



# RIGGING ADVISORY CIRCULAR

Issue Date: 1 June 2003

RAC No. 101 Rev. B

**SUBJECT:** GUIDE TO THE APF RIGGER EXAMINATION

**STATUS:** ADVISORY

**APPLICATION:** The applicant must hold a Packer "A" rating and be recommended by a Rigger Examiner.  
Persons wishing to acquire the APF Rigger rating must complete an application card available from the APF (or the APF Web site) and forward it together with the prescribed fee to the attention of the National Examiner.

**EXAMINATION FORMAT:** The examination consists of two parts, a written part and a practical part.  
The candidate must achieve a 70% pass in each part.

The written consists of 100 multiple choice questions. The candidate has 2 hours to complete the examination. The written exam must be attempted in the presence of a Chief Instructor or Rigger Examiner who is approved by APF Council Rigger Panel Chair or Director Riggers.

The practical will take between 8 and 40 hours to complete, depending upon the availability of machines, tools, project material and the candidate's skill. There is no time limit on the practical exam.  
Each of the practical tasks may be attempted at a time suitable to the examiner and the candidate.

The practical examination must be attempted in the presence of a Rigger Examiner or where this is impractical a Chief Instructor may oversee the practical tasks (with the prior permission of the Director Riggers) and forward the samples of workmanship to the Director Riggers (or a Rigger Examiner appointed by the Director Riggers) for assessment.

**EXAMINATION SCOPE:** The Rigger examination is based in part on the Parachute Rigger Course by Dan Poynter. This is the self teaching course with practical assignments and questions taken from the Parachute Manual also written by Dan Poynter.

Both the Parachute Rigger Course and the Parachute Manual are readily available through parachute equipment suppliers and from the APF Office.

The Parachute Rigger Course is the basis of approx 30% of the questions in the written exam.

A further 30% of questions relate to APF Operational Regulations and CAO 103.18.

The remaining 40% are general knowledge questions on aspects of Rigger current practice.



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Some of this information is contained in the Packing, Maintenance, Inspection and Repair Procedures supplied by equipment manufacturers. The remaining general knowledge questions are taken from APF Rigger Advisory Circulars and Service Bulletins.

Every endeavour has been made to avoid questions for which no reference exists or which refer to equipment which may not be readily available in Australia or New Zealand.

The following syllabus will assist applicants in covering each subject thoroughly before the exam.

The candidate is reminded that a failed exam will make the applicant ineligible to resit the exam for 3 months.

## **GUIDE TO PUBLICATIONS, REFERENCE MANUALS, STUDY MATERIAL and SYLLABUS**

## **KNOWLEDGE STANDARD**

APF Operational Regulations, Sections 7.3, 7.4, 7.5, 7.8, 10, 11 and 12  
All other sections

DETAILED  
WORKING

APF Rigging Advisory Circulars & Service Bulletins

DETAILED

Rigger Course and Study Guide by Dan Poynter

WORKING

The Parachute Manual Vol 1 & 2 by Dan Poynter

WORKING

Material and parts used in the manufacture of popular equipment in general use. Ref. Poynter's Manual

WORKING

MANUFACTURING TECHNIQUES including: Stitch Patterns, Joint Efficiency, Buffer Webbing, Confluence Wraps, Block/Bias Construction, Hardware Use & Compatibility, Machines & Tools.

WORKING

PARACHUTE DEFINITIONS including: Safe Working Load, Shock Load, Ultimate Load, Proof Load, Snatch Force, Critical Opening Speed.

WORKING



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Reserve Inspection and Packing Instructions including: (*Ref. Owners manuals*)

Skydiving Reserve, Container and Harness Inspection	DETAILED
Pilot/Emergency Parachute, Container and Harness Inspection	DETAILED
Ram-Air Reserves - Free bag and diaper deployment, PRO packing and flat packing including adaptations for molar reserve freebags.	DETAILED
Round Reserves - Canopy first deployment, 2 Bite split diaper, Full diaper	DETAILED

Main parachute packing instructions for:

Ram-Air main parachutes (flat packing and PRO packing)	DETAILED
Round main parachutes	WORKING

Parachute Container deployment systems including:

Bottom of Container (BOC), Throwaway pilot chute deployment (TAP), Pull-out pilot chute deployment (POP), Ripcord (RC), Static Line (SL)	DETAILED
Tandem drogue systems	DETAILED
Reserve Static Lines (RSLs)	WORKING

Automatic Activation Devices (AADs) including installation requirements for most common parachute containers

CYPRES , ASTRA, FXC 12000, KAP 3, Vigil	WORKING
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*Note that the approval for a Rigger to install Cypres kits requires an application and exam conducted by Airtec GmbH who will then issue the approved installation guide.*

Para Gear Catalog (*annual update available from Para Gear*) REFERENCE

TEST METHODS including:

Acid mesh test, Fabric tear strength and permeability	WORKING
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Civil Aviation Orders: Part 107 Airworthiness Directives- Aircraft Equipment, Section: Parachute Equipment (AD/PARA/##) - <i>Demonstrate internet search for updates</i> -	DETAILED
CASA CAO. 103.11, 103.18 and 107	DETAILED
CASR 1998 Part 21.601 – 21.621	BASIC
ASTM D6193-97 Standard Practice for Stitches and Seams <i>This is an extensive standard that describes all types of stitches and seams developed by the American Society for testing and Materials. Relevant parts are available for reference from the APF.</i>	BASIC
TSO C23d and AS-8015B	BASIC

## **CASA APPROVED WORKSHOP**

Should an APF Rigger intend to manufacture parachute certificated parts to approved designs it is necessary to gain CASA approval for their workshop - ref APF Op Reg 11.2.1 (d).

A generic manual has been prepared by the APF to assist in this endeavour and this should be read in conjunction with information from CASA CAR 30 Certificate of Approval, CAAPs - 30-1(1) Certificates of approval - Guidelines, 30-3(0) Approved Maintenance Organisation - Limited category aircraft and 30-4(0) Certificate of Approval - Maintenance Organisation.

Contact the APF Office to receive a copy of this manual.

Parachute certificated parts may also be manufactured under a CAR 35 approval.

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