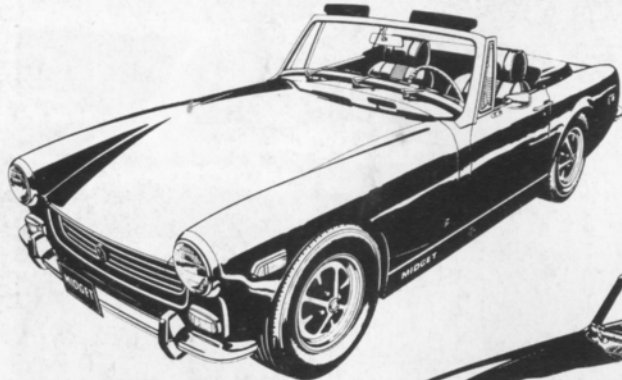
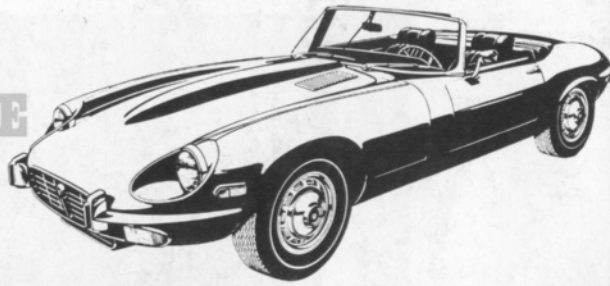


JAGUAR V-12 CONVERTIBLE



MG MIDGET



MGB

For further information and a test drive,
see the authorized Austin/MG/Jaguar
dealer in your area.

DETROIT METROPOLITAN AREA AUTHORIZED DEALERS:

Falvey Imported Cars
Ferndale

Bob Owens Sales Inc.
Westland

*Redford Stables, Inc.
Detroit

Sports Cars, Inc.
Flint

Brooks Imported Cars
Lansing

Bob Leppan Sales & Service
Mount Clemens

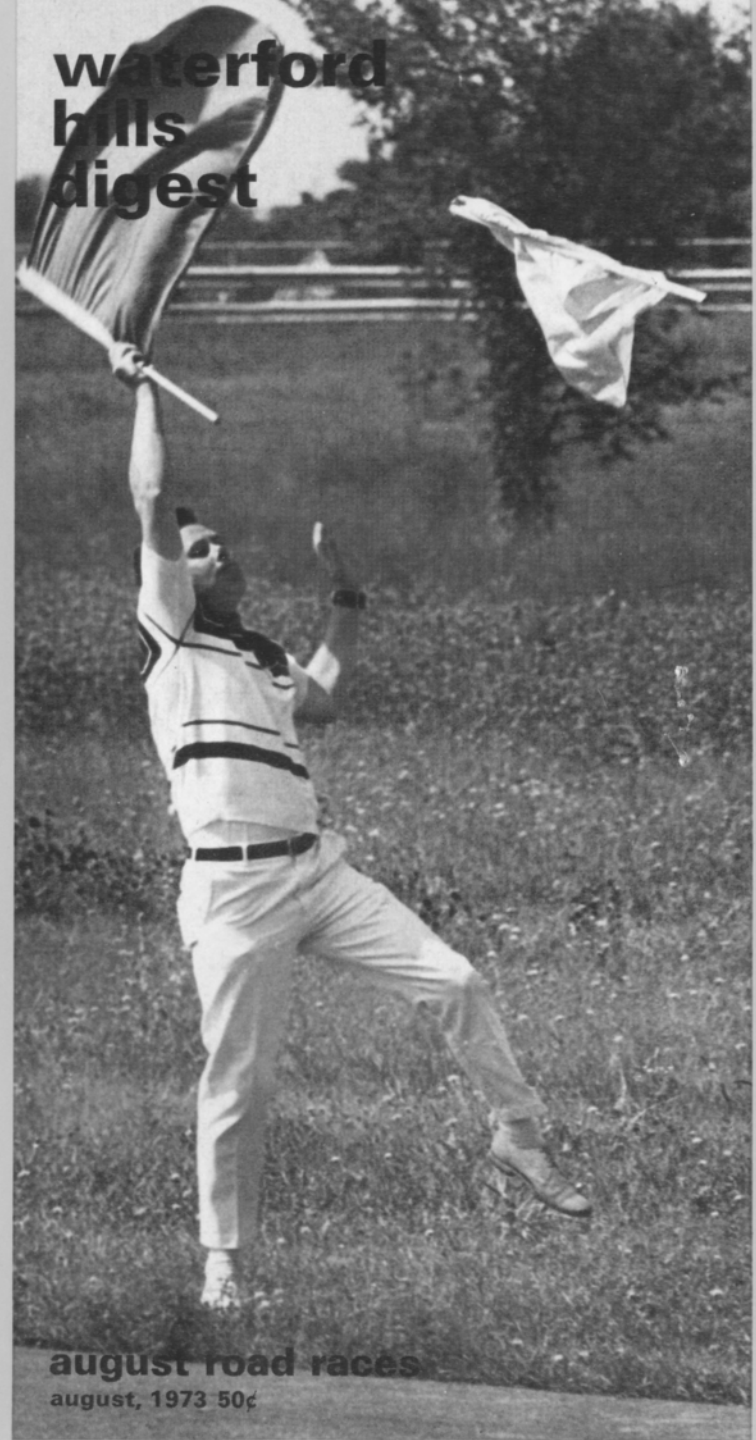
Sample Sports Cars Sales Inc.
Detroit

Pontiac Sports Cars, Inc.
Pontiac

Overseas Imported Cars, Inc.
Ann Arbor

*Austin/MG only

waterford hills digest



august road races

august, 1973 50¢



THIS CAR AND YOUR CAR DON'T HAVE MUCH IN COMMON. EXCEPT US.

Practically everything about a racing car is specially designed for racing.
With this exception.

The Timken® tapered roller bearings that take the bruising turns and grueling high speeds of racing are the same Timken bearings that come as standard equipment on many of today's passenger cars.

Your car is probably one of them.

Timken bearings are made of specialty alloy steel, and case-carburized for extra protection as a matter of course.

If they can hold up under the strains of racing, think what they can do on your car.

We believe there's no better bearing in the long run.

For a free Timken bearing high performance decal like the one shown here, just write us: The Timken Company, 16101 Schaefer Highway, Detroit, MI 48235.

TIMKEN
REGISTERED TRADE MARK
TAPERED ROLLER BEARINGS

vol. 13
no. 5
august, 1973

w hd

contents

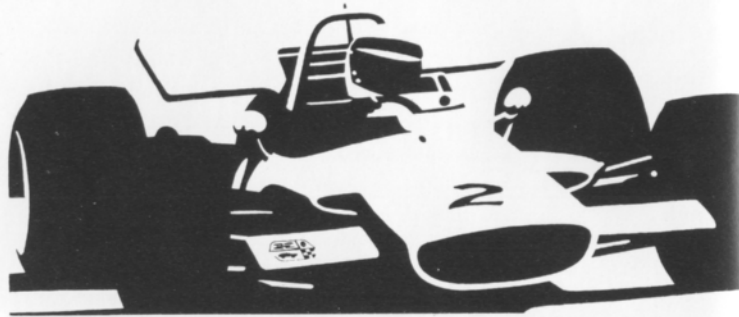
- 2 the inside line
- 3 officials
- 4 waterford profiles
- 9 average lap speed chart
- 9 class records
- 18 racing classes
- 19 flags
- 20 waterford hills
- 21 sports car activities

publisher	frank cizek bob gustafson larry conely
editor	
production mgr	
photography	al bizer frank cizek jim jelenek larry conely

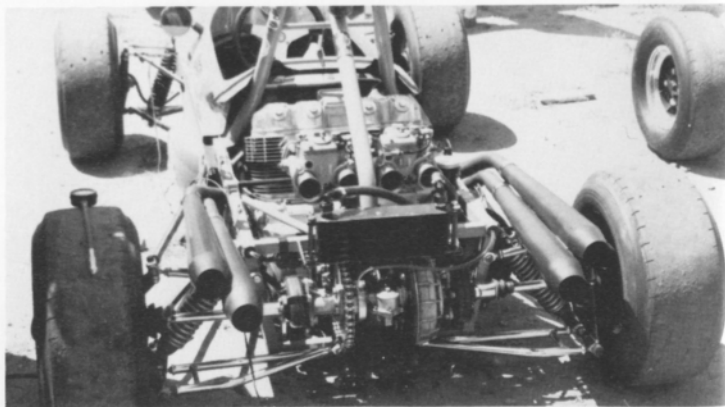
The Waterford Hills Digest is published by the Waterford Hills Road Racing, Inc. in conjunction with each major race at the Waterford Hills Road Course. Advertising rates available on request. Editorial contributions are welcomed; however, the Digest is not responsible for the return of unsolicited material of any kind unless it is accompanied by a stamped, self-addressed envelope. Address all communications to: Waterford Hills Digest, 1707 Gardenia Ave., Royal Oak, Michigan. Phone 313-398-0865. Copyright © 1973 by Waterford Hills Road Racing, Inc. Reproduction in any manner in whole or part without written permission prohibited.

the inside line

larry conely



Fans at Waterford's July race witnessed many Canadian entries, several among them driving Formula 4's. Although the F4 hasn't caught on in Michigan yet, it is quite popular in Canada, and rightly so. These deviously fast little creatures merit a bit more attention than they have been getting, for their virtues are many. Being powered by motorcycle and snowmobile engines they run amazingly low lap times, approaching CSR, BP, BS, and FV records at Waterford.



The Japanese architect of the Honda powered machine, for instance, has put together a clean piece of engineering. Suspension, final drive, etc. are very good, but the innovation is in the power plant. A mass produced engine is used which is inherently bred to stand up under punishment, while squeezing maximum output from minimal displacement. Mechanically compact component assemblies epitomize necessity, function, and efficiency. Since the engines are transplanted from bikes, peak performance is reached at a high power to weight ratio. Their credentials are impressive. That long sought after high RPM range is standard equipment, as is the rapid acceleration potential, lack of gadgetry, and usually air cooling.

It would seem as though these F4 vehicles hold as much potential as anything on four wheels. Those funny looking things with the wierd exhaust systems and ten inch tires are adding a new dimension to formula racing. Let us hope to see a few more in the not-too-distant future on Waterford's course.

officials

chief steward	tom abbott
assistant	doug anthony
race coordinator	jerry shiloff
timing & scoring	jerry morlewski
	jane morlewski
flags & communications	jack holth
	carl zahler
paddock marshall	dick grzybowski
tech inspection	jim velzy
course marshall	stan gorman
safety	doug mackinder
doctors	fred johnson m.d.
	hank larabee d.o.
registrar	connie vancea
chief starter	lou higgins
asst. starter	charlie pickett
asst. starter	hal goff
digest editor	larry conely

waterford profiles

by Susan Jeffries



A cursory glance, or even a direct stare, would never reveal that mild mannered Lou Higgins turns into a whirling dervish at the drop of a checkered flag. But there he is, our Chief Starter, riffling the flag, twirling and leaping in the air, two feet away from a speeding racecar.

"It's a kick," he says calmly.

"I get as close as I can because it's exciting—but only if I can trust the driver not to do something squirrely."

Though he gets closer than most would like to be to the finishing cars, he's only been hit once. "The first race of my first season at the Start/Finish Line, a C modified's suspension broke coming down the Straight for the checker and I landed in the passenger seat," he said. They were both more surprised than hurt.

"I don't remember the accidents at all" says Lou. "I have an aversion to blood." He forgets not only the accidents but also the races. "I react to the moment" and then forget almost instantly, he says.

His introduction to racing came in 1961 as pit crew for a friend, which he found to be not very exciting, so he started working on the wrecker, around the pits and in the tower until he found his niche in Flags and Communications. He started on the Start/Finish Line in 1966 with Ed Houlihan, and has since become a very colorful part of our Race Pageantry.

If you listen to Lou, Chief Starter sounds like a pretty easy job. "I just count laps and start and stop the race," he says. The physical work involved is perhaps not very taxing, but the judgement required is precise.

In practice sessions and races, he must flag cars onto the track. Judging the speed of cars coming out of Swamp Turn so that the slowly entering car doesn't get demolished is not an easy job. Drivers can't turn around to see Swamp because of their helmets and shoulder straps. They put their faith in

**chief
starter
dances
for
kicks**

showmanship?
no . . .
if they can't see you
in the back of the
pack, it's not
a good start



Lou congratulates
the winner
of each class
and presents him
with the
checkered flag
for the victory lap

Lou's signal. If he's wrong, someone gets crashed before
Turn One.

In starting a race, Lou is the only one who can decide if the
pack is traveling at the right speed, if they are bunched up
properly, or if they are all strung out and must go around again
to get organized. Until Lou is satisfied, the race never starts.

Re-starting a race is more complicated. It is one of the only



two headaches Lou will admit. If the red flag is shown after the midway point of a race, they just call that the race and everyone heads for the pits. If the red flag comes before the mid point, however, "All hell breaks loose." The cars must be collected and re-gridded according to their position when they crossed the Start/Finish Line on the preceding, completed lap. It not only takes a lot of official's time to figure out who was where, but also erases any distance between positions, which is annoying to those with a good piece of track between them and the car behind.

The other headache is trying to keep track of the first place car in the big bore and formula races. The lead cars are so fast and pass and re-pass each other so often, not to mention lapping the others, that it is nearly impossible to keep track of who is first. To his credit, Lou has never given the checker to the wrong car.

Lou loves flagging and is a dedicated Starter, but he's never wanted to drive claiming "not enough 'feel' of the road." "I've tried sliding around on parking lots, but I just don't feel the car doing anything. Besides, I don't exhibit a competitive enough nature, he says.

He only recently found out that going fast was fun. His first high speed ride came this year—in the Porsche Audi pace car. "I'd like to do that again," he says mildly.

You only know how dedicated he really is when you find out that he's worked either as pit crew or course worker on nearly every track in the Midwest, including Mosport in Toronto. Enduro events are his favorite because there is more going on, with the feverish activity of the pit stops. Lou once quit a good job to work the Sebring 12 hour.

He plans to work Sebring again this year and hopes he won't have to quit his current job as "roving foreman" at Bob Zankl Volkswagen to get there.

average lap speed chart

Min/Sec	MPH	Min/Sec	MPH	Min/Sec	MPH
1:00	85.326	1:17	66.488	1:34	54.463
1:01	83.927	1:18	65.635	1:35	53.890
1:02	82.574	1:19	64.805	1:36	53.329
1:03	81.263	1:20	63.995	1:37	52.779
1:04	79.993	1:21	63.204	1:38	52.240
1:05	78.762	1:22	62.434	1:39	51.713
1:06	77.569	1:23	61.681	1:40	51.196
1:07	76.411	1:24	60.947	1:41	50.689
1:08	75.288	1:25	60.230	1:42	50.192
1:09	74.197	1:26	59.530	1:43	49.704
1:10	73.137	1:27	58.846	1:44	49.227
1:11	72.106	1:28	58.178	1:45	48.758
1:12	71.105	1:29	57.523	1:46	48.298
1:13	70.131	1:30	56.884	1:47	47.846
1:14	69.183	1:31	56.259	1:48	47.403
1:15	68.261	1:32	55.647	1:49	46.968
1:16	67.363	1:33	55.041		

The Waterford Hills Road Course is 1.4221 miles long (7,509 ft. center line of track). To determine the speed of any individual car, time it for one complete lap and read off the speed from this table.

The Official Time Pieces used at the Waterford Hills Road Course are CERTIFIED BULOVA MASTER WATCHES. These instruments are made available to OCSRRC through the courtesy of THE BULOVA WATCH COMPANY.

class records

ASR	John Greenwood	Lola	1:12.8	5-72
BSR	Carl Armstrong	Porche 906	1:13.5	7-73
CSR	Warren Purdy	Lotus 23	1:16.5	7-73
DSR	Mill Mundus	Baker Mark II	1:24	N. D.
AP	John Greenwood	Corvette	1:16.3	9-72
BP	Mike Manner	Corvette	1:19.4	8-72
CP	Don Clining	TR6	1:19.9	6-73
DP	Gary Bendik	GT6	1:18.7	7-73
EP	Doug Miller	Porche	1:17.8	6-73
FP	Gary Riddell	MG Midget	1:20.4	6-73
GP	Hugo Carlson	MG Midget	1:20.0	7-73
HP	Mike Baldwin	Sprite	1:22.3	6-73
AS	Warren Tope	Mustang	1:18.6	5-71
BS	Don Eichstaedt	Pinto	1:20.1	7-73
CS	Geoff Foster	Mini Cooper	1:22.4	7-73
DS	Dave Dunham	Mini Cooper	1:26.8	7-73
SSS	Fred Hafner	Pinto	1:34.7	7-72
FB	Lew Cooper	Lola	1:09.1	7-73
FC	Jim Schmid	Brabham	1:15	9-72
FF	Mark Davison	Titan	1:12.6	6-73
FV	Ralph Ridge	Ben Lynx	1:18	7-72
F4	Gordon Green	P&G	1:19.5	7-73
FSV	Jim Purcell		1:12.4	6-73

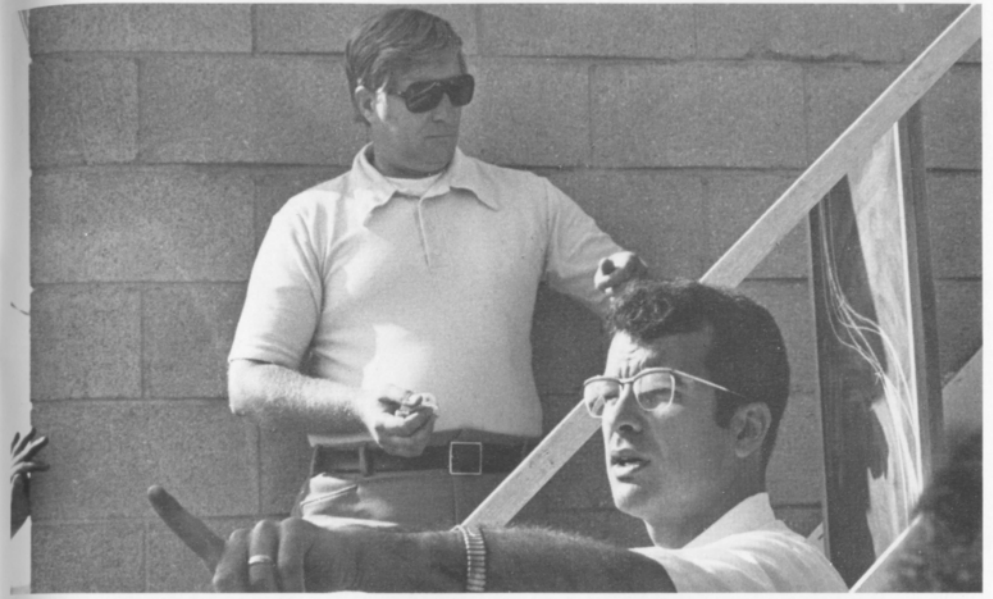


- 1 al bizer doing his thing
- 2 formula ford built for two?
- 3 three at a time through skeet house
- 4 i think that was the wrong line . . .
- 5 maybe we need a bigger sign!

the july race weekend was made particularly enjoyable by the presence of 39 drivers from canada.



**driver
education**
ala waterford



driver education





1 traffic jam
2 follow me, guys
3 gary bendik, making a nuisance of himself.
4 he did it to me, and so i did it to him, and then he did it to me, and . . .
5 unsafe at *any* speed?
6 quick! what takes the worry out of being close?



racing classes

flags

- PRODUCTION**
- A** Abarth Simca 2000; Cobra 427; Corvette Sting Ray Roadster & Coupe 350, 1970, 1971; Corvette Sting Ray Roadster & Coupe 396, 427, 454 thru 1973; DeTomaso Pantera 351, 1972-73; Griffith 200; Porsche GTS/904.
 - B** Alfa Romeo Montreal; AMX Sports Coupe 290 thru 1969; AMX Sports Coupe 343 thru 1969; Cobra 289; Corvette 283, 327 (1962); Corvette Sting Ray Roadster 327, 350, 1963 thru 1973; Ferrari 365 GTB 4 Daytona; Jaguar Series 3 (V-12); Porsche 911E Coupe/Targa, Cabriolet, 1969; Porsche 911S Coupe/Targa, Cabriolet, 1969; Porsche 911E Coupe/Targa, Cabriolet, 1970-1971; Porsche 911S Coupe/Targa, Cabriolet, 1970-1971; Shelby GT 350 thru 1966; Shelby GT 350 1-4V, 1967; Shelby Cobra GT 350 Coupe, 1969.
 - C** Alfa Romeo TZ; Datsun SRL 311U (Mikuni); Datsun 240Z Sports (Hitachi & Mikuni) thru 1973; Ferrari Dino 246 GT; Jaguar E 3.8 & 4.2; Lotus Elan thru S-4 (Roadster, Coupe & Drophead); Lotus Europa Twin Cam; Lotus Elan Plus Two; Lotus Seven Series Four; MGC, MGC GT; Porsche Carrera 1500, 1600; Porsche 911, 911S, 911I, (Coupes) thru 1968; Porsche 911T, Coupe/Targa, Cabriolet, 1969; Porsche 911T, Coupe/Targa, Cabriolet, 1970, 1971; Porsche 911T, E, S Coupe/Targa, Cabriolet, 1972; Porsche 914/6 thru 1972; Sunbeam Tiger 260; Triumph T-250; Triumph TR-5; Triumph TR-6 thru 1972.
 - D** Alfa Romeo Duetto 1750 thru 1971; Alfa Romeo 2000 Spider; Austin Healey 3000; Daimler SP-250; Datsun SRL 311U (Hitachi); Elva Mk III 1800 & Mk IV 1800; Elva Mk IV T 1800; Jaguar XK 120, 140, 150; Jensen Healey; Lotus Super Seven; Lotus Europa Mk 46, 54 (65); Porsche 9145; Triumph GT-6 & GT-6 Plus; Triumph GT-6 Mark III (2 carb.) thru 1972; Triumph GT-6 Mark III (1973 Swing Axle); Triumph TR-4; Triumph TR-4A IRS; TVR Mk III 1800; Yenko Stinger.
 - E** Alfa Romeo Duetto 1600; Alfa Romeo Giulia Spider Veloce 1600; Alfa Romeo Giulia GT & GTZ; Austin Healey 100-6; Elva Mark I, II, III, 1662; Elva Mark IV 1622; Fiat 124 Sport Spider 1600 (2 carb); MGB MGB GT; Morgan +4; Opel GT 1900; Porsche 912 Coupe/Targa, Cabriolet thru 1968; Porsche 912 Coupe/Targa, Cabriolet, 1969; Porsche 914/4 thru 1973; Porsche 356C/1600SC & 356B Super 90; Porsche 356 1500/1600 A, B, C; Saab Sonnet V-4, thru III; Triumph TR-2, 3, 3A, 3B; Turner 1500; TVR Mk III 1622; TVR Vixen 1600 Ford; Volvo 1800 (1990 cc) 1969, 1800E, 1800ES thru 1973.
 - F** Alfa Romeo Guilietta Super 1300; Alfa Romeo Sprint Speciale; Alfa Romeo Guilia Sprint & Super 1600; Alfa Romeo Spider 1300 Junior; Alfa Romeo Junior Z; Alpine A100 1100; Austin Healey 100-4, 100M; Austin Healey Sprite 1275; Datsun SPL 311 & SPL 311U; Fiat 124 Sport Spider thru 1970, 1600—1971-1973 (one carb); Fiat Abarth OT 1300/124 Coupe; Lotus 7 & 7 America; MGA 1500, 1600, 1622; MGA Twin Cam; MG Midget 1275 thru 1973; Morgan 4/4 Mk V; Sunbeam Alpine; Triumph Spitfire Mk III thru 1970; Triumph Spitfire Mk IV thru 1972; Triumph Spitfire 1500; Volvo P 1800 S (1780 cc).
 - G** Alfa Romeo Sprint & Spider 1300; Austin Healey Sprite 1100, AN 8 (1100); Datsun SPL 310U; Fiat Abarth OTS 1000 Coupe; Fiat Abarth 1000 Pushrod; Fiat Abarth OT 1000 Spider; Honda S800; Matra; MG Midget AN2, AN3; Porsche 1300; Rene Bonnet CRB; Triumph Spitfire Mk I & II; Turner 950S.
 - H** Austin Healey Sprite 948 Mk. I & II; Fiat 850 Spider, Racer thru 1973; Fiat Abarth 850S, 750 GT, 750MM; Honda S600; Mg Midget 948 MGTC, TD, TF 1250; MG TF — 1500; Morgan 4/4 Mk. IV; Opel GT 1100 thru 1971.

SHOWROOM STOCK SEDAN

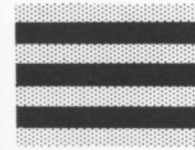
Austin Morris Marina, 1800 cc; Chevrolet Vega, 2300 cc; Datsun 510 (1972 only), 1600 cc; Datsun 610 (4 door); Dodge Colt, 1600 cc; Fiat 124S, 1437 cc; Ford Pinto, 2000 cc; Opel 1900 Sedan (2 dr or 4 dr), 1900 cc; Plymouth Cricket; Renault R12, 1565 cc; VW Super Beetle & Beetle, 1600 cc; SAAB 96 Sedan; Subaru 1400 Sedan; Toyota Corona, 1900 cc or 2000 cc.

SHOWROOM STOCK SPORTS CAR

Fiat 124 Spider, 1592 cc or 1608 cc; MGB and MGB-GT, 1800 cc; MG Midget, 1275 cc; Opel GT, 1900 cc; Porsche 914/4, 1679 cc; Triumph GT-6 Mark III, 2000 cc; VW Karmann Ghia Coupe or Convertible, 1679 cc.

- SPORTS RACING**
- ASR** Over 2000 cc
 - BSR** Over 1300 cc to 2000 cc
 - CSR** Over 850 cc to 1300 cc
 - DSR** Below to 850 cc
- FORMULA**
- FF** FORD
 - FSV** SUPER-VEE
 - FV** VEE
 - FA** 1100 cc to 3000 cc
 - FB** 1100 cc to 1600 cc
 - FC** Up to 1100 cc

- SEDAN**
- AS** Over 2500 cc with proper homologation forms.
 - BS** Over 1300 cc to 2500 cc with proper homologation forms.
 - CS** Up to 1300 cc with proper homologation forms.
 - DS** Separate Waterford Class



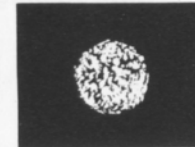
yellow with red stripes

Take care, oil has been spilled or a slippery condition exists somewhere in your vicinity. Look at the track surface.



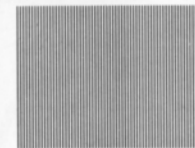
black

Sloppy or dangerous driving. Complete the lap you are on, then stop at the Start/Finish line for consultation with the Chief Steward.



black with orange ball

(Meatball black flag) There is something mechanically wrong with your car. Proceed to your pits at reduced speed.



green

(Or no flag) Course is clear.



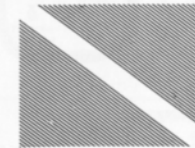
yellow

(Stationary) Take care, danger, no passing. (Waving) Great danger, be prepared to stop, no passing.



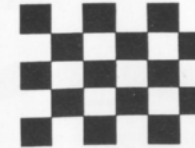
red

Stop immediately, clear the course as well as circumstances permit; the race has been stopped.



blue with diagonal yellow stripes

(Motionless) Another competitor is following you closely.



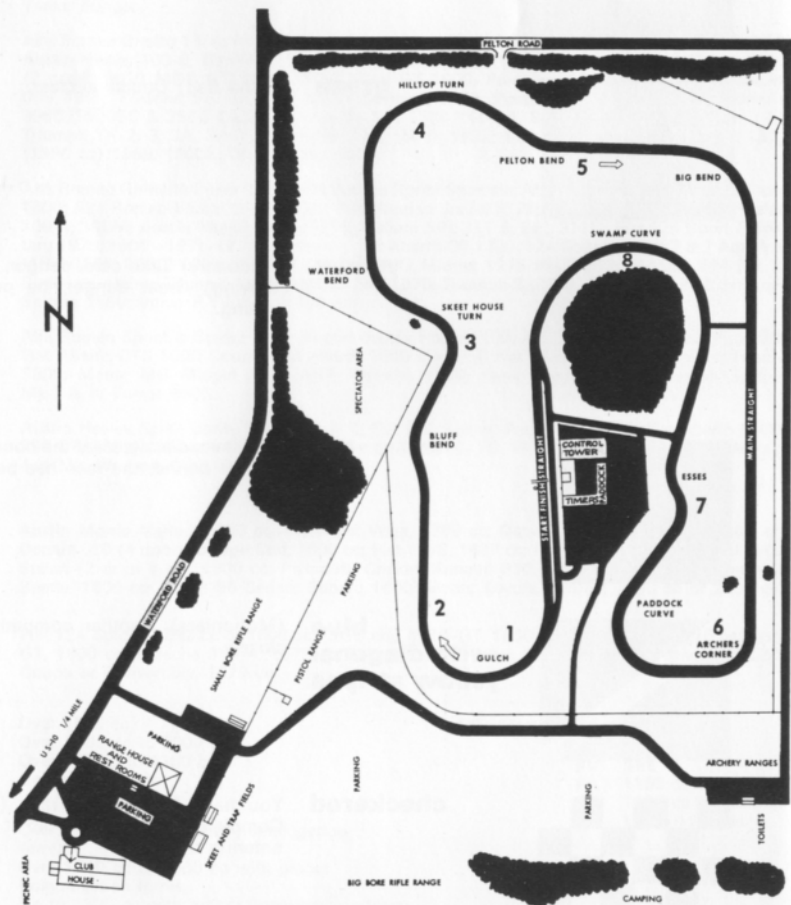
checkered

You have finished the race (or practice session). Complete one "cool-off" lap at reduced speed before entering the pits.

waterford hills



a 1.5 mile asphalt road course at waterford, michigan



if only i had a wider car . . .

sports car activities

- September 1-2 Porche Club Gymkhana
- September 9 Corvette Club Gymkhana
- September 29-30 Waterford Race