

**ANDRA 2018/2019 Rulebook Rule Submission Title:  
A/Fuel Dragster into Top Alcohol Eliminator**

**SUBMISSION AUTHOR: EXTERNAL**

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**RULEBOOK REFERENCE:**

3.15: TOP ALCOHOL ELIMINATOR, page 183 to 185

**RULE SUBMISSION INTENT:**

I propose that A/FD rules mirror that of the NHRA Top Alcohol rules with some changes to ensure parity with the classes currently competing here (in Australia under ANDRA Sanction).

These changes most likely will be a reduction of Nitromethane percentage and possibly a fuel pump output flow restriction. Nitromethane percentage can be verified with scrutineering after each run as per normal procedure for any vehicle in the category.

**PROPOSED ADMENDMENT:**

Adding a new Class "A/FD" (A Fuel Dragster) into Top Alcohol Eliminator.

**CLASSES AFFECTED:**

TA/ - Top Alcohol

**How does this rule protect the safety of participants and spectators?**

This would be a very important consideration for any competitor thinking of running in this class. Starting any Nitromethane engine at any time has to be a precisely orchestrated procedure. In short, if any Nitromethane is present in the cylinders when starting the engine, it will result in severe consequences. This is elevated in injected Nitromethane because of the high compression ratio - @ 13:1 - required for these engines, they must be warmed up on alcohol then switched over to Nitromethane to put heat into the cylinders. I am aware of this through my T/F and F/C experience even though the Supercharged Nitromethane engines have much lower compression. I would envisage that anyone considering running Nitromethane be well informed of what's required to start, run and shut off this type of engine safely, and possibly even go through a training course and test. Nitromethane is not to be feared but must be respected. I am happy to put together an instruction on safety booklet to give to all new to Nitromethane competitors. There would also need to some consideration from the blown alcohol competitors with regards to starting the injected Nitromethane engines before a burnout/race. The Nitromethane engine needs to be started on Methanol and warmed to a desired temperature before it is switched over to Nitromethane, this procedure does take a few minutes extra, so the expected thing in the US is for the blown car to wait for a signal from the injected Nitromethane Crew Chief when his car is about to be switched over to Nitromethane before starting the blown alcohol car.

**How is this rule a positive step for the sport?**

There a number of positive reasons for introducing A/FD into Top Alcohol. To those who might not know, A/FD refers to a naturally aspirated Nitromethane burning front or rear engine dragster.

Adding competitors. I believe there are few people outside the category as well as myself who are very interested in competing in this class if it is successful in becoming part of Top Alcohol.

**What is the positive impact of the rule on other classes and brackets?**

Adding a different element to the category. Australia is unique in having Supercharged Methanol burning Dragsters, Funny Cars and Altereds competing together, and having a fourth type of car competing will only add to the variety for the fans to enjoy. With the door cars on the cusp of adding Turbocharged and Nitrous Oxide cars, the addition of A/FD will only bolster the support and attractiveness of the category and Drag Racing in general.

**How does the rule ensure increased opportunity for even competition?**

Providing a training ground for future Nitromethane tuners and drivers. There is currently nowhere for anyone wishing to run a Nitromethane fuelled car in Australian competition other than Top Fuel. This category is out of the reach of most people's financial means, but A/FD will provide a reasonably priced controlled alternative for those who want to run Nitromethane, and also provide a possible market for some good used parts from the Top Fuel teams that are similar, e.g. chassis, clutch parts, wheels etc.

**Describe how the rule is practical and enforceable?**

To police a possible fuel pump flow restriction, I would propose that the pumps in this class be sent to a third party who has a commercially available and reputable flow bench, such as Greg Gower. These pumps, once verified that they meet or are under the required specification, would then be

sealed with a tag in such a way that the output flow cannot be manipulated. Weight would be as per the. US rules, 2125 lbs minimum and 5.00 lbs per cu. in. Injected Nitromethane cars by nature aren't extremely consistent, because they don't have a blower to assist in creating their own atmosphere they are very susceptible to very small changes in air density, which can lead to occasionally either smoke the tyres at the hit or drop cylinders, but that's one of the challenges of running one of these cars!

**Describe how the cost of complying with the rule is reasonable for competitors?**

I believe the costs to compete in this class will be similar to the alcohol fuelled cars. Given the RPM of these cars is much lower, and you don't need a blower, but Nitromethane is a very unforgiving fuel, and can damage engine parts in an instant. The clutches use 4 discs and 3 floaters, and they are a full centrifugal unit with no management or lock up levers allowed, and with no transmission they tend to wear very rapidly during a run, enough to require replacement of the clutch pack and resurfacing of the flywheel and donut friction surfaces between each run. The floaters most likely will be 1 run only, and the wear level on the discs will probably only allow for 1-2 grinds before they need to be replaced. Engine bearings will need to be checked and replaced each run, and the head gaskets will need to be changed to adjust the compression ratio as the density altitude changes, a racer will need to have a large selection to tune to conditions. Piston and con rod replacement strategy will be similar to an alcohol fuelled car. Spark plugs will need to be changed each run, there will be 16 if running dual magnetos as nearly all injected Nitromethane cars will. Nitromethane itself has gone up in price dramatically, around \$1850.00 a drum now, a A/FD would use @ 50 litres per run including a warmup in the pits.