

# MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA



## HEAVY MODEL AIRCRAFT INSPECTION AND OPERATION PROCEDURE

### **MOP015**

## Amendments made to MOP015

Shading of **text** identifies changes to the previous version

Paragraph	Brief description of change	Change incorporated by
6.6.3 6.6.4 amended and renumbered.	Delete the below paragraph. No longer a requirement. The MAAA Aircraft Inspector of the model is responsible for ensuring that the bottom section of the completed Permit to Fly is sent to the Ordinary Member	MAAA Secretary January 2015
7.4	Delete the requirement to return a cancelled Permit to Fly form to the issuing body.	
9.2.3	Delete the below paragraph. This data is available via the Membership System. The MAAA Secretary shall supply the Ordinary Members at least annually a list of MAAA Inspectors affiliated with them.	
Form MAAA038 Permit to Fly	Delete bottom section. No requirement to send any part of the form to the State Association. Owner responsible for retaining the entire form.	
1 Introduction	Delete reference to UAVs	MAAA Secretary August 2014
3.0 Definitions	Amend CAR to CASR (Civil Aviation Safety Regulation) Amend AAAO to RAAO (Recreational Aviation Administration Organisation) Amend increase mass weight to 150Kgs Delete reference to UAVs	
5.1	Amend increase mass weight to 150Kgs	
7.6	Requirement for Flying at Displays - Giant models	
Annex	To avoid confusion, the Annex containing the sample form was removed. Refer to the MAAA website to view or download the relevant form.	

© MAAA 2015

This Policy and/or Procedure forms part of the MAAA Manual of Procedures. This entire document is for the use of all classes of members of the MAAA in the conduct of activities associated with the MAAA and is not be used for any other purpose, in whole or in part, without the written approval of the MAAA Executive.

## Table of Contents

1.	INTRODUCTION.....	3
2.	PURPOSE .....	3
3.	DEFINITIONS .....	4
4.	RESPONSIBILITIES .....	5
	4.1 Owner/Operator .....	5
	4.2 Inspector .....	5
5.	MAAA REQUIREMENTS FOR HEAVY MODELS .....	5
	5.1 General.....	5
6.	REQUIREMENTS FOR THE ISSUE OF A PERMIT TO FLY .....	6
	6.1 Prior to Inspection Process .....	6
	6.1.1 All Heavy Models .....	6
	6.1.2 Giant Models – Additional requirements .....	7
	6.2 Inspection Process – All Heavy Models.....	7
	6.3 Additional Inspection Requirements and Recommendations for Giant Models .....	8
	6.3.1 Control Systems .....	8
	6.4 Test Flights – General.....	10
	6.5 Additional Test Flight Requirements for Giant Models .....	11
	6.6 Issue of a Permit to Fly .....	11
7.	OPERATION UNDER A PERMIT TO FLY .....	12
	7.1 Pilots of Heavy Models.....	12
	7.2 Pre-Flight Inspection .....	12
	7.3 Suspension of Permit .....	12
	7.4 Cancellation of Permit .....	12
	7.5 Flying at Displays.....	12
	7.6 Flying at Displays - Giant Models .....	13
	7.7 Flying Sites for Giant Models .....	13
8.	INSPECTION PROCEDURES .....	13
	8.1 Inspection Before Test Flights.....	13
	8.2 Revalidation of a Suspended Permit to Fly.....	13
	8.3 Appeals.....	13
	8.4 Three Year Revalidation Inspection .....	13
	8.5 Documentation.....	14
9.	AUTHORISED INSPECTORS.....	14
	9.1 Appointment.....	14
	9.2 Register of Inspectors .....	14
	9.3 Obligations of an Inspector.....	14
10.	OTHER PROCEDURES .....	14
	10.1 General .....	14
11.	FORMS.....	15
	Permit to Fly Form MAAA038 See the MAAA Website - Forms .....	15
	Checklist for Inspection of a Fixed Wing Model Aircraft .....	15
	Checklist for Inspection of a Rotary Wing Model Aircraft .....	15
	Checklist for Inspection of a Gas Turbine Powered Model Aircraft .....	15
	Checklist for Inspection of a Pulse Jet Powered Model Aircraft .....	15
	Giant Model Aircraft .....	15

# **HEAVY MODEL AIRCRAFT INSPECTION AND OPERATION PROCEDURE**

## **1. INTRODUCTION**

- 1.1 The MAAA requires that Heavy and Gas Turbine powered Model Aircraft be operated in conformance to the CASA regulations, the MAAA Manual of Procedures, and MAAA safety requirements.
- 1.2 A Model Aircraft operated by an Affiliate Member of the MAAA is subject to the requirements of the MAAA Manual of Procedures as well as CASR (1998) Part 101 sections A, B, C and G.
- 1.3 The MAAA requires that all aircraft with a dry mass greater than 7Kgs have a valid Permit to Fly.
- 1.4 MAAA FW25 and RW25 Aircraft Inspectors are authorised to issue Permits to Fly for Large Models to any Affiliate Member of the MAAA irrespective of State of affiliation of the Inspector or aircraft owner or pilot.
- 1.5 MAAA FW50 and RW50 Aircraft Inspectors are authorised to issue Permits to Fly for Giant Models to any Affiliate Member of the MAAA irrespective of State of affiliation of the Inspector or aircraft owner or pilot.
- 1.6 MAAA FW25 and RW25 Aircraft Inspectors may inspect a Large Model they own, or have built, ONLY when it is impractical due to distance or availability to have another FW25 or RW25 Aircraft Inspector perform the inspection. In this case the inspection and test flight of their own Large Model must be done in the presence of a member of the Inspector's Club Executive who shall countersign the Permit to Fly.
- 1.7 MAAA FW50 and RW50 Aircraft Inspectors shall not inspect or issue Permits for a Giant model they own, or have built.
- 1.8 All Gas Turbine powered Model Aircraft require a valid Permit to Fly form in accordance with MOP030 and the relevant requirements of this procedure.
- 1.9 All radio controlled Pulse Jet powered Model Aircraft require a valid Permit to Fly form in accordance with MOP025 and the relevant requirements of this procedure.

## **2. PURPOSE**

The purpose of this publication is to provide all Affiliate Members of the MAAA a ready reference to their obligations and regulations as required under Commonwealth law, and MAAA rules and procedures for the operation of Large and Giant Model Aircraft.

### **3. DEFINITIONS**

If there is any inconsistency between CASR (1998) Part 101 and this Procedure then the provisions of CASR (1998) Part 101 Subparts A, B, C and G apply. All definitions given in the CASR (1998) Part 101 apply equally throughout this manual.

In this document the term Model Aircraft is taken to mean both radio controlled Fixed Wing and Rotary Wing model aircraft.

#### **Recreational Aviation Administration Organisation (RAAO) –**

An organisation approved by CASA to administer a designated aviation activity.

<b>Affiliate Member</b> .....	A person properly affiliated with a Club that is properly affiliated with an MAAA Ordinary Member.
<b>ARF</b> .....	Almost Ready to Fly. A Model Aircraft primarily manufactured by commercial business and assembled by the modeller.
<b>CASA</b> .....	Civil Aviation Safety Authority.
<b>Endorsed Pilot</b> .....	Pilots who, having flown a test flight unaided to a safe standard while observed by the relevant MAAA Inspector, have their name endorsed on the "Permit to Fly" by the Inspector.
<b>Failsafe</b> .....	A system which sets a control/s to a predetermined setting when loss of signal is detected.
<b>Fixed Wing Model Aircraft</b> .....	A Model Aircraft where the lift is provided solely by fixed surfaces.
<b>Giant Model Aircraft</b> .....	Any Model Aircraft with a dry mass, (excluding fuel, but including all batteries if electric powered) of more than 25Kgs but less than 150Kgs.
<b>Large Model Aircraft</b> .....	Any Model Aircraft with a dry mass (excluding fuel, but including all batteries if electric powered) of 7Kgs or more, to a maximum of 25Kgs.
<b>Inspector</b> .....	Financial Affiliate Members of the MAAA who have met the requirements for their appointment and have been given written authority to carry out inspections on behalf of the MAAA in connection with the issue of a Permit to Fly.
<b>Relevant Inspector</b> .....	One of the following categories of MAAA Inspector: FW25, RW25, FW50, RW50, Gas Turbine endorsement. See MOP006.
<b>Inspector Check List</b> .....	The Check List for Inspection of a Model Aircraft as required for the issue of a Permit to Fly.
<b>Heavy Model</b> .....	A Model Aircraft with a dry mass, (excluding fuel, but including all batteries if electric powered), of greater than 7Kgs but less than 150Kgs.

<b>MAAA</b> .....	Model Aeronautical Association of Australia Inc.
<b>MAAA Ordinary Member</b> .....	A State Association properly affiliated with the MAAA Inc.
<b>Model Aircraft</b> .....	The generic term covering both Fixed and Rotary Wing Model Aircraft.
<b>Ordinary Member</b> .....	See MAAA Ordinary Member
<b>Permit to Fly</b> .....	A document issued by an authorised MAAA Inspector, valid for 3 years from date of issue, following inspection in accordance with MAAA procedure. A Permit to Fly becomes valid when a single pilot has been endorsed by an authorised MAAA Inspector.
<b>Radio Controlled Model Aircraft</b>	See MAAA Internal and Stabilisation Policy, MOP044
<b>Rotary Wing Model Aircraft</b>	Otherwise known as a helicopter
<b>RTF</b> .....	Ready to Fly. A Model Aircraft manufactured and assembled by commercial business as a complete package and capable of flying as supplied.
<b>State Association</b> .....	See MAAA Ordinary Member
<b>Temporary Permit</b> .....	A permit, valid for the day of issue only, which allows a test flight/s for the purpose of issuing a Permit to Fly.

#### **4. RESPONSIBILITIES**

##### **4.1 Owner/Operator**

- 4.1.1 Individual operators of Model Aircraft are responsible for their compliance, and their model's compliance, with CASR (1998) Part 101 Subparts A, B, C and G also with all MAAA rules and the requirements of the MAAA Manual of Procedures.
- 4.1.2 Owners are responsible for ensuring that all paperwork, including inspection documentation, is kept so that it is available for re-certification processes.

##### **4.2 Inspector**

- 4.2.1 Inspectors are responsible for maintaining an awareness of the requirements of the MAAA Manual of Procedures with respect to inspecting and flying of Model Aircraft.

#### **5. MAAA REQUIREMENTS FOR HEAVY MODELS**

##### **5.1 General**

- 5.1.1 MAAA rules require that Model Aircraft that weigh between 7Kgs and 150Kgs, Dry Weight (without fuel but with all batteries), all Gas Turbine powered Model Aircraft (regardless of weight) and all radio controlled

Pulse Jet powered Model Aircraft (regardless of weight) require a valid Permit to Fly before they are allowed to take off and be flown.

- 5.1.2 A Permit to Fly, is issued by an MAAA Inspector: FW25, RW25, FW50, RW50 with/without Gas Turbine/ Pulse Jet Endorsement, depending on the aircraft classification, on behalf of an MAAA Ordinary Member when the requirements detailed in this document have been met.
- 5.1.3 A Permit to Fly remains valid until any of the circumstances requiring suspension or cancellation occurs (see 7.3 & 7.4).
- 5.1.4 A suspended Permit to Fly may be revalidated by a relevant MAAA Aircraft Inspector as described in 8.2 below.
- 5.1.5 An MAAA Inspector for the relevant aircraft shall issue a Temporary Permit to Fly, valid only on the day of issue, to allow test flights as described below to take place.
- 5.1.6 On satisfactory completion of test flights required under this Procedure, the Inspector shall endorse the Temporary Permit accordingly, which then becomes a Permit to Fly.
- 5.1.7 In the event that it is impractical to obtain the services of a fully qualified MAAA Inspector for the relevant aircraft, a viable alternative can be arranged by contacting the MAAA Executive.

## **6. REQUIREMENTS FOR THE ISSUE OF A PERMIT TO FLY**

### **6.1 Prior to Inspection Process**

#### **6.1.1 All Heavy Models**

- 6.1.1.1 Owners of Model Aircraft that require a Permit to Fly should obtain the Permit to Fly form (Form MAAA038) from the Forms Section of on the MAAA web site ([www.maaa.asn.au](http://www.maaa.asn.au)).
- 6.1.1.2 The owner of the aircraft shall:
  - (a) Fill in the applicable fields of the Permit to Fly form.
  - (b) Sign the "Owner's Declaration" section of the Permit to Fly form.
  - (c) Identify on the Permit to Fly form the proposed Flight Envelope of the model. The Flight Envelope shall be selected from:
    - (i) level manoeuvres, flat turns, gentle climbs and dives
    - (ii) aerobatics except flick
    - (iii) unrestricted aerobatics
- 6.1.1.3 The owner shall use as appropriate: the "Check List for Inspection of a Fixed Wing Model Aircraft" the "Check List for Inspection of a Rotary Wing Model Aircraft", the "Check List for Inspection of a Gas Turbine Powered Aircraft", the "Check List for Inspection of a Pulse Jet Powered Aircraft" and the "Giant Model Aircraft Pre and During Construction/Assembly Inspection Assessment" as a guide to check the aircraft and rectify any details that require attention. All check lists are available from the MAAA website. ([www.maaa.asn.au](http://www.maaa.asn.au))
- 6.1.1.4 Once satisfied that the aircraft is ready to be assessed for the issue of a Permit to Fly, the owner shall contact an appropriate

MAAA Aircraft Inspector (for Gas Turbine powered models a relevant FW or RW Inspector with Gas Turbine endorsement is required) to arrange a date and time for the inspection and Permit process.

- 6.1.1.5 The Ordinary Member shall maintain a list of MAAA Aircraft Inspectors affiliated with the Ordinary Member who are authorised to issue Permits to Fly.

## **6.1.2 Giant Models – Additional requirements**

- 6.1.2.1 Prior to the commencement of work on a Giant Model the builder/owner shall contact an MAAA FW50 or RW50 Inspector (for a gas turbine powered Giant Model an FW50 or RW50 with Gas Turbine endorsement is required). The Inspector shall assess the building drawings, ARF kit or pre-built model, to determine when the inspection schedule required should commence, taking into account the degree of complexity of the project. Multiple inspections may be made during construction as required by the Inspector.
- 6.1.2.2 The FW50 or RW50 Inspector shall determine the construction inspection program based on the experience of the modeller, if it is a proven design, the plans the aircraft is being constructed to and any other relevant information. An enlarged commercially available plan shall be treated as an “own design”.
- 6.1.2.3 The FW50 or RW50 Inspector shall note on the Giant Model Aircraft Pre and During Construction/Assembly Inspection Assessment form, MAAA030, the number of and details of “during construction” inspections that shall be made and the stage/s of construction that these inspections are to be made.
- 6.1.2.4 For new ARF models, the FW50 or RW50 Inspector shall closely examine the model’s construction method to the maximum extent possible, and ensure that adequate test flying is carried out to confirm the structural airworthiness of the model.
- 6.1.2.5 In the case of already constructed models being inspected after change of ownership or revalidation, except ARF models as above, proof of previous inspections during construction (eg a previous valid Giant Model Permit) must be supplied.
- 6.1.2.6 If the proof of previous inspections and/or the previous Permit to Fly is not available then the FW50 or RW50 Inspector shall conduct a detailed inspection of the model taking into account the condition and type of model, previous knowledge of the model and other such factors.

## **6.2 Inspection Process – All Heavy Models**

- 6.2.1 The MAAA Aircraft Inspector shall check the Permit to Fly form to ensure that the Ownership and Model Details are completed and that the Owner’s Declaration is signed and dated.
- 6.2.2 The MAAA Inspector shall check that the model details on the Permit document are correct.
- 6.2.3 Prior to assembly of the aircraft to verify general airworthiness, “as distinct from structural integrity”, the MAAA Inspector shall, using the relevant



Check List for Inspection, inspect the aircraft, marking on the Checklist “Not Applicable” or indicating “Satisfactory” with a tick as appropriate. Any unsatisfactory items must be rectified, re-examined and marked/indicated “satisfactory” before test flights commence.

- 6.2.4 After assembly of the Model Aircraft, the MAAA Inspector shall examine the complete Model Aircraft to verify general airworthiness. Any unsatisfactory items must be rectified, re-examined and marked satisfactory before test flights commence.
- 6.2.5 If the MAAA Inspector is satisfied that the aircraft is suitable for a test flight a Temporary Permit to Fly for the day shall be issued by filling in and dating that section of the Permit to Fly form.
- 6.2.6 If the MAAA Inspector is not satisfied that the aircraft is suitable for a test flight the owner shall be informed of the problem/s that require attention to bring the aircraft to a state that would allow a Temporary Permit to be issued to allow a test flight to be undertaken.
- 6.2.7 If the problems identified by the Inspector are of a minor nature and can be repaired immediately, the owner can make repairs and submit the model for re-inspection.
- 6.2.8 Prior to any engine start (where applicable) the Inspector should ensure that the Radio Fail Safe has been set, at the very least, to not increase throttle.

### **6.3 Additional Inspection Requirements and Recommendations for Giant Models**

#### **6.3.1 Control Systems**

The following minimum requirements for control systems shall apply. A FW50 or RW50 Inspector may recommend upgrading the requirements depending on the size and performance of the Giant Model under examination. However final responsibility for the selection of a suitable system remains with the builder.

##### **6.3.1.1 Radio Systems**

The transmitter and receivers used for the control of Giant Models be tested and subject to ongoing checks strictly in accordance with the MAAA Frequency Directive. This means that both the transmitter and the receivers have to be certified. 10 kHz operation is not allowed for Giant Models.

##### **6.3.1.2 Receiver**

To give some form of redundancy, it is recommended twin receivers, each with separate power supply and wiring, share each of the primary controls of the aircraft wherever possible. For example one receiver would drive the port aileron and the second would drive the starboard aileron. It is recommended that Failsafe be used on at least the throttle channel. For most PPM systems, an add-on Failsafe would be needed.

##### **6.3.1.3 Battery**

Battery redundancy is required. This may be provided by use of separate batteries for each receiver or a common supply using a battery backer system from a power board or otherwise.

The total battery capacity shall take into account the number and power of the servos, the required control throws, the size and

speed of the model together with the expected number of commands to be exercised in flight.

It is unlikely that a total battery capacity of less than 2000 mAH would be adequate for a Giant Model.

#### 6.3.1.4 Servos – General

The following paragraphs specify the minimum servo torque required to power the primary control surfaces. Where servo torque is suggested for a control surface this can be provided by one or more servos working together. The minimum may not be sufficient for fast flying models or those with large control surfaces or throws.

It is suggested that if the builder does not have experience with the size and class of model being built that they take into account the recommendations of the designer, those of other models of similar weight and performance which are published in magazines or on the internet, the experience of other modellers or information published to calculate required servo performance. The Inspector is entitled to require the builder to justify his choice of servo.

Mechanical or other means of boosting torque supplied to a control surface may be taken into account when considering servo torque requirements on a control surface. This may be in the form a boost tabs or similar systems that assist control surface movements.

Servos must be visible for inspection i.e. with the wing off, or through an access panel.

##### 6.3.1.4.1 Elevators

In the case of separate elevators, the minimum servo torque for each elevator half shall be 6Kg.cm. In the case of a single elevator the minimum servo torque to the elevator shall be 8Kg.cm.

##### 6.3.1.4.2 Ailerons

The minimum servo torque per aileron shall be 6Kg.cm.

##### 6.3.1.4.3 Elevons

The minimum servo torque per elevon shall be 8Kg.cm.

##### 6.3.1.4.4 Other combined function control surfaces:

As for Elevons.

#### 6.3.1.5 Control linkages

The control linkages, clevises and horns shall be able to withstand the maximum torque output of the servo.

Where commercial clevises are used for primary control surfaces, they must be a minimum of 4-40 type. Pull/Pull systems are recommended where appropriate. Heavy-duty linkages that are available for large aerobatic models, and heavy-duty servo arms, are recommended.

#### 6.3.1.6 Engine(s)

In the case of ignition engine powered aircraft they shall be capable of being shut down from the transmitter by an alternate means to the throttle control (for example a separate servo operated kill switch). In the case of a dual receiver system this shall not be controlled by the receiver operating the throttle control.

#### 6.3.1.7 Gas Turbine Powered

An MAAA FW50 or RW50 Inspector with Gas Turbine endorsement is responsible for the issue of the Permit to Fly for that type of Gas Turbine powered Giant Model. In addition to the above inspection requirements for Giant Models the installation and operation of the turbine/s shall be inspected and approved by the FW50 or RW50 Inspector with Gas Turbine endorsement.

### 6.4 Test Flights – General

6.4.1 Test flights can only take place after the relevant MAAA Aircraft Inspector has issued a Temporary Permit to Fly by the dating of the Permit to Fly form.

6.4.2 All test flights shall take place:

- (a) at a site suitable for the purpose so that any failures do not endanger people or property, and
- (b) in the presence of a relevant MAAA Aircraft Inspector, and
- (c) while a Temporary Permit to Fly is in force for the model, and
- (d) with all fuel tanks full.

6.4.3 The relevant MAAA Aircraft Inspector shall observe the proposed pilot test fly the aircraft. The model shall then be flown to demonstrate its ability to perform safely all the manoeuvres contained in the nominated flight envelope.

6.4.4 Pilots of aircraft being flown for a test flight shall demonstrate that they are able to maintain control of the model while performing safely the nominated manoeuvres. The manoeuvres must be recognisable and be performed without any disorientation or loss of control.

Specific Requirements for Fixed Wing Model Aircraft are:

- (a) no control surface flutter is apparent
- (b) the deflection of each control surface during level flight at full throttle produces the correct response
- (c) take-off and landing must be flown by the above pilot so that:
  - (i) during take-off, the aircraft must not deviate from its initial selected heading in excess of 30 degrees until it achieves a safe height to manoeuvre.
  - (ii) landing must be achieved in the same general area as used for take-off and should not result in any major airframe damage to the aircraft under test. (For example, a nose-over resulting in a broken propeller would not be grounds for a rejection but a smashed landing gear from a heavy landing may require a re-test.)

Specific Requirements for Rotary Wing Model Aircraft are:

- (a) no vibration or flutter is apparent
- (b) the deflection of each control during hover produces sufficient and correct response to enable stable control within close proximity of the take off point
- (c) the deflection of each control during forward flight produces sufficient and correct response to enable stable control

- (d) take off, hover, flight and landing must be flown by the above pilot so that:
  - (i) during forward flight the aircraft must not deviate from its initial selected heading in excess of 30 degrees until it achieves a safe height to manoeuvre
  - (ii) landing must be achieved in the same general area as used for take off and should not result in any major airframe damage to the aircraft under test. (For example, a minor ground strike by the tail rotor would not be grounds for a rejection but a damaged main rotor blade or landing gear from a heavy landing may require a re-test.)

- 6.4.5 Any number of test flights may be made on the day; provided that changes other than adjustment of trimming devices and control throws are approved by the relevant MAAA Aircraft Inspector.
- 6.4.6 The MAAA Aircraft Inspector shall, if considered necessary, ask the pilot to demonstrate manoeuvres within the model's stated flight envelope to prove the aircraft's airworthiness and/or suitability for the manoeuvre.
- 6.4.7 The MAAA Aircraft Inspector shall sign the Permit to Fly Form adjacent to the flight envelope which has been demonstrated successfully and is within the capabilities of the aircraft and pilot. This is then considered the flight envelope of the aircraft for the endorsed pilot.
- 6.4.8 All pilots listed on the Permit to Fly form must have their flight envelope tested, approved and endorsed on the Permit to Fly form by a relevant MAAA Aircraft Inspector. The endorsing of pilots on the form can be done at any time.
- 6.4.9 If faults are identified by the MAAA Aircraft Inspector during the test flight/s and it is considered appropriate, the Inspector shall allow further test flights to be conducted in his/her presence after rectification and inspection of the faults identified.
- 6.4.10 If for any reason the MAAA Aircraft Inspector is not satisfied with the airworthiness of the model as demonstrated in the test flight/s, the Temporary Permit to Fly shall be cancelled.

## **6.5 Additional Test Flight Requirements for Giant Models**

- 6.5.1 A minimum of three flights or more as required by the relevant FW50 or RW 50 Aircraft Inspector.
- 6.5.2 Each flight is to be logged, and at least the last two test flights to be made without any retrim, repair, or major adjustment to the airframe or radio, before final certification.
- 6.5.3 All pilots of Giant Models shall have Gold Wings endorsement for the aircraft type being flown.
- 6.5.4 All pilots undergoing training for endorsement of a Giant Model must have Gold Wings endorsement for the aircraft type being flown.

## **6.6 Issue of a Permit to Fly**

- 6.6.1 When the MAAA Aircraft Inspector is satisfied that the model meets with the requirements of this manual, the Temporary Permit shall be endorsed with the flight envelope tested, date of demonstration and signature. The endorsed Temporary Permit then becomes a valid Permit to Fly and the date of demonstration becomes the date of issue.

- 6.6.2 In the case of Giant Models, the form MAAA030 "Giant Aircraft Pre and During Construction/Assembly Inspection Assessment" shall also be signed by the MAAA Inspector.
- 6.6.3 The owner shall retain the Permit to Fly form and be able to produce it on demand when operating the aircraft. In the case of a Giant Model, form MAAA030 "Giant Aircraft Pre and During Construction/Assembly Inspection Assessment" forms part of the documentation that the owner retains.

## **7. OPERATION UNDER A PERMIT TO FLY**

### **7.1 Pilots of Heavy Models**

A valid Permit to Fly allows flights of the subject aircraft under the control of any pilot whose name appears on the Permit to Fly as an "Endorsed Pilot". The Permit also allows flights of the subject aircraft under the direct supervision of any pilot whose name appears on the Permit to Fly as an "Endorsed Pilot" except at Displays that require a Display Permit. See Manual of Procedures MOP019 Display Procedure.

### **7.2 Pre-Flight Inspection**

The pilot of a model aircraft requiring a Permit to Fly shall verify all items in the relevant Inspection Checklist, before the first flight on any one day. Items marked "P" must also be verified before each flight.

### **7.3 Suspension of Permit**

A Permit to Fly shall be considered suspended whenever the model for which it is issued:

- (a) suffers damage to its primary structure or any control surface
- (b) suffers any control malfunction during flight
- (c) is structurally or aerodynamically modified including radical changes to the control throws.
- (d) is fitted with a different type or size of engine or engine mount
- (e) is fitted with a different type or size of servo operating a control surface
- (f) is fitted with a different type of battery with lower capacity.
- (g) is fitted with a different radio receiver from that originally approved
- (h) undergoes a change of ownership

A suspended Permit may be re-validated as described in 8.2 below.

### **7.4 Cancellation of Permit**

A Permit to Fly shall be considered to be cancelled whenever the model for which it is issued:

- (a) is damaged beyond repair
- (b) is modified such that it is no longer accurately described in the Permit.
- (c) is over three (3) years old from the date of issue of Permit to Fly and has not been issued with a new Permit to Fly.

### **7.5 Flying at Displays**

Flying of any Heavy Model aircraft at Displays, as defined in MOP019, shall only be done in accordance with the requirements of MOP019.

Only those pilots listed on the Permit to Fly shall pilot an aircraft requiring a Permit to Fly at Displays that require the issue of a Display Permit under MOP019. The training of pilots of models requiring a Permit to Fly is not permitted at Displays.

## **7.6 Flying at Displays - Giant Models**

Prior to any demonstration flights to the general public, a Giant Model (25-150Kgs) and pilot, shall have logged six flights, which may include test flying for the Permit to Fly, and a minimum of one hour accumulated, logged, flying time.

## **7.7 Flying Sites for Giant Models**

Giant Models cannot be flown at a Club Field unless this has been approved by the Club.

It is the responsibility of the pilot of a Giant Model to be satisfied that the proposed flying area is suitable for the particular model under the conditions present on the day.

When considering the suitability of any particular site the Giant Model pilot should pay particular attention to, but not be limited, to; the following items:

- The size speed and number of any other aircraft that may be flying at the same time,
- The maximum airspeed of the model,
- The area required for the model to carry out normal planned manoeuvres.
- Safety margins needed to cover any unforeseen incidents such as engine failure or control anomaly,
- Wind speed and direction,
- Length and surface of runway,
- Take off clearance of obstacles,
- Landing glide path clearance of obstacles,
- Consideration of possible engine failure on takeoff or landing,
- Obstacles in general flight path,
- Possible alternate emergency landing areas,
- Overshoot considerations,
- Noise considerations,
- Location and clearance of other personnel, buildings and car parks, relative to the planned flight path and that which might be required in an emergency.

## **8. INSPECTION PROCEDURES**

### **8.1 Inspection Before Test Flights**

See Section 6.2 and 6.3

### **8.2 Revalidation of a Suspended Permit to Fly**

A relevant MAAA Aircraft Inspector may revalidate a suspended permit provided that:

- (a) the modification or repairs causing suspension have been examined and found to meet the appropriate standards, and
- (b) the model in its modified state has been inspected and test flown as in 6.2, 6.3, 6.4, 6.5 and 6.6 as applicable.

### **8.3 Appeals**

In the event of unresolved disputes, the applicant for a Permit to Fly may appeal to the Ordinary Member. That Ordinary Member shall be the final arbiter in all disputes.

### **8.4 Three Year Revalidation Inspection**

- (a) This inspection is to revalidate a permit that is more than three years old since the date of issue. A permit can be revalidated prior to the end of the three year period.

- (b) The MAAA Aircraft Inspector shall cancel any Permit to Fly if the permit has been found to be in breach of clause 7.3.
- (c) The relevant MAAA Aircraft Inspector shall, after approving a three year inspection of an aircraft and obtaining the Permit to Fly form from the operator, issue a new Permit to Fly and in the case of a Giant Model other documents as required by this procedure to the owner with all appropriate details stated on the form/s and validated by signing and dating where required. The Inspector shall destroy the old Permit to Fly. The inspection documents for Giant Models shall be retained by the owner.

#### **8.5 Documentation**

The Permit to Fly documentation for revalidation shall be handled as detailed in clause 6.6.

### **9. AUTHORISED INSPECTORS**

#### **9.1 Appointment**

- 9.1.1 Inspectors shall be appointed and reappointed in accordance with the Appointment and Reappointment of Inspectors Procedure, MOP006.
- 9.1.2 The MAAA may define any requirements deemed necessary for appointments as an Inspector, and shall issue a statement of authority in the form of an endorsement printed on the MAAA membership card of the candidates who meet these requirements. See MAAA Appointment and Reappointment of Inspectors Procedure, MOP006.

#### **9.2 Register of Inspectors**

- 9.2.1 The MAAA Secretary shall maintain the register of MAAA Inspectors.
- 9.2.2 The Ordinary Members shall maintain registers of MAAA Inspectors affiliated with them.

#### **9.3 Obligations of an Inspector**

- 9.3.1 In accepting nomination as an MAAA Aircraft Inspector, an Affiliate Member accepts the responsibility implicit in the appointment and undertakes:
  - (a) to be, generally and reasonably, available with adequate notice to attend and observe test flights when requested, and
  - (b) to carry out all duties in accordance with this document
- 9.3.2 An MAAA Inspector carries no responsibility for a failure of an aircraft and any subsequent damage, however caused, during a test flight.
- 9.3.3 There is no liability for subsequent flights under any circumstances as the conditions of operation are outside the inspector's control.

### **10. OTHER PROCEDURES**

#### **10.1 General**

The operation of Model Aircraft shall be in conformance to CASA regulations and other MAAA Procedures.

## **11. FORMS**

- Permit to Fly** Form MAAA038 See the MAAA Website - Forms
- Checklist for Inspection of a Fixed Wing Model Aircraft**  
(2 Pages) Form MAAA014 See the MAAA Website - Forms
- Checklist for Inspection of a Rotary Wing Model Aircraft**  
(2 Pages) Form MAAA033 See the MAAA Website - Forms
- Checklist for Inspection of a Gas Turbine Powered Model Aircraft**  
(2 pages) Form MAAA039 See the MAAA Website - Forms
- Checklist for Inspection of a Pulse Jet Powered Model Aircraft**  
(2 pages) Form MAAA040 See the MAAA Website - Forms
- Giant Model Aircraft**  
Pre and During Construction/Assembly Inspection Assessment (2 pages)  
Form MAAA030 See the MAAA Website - Forms