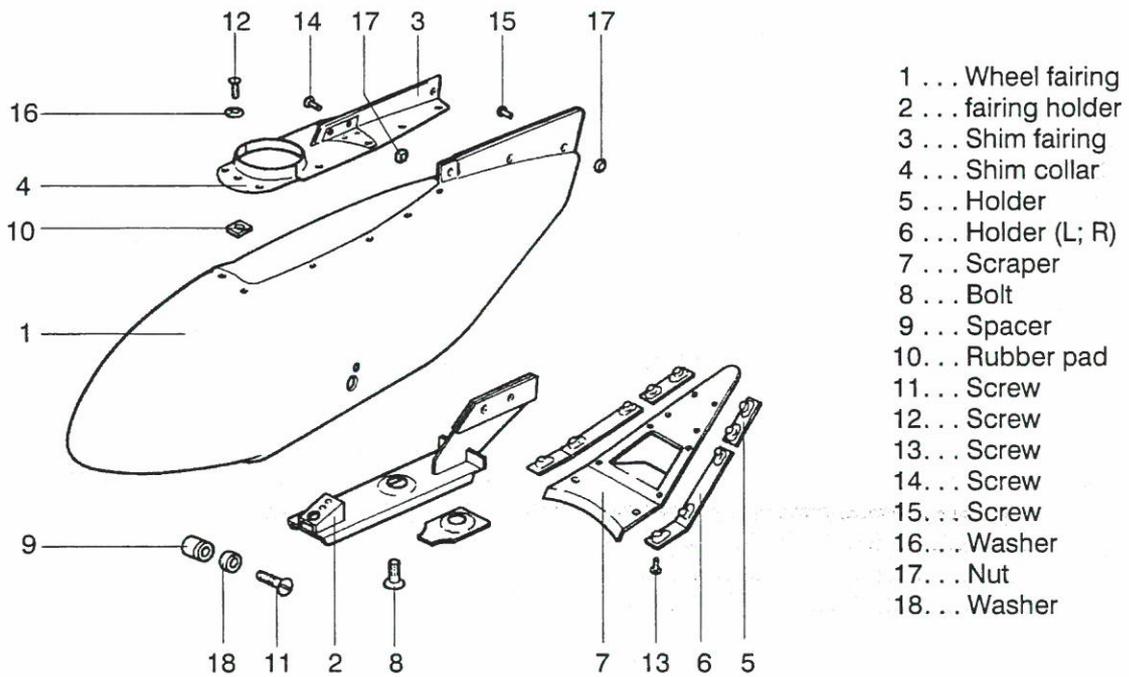
All

32-42-00

Revision No. 10

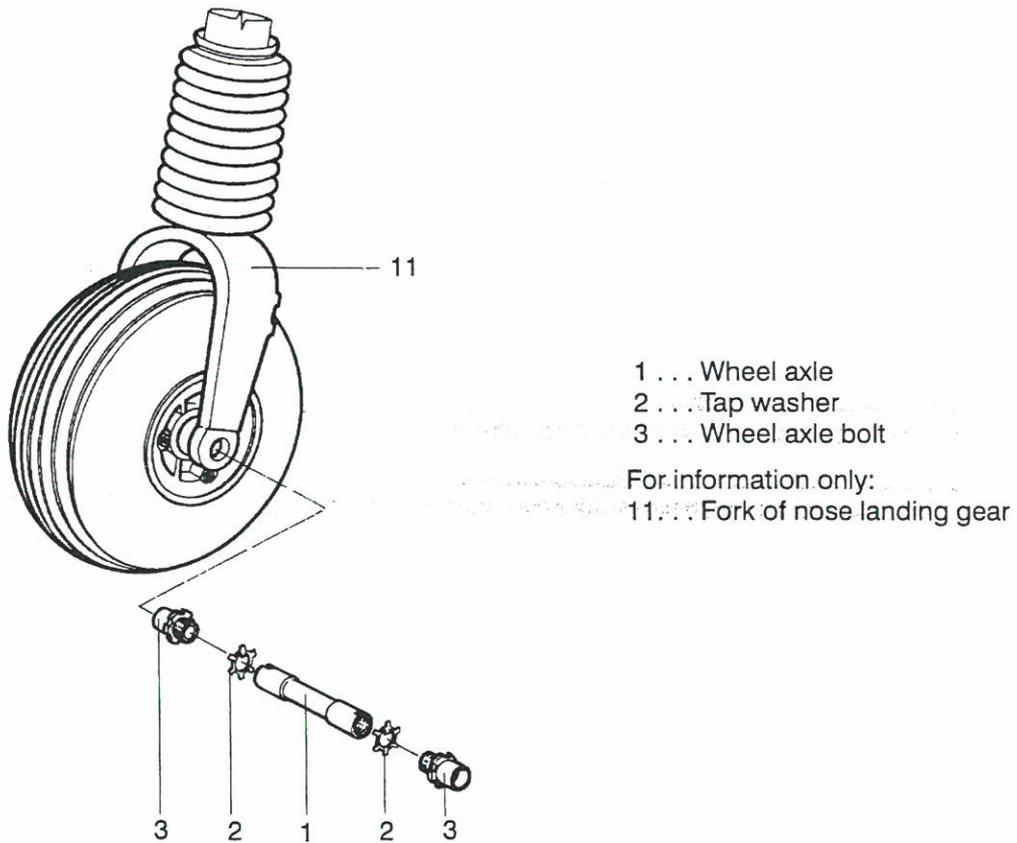
page 32 - 51

2007-11-20



- 1 ... Wheel fairing
- 2 ... fairing holder
- 3 ... Shim fairing
- 4 ... Shim collar
- 5 ... Holder
- 6 ... Holder (L; R)
- 7 ... Scraper
- 8 ... Bolt
- 9 ... Spacer
- 10 ... Rubber pad
- 11 ... Screw
- 12 ... Screw
- 13 ... Screw
- 14 ... Screw
- 15 ... Screw
- 16 ... Washer
- 17 ... Nut
- 18 ... Washer

Fig. 32-20. Nose Wheel Fairing



- 1 ... Wheel axle
- 2 ... Tap washer
- 3 ... Wheel axle bolt

For information only:
11 ... Fork of nose landing gear

Fig. 32-21. Wheel of Nose Landing Gear



GENERAL

The pitot pressure is supplied to airspeed indicators from pitot probes. The static pressure is supplied to barometric instruments from the static vents. The alternate static pressure is supplied from the vents located in firewall and in cockpit. The pressure for stall warning system is supplied from the stall probe.

Technical specification of the COMM/NAV equipment (technical description, servicing and maintenance and wiring diagrams) are described in Chapter 95 (SUPPLEMENTS).

EFFECTIVITY:

All

34-00-00

Revision No. 10
page 34 - 1
2007-11-20



PITOT – STATIC SYSTEM

DESCRIPTION AND OPERATION

The pitot pressure is supplied to airspeed indicators from the pitot tube (Fig. 34–1, item 1) that is under the port wing.

The static pressure for barometric instruments (Airspeed indicators, altimeters, VSI, and altitude encoder) is supplied from static vents (2) that are in the aft fuselage section.

The alternate static pressure (subsection 34–11–00) is collected by vent (3) in the fire wall and from the cockpit.

The pressure for stall warning system (subsection 34–12–00) is collected by stall warning probe (4) located under the port wing near the leading edge.

The pitot pressure pipeline (5), static pressure pipeline (6) and pipeline of stall warning system (7) are provided with water traps (8). The water traps are accessible after opening the access port doors (Fig. 52–5, item 25) in the bottom engine cowling.

The pitot probe (Fig. 34–1, item 1) and static probes (2;4) are equipped with anti-icing heaters (section 30–30–00).

Protection of probes and vents during airplane parking:

- The pitot probe is protected by canvas cover (9);
- The static vents and stall warning probe are provided during parking with plugs (10).



REPAIR OF CORROSIVE PARTS

CAUTION

IN CASE THE CORROSIVE SPOTS WITH ROUGH SURFACE OF DARK COVER (INTER-CRYSTALLINE CORROSION) INDICATING THE CORROSION PENETRATION INTO THE DEPTH OF BASE MATERIAL IT IS NECESSARY TO REPLACE AFFECTED PARTS.

- 1) Remove paint completely from the metal surface with the 5 mm (0.20 in) access around the corrosive spots with paint remover or mechanically.

NOTE

Corrosion under the painted surface may be detected according to blistered paint. The corrosion may be removed with sharp tool without part surface damage.

- 2) Remove corrosion with emery paper No. 180 and if necessary by pumice. Check surface with removed paint by 6× magnifying glass.
- 3) Repair paint (subsection 51-72-00).

EFFECTIVITY:

All

51-11-00

page 51-3
1998-06-30

REPAIR OF SHEET PARTS

CAUTION

REPAIR OF SKIN OF FUSELAGE AFT PART, TAIL UNIT AND WINGS IS ISSUED IN SUBSECTION 57-10-00 APPROVED REPAIRS.

REPAIR OF CRACK IN THE SHEET COVER

- 1) Level the deformed cover by means of wooden mallet and suitable shims
- 2) Drill of the ends of cracks with 1,5 mm (0,06 in) drill
- 3) Make overlapping stripe:
 - a) the thickness of sheet should at least the same as that of repaired sheet
 - b) the overlapping stripe should overlap the edge of crack for at least 15 mm (0,60 in)
- 4) Chamfer the sheet edges and protect contact surfaces of repaired and repair sheets with pain.
- 5) Rivet overlapping stripe to repaired spot (fig. 51-1):
 - a) use duralluminium rivets of minimum 186 MPa and 3x to 5x thicker diameter of sheet thickness
 - b) the lenght of rivet should be 1,5x longer than the thickness of riveted sheets
 - c) the rivet spacing should be the same as at the periphery of repaired part but not greater than 30 mm (1,20 in)
 - d) the rivet distance from the edge should at least 7 mm if used rivets are thicker than 3 mm (0,12 in).
- 6) Repair paint (subsection 51-72-00).

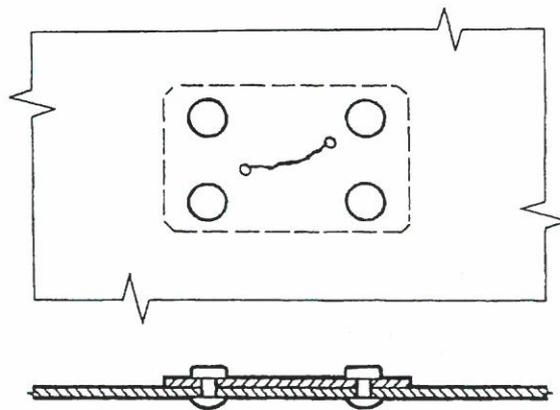
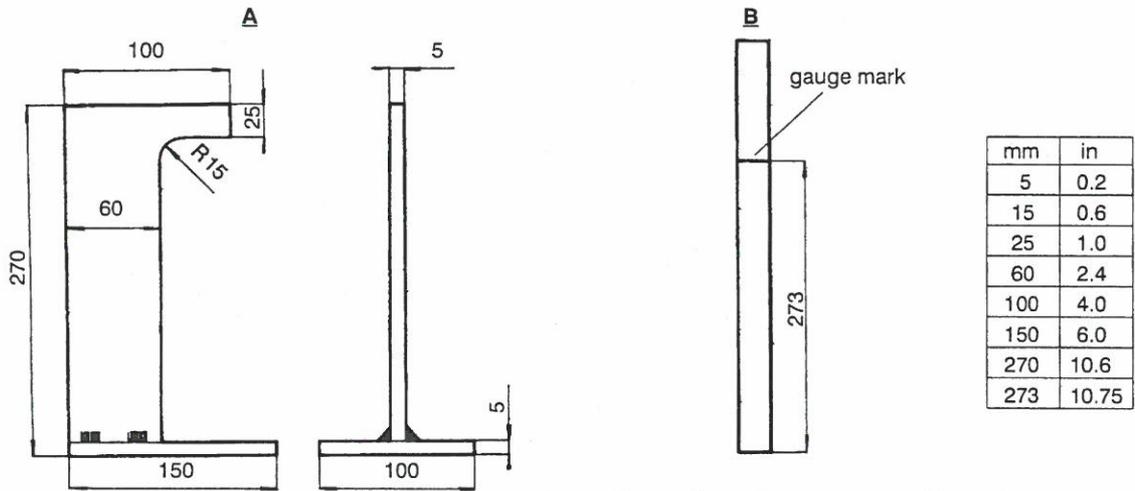
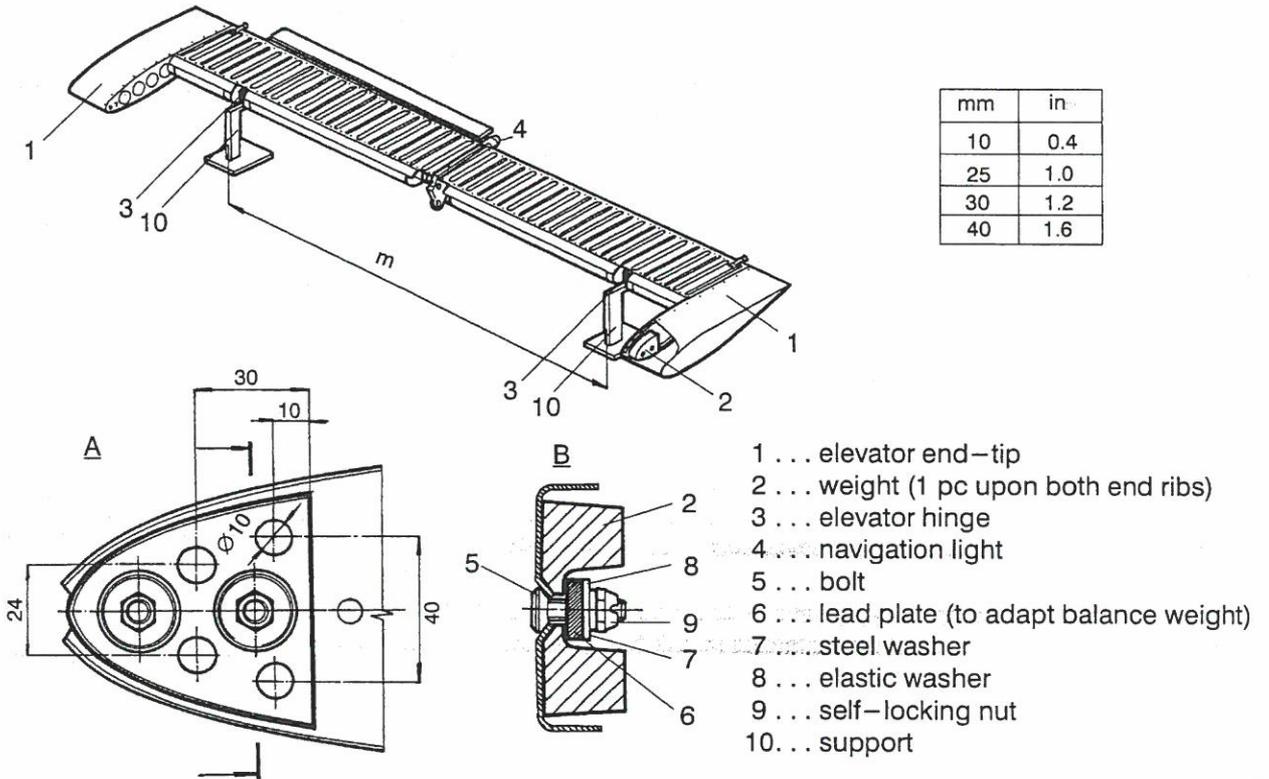


Fig. 51-1 Repair of Cracks in Sheet Covers



A ... dimension of struts, material, weldable steel sheet
 B ... gauge with gauge mark, material, wood

Fig. 55-9. Struts and gauge



A ... adaptation of weight mass by drilling up to the 10 mm (0.4 in) depth
 B ... adaptation of weight mass by using the load plates
 M ... distance between external hinges of elevator: $m=1893$ mm (72.53 in)

Fig. 55-10. Setting the Elevator upon Jacks and Weight Mass Adaptation

EFFECTIVITY:
 All



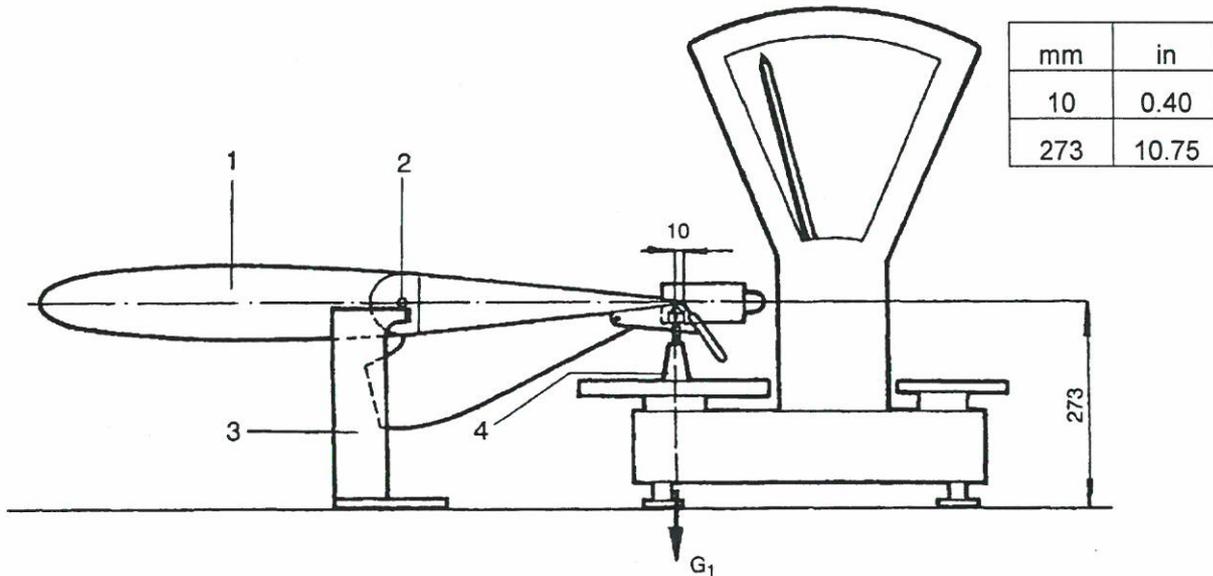
RECORD OF ELEVATOR STATIC BALANCING CHECK

Airplane production number: _____ Production number of elevator: _____

MASS G				
prescribed G_A		balanced G_B		
kg	lbs	kg	lbs	**
0.135 – 0.660	0.298 – 1.455			

Mass G_B is difference between overall mass G_1 , received by weighting and mass of adjustable support G_2 ($G_B = G_1 - G_2$ kg).

** Delete what is not applicable.



- 1 ... Elevator
- 2 ... Fitted suspension bolts
- 3 ... Fixed suspensions (2 jacks)
- 4 ... Adjustable suspensions

Date of measurement Weighing made out by

Date of check Check carried out by

Result of weighing: SUITABLE – NOT SUITABLE
(delete what is not applicable)



APPROVED REPAIRS

REPAIR OF WING MOUNTS

CAUTION

THE WING MOUNTS MAY BE REPLACED BY AIRCRAFT MANUFACTURER OR BY MANUFACTURER CERTIFIED REPAIR SHOP.

Fault	Remedy
<p>Faulty wing mounts:</p> <ul style="list-style-type: none"> a) Local corrosion up to 0.1 mm (0.004 in) depth b) Cracks and corrosion deeper than 0.1 mm (0.004 in) c) Lose bordering bearing of aft wing mount; d) Dented holes of wing fuselage and wing mounts as detected after micrometer measurement e) Dented hole in the aft wing fuselage and wing mounts as detected by micrometer measurement. 	<p>Remove corrosion with fine emery paper.</p> <p>Replace cracked or excessively corroded mounts.</p> <p>} According to subsection "Reaming of Wing Mount Holes".</p>

EFFECTIVITY:

All

REAMING OF WING AND FUSELAGE MOUNTS

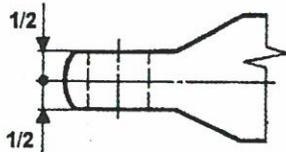
CAUTION

CHECK WING POSITIONING AFTER WING MOUNT HOLE REAMING (Subsection 08-20-00).

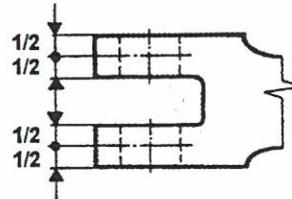
General hints for hole reaming are issued in subsection 20-21-00.

Measure the fuselage main spar wing mounts to detect hole denting by means of three-point micrometer in the middle of mount thickness according to figure below:

a) Upper wing mount



b) Bottom wing mount



Upper Wing Mount

Hole in mount (Fig. 57-8, item 1; 3)		Recommended fixtures		Recommended reamers		Recommended calipers					
		mount in wing	mount in fuselage	mount in wing	mount in fuselage						
Original dimension	Ø 20 H6	----	----	----	----	----					
Dimension after repair	Ø 20,1 H6	reaming fixture (L; R) 500-529-0174	reaming fixture 500-529-0170	set of reamers 003-241-0949	set of reamers 003-224-0950	set of calipers 34-F526-401					
	Ø 20,2 H6						reamer adapter 32-Z42-1887	set of centering mandrels 500-240-0171	(Ø 20,1 H6; Ø 20,2 H6; Ø 20,3 H6;	(Ø 20,1 H6; Ø 20,2 H6; Ø 20,3 H6;	(Ø 20,1 H6; Ø 20,2 H6; Ø 20,3 H6;
	Ø 20,3 H6										
	Ø 20,4 H6	counterbore 32-Z42-1850									

Mount pin (Fig. 57-8, item 2)		Number of pin
Original dimension	Ø 20 h6	Z 42.2181-00.00
Dimension after repair	Ø 20,1 h6	Z 42.2182-00.00
	Ø 20,2 h6	Z 42.2183-00.00
	Ø 20,3 h6	Z 42.2184-00.00
	Ø 20,4 h6	Z 42.2185-00.00

Bottom Wing Mount

Hole in mount (Fig. 57-8, item 4; 6)		Recommended fixtures		Recommended reamers		Recommen- ded calipers
		mount in wing	mount in fuselage	mount in wing	mount in fuselage	
Original dimension	∅ 20 H6	-----	-----	-----	-----	-----
Dimension after repair	∅ 20,1 H6	reaming fixture 500-529-0174 reamer adapter 32-Z42-1887 counterbore 32-Z42-1850	reamer guide bushings 500-240-0172 set of centering mandrels 500-240-0171 reamer adapter 500-240-0173	set of reamers 003-241-0949 (∅ 20,1 H6; ∅ 20,2 H6; ∅ 20,3 H6; ∅ 20,4 H6)	set of reamers 003-224-0950 (∅ 20,1 H6; ∅ 20,2 H6; ∅ 20,3 H6; ∅ 20,4 H6)	set of calipers 34-F526-401 (∅ 20,1 H6; ∅ 20,2 H6; ∅ 20,3 H6; ∅ 20,4 H6)
	∅ 20,2 H6					
	∅ 20,3 H6					
	∅ 20,4 H6					

Mount pin (Fig. 57-8, item 5)		Number of pin
Original dimension	∅ 20 h6	Z 42.2191-00.00
Dimension after repair	∅ 20,1 h6	Z 42.2192-00.00
	∅ 20,2 h6	Z 42.2193-00.00
	∅ 20,3 h6	Z 42.2194-00.00
	∅ 20,4 h6	Z 42.2195-00.00

EFFECTIVITY:
All



Aft Wing Mount

Hole in mount (Fig. 57-8, item 7)		Recommended reamer	Recommended caliper
Original dimension	Ø 12 H7	----	----
Dimension after repair	Ø 12,1 H7	Ø 12,1 H7 000-224-5013	Ø 12,1 H7 000-511-1016
	Ø 12,2 H7	Ø 12,2 H7 000-224-5014	Ø 12,2 H7 000-511-1017
	Ø 12,3 H7	Ø 12,3 H7 000-224-5015	Ø 12,3 H7 000-511-1018
	Ø 12,4 H7	Ø 12,4 H7 000-224-5043	----

Mount pin (Fig. 57-8, item 8)		Number of pin
Original dimension	Ø 12 ^{-0,005} _{-0,015}	Z 42.2100-00.22
Dimension after repair	Ø 12,1 ^{-0,005} _{-0,015}	Z 42.2100-00.23
	Ø 12,2 ^{-0,005} _{-0,015}	Z 42.2100-00.24
	Ø 12,3 ^{-0,005} _{-0,015}	Z 42.2100-00.25
	Ø 12,4 ^{-0,005} _{-0,015}	Z 42.2100-00.28