

Australian National Drag Racing Association rule submission

Rule submission by;

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Author Bio

I have competed as a Modified Bike racer in Western Australia for over 10 years, claiming the WA Mod Bike championship in 2005/06. I have crewed on a Group 2 CC Competition turbo bike and have recently completed the Johnny Vickers Nitro Bike School in North Carolina. I have also participated in the 2011 AHDRA Jim McClure Nitro Bike Nationals at Rockingham North Carolina as a tuner for two Pro Dragster Nitro Bikes.

Rule Submission concept.

Australian drag racing does not have a pathway for motorcycle riders and tuners to enter the group 1 field of Nitro methane fuelled motorcycles. The only opportunity to experience running a Nitro Methane motorcycle and be competitive is to jump straight into the world of Top Bike. The forces that are exerted on the mind and body from a 6 second Top Bike are extreme and require the mind to adjust to the acceleration rate to maintain true control of the motorcycle.

Top Bike requires an intricate knowledge of how the chemical compound CH_3NO_2 works in an internal combustion engine, using high tech computer programmes and data loggers, fuel injection systems and clutches to ensure the perfect drag racing pass is achieved.

Pro Stock Motor cycle in recent years has struggled to maintain competitive fields. This group one class is on the edge of motorcycle technological advancement and as such requires large financial support to ensure race teams are competitive. The world economic crisis has not helped to keep the competitor numbers at levels that the class requires to keep the viewing public interested.

The introduction of carburetted Nitro Methane fuelled motorcycles as a group one motor cycle drag racing class will introduce racers and tuners to the unique characteristics of how Nitro methane makes power in an internal combustion engine without the complexities of fuel injection. Carburetted Nitro Drag bikes that can achieve low 7 second passes will serve as the stepping stone into Top Bike. They will be able to introduce riders to the acceleration that a Nitro Bike displays and tuners to the single gear motorcycles and maximising the power that Nitro methane produces. The purchase cost of a Carburetted Nitro Bike is approximately one third the cost of a Top Bike and substantially less to race and maintain due to the simplicity of design.

The ADHRA run a Pro Dragster Class of Nitro Bike that has produced exciting low 7 second racing that has grown over the last 5 years. The Johnny Vickers Nitro Bike Drag Racing School uses 120 cubic inch carburetted Nitro Bikes that endure the abuse of students at the school and then are used to compete in national events with without consuming engine parts.

I believe that this rule submission is a positive step forward in motorcycle drag racing. The submission will ensure that Nitro methane motorcycle Drag racing motorcycles continues to grow, particularly during periods of financial instability. It will create a safety step that will assist riders and crews to adjust to the complexities of nitro methane racing.

ANDRA Rule Submission 22/10/2011

New class: NITRO BIKE Group 1

Designation: NB/M (Metric) or NB/T (Twin) followed by bike number.

CLASS DETAILS

Reserved for nitro burning, carburetted, high gear motorcycles built specifically for all out drag racing. Combined weight of motorcycle and rider at the conclusion of a run must equal at least 5.7 pounds per cubic inch including safety gear.

ENGINE

Twin; Pushrod, 45 V-Twin Carburetted single engine with 122 cubic inch. maximum displacement. Pushrod aftermarket heads are legal (including 4 valve). Crankcase and all tanks containing fluids must have vent tubes routed to catch can or have a non-spill breather system on motorcycle. Must have "Bellypan" scatter shield under engine. S.F.I. Specification 46.1 approved engine restraint systems are required.

Metric; In-line 4 cylinder engine with a 2000cc maximum displacement.

Transmission:

Single speed drive train only. Any centrifugal and/or RPM controlled clutch may be used. The clutch must be self-contained. No fluid or electrical inputs may control the operation of the clutch. (Clutch must have strong protective covering.) Guard must be .060 steel or 1/8 inch aluminium.

Fuel: Fuel to be mononitromethane and/or methyl alcohol only. No propylene oxide or nitrous allowed.

CLASS REGULATIONS

Engine; As per Top Bike except where not permitted as mentioned above

Supercharging; Not permitted

SUSPENSION AND BRAKES

Brakes: Hydraulic type, front and rear, mandatory. Minimum size is 9-inch diameter, 1/8-inch thickness for rotors.

Controls: Handlebar controls must be located in safe, workable position. Foot pegs and foot controls must be located in safe, workable position and must be mounted in a safe, craftsman-like manner. Mandatory fuel shutoff must be accessible by rider from riding position. Dual cable push-pull throttle assembly is mandatory.

Lanyard for secondary shut-off must be run through eyelet, allowing the lanyard to be pulled in any direction and closing shut-off.

Suspension: Front suspension minimum size 32 mm and minimum travel of 2 inches. Fork stops required; must limit the turning arc to 28 degrees. Steering dampeners are mandatory.

FRAME

Frame: Any type permitted. All frames should be heli arc welded and main rails must have a minimum diameter of one inch. All major frame tubing must be chrome moly and have at least .058-inch wall thickness. Rake angle must be at least 35 degrees. Alternative frame materials must be submitted to ANDRA for approval. Ground Clearance: Minimum of 50mm (2 inches) with rider on motorcycle and 10 p.s.i. in rear tire (includes exhaust and kickstand).

Wheelie Bars: Wheelie bars are required. Maximum length from centre of rear axle to centre of wheelie bar axle must be at least equal the wheelbase but not exceed 3050mm (120 inches) and to be a minimum of 1905mm (75 inches) in length Bars to be securely cross-braced.

WHEELS AND TIRES

Tires: Must be specified for racing use by manufacturer. Rear tire tread width is limited to 11 inches as measured by ANDRA template.

Wheels: Rear wheel minimum 15 inch, maximum 18 inch. Front wheel minimum 16 inch, maximum 19 inch.

BODY

Body: No body parts are necessary, except rear fender that must cover width of tire and extend past the rear axle.

Fairing: Must be mounted solidly to frame tubes.

Seat: Seat, tail section and rear fender may be incorporated into one unit and must include a step to prevent rider sliding backward.

ELECTRICAL

Ignition: Any non-programmable capacitive OR inductive discharge ignition systems are allowed. Hybrid (capacitive and inductive) ignitions are not allowed.

Starting System: Must be electric external starter. Battery top covers are required. No rollers. No push starts. Jack stands are mandatory for starting. No dry hops in pits.

Control Switches: Must be mounted and constructed in a safe, craftsman-like manner. Must have an emergency kill switch.

Computers: Only data gathering computers are allowed.

Lights: Night lighting required

RIDER

Credentials: Valid ANDRA Group 1 competitor license.

Helmet: Full coverage helmets only! Must be Snell-2000 approved. Eye protection required.

Protective Clothing: Full finger leather gloves with knuckle armour and palm reinforcement, one piece or full circumference zippered leather suit with knee, elbow and shoulder armour or reinforcement, spine/back protector and above the ankle leather boots with toe area reinforcement are required.

Chest Protection: Chest protectors are mandatory. "Ballistic chest protection" (meaning bullet proof) is a device worn to protect the rider's chest from puncture of flying debris in case of catastrophic engine explosion.