NZMAA FLYING RULES

Section 8: Pylon

Updates and Alterations

Date	Paragraph	Change
April 2006	4 and 5	Q500 added.
May 2006	Section 8A	deleted,
		Reference to FAI website added.
	2.4	muffler rule changed
Jan 09	Q500	
	4.11	fuel alteration
	4.1	deleted to allow composite airframes
	4.2.1	Weight change
	5.2.1	Weight change
	4.13	addition allowing no more than one class to be flown
Jan 2011	4.13	deleted to allow more participation
		The word "composite" removed from all rules
July 2020		Delete highlighted yellow
		Add highlighted blue
Jul 2020	1.	Addition of FAI classes F3R, F3T and F3E (prev. F5D)
	2.	Delete Sportsman Pylon, no longer flown
	3.	Delete Intermediate Pylon, no longer flown
	4.	Update Sport Quickie 500 rules
	5.	Delete Expert Quickie 500, no longer flown

NZMAA FLYING RULES

Section 8: Pylon

1. PYLON : APPLICABILITY

R/C Pylon classes flown in New Zealand include the FAI International classes of F3D. [, F3T, F3R and F3E (previously F5D).]

Rules for F3D [International classes] are included in the FAI Sporting Code – available from the FAU [I] website

ftp://www.fai.org/sporting_code/sc4/sc4.f3d.06.zip.

There are four [is one] domestic non-FAI pylon classes: Sportsman, Intermediate, Sport Quickie 500 and Expert Quickie 500. [class: Sport Quickie 500.]

2. SPORTSMAN PYLON [*delete class*]

2.1 Open airframe. Model must ROG.

2.2 The engine is to be front induction, side exhaust and a maximum displacement of 0.46ci. It is to be fitted with the original, factory supplied muffler and carburettor for that engine.

2.3 Throttle. Engine must be variable throttle equipped, i.e. No Venturis.

2.4 No modifications allowed to engine, and/or carburettor. The only modifications permitted to the muffler are the removal of the baffle, plus the peripheral seam welding at the joint, and the spot welding of the end holes in the muffler.

2.5 Engine must not be a "Quickie 500" type or one of the following:

a) Nelson 40 Q and variations

b) Quickie Jett 40 and variations

c) Rossi 40 or 45

d) MVVS 40 or 45

e) Irvine 40 fitted with special muffler

f) Fox 40 Q500

g) Super Tigre Q500

h) Webra 40 Q500

i) Any homebuilt motor

2.6 Course to be FAI and all relevant FAI course rules apply.

2.8 Fuel to be 80% Methanol, 20%lubricant.

Note: Where the organisers supply fuel then this supplied fuel must be used.

2.9 Propeller to be unmodified and commercially available.

3. INTERMEDIATE PYLON [*delete class*]

3.1 Open airframe. Model must ROG, and have a minimum weight of 1800 grams.

3.2 Engine to be any front induction, side exhaust to a displacement of 0.46 ci. Engine modifications will be allowed.

3.3 Exhaust systems are free and the engine must be equipped with a positive fuel shut off.

3.4 Fuel to be 80% Methanol, 20%lubricant.

Note: Where the organisers supply fuel then this supplied fuel must be used.

3.5 Propellers open.

3.6 Course to be FAI and all relevant FAI course rules apply.

4. 2. SPORT QUICKIE 500

4.1 Deleted to allow composite airframes

2.1 Weight ~ Minimum of 1700 grams and a maximum of 2045 grams, excluding fuel.

4 2.2 Fuselage

4.2.1 Weight. Minimum of 1600 grams (3 ¾ pounds) and a maximum of 2045 grams (4 ½ pounds).

4 2.2.2 1 Depth, Minimum of 90mm (3-1/2 inches) at its deepest point, which must occur within the wing chord.

4 2.2.3 2 Width, Minimum of 73mm (2 -7/8 inches) at its widest point, which must occur within the wing chord. Width and depth points need not coincide.

4 2.2.4 3 Cross-section, The fuselage shall have a simple, rectangular "box" cross-section with a maximum radius of 6.5mm (1/4 inch) at the corners. Diamond-shaped cross sections are prohibited. Fillets or fairings between the fuselage and wing are prohibited. Canopies and turtle decks are acceptable but shall not be included in width or depth measurements. The front firewall shall be a rectangular, flat plate measuring at least 57mm (2 -1/4 inches) by 57mm (2-1/4inches). The perimeter of the front firewall may be rounded to a maximum radius of 6.5mm (1/4 inch).

4 2.3 Lifting surface

4 2.3.1 Wing Area. Minimum of 32.25dm2 (500 square inches).

4 2.3.2 Wing Span. Minimum 1270mm (50 inches) (projected), maximum 1320mm (52 inches) (projected).

4 2.3.3 Wing chord must be constant for at least 1206mm (47-1/2inches) of the span.

4 2.3.4 Wing Airfoil thickness, Minimum of 30mm (1-3/16 inches) for at least 1206 mm (47-1/2 inches) of the span.

4 2.4 Engine installation, the engine and engine mount shall be fully exposed. No cowling or streamlining of the engine is permitted. A backplate -type radial engine mount that replaces the stock engine backplate may be used so long as it displaces the same crankcase volume as the stock backplate assembly. Corners and edges of the engine mount may be rounded to a maximum radius of 6.5mm (¼ inch)

4 2.5 The landing gear shall be fixed, with at least two main wheels of a diameter not less than 57mm (2-1/4 inches). The main wheels shall be at least 178mm (7 inches) apart measured parallel to the wingspan. No wheel pants, wheel spats, or strut fairings shall be used to streamline the main landing gear. Struts shall be either round wire; at least 3mm (1/8-inch) in diameter, or flat stock no more than 3mm (1/8 -inch) thick. Flat stock may be filed or otherwise shaped to an airfoil cross-section but must have a blunt leading edge. Nose or tail wheels, if used, may be streamlined or enclosed

4 2.6 The engine is to be stock, commercially available, front-intake, side exhaust with a maximum displacement of 7.5cc (0.465 cubic inch).

4 2.7 Intake, as supplied by the manufacturer of the engine. The carburettor shall be fully functional (no venturis) and must be stock, except for longevity -enhancing modifications as follows:

4 2.7.1 Adjustment screws and idle needle valves may be held in place with commercially available thread locker, epoxy, or other adhesives and safe tied with rubber bands, wire, or plastic ties.

4 2.7.2 Barrel retaining screws or pins may be replaced with commercially available screws or pins of harder material and may be held in place with commercially available adhesives. Barrels may be deburred for smoother movement and may be safe tied with rubber bands, wire, or plastic ties.

4 2.7.3 Throttle arms may be modified or replaced.

4 2.8 Exhaust system

4 2.8.1 The engine shall be equipped with an expansion chamber muffler or zero-boost muffler as provided by the manufacturer of the engine being used, and having a single exhaust outlet. The only modifications permitted to the muffler are as follows: a tapping for a pressure fitting to supply pressure to the fuel system. The baffle can be removed and can be welded for life enhancement. Any centre bolt may be removed or replaced. Tuned mufflers and tuned pipes are prohibited.

4 2.9 Fuel feed. Other than muffler pressure, no fuel system pressurization is permitted.

4 2.10 Propeller to be of APC or a similar, commercially available and must be stock, except for balancing.

4 2.11 The fuel must contain up to 10 percent nitro methane, 18 percent lubricant. If the event organiser supplies fuel then all competitors must use it. If the event is organised by the SIG, the fuel will be supplied by the SIG and used at 10 percent nitro methane and 18 percent lubricant.

4 2.12 Course to be [set as per] FAI and all relevant course rules apply.

5. EXPERT QUICKIE 500 [*delete class*]

5.2 Fuselage

5.2.1 Weight. Minimum of 1 600 grams (3 ¾ pounds), maximum of 2045 grams (4 ½ pounds)

5.2.2 Width minimum 73mm (2 -7/8 inches) at its widest point, which must occur within the wing chord. Depth minimum 90mm (3-1/2 inches) at its deepest point, which must occur within the wing chord. Width and depth points need not coincide.

5.2.3 Cross-section. The fuselage shall have a simple, rectangular "box" cross-section with a maximum radius of 6.5mm (1/4 inch) at the corners. Diamond-shaped cross sections are prohibited. Fillets or fairings between the fuselage and wing are prohibited. Canopies and turtle decks are acceptable but shall not be included in width or depth measurements. The front firewall shall be a rectangular, flat plate measuring at least 57mm (2 -1/4 inches) by 57mm (2-1/4 inches). The perimeter of the front firewall may be rounded to a m5.3 Lifting surface

5.3.1 Wing Area. Minimum of 32.25dm2 (500 square inches).

5.3.2 Span. Minimum 1270mm (50 inches) (projected), maximum 1320mm (52 inches) (1320mm) (projected).

5.3.3 Wing chord must be constant for at least 1206mm (47-1/2 inches) of span.

5.3.4 Airfoil thickness. Minimum of 30mm (1 -3/16 inches) for at least 1206mm (47-1/2 inches) of span.

5.4 Engine installation. The engine and engine mount shall be fully exposed. No cowling or streamlining of the engine is permitted. A backplate-type radial engine mount that replaces the stock engine backplate may be used so long as it displaces the same crankcase volume as the stock backplate assembly. Corners and edges of the engine mount may be rounded to a maximum radius of 6.5mm (1/4 inch)

5.5 Landing Gear. The landing gear shall be fixed, with at least two main wheels of a diameter not less than 57mm (2-1/4 inches). The main wheels shall be at least 178mm (7 inches) apart, measured parallel to the wingspan. No wheel pants, wheel spats, or strut fairings shall be used to streamline the main landing gear. Struts shall be either round wire; at least 3mm (1/8-inch) in diameter, or flat stock no more than 3mm (1/8-inch) thick. Flat stock may be filed or otherwise shaped to an airfoil cross-section but must have a blunt leading edge. Nose or tail wheels, if used, may be streamlined or enclosed.

5.6 The engine is to be stock, commercially available, front-intake, side exhaust with a maximum displacement of 6.5cc (0.405 cubic inch).

5.7 Intake. A single carburettor with a maximum inner diameter of 9mm. The carburettor may be locked or pinned in the open position and needs not be functional; except that, if the carburettor is not functional, a separate engine

shutoff mechanism shall be used. Other than such locking or pinning, the carburettor shall be stock. Venturis are prohibited.

5.8 Exhaust system

5.8.1 General description. The engine shall be equipped with an expansion chamber muffler, zero-boost muffler, or tune d muffler as provided by the manufacturer for the engine being used, and having a single exhaust outlet with a maximum outlet area of 40mm2 (0.0621 square inches) (equivalent to the area of a round hole measuring 7.5mm (9/32-inch) in diameter).

5.8.2 Inner configuration of tuned mufflers: A tuned muffler used in this event shall have only one internal part, a straight tube or extractor of the type commonly known as a "minipipe". The minipipe shall have a constant, circular cross-section and constant inside and outside diameter.

5.8.3 Outside dimensions. The distance from the centre of the piston to the centre line of the muffler shall not exceed 70mm (2 -3/4 inches). The overall length of the muffler shall not exceed 185mm (7 -1/4 inches), measured from the front of the header to the back of the exhaust outlet. The outside diameter shall not exceed 45mm (1 -3/4 inches), and both the inside and outside diameter of the outside shell of the muffler shall remain constant for at least 115mm (4-1/2 inches).

5.8.4 No modifications allowed to the exhaust

5.9 Fuel feed. Other than muffler pressure, no fuel system pressurization is permitted.

5.10 Propeller

5.10.1 Materials. APC packaged for '40 Pylon' and containing a D-1 designation on the outside hub.

5.10.2 Dimensions. Minimum diameter 222mm (8-3/4 inches).

5.10.3 Availability, modification. Propellers must be commercially available and stock, except for balancing.

5.11 The fuel must contain 10 percent nitromethane, 18 percent lubricant. If the event organiser supplies the fuel then all competitors must use it.

5.12 Course to be FAI and all relevant course rules apply.