

Technical Bulletin



DP02	TB0046-2012	Élan Motorsports Technologies	
From:	Chris Smith		
Subject:	2.0L MZR Engine Start-up Procedure	Date:	August 3rd, 2012

Attention all Élan DP02 teams

Ongoing investigations to date as to the probable cause of engine failure has produced plausible evidence of irreparable engine damage occurring at cold start situations ultimately resulting in engine failure at race speed.

In light of the evidence compiled so far, it is strongly recommended that the following precautionary procedures should be performed by all teams on cold start and warm up.

Instructions for cold engine start-up:

- 1) Crank engine with ignition off; ensure oil pressure builds to min 10 p.s.i.
- 2) Start engine and immediately set it to idle at 2000/2500 RPM insert temporary throttle stop that does not affect base idle setting.
- 3) Allow engine coolant temp to heat to 170/180 degrees F whilst maintaining above RPM's
- 4) Extended periods of sub 2000rpm idle should be avoided.

Oil volume:

It is also recommended that teams monitor their oil reservoir levels to ensure maximum oil volume at all times. Teams are further encouraged to utilize the optional air/oil cooler in order to increase the volume of oil in the system as well as improved control of running temperatures/pressures.

Oil brand and viscosity:

It is requested teams should use Mobil1 0w 50 racing oil along with the above start procedure until further notice.

Informational Note:

Our hypothesis of cold start damage initiated a dyno test programme which concluded the Mobil1 0w 50 racing oil allowed for substantial increase in cold flow rate over J.Gibbs XP6 and Mobil1 15w 50.

A pre-heat system and larger oil reservoir might provide a complete solution, however due to packaging and economic considerations this is not deemed practical at this time.

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