



**SERVICE BULLETIN No. 1/01/2003**

1. **DATE:** January 10, 2003
2. **APPLIES TO:** Parts of parachute sets manufactured by MarS Ltd. and MarS Inc.
3. **REASON:** Information for parachute equipment users
4. **NUMBER OF SHEETS:** 7
5. **NUMBER OF ENCLOSURES:** 3

In Jevíčko on January 10, 2003

Ing. Svatoslav Marek – Director of MarS Inc. Jevíčko

Stamp and signature:





## **Service Life of the Parts of Parachute Equipment**

### **A. Canopies of main parachutes**

The maximum service life of the canopies of main parachutes has not been specified and depends on the actual condition of each canopy.

- 1.1. After five years of a parachute's service life an expert inspection is carried out at least once in 2 years.
- 1.2. If a canopy is found suitable for use, an authorized person enters a record in its technical card.
- 1.3. If a canopy is damaged, it is submitted for repair or put out of order. If put out of order, a respective record is entered in its technical card (if it is required).
- 1.4. Inspections are to be completed by the manufacturer or by an authorized person.

### **2. Scope of inspections**

The expert inspections of the canopy of the main parachute are carried out in the following sequence.

- 2.1. The condition of the accompanying documentation
  - Technical card (if required)
  - Proper completion of entries
- 2.2. Parachute marking inspection
  - Production numbers
  - Parachute type marking
  - Production date
  - Manufacturer
- 2.3. Inspections take place according to the sequence of the inspection of the canopy of the main parachute (enclosure No. 1.)



Enclosure No. 1

## Main Parachute Canopy (and Related Parts) Inspection Procedure

	YES suitable	NO Unsuitable
<b>1. Main parachute canopy log</b>		
<b>2. Main parachute canopy marking</b>		
Production number:		
Production date:		
Manufacturer / type:		
Owner: <span style="float: right;">Contact:</span>		
2.1. Canopy webbing (damage – see the scheme)		
2.2. Seams - the upper panel		
2.3. Seams - the lower panel		
2.4. Seams – side panels and stabilizers (including the stops)		
2.5. Seams – the leading edge		
2.6. Seams – trailing edge		
2.7. Sewing of line loops		
2.8. Load-bearing and steering lines		
- sewing condition – canopy		
- condition and sewing at the forking		
- condition and sewing at screwing buckles		
2.9. Screwing buckles (threads, nuts, deformations)		
2.10. Loose ends of the load-bearing harness		
- metal parts, grommet		
- condition of harnesses		
- hemming		
- strength sewing		
- functionality of the three-ring system		
- other (the condition of the Velcro strap, etc.)		
<b>Overall inspection results</b>	<b>Suitable</b>	<b>Unsuitable</b>

In ..... date .....

Signature: .....

Note: Cross out the appropriate





## **B. Reserve parachutes**

The maximum service life of these parachutes is set to 15 years.

- 1.1. After five years of a parachute's service life an expert inspection is carried out at least once in 2 years.
- 1.2. If a canopy is found suitable for use, an authorized person enters a record in its technical card.
- 1.3. If a canopy is damaged, it is submitted for repair or put out of order. If put out of order, a respective record is entered in its technical card (if it is required).
- 1.4. Inspections are to be completed by the manufacturer or by an authorized person.
- 1.5. After completing 10 years of service life, the company offers an expert inspection in a manufacturer plant.

## **2. Scope of inspections**

Inspections to determine the service life of reserve parachutes are completed in the following sequence.

- 2.1. The condition of the accompanying documentation
  - Technical card (if required)
  - Proper completion of entries
- 2.2. Parachute marking inspection
  - Production numbers
  - Parachute type marking
  - Production date
  - Manufacturer
  - Marking with standard TSO C 23 c (d)
- 2.3. Inspections take place according to the sequence of the inspections of the canopy of the reserve parachute (enclosure No. 2.)



Enclosure No. 2

## Reserve Parachute (and Related Parts) Inspection Procedure

	<b>YES Suitable</b>	<b>NO Unsuitable</b>
<b>1. Reserve parachute log</b>		
<b>2. Reserve parachute canopy marking</b>		
Manufacturing number:		
Production date:		
Manufacturer / type:		
Owner: <span style="float: right;">Contact:</span>		
2.1. Canopy webbing (damage – see the scheme)		
2.2. Seams - the upper panel		
2.3. Seams - the lower panel		
2.4. Seams – side panels and stabilizers (including the stops)		
2.5. Seams – the leading edge		
2.6. Seams – trailing edge		
2.7. Sewing of line loops		
2.8. Load-bearing and steering lines		
2.9. Conditions of sewing at the canopy		
2.10. Condition and sewing at the forking		
2.11. Condition and sewing at screwing buckles		
2.12. Screwing buckles (threads, nuts, deformations)		
2.13. Steering loops (tying of steering lines, bushing, Velcro strap)		
<b>Overall inspection results</b>	<b>Suitable</b>	<b>Unsuitable</b>

In ..... date .....

Signature: .....

Note – Cross out the appropriate.



### **C. Harnesses with packing panels**

The maximum service life of harnesses with packing panels is set to be 15 years.

- 1.1. After five years of the service life of a harness with packing panels an expert inspection is carried out at least once in 2 years.
- 1.2. If a panel with a harness is suitable for further use, an authorized person makes an entry in a parachute log.
- 1.3. If a panel with a harness is damaged, it is submitted for repair or put out of order. If put out of order a respective record is made in its technical card.
- 1.4. Inspections are to be completed by the manufacturer or by an authorized person.
- 1.5. After completing 10 years of service life, the company offers an expert inspection in a manufacturer plant.

### **2. Scope of inspections**

Inspections to determine the service life of harnesses with a packing panel are completed in the following sequence.

- 2.1. The condition of the accompanying documentation
  - Technical card (if required)
  - Proper completion of entries
- 2.2. Inspection of the marking of the harness and of its packing panel
  - Production numbers
  - Panel with harness type marking
  - Production date
  - Manufacturer
  - Marking with standard TSO C 23 c (d)
- 2.3. Inspections take place according to the sequence of the inspections of the packing panel with a harness (and related parts) (enclosure No. 3.)



## Packing Panel with Harness (and Related Parts) Inspection Procedure

	YES Suitable	NO Unsuitable
<b>1. Packing panel with harness log</b>		
<b>2. Packing panel with harness marking</b>		
Manufacturing number:		
Date of manufacturing:		
Manufacturer / type:		
Owner: Contact:		
<b>3. Harness conditions (harnesses must not be damaged)</b>		
<b>4. Strength sewing</b>		
4.1. Sewing of the harnesses of the reserve parachute		
4.2. Sewing of the braking system of the reserve parachute		
4.3. Sewing at the large ring of the release system		
4.4. Sewing of the chest harness		
4.5. Sewing of the cross made by the leg harness and the main harness		
4.6. Sewing of stops on the leg harnesses		
<b>5. Releaser pockets (without damage)</b>		
<b>6. Inspection of metal parts</b>		
6.1. Release rings		
6.2. Chest harness buckle		
6.3. Ring on the hip joint		
6.4. Leg buckle Its metal parts must not be damaged, i.e. they must be free of sharp edges, deformations, signs of corrosion and must be mechanically functional		
<b>7. Parachute packing panel</b>		
7.1. Padding of flaps (must be free of cracks)		
7.2. Metal bushings (must be smooth; without sharp edges and cracks)		
7.3. Release hose (without deformations)		
7.4. Reverse parachute hose (without deformations)		





7.5. Webbing and hemming (without damage)		
7.6. Packing panel sewing (homogeneous)		
7.7. Velcro straps and their conditions (functional joints, attachment by sewing)		
7.8. Sewing of the corners of the reverse parachute inside a packing panel		
7.9. Pocket of the pilot parachute of the main parachute (elastic, functional)		
7.10. KAP plate, main parachute releaser hose, attachment of KAP onto a packing panel, covering flap		
7.11. Reverse parachute closing loop (to be replaced when repacked)		
<b>8. Releaser</b>		
8.1. Must move freely in hoses		
8.2. Plastic-covered wires must be cleaned		
8.3. The ends of the wires must be fire polished (i.e. the wire under the plastic material must not be obviously visible, the end must not be sharp)		
8.4. Proper length of the ends sticking out of hoses		
8.5. Wires must not be twisted		
<b>9. Reverse parachute releaser</b>		
9.1. Without damage		
9.2. Proper length		
9.3. Wire and needle without damage and damage stop (soldering-in and pressing-in)		
<b>10. Reserve parachute pilot parachute (production No. ....)</b>		
10.1. Pilot parachute webbing (without damage)		
10.2. Spring (min. strength - 100 N), joining of the closing loops of the spring		
10.3. Solid board (Cypres, Astra)		
10.4. Bushing in the upper and lower part of the pilot parachute (without deformations and cracks)		
<b>11. Reserve parachute container (production No. ....)</b>		
11.1. Hemming, including the sewing of loops (without damage)		
11.2. Sewing of the container		
11.3. Pressing on of bushings (without deformations and sharp edges)		
11.4. Braided rubber bands		
<b>Overall inspection results</b>	<b>Suitable</b>	<b>Unsuitable</b>



In ..... date .....

Signature:

.....

Note: Cross out the appropriate.



**D. Other parts**

(pilot parachute, connecting lines, containers, steering buckles, loose ends)

- 1.1. The maximum service life of these other parts is 15 years.
- 1.2. The basic criterion for their further use is the proper function of parts and the suitable technical parameters of parts (for instance, the strength of the spring of the pilot parachute of the reserve parachute).
- 1.3. The maximum service life of parts containing rubber components is 5 years. If these parts fail to provide required properties, they must be replaced without delay.

	<b>Part</b>	<b>Production number</b>	<b>Suitable</b>	<b>Unsuitable</b>
1.	Reserve parachute pilot parachute			
2.	Connecting line			
3.	Reserve parachute container			
4.	Reserve parachute steering buckles			
5.	Main parachute pilot parachute			
6.	Main parachute container			
7.	Connecting line			
8.	Loose ends			
9.	Main parachute steering loops			
<b>Overall inspection results</b>			<b>Suitable</b>	<b>Unsuitable</b>

Note: Cross out the appropriate.

In ..... date .....

Signature: .....