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## Oval Event Memo

To: Star Mazda Series Competitors

From: Star Race Cars

Date: 16.April.2010

Re: Oval Preparation

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As a reminder to returning and new teams, please review the items below when preparing for the upcoming oval events.

### **Rear Upright Clevis LH-**

The rear upright clevis was updated for the 2009 season in order to give teams a greater range of negative camber. Although both the 2008 and 2009 versions are legal, newer teams may want to purchase the 2008 LH clevis in order to get into positive camber without an excess number of camber shims. The part numbers (020-531) are identical. When ordering please indicate which version you are interested in.

### **20.5MM Front Anti Roll Bar-**

The 20.5MM Front Anti Roll Bar is mandatory during oval events. Please contact the parts department immediately if you do not have one in your inventory. The part number is 000-507.

### **Vacuum pump-**

The auxiliary vacuum pump is optional (ref regulation D.4.d). The pump helps to maintain enough vacuum in the system for the engine valves to function during long periods of 100% throttle. These pumps can be purchased directly through the Star Race Cars parts department (050-559) or through a Ford dealership (6C3Z-2A451-BA).

### **Extra Camber Shims-**

Check your inventory and bring more than you need. Most teams will have enough thin shims but not enough of the .250 version. The part numbers for the .250 camber shims are 000-565 and 020-534.

### **Reflective Number Plates-**

Both of our oval events are night races. The series will issue each car a set of reflective number plate backgrounds at the events. Contact the parts department if you would like to receive them in advance.

### **Gear stack-**

After reviewing data from vehicles of similar speed at ORP, the series recommends the following gear set.





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1 <sup>st</sup> 12/29	2 <sup>nd</sup> 15/30	3 <sup>rd</sup> 15/25	4 <sup>th</sup> 19/27	5 <sup>th</sup> 20/25	6 <sup>th</sup> 18/22
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If the recommended gearing functions properly during the ORP test, a bulletin will be released requiring those gears to be used during the ORP race event.

The standard Oval gear stack will remain unchanged for the Iowa event (ref regulation D.6.f).

**Spotters-**

Please inform your spotters of the drivers meeting times during the events including the test days. There will also be a spotter's seminar as part of the Road To Indy Summit.

**Catering-**

Lunch will be served for all Star Mazda attendees during the ORP test event May 5-6 at no extra charge. There will also be a sponsored BBQ dinner during the Road To Indy Summit on Friday the 28th.



### Ratio Calculator

Standard       MPH    KPH  
        
            Cir.   71.125

Width	<input type="text"/>				
Aspect Ratio	<input type="text"/>				
Rim Diameter	<input type="text"/>				
Ring & Pinion	<input type="text" value="9"/>	to	<input type="text" value="31"/>	3.4444	<input type="text" value="MPH"/>
1st gear	<input type="text" value="12"/>	to	<input type="text" value="29"/>		<input type="text" value="69.614"/>
2nd gear	<input type="text" value="15"/>	to	<input type="text" value="30"/>		<input type="text" value="84.118"/>
3rd gear	<input type="text" value="15"/>	to	<input type="text" value="25"/>		<input type="text" value="100.941"/>
4th gear	<input type="text" value="19"/>	to	<input type="text" value="27"/>		<input type="text" value="118.388"/>
5th gear	<input type="text" value="20"/>	to	<input type="text" value="25"/>		<input type="text" value="134.588"/>
6th gear	<input type="text" value="18"/>	to	<input type="text" value="22"/>		<input type="text" value="137.647"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>

Rpm drop	<input type="text"/>
	<input type="text" value="1483"/>
	<input type="text" value="1433"/>
	<input type="text" value="1267"/>
	<input type="text" value="1035"/>
	<input type="text" value="191"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>

ORP proposed gearing

### Transmission Diagram

