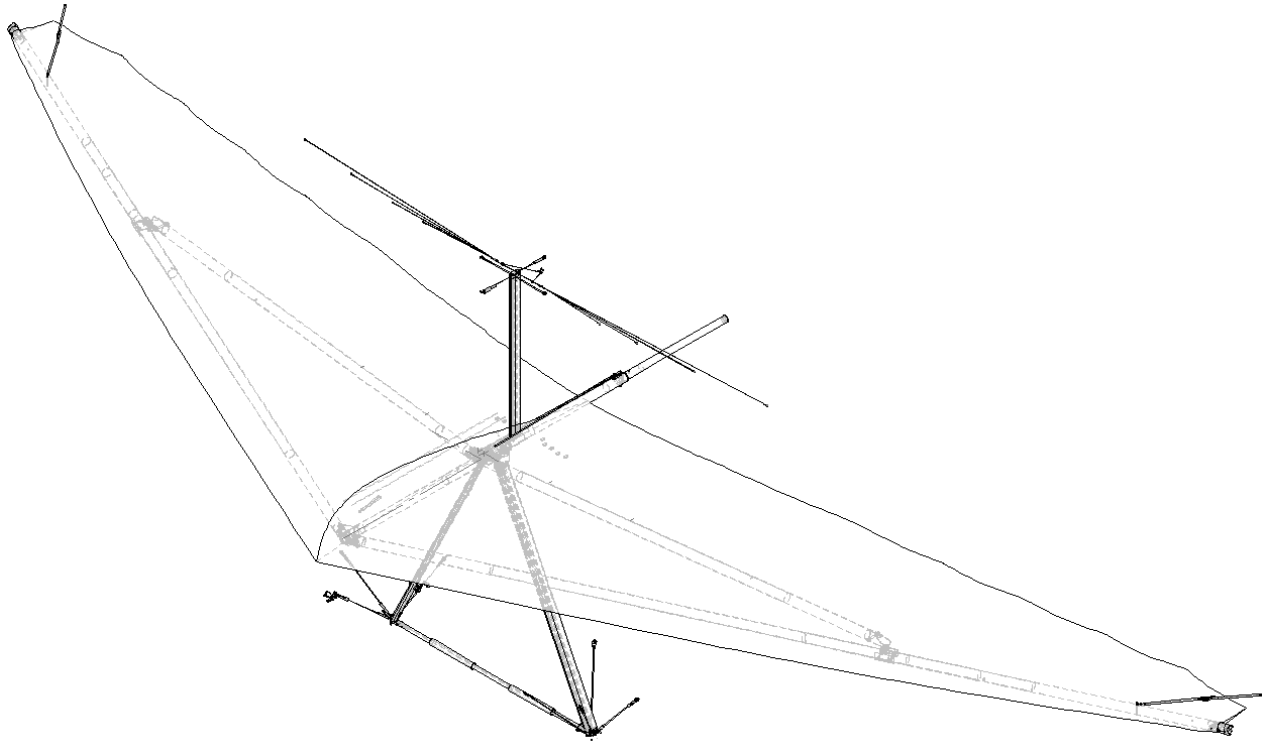
AirBorne
AUSTRALIA



STREAK 3 & CRUZE WING MAINTENANCE MANUAL AND ILLUSTRATED PARTS CATALOGUE

Manufacturer: AirBorne WindSports Pty Ltd
Unit 22/30 Kalaroo Rd
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Australia
Phone : + 61 2 4944 9199
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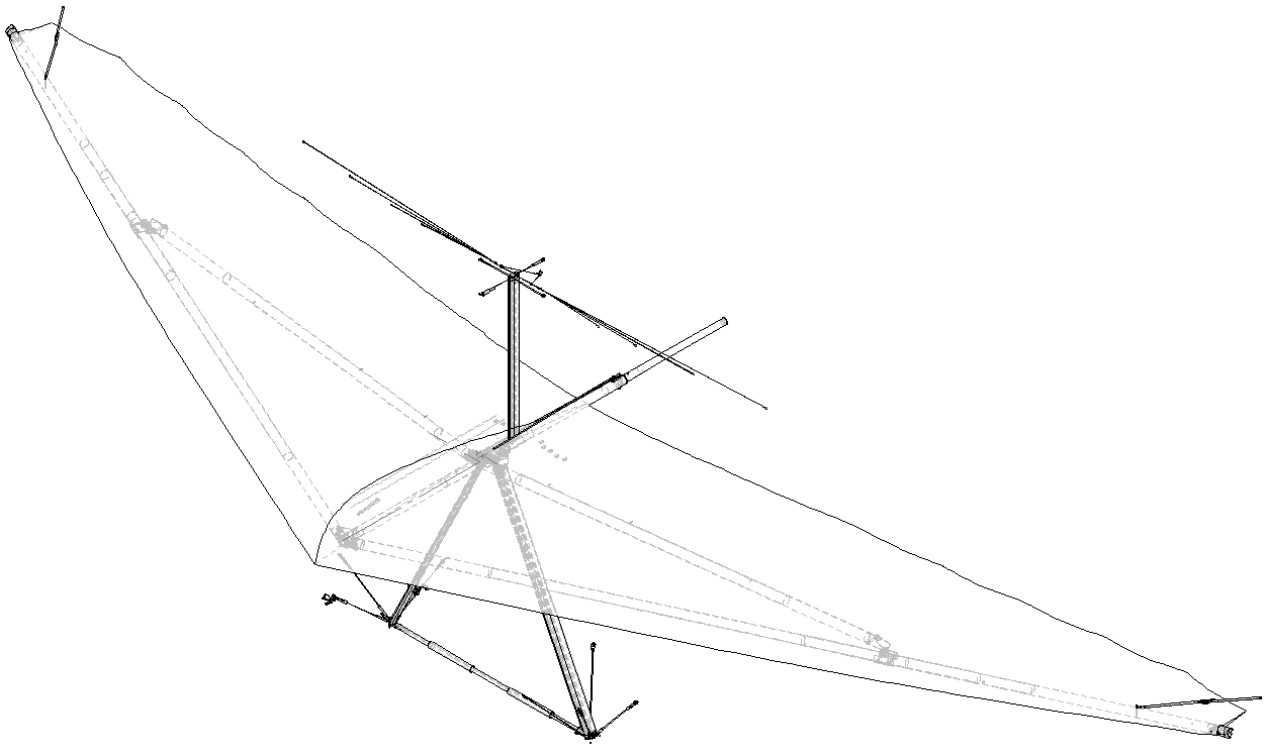
Website : http://www.airborne.com.au/
 Part # 108607

Issue 2.0 May 2007

This wing should only be used in conjunction with a certified wig and base combination.

AirBorne AUSTRALIA



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Part # 107614

DATA PACKAGE
This manual constitutes one part of the complete data package that accompanies the aircraft. Following is a list of each of the components, which are required.

• **Pilot's Operator's Handbook**	
• **Applicable Base Maintenance Manual**	
• **Applicable Base Illustrated Parts Catalogue**	
• **Wing Maintenance Manual**	+
• **Wing Illustrated Parts Catalogue**	
• **Rotax Owners Manual**	
• **Rotax Maintenance (Compact Disk)**	
• **Radio Manual – If Installed**	
• **BRS Parachute Manual – If Installed**	

AMENDMENT RECORD SHEET

Amendment Date	Affected Sections	Affected Pages	Date Inserted	Signature

Table 1 Amendment Record Sheets

NOTE

Airborne's data packages will be revised from time to time. Owners registered on AirBorne's database will be notified of any changes to data and directed to the AirBorne web site (http://www.airborne.com.au/) for the applicable pages. The amended pages should be printed and the prior page replaced in the folder as soon as possible. The amendment table should at that time be updated with the appropriate details and date. Revised pages will be sent by mail if requested.

LOG OF ALL EFFECTIVE PAGES

Page	Issue	Date	Page	Issue	Date
All of issue pages 1 to 53	2.0	May 2007			

Table 2 Log Of Effective Pages

INTRODUCTION

This manual contains factory recommended procedures and instructions for ground handling, servicing and maintaining the Streak 3 or Cruze wing section of this aircraft. The procedures described are to be used in conjunction with those required by the National Airworthiness Authority (NAA) of the country of registration. Any NAA maintenance requirement takes precedence over this manual.

This manual should be used in conjunction with a certified base, and therefore the operator is directed to reference the base maintenance manual for any issues that are related to the base component of the aircraft.

Skills

Only people with an adequate skill level should perform maintenance on this aircraft. A sound understanding of mechanical systems, and good experience with the necessary tools and procedures is required - as the continuing airworthiness of the aircraft relies on the competence of the person performing the maintenance. Assessment and judgement of the condition of each individual component is required, which necessitates a sound understanding of the purpose of each component in the system. All maintenance and repairs must be carried out in accordance with good aeronautical practices.

Skills and authorisations specific to Special Light Sport Aircraft

Maintenance tasks are rated in the categories listed below, according to the applicable category of registration and skill levels required to perform those tasks:

Owner— FAA regulations authorize SLSA aircraft owners who hold at least a sport pilot certificate to perform maintenance as outlined in 14 CFR Part 43. To perform inspections on aircraft condition, functional checks and maintenance in between inspections carried out by LSA Repairman Maintenance certificate holders.

LSA Repairman Maintenance— This certification authorizes a certificate holder to perform line maintenance, repairs and alterations to S-LSA as the task allows. Includes 100 hourly and yearly inspections on S-LSA.

A&P—Mechanic Certificate with Airframe and or Powerplant rating. To perform heavy Maintenance on airframes or powerplant as the rating allows.

Task Specific—Applicable to the following ratings:

LSA Repairman Maintenance with appropriate task specific training or;

A *Mechanic Certificate* with appropriate task specific training.

Authorizes the holder of mechanic certificate or a repairman certificate who has received task specific training, to perform the tasks approved under that training. Allows a repairman certificate holder to perform, heavy maintenance, repairs and alterations on the SLSA.

E.g. The Mechanic Certificate holder may obtain Task Specific training on Rotax engines, to allow overhaul etc.

Skills and authorisations specific to Experimental Special Light Sport Aircraft

LSA Repairman Inspection— To perform line maintenance and inspections to be completed on an E-LSA by a responsible owner, who holds an FAA repairman certificate (light sport aircraft), with an inspection rating or equivalent.

There are no requirements for minimum certification to perform any other task on an experimental aircraft. However, Airborne recommend that only people with an adequate skill level should perform maintenance on this aircraft as described at the start of this section.

Other Categories of Registration

This aircraft is certified as a Primary Category aircraft and when supplied with this manual and associated placards is a Light Sport eligible aircraft. This manual is created to be compliant to the standards applicable to Special Light Sport Aircraft.

The category of registration may be quite varied; as such the maintenance requirements of this aircraft are to be applied in conjunction with the requirements of the National Airworthiness Authority (NAA) of the country of registration. Any NAA maintenance requirement takes precedence over this manual.

In the event that the owner is permitted to perform maintenance in their country and category of registration, if there are any doubts regarding the required and appropriate maintenance then the safety of the aircraft may be jeopardised in continuing with self maintenance. In this situation an Airborne Dealer should be contacted for the correct procedures and or servicing.

Tooling

There are no specialised tools needed for the maintenance described in this manual, following is a list of the type of tools that may be required.

NOTE

Loctite will be required in certain locations and should **always** be replaced after disassembly.

- Loctite (243 and 262) for the frame
- Open ended Imperial Spanner set
- Open ended Metric Spanner set
- Torque wrench
- Dry Lubricant – lubricant that doesn't attract dust after application.
- Hex key set
- Bettsometer Instrument
- Various general care items, specified where needed

This list may not be comprehensive.

Format

The manual has been prepared using the ATA format, which provides a standard layout of the chapters to be included, and their content. Some of the chapters are not included as they are deemed to be not applicable to this aircraft.

The information in this manual is based on the data that was available at the time of its publication. The latest amendments to this manual will be issued on the Airborne website in PDF format. This should be printed out and added to the manual. Therefore it is important that operators keep a regular check on the website for any amendments that have been made. If any errors or omissions are found in this manual please advise the factory.

Service Difficulty Reporting

Any service difficulties or defects should be reported to Airborne using the form contained in appendix A.

WARNING

THE INFORMATION IN THIS MANUAL NEEDS TO BE FOLLOWED, AND IT IS NOT ACCEPTABLE TO MAKE CHANGES TO THE MATERIALS AND OR PHYSICAL FEATURES OF THIS AIRCRAFT. IN PARTICULAR THE GRADES OF BOLTS THAT HAVE BEEN UTILISED IN THE MANUFACTURE OF THIS AIRCRAFT ARE CRITICAL FOR ITS CONTINUING AIRWORTHINESS. NEVER REPLACE BOLTS WITH ANY OTHER SIZE OR GRADE. GRADE 8 BOLTS ARE NOT INTERCHANGEABLE WITH AIRCRAFT (AN) GRADE BOLTS. THE FATIGUE CHARACTERISTICS OF AIRCRAFT GRADE BOLTS ARE SUPERIOR TO OTHER BOLTS AND ALLOW LONGER SAFE SERVICE LIFE UNDER CYCLIC LOADS LIKE THOSE EXPERIENCED IN AIRCRAFT. THE LENGTH OF THE BOLT IS IMPORTANT. IF A SHORTER BOLT IS USED THE THREAD MAY ENCROACH ON THE LOAD BEARING AREA, WHICH INCREASES THE STRESSES EXPERIENCED BY IT.

MANDATORY SERVICE BULLETINS

AS THE SERVICE HISTORY OF THE AIRFRAME EVOLVES AIRBORNE WILL FROM TIME TO TIME ISSUE AIRBORNE DIRECTIVES, WHICH DETAIL ANY CHANGES TO THE MAINTENANCE MANUALS, PILOT'S OPERATING HANDBOOK, OR ANY OTHER DETAILS THAT AIRBORNE DEEMS NECESSARY FOR OWNERS TO BE NOTIFIED OF.
THE WEB ADDRESS FOR AIRBORNE DIRECTIVES IS:
HTTP://WWW.AIRBORNE.COM.AU/
IT IS THE RESPONSIBILITY OF THE OPERATOR TO KEEP UP TO DATE WITH ANY ROTAX DIRECTIVES THROUGH THE ROTAX WEBSITE.

USE OF METRIC/ IMPERIAL UNITS

This Service Manual uses the metric unit system as the basic system of measurement. Where common usage or available instrumentation refer to the Imperial system, both units are quoted. The following conversion factors are presented as a ready reference to the conversion factors that have been used in this manual.

1 Pound (lb)	=	0.4536 Kilogram (kg)
1 Pound per sq in (psi)	=	6.895 Kilopascal (kPa)
1 Inch (in)	=	25.4 Millimetres (mm)
1 Foot (ft)	=	0.3048 Metre (m)
1 Statute mile	=	1.609 Kilometres (km)
1 Nautical mile (NM)	=	1.852 Kilometres (km)
1 Millibar (mb)	=	1 Hectopascal (hPa)
1 Millibar (mb)	=	0.1 Kilopascal (kPa)
1 Imperial gallon	=	4.546 Litres (l)
1 US gallon	=	3.785 Litres (l)
1 US quart	=	0.946 Litre (l)
1 Cubic foot (ft^3)	=	28.317 Litres (l)
1 Degree Fahrenheit (F)	=	(1.8 X C)+32
1 Inch Pound (in lb)	=	0.113 Newton Metres (Nm)
1 Foot Pound (ft lb)	=	1.356 Newton Metres (Nm)

Table 3 Imperial / Metric Conversions

CONTENTS

Figures

Tables

0. ASSEMBLY AFTER SHIPPING

00.00.00 Wing Assembly After Shipping.

This procedure is to be followed if the wing arrives in a short packed configuration. An approved dealer is responsible for assembly from the short packed configuration. The short packed wing has had the rear leading edges removed to reduce the packed size for transport.
The correct reassembly of the wing is critical for safety and performance of the wing. If there are any doubts about the correct procedure for assembly after shipping contact AirBorne.

00.10.00 Reassembly Guide

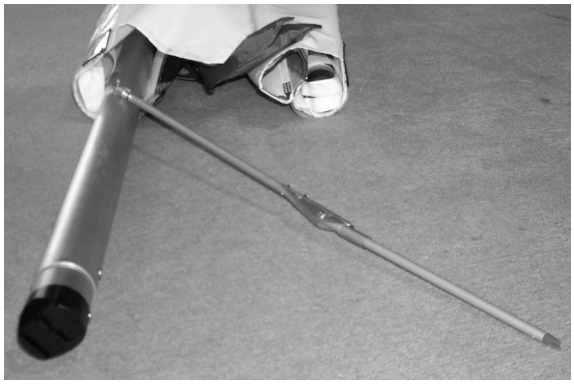
Remove wing from box
Ensure that all staples are removed before pulling the wing from the box. Damage to the sail may result if caught on box staples.

Unzip bag
Remove padding from the nose of the wing. Remove all wing straps. Remove padding from control bar and rear leading edges.

Assemble the control frame
Assemble control frame and rotate the wing so that it is lying flat on the ground

Spread Leading Edges
Spread both leading edges approximately ½ metre. Remove the tip bags, which have been used as protection on the rear of the front leading edges.

Insert Rear Leading Edges



NOTE
Insert rear leading edges in the correct side (left and right hand sides are marked) with the slot positioned horizontally.

Ensure that the **tip strut** is positioned on the **top** of the leading edge (top of leading edge assumes the wing is in the flying position).
The rear leading edges are located with their slots and held in place by the sail loops.

Figure 1 Insertion of Rear Leading Edges

CAUTION

VELCRO TABS AND SAIL CELLS NEED TO BE POSITIONED AFT OF THE LEADING EDGE. ONCE INSTALLED THE REAR LEADING EDGE SLOT SHOULD BE LOCATED ON THE CHANNEL HORIZONTAL BOLT. IT IS IMPOSSIBLE TO ROTATE THE LEADING EDGE IF CORRECTLY INSTALLED.

Tension Sail

Place one hand on the rear of the leading edge. Pull sail firmly until the loops are located on the end of the leading edge fitting. This holds both the sail and the rear leading edges in place. Ensure the webbing is centrally located with one on each side of the central divider. Repeat for the other leading edge.

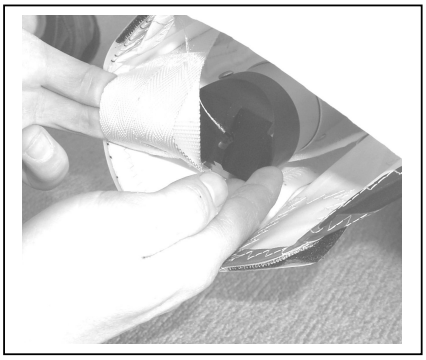
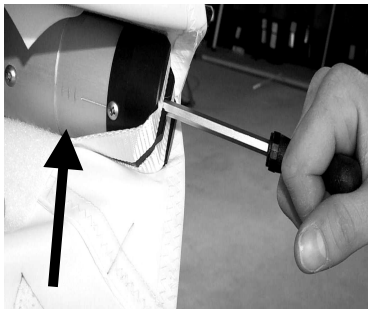


Figure 2 Locating Sail Webbing on Rear Leading Edges

Set Tip Adjusters



Tension the sail using a 6mm Allen key. The tip fitting should be adjusted until the leading edge is positioned on the:

4th mark for Streak 3 Wing
3rd mark for Cruze Wing

The markings are on the internal tube and should be adjusted until the appropriate mark aligns with the main outer tube

Secure the hook and loop fastener tabs around the leading edge.

Figure 3 Setting Tip Adjusters

NOTE

If you find difficulty pulling the sail tension on the leading edge the adjustable tips can be wound in (clockwise) The sail nose tangs can be removed to allow the sail to move back. It is, however, extremely important to check that the sail at the nose does not foul on the frame when the wing is being tensioned. Ensure that the nose tangs are replaced and secured.

arks

Tip Protectors

Install the tip wear protectors (secure the hook and loop fasteners to the mylar protectors onto the sail at the tip).

Assemble

Assemble in accordance with section 4 of the Pilot's Operating Handbook.

Preflight

CAUTION

A THOROUGH AND COMPLETE PREFLIGHT IS ESPECIALLY NECESSARY AFTER REASSEMBLY. THOROUGHLY CHECK ALL NUTS AND BOLTS (REFER TO SECTION 5 FOR TORQUING PROCEDURES BEFORE TIGHTENING ANY NUTS), WIRE ROUTING, SAIL FIT, MYLAR SHAPE AND OVERALL SYMMETRY OF THE WING BEFORE FLIGHT.

Preflight as described in section 4 of the Pilots Operating Handbook paying particular attention to possible damage to the airframe during transport.

4. AIRWORTHINESS LIMITATIONS

4.00.00 General

This section sets forth each mandatory replacement time, structural inspection interval, and related structural inspection procedure required for type certification.

4.20.00 Airframe Limitations

Component	Life (hours)	Requirement
Heart Bolt (1 off)	100	Mandatory Replacement
Wires	961	Check For Service Life Announcements. Replace if there are no revisions.
Tubes	961	Check For Service Life Announcements. Replace if there are no revisions.
Sail	1000	Mandatory Replacement

Table 4 Airframe Limitations

The airframe was analysed using FAA fatigue analysis "Fatigue Evaluation Of Wing and Associated Structure on Small Airplanes FAA Report # AFS-120-73-2". In order to estimate the time life limits for the major components of the airframe, this is detailed in Airborne report 04-144ds. The estimates that have been made do not take into account any extreme loads, which will reduce the fatigue life of the airframe. The fatigue life of these components is dependent upon rigid adherence to maintenance schedules.

As the service history of the airframe evolves these time life estimates are expected to be revised. Amendments should be checked for regularly.

5. TIME LIMITS/MAINTENANCE CHECKS

5.00.00 General

The time limits and maintenance schedule provided are in addition to any regulation of the governing body where the aircraft is being flown. The pilot of the aircraft must ensure that the required maintenance is carried out and documented in the correct manner.

Airborne microlights have been designed to permit easy inspection, and operators should have no difficulty in assessing problems or recognising damage if visual checks are carried out correctly.
Maintenance checks may require partial disassembly of the wing. Inspection should include a thorough visual check of the condition of the component and the attachment point in adequate lighting conditions. Cleaning of the component may be required for proper inspection. Significant scratches, cracks, galling, corrosion or any other mechanical wear of the component is reason for replacement. The sail requires special attention to the condition of the fabric, and Bettsometer tests will be required after significant amounts of environmental exposure to things such as UV radiation, chemicals and heat, as well as mechanical wear (and or tears). For instructions on Bettsometer testing see Section 57.30.10 Bettsometer Testing.

The Pilot's Operating Handbook outlines checks required prior to each flight.

Extreme operating conditions may reduce the time limits for components. Unscheduled maintenance is detailed in Section 5.50.00. AirBorne will from time to time amend these maintenance checks as the service history of the aircraft evolves. It is the responsibility of the pilot to ensure compliance with new directives. (Information is available on the website http://www.airborne.com.au/)

5.00.10 Inspection Notes

Installation & Removal
When removing or installing tubing do not bend or force tubes.

Inspection
Inspect tubing for cracks, damage from abrasion, elongated holes or distortion in tube surface. Inspect holes in tubing and corners / radiused areas for cracks during scheduled inspections. Ensure that the areas are clean. A 10X magnifying glass and good lighting will improve this visual inspection for cracks.

WARNING
NEVER ATTEMPT TO REPAIR TUBING. ALWAYS REPLACE WITH A GENUINE NEW PART.

Corrosion
Inspect tubing for corrosion inside and out. Discolouration of the metal may indicate corrosion. Salt is the most common cause of corrosion during coastal operation. Parts affected by salt must be stripped and thoroughly cleaned before reassembly. The cause of the corrosion must be identified and eliminated. If corrosion (pitting or oxidation) is present the component must be removed and replaced with a new part.
Exposed wires may be protected from corrosion by applying a water dispersant such as WD 40, RP7 or Inox using a rag wetted with the water dispersant. Such treatment is only required in corrosive environments. Preventative treatment may be applied as required.

Replacement
Aluminium tube comes in many different sizes and grades. As sections of the airframe are manufactured from tube made specifically to Airborne's specification it is important that only genuine replacement parts as supplied by Airborne WindSports Pty. Ltd are used.

Airframe Bolts
All airframe bolts are either aircraft quality or high tensile bolts. If it necessary to replace any bolts or nuts it is important that the specification of the original bolt are matched when a replacement is selected. This applies not only to the grade of the bolts but to the length as well.

Installation & Removal
- After tightening, all bolts should have at least 1 to 2 threads showing.
- All self-locking nuts should not be installed more than 2 times.
- Be sure not to over-torque bolts when installing.
- Check assembly instructions for correct bolt placement.

Inspection
Check bolts for worn shanks, bad threads or corrosion.

Wire Inspection
Inspection of wires should concentrate on any areas where the wires come into physical contact with other components. These areas may cause stress concentration and mechanical wear. Some areas may need to be partially disassembled to fully inspect wires. Kinks created during packing up, transport and storage should also be checked. Any degradation of wires requires replacement.

5.20.00 Scheduled Maintenance Checks

General care should include:
- Washing down the tube with warm water and a light detergent followed by rinsing with fresh water.
- Fabric sponged with warm water and a mild detergent and rinsed with fresh water.

Apart from the consequences of heavy landing, or of exceeding flight limitations, the major factors requiring attention are corrosion, fatigue, wear, UV exposure and heat.
There are no known fatigue problems with Airborne microlights, but excessive loads and vibration can weaken the structure. Regular inspection for hairline cracks in areas under high stress, such as bolt holes and tube junctions is recommended.
Many components can be replaced with ease, for difficult repairs or if the repair process is not fully understood consult your Airborne Dealer or the Airborne factory.
The registration of microlights is only valid provided that all necessary maintenance, modification and service requirements are fulfilled.

These requirements include:
(a) Maintenance of aircraft as per the Maintenance Schedule in this manual.
(b) Modification as detailed in any relevant Service Bulletins.
(c) Modification to approved details, obtained from Airborne WindSports Pty. Ltd.
(d) Repairs necessary to replace minor damage, wear or ageing.
(e) Servicing, replacement and overhaul, inspection and checking in compliance with the Maintenance Schedule.
(f) Any Airworthiness Directory (AD) issued by CASA or the NAA of the country of registration

5.20.01 Maintenance Privileges

This manual lists task to be performed on the maintenance schedule. The minimum qualification required to perform that task is prescribed. A simple explanation of maintenance privileges permitted according to LSA category of registration is described in the table below:

	Experimental LSA				Special LSA			
	Sport Pilot	Owner Sport Pilot	LS – I Sport Pilot	LS - M / A&P / part 145 repair	Sport Pilot	Owner Sport Pilot	LS – I Sport Pilot	LS - M / A&P / part 145 repair
Modifications								
Daily Inspections								
Preventative Maintenance								
Repairs, Major Maintenance.								
100 hour inspection								
Annual Inspection								

Authorized to perform.

May perform only if the Repairman Inspector is the owner of the aircraft.

May perform only if the modification is included in the aircrafts Maintenance Manual or if the repairman is authorized to do so by the manufacturer.

May perform if the Repairman Inspector is the owner of the aircraft and not using the aircraft for compensation (training or towing), or

When using the Experimental aircraft for compensation (Training or towing) until January 31 2010, the inspection must be performed by an LS - M / A&P or part 145 repair facility.

Not authorized to perform.

Table 5 Maintenance Privileges

Note that owners and pilots are permitted to perform preventative maintenance tasks as prescribed by FAR document: Part 43, Appendix A Sec. A43.1

Limitations Due to Registered Category

S-LSA

Maintenance on a Special LSA, 100 hourly and annual inspections are to be performed by the holder of a LSA Repairman Maintenance certificate or an appropriately rated A&P mechanic.

Note: owners and pilots are permitted to perform preventative maintenance tasks as prescribed by FAR document: Part 43, Appendix A Sec. A43.1

E-LSA

The owner of an aircraft registered as an Experimental LSA has operations limited to private use and has additional maintenance privileges.

During the transition period, commercial operations may be conducted until 31 January 2010. Where the experimental registered aircraft is used for compensation (training or towing) during the transition period the option c) below does not apply to 100 hourly inspections.

The 100 hourly or annual inspections on an E-LSA are to be performed by:

a) the holder of a LSA Repairman Maintenance certificate, or

b) an appropriately rated A&P mechanic, or

c) the owner when the owner is the holder of a LSA Repairman Inspection certificate.

The pilot of the E-LSA aircraft is responsible to see that the maintenance and inspection has been performed on this aircraft as per the maintenance schedules prescribed in this maintenance manual. The maintenance schedule tasks remain applicable, where there is no minimum level of qualification required to perform maintenance on E-LSA, however a minimum skill level continues to apply to tasks. Only people with an adequate skill level should perform maintenance on this aircraft. A sound understanding of mechanical systems, and good experience with the necessary tools and procedures is required - as the continuing airworthiness of the aircraft relies on the competence of the person performing the maintenance. Assessment and judgement of the condition of each individual component is required, which necessitates a sound understanding of the purpose of each component in the system. If there are any doubts regarding the required and appropriate maintenance then the safety of the aircraft may be jeopardised in continuing with self maintenance. In this situation an Airborne Dealer should be contacted for the correct procedures and or servicing.

All maintenance and repairs must be carried out in accordance with good aeronautical practices.

5.20.02 Description of Task Classification

Preventative Maintenance

The preventative maintenance that is permissible to be performed by pilot certificate holders is defined in FAR document Part 43, Appendix A Sec. A43.1.

Line Maintenance

Includes inspections, servicing of fluids. Tasks where specific instructions are described in the manual that do not require specialized training, for replacement, repair of parts and structure or alterations described in the manual. Includes compliance with service directives that prescribe repairmen as the minimum qualification to perform the task.

Heavy Maintenance

Tasks that require a repairman rating with specialized training or Mechanic with A&P rating, such as major engine work, repair of landing gear assemblies. It also includes alterations to structure where instructions are provided in the manual, such as fitment of an undercarriage kit or a tow kit.

5.20.03 Qualification Descriptions

Certification Required to Perform Light Sport Aircraft Maintenance Tasks

[O] **Owner**—Items that can be expected to be completed by a responsible owner who holds a pilot certificate but who has not received any specific authorized training.

[R] **E-LSA Repairman Inspection** - Applicable to E-LSA registration. Repairman Inspection—Items that can be expected to be completed on an ELSA by a responsible owner, who holds an FAA repairman certificate (light sport aircraft), with an inspection rating or equivalent.

[R] **S-LSA Repairman Maintenance**- Applicable to S-LSA registration. Repairman Maintenance—Items that can be expected to be completed on a S-LSA or E-LSA by a responsible individual, who holds a FAA repairman certificate (light sport aircraft), with a maintenance rating or equivalent.

[A&P] **Mechanic Certificate** with **Airframe** and or **Powerplant** Training - A&P—Items that can be expected to be completed by a responsible individual who holds a mechanic certificate with airframe or powerplant ratings, or both, or equivalent.

[RS] **Part 145 Repair Station** – Items that can be expected to be completed by a responsible organization that holds a part 145 repair Station approval.

[TS] **Task Specific** – Items that can be expected to be completed by a responsible individual who holds either a mechanic certificate or a repairman certificate and has received task specific training to perform the task.

When specifying the “task specific” level of certification, the specific training is also specified where it is appropriate.

Note that **dealers may be authorized** by the manufacturer to perform a maintenance or modification task for which they are specifically trained. These tasks are not necessarily included in the Maintenance Manual.

This Maintenance manual is created with the focus to maintain Special Light Sport Aircraft (S-LSA). This category of registration allows the aircraft to be used for hire and reward. Maintenance requirements are given in the maintenance schedule tables. Note that the level of qualification is given for each of the tasks.

Notice that this manual prescribes owner maintenance and repairman maintenance. The minimum applicable repairman ratings for each category of registration are as follows:

E-LSA registered - LSA Repairman Inspection certificate **(LS-I)**.

S-LSA registered - LSA Repairman Maintenance certificate **(LS-R)**.

In both cases of E-LSA and S-LSA, a person who holds a mechanic certificate with A&P rating, or a part 145-repair station may perform maintenance and inspections on the LSA.

The 100 hourly or annual inspections on a S-LSA are to be performed by the holder of a LSA Repairman Maintenance certificate, an appropriately rated Mechanic with Airframe and Powerplant (A&P) rating, or a part 145 Repair Station.

The holder of a sport pilot certificate may perform preventive maintenance on an aircraft owned or operated by that pilot and issued a special airworthiness certificate in the light-sport category. Items of preventative maintenance that may be performed by an owner are listed in FAR 43 appendix A, Section A43.1 (c)

5.20.05 Maintenance Task Legend

Your micro light should be maintained in accordance with the following schedules. When registered under LSA, the following schedules are mandatory. The following codes are used in these schedules:

Code

1 Oil lubricate, clean and service.
2 Check as directed.
3 Check for insecurity, cracks, wear legibility and faulty operation.
4 Remove, inspect and replace if necessary.
5 Recommend replacement or overhaul.
6 Mandatory Replacement
7 Refer to Rotax maintenance manual and Rotax maintenance logbook.

Certification required to perform Light Sport Aircraft maintenance tasks

[O] Owner
[R] E-LSA Repairman Inspection (experimental registered aircraft only)
[R] S-LSA Repairman Maintenance
[A&P] Mechanic Certificate Airframe and or Powerplant
[TS] Task Specific

5.20.06 Log Book

When maintenance is performed always fill out the appropriate check sheet supplied in Appendix A at the rear of this maintenance manual. The aircraft logbook should also be filled out when maintenance has been done.

When Service Bulletins have been complete both the maintenance manual and the log book should be filled out. A copy of the Service Bulletin form should be sent to the factory to be stored with the aircraft QA papers.

A separate maintenance manual is supplied with the trike base. The wing maintenance log should be filed out in the wing maintenance manual and aircraft log book.

5.20.10 Wing Airframe Maintenance Schedule

WING MAINTENANCE SCHEDULE	Manual Section	AIRCRAFT OR ITEM HOURS OF OPERATION									
Inspection Items	**Reference**	**100**	**200**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**
Sail Bettsometer testing	57.30.00		2[R]		2[R]		2[R]		2[R]		2[R]
Wing sail fabric & stitching	57.30.00	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Wing sail attachment points	57.30.00	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Tip assembly and webbing. Correct tension set	00.10.00	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Inspection zips operational	As directed	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Batten fitting latch secure	As directed	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]
Check battens against template	57.40.00	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Wires & attachment fittings	As directed	3[R]	3[R]	3[R]	3[R]	4[R]	3[R]	3[R]	3[R]	3[R]	6[R]
Reflex bridles for kinks corrosion	As directed	3[R]	3[R]	3[R]	3[R]	4[R]	3[R]	3[R]	3[R]	3[R]	6[R]
Leading edges, keel, cross bars and down tubes for straightness, dents and corrosion	As directed	2[R]	2[R]	2[R]	2[R]	4[R]	2[R]	2[R]	4[R]	2[R]	6[R]
Remove frame for sail, disassemble and check for fatigue cracks radiating from drilled holes	5.50.50					4[R]					6[R]
Loose bolts / nuts	20.10.00	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	6[R]
Universal joint / keel roller free moving and in good order	As directed	2[R]	2[R]	2[R]	2[R]	4[R]	2[R]	2[R]	2[R]	2[R]	6[R]
Heart bolt (See time life 4.20.00)	As directed	6[R]	6[R]	6[R]	6[R]	6[R]	6[R]	6[R]	6[R]	6[R]	6[R]
Trimmer assembly operation	As directed	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]	2[R]
Placards: Trimmer, Kingpost and Data plate	As directed	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]	3[R]

Table 6 Scheduled Maintenance

5.50.00 Unscheduled Maintenance Checks

Unscheduled maintenance is required due to abnormal flight loads such as severe turbulence or heavy landings. If any abnormal loads are encountered during transport or storage then the airframe needs to be checked.
The pilot will be responsible for identification of these extreme operating conditions and identification of the effected components. Where damage is found further checks should be carried out upon areas that may also be affected.
Thorough checks should also be carried out after transportation of the aircraft, and after extended storage periods.

5.50.10 Inspection after heavy landing.

The main attachment point for the wing to the aircraft base should be inspected carefully for any permanent deformation of the U-bracket the main bolt or the keel, as well as all of the other effected components. If the landing resulted in contact with the ground then obviously these parts will require extra attention. The tubing relies on being intact in perfect condition for full strength. If tubing is bent or kinked in any way then it should be replaced prior to flying. This includes its attachment point to bolts. The battens should be checked against the supplied batten profiles and the opportunity should also be taken to inspect the batten fittings.

5.50.20 Inspection after heavy turbulence.

The main areas of wing structure that require attention after severe turbulence are the attachment points for structures. These include the front and rear wires, the side wires and the main hang point. The sail should also be inspected for any strain or tearing that may have occurred – though this is very unlikely. All of the tubing should be inspected for bending, including the battens against the supplied batten profiles. The opportunity should be taken to inspect the batten fittings at the same time.
If the base bar has made contact with the mast brace at any time during flight then they should both be checked.

5.50.50 Sail removal

The sail should be removed for close inspection of the airframe if the frame is suspected of suffering any damage for example, having bent tubes following a heavy landing, blow over or crash. If the wing suddenly develops a turn after severe turbulence it is possible that some tubes may be bent, therefore close inspection of all the tubes is necessary. It is suggested that the sail should be removed from the frame every 500 hours to check for any signs of fatigue or damage from general wear and tear.

The main points to check are

-Cross bar hinge joint
-Cross bar /leading edge joint (deformation in the bushes)
-Leading edge nose joint (deformation in the bushes)
-Nose plates
-Straightness of the tubes
-Elongation of boltholes
-Damaged wires
-Damage to bolts
-Damage to sail

NOTE

If any part of the aircraft has any signs of damage the part should be replaced prior to re-installing the frame.

Special Requirements and Tips

When installing or removing the sail you will need a large unobstructed area of approximately 12 metres by 3 metres. Make sure the surface is clean and not abrasive. Rough concrete will damage the sail, a grass area will not damage the wing, but will provide many hiding places for bolts, nuts and washers – short carpet is ideal.
It is a good practise to note the order of washers and other fittings prior to disassembly and to have a small container to put the hardware in. The Illustrated Parts Catalogue should be referenced for correct assembly.

NOTE
Wherever possible perform an operation on one side of the wing, and completely reassemble it before continuing with the other side. This method gives an easy reference to the reassembly sequence that is required for correct and safe operation.

De-Tension the Tip

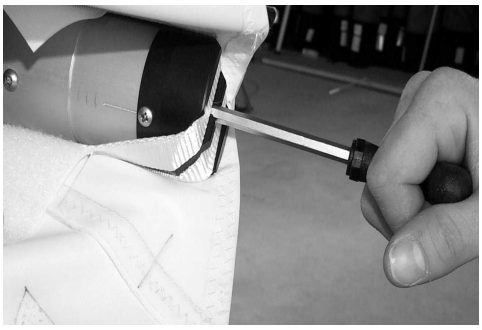


Figure 4 De- Tensioning the Tip

-Undo hook and loop retaining straps at rear leading edge.
-Wind tip-tensioner inward (clockwise) to de-tension the tip webbing.
-Remove sail webbing from rear leading edge.

Remove Rear Leading Edges

-Spread leading edges approximately 1-½ metres apart.
-Remove rear leading edge from airframe.

Figure 5 Removing Rear Leading Edges

Unbolt Side Wires

-Unbolt top and bottom side wires from cross bar and feed wires back through sail.

Figure 6 Unbolting Side Wires

Remove Quick Clip Nut

-Remove quick clip bolt padding.
-Undo quick clip bolt and remove sail webbing, bottom rear wires and bolt from airframe (see Drawing 6485 in Illustrated Parts Catalogue).

Figure 7 Removing Quick Clip Nut

Remove Top Front Back Wire

-Unbolt top front to back wire from pull back wire shackle.

Figure 8 Removing top Front to Back Wire

Unroll Sail

-Unroll sail enough to access reflex bridles.
-Undo reflex bridle shackles from sail. Cut off heat shrink and undo trimmer wire shackle. Feed trimmer wire back through sail.

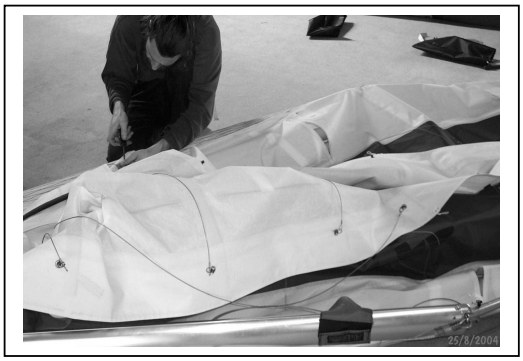
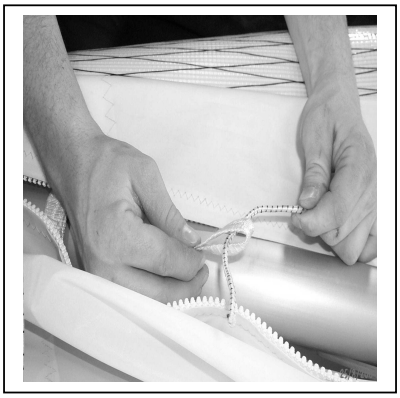


Figure 9 Unrolling sail

Untie Bungie



-Untie bungie from pull back handle.

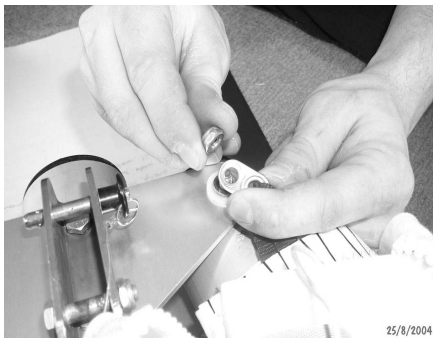
Figure 10 Untying bungie

Remove Zip

-Cut off zip tie at nose junction.
-Remove zip slider from zip and unclip sail safety webbing.

Figure 11 Removing centre zipper

Remove Nose Webbing



-Undo sail webbing nut and remove sail webbing. Replace nut finger tight (see Drawing 6474 in Illustrated Parts Catalogue).

Figure 12 Removing nose webbing

Unbolt Top Front Wire

-Unbolt top front wire from nose junction and replace nut finger tight. Raise nose slightly and feed wire back through sail (king post will now be detached).

Figure 13 Unbolting top front wire

Remove Airframe from Sail

-Leave control frame attached and carefully slide frame out through the nose of the sail.

Figure 14 Removing Airframe

CAUTION

DO NOT FORCE SAIL. IF IT SNAGS, STOP AND FIND WHAT IT'S CAUGHT ON.

5.50.60 Frame Reinsertion

After the frame has been removed for inspection the frame must be properly reinstalled to maintain a high level of safety. Particular attention must be paid to the correct orientation of bolts and washers.
It is advisable that all nuts that are removed are replaced with new ones, or as a rule Nylok nuts should not be reinstalled more than twice.

WARNING

REFER TO SECTION 20 (STANDARD PRACTICES) FOR CORRECT TORQUING PROCEDURES, FAILURE TO READ AND UNDERSTAND THE SPECIFIC TORQUING METHODS THAT ARE NECESSARY FOR THIS THIN WALLED TUBULAR STRUCTURE WILL RENDER THE AIRFRAME UNSAFE TO FLY.

Reinstall Bungie

-Tie pull back handle bungie to pulley temporarily using a bowline knot

Figure 15 Tie pull back bungie to pulley

Prepare Frame for Sail Reinstallation

-Insert quick clip bolt, attach rear-flying wires and tighten nut finger tight, it needs to be removed again to allow the keel pocket past.
-Insert rear leading edges into **correct right and left hand side** and stand airframe onto its A-frame.
-The folding tip struts should be on the top of the tube.
-Lay sail out at the tips inline with the airframe.

Figure 16 Frame preparation for Sail Reinstallation

Reinstall Sail Step 1.

-Slide sail 1 metre up the airframe making sure one leading edge goes in either side of the sail

Figure 17 Sliding sail onto frame (Step 1.)

Reinstall Sail Step 2.

-Hold the leading edge up approximately 1/2 metre off the ground while you slide the sail up, so the leading edges don't hit the cells (internal fabric ribs).
Slide sail up half a side at a time.
-Pull sail on slowly as damage can result if sail is caught on internal ribs.

Figure 18 Sliding sail onto frame (Second Step)

Insert Keel into Sail

-When sail is approximately halfway up, insert the keel into the keel pocket.
-Slide sail up until the keel pocket hits the quick clip bolt.

Figure 19 Inserting keel into sail

Position Keel Pocket forward of Rear Wires

-Have someone hold the nose of the wing up so the bottom rear flying wires are loose.
-Remove quick clip nut and bottom rear flying wires.
-Slide keel pocket up until the sail tang aligns with the quick clip bolt hole.
-Re insert quick clip bolt and attach washer, sail tang and rear flying wires, tighten nut (see drawing 6485 in Illustrated Parts Catalogue)
-Let the nose down.
-Slide the rest of the sail up to the nose.

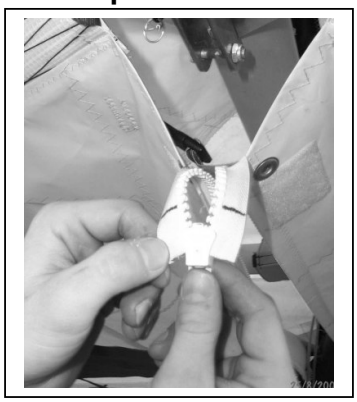
Figure 20 Position Keel pocket forward of rear wires

Spread Wings

-Spread each wing apart ¼ of the way alternately on each side until fully open, making sure sail is loose and free at all times.

Figure 21 Spread the wings apart

Join Zip



-Connect sail safety strap at nose junction.
-Slide on zip slider, making sure strike marks on the zipper align.
-Fasten zip tie through eyelet holes around the zipper.

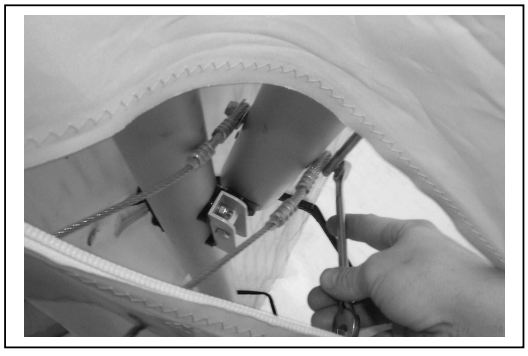
Figure 22 Join centre zipper

Attach Front Top Wires

-Lay king post assembly out at the back of the wing.
-Feed top front wire back through the nose cone then back through the sail.
-Attach tang to nose bolt, see illustrated parts catalogue, drawing # 6485.

Figure 23 Attach Front Top wires, showing Top front wire being pushed through the sail slot.

Fit Side Wires



-Feed bottom and topside wires back through sail slots.
-Bolt side wires to cross bar.

Figure 24 Fit side wires

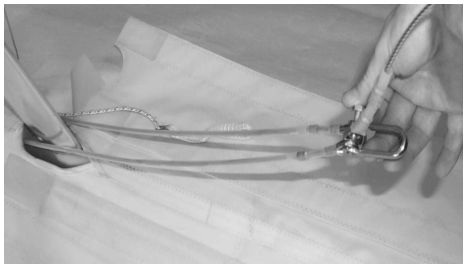
CAUTION
MAKE SURE BOTTOM SIDE WIRES ARE IN THE CORRECT FWD AND AFT SLOTS.

Locate Tip Webbing

-Locate tip webbing over rear leading edge and secure retaining Velcro.

Figure 25 Locate tip webbing

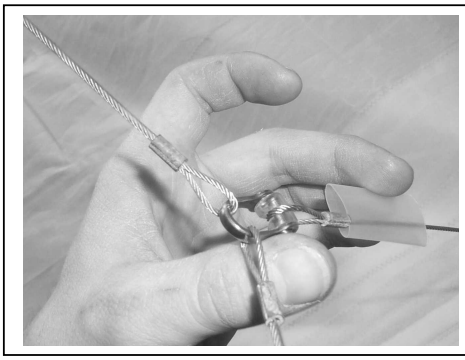
Fit King Post



-Feed pull back wires and pull back handle back through king post hole
-Insert king post into locating hole. Although there may be two holes visible there is one hole available that is large enough for the king post locating bush. When installed the machined fitting (with velcro) should be flush with the keel.
-Bolt top front to back wire to the pull back shackle.

Figure 26 Fit king post

Fit Reflex Bridle



-Reattach bridles to sail using Loctite 243 on the shackle screw
-Feed trimmer cable back through eyelet hole in sail.
-Fit new heat shrink (13mm x 30mmL) over trimmer wire. Feed shackle back through wires and tighten using Loctite 243. Slide heat shrink over shackle assembly. Shrink down using a heat gun.

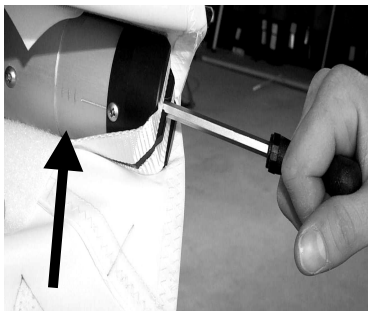
Figure 27 Fit reflex bridle

Insert Battens

-Insert battens and pull cross bar tension on
-Tie pull back bungie onto pull back handle using a bowline knot.
-Photo shows the pull back handle being tied on.

Figure 28 Insert batten

Reset Tip Adjusters



Tension the sail using a 6mm Allen key. The tip fitting should be adjusted until the leading edge is positioned on the:

4th mark for Streak 3 Wing
3rd mark for Cruze Wing

The markings are on the internal tube and should be adjusted until the appropriate mark aligns with the main outer tube

Secure Velcro tabs around the leading edge.

Figure 29 Tension tip

NOTE
If you find difficulty pulling the sail tension on the leading edge the adjustable tips can be wound in (clockwise). The sail nose tangs can be removed to allow the sail to move back. It is, however, extremely important to check that the sail at the nose does not foul on the frame when the wing is being tensioned. Ensure that the nose tangs are replaced and secured.

Locate Folding Tip Strut - Ensure strut is on top of the leading edge

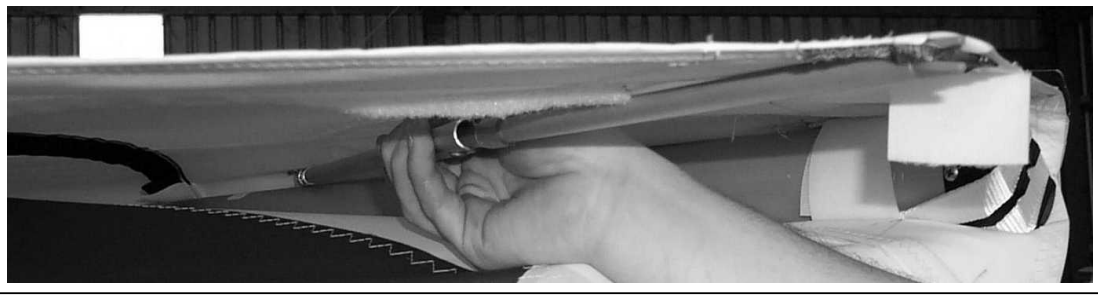


Figure 30 Locate Folding Tip Strut

Attach Swan Catch

-Attach swan catch.
-Secure and tighten nose webbing tangs.

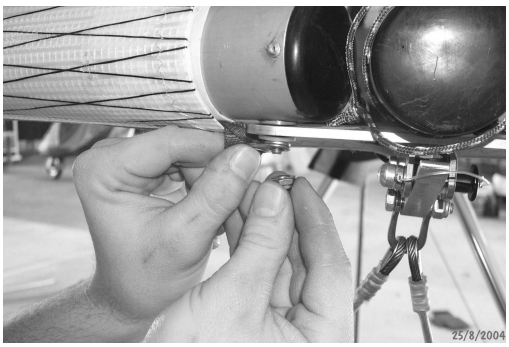


Figure 31 Nose webbing

Quality Assurance

After this procedure is completed recheck all nuts, bolts and connections, make sure that there are no parts left over or missing from the assembly.

NOTE

It is good practice to have an independent person check the airframe. AirBorne WindSports always uses a different person for checking the assembly process. Following is the Final assembly QA sheet, which may assist in performing the final inspection process. This QA is used by trained personnel and does not represent all of the instructions that are necessary for a safe aircraft. It is to be used as a reference only.

QA Inspection Form

AIRBORNE WINDSPORTS PTY LTD

STREAK III & CRUZE WING FINAL QUALITY INSPECTION

GJP-163

Production Order No ***P -***

Line	Check Operation, Security and Finish	Left Hand Side	Right Hand Side
1.	Nose Assembly		
2.	Nose Catch		
3.	Nose webbing secure		
4.	Nose Battens		
5.	Nose Cone		
6.	Keel Roller / U-Bracket		
7.	Down Tubes top assembly		
8.	D/Tube Stops		
9.	King Post Base		
10.	Cross Bar Hinge		
11.	Cross Bar Padding		
12.	Undersurface Zip		
13.	Down Tube Bottom Corners		
14.	Trimmer Placard		
15.	Bottom Front Wires		
16.	Side Wire Shackles		
17.	Base Bar Bolts		
18.	Cross bar / Leading Edge Junction		
19.	Top Side Wires		
20.	Bottom Side Wires		
21.	X/Bar L/Edge Zip		
22.	Tip Webbing Located Correctly		
23.	Tip Tension Adjusted **(Streak 3 on 4th Mark, Cruze on 3rd Mark)**		
24.	Tip Strut Adjusted **-** Locknut secure		
25.	Tip Zips		
26.	Tip Scuff Pads		
27.	Main Sail Batten Fittings		
28.	Leech line Cleat		
29.	Reflex Bridle Shackles		
30.	Pull Back Wires / Quick Clip		
31.	Bottom Rear Wires		
32.	King Post Top Assembly		
33.	King Post Base Placard		
34.	Trimmer Handle		
35.	Trimmer Cable		
36.	Downtube Pulley Bottom		
37.	Downtube Pulley Top		
38.	Serial number placard		
39.	Include Test Fly Sheet		

	Name	Signature	Date
Completed By			
Checked By			

Issue Date – 9 August 2005

Table 7 Airborne Final QA Inspection Sheet

6. DIMENSIONS AND AREAS

6.00.00 General

This section gives general dimensions for the wing. It should be noted that this is a flex wing aircraft and the dimensions that are given will be different depending on the loads on the wing. In general the dimensions that have been supplied are those without the sail on the wing, (which bends the leading edge and slightly reduces the wing span) and with the wing on the ground, resting on the base bar. As the wing is loaded in flight the lower wires will become taut and the amount of anhedral will reduce, changing the geometry and dimensions to the optimal positions for flight.

6.10.00 Major Dimensions of the S Series Airframe

Frame rake shown on drawing is for Streak 3. Cruze frame rake on following table.

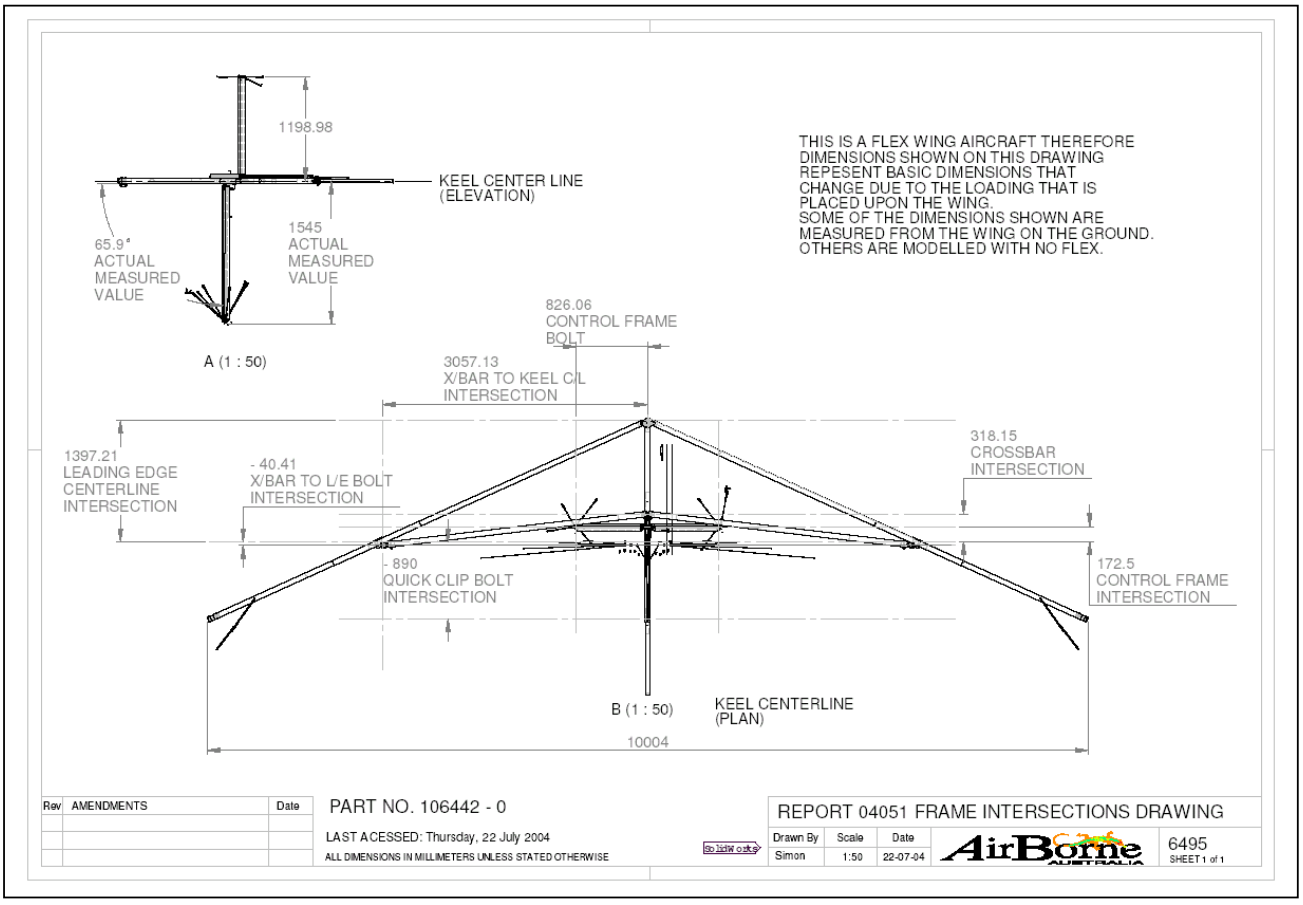


Figure 32 Major dimensions of airframe

6.30.00 Significant Dimensions and Areas

General
The Major dimensions of the wing are listed below.

	Streak 3		Cruze	
	Metric	Imperial	Metric	Imperial
Sail Area	13.54 m^2	145.7 ft^2	14.4 m^2	155 ft^2
Control Frame Rake Angle	65.9^0	65.9^0	77.0^0	77.0^0
Wingspan	10 m	32.8 ft	10 m	32.8 ft
Control Frame Height From Keel	1.545 m	5.07 ft	1.545 m	5.07 ft
Nose Angle (With Sail Installed)	131.2^0	131.2^0	131.2^0	131.2^0

Table 8 Dimensions and areas

9. GROUND HANDLING

9.00.00 General
The wing should only be moved in the packed up condition or if necessary when attaching to the base.

When moving the wing in the assembled position it is recommended that the wing is lifted with the shoulders whilst standing in the control frame. It is suggested that an assistant is used to support the weight on the rear of the keel tube.

If there is wind or gusts the wing can easily be caught by the wind without proper handling. If there is a significant amount of wind, it is advisable to have assistants to hold the side wires. The wing should be moved with the nose facing into the wind.

CAUTION

ENSURE THAT WHEN MOVING THE WING IN WINDY CONDITIONS THAT THE NOSE IS KEPT LOW WHEN FACING INTO THE WING. THE WINDWARD TIP SHOULD ALSO BE KEPT LOWER TO AVOID THE WING RISING.

9.10.00 Ground Transportation
Avoid damage to your wing by using well padded racks. Careless transportation can cause considerable damage to your wing.

We recommend that you support the wing in at least 3 places to spread the load. The wing should be transported with the control frame down to minimise the chance of damage to the cross tubes.

Flat straps should be used for tie downs to avoid damage to leading edge mylar.

Store the wing in a dry room off the ground. Air the wing out regularly to avoid mildew, and never store wet.

10. DERIGGING

10.00.00 General

For derigging and storage see Sections 4 of the Aircraft Operating Instructions or Pilots Operating Handbook as appicable.

11. REQUIRED PLACARDS

11.00.00 General

The placards that are present on this aircraft are a legal requirement showing safety information, emergency information and identification of the aircraft. The placards must be repaired or replaced if they become illegible or damaged in service. Replacement placards may be purchased from an Airborne dealer or direct.

11.10.00 Required Placards

The placards on the aircraft are designed to provide information regarding general aircraft limitations and other details for the safe operation of the aircraft.

The placards that are required for operation of this aircraft are available in the Aircraft Operating Instructions, Section 2, "Placards".

20. STANDARD PRACTICES - AIRFRAME

20.00.00 General

This chapter gives details for each of the bolts that are used on the wing. This is because there are few fittings which require standard torques.

20.10.00 Torquing Procedures

Correct torquing of fasteners is critical. If a bolt or fastener is too loose it may cause unnecessary movement resulting in wear or fatigue damage, while over tightening may cause tensile failure of the bolt, or crushing of components. Specific torques should be determined using an accurate torque wrench. The torque required after the nut is fully on the shaft, but not against the mating surface should be added to the final torque value.

WARNING

THE CORRECT TORQUING OF THE BOLTS FOR THE WING SECTION OF THE AIRFRAME IS ESPECIALLY IMPORTANT FOR THE SAFETY AND LONGEVITY OF THE WING. IN GENERAL STANDARD TORQUING VALUES WILL NOT BE APPLICABLE, BECAUSE OF THE NATURE OF THE THIN WALL ALUMINIUM TUBING THAT HAS BEEN USED TO CONSTRUCT THE MAJORITY OF THE WING STRUCTURE.

NEVER TIGHTEN NUTS SO THAT THE ALUMINIUM TUBING IS DEFORMED FROM ITS CIRCULAR CROSS SECTIONAL SHAPE.

ALWAYS HAVE AT LEAST ONE FULL THREAD SHOWING PAST ANY NYLOK NUT THAT IS USED.

NEVER REPLACE COMPONENTS WITH A SUB STANDARD PART. TO REITERATE, OTHER GRADES OF BOLTS – SUCH AS GRADE 8 DO NOT HAVE THE SAME STRENGTH / FATIGUE CHARACTERISTICS AS AN (AERONAUTICAL GRADE) BOLTS.

Special Torquing Procedures

Special Notes for each of the bolts on the wing are given in the table below, along with references to the illustrated parts catalogue, which should be used to ensure that the components are reinstalled in the correct sequence.

Definition of "Just Not Loose"

A definition of torque has been made for the assembly of this wing which has been called "Just not loose", a setting which is used to achieve the best combination of strength characteristics of the tubing while not allowing any vibration or relative movement of the bolt in the axial direction. In practice this means that the nut shall be tightened adequately to ensure that each of the components that are held by it are in contact with each other, and then approximately ¼ turn more should be made. The resulting fit should not allow any axial movement of the bolt in its location, but will allow rotation (using fingers) of a held component to be achieved with approximately 20mm of lever arm; (eg. a wire tang).

No.	Area	Instructions
1.	Nose Assembly	Central bolts, "Just Not Loose" Outer bolts to leading edges may be slightly tighter, make sure that the sail tangs are in place with approximately two threads showing. This area may be slightly tighter than "Just Not Loose" because there is a bush in the leading edge (see drawing 6474 Illustrated Parts Catalogue).
2.	Nose Catch	"Just not loose" (See Drawing 6485 Illustrated Parts Catalogue)
3.	Keel Roller / U Bracket	The socket countersunk cap screws which locate in the "Neg Plate" (horizontal aluminium plate with serial number riveted to it) should be

		tightened to approximately 25 Nm. Red Loctite 262 must be used (see Drawing 6470 Illustrated Parts Catalogue)
4.	Down Tubes T op Assembly	The down tubes are also attached to the U-bracket. The down tubes need to move relative to the U Bracket, therefore it is important that they are able to move after tightening. This may be slightly tighter than "Just Not Loose" Ensure that there is no gap between the neg plate and the U-bracket, there should be approx 2-3 threads showing.
5.	King Post Base	The bolts which attach the fittings to the king post should be tightened to approx 15 Nm (firm). Loctite 243 must be used. The long locating bolt which protrudes vertically from the bottom of the king post should be firm, with Loctite 243 see drawing 6481 Illustrated Parts Catalogue)
6.	Cross Bar Hinge	The central bolt should be tightened to "Just not loose", the black acetal cross bar protector should still be able to be rotated by hand (see drawing 6483 Illustrated Parts Catalogue).
7.	Down Tube Bottom Corners	The side wire / "D" shackle and base bar fitting bolt, should be slightly tighter than "just not loose", but the "D" shackle and base bar knuckle should be able to be rotated by hand. Loctite is not required, as there is a locking bolt installed.
8.	Base Bar Bolts	"Just not loose".
9.	Cross Bar Leading Edge Junction	"Just not loose". **NOTE** The vertical bolt will have approximately four threads showing. (See Drawing 6474 Illustrated Parts Catalogue)
10.	Top Side Wires	"Just not loose".
11.	Bottom Side Wires	"Just not loose".
12.	Reflex Bridle Shackles	Firm – tighten to the end of the thread, use Loctite 243.
13.	Pull Back Wires	Tighten bolt till 1-2 threads are showing. **NOTE** The wires that locate on the bolt will float slightly from side top side (see drawing 6483 Illustrated Parts Catalogue) - there will be three wires in the pull back shackle, with the inclusion of the top front back wire.
14.	Quick Clip Bolt and Bottom Rear Wires	"Just not loose" (see drawing 6485 Illustrated Parts Catalogue)
15.	King Post Top Assembly	The aluminium fitting which attaches to the king post (part # 106209) should be tightened to approx 15 Nm (firm). (See Drawing 6481 and 6406 Illustrated Parts Catalogue) Loctite 243 must be used. Locate the wires in their correct position. The cover is held in place with four bolts. These should be firm with Loctite 243 used.
16.	Trimmer Attachment to Down Tube	The procedure that is used for the torque of the trimmer handle ensures that the amount of trimmer adjustment will not remain over tightened. Install the bolt and then turn the handle until the swage is at the top of its adjustment (at the top of the stickers arrow). Tighten the bolt until the swaged wire will just remain at the top adjustment point.
17.	Trimmer Handle	Firm with Loctite 243 (see drawing 6409 Illustrated Parts Catalogue).

Table 8 Torque settings for the wing

20-20-00 SAFETYING PROCEDURES

All bolts and nuts, except the self-locking type, should be safetied after installation. This prevents them from loosening in flight due to vibration.

Self-Locking Nuts

Self-locking nuts are used throughout the airframe. Self-locking nuts may be reused but not if they can be run on the thread by hand without using tools. After a self-locking nut has been tightened at least one full thread pitch of the male thread must protrude through the nut-locking feature.

Loctite

On any bolt that does not have a Nyloc type locking mechanism, Loctite 243 should be used to prevent premature loosening. On the U-bracket Loctite 262 (Red High Strength) needs to be used.

20-30-00 CONTROL CABLES AND TERMINALS

There is a single control cable on the wing, used for the trimmer. The trimmer wire is routed through the right hand down tube, through a pulley to halve the ratio, and on to the trimmer reel where the pilot actuates it. The trimmer should be checked regularly for excessive friction and wear. Wear is most likely to occur at the ends of the cables at the attachment points and the areas where the wire is bent.

27. FLIGHT CONTROLS

27.00.00 General

The Streak 3 and Cruze wings use weight shift control. This means that there is no need for most of the traditional flight control surfaces such as flaps and rudders. The pilot uses the control bar to shift weight relative to the attachment point of the base to the wing, which in turn causes a reaction in the wing and the control response of the aircraft.

27.30.00 Reflex Bridles

Reflex bridles produce longitudinal stability when the wing is at zero or negative angles of attack. The reflex bridles work by stopping the trailing edge of the wing moving downward, as they are tethered to the king post assembly. When the wing has any negative load on the top surface the rest of the lifting surface will move downward relative to the trailing edge, effectively creating elevator type control surfaces that produce a positive pitching moment, helping to restore level flight.

27.60.00 Spoiler, Drag Devices and Variable Aerodynamic Fairings

The only flight control on the wing that is not automatic or weight shift controlled is the trim speed control. A pulley device on the right hand down tube gathers wire, which is linked to the reflex bridles. Turning the trim handle pulls the reflex bridles upward, pulling up and effectively creating elevator surfaces, causing the trim speed of the wing to decrease. There is a swage on the wire, which allows the pilot to see which position the trimmer is in. The wire for the trimmer assembly should be periodically inspected for wear, and the handle inspected for free operation.

27.70.00 Trimmer Knob Inspection

When inspecting the trimmer assembly, check that the pulley at the bottom of the base bar has not been worn by the position indicating swage on the wire. If the pulley has been worn it will need to be replaced.

57. WINGS

57.00.00 General

The main structure of the wing comprises of aluminium tubing and stainless steel wire. The lifting surface is constructed from Dacron polyester fabric. The wing is subject to maintenance checks and preflight procedures that must be carried out prior to flying. Any dents crazing, bends (except for tube bending caused by normal flight and set up loads), corrosion or other distortion of the wing structure renders the wing unsafe to fly. Secondary structures of the aircraft are limited to:

- Keel extension structure
- The trimmer assembly
- The pull back assisting rope and pulley system

CAUTION

IT SHOULD BE NOTED THAT ALL OF THE TUBES THAT ARE USED ARE SPECIFIC GRADES OF ALUMINIUM DESIGNED FOR FLEX, STRENGTH AND FATIGUE CHARACTERISTICS. ALL OF THE TUBES ARE SLEEVED FOR STRENGTH AND WHERE STRESS CONCENTRATIONS EXIST. IF ANY TUBING IS TO BE REPLACED IT SHOULD BE REPLACED WITH AIRBORNE SPARE PARTS ONLY.

57.10.00 Main Frame Description

This section allows the user to understand the main function of each of the components of the wing, which should help the operator, or maintenance personnel to properly inspect the wing.

Keel

The keel of the wing is mainly constructed from 6061 T6 aluminium. Each of the major components of the wing are attached to the keel. Major components from the front to the rear of the keel:

Nose Plates

The nose plates are bolted to the keel and provide attachment points from the leading edges to the keel. They are attached to the keel with bolts. The nose plate bolts also attach the stainless U-channel where the front wires attach to the swan catch.

U Bracket

The U-bracket provides a mounting point for both the control frame and the trike mast, the main attachment point for the base to the wing. The U-bracket is allowed to rotate around the keel, and is held in position longitudinally with acetal bungs, which are bolted to the keel.

Quick Clip

The quick clip is bolted to the keel with the same bolt used to attach the rear wires.

King Post

The king post assembly is a vertical post from the keel of the wing, which supports the reflex bridles the Top Front and Back wires, and the top side wires. The king post works in compression, and is located on the keel using a locating pin. The main material is 6061 T6 aluminium for both the tubing and the fittings.

Control Frame

The control frame is constructed mainly from 6061 T6 aluminium. The control frames down tubes work mainly in compression due to the positive loading of the wing, which is reacted through the Side wires

and base bar sections. The base bar works mainly in tension through the side wire loads from the crossbars and leading edges.
The control frame is bolted to the keel through the U-bracket. The fittings at the top of the control frame allow relative movement between the U-bracket and the control frame. This is necessary because of the movement between the base and the wing during the weight shift control actions.

Leading Edge
The leading edges are mainly constructed from 6061 T6 Aluminium. The leading edges are mainly loaded in bending and compression and share loading with the cross bars during positive and negative flight loads.
The leading edges are attached to the keel through the two nose plates at the front of the wing, and via a bolt assembly to the cross bars and the outboard wires. The rear leading edges fit inside the leading edge tubes, which locate onto a horizontal bolt in the leading edge assembly. The rear leading edges are a part of the leading edge, but are made in order that they may be removed for ease of shipping.

Cross Bars
The cross bars are mainly constructed from 6061 T6 aluminium. The cross bars serve the purpose of holding the leading edges forwards and spread against the sail, they share the loading with the leading edges during positive and negative flight loads.
The cross bars are attached to each other at the keel using a ball joint that allows relative movement. They are also tethered to the keel via a webbing loop. The cross bars are attached to the leading edges outboard using a bolt assembly. The top and bottom side wires are a part of the bolting arrangement.

Battens
The battens are mainly constructed from 7075 T6 aluminium. The battens are located with batten pockets sewn into the sail. The batten fittings at the trailing edge secure the battens into their pockets.
The battens help to maintain the profile of the wing during flight, and are important to the correct and stable operation of the wing. For this reason there is a batten profile that is supplied with each wing for the battens to be checked against.

WARNING

DO NOT FLY THE WING WITH ANY OTHER BATTEN PROFILE THAN THAT SUPPLIED BY AIRBORNE, AS VARIATION MAY HAVE SERIOUS EFFECTS ON THE FLIGHT PERFORMANCE STALL AND STABILITY CHARACTERISTICS OF THE WING.

Top and Bottom Side Wires
The bottom side wires are stainless steel braided wires, which are attached to the cross bars and the knuckle at the bottom of the control frame through swaged fittings. The control frame end is attached via a stainless D-shackle, while the cross bar end has a fitting that allows a bolt to secure it.

Top and Bottom Front Back Wires
The bottom front back wires are stainless steel braided wires that have swaged fitting at each end for attachment to the nose catch, control frame and keel.

Reflex Bridles
The reflex bridles are mainly stainless steel wire swaged together and attached to the top of the king post via the top king post fitting, and to the sail using D-shackles. The trimmer wire is also attached using a D-shackle.

57.30.00 Sail

The sail comprises the lifting surface of the wing. It is mainly constructed of Dacron polyester fabric, with some Mylar material making up the leading edge areas. The sail is constructed from many individual panels, which are sewn together using polyester thread to form the required shape. The sail has attachment points sewn into it to attach to the frame at various points and to hold the battens in place. The Sail also provides zips that facilitate easy preflight inspection of all the members inside the double surface wing.

The sail should be kept out of the sun as much as possible as sunlight will damage the sail, and in time will cause it to fail the required Bettsometer tests.

Inspection

- Check for tears in the sailcloth or any loose or unravelled seams.
- Check all webbing securing points are not damaged or worn.
- Check all inspection zippers to see if they function smoothly and close completely.

Protection

Ultraviolet radiation from strong sunlight ultimately reduces the strength of Dacron, but this may be reduced to an acceptable level by careful consideration of the wings use and exposure. In its bag the wing is fully protected. Sunlight will eventually cause it to fail the required Bettsometer tests.

KEEP THE SAIL COVERED WHEN NOT IN USE AS CONTINUED EXPOSURE TO ULTRAVIOLET RADIATION DRAMATICALLY REDUCES SAIL LIFE.

The Dacron sailcloth may be cleaned with warm soapy water. Strong detergents must not be used. Thoroughly rinse with plenty of clean water.

NEVER USE CHEMICAL SOLVENTS OR APPLY WATER REPELLENT COMPOUNDS.

57.30.10 Bettsometer Testing

Bettsometer testing is a method of determining the tensile strength of the sail fabric and stitching, which is known to degrade during the life of the sail.

Hour or Time Related Check Limits

Annual Bettsometer test with a 1.2mm diameter needle, with wing sails fitted and tensioned for flight is to be carried out to:
Upper & lower surface: 1360 grams.
Stitches: 1360 grams using a 1mm or 1.2mm diameter hook, pull upwards.

As well as the annual check there are several criteria for testing of sails, which are highly dependent on the conditions that the sail fabric is exposed to. The pilot/operator of the aircraft is responsible for determining the level of exposure that the sail experiences.
Generally the method used for fabric testing is a Bettsometer test (on an annual basis). Annual testing has been found to be adequate for recreational user where the operator takes care to avoid unnecessary exposure to UV.
More frequent testing (200 operating hours or 750 UV hours) is applied where operators exceed these hours prior to the annual test.

NOTE

- If a wing is stored under a roof, but the roof does not have doors on the front – i.e. an open hanger, the wing will still experience UV degradation.
- If a wing is flown, and or left in the open for a day, this will equate to 8-10 hours of UV exposure.

Where aircraft have been exposed to high levels of UV over an extended period (such as being left set-up in the open for 3 months or more - equivalent to 750 UV hours), then testing prior to return to service is recommended.

The instructions that are supplied with the Bettsometer should be followed to ensure proper testing.

NOTE

Some instructions that may be helpful,

- The instructions that come with the Bettsometer recommend that *"any flat section of the sail, clear of obstructions"* is suitable for fabric testing. Single layer sections of the sail would give a more relevant test result than patched or multi-layered sections and obviously those areas most exposed to UV damage (usually the top surface) would be the most useful to test.
- Likewise the stitching exposed on the top surface would show the most UV degradation and will give a better indication of the strength left in the thread than that on the under surface.

Figure 33 Bettsometer Instrument, an example supplier: http://www.conairsports.co.uk/

57.30.20
Minor tears or rips in the sail

Minor sail repairs are a Line Maintenance task which Sport Pilots are suitable to perform unless local regulations prohibit owner maintenance for sails. A repair is classified as minor if tears are less than 30mm long, provided that no free edges (such as the wing trailing edge) are broken and that the tear is isolated and not within 50mm of an existing seam line or 100mm of the trailing edge. Also, abraded holes no more than 15mm in diameter. Such damage may be replaced with self adhesive patch material (Often called “sail tape” or “sticky back sail repair tape”) such as used for registration letters. If possible a patch should be applied to both sides of the fabric.
(Reference BMAA TIL No. 015 Issue 1.)
The tape is available from Airborne as a spare part.
Any other significant damage should be discussed with Airborne or a dealer for an assessment of the best repair option.

57.40.00 Tuning

Roll Tuning

Your aircraft was test flown and delivered to you in good flying order.

WARNING

EXPERIENCED PERSONNEL SHOULD ONLY CARRY OUT ADJUSTMENTS TO THE WING, IDENTIFICATION OF A TURN SHOULD ALSO BE CARRIED OUT BY AN EXPERIENCED PERSON. ANY ADJUSTMENTS SHOULD BE RECORDED IN THE MAINTENANCE LOG. CHANGES REQUIRED FOR TUNING ARE SMALL AND INCRIMENTAL. MAJOR CHANGES WILL CAUSE THE WING TO PERFORM BADLY, AND MAY BE DANGEROUS.

If you feel that the wing requires adjustment to trim in the roll or the pitch axis you should check that the problem is not caused by something asymmetrical in the frame or the battens. In order of priority check the following:

- Ensure that the wires, especially the reflex bridles are correctly routed
- Check the battens against the template
- Check that the sail webbing is correctly mounted on the leading edges and tensioned to the correct mark
- Check the keel is straight
- Check that the leading edges are straight and that the rear leading edges are located correctly

To check your battens use the following procedure:

- Remove the battens from the wing after the wing is de tensioned as required during the pack up phase. See Pilot's Operating Handbook for pack up procedures
- Lay the template out on a flat surface.
- Note whether the battens have been reflexed. Do not change the reflex initially. The battens may have already been reflexed to correct a turn.
- Start with the keel batten lining the nose of the batten up with the start of the line. The line should be above the batten.
- If the batten does not line up, gently apply pressure using your hand or knee to get a smooth curve.

After checking as noted above a turn can be remedied by adjustments as outlined in the following table.

Roll Tuning Matrix

The following table outlines procedures for tuning a wing to correct a turn.

	Adjustment Method	Remedy Left Turn	Remedy Right turn
VERY MILD TURN	**Batten Tip Ends** Unclip batten ends. Rotate batten ends clockwise to reduce tension or rotate batten ends anti-clockwise to increase tension. Note: Tip batten tuning has more effect on turn tuning than the root battens **Strut Tension** The over centre strut should be rotated to adjust the tension. The lock nut should be loosened prior to rotation. The strut should be unloaded prior to adjustment. Clockwise adjustment of the strut reduces tension and anti-clockwise adjustment increases tension.	The main sail batten tip end tension can be increased 2-4 turns on the left wing. The tension on the right can be decreased the same amount if required. Strut tension on the left strut should be increased by 2-4 turns. The tension on the right can be decreased the same amount if required.	The main sail batten tip end tension can be increased 2-4 turns on the right wing. The tension on the left can be decreased the same amount if required. Strut tension on the right strut should be increased by 2-4 turns. The tension on the left can be decreased the same amount if required.
	The above adjustments assume that the trimmer is off when the turn is evident. In the case of a turn developing when the trimmer is activated the battens adjacent to the reflex bridles should be adjusted. As an example if a left turn is evident when the trimmer is on the battens (#3,4,5&6) should be tightened on the LHS and vice versa for a right turn		
MILD TURN	**Tip Angle Adjustment** The angle of the tip can be adjusted by rotating the angle of the tip. Adjustment requires removal of the stainless screw, which secures the tip webbing bung. The tip bung is rotated and the screw is re installed in the appropriate hole. Reduction in leading edge tension will simplify procedure. Ensure correct tension is applied after adjustment. See Section 0 Assembly After Shipping for tip adjustment details	Rotate the left tip down (clockwise) 1 hole and re install screw. If more adjustment is required rotate the right tip up (clockwise) 1 hole and re install screw.	Rotate the right tip down (anti clockwise) 1 hole and re install screw. If more adjustment is required rotate the left tip up (anticlockwise) 1 hole and re install screw.
SIGNIFICANT TURN	**Batten Reflex Adjustment** One of the most effective ways to tune a more significant turn is to reflex the root battens. Contact the factory for details for reflex tuning. The wing needs to be removed from the base and de tensioned. The battens should be shaped to the template and re installed.	The battens (#3,4,5&6) on the left side should be reflexed as per batten profile.	The battens (#3,4,5&6) on the right side should be reflexed as per batten profile.

Table 9 Tuning procedure

If after tuning the turn persists consult your authorised dealer or the factory.

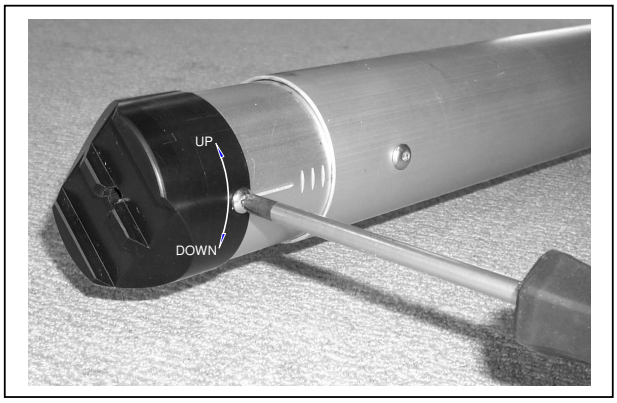


Figure 34 Adjusting Tip Angle (Sail not fitted)

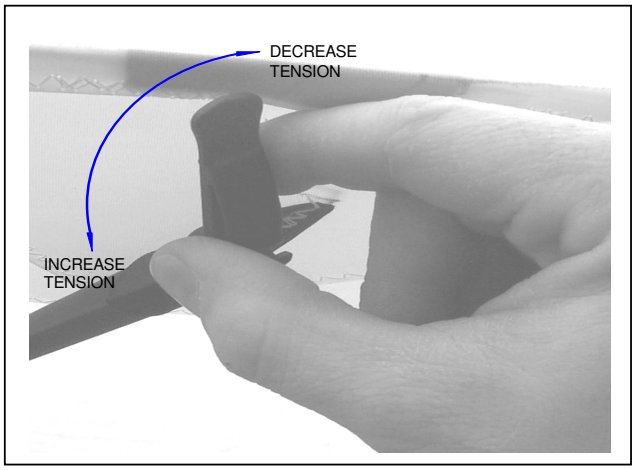


Figure 35 Adjusting Batten Tension

Pitch Tuning

Trim speed at MTOW and the trimmer in the off position is:

Streak 3 wing **54-58 KIAS**
Cruze wing **47-52 KIAS**

If the wing is trimming outside the specified trim range a forward or aft movement of the keel roller on the keel tube can be used to trim the wing.

A one-hole adjustment will see a typical change in trim of 5 knots. Moving the roller to the forward position will increase the trim speed whilst moving the roller rearward will decrease the trim speed. The illustrated parts catalogue should be referenced for correct reassembly.

57.50.00 Attach Fittings

U-bracket
The U-bracket is the main attachment point of the wing to the base structure, as well as to the keel of the wing. It is the major junction for the three main components of the aircraft, the wing (keel attachment), base (mast attachment) and control frame (top knuckle attachment). The U-bracket has two components, a ∩ shaped channel, and a negative block that is attached in to preclude the keel from moving out the bottom of the bracket.
The U-bracket should be checked thoroughly after any unusual loads.

Overcenter Battens
The overcenter battens are attached to the rear leading edges near the tips. They are attached using a clevis pin and with an aluminium eyebolt.

57.60.00 Flight Surfaces
There is a trim speed control device on the wing. The trim control is achieved by a pulley system, which raises the reflex bridles. Raising the bridles cause the root airfoil of the wing to be reflexed. The reflexed section causes the centre of pressure of the airfoil to move forward resulting in a reduction in trim speed.

95. SPECIAL PURPOSE EQUIPMENT

95.10.00 Training Bars

The training bars are supplied as an option for use by qualified instructors in order to teach people to fly the aircraft, and with more experienced students to fly the aircraft from the rear if necessary. The training bars attach to the wings base bar and down tubes, and provide control extensions toward the back of the aircraft for rear occupant usage.

95.10.10 Training Bar Maintenance

The training bars are likely to be installed and removed often, therefore it is important that the components are accounted for each time that they are removed and installed, see drawing number 6505 in the Illustrated Parts Catalogue. The bars are specific for the left and right hand sides, and need to be installed on the inside of the down tubes. They should be inspected for bending, and at each of the bolt holes and welds as well as any other wear that may occur each time they are installed.
If they are permanently affixed to the aircraft they need to be inspected at regular intervals. The frequency of inspection will depend on the amount that they are used. Prior to each flight they should be checked to ensure that the locking pin is installed correctly, and that they are securely attached to the uprights and base bar.
The welded base bar attachment has been made to be slightly loose, for ease of fitment.

Training bar attachment, showing the correct attachment of the bar on the inside of the down tube. The detail view shows the sequence of components.
1. Bolt, head to the inside of the control frame
2. Tube
3. Nylon Washer
4. Down tube clamp (both sides)
5. Wing nut, turned until both side of the down tube clamp contact. Ensure the training bars are held securely
6. Safety pin

Note:
The attachment to the base bar, a pip pin or bolt secures the training bar to the base bar, and also secures the control frame knuckle. A longer PIP Pin is necessary for the larger diameter tube of the training bar.

The right hand side training bar is secured in the same way and is also attached on the inside of the down tube.

Figure 36 LHS Training Bar Attachment

APPENDIX A – Condition Inspection Checklist

Wing Maintenance Log. S/N: _____

Date	Hours	Maintenance Section or Service Bulletin	Work Performed	Maintained by

APPENDIX B – Feedback Form

***Operation and Maintenance* Feedback Form**	
AirBorne AUSTRALIA	Please use a copy of this form to provide notification to the manufacturer about issues or anomalies identified during the operation or maintenance of the aircraft or in the content of the manual.
Return to AirBorne WindSports Pty Ltd PO Box 7042 Redhead New South Wales 2290 Australia Fax +61 2 4944 9199 Email trikesupport@airborne.com.au	Please provide your own contact details below
Issue Description	
If you have a proposal to remedy the issue please provide it here: Number of pages submitted including this cover page_____	

End Streak 3 Cruze Maintenance Manual

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STREAK 3 & CRUZE
ILLUSTRATED PARTS CATALOGUE

Applicability: Streak 3B
: Cruze

Unit 22/30 Kalaroo Rd
Redhead 2290
New South Wales
Australia
Phone (+61) 2 49449199
Fax (+61) 2 49449399

Part # 106726

INTRODUCTION

WARNING

SOME PARTS WHICH ARE LISTED ARE COMPONENTS OF PARTS WHICH ARE NOT USER SERVICABLE. ONLY MAINTENANCE WHICH IS SPECIFIED IN THE MAINTENANCE MANUAL SHOULD BE ATTEMPTED AND ONLY THE EXACT SPARE SHOULD BE USED TO REPLACE PARTS. THE FOLLOWING DRAWINGS ARE PROVIDED AS A CONVIENIENCE TO AID IDENTIFICATION OF PARTS WHICH ARE USER MAINTAINABLE.

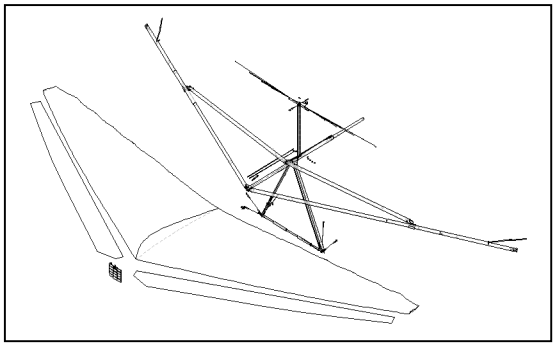
This manual should be used in conjunction with the correct maintenance manual, and repairs should only be carried out by competent people. Read the Maintenance manual before proceeding.

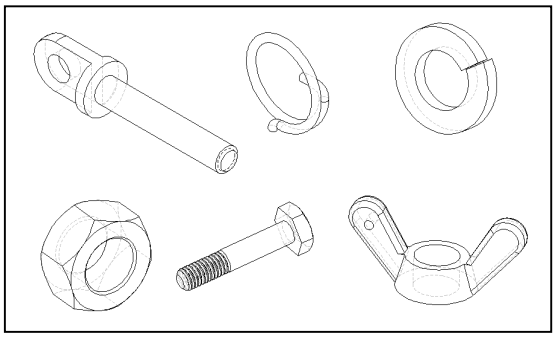
This parts catalogue has been prepared to aid in the identification of components that may effect the airworthiness of the Airborne Streak 3-B and Cruze Series of Wings.
Drawings with various levels of detail are supplied that include all of the spare parts available – specific to the serial number identification of the wing.
Most of the parts listed are available as spare parts. If a component is not listed then it may only be available as a complete part. For example spare parts are not available for the base bar, only the entire base bar assembly is supplied as a spare part.
All parts available are named and have part numbers, this is the identification system that should be used to order spares, eg: Shackle RF615 4mm, Part Number 100406, and the quantity required.
NB. Some parts may have been used from other wings, and therefore have other model names in the title. The most important thing in ordering spare parts is the part number.

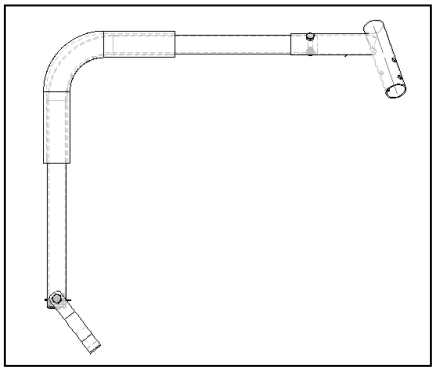
NOTE

Airbornes data packages will be revised from time to time. Owners registered on AirBorne's data base will be notified of any changes to data and directed to the AirBorne web site (http://www.airborne.com.au/) for the applicable pages. The amended pages should be printed and the prior page replaced in the folder as soon as possible. The amendment table should at that time be updated with the appropriate details and date. Revised pages will be sent by mail if requested.

TABLE OF CONTENTS







NAVIGATING

This manual is constructed in a hierarchal manner, which is the same as a family tree, where the "Highest Level Drawing" of assembly is at the front of the manual, which is equivalent to the oldest member of the family tree, and it contains "Main Sub Chapters", which are the equivalent of it's children. In turn each of these four "Main Sub Chapters" operates in the same way, whereby the order of the drawings that it contains defines the order "underneath" it, and so on.

The top level assembly however contains individual parts as well, some of which do not require drawings, and some of which are included in the miscellaneous chapter 2.

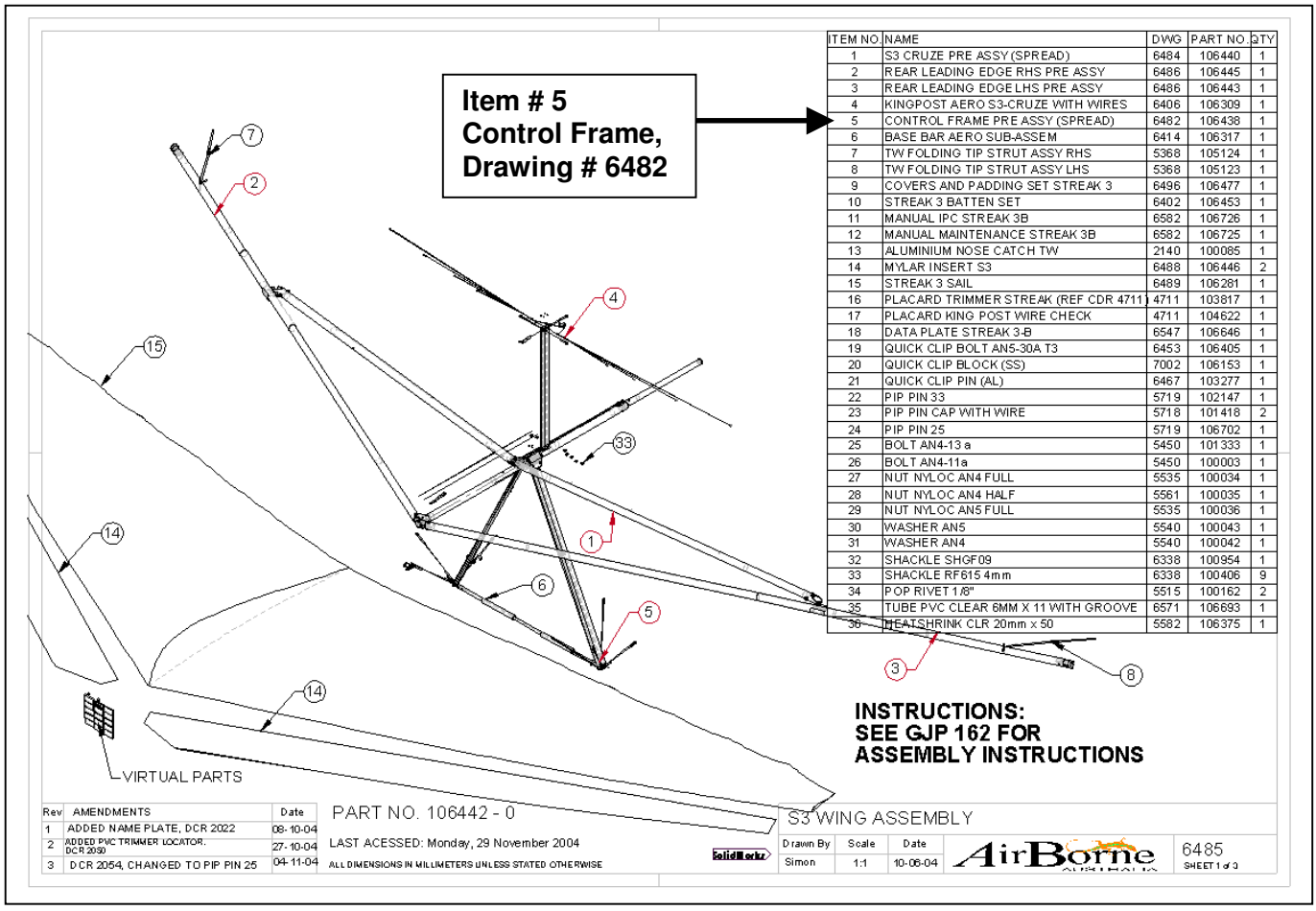
NOTE

The item numbers do not always apply because not all of the next level of drawings are required. With some attention to the method of the system this manual is simple to navigate. The main thing to recognise is that each drawing underneath the "Main Sub Chapter" is pointed out by the balloon number on it so that the general area of the trike may be visually identified, and then the drawing number which is needed can be found.

EXAMPLE

For example if you were to require a new handle for the trimmer assembly.

Step 1. Identify that it is a part of the control frame assembly , which means that it is in chapter 1.



ITEM NO.	NAME	DWG	PART NO.	QTY
1	S3 CRUZE PRE ASSY (SPREAD)	6484	106440	1
2	REAR LEADING EDGE RHS PRE ASSY	6486	106445	1
3	REAR LEADING EDGE LHS PRE ASSY	6486	106443	1
4	KINGPOST AERO S3-CRUZE WITH WIRES	6406	106309	1
5	CONTROL FRAME PRE ASSY (SPREAD)	6482	106438	1
6	BASE BAR AERO SUB-ASSEM	6414	106317	1
7	TW FOLDING TIP STRUT ASSY RHS	5368	105124	1
8	TW FOLDING TIP STRUT ASSY LHS	5368	105123	1
9	COVERS AND PADDING SET STREAK 3	6496	106477	1
10	STREAK 3 BATTEN SET	6402	106453	1
11	MANUAL IPC STREAK 3B	6582	106726	1
12	MANUAL MAINTENANCE STREAK 3B	6582	106725	1
13	ALUMINIUM NOSE CATCH TW	2140	100085	1
14	MYLAR INSERT S3	6488	106446	2
15	STREAK 3 SAIL	6489	106281	1
16	PLACARD TRIMMER STREAK (REF CDR 4711)	4711	103817	1
17	PLACARD KING POST WIRE CHECK	4711	104622	1
18	DATA PLATE STREAK 3-B	6547	106646	1
19	QUICK CLIP BOLT AN5-30A T3	6453	106405	1
20	QUICK CLIP BLOCK (SS)	7002	106153	1
21	QUICK CLIP PIN (AL)	6467	103277	1
22	PIP PIN 33	5719	102147	1
23	PIP PIN CAP WITH WIRE	5718	101418	2
24	PIP PIN 25	5719	106702	1
25	BOLT AN4-13 a	5450	101333	1
26	BOLT AN4-11a	5450	100003	1
27	NUT NYLOC AN4 FULL	5535	100034	1
28	NUT NYLOC AN4 HALF	5561	100035	1
29	NUT NYLOC AN5 FULL	5535	100036	1
30	WASHER AN5	5540	100043	1
31	WASHER AN4	5540	100042	1
32	SHACKLE SHGF09	6338	100954	1
33	SHACKLE RF615 4mm	6338	100406	9
34	POP RIVET 1/8"	5515	100162	2
35	TUBE PVC CLEAR 6MM X 11 WITH GROOVE	6571	106693	1
36	HEATSHRINK CLR 20mm x 50	5582	106375	1

Rev	AMENDMENTS	Date
1	ADDED NAME PLATE, DCR 2022	08-10-04
2	ADDED PVC TRIMMER LOCATOR. DCR 2030	27-10-04
3	DCR 2054, CHANGED TO PIP PIN 25	04-11-04

Drawn By	Scale	Date
Simon	1:1	10-06-04

Figure 1 Highest Level Drawing

Step 2. So now if you go to that drawing (6482) then you may use the balloon identifiers to find the next drawing number that is required.

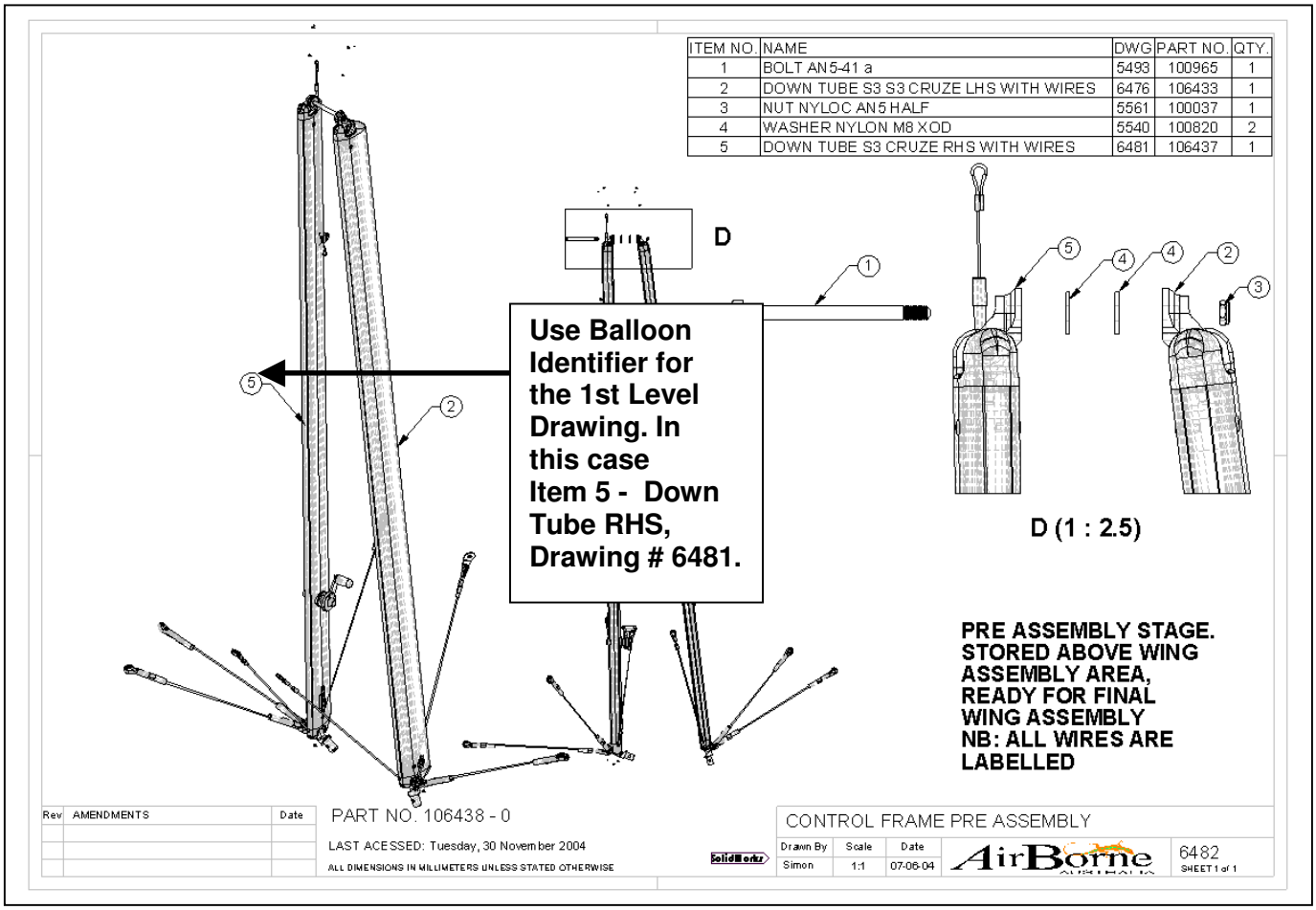
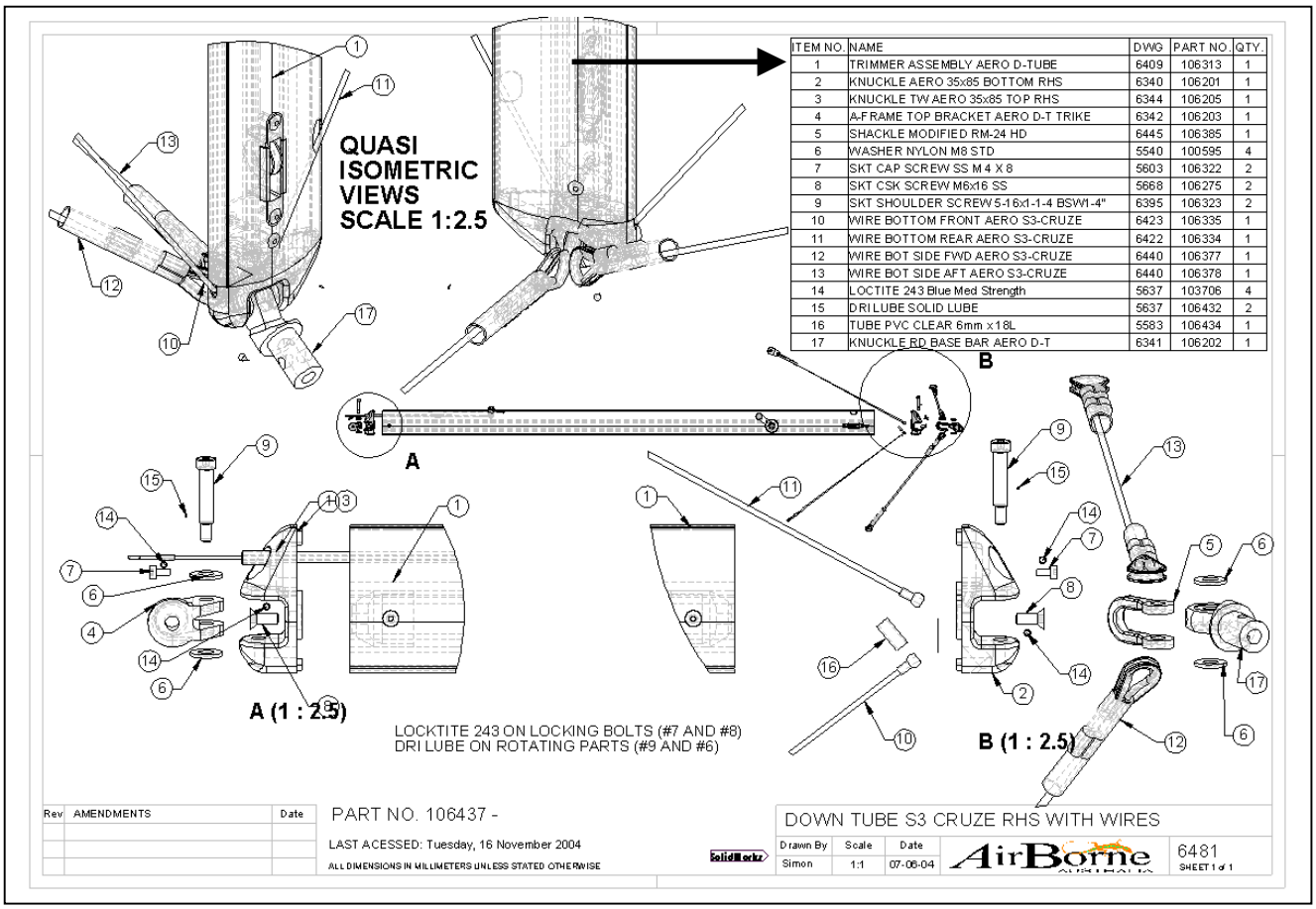


Figure 2 Chapter 1. Control Frame Assembly, Drawing # 6482

Step 3. Again identify the next level of drawing that is relevant. In this case Item 1. Trimmer Assembly Aero Down Tube. Drawing # 6409.



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	TRIMMER ASSEMBLY AERO D-TUBE	6409	106313	1
2	KNUCKLE AERO 35x85 BOTTOM RHS	6340	106201	1
3	KNUCKLE TW AERO 35x85 TOP RHS	6344	106205	1
4	A-FRAME TOP BRACKET AERO D-T TRIKE	6342	106203	1
5	SHACKLE MODIFIED RM-24 HD	6445	106385	1
6	WASHER NYLON M8 STD	5540	100595	4
7	SKT CAP SCREW SS M 4 X 8	5603	106322	2
8	SKT CSK SCREW M6x16 SS	5668	106275	2
9	SKT SHOULDER SCREW 5-16x1-1-4 BSW1-4"	6395	106323	2
10	WIRE BOTTOM FRONT AERO S3-CRUZE	6423	106335	1
11	WIRE BOTTOM REAR AERO S3-CRUZE	6422	106334	1
12	WIRE BOT SIDE FWD AERO S3-CRUZE	6440	106377	1
13	WIRE BOT SIDE AFT AERO S3-CRUZE	6440	106378	1
14	LOCTITE 243 Blue Med Strength	5637	103706	4
15	DRI LUBE SOLID LUBE	5637	106432	2
16	TUBE PVC CLEAR 6mm x 18L	5583	106434	1
17	KNUCKLE RD BASE BAR AERO D-T	6341	106202	1

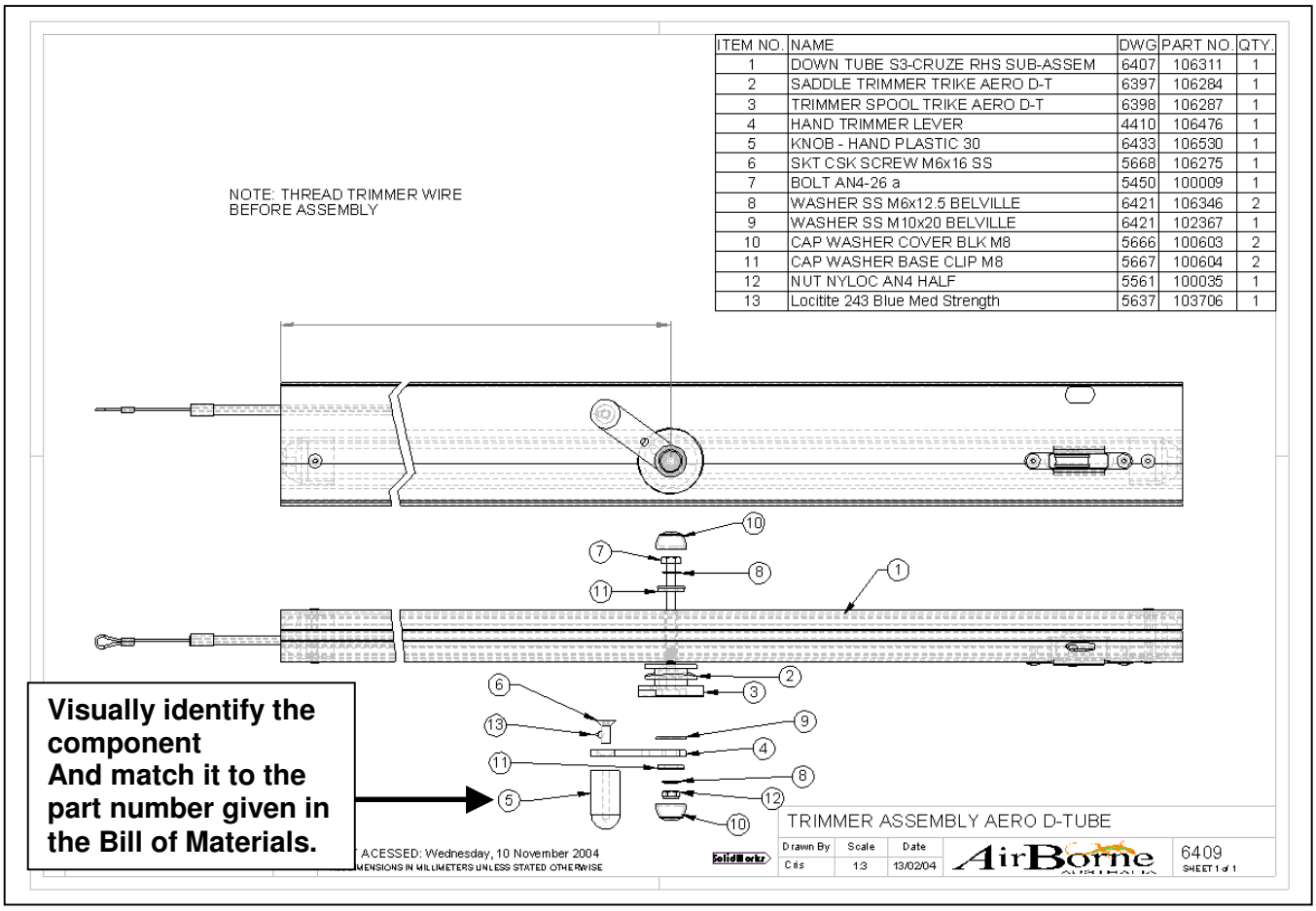
Rev	AMENDMENTS	Date

Figure 3 Identify the next drawing number

Step 4. Order!

Now that the actual component has been found the Part Number **AND THE DESCRIPTION** can be recorded in order to make the spare part order.

E.g. Knob - Hand Plastic 30, Part # 106530.



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	DOWN TUBE S3-CRUZE RHS SUB-ASSEM	6407	106311	1
2	SADDLE TRIMMER TRIKE AERO D-T	6397	106284	1
3	TRIMMER SPOOL TRIKE AERO D-T	6398	106287	1
4	HAND TRIMMER LEVER	4410	106476	1
5	KNOB - HAND PLASTIC 30	6433	106530	1
6	SKT CSK SCREW M6x16 SS	5668	106275	1
7	BOLT AN4-26 a	5450	100009	1
8	WASHER SS M6x12.5 BELVILLE	6421	106346	2
9	WASHER SS M10x20 BELVILLE	6421	102367	1
10	CAP WASHER COVER BLK M8	5666	100603	2
11	CAP WASHER BASE CLIP M8	5667	100604	2
12	NUT NYLOC AN4 HALF	5561	100035	1
13	Locitite 243 Blue Med Strength	5637	103706	1

Figure 4 Identify the actual component required

1 WING ASSEMBLY S3 - DRAWING # 6485

1.1 Cross Bar Leading Edge Junct. - *Drawing # 6484*
- **1.1.1 Nose Junction Assembly** - **Drawing # 6474**
  - 1.1.1.1 U Bracket and Keel Assembly - Drawing # 6470
  - 1.1.1.2 Leading Edge and Channel - Drawing # 6473
- **1.1.2 Cross Bar Hinge Assembly** - **Drawing # 6483**

1.2 Rear Leading Edge Assembly - *Drawing # 6486*
- **1.2.1 Trike Wing Leading Edge Tensioner** - **Drawing # 5172**

1.3 Kingpost Assembly - *Drawing # 6406*

1.4 Control Frame Assembly S3 - *Drawing # 6482*
- **1.4.1 Down Tube LHS Assembly** - **Drawing # 6476**
- **1.4.2 Down Tube RHS Assembly** - **Drawing # 6481**
  - 1.4.2.1 Trimmer Assembly - Drawing # 6409

1.5 Covers and Padding - *Drawing # 6496*

1.6 Batten List S3 - *Drawing # 6402*
- **1.6.1 Trike Wing Batten Interchange List** - **Drawing # 6712**

1.7 Data Package Components - *Drawing # 6929*

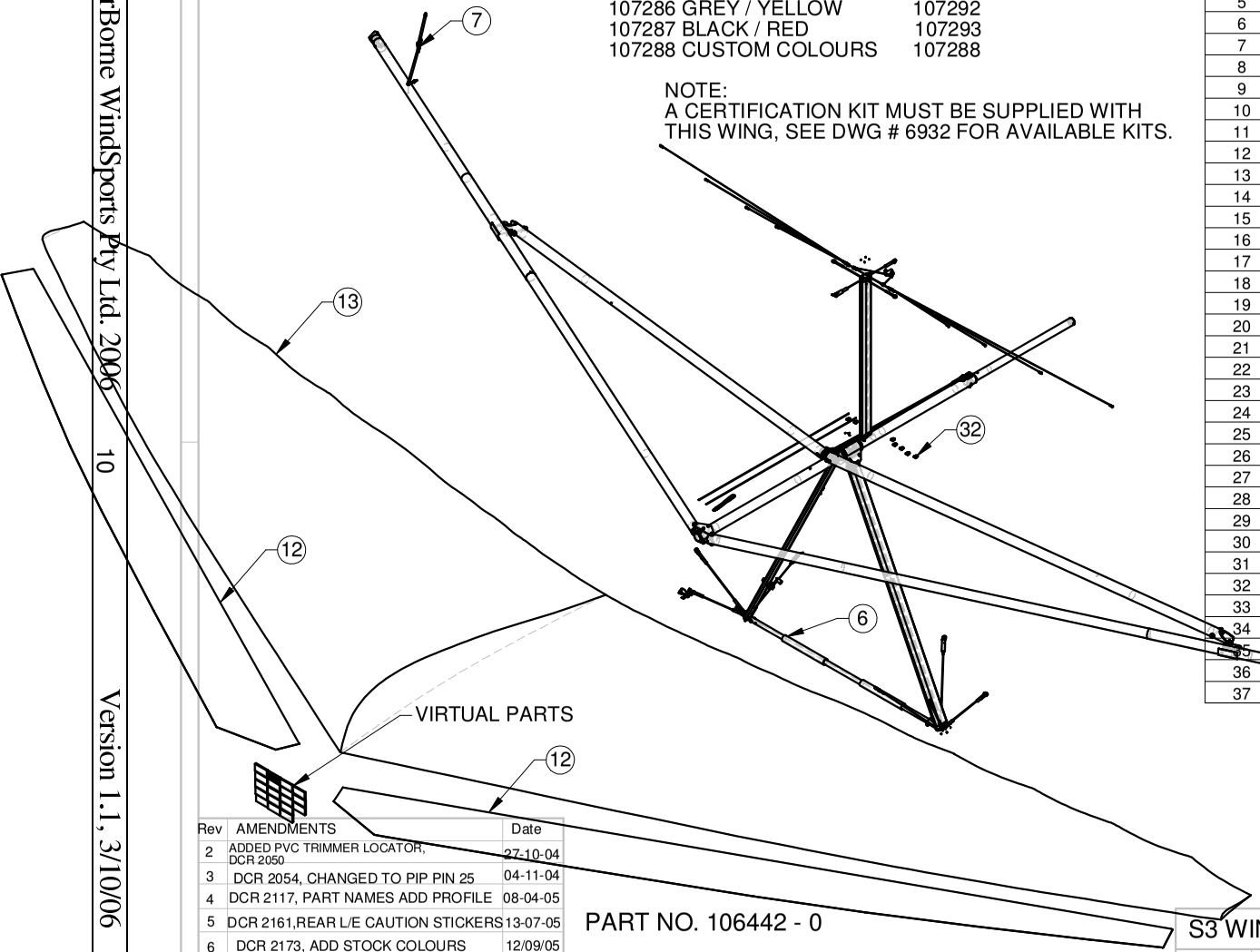
1.8 Batten Profile S3 - *Drawing # 6622*

STREAK 3 – CRUZE IPC

STOCK COLOUR PART # LIST / SAIL #

106442 COLOUR TBA	
107283 WHITE / RED	107289
107284 WHITE / YELLOW	107290
107285 WHITE / BLUE	107291
107286 GREY / YELLOW	107292
107287 BLACK / RED	107293
107288 CUSTOM COLOURS	107288

NOTE:
A CERTIFICATION KIT MUST BE SUPPLIED WITH THIS WING, SEE DWG # 6932 FOR AVAILABLE KITS.



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	AIRFRAME PRE ASSY S SERIES	6484	106440	1
2	REAR LEADING EDGE RHS PRE ASSY	6486	106445	1
3	REAR LEADING EDGE LHS PRE ASSY	6486	106443	1
4	KINGPOST AERO S3-CRUZE WITH WIRES	6406	106309	1
5	CONTROL FRAME PRE ASSY S3 (SPREAD)	6482	106438	1
6	BASE BAR AERO SUB-ASSEM	6414	106317	1
7	TW FOLDING TIP STRUT ASSY RHS	5368	105124	1
8	TW FOLDING TIP STRUT ASSY LHS	5368	105123	1
9	COVERS AND PADDING SET S SERIES	6496	106477	1
10	BATTEN STREAK 2B/3 SET	6402	106453	1
11	NOSE CATCH - SWAN	2140	100085	1
12	MYLAR INSERT S SERIES	6488	106446	2
13	STREAK 3 SAIL	6489	106281	1
14	PLACARD TRIMMER STREAK (REF CDR 4711)	4711	103817	1
15	PLACARD KING POST WIRE CHECK	4711	104622	1
16	BOLT QUICK CLIP AN5-31A TYPE 3	6453	106405	1
17	QUICK CLIP BLOCK (SS)	7002	106153	1
18	QUICK CLIP PIN (AL)	6467	103277	1
19	QUICK CLIP SPRING (157A)	6468	101203	1
20	PIP PIN 38	5719	102146	1
21	PIP PIN CAP WITH WIRE 38	5718	101418	1
22	PIP PIN 25	5719	106702	1
23	PIP PIN CAP WITH WIRE	5718	101418	1
24	BOLT AN4-13 a	5450	101333	1
25	BOLT AN4-11a	5450	100003	1
26	NUT NYLOC AN4 FULL	5535	100034	1
27	NUT NYLOC AN4 HALF	5561	100035	1
28	NUT NYLOC AN5 FULL	5535	100036	1
29	WASHER AN5	5540	100043	1
30	WASHER AN4	5540	100042	1
31	SHACKLE SHGF09	6338	100954	1
32	SHACKLE RF615 4mm	6338	100406	9
33	TUBE PVC CLEAR 6MM X 11 WITH GROOVE	6571	106693	1
34	HEATSHRINK CLR 20mm x 50	5582	106375	1
35	BATTEN PROFILE STREAK II/III	6622	105028	1
36	LABEL S3 REAR L/E LHS	6846	107257	1
37	LABEL S3 REAR L/E RHS	6846	107256	1

Rev	AMENDMENTS	Date
2	ADDED PVC TRIMMER LOCATOR, DCR 2050	27-10-04
3	DCR 2054, CHANGED TO PIP PIN 25	04-11-04
4	DCR 2117, PART NAMES ADD PROFILE	08-04-05
5	DCR 2161,REAR L/E CAUTION STICKERS	13-07-05
6	DCR 2173, ADD STOCK COLOURS	12/09/05
7	DCR 2234, REMOVE PARTS C/- SLSA	10-04-06
8	DCR 2238, CHG PIP PIN TO 38	12-04-06

PART NO. 106442 - 0

LAST ACESSED: Wednesday, 13 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

S3 WING ASSEMBLY

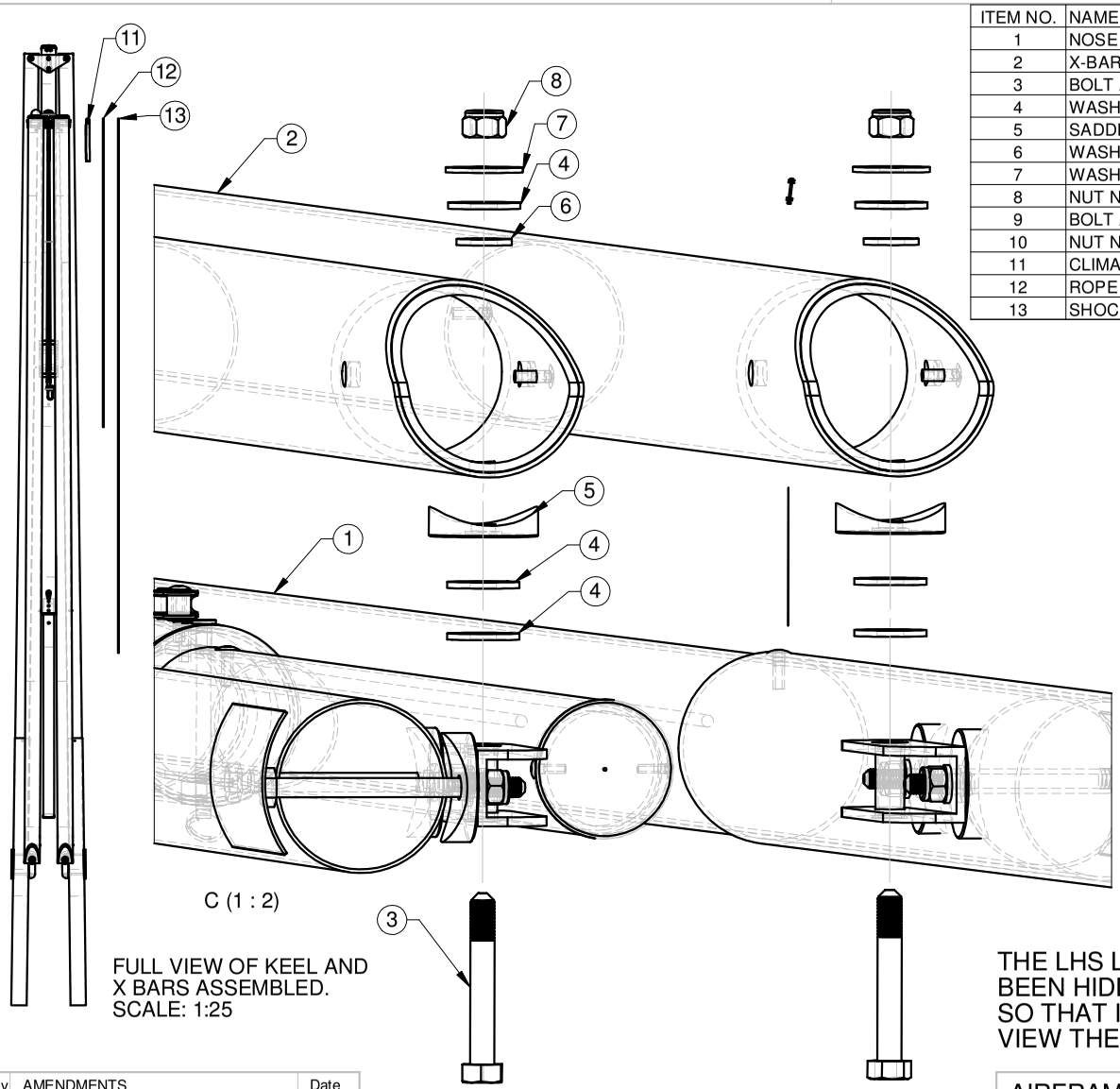
Drawn By	Scale	Date
Simon	1:10	10-06-04

AirBorne AUSTRALIA

6485

SHEET 1 of 3

AirBorne AUSTRALIA



C (1 : 2)

FULL VIEW OF KEEL AND
X BARS ASSEMBLED.
SCALE: 1:25

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	NOSE JUNCTION ASSY S SERIES	6474	106426	1
2	X-BAR WITH HINGE	6483	106439	1
3	BOLT AN5-21 a	5493	100819	2
4	WASHER NYLON M 8 XOD	5540	100820	6
5	SADDLE 60MM TUBE	7166	100080	2
6	WASHER NYLON M8 STD	5540	100595	2
7	WASHER SS 5-16 X 1" X 16g	5540	100714	10
8	NUT NYLOC AN5 FULL	5535	100036	2
9	BOLT AN5-36 a	5493	100026	2
10	NUT NYLOC AN5 HALF	5561	100037	2
11	CLIMAX 2 , STREAK PULL BACK STRAP W TANG	6463	104754	1
12	ROPE PRESTRETCHED 4 X 1270	6493	106452	1
13	SHOCK CORD 4mm X 2200	6493	106451	1

VIEW OF RHS LEADING EDGE
SHOWING WIRE POSITIONS

THE LHS LEADING EDGE HAS
BEEN HIDDEN IN DETAIL VIEW A,
SO THAT IT IS POSSIBLE TO
VIEW THE PARTS BEING ASSEMBLED.

Rev	AMENDMENTS	Date
1	CHANGED TO S SERIES DCR 2109	08-04-05

PART NO. 106440 - 1

LAST ACESSED: Tuesday, 3 October 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

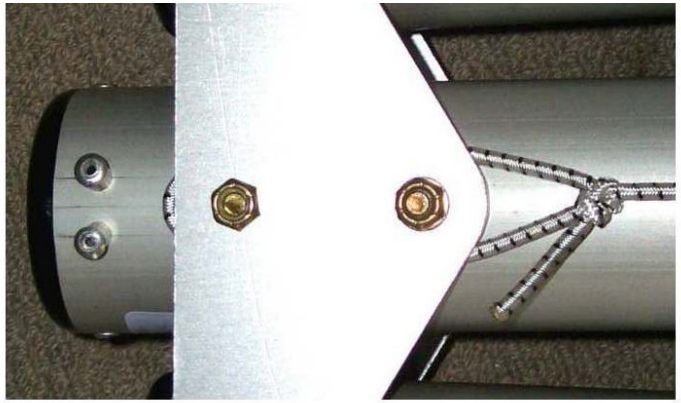
AIRFRAME PRE ASSY S SERIES

Drawn By	Scale	Date		
Simon	1:1	09-06-04	AirBorne AUSTRALIA	6484 SHEET 1 of 2

AirBorne AUSTRALIA

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	NOSE JUNCTION ASSY S SERIES	6474	106426	1
2	X-BAR WITH HINGE	6483	106439	1
3	BOLT AN5-21 a	5493	100819	2
4	WASHER NYLON M 8 XOD	5540	100820	6
5	SADDLE 60MM TUBE	7166	100080	2
6	WASHER NYLON M8 STD	5540	100595	2
7	WASHER SS 5-16 X 1" X 16g	5540	100714	10
8	NUT NYLOC AN5 FULL	5535	100036	2
9	BOLT AN5-36 a	5493	100026	2
10	NUT NYLOC AN5 HALF	5561	100037	2
11	CLIMAX 2 , STREAK PULL BACK STRAP W TANG	6463	104754	1
12	ROPE PRESTRETCHED 4 X 1270	6493	106452	1
13	SHOCK CORD 4mm X 2200	6493	106451	1

PHOTOGRAPHS OF ROPE AND SHOCK CORD ROUTING PRIOR TO FINAL ASSEMBLY PULL BACK STRAP LOCATION ALSO SHOWN.



Rev	AMENDMENTS	Date

PART NO. 106440

LAST ACESSED: Tuesday, 3 October 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

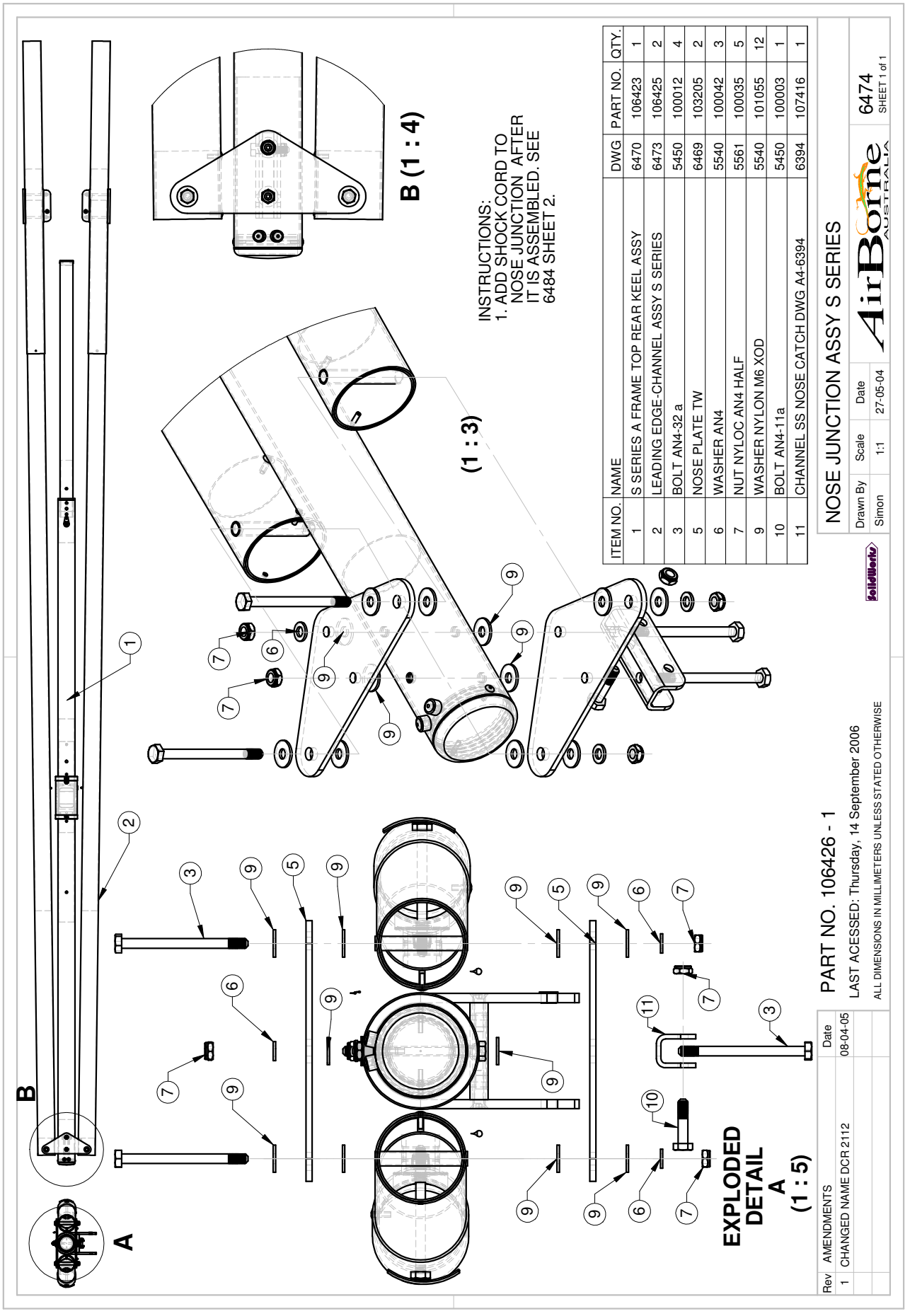
AIRFRAME PRE ASSY S SERIES

Drawn By	Scale	Date
Simon	1:50	17-06-04

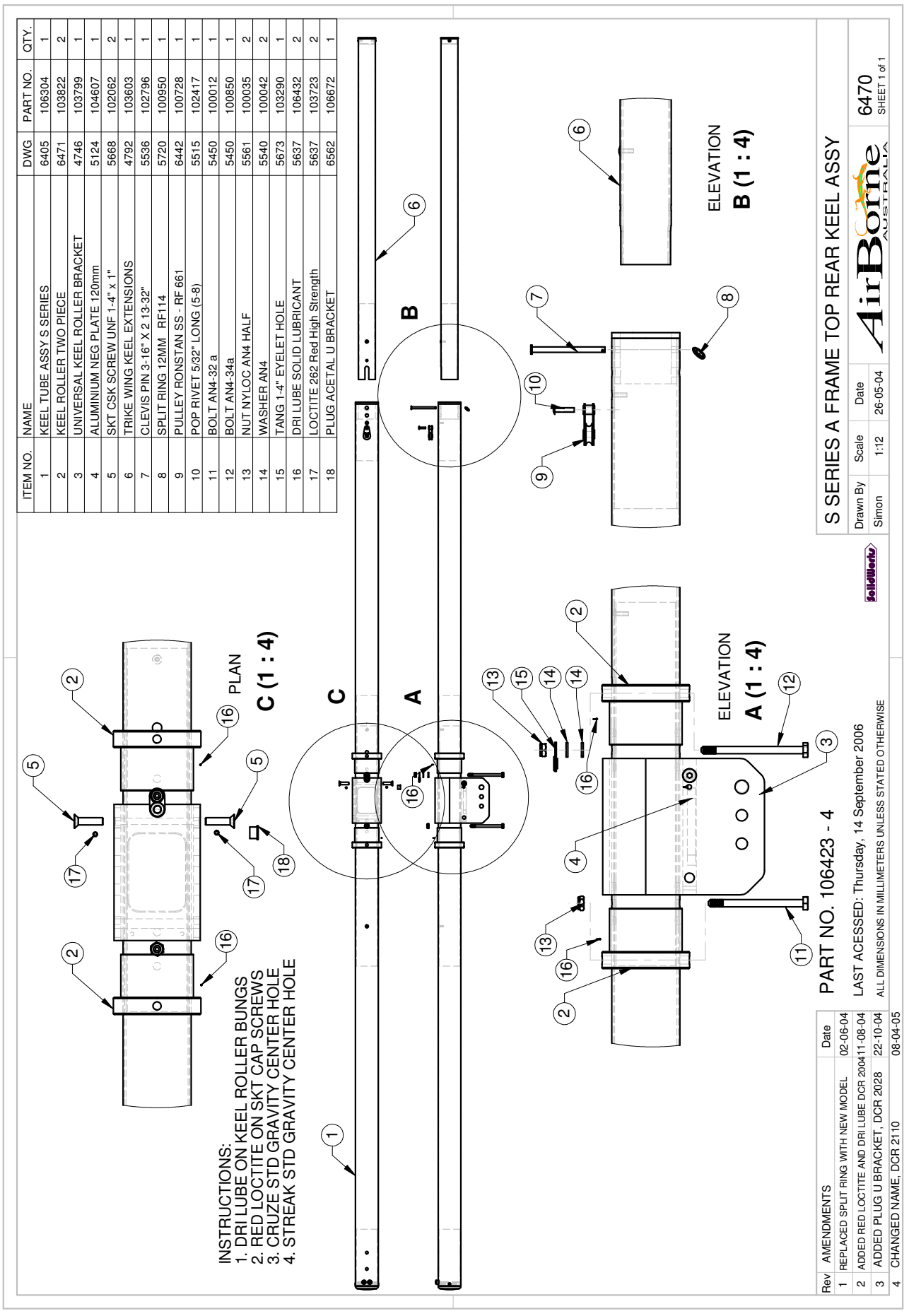
AirBorne AUSTRALIA

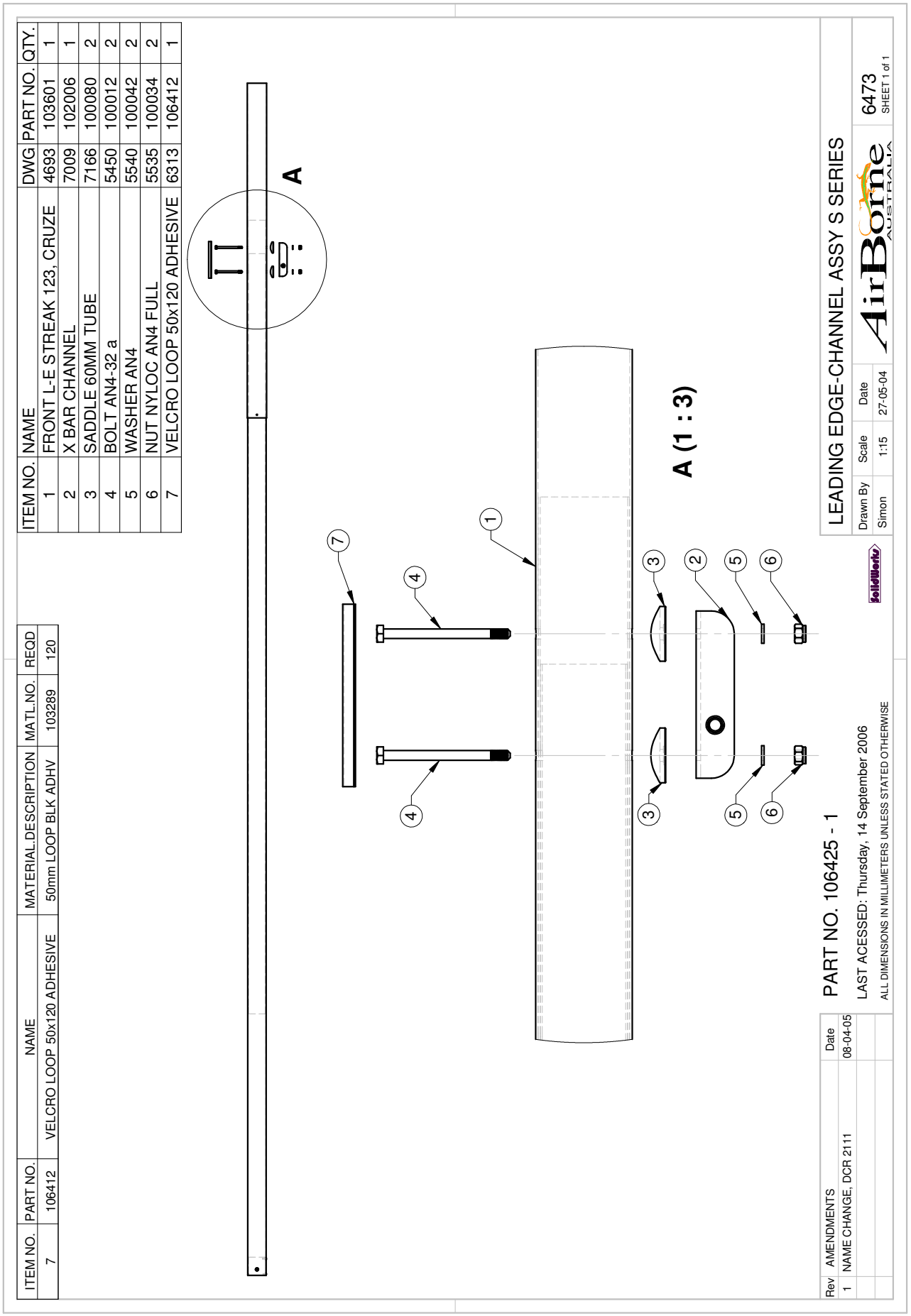
6484

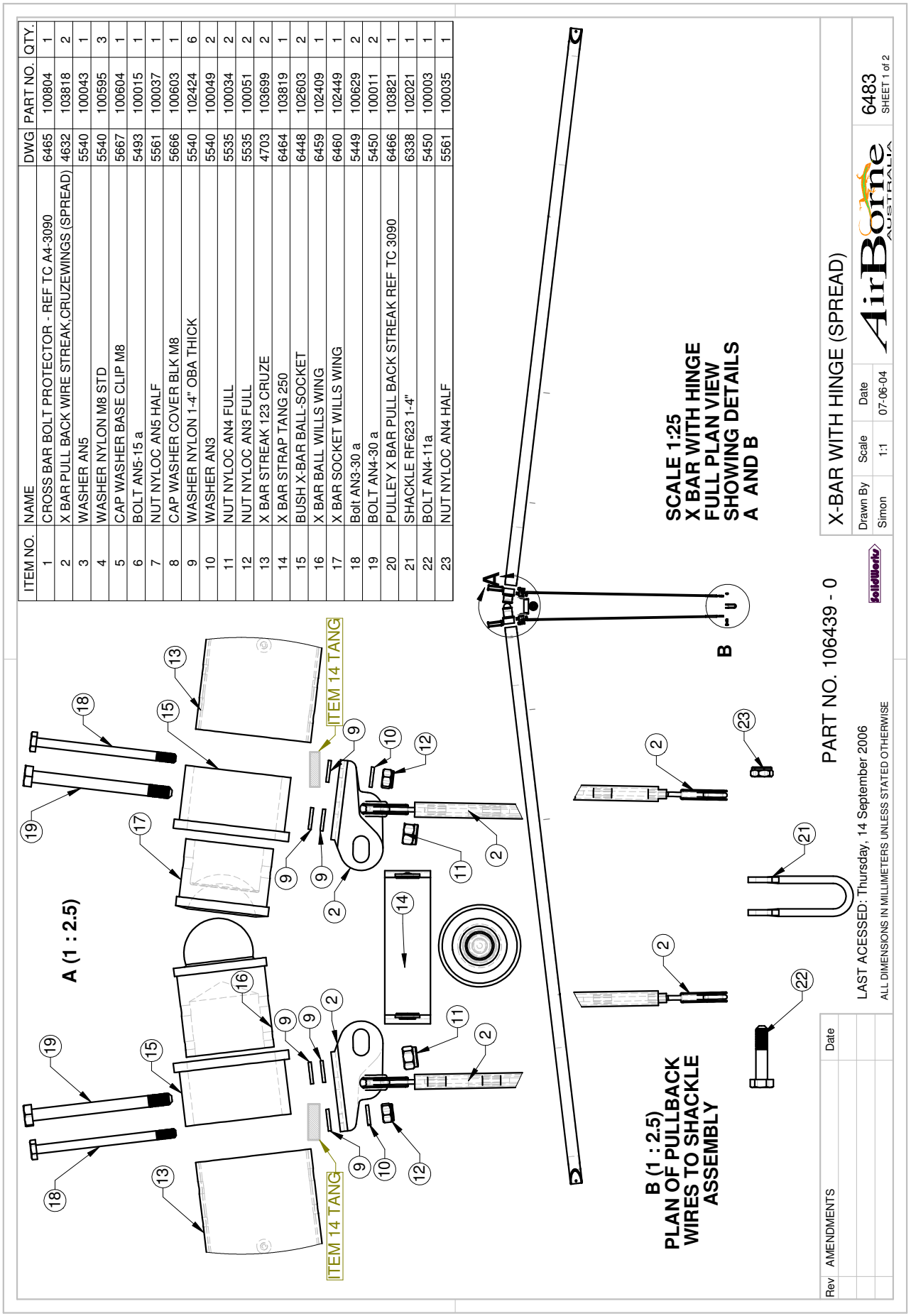
SHEET 2 of 2

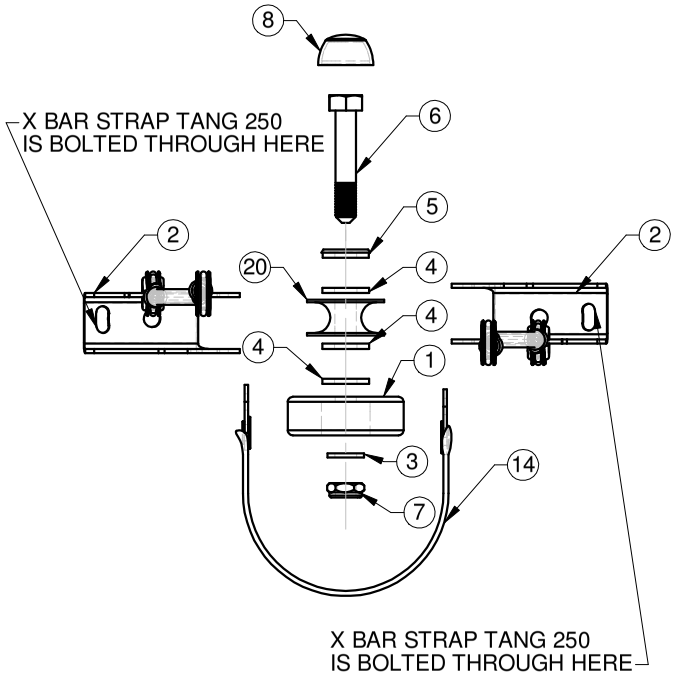


ITEM NO.	NAME	DWG	PART NO.	QTY.
1	S SERIES A FRAME TOP REAR KEEL ASSY	6470	106423	1
2	LEADING EDGE-CHANNEL ASSY S SERIES	6473	106425	2
3	BOLT AN4-32 a	5450	100012	4
5	NOSE PLATE TW	6469	103205	2
6	WASHER AN4	5540	100042	3
7	NUT NYLOC AN4 HALF	5561	100035	5
9	WASHER NYLON M6 XOD	5540	101055	12
10	BOLT AN4-11a	5450	100003	1
11	CHANNEL SS NOSE CATCH DWG A4-6394	6394	107416	1


ITEM NO. | NAME | DWG | PART NO. | QTY.
1 | KEEL TUBE ASSY S SERIES | 6405 | 106304 | 1
2 | KEEL ROLLER TWO PIECE | 6471 | 103822 | 2
3 | UNIVERSAL KEEL ROLLER BRACKET | 4746 | 103799 | 1
4 | ALUMINIUM NEG PLATE 120mm | 5124 | 104607 | 1
5 | SKT CSK SCREW UNF 1-4" x 1" | 5668 | 102062 | 2
6 | TRIKE WING KEEL EXTENSIONS | 4792 | 103603 | 1
7 | CLEVIS PIN 3-16" X 2 13-32" | 5536 | 102796 | 1
8 | SPLIT RING 12MM RF114 | 5720 | 100950 | 1
9 | PULLEY RONSTAN SS - RF 661 | 6442 | 100728 | 1
10 | POP RIVET 5/32" LONG (5-8) | 5515 | 102417 | 1
11 | BOLT AN4-32 a | 5450 | 100012 | 1
12 | BOLT AN4-34a | 5450 | 100850 | 1
13 | NUT NYLOC AN4 HALF | 5561 | 100035 | 2
14 | WASHER AN4 | 5540 | 100042 | 2
15 | TANG 1-4" EYELET HOLE | 5673 | 103290 | 1
16 | DRI LUBE SOLID LUBRICANT | 5637 | 106432 | 2
17 | LOCTITE 262 Red High Strength | 5637 | 103723 | 2
18 | PLUG ACETAL U BRACKET | 6562 | 106672 | 1
INSTRUCTIONS:
1. DRI LUBE ON KEEL ROLLER BUNGS
2. RED LOCTITE ON SKT CAP SCREWS
3. CRUZE STD GRAVITY CENTER HOLE
4. STREAK STD GRAVITY CENTER HOLE
PLAN
C (1 : 4)
ELEVATION
A (1 : 4)
ELEVATION
B (1 : 4)
PART NO. 106423 - 4
S SERIES A FRAME TOP REAR KEEL ASSY
Drawn By: Simon
Scale: 1:12
Date: 26-05-04
AirBorne AUSTRALIA
6470
SHEET 1 of 1
LAST ACESSED: Thursday, 14 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev | AMENDMENTS | Date
1 | REPLACED SPLIT RING WITH NEW MODEL | 02-06-04
2 | ADDED RED LOCTITE AND DRI LUBE DCR 2004 | 11-08-04
3 | ADDED PLUG U BRACKET, DCR 2028 | 22-10-04
4 | CHANGED NAME, DCR 2110 | 08-04-05


ITEM NO. NAME DWG PART NO. QTY.
1 FRONT L-E STREAK 123, CRUZE 4693 103601 1
2 X BAR CHANNEL 7009 102006 1
3 SADDLE 60MM TUBE 7166 100080 2
4 BOLT AN4-32 a 5450 100012 2
5 WASHER AN4 5540 100042 2
6 NUT NYLOC AN4 FULL 5535 100034 2
7 VELCRO LOOP 50x120 ADHESIVE 6313 106412 1
ITEM NO. PART NO. NAME MATERIAL.DESCRIPTION MATL.NO. REQD
7 106412 VELCRO LOOP 50x120 ADHESIVE 50mm LOOP BLK ADHV 103289 120
A
A (1 : 3)
LEADING EDGE-CHANNEL ASSY S SERIES
Drawn By Simon
Scale 1:15
Date 27-05-04
AirBorne AUSTRALIA
6473
SHEET 1 of 1
PART NO. 106425 - 1
LAST ACESSED: Thursday, 14 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
SolidWorks
Rev AMENDMENTS Date
1 NAME CHANGE, DCR 2111 08-04-05

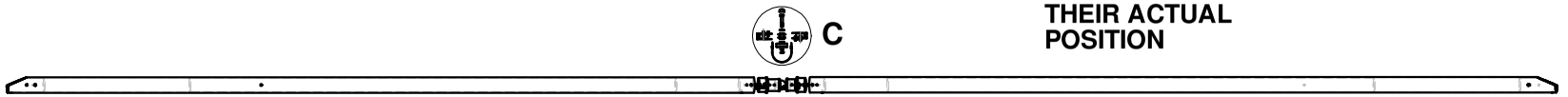

ITEM NO. | NAME | DWG | PART NO. | QTY.
1 | CROSS BAR BOLT PROTECTOR - REF TC A4-3090 | 6465 | 100804 | 1
2 | X BAR PULL BACK WIRE STREAK,CRUZEWINGS (SPREAD) | 4632 | 103818 | 2
3 | WASHER AN5 | 5540 | 100043 | 1
4 | WASHER NYLON M8 STD | 5540 | 100595 | 3
5 | CAP WASHER BASE CLIP M8 | 5667 | 100604 | 1
6 | BOLT AN5-15 a | 5493 | 100015 | 1
7 | NUT NYLOC AN5 HALF | 5561 | 100037 | 1
8 | CAP WASHER COVER BLK M8 | 5666 | 100603 | 1
9 | WASHER NYLON 1-4" OBA THICK | 5540 | 102424 | 6
10 | WASHER AN3 | 5540 | 100049 | 2
11 | NUT NYLOC AN4 FULL | 5535 | 100034 | 2
12 | NUT NYLOC AN3 FULL | 5535 | 100051 | 2
13 | X BAR STREAK 123 CRUZE | 4703 | 103699 | 2
14 | X BAR STRAP TANG 250 | 6464 | 103819 | 1
15 | BUSH X-BAR BALL-SOCKET | 6448 | 102603 | 2
16 | X BAR BALL WILLS WING | 6459 | 102409 | 1
17 | X BAR SOCKET WILLS WING | 6460 | 102449 | 1
18 | Bolt AN3-30 a | 5449 | 100629 | 2
19 | BOLT AN4-30 a | 5450 | 100011 | 2
20 | PULLEY X BAR PULL BACK STREAK REF TC 3090 | 6466 | 103821 | 1
21 | SHACKLE RF623 1-4" | 6338 | 102021 | 1
22 | BOLT AN4-11a | 5450 | 100003 | 1
23 | NUT NYLOC AN4 HALF | 5561 | 100035 | 1
A (1 : 2.5)
ITEM 14 TANG
ITEM 14 TANG
B (1 : 2.5)
PLAN OF PULLBACK
WIRES TO SHACKLE
ASSEMBLY
SCALE 1:25
X BAR WITH HINGE
FULL PLAN VIEW
SHOWING DETAILS
A AND B
A
B
PART NO. 106439 - 0
X-BAR WITH HINGE (SPREAD)
Drawn By Simon
Scale 1:1
Date 07-06-04
AirBorne AUSTRALIA
6483
SHEET 1 of 2
SolidWorks
LAST ACESSED: Thursday, 14 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev AMENDMENTS Date



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	CROSS BAR BOLT PROTECTOR - REF TC A4-3090	6465	100804	1
2	X BAR PULL BACK WIRE STREAK,CRUZEWINGS (SPREAD)	4632	103818	2
3	WASHER AN5	5540	100043	1
4	WASHER NYLON M8 STD	5540	100595	3
5	CAP WASHER BASE CLIP M8	5667	100604	1
6	BOLT AN5-15 a	5493	100015	1
7	NUT NYLOC AN5 HALF	5561	100037	1
8	CAP WASHER COVER BLK M8	5666	100603	1
9	WASHER NYLON 1-4" OBA THICK	5540	102424	6
10	WASHER AN3	5540	100049	2
11	NUT NYLOC AN4 FULL	5535	100034	2
12	NUT NYLOC AN3 FULL	5535	100051	2
13	X BAR STREAK 123 CRUZE	4703	103699	2
14	X BAR STRAP TANG 250	6464	103819	1
15	BUSH X-BAR BALL-SOCKET	6448	102603	2
16	X BAR BALL WILLS WING	6459	102409	1
17	X BAR SOCKET WILLS WING	6460	102449	1
18	Bolt AN3-30 a	5449	100629	2
19	BOLT AN4-30 a	5450	100011	2
20	PULLEY X BAR PULL BACK STREAK REF TC 3090	6466	103821	1
21	SHACKLE RF623 1-4"	6338	102021	1
22	BOLT AN4-11a	5450	100003	1
23	NUT NYLOC AN4 HALF	5561	100035	1

C (1 : 2.5)
ELEVATION OF PIVOT BOLT TO PULLBACK HINGE ASSEMBLY

SCALE 1:25
X BAR WITH HINGE
FULL ELEVATION VIEW
SHOWING DETAIL C
NB THE PARTS ARE EXPLODED UP FROM THEIR ACTUAL POSITION



Rev	AMENDMENTS	Date

PART NO. 106439 - 0

LAST ACESSED: Thursday, 14 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

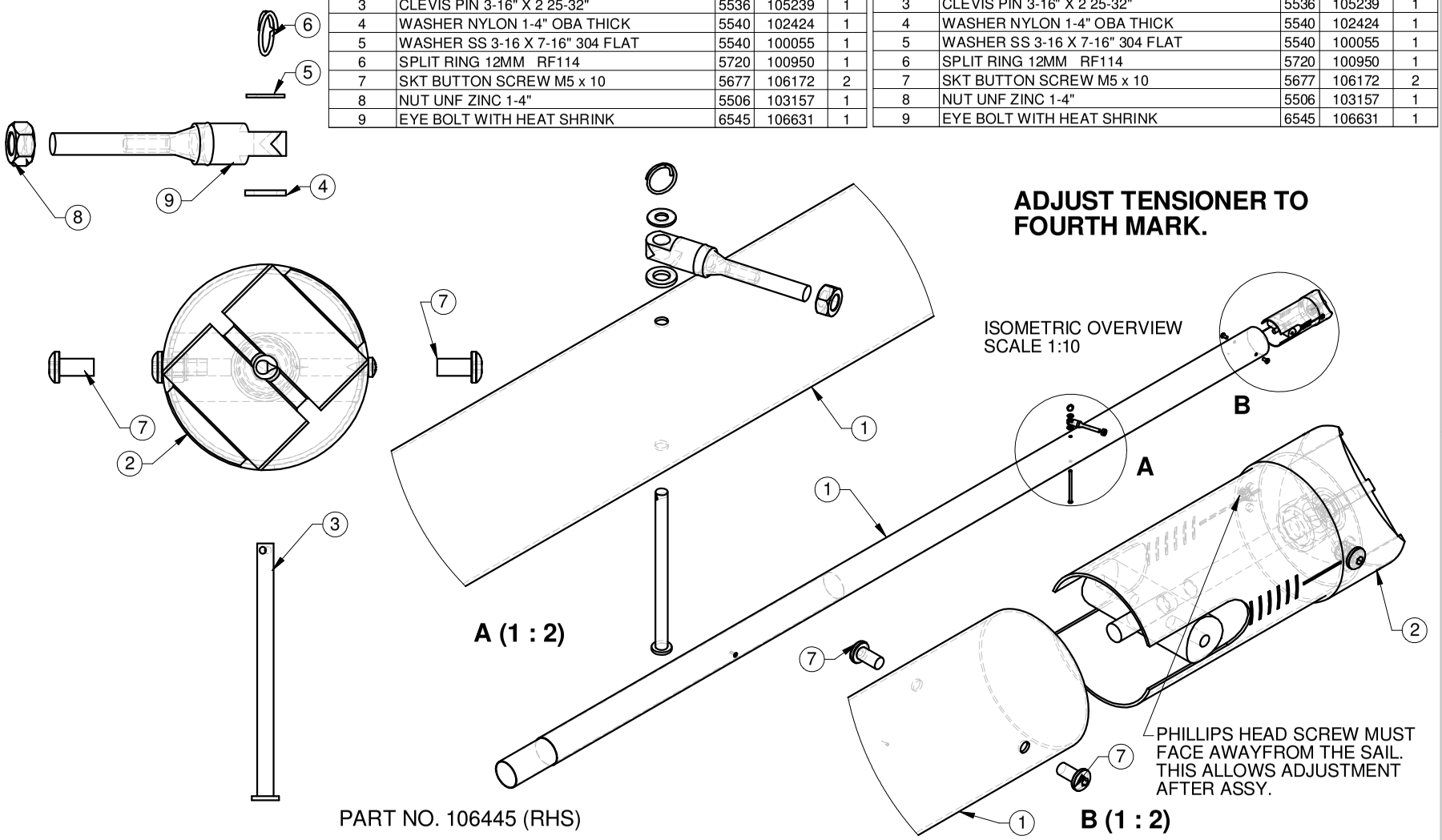
X-BAR WITH HINGE (SPREAD)

Drawn By	Scale	Date		
Cris	1:1	06/05/03	AirBorne AUSTRALIA	6483 SHEET 2 of 2

AirBorne AUSTRALIA

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	REAR LEADING EDGE ASSY S SERIES	6403	106303	1
2	TW LEADING EDGE TENSIONER ASS LHS	5172	104669	1
3	CLEVIS PIN 3-16" X 2 25-32"	5536	105239	1
4	WASHER NYLON 1-4" OBA THICK	5540	102424	1
5	WASHER SS 3-16 X 7-16" 304 FLAT	5540	100055	1
6	SPLIT RING 12MM RF114	5720	100950	1
7	SKT BUTTON SCREW M5 x 10	5677	106172	2
8	NUT UNF ZINC 1-4"	5506	103157	1
9	EYE BOLT WITH HEAT SHRINK	6545	106631	1

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	REAR LEADING EDGE ASSY S SERIES	6403	106303	1
2	TW LEADING EDGE TENSIONER ASS RHS	5172	104740	1
3	CLEVIS PIN 3-16" X 2 25-32"	5536	105239	1
4	WASHER NYLON 1-4" OBA THICK	5540	102424	1
5	WASHER SS 3-16 X 7-16" 304 FLAT	5540	100055	1
6	SPLIT RING 12MM RF114	5720	100950	1
7	SKT BUTTON SCREW M5 x 10	5677	106172	2
8	NUT UNF ZINC 1-4"	5506	103157	1
9	EYE BOLT WITH HEAT SHRINK	6545	106631	1



PART NO. 106445 (RHS)

PART NO. 106443 - (LHS)

Rev	AMENDMENTS	Date

LAST ACESSED: Thursday, 14 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

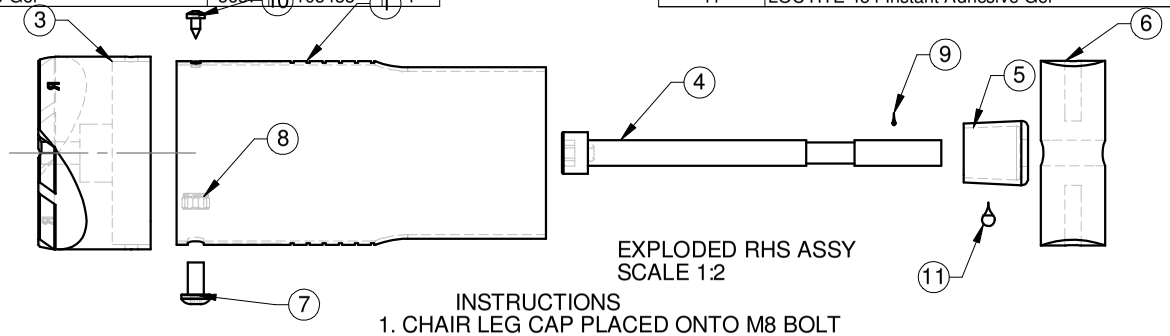
REAR LEADING EDGES PRE ASSY

Drawn By	Scale	Date		
Simon	1:1	10-06-04	AirBorne AUSTRALIA	6486 SHEET 1 of 1

AirBorne AUSTRALIA

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	STREAK ADJUSTER INNER TUBE REF TC A4-5168	5168	104665	1
2	WING ADJUSTER WEBBING CAP LHS	5169	104666	1
4	TIP ADJUSTER BOLT TRIKE WING	5233	104733	1
5	CHAIR LEG CAP 16 21-64" HOLE	5171	104668	1
6	STREAK ADJUSTER DOWL	5170	104667	1
7	SKT BUTTON SCREW M5 x 10	5677	106172	1
8	NUT NYLOC M 5 FULL	5604	101365	1
9	DRI LUBE SOLID LUBRICANT	5637	106432	1
10	SCREW SELF-TAPPING 1-4x8g 304SS	5909	105140	1
11	LOCTITE 454 Instant Adhesive Gel	5637	105433	1

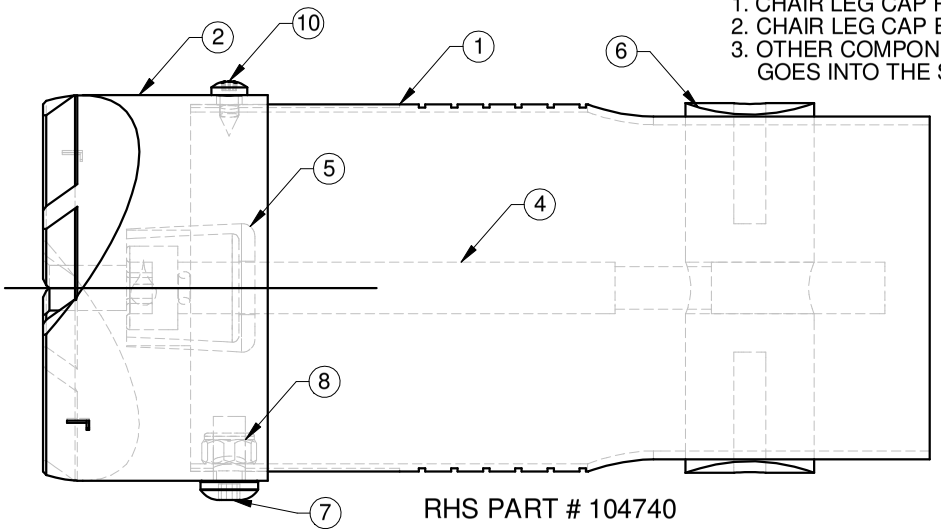
ITEM NO.	NAME	DWG	PART NO.	QTY.
1	STREAK ADJUSTER INNER TUBE REF TC A4-5168	5168	104665	1
3	WING ADJUSTER WEBBING CAP RHS	5169	105995	1
4	TIP ADJUSTER BOLT TRIKE WING	5233	104733	1
5	CHAIR LEG CAP 16 21-64" HOLE	5171	104668	1
6	STREAK ADJUSTER DOWL	5170	104667	1
7	SKT BUTTON SCREW M5 x 10	5677	106172	1
8	NUT NYLOC M 5 FULL	5604	101365	1
9	DRI LUBE SOLID LUBRICANT	5637	106432	1
10	SCREW SELF-TAPPING 1-4x8g 304SS	5909	105140	1
11	LOCTITE 454 Instant Adhesive Gel	5637	105433	1

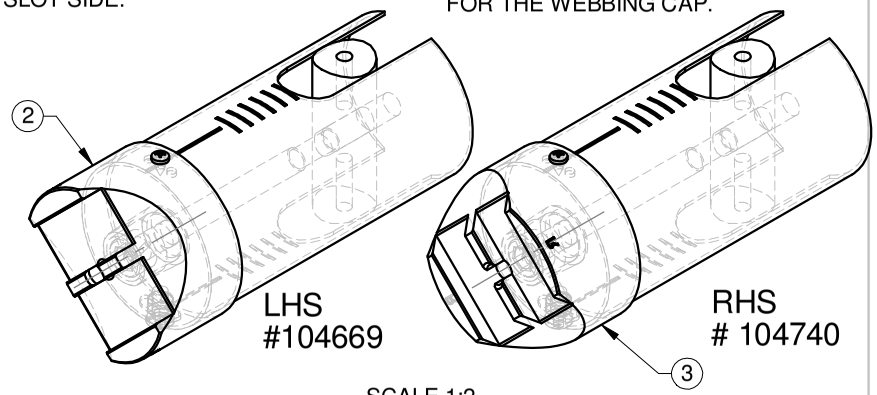


EXPLODED RHS ASSY
SCALE 1:2

INSTRUCTIONS
1. CHAIR LEG CAP PLACED ONTO M8 BOLT
2. CHAIR LEG CAP BONDED INTO WEBBING CAP
3. OTHER COMPONENTS ASSEMBLED, THE BOLT GOES INTO THE SLOT SIDE.

NB: THERE ARE TWO DIFFERENT LEFT / RIGHT COMPONENTS FOR THE WEBBING CAP.





SCALE 1:2

RHS PART # 104740

PART NO. 104669 - 0

LAST ACESSED: Thursday, 14 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

Rev	AMENDMENTS	Date
1	DCR 2163, ADDED LOCTITE.	10/08/05

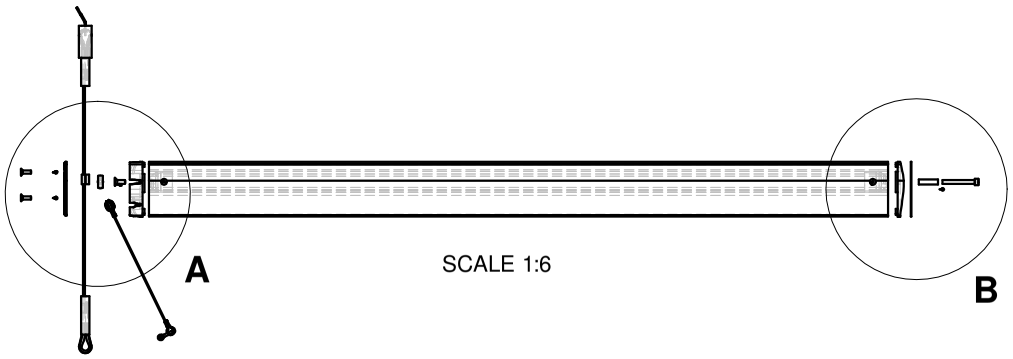
TW LEADING EDGE TENSIONER ASSYS

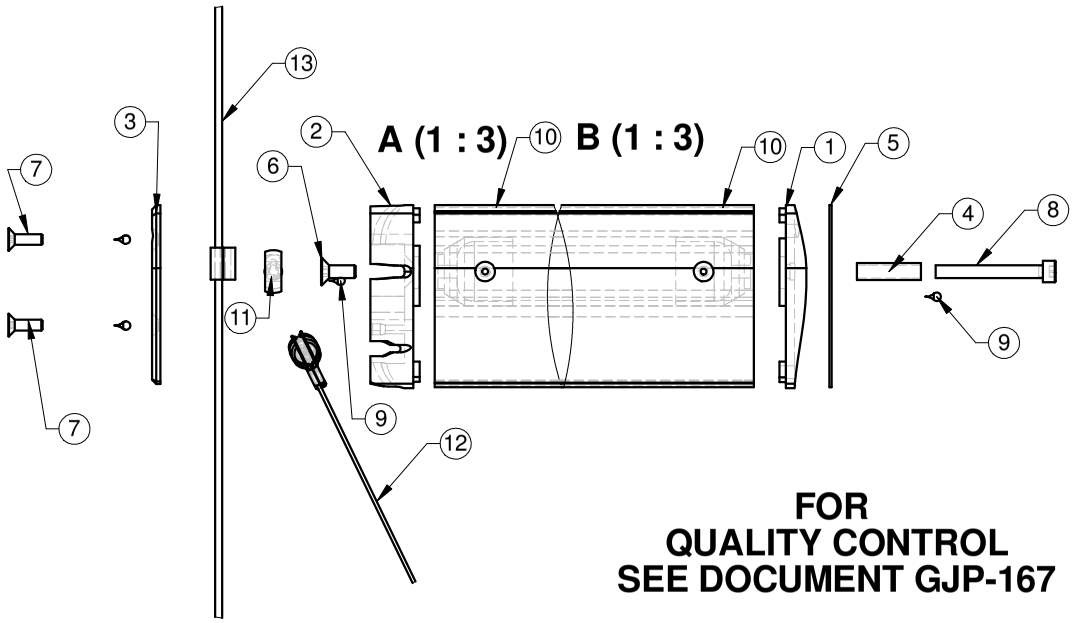
Drawn By	Scale	Date		
Simon	1:1	20-05-04	AirBorne AUSTRALIA	5172 SHEET 1 of 1

AirBorne AUSTRALIA

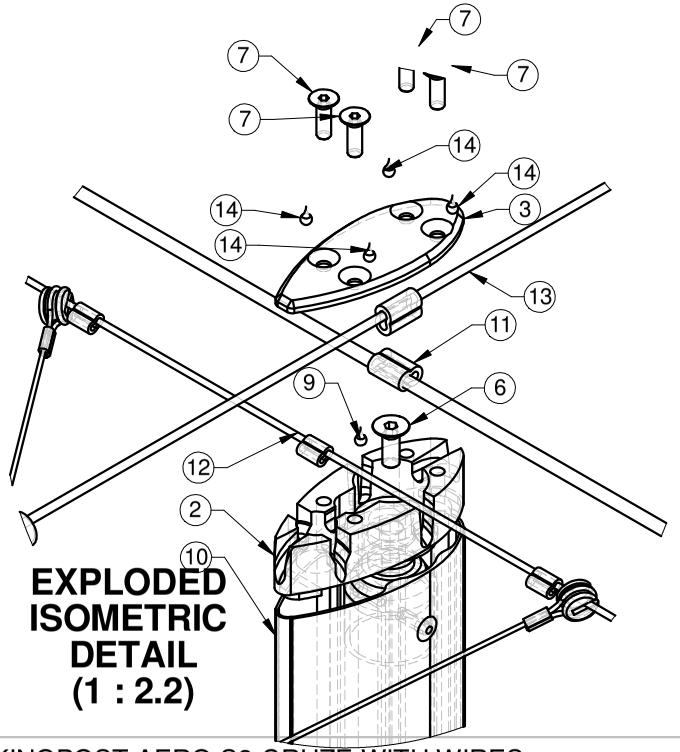
STREAK 3 – CRUZE IPC

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	KINGPOST BASE FITTING AERO	6345	106208	1
2	KINGPOST TOP FITTING AERO	6346	106209	1
3	KINGPOST TOP FITTING PLATE AERO	6347	106210	1
4	BUSH KINGPOST LOCATOR T-W AERO	5453	106302	1
5	VELCRO LOOP 50x85 ADHESIVE	6313	106381	1
6	SKT CSK SCREW M6x16 SS	5668	106275	1
7	SKT CSK SCREW M5x16 SS	5668	106344	4
8	SKT CAP SCREW SS M 6 X 50 - MODIFIED	5603	106306	1
9	LOCTITE 243 BLUE MID STRENGTH	5637	103706	2
10	KINGPOST S3-CRUZE	6478	106427	1
11	TOP SIDE SET WIRE STREAK 2 XT, 3, CRUZE	6439	104882	1
12	REFLEX BRIDLE ASSEM S SERIES TRIMME	6430	106342	1
13	WIRE TOP FRONT-BACK AERO S3-CRUZE	6438	106305	1
14	LOCTITE 222 Magenta Low Strength	5637	105432	4





FOR QUALITY CONTROL SEE DOCUMENT GJP-167



EXPLODED ISOMETRIC DETAIL (1 : 2.2)

Rev	AMENDMENTS	Date
1	ADDDED WIRES TO ASSY. CHANGED NAME	03-06-04
2	ADDED LOCTITE TO TOP PLATE, DCR 2012	07-09-04

PART NO. 106309 -

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

KINGPOST AERO S3-CRUZE WITH WIRES

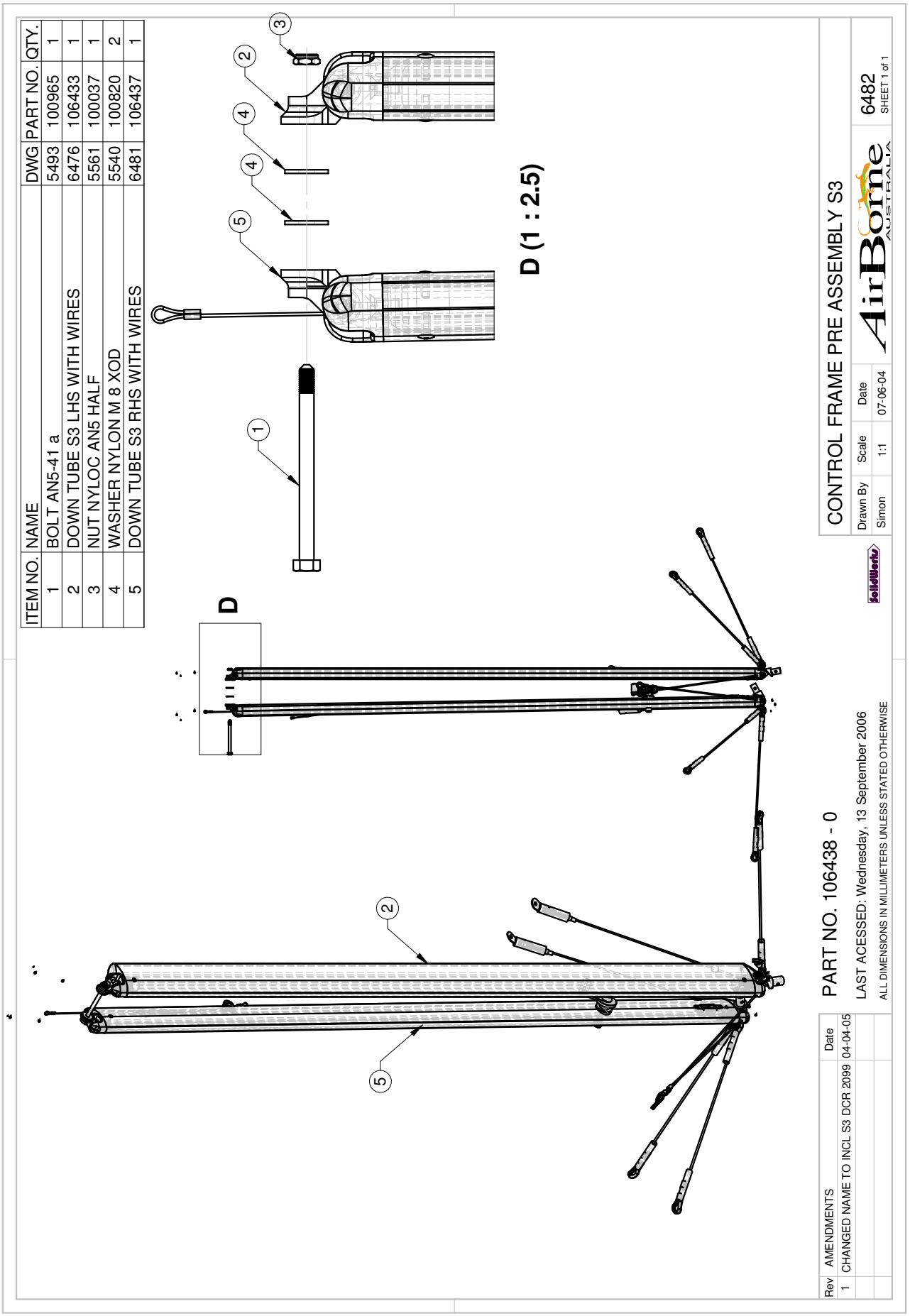
Drawn By	Scale	Date
Simon	1:6	28-05-04

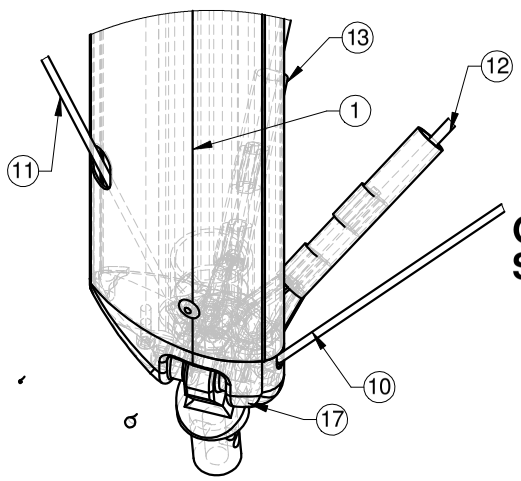
AirBorne AUSTRALIA

6406

SHEET 1 of 1

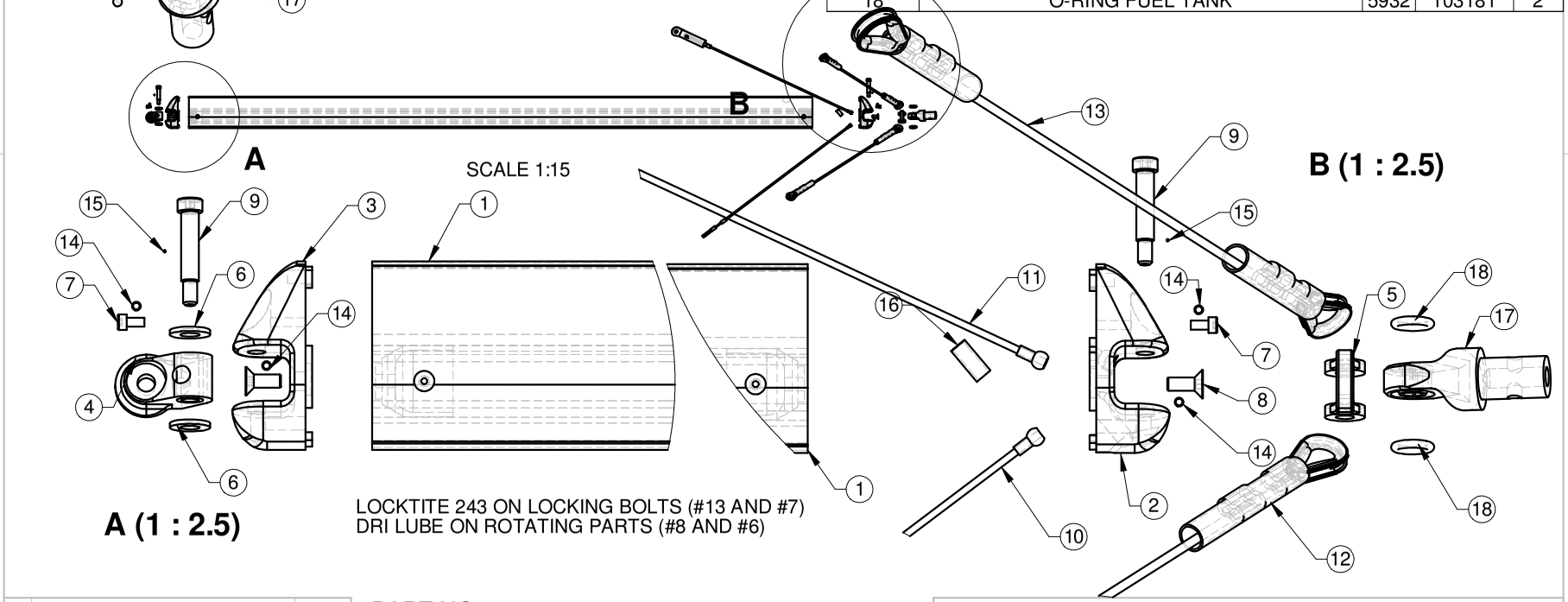
AirBorne AUSTRALIA


ITEM NO. | NAME | DWG | PART NO. | QTY.
1 | BOLT AN5-41 a | 5493 | 100965 | 1
2 | DOWN TUBE S3 LHS WITH WIRES | 6476 | 106433 | 1
3 | NUT NYLOC AN5 HALF | 5561 | 100037 | 1
4 | WASHER NYLON M 8 XOD | 5540 | 100820 | 2
5 | DOWN TUBE S3 RHS WITH WIRES | 6481 | 106437 | 1
D (1 : 2.5)
D
CONTROL FRAME PRE ASSEMBLY S3
Drawn By Simon
Scale 1:1
Date 07-06-04
AirBorne AUSTRALIA
6482
SHEET 1 of 1
SolidWorks
PART NO. 106438 - 0
LAST ACESSED: Wednesday, 13 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev AMENDMENTS Date
1 CHANGED NAME TO INCL S3 DCR 2099 04-04-05



QUASI ISOMETRIC VIEW
SCALE 1:2.5

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	D-TUBE AERO S3-CRUZE LHS SUB-ASSEM	6408	106312	1
2	KNUCKLE AERO 35X85 B LHS 6061	6889	107475	1
3	KNUCKLE TW AERO 35x85 TOP LHS	6343	106204	1
4	BRACKET AERO D-T TRIKE BUSHED	6893	107503	1
5	SHACKLE MODIFIED RM-24 HD	6445	106385	1
6	WASHER NYLON M8 STD	5540	100595	2
7	SKT CAP SCREW SS M 4 X 8	5603	106322	2
8	SKT CSK SCREW M6x16 SS	5668	106275	2
9	SKT SHOULDER SCREW BSW 5-16x1 1-4 ZINC	6395	108070	2
10	WIRE BOTTOM FRONT AERO S3	6423	106335	1
11	WIRE BOTTOM REAR AERO S3	6422	106334	1
12	WIRE BOT SIDE FWD AERO S3-CRUZE	6440	106377	1
13	WIRE BOT SIDE AFT AERO S3-CRUZE	6440	106378	1
14	LOCTITE 243 BLUE MID STRENGTH	5637	103706	4
15	DRI LUBE SOLID LUBRICANT	5637	106432	2
16	TUBE PVC CLEAR 6mm x 18L	5583	106434	1
17	KNUCKLE RD BASE BAR AERO SLOT	6897	107510	1
18	O-RING FUEL TANK	5932	103181	2



Rev	AMENDMENTS	Date
1	CHANGED NAME DCR 2095	05-04-05
2	KNUCKLES & BRACKETS DCR 2236	04-04-06
3	DCR 2265, ZINC PLATED 108070	20-09-06

PART NO. 106433 - 0

LAST ACESSED: Tuesday, 3 October 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

DOWN TUBE S3 LHS WITH WIRES

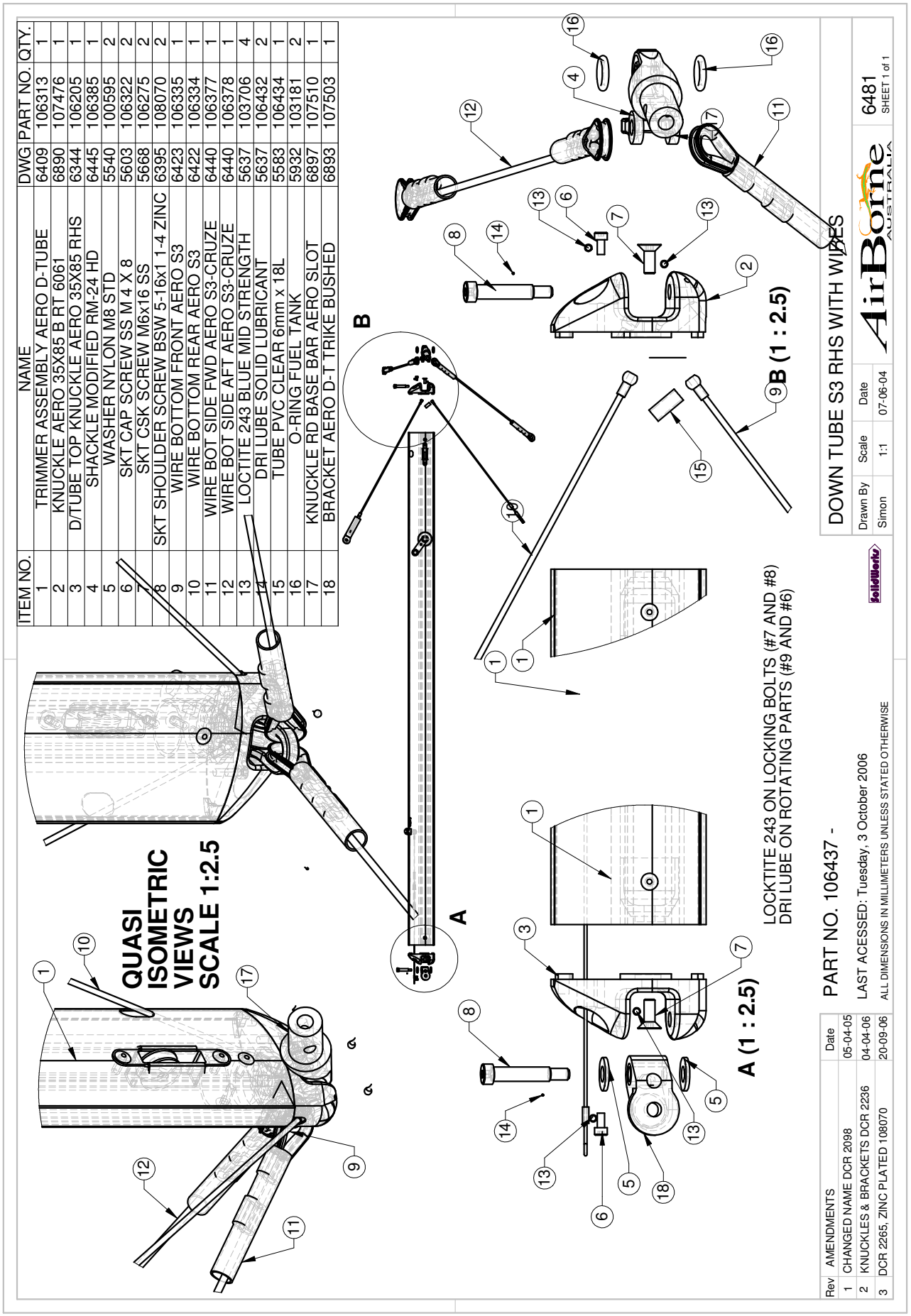
Drawn By	Scale	Date
Simon	1:20	24-05-04

AirBorne AUSTRALIA

6476

SHEET 1 of 1

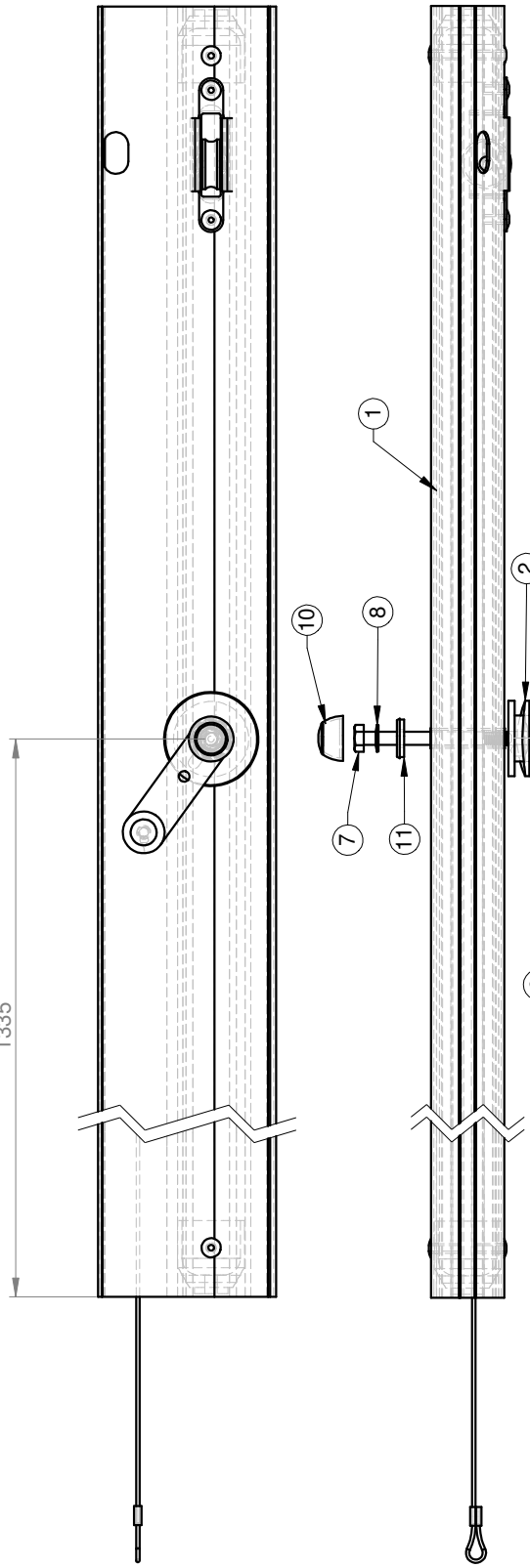
AirBorne AUSTRALIA



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	TRIMMER ASSEMBLY AERO D-TUBE	6409	106313	1
2	KNUCKLE AERO 35X85 B RT 6061	6890	107476	1
3	D/TUBE TOP KNUCKLE AERO 35X85 RHS	6344	106205	1
4	SHACKLE MODIFIED RM-24 HD	6445	106385	1
5	WASHER NYLON M8 STD	5540	100595	2
6	SKT CAP SCREW SS M 4 X 8	5603	106322	2
7	SKT CSK SCREW M6x16 SS	5668	106275	2
8	SKT SHOULDER SCREW BSW 5-16x1 1-4 ZINC	6395	108070	2
9	WIRE BOTTOM FRONT AERO S3	6423	106335	1
10	WIRE BOTTOM REAR AERO S3	6422	106334	1
11	WIRE BOT SIDE FWD AERO S3-CRUZE	6440	106377	1
12	WIRE BOT SIDE AFT AERO S3-CRUZE	6440	106378	1
13	LOCTITE 243 BLUE MID STRENGTH	5637	103706	4
14	DRI LUBE SOLID LUBRICANT	5637	106432	2
15	TUBE PVC CLEAR 6mm x 18L	5583	106434	1
16	O-RING FUEL TANK	5932	103181	2
17	KNUCKLE RD BASE BAR AERO SLOT	6897	107510	1
18	BRACKET AERO D-T TRIKE BUSHED	6893	107503	1

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	DOWN TUBE S3-CRUZE RHS SUB-ASSEM	6407	106311	1
2	SADDLE TRIMMER TRIKE AERO D-T	6397	106284	1
3	TRIMMER SPOOL TRIKE AERO D-T	6398	106287	1
4	HAND TRIMMER LEVER	4410	106476	1
5	KNOB - HAND PLASTIC 30	6433	106530	1
6	SKT CSK SCREW M6x16 SS	5668	106275	1
7	BOLT AN4-26 a	5450	100009	1
8	WASHER SS M6x12.5 BELVILLE	6421	106346	2
9	WASHER SS M10x20 BELVILLE	6421	102367	1
10	CAP WASHER COVER BLK M8	5666	100603	2
11	CAP WASHER BASE CLIP M8	5667	100604	2
12	NUT NYLOC AN4 HALF	5561	100035	1
13	LOCTITE 243 BLUE MID STRENGTH	5637	103706	1

NOTE: THREAD TRIMMER WIRE
BEFORE ASSEMBLY



PART NO. 106313 -

Rev	AMENDMENTS	Date
1	MOVED PULLEY TO PREV. ASSY. CHANGED BOLT LGTH	31-05-04
2	DCR 2162 CHANGE TRIMMER KNOB	09/08/05

LAST ACESSED: Monday, 11 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

Drawn By	Scale	Date
Cris	1:3	13/02/04

TRIMMER ASSEMBLY AERO D-TUBE

AirBorne AUSTRALIA

6409

SHEET 1 of 1

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	COVER FOLDING BAR CENTRE	4500	101673	1
2	COVER QUICK CLIP K POST BASE	6499	106480	1
3	COVER U BRACKET STREAK	6497	106478	1
4	COVER X/BAR SMALL	7146	102730	1
5	GLIDER TIE	7153	100139	4
6	COVER REAR KEEL TRIKE WING	4499	102436	1
7	BATTEN BAG DOUBLE	6498	106479	1
8	COVER TIP BAG ELASTIC	6500	106481	2
9	COVER GLIDER BAG STREAK	7149	103883	1
10	COVER BASE BAR S SERIES	6501	106482	1
11	TRIMMER COVER	6535	106614	1
12	TIP SCRUFF PAD S SERIES	6548	105139	1

Rev	AMENDMENTS	Date
1	ADDED TIP SCRUFF PAD, DCR 2051	27-10-04
2	CHANGED TO S SERIES DCR 2107	08-04-05

PART NO. 106477 - 2

LAST ACESSED: Wednesday, 13 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

COVERS AND PADDING SET S SERIES

Drawn By	Scale	Date
Simon	NTS	28-06-04

AirBorne AUSTRALIA

6496

SHEET 1 of 2

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	COVER FOLDING BAR CENTRE	4500	101673	1
2	COVER QUICK CLIP K POST BASE	6499	106480	1
3	COVER U BRACKET STREAK	6497	106478	1
4	COVER X/BAR SMALL	7146	102730	1
5	GLIDER TIE	7153	100139	4
7	BATTEN BAG DOUBLE	6498	106479	1
8	COVER TIP BAG ELASTIC	6500	106481	2
9	COVER GLIDER BAG STREAK	7149	103883	1
10	COVER BASE BAR S SERIES	6501	106482	1
11	TRIMMER COVER	6535	106614	1
12	TIP SCRUFF PAD S SERIES	6548	105139	1
13	COVER REAR KEEL TRIKE WING	4499	102436	1

COVERS AND PADDING SET S SERIES

Drawn By	Scale	Date
Simon	1:1	02/03/03

AirBorne AUSTRALIA

6496

SHEET 2 of 2

PART NO. 106477

LAST ACESSED: Wednesday, 13 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

Rev	AMENDMENTS	Date

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	BATTEN STREAK 2B/3 SET	6402	106453	1

Batten	LHS PART No	RHS PART No
Nose	104980	104981
No 1	106464	106454
No 2	106465	106455
No 3	106466	106456
No 4	106467	106457
No 5	106468	106458
No 6	106469	106459
No 7	106470	106460
No 8	106471	106461
No 9	106472	106462
No 10	106473	106463
US1	103757	103751
US2	103758	103752
US3	103759	103753
US4	105004	105005
US5	103761	103755

NOTE:
THE NUMBER 1. BATTENS ARE CLOSEST TO THE KEEL.

ADD DRI-LUBE TO THREADED FITTINGS WHEN ASSEMBLING

Rev	AMENDMENTS	Date
1	CHANGED NAME DCR 2091	09-03-05

PART NO. 106453 - 1

LAST ACESSED: Thursday, 14 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

BATTEN STREAK 2B/3 SET

Drawn By	Scale	Date
Simon	1:1	24-05-04

AirBorne AUSTRALIA

6402
SHEET 1 of 1

AirBorne AUSTRALIA

				MAIN SAIL BATTENS												
EDGE				Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
BUNGIE BATTENS			RHS	102546	102547	102548	102549	102550	102551	102552	102553	102554	102555	102556		102576
SERIAL #	1	337	LHS	One Only	102557	102558	102559	102560	102561	102562	102563	102564	102565	102566		102575

				MAIN SAIL BATTENS												
STREAK I				Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
BUNGIE BATTENS			RHS	103750	103730	103731	103732	103733	103734	103735	103736	103737	103738	103739		102576
SERIAL #	1	228	LHS	One Only	103740	103741	103742	103743	103744	103745	103746	103747	103748	103749		102575

				MAIN SAIL BATTENS												
STREAK II & II XT				Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
SPRING BATTENS			RHS	104981	104983	104985	104987	104989	104991	104993	104995	104997	104999	105001		105124
SERIAL #	250	321	LHS	104980	104982	104984	104986	104988	104990	104992	104994	104996	104998	105000		105123

NOTE: DOUBLE NOSE BATTENS. FOLDING STRUTT

				MAIN SAIL BATTENS												
STREAK IIB	(Dwg 6402 - Set #106453)			Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
HINGE			RHS	104981	106454	106455	106456	106457	106458	106459	106460	106461	106462	106463		105124
SERIAL #	1	Current	LHS	104980	106464	106465	106466	106467	106468	106469	106470	106471	106472	106473		105123

NOTE: DOUBLE NOSE BATTENS. FOLDING STRUTT. SETSAME AS SIII

				MAIN SAIL BATTENS												
STREAK III	(Dwg 6402 - Set #106453)			Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
HINGE			RHS	104981	106454	106455	106456	106457	106458	106459	106460	106461	106462	106463		105124
SERIAL #	1	Current	LHS	104980	106464	106465	106466	106467	106468	106469	106470	106471	106472	106473		105123

NOTE: DOUBLE NOSE BATTENS. FOLDING STRUTT. SET SAME AS SIIB

				MAIN SAIL BATTENS												
CRUZE	(Dwg 6274 -Set #106891)			Nose	1	2	3	4	5	6	7	8	9	10	11	Strutt
HINGE			RHS	104981	106871	106872	106873	106874	106875	106876	106877	106878	106879	106880		106905
SERIAL #	1	Current	LHS	104980	106881	106882	106883	106884	106885	106886	106887	106888	106889	106890		106906

NOTE: DOUBLE NOSE BATTENS. FOLDING STRUTT

STREAK BATTENS

Rev	AMENDMENTS	Date

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

TRIKE WING BATTEN INTERCHANGE TABLE

Drawn By	Scale	Date		
Simon	NTS	11-09-06	AirBorne AUSTRALIA	6712 SHEET 1 of 2

AirBorne AUSTRALIA

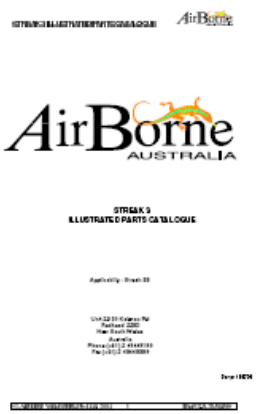
ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	107132	MANUAL IPC CRUZE	NA	NA	NA

ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	106726	MANUAL PAGES IPC S3/CRUZE B	NA	NA	NA

ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	107614	MANUAL PAGES MAINT S3/CRUZE LSA	NA	NA	NA

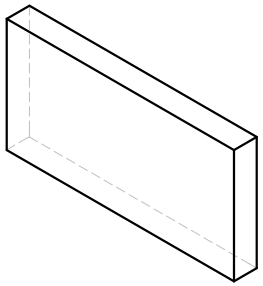
ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	106725	MANUAL PAGES MAINT S3/CRUZE PRIMARY	NA	NA	NA

1



2

NOTE: (PART # 107132)
THE CRUZE IPC IS A DRAFT VERSION AND THE S3 IPC IS SUBSTITUTED AT THIS TIME, 06-04-06.



3

4

THESE ARE VIRTUAL PARTS

Rev	AMENDMENTS	Date
1	DCR 2234, SPLI FROM 6863 AND 6582	06-04-06

PART NO. 107132

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

DATA PACKAGE COMPONENTS S3 / CZ				
Drawn By	Scale	Date	AirBorne AUSTRALIA	6929
Simon	1:2	06-04-06		SHEET 1 of 1

ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	105028	BATTEN PROFILE STREAK II/III	NA	NA	NA

PART NO. 105028

BATTEN PROFILE STREAK II/III

Drawn By	Scale	Date
Simon	1:2	02/03/03

AirBorne AUSTRALIA

6622

SHEET 1 of 1

LAST ACESSED: Thursday, 14 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

Rev	AMENDMENTS	Date

2 WING ASSEMBLY CRUZE - DRAWING # 6790

2.1 (Cross Bar Leading Edge Junct. - Drawing # 6484)
- **2.1.1 (Nose Junction Assembly - Drawing # 6474)**
  - 2.1.1.1 (U Bracket and Keel Assembly - Drawing # 6470)
  - 2.1.1.2 (Leading Edge and Channel - Drawing # 6473)
- **2.1.2 (Cross Bar Hinge Assembly - Drawing # 6483)**

2.2 (Rear Leading Edge Assembly - Drawing # 6486)
- **2.2.1 (Trike Wing Leading Edge Tensioner - Drawing # 5172)**

2.3 (Kingpost Assembly - Drawing # 6406)

2.4 Control Frame Assembly Cruze - Drawing # 6785
- **2.4.1 Down Tube LHS Assembly - Drawing # 6783**
- **2.4.2 Down Tube RHS Assembly - Drawing # 6782**
  - 2.4.2.1 (Trimmer Assembly - Drawing # 6409)

2.5 (Covers and Padding - Drawing # 6496)

2.6 Batten List Cruze - Drawing # 6274
- **2.6.1 (Trike Wing Batten Interchange List - Drawing # 6712)**

2.7 (Data Package Components - Drawing # 6929)

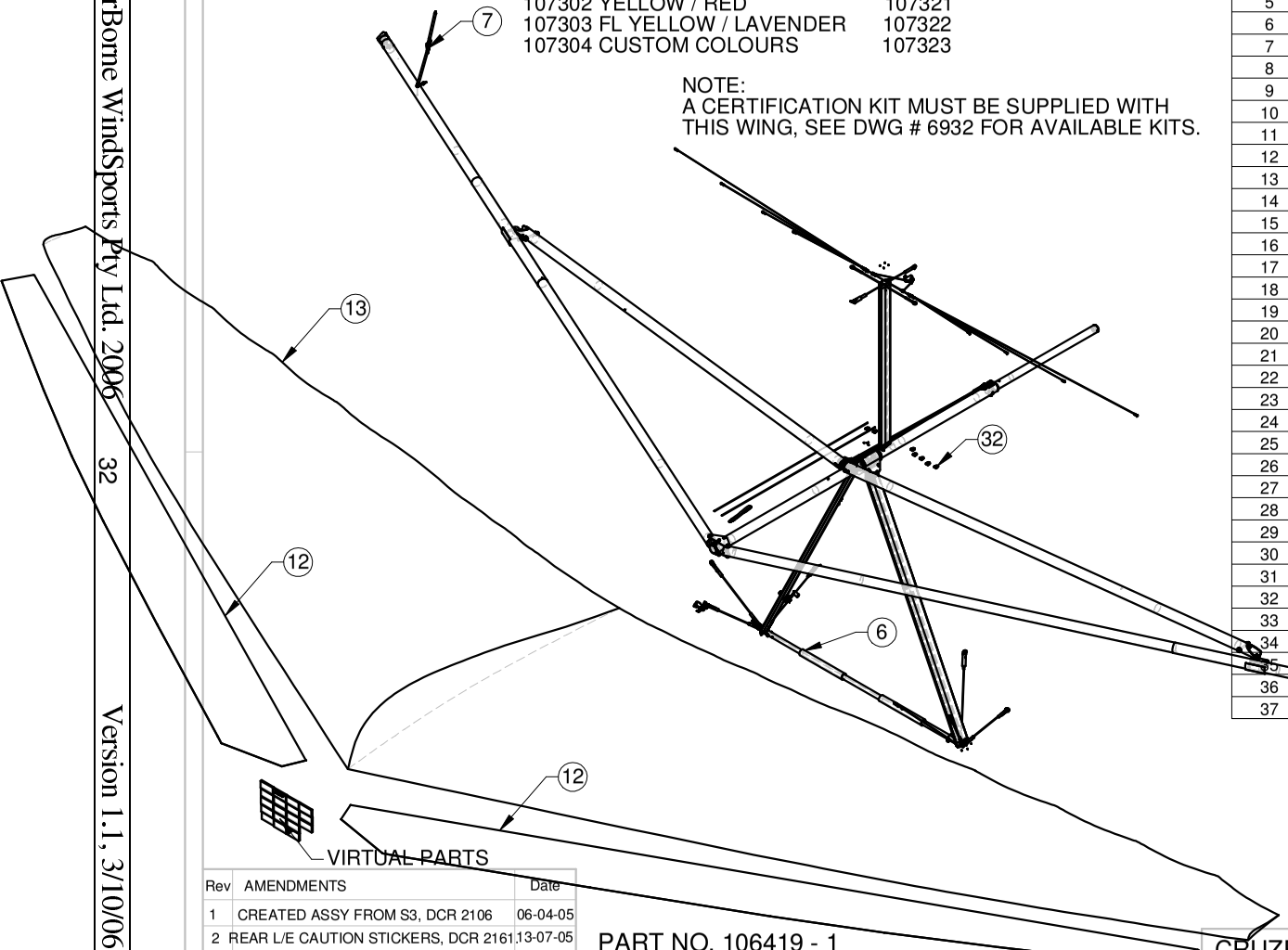
2.8 Batten Profile Cruze - Drawing # 6796

Drawings which are included in the Streak 3 setion are not included again, and are designated with brackets around the drawing name.

STOCK COLOUR PART # LIST / SAIL #

106419 COLOUR TBA	106420
107299 WHITE / RED	107318
107300 FLOURO YELLOW / BLUE	107319
107301 WHITE / BLUE	107320
107302 YELLOW / RED	107321
107303 FL YELLOW / LAVENDER	107322
107304 CUSTOM COLOURS	107323

NOTE:
A CERTIFICATION KIT MUST BE SUPPLIED WITH THIS WING, SEE DWG # 6932 FOR AVAILABLE KITS.



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	AIRFRAME PRE ASSY S SERIES	6484	106440	1
2	REAR LEADING EDGE RHS PRE ASSY	6486	106445	1
3	REAR LEADING EDGE LHS PRE ASSY	6486	106443	1
4	KINGPOST AERO S3-CRUZE WITH WIRES	6406	106309	1
5	CONTROL FRAME PRE ASSY CRUZE (SPREAD)	6785	107126	1
6	BASE BAR AERO SUB-ASSEM	6414	106317	1
7	TW FOLDING TIP STRUT ASSY CRUZE RHS	5368	107130	1
8	TW FOLDING TIP STRUT ASSY CRUZE LHS	6788	107129	1
9	COVERS AND PADDING SET S SERIES	6496	106477	1
10	BATTEN CRUZE HINGE SET	6274	106891	1
11	NOSE CATCH - SWAN	2140	100085	1
12	MYLAR INSERT CRUZE	6795	107133	2
13	SAIL CRUZE	6789	106420	1
14	PLACARD TRIMMER CRUZE REF CDR 4711	4711	107241	1
15	PLACARD KING POST WIRE CHECK	4711	104622	1
16	BOLT QUICK CLIP AN5-31A TYPE 3	6453	106405	1
17	QUICK CLIP BLOCK (SS)	7002	106153	1
18	QUICK CLIP PIN (AL)	6467	103277	1
19	QUICK CLIP SPRING (157A)	6468	101203	1
20	PIP PIN 38	5719	102146	1
21	PIP PIN CAP WITH WIRE 38	5718	101418	1
22	PIP PIN 25	5719	106702	1
23	PIP PIN CAP WITH WIRE	5718	101418	1
24	BOLT AN4-13 a	5450	101333	1
25	BOLT AN4-11a	5450	100003	1
26	NUT NYLOC AN4 FULL	5535	100034	1
27	NUT NYLOC AN4 HALF	5561	100035	1
28	NUT NYLOC AN5 FULL	5535	100036	1
29	WASHER AN5	5540	100043	1
30	WASHER AN4	5540	100042	1
31	SHACKLE SHGF09	6338	100954	1
32	SHACKLE RF615 4mm	6338	100406	9
33	TUBE PVC CLEAR 6MM X 11 WITH GROOVE	6571	106693	1
34	HEATSHRINK CLR 20mm x 50	5582	106375	1
35	BATTEN PROFILE CRUZE	6796	107140	1
36	LABEL S2B/CRUZE REAR L/E LHS	6846	107255	1
37	LABEL S2B/CRUZE REAR L/E RHS	6846	107254	1

Rev	AMENDMENTS	Date
1	CREATED ASSY FROM S3, DCR 2106	06-04-05
2	REAR L/E CAUTION STICKERS, DCR 2161	13-07-05
3	DCR 2173, ADD STOCK COLOUR #'S	12/09/05
4	DCR 2234, REMOVE CERT PARTS FPR SLSA	10-04-06
5	DCR 2238, CHANGE PIP PIN TO 38	12-04-06

PART NO. 106419 - 1

LAST ACESSED: Wednesday, 13 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

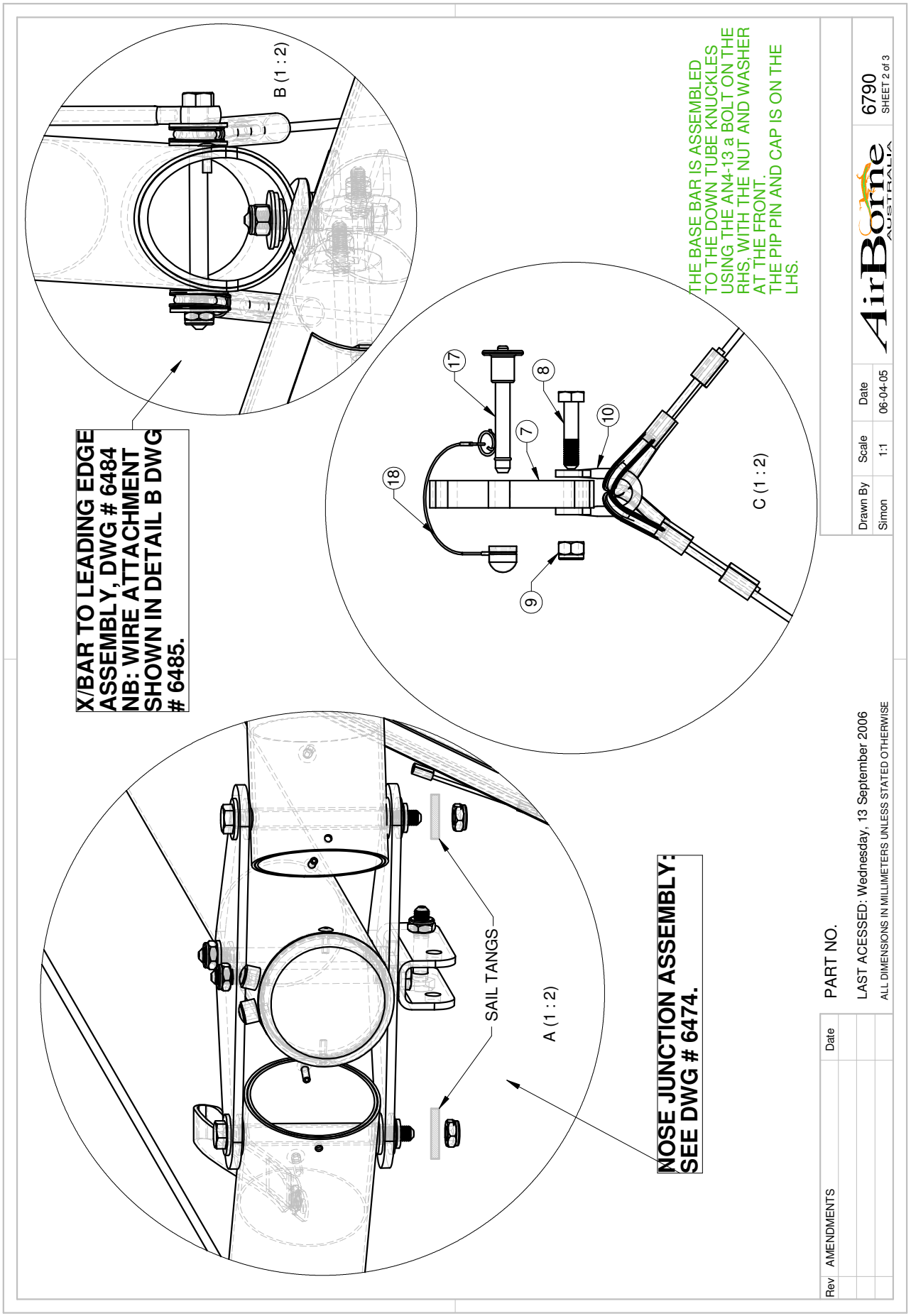
SolidWorks

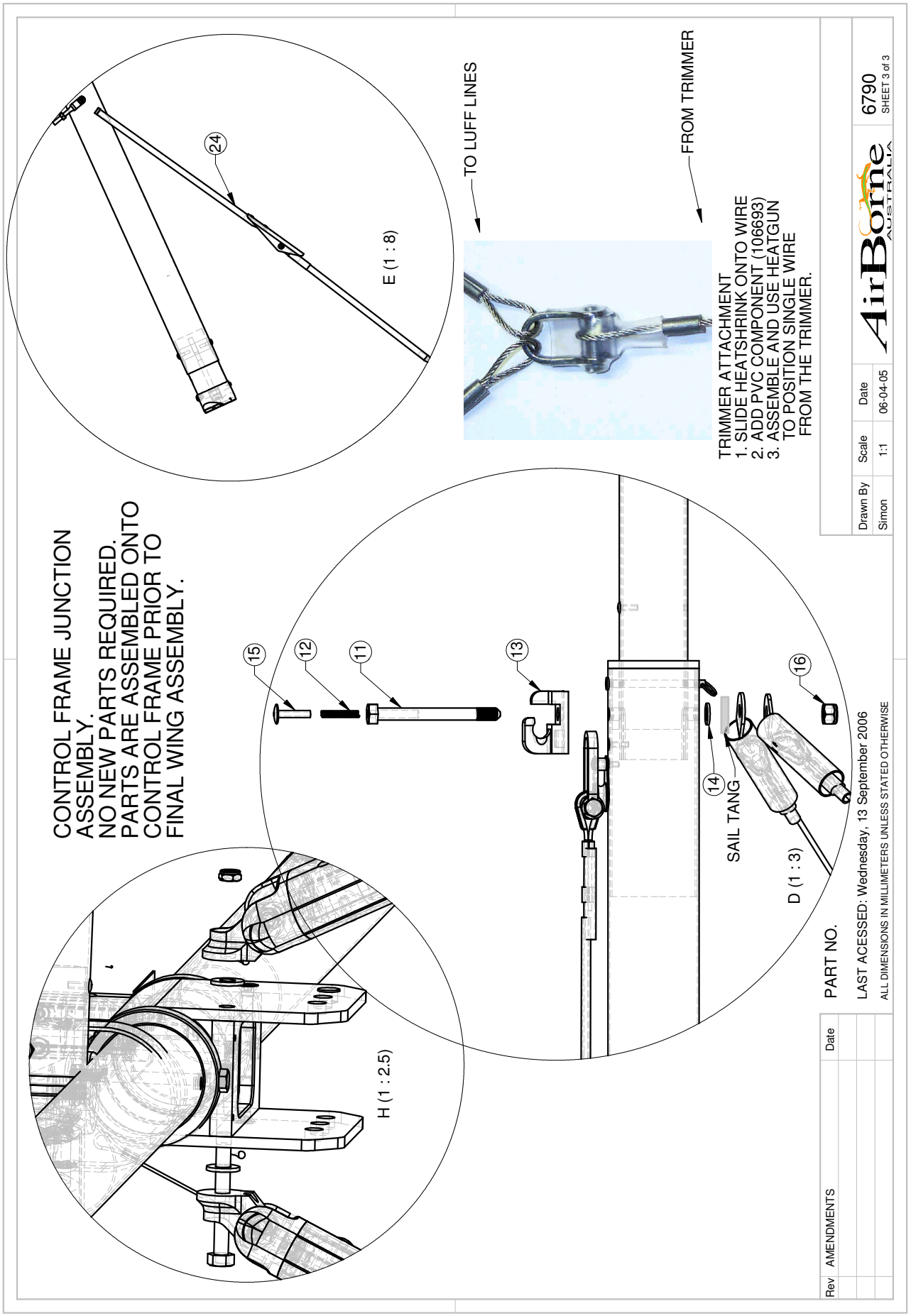
CRUZE WING ASSEMBLY

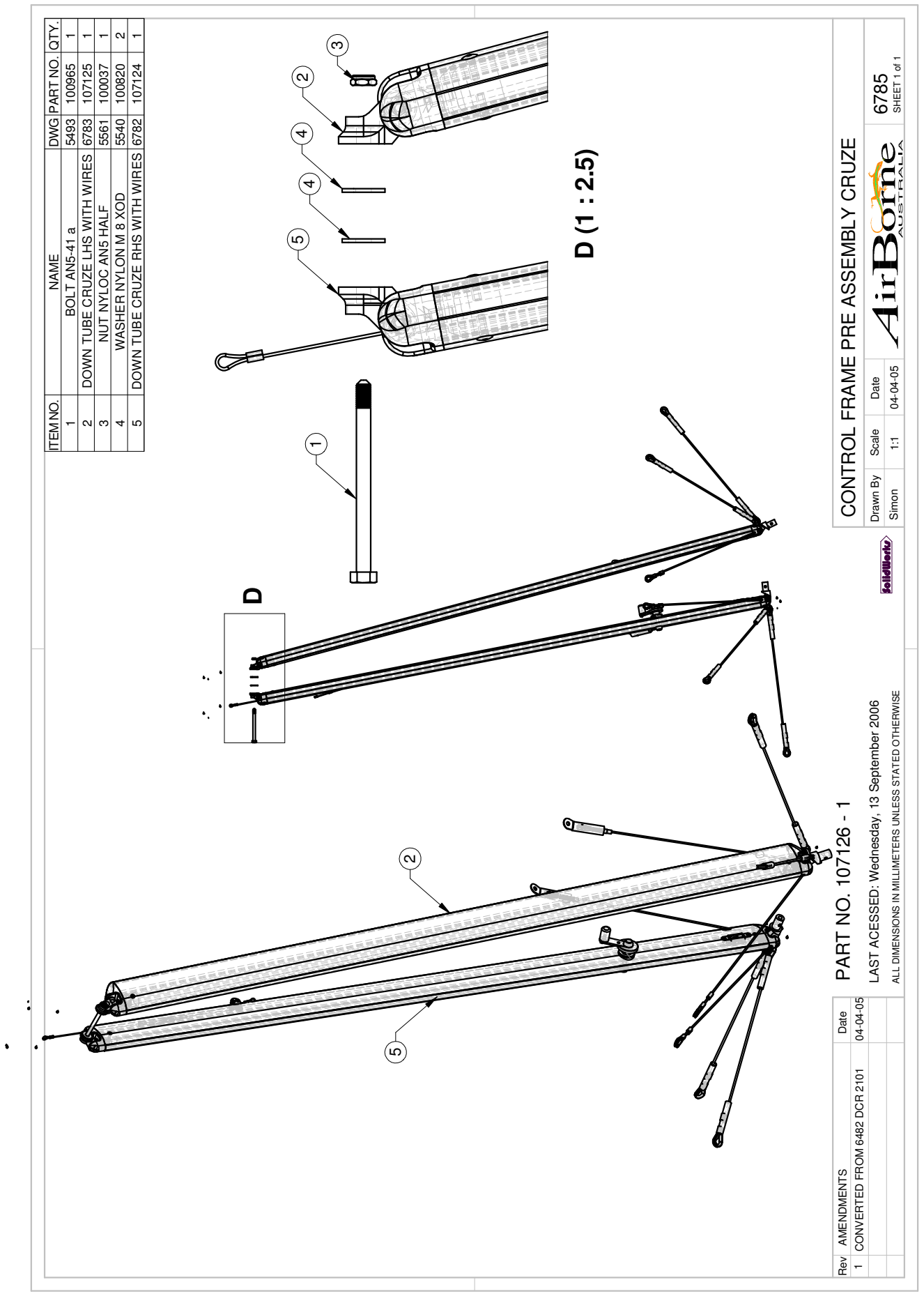
Drawn By	Scale	Date	
Simon	1:1	06-04-05	AirBorne AUSTRALIA

6790
SHEET 1 of 3

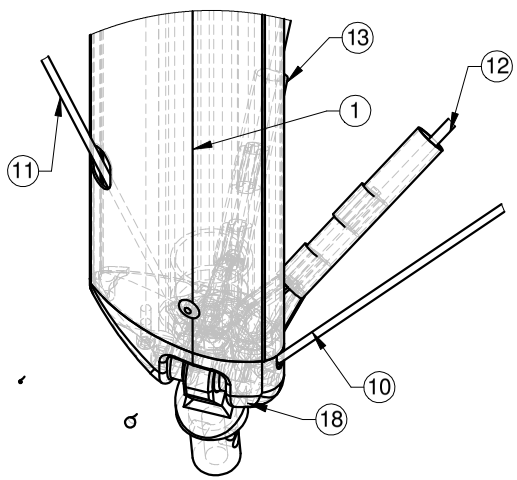
AirBorne AUSTRALIA


B (1 : 2)
X/BAR TO LEADING EDGE ASSEMBLY, DWG # 6484
NB: WIRE ATTACHMENT SHOWN IN DETAIL B DWG # 6485.
THE BASE BAR IS ASSEMBLED TO THE DOWN TUBE KNUCKLES USING THE AN4-13 a BOLT ON THE RHS, WITH THE NUT AND WASHER AT THE FRONT.
THE PIP PIN AND CAP IS ON THE LHS.
C (1 : 2)
17
8
7
10
18
9
SAIL TANGS
A (1 : 2)
NOSE JUNCTION ASSEMBLY: SEE DWG # 6474.
PART NO.
LAST ACESSED: Wednesday, 13 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev AMENDMENTS Date
Drawn By Simon
Scale 1:1
Date 06-04-05
6790
SHEET 2 of 3

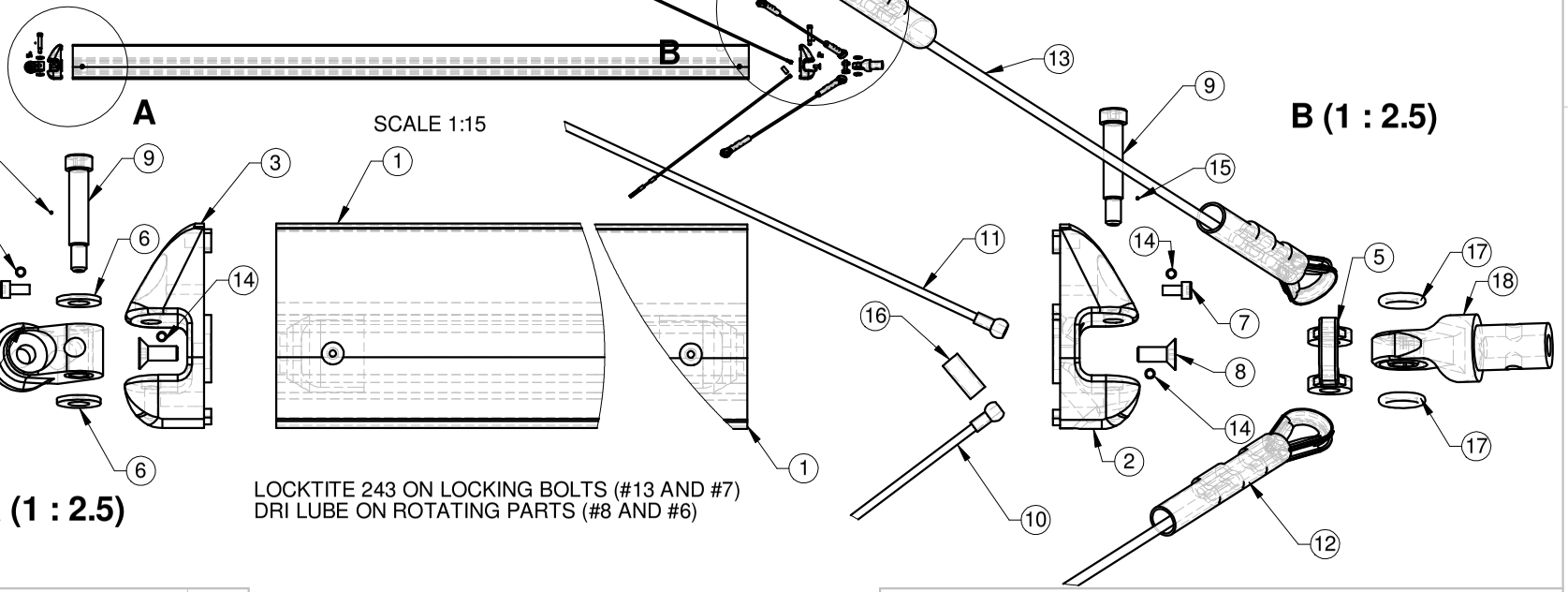

E (1 : 8)
24
TO LUFF LINES
FROM TRIMMER
TRIMMER ATTACHMENT
1. SLIDE HEATSHRINK ONTO WIRE
2. ADD PVC COMPONENT (106693)
3. ASSEMBLE AND USE HEATGUN TO POSITION SINGLE WIRE FROM THE TRIMMER.
CONTROL FRAME JUNCTION ASSEMBLY.
NO NEW PARTS REQUIRED.
PARTS ARE ASSEMBLED ONTO CONTROL FRAME PRIOR TO FINAL WING ASSEMBLY.
15
12
11
13
16
14
SAIL TANG
D (1 : 3)
H (1 : 2.5)
PART NO.
LAST ACESSED: Wednesday, 13 September 2006
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev
AMENDMENTS
Date
Drawn By
Simon
Scale
1:1
Date
06-04-05
AirBorne AUSTRALIA
6790
SHEET 3 of 3



ITEM NO.	NAME	DWG	PART NO.	QTY.
1	D-TUBE AERO S3-CRUZE LHS SUB-ASSEM	6408	106312	1
2	KNUCKLE AERO 35X85 B LHS 6061	6889	107475	1
3	KNUCKLE TW AERO 35x85 TOP LHS	6343	106204	1
4	BRACKET AERO D-T TRIKE BUSHED	6893	107503	1
5	SHACKLE MODIFIED RM-24 HD	6445	106385	1
6	WASHER NYLON M8 STD	5540	100595	2
7	SKT CAP SCREW SS M 4 X 8	5603	106322	2
8	SKT CSK SCREW M6x16 SS	5668	106275	2
9	SKT SHOULDER SCREW BSW 5-16x1 1-4 ZINC	6395	108070	2
10	WIRE BOTTOM FRONT AERO CRUZE	6423	107122	1
11	WIRE BOTTOM REAR AERO CRUZE	6422	107123	1
12	WIRE BOT SIDE FWD AERO S3-CRUZE	6440	106377	1
13	WIRE BOT SIDE AFT AERO S3-CRUZE	6440	106378	1
14	LOCTITE 243 BLUE MID STRENGTH	5637	103706	4
15	DRI LUBE SOLID LUBRICANT	5637	106432	2
16	TUBE PVC CLEAR 6mm x 18L	5583	106434	1
17	O-RING FUEL TANK	5932	103181	2
18	KNUCKLE RD BASE BAR AERO SLOT	6897	107510	1



QUASI ISOMETRIC VIEW
SCALE 1:2.5



Rev	AMENDMENTS	Date
1	CHANGED NAME DCR 2100	05-04-05
2	CHANGED KNUCKLES DCR 2236	04-04-06
3	DCR 2265, ZINC PLATED 108070	20-09-06

PART NO. 107125 - 0

LAST ACESSED: Tuesday, 3 October 2006

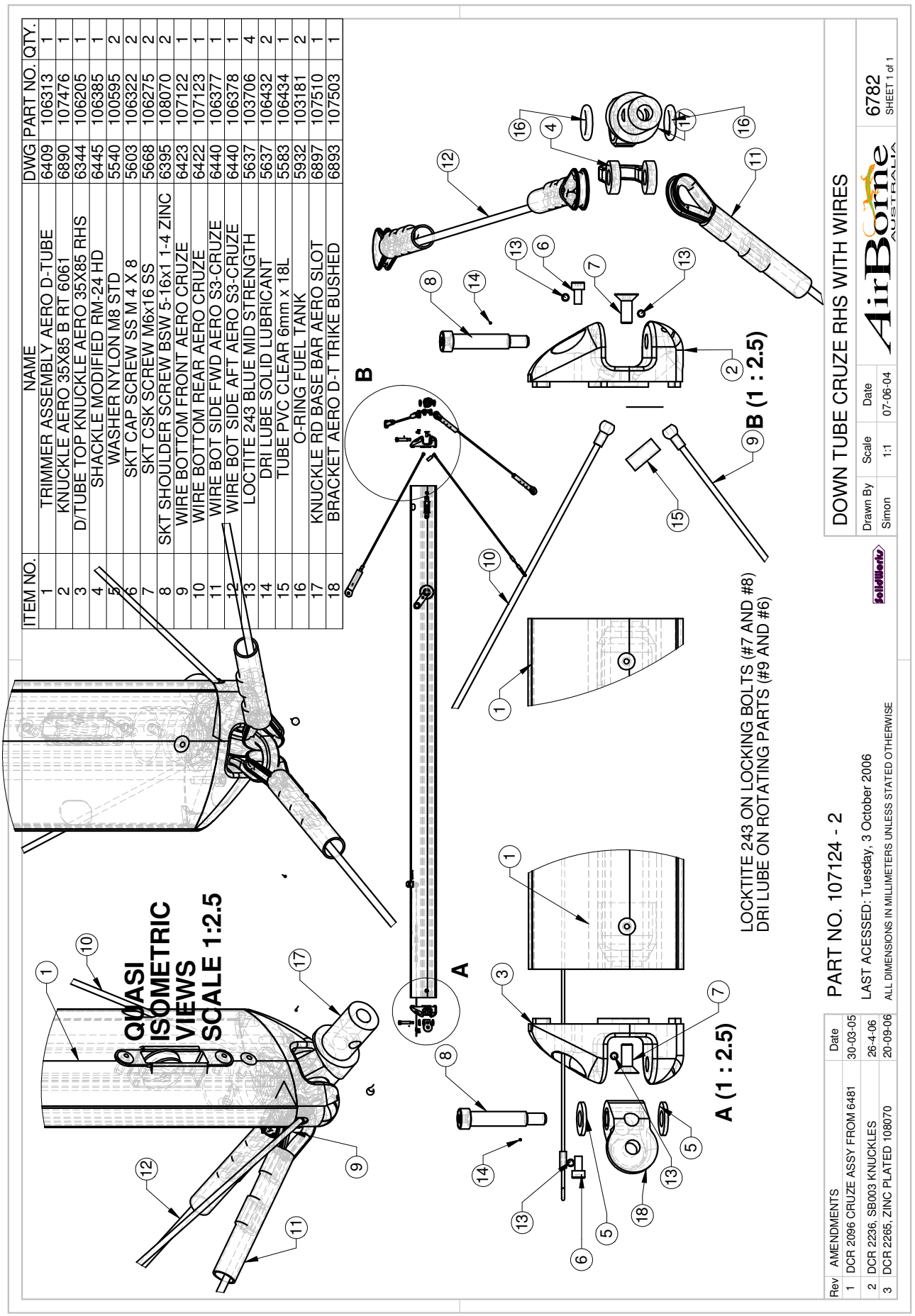
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

DOWN TUBE CRUZE LHS WITH WIRES

Drawn By	Scale	Date		
Simon	1:20	04-04-05	AirBorne AUSTRALIA	6783 SHEET 1 of 1

AirBorne AUSTRALIA

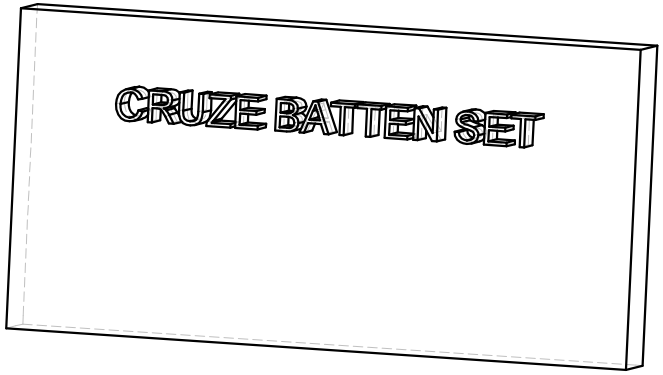


ITEM NO.	NAME	DWG	PART NO.	QTY.
1	TRIMMER ASSEMBLY AERO D-TUBE	6409	106313	1
2	KNUCKLE AERO 35X85 B RT 6061	6890	107476	1
3	D/TUBE TOP KNUCKLE AERO 35X85 RHS	6344	106205	1
4	SHACKLE MODIFIED RM-24 HD	6445	106385	1
5	WASHER NYLON M8 STD	5540	100595	2
6	SKT CAP SCREW SS M 4 X 8	5603	106322	2
7	SKT CSK SCREW M6x16 SS	5668	106275	2
8	SKT SHOULDER SCREW BSW 5-16x1 1-4 ZINC	6395	108070	2
9	WIRE BOTTOM FRONT AERO CRUZE	6423	107122	1
10	WIRE BOTTOM REAR AERO CRUZE	6422	107123	1
11	WIRE BOT SIDE FWD AERO S3-CRUZE	6440	106377	1
12	WIRE BOT SIDE AFT AERO S3-CRUZE	6440	106378	1
13	LOCTITE 243 BLUE MID STRENGTH	5637	103706	4
14	DRI LUBE SOLID LUBRICANT	5637	106432	2
15	TUBE PVC CLEAR 6mm x 18L	5583	106434	1
16	O-RING FUEL TANK	5932	103181	2
17	KNUCKLE RD BASE BAR AERO SLOT	6897	107510	1
18	BRACKET AERO D-T TRIKE BUSHED	6893	107503	1

Rev	AMENDMENTS	Date
1	DCR 2096 CRUZE ASSY FROM 6481	30-03-05
2	DCR 2236, SB003 KNUCKLES	26-4-06
3	DCR 2265, ZINC PLATED 108070	20-09-06

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	BATTEN CRUZE HINGE SET	6274	106891	1

Batten	LHS PART No	RHS PART No
Nose	104980	104981
No 1	106464	106454
No 2	106465	106455
No 3	106466	106456
No 4	106467	106457
No 5	106468	106458
No 6	106469	106459
No 7	106470	106460
No 8	106471	106461
No 9	106472	106462
No 10	106473	106463
US1	103757	103751
US2	103758	103752
US3	103759	103753
US4	105004	105005
US5	103761	103755



NOTE:
THE NUMBER 1. BATTENS ARE CLOSEST TO THE KEEL.

Rev	AMENDMENTS	Date

PART NO. 106891 - 0

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

BATTEN CRUZE HINGE SET

Drawn By	Scale	Date
Simon	1:1	24-05-04

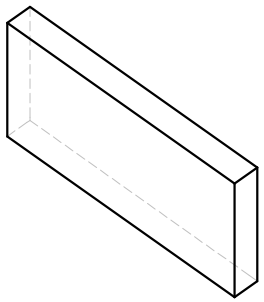
AirBorne AUSTRALIA

6274
SHEET 1 of 1

AirBorne AUSTRALIA

ITEM NO.	PART NO.	NAME	MATERIAL.DESCRIPTION	MATL.NO.	REQD
1	107140	BATTEN PROFILE CRUZE	NA	NA	NA

~~*CRUZE*~~ BATTEN PROFILE



Rev	AMENDMENTS	Date

PART NO. 107140

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

BATTEN PROFILE CRUZE				
Drawn By	Scale	Date	AirBorne AUSTRALIA	6796
Simon	1:2	14-04-05		SHEET 1 of 1

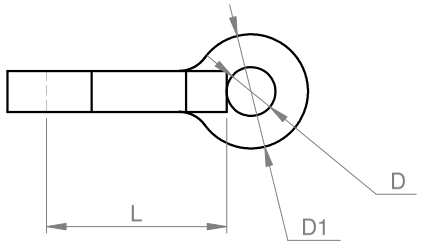
AirBorne AUSTRALIA

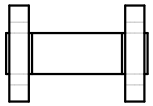
3 MISCELLANEOUS COMPONENTS

WARNING

THE PARTS WHICH ARE REPRESENTED IN THE FOLLOWING DRAWINGS ARE NOT NECESSARILY PART OF THIS AIRCRAFT. SOME PARTS WHICH ARE LISTED ARE COMPONENTS OF PARTS WHICH ARE NOT USER SERVICABLE. ONLY MAINTENANCE WHICH IS SPECIFIED IN THE MAINTENANCE MANUAL SHOULD BE ATTEMPTED AND ONLY THE EXACT SPARE SHOULD BE USED TO REPLACE PARTS. THE FOLLOWING DRAWINGS ARE PROVIDED AS A CONVIENIENCE TO AID IDENTIFICATION OF PARTS WHICH ARE USER MAINTAINABLE.

PART NO.	DWG	D	L	W	D1	W4	W5
100406	6338	4	15.5	10	8.9	3	3.2
104305	6338	4.7625	18	11	13.9	3	4
102021	6338	6.35	43	14	14.9	3	4
100067	6338	7.9375	51	30	18.2	3	4
	6338	6.4	22	14		3	4
106315	6338	7.6	28	14	17.75	5	6.1
100954	6338	6.5	23.5	12.2	13.6	2.92	4.34

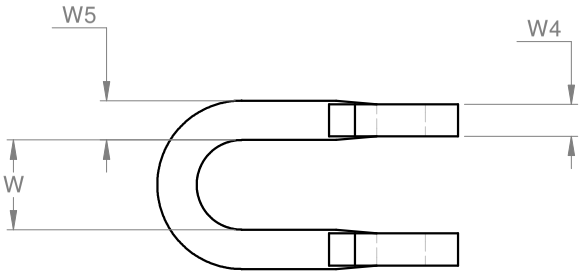


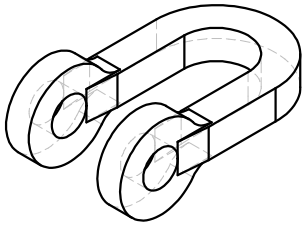


NOTE FOR MODEL DATA:

SHACKLE DIMENSIONS NOT ACCURATE-
CHECK DEFORE USE IN DESIGN

SHACKLE PIN NOT SHOWN





Rev	AMENDMENTS	Date
1	INSTRUCTIONS FOR MOD MOVED TO DWG 6479	03-06-04

LAST ACESSED: Thursday, 14 September 2006

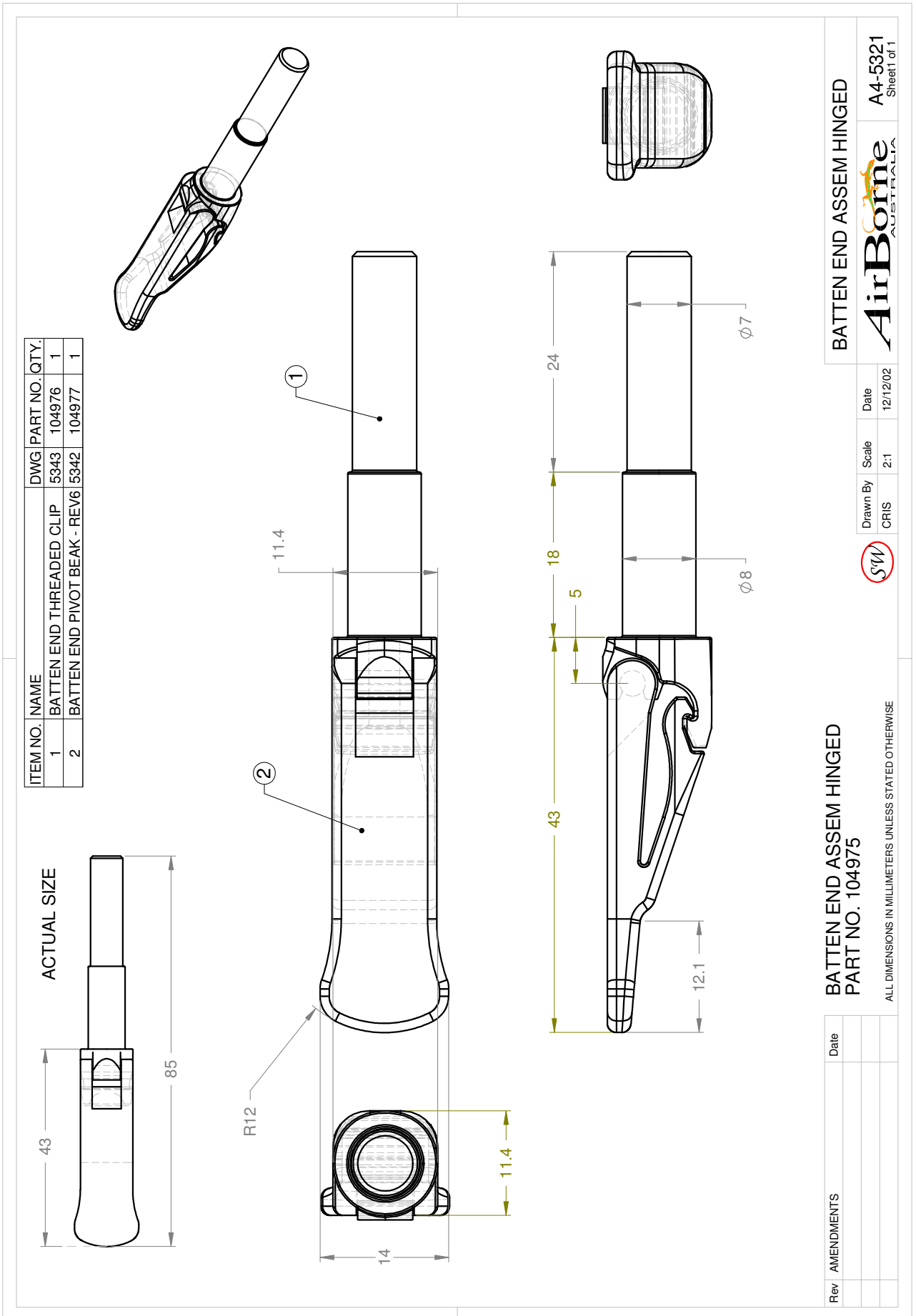
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

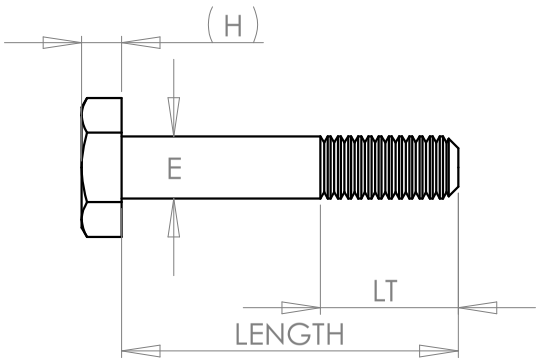
SolidWorks

DEE SHACKLES - DESIGN TABLE

Drawn By	Scale	Date		
Cris	1:1	13/10/03	AirBorne AUSTRALIA	6338 SHEET 1 of 1

AirBorne AUSTRALIA


ITEM NO. | NAME | DWG | PART NO. | QTY.
1 | BATTEN END THREADED CLIP | 5343 | 104976 | 1
2 | BATTEN END PIVOT BEAK - REV6 | 5342 | 104977 | 1
ACTUAL SIZE
43
85
11.4
R12
14
11.4
24
18
5
43
12.1
Ø7
Ø8
BATTEN END ASSEM HINGED
A4-5321
Sheet 1 of 1
AirBorne AUSTRALIA
Drawn By CRIS
Scale 2:1
Date 12/12/02
BATTEN END ASSEM HINGED
PART NO. 104975
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
Rev AMENDMENTS Date



DIMENSIONED TO ANSI B18.2.1-1981
STANDARD HEX AND HEAVY BOLTS
TABLE 2. PG# 1049 AND 1047
MACHINERERY'S HANDBOOK 22ND ED
INDUSTRIAL PRESS LTD, NEW YORK.

Design Table for: AN3 hex bolt

PART NO.	NAME
102927	Bolt AN3-10 a
100050	Bolt AN3-12 a
100584	Bolt AN3-13 a
100735	Bolt AN3-15 a
101184	Bolt AN3-21 a
100558	Bolt AN3-23 a
100629	Bolt AN3-30 a

Rev	AMENDMENTS	Date

LAST ACESSED: Wednesday, 20 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

AN3 BOLT DESIGN TABLE

Drawn By	Scale	Date
Simon	2:1	02/03/03

AirBorne AUSTRALIA

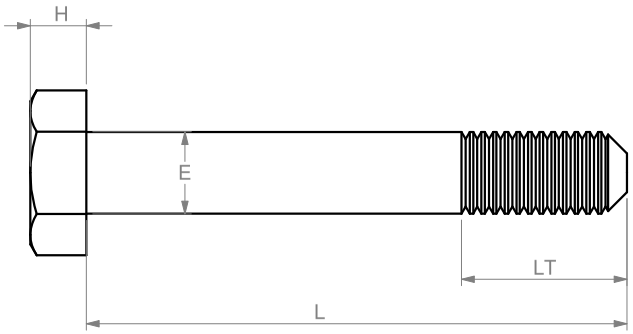
5449

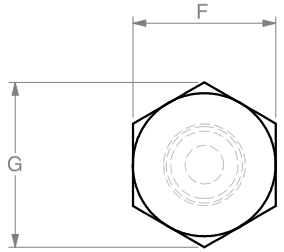
SHEET 1 of 1

Design Table for: hex bolt_an

PART NO.	NAME	LENGTH	DIA
100002	BOLT AN4-6	19.84	6.35
100001	BOLT AN4-7	23.02	6.35
100003	BOLT AN4-11a	29.37	6.35
100547	BOLT AN4-12 a	32.54	6.35
101333	BOLT AN4-13 a	35.72	6.35
100559	BOLT AN4-14 a	38.89	6.35
100967	BOLT AN4-15 a	42.07	6.35
100004	BOLT AN4-16	45.24	6.35
105330	BOLT AN4-20	51.59	6.35
100006	BOLT AN4-20 a	51.59	6.35
100549	BOLT AN4-22 a	57.94	6.35
100587	BOLT AN4-24 a	64.29	6.35
100009	BOLT AN4-26 a	70.64	6.35
100010	BOLT AN4-27 a	73.82	6.35
100011	BOLT AN4-30 a	76.99	6.35
100631	BOLT AN4-31	80.17	6.35
100012	BOLT AN4-32 a	83.34	6.35
101363	BOLT AN4-33 a	86.52	6.35
100850	BOLT AN4-34a	89.69	6.35
100013	BOLT AN4-35 a	92.87	6.35
100014	BOLT AN4-36 a	96.04	6.35
100713	BOLT AN4-40 a	102.39	6.35
102273	BOLT AN4-41 a	105.57	6.35
103668	BOLT AN4-42 a	108.74	6.35

DIMENSIONED TO ANSI B18.2.1-1981
STANDARD HEX AND HEAVY BOLTS
TABLE 2. PG# 1049 AND 1047
MACHINERERY'S HANDBOOK 22ND ED
INDUSTRIAL PRESS LTD, NEW YORK.





Rev	AMENDMENTS	Date

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

AN4 BOLT - DESIGN TABLE

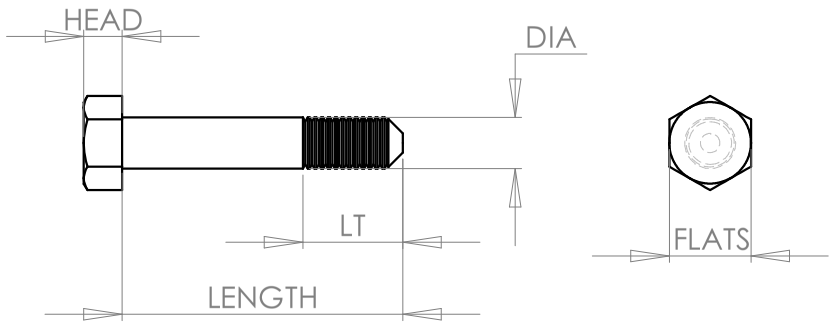
Drawn By	Scale	Date		
Simon	2:1	21/03/03	AirBorne AUSTRALIA	5450 SHEET 1 of 1

AirBorne AUSTRALIA

Design Table for: AN5 hex bolt_an

	PART NO.	NAME	LENGTH	DIA
	102743	BOLT AN5-11	30.96	7.9375
	100015	BOLT AN5-15 a	43.66	7.9375
	100553	BOLT AN5-16 a	46.83	7.9375
	103296	BOLT AN5-17	50.01	7.9375
	101244	BOLT AN5-17 a	50.01	7.9375
	100016	BOLT AN5-20 a	53.18	7.9375
	100819	BOLT AN5-21 a	56.36	7.9375
	100017	BOLT AN5-22 a	59.53	7.9375
	100018	BOLT AN5-24A	65.88	7.9375
	100019	BOLT AN5-25 a	69.06	7.9375
	100588	BOLT AN5-26	72.23	7.9375
	104713	BOLT AN5-26 a	72.23	7.9375
	100020	BOLT AN5-27 a	75.41	7.9375
	100021	BOLT AN5-30 a	78.58	7.9375
	100022	BOLT AN5-31 a	81.76	7.9375
	100023	BOLT AN5-32 a	84.93	7.9375
	100024	BOLT AN5-33	88.11	7.9375
	100025	BOLT AN5-34 a	91.28	7.9375
	106618	BOLT AN5-36	97.63	7.9375
	100026	BOLT AN5-36 a	97.63	7.9375
X	100027	BOLT AN5-37	100.81	7.9375
	100028	BOLT AN5-40 a	103.98	7.9375
	100965	BOLT AN5-41 a	107.16	7.9375
	104500	BOLT AN5-46	123.03	7.9375
	100029	BOLT AN5-46 a	123.03	7.9375
	100960	BOLT AN5-53 a	138.91	7.9375
	100420	BOLT AN5-56 a	148.43	7.9375

DIMENSIONED TO ANSI B18.2.1-1981
STANDARD HEX AND HEAVY BOLTS
TABLE 2. PG# 1049 AND 1047
MACHINERERY'S HANDBOOK 22ND ED
INDUSTRIAL PRESS LTD, NEW YORK.



PARTS WITH AN X BESIDE MAY NOT BE STOCKED BY AIRBORNE.
THIS TABLE DOES NOT INCLUDE ALL PARTS THAT HAVE BEEN
MADE OBSOLETE. CHECK FOR EXISTING OBSOLETE PARTS PRIOR TO
ALLOCATING NEW PART NUMBERS.

Rev	AMENDMENTS	Date
1	NAME CHANGED TO MATCH FP	19/10/04
1	AN5-24A BOLT ADDED DCR 2243	27/04/06

LAST ACESSED: Wednesday, 20 September 2006

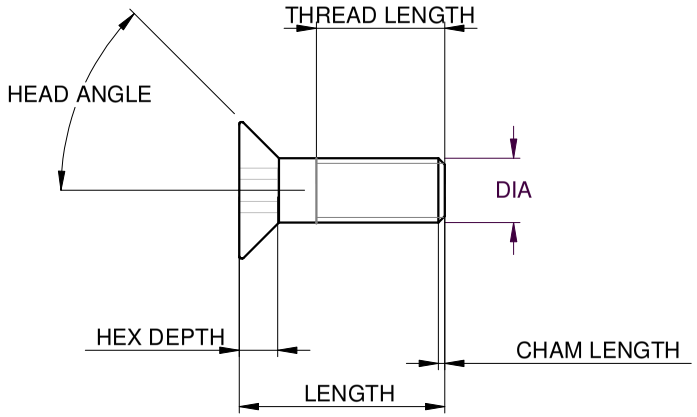
ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

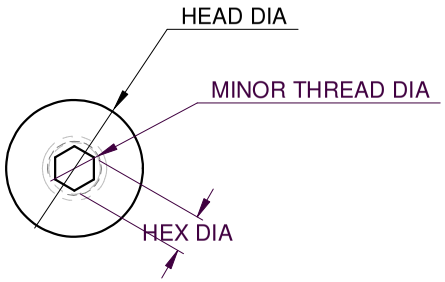
AN-5 BOLT DESIGN TABLE

Drawn By	Scale	Date		
Simon	1:1	02/03/03	AirBorne AUSTRALIA	5493 SHEET 1 of 1

AirBorne AUSTRALIA

PART NO.	NAME	DIA	HEAD DIA	HEAD °	LENGTH
106344	SKT CSK SCREW M5x16 SS	5	11.2	45	16
105453	SKT CSK SCREW M6x45	6	13.44	45	45
101823	SKT CSK SCREW BSW 2.5x0.25"	6.35	11.4	45	2.5*25.4
105997	SKT CSK SCREW BSW 1-4" MOD 58L	6.35	11.4	45	58
106319	SKT CSK SCREW BSW 1-4" MOD 47L	6.35	11.4	45	47
102062	SKT CSK SCREW UNF 1-4" x 1"	6.35	12.5	40	25.4
106275	SKT CSK SCREW M6x16 SS	6	13.44	45	16





Rev	AMENDMENTS	Date
1	UPDATED AND REMOVED PARTS WITH NO PART NUMBERS IN THE SYSTEM	04-06-04

LAST ACESSED: Wednesday, 20 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

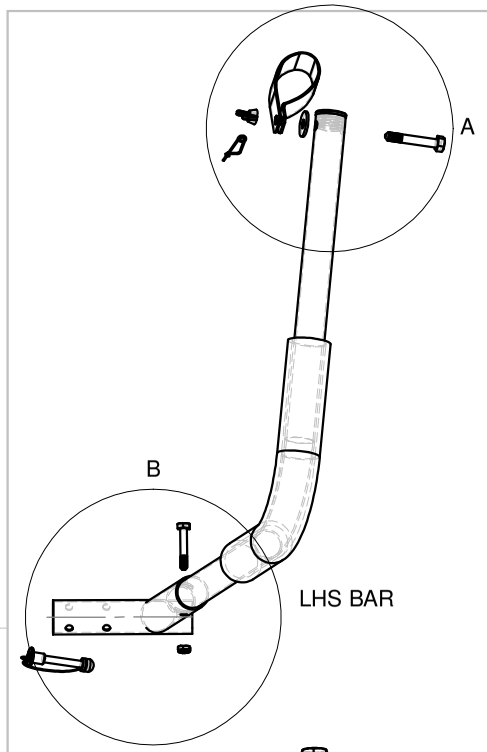
SKT CAP SCREW COUNTERSINK - DESIGN TABLE

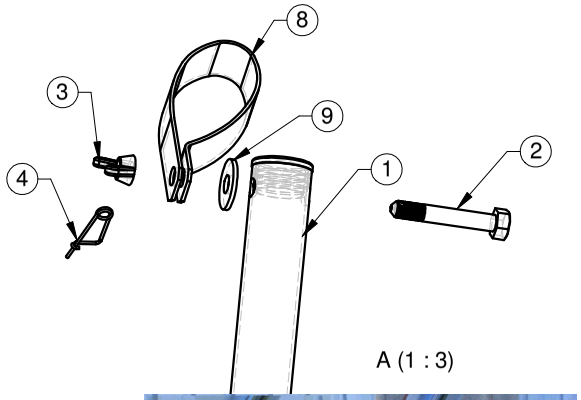
Drawn By	Scale	Date		
Cris	2:1	22/05/03	AirBorne AUSTRALIA	5668 SHEET 1 of 1

4 OPTIONS – TRAINING BARS

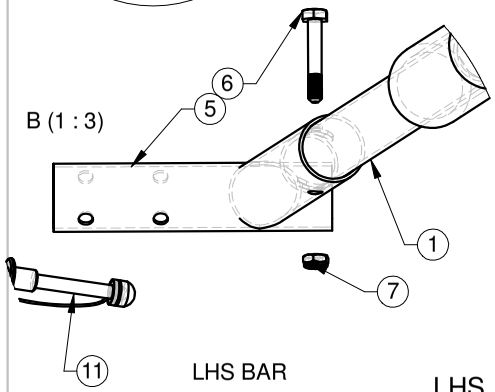
4.1 Training Bars - Drawing # 6505

STREAK 3 – CRUZE IPC





LHS BAR



LHS BAR

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	TRAINING BAR BLANK WITH GRIP TYPE 3	4461	106527	1
2	BOLT AN5-17	5493	103296	1
3	WINGNUT AN5	5534	102454	1
4	SAFETY PIN	5545	100920	1
5	TRAINING BAR ADAPTOR LHS TYPE 3	6506	103293	1
6	BOLT AN4-14A	5450	100559	1
7	NUT NYLOC AN4 HALF	5561	100035	1
8	TRAINING BAR CLAMP AERO INCL H/SHRI	6507	106552	1
9	WASHER NYLON M 8 XOD	5540	100820	1
11	PIP PIN 38 WITH CAP	5721	102148	1

ITEM NO.	NAME	DWG	PART NO.	QTY.
1	TRAINING BAR BLANK WITH GRIP TYPE 3	4461	106527	1
2	BOLT AN5-17	5493	103296	1
3	WINGNUT AN5	5534	102454	1
4	SAFETY PIN	5545	100920	1
5	TRAINING BAR ADAPTOR RHS TYPE 3	6506	103292	1
6	BOLT AN4-14A	5450	100559	1
7	NUT NYLOC AN4 HALF	5561	100035	1
8	TRAINING BAR CLAMP AERO INCL H/SHRI	6507	106552	1
9	WASHER NYLON M 8 XOD	5540	100820	1

INSTRUCTIONS:
1. THIS TYPE HAVE RUBBER GRIPS
2. ONE PIP PIN 38 WITH CAP SUPPLIED
3. RHS BAR IS A MIRROR IMAGE
4. TRAINING BAR TYPE 3 INCLUDES BOTH SIDES. PART # 106526.

Rev	AMENDMENTS	Date
1	CHANGED TO 3D	23-07-04
2	PART NAMES CHANGED DCR 2237	12/04/06
3	DCR 2238, CHANGED PIP PIN TO 38	12-04-06

LHS PART NO.106517 - 0
RHS PART NO. 106525 - 0

LAST ACESSED: Monday, 11 September 2006

ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE

SolidWorks

TRAINING BAR TYPE 3 FAIRED

Drawn By	Scale	Date		
Simon	1:6	24-05-04	AirBorne AUSTRALIA	6505 SHEET 1 of 1

AirBorne AUSTRALIA