

Title: BRS Parachute Kit Installation Instructions XT-912

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<u>Summary of Changes</u>

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1 Synopsis

This report outlines the method used when installing the BRS Ballistic Parachute on the XT-912 Trike base.

All parts that are not supplied with the ballistic parachute from BRS or already installed on the aircraft, should be included with the Airborne Parachute Mount Kit, Airborne part number #106374.

Depending on the state of the Trike when delivered, some additional equipment may be required for the fitment. If the bracket which holds the parachute handle is not already attached to the Trike, the seat frame will need to be drilled and the bracket bolted and riveted in place, (rivet supplied).

Note, the installation of the BRS parachute recovery system is not certified, see the Pilots Operating Handbook for further details.

2 Introduction

The BRS ballistic parachute is not supplied with the aircraft by AirBorne WindSports for some countries. This is due to the deployment rocket being classified as a 'dangerous good' which incurs various shipment penalties. Hence Airborne supplies a kit to allow the distributor or owner to complete the BRS installation. Note, it is necessary to check with local regulations to ensure installation is permitted.

The information documented in this report is deemed adequate for a reasonably skilled person to install the BRS parachute system. However if you are unsure of some aspect of the installation or fitment process, please contact AirBorne WindSports or your nearest Airborne dealer.

Figure 1 Ballistic parachute installation, XT-912



3 Parts Supplied

Below is a list of drawings that accompany this document and provide some of the data for the fitment of the BRS parachute recovery system. The installation of the rocket and deployment cables are part of the BRS documentation. The list of parts below are as supplied by airborne for the parachute installation kit.

Table 1 Drawings list (see appendix A)

DWG	SHEET	DWG NAME
A4-5904	1	PARACHUTE SUB-ASSEMBLY BRS XT
	2	PARACHUTE MOUNT KIT BRS XT
A4-6553	3	RELEASE TAG SAFETY (BRS KIT)

Table 2 Parts list from A4-5904, Sheet 2

ITEM NO.	DWG NAME	DWG	PART NO.	QTY.
1	PARACHUTE MOUNT BRS XT COMPONENT	5905	105724	1
2	BOLT AN4-27 a	5450	100010	1
3	WASHER AN4	5540	100042	1
4	NUT NYLOC AN4 HALF	5561	100035	2
5	HOSE BUSH 6ID x 10L	5726	106720	1
6	CABLE TIE MED	5605	101193	5
7	SPLIT RING 10MM - PIP PIN	5720	105508	1
8	VELCRO LOOP 50x40	6313	106664	1
9	PARACHUTE RELEASE TAG CABLE XT	6553	106773	1
10	VELCRO HOOK 25x120 ADHESIVE	6313	106774	1
11	NUT NYLOC M 6 FULL	5604	102132	1
12	POP RIVET SS 3/16"	5515	102205	1
13	EYEBOLT AN43b- 4a	6538	100056	1
14	WASHER NYLON M6 XOD	5540	101055	2
15	BRACKET PARACHUTE HANDLE XT	6537	106624	1
16	SKT BUTTON SCREW M6 x 16	5677	101752	1
17	PLACARD EMERGENCY PARACHUTE BRS	5900	106647	1

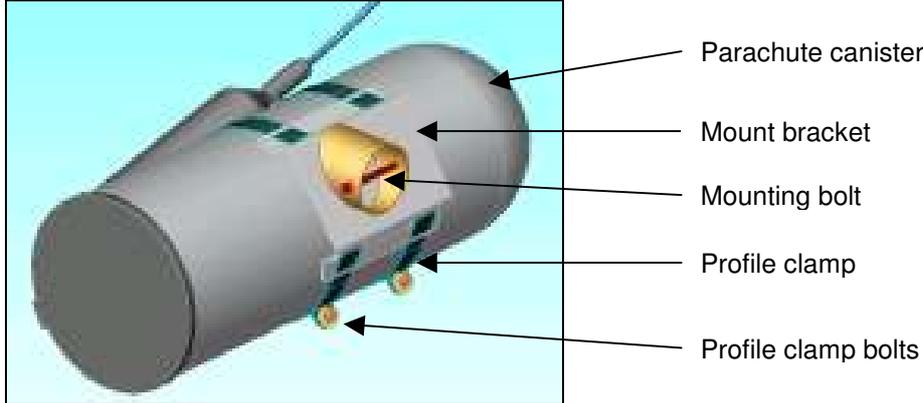
4 Procedure

The BRS ballistic parachute should be installed in accordance with the instructions from the BRS documentation and this document. Note, the installation of the BRS falls outside the scope of the certification for this aircraft, refer to Pilot Operators Handbook for further details.

4.1 BRS Mount and Parachute Mounting

The parachute canister is attached to the mounting bracket by means of large profile clamps, see drawing A4-5904, Appendix A. The canister is located on the parachute bracket by the deployment rocket attachment boss.

Figure 2 Parachute bracket attachment



Once the canister is attached to the bracket, attach the bracket to the rear of the Trike. The steel base tube has a aluminium mounting tube protruding, see Figure 3 below.

Figure 3 Parachute mount attachment tube

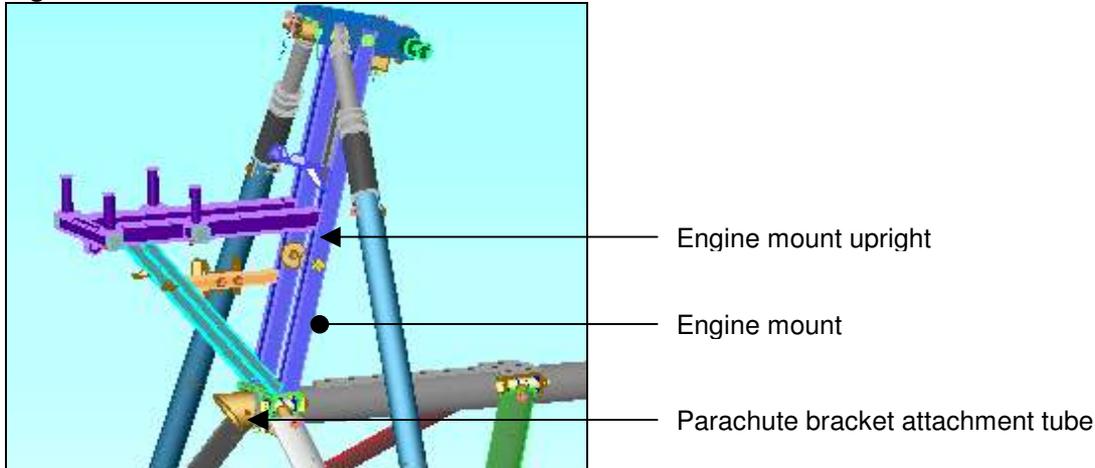


Figure 4 Side view, parachute attached to Trike

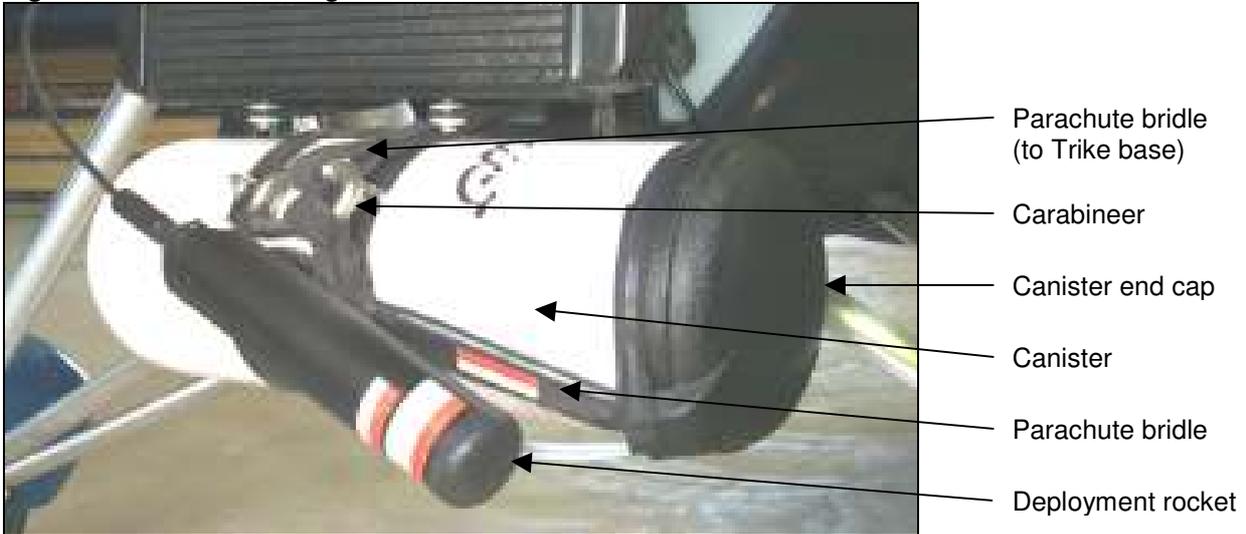


4.2 Rocket Assembly and Installation

Using the data supplied by BRS, remove canister plastic end cap, and assemble the rocket and cables onto the parachute canister.

Adjust rocket angle. Ensure the rocket is angled downward at an angle of approximately 25°. Sight along the rocket, it should be aimed to traject below the RHS wheel spat.

Figure 5 Rocket angle



4.3 Parachute Bridle Attachment and Routing

Attach the end of the bridle around the engine mount uprights as shown in Figure 6 and Figure 7. Loop the end of the bridle through itself in the direction shown. Cable tie the bridle back in-between the uprights so the mast can fold back without difficulty.

Figure 6 Bridle end attachment



Figure 7 Schematic, bridle attachment

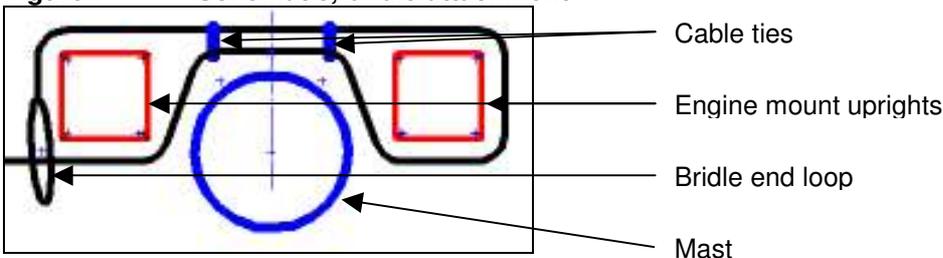


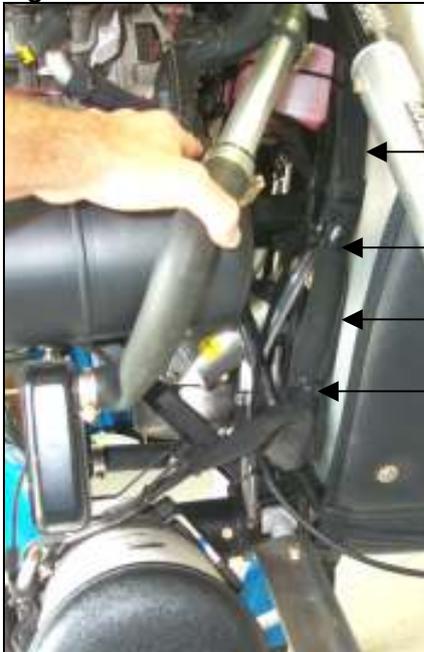
Figure 8 Side view, bridle attachment



Bridle attachment
RHS upright

Run the bridle down the RHS upright and attach to the carabineer on the parachute canister as shown in Figure 9 below. Gather together the remaining bridle and neatly and cable tie in place, as shown below.

Figure 9 Gathered bridle on engine mount upright

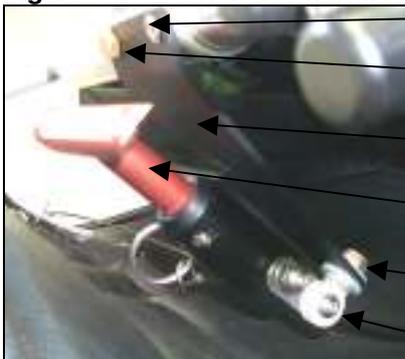


Engine mount upright
Cable tie
Gathered bridle
Cable tie

4.4 Release Handle Attachment

If the release handle bracket is not already attached, unscrew the LHS seat frame bolt and attach bracket as shown. Using the bracket as a guide, drill the seat frame using a 4.8mm (or 3/16") drill and rivet the bracket in place (3/16" SS rivet supplied).

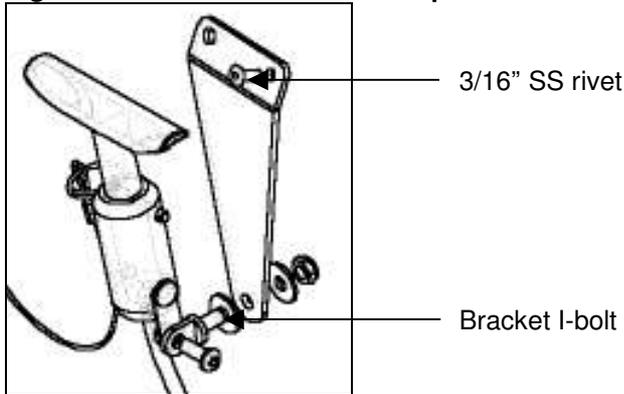
Figure 10 Release handle attachment



Drill and rivet
Seat frame bolt
Release handle bracket
Release handle
Bracket I-bolt
Handle pre-assembly

Attach the pre-assembled handle onto the bracket with the I-bolt provided, see drawing A4-5904, Sheet 2 for bracket assembly.

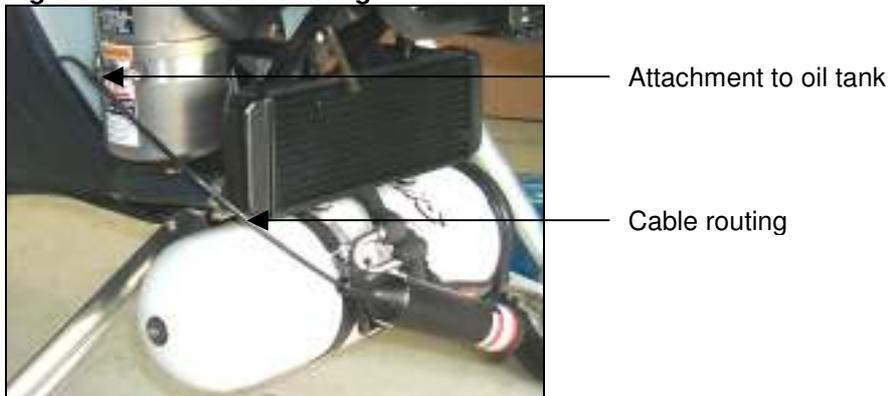
Figure 11 Release handle exploded view



4.5 Cable Routing and Adjustment

Route the release cable around the side of the Trike as shown below. Using the hose bush and cable tie, attach the cable to the oil tank as shown in Figure 12 below. Ensure the cable is routed as close to the Trike as possible (to avoid it being caught) without over-stressing or kinking the cable.

Figure 12 Cable routing



Thread cable tie through hose bush and around the oil tank bolt. The other end goes around the cable as shown. Pull the cable tie up tight to lock cable onto hose bush. Cut off the excess cable tie end.

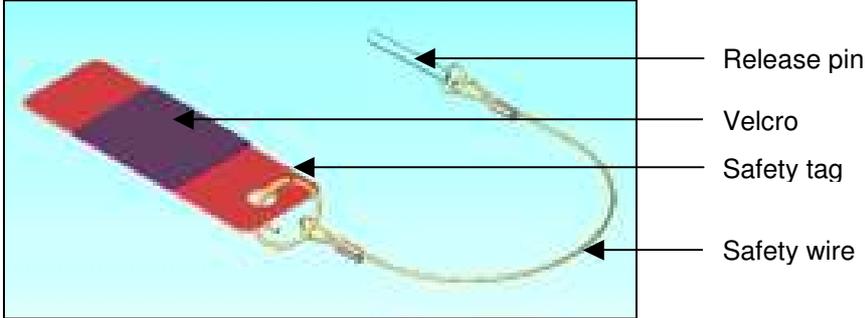
Figure 13 Cable attachment to oil tank



4.6 Safety Tag Attachment and Placement

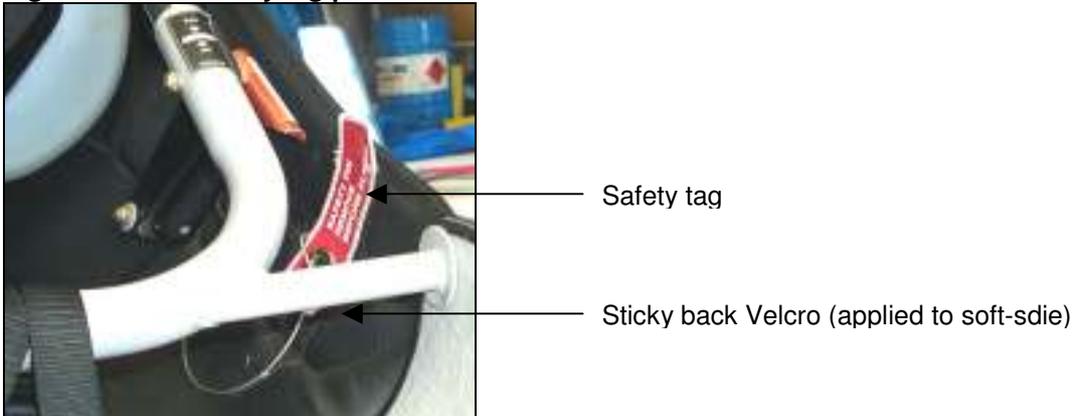
The red safety tag comes as part of the BRS parachute. Sew the 50 x 40 mm piece of Velcro loop onto the tag as shown, see Figure 14 below. Attach one end of the safety wire to the release tag and the other to the release pin, see drawing A4-6553, Sheet 3 for instructions.

Figure 14 Safety tag assembly



Attach the sticky back Velcro (hook) onto the inside of the soft-side, under the red safety tag as shown in Figure 15 and Figure 16 below.

Figure 15 Safety tag placement



Ensure the release handle fits neatly between the seat frame and the soft side. It should be able to be reached by both occupants.

Figure 16 Release handle



4.7 **Placard Attachment**

Attach the BRS warning placard on the inside of the pod as shown below.

Figure 17 Placard placement



5 **Final Inspection**

1. Ensure mount bracket and internal tube is tight
2. Ensure canister clamps are tight.
3. Ensure rocket is clamped up tight, (unable to rotate) and facing downwards, aim to clear the RHS spat.
4. Check routing of release cable, close to the side Trike and ensure there are no kinks or sharp bends.
5. Angle and placement of release handle. The handle can be rotated, ensure it is within reach of both occupants.
6. Release handle safety attached, pin in place.
7. Placard attached to Pod as shown.

6 Appendix A

6.1 Drawing A4-5404 (Sheet 1)

ITEM NO	NAME	DWG PART NO	QTY
1	PARACHUTE CAMSTER BRIS 1060	5302	1
2	PARACHUTE MOUNT BRIS XT COMPONENT	5305	1
3	PARACHUTE ROCKET ASSEMBLY BRIS XT	6512	1
4	PARACHUTE BRIDGE BRIS XT	6518	1
5	CARABINER 12mm x 80 - SCREW TYPE	6522	1
6	PARACHUTE CLAMP BRIS	6517	2
7	BOLT AN4-27 4	5450	1
8	3/4" BUTTON SCREW M6 x 16	5677	2
9	WASHER AN4	5540	1
10	WASHER BS 1.4 X 3-4"	5540	4
11	NUT NYLOC M 6 FULL	5304	2
12	NUT NYLOC AN4 HALF	5581	1
13	HOSE BUSH 8D x 10L	5726	1
14	CABLE TIE MED	5305	1

NOTE:
 PURCHASED PART PARACHUTE MICROLIGHT BRIS 1060 INCLUDES CAMSTER, ROCKET RELEASE HANDLE ETC PART NO. 106524 (INCLUDED IN FOX PRO A4-5304) PARTS SHOWN HERE THAT MAKE UP 106524 ARE REFERENCED IN FOX PRO

FIT THIS END ONTO PARACHUTE MOUNT INTERNAL TUBE ON TRIKE (SEE 5558) ATTACH WITH BOLT AS SHOWN

CABLE TIE TO OIL TANK

WEIGHT INCLUDING RELEASE HANDLE BRACKETS ETC = APPROXIMATELY 12 kg

ROCKET SUB-ASSEMBLY INCLUDES RELEASE HANDLE NOT SHOWN HERE

PARACHUTE BRIDGE SCHEMATIC FOR BOM PURPOSES ONLY

UPDATE O/P FORMS WITH REV CHANGE
 Rev: AMCHD/ST/1
 1 NOT ADDED FIRST 2 PARTS REDUCED/8/04

PART NO. 105723 -

LAST ACCESSIBLE Thursday, 6 December 2004
 ALL dimensions in millimeters unless printed otherwise

PARACHUTE SUB-ASSEMBLY BRIS XT

5304
 8/10/04

Drawn By: Mike
 Date: 20/07/03
 Cdr: 20/07/03

6.2 Drawing A4-5404 (Sheet 2)

PARTS BELOW REQUIRED FOR BRS PARACHUTE MOUNTING KIT
 FOR INSTALLATION INSTRUCTIONS FOR THE BRS RECOVERY SYSTEM
 SEE ENGINEERING REPORT 04/210

SEE PARACHUTE KIT INSTALLATION DOCUMENTATION FOR ASSEMBLY INSTRUCTIONS ENCRPT 04/210

ITEM NO.	NAME	DWG PART NO.	QTY.
1	PARACHUTE MOUNT BRS XT COMPONENT	5305 106724	1
2	BOLT AM4-27 8	5450 100010	1
3	WASHER AM4	5540 100042	1
4	NUT NYLOC AM4 HALF	5561 100095	2
5	HOSE BUSH END x10L	5726 106720	1
6	CABLE TIE MED	5805 101183	6
7	SPLIT RING 10MM - PIP PIN	5720 106508	1
8	VELCRO LOOP 50MM	6313 106664	1
9	PARACHUTE RELEASE TAG SAFETY CABLE XT	6553 106773	1
10	VELCRO HOOK 25x120 ADHESIVE	5313 106774	1
11	NUT NYLOC M6 FULL	5604 100132	1
12	FOR RIVET SS 316"	5515 100205	1
13	EYEBOLT AM43x.4x	6538 100066	1
14	WASHER NYLON M6 X OD	5540 101055	2
15	BRACKET PARACHUTE HANDLE XT	6537 106624	1
16	SKIT BUTTON SCREW M6 x 16	5627 101752	1
17	PLACARD EMERGENCY PARACHUTE BRS	5900 106647	1

FIT THIS END ONTO PARACHUTE MOUNT INTERNAL TUBE ON TRAPEZOID (SEE 5659) ATTACH WITH BOLT AS SHOWN

PARACHUTE MOUNT KIT BRS XT

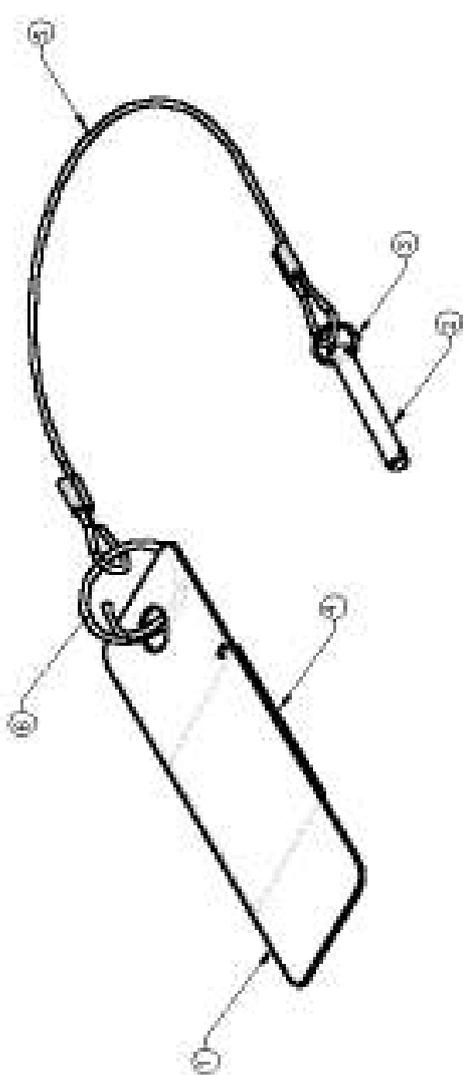
Drawn By: Nade Date: 06/05/00
 Dwg No: 13.5
 5304
 04/210/DS

PAR. NO. 106374 -
 LAST APPROVED: Thursday, 4th December 2004
 ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

6.3 Drawing A4-6553 (Sheet 3)

ITEM NO.	NAME	DWG.	PART NO.	QTY.
1	PARACHUTE RELEASE SAFETY TAG	6553	108656	1
2	PARACHUTE RELEASE PIN BR8	6510	100548	1
3	SPLIT RING 10MM - PIP PIN	3720	103508	1
4	VELCRO LOOP 40x40	6313	106604	1
5	PARACHUTE RELEASE TAG SAFETY CABLE BR8	6553	106773	1
6	SPLIT RING 35MM BR8 RELEASE SAFETY	5720	108707	1

ASSEMBLY INSTRUCTIONS:
 1. SEW VELCRO LOOP #5 ONTO BACK OF SAFETY TAG #1
 2. ATTACH SAFETY WIRE #7 WITH SPLIT RING #6
 3. ATTACH OTHER END OF WIRE ONTO RELEASE PIN #2 WITH SMALL SPLIT RING #3



NOTE: BOM NOT LINKED TO ASSEMBLY

RELEASE TAG SAFETY (BRS KIT)

AirBorne
WindSports Pty. Ltd

Drawn By: Scale: Date:
 QTY: 1:1 Scale: 10/10/04

8553
 10/10/04

Rev. APPROVED: _____ Date: _____

LAST ACCESS: Thursday, 10 December 2004
 04/210/DS-rev0