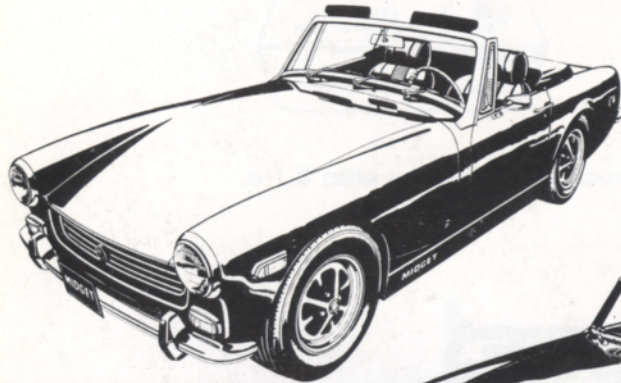
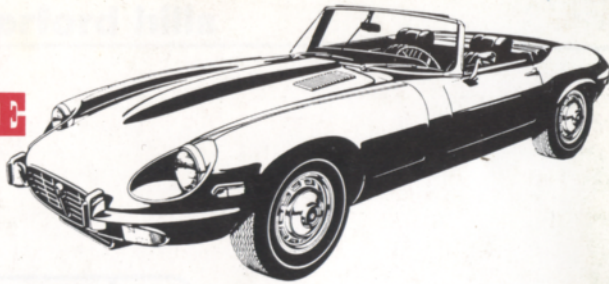


JAGUAR V-12 CONVERTIBLE



MG MIDGET



MGB

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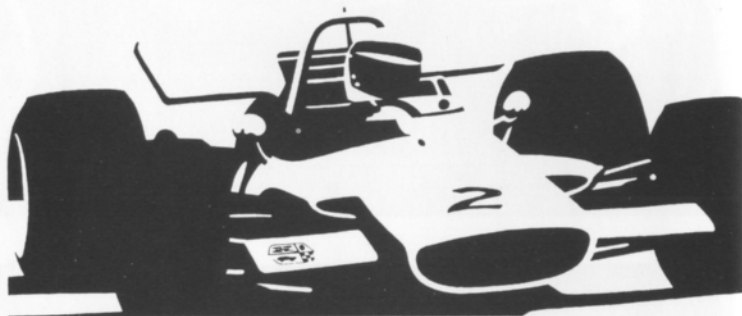
*Austin/MG only

waterford hills digest

midsummer trophy races
july, 1973 50¢

the inside line

larry conely



The Inside Line turns again this month to safety, this time in the person of Jim Velzy and his team of squinting tech inspectors.

Tech inspection in itself is an experience of sorts, and tech inspector is not a job for one with fallen arches or weak lungs. First of all, as the drivers arrive in the paddock, they put their cars on a list that the tech inspectors use as a guide. From there, the tech inspector departs for the paddock in search of the five or six cars' numbers he has picked up. Invariably, a tech inspector cannot take ten steps without pre-race confusion transforming into full blown hysteria. Wild eyed drivers assault him because they don't yet have their tech stickers enabling them to go out for practice or qualification laps. Every race, however, some miraculous phenomenon descends upon the paddock area, and despite the worst premonitions, they all somehow manage to get on the track.

Once a tech inspector has found his car, Sherlock Holmes—move over. At a recent race, this editor took the opportunity to make some rounds with a tech inspector. While traveling through the paddock area I was always behind, but once we reached the car, no matter where or how fast I moved, I always felt as though I were in the way. Another thing worth noting is how fast that multitude of checks and notations accumulates on his clip board.

Of course, all the things such as safety belts, roll bars, and brake lights are obvious. Helmets are checked to make sure they meet specifications (and all are labeled with the driver's name, blood type, and allergies). Fire extinguisher types and dates are checked, and a tech inspector will frequently offer suggestions to improve its quick release from the vehicle. Battery terminals must be suitably insulated against shorts in the event the car is rolled. Master cylinders are checked to make sure they are full, and clean. The engine is started and the external kill switch tested to ensure it is not simply a window dressing. Of course, the list goes on and on, but space does not permit much of a description.

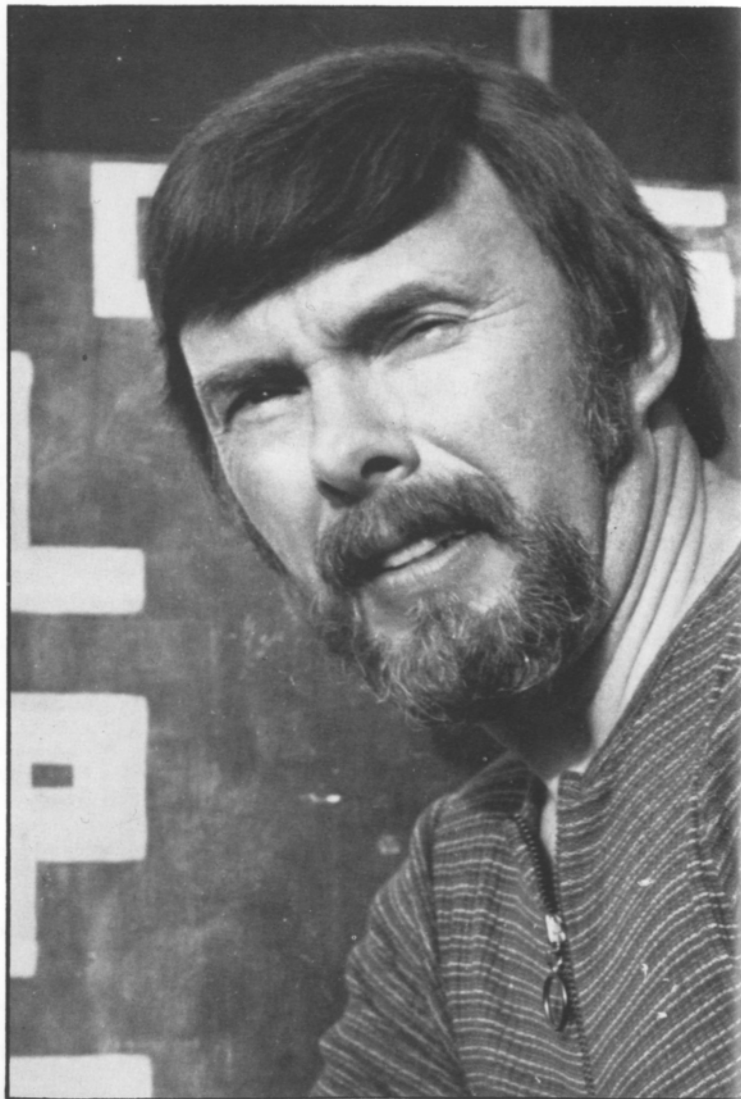
But space does permit a brief note of recognition to the people who make sure that all the vehicles on the track are safe. Despite the fact that it often seems like open season on orange vests in the paddock, they perform an invaluable service to racing.

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 larry conely



Cars had always been an interest. Once in a while a little street racing. Bob Gustafson was bitten by a Renault 4 CV in 1961. The venerable French 'buckboard' was soon replaced by a somewhat tired 1953 MGTD that had some significant attributes: a louvered hood, oiled oak bumpers and a motor that was surprisingly willing for a 1250. Restoration was in order and six months later the red beauty was on the street again. After running a few Gymkhanas it became apparent that both Bob and the TD were formidable competitors in the newly joined MG Car Club. Soon the MGTD wasn't competitive enough. Shortly thereafter the first 1100cc MG Midget sold in Michigan rolled into Bob's garage. 1963 was the first year of the Detroit Council of Sports Car Clubs Gymkhana Challenge Series. Bob ran over 30 Gymkhanas that season, sometimes two on the same day and won the Series.

He always had a faithful pit crew. If Mary didn't make it to an event some of the six children did. 10 year old Gary was beginning to be more than casual about Dad's new found interest and seldom missed an event. One day in August 1964 Bob came home from work and casually announced, "I'm going racing". Two weeks later the Red Midget was in the Waterford Hills Drivers School. Bob finished second in his first race, and then began an incredible string of breakdowns which resulted in a year and a half of being either a bridesmaid or a DNF. In 1966 Miller Beurmann asked Bob to drive his "Gray Rat" (Saab powered H Modified). He took three second places and Miller found a buyer for the car, but Bob was still a bridesmaid. Later in the season Bob and Dan O'Conner shared a tired H Production Bugeye Sprite. That year they both were bridesmaids. During that 1966 season Bob took on the job of Paddock Marshal. In 1967 he worked with Danny McDonald as Assistant Steward. A closer involvement with the club was desirable and Bob was elected to the Board of Directors in 1968. In early

**bob
gustafson**

waterford profiles

by [unclear]



July 1968 the Digest Editor and Public Relations Director, Elaine Fisher suddenly resigned. Having a background in graphics, printing and some writing, Bob decided to accept the challenge and took over with just two weeks to produce the next Digest. The deadline was met and Public Relations became his bag.

Meanwhile in July of 1970 Bob returned to competition with an H Production Bugeye and finally broke the ice by winning



his first race. No more a bridesmaid. 1971 was his year to remember, Club Champion, winner of the Falvey Trophy and a class record with 9 wins and 2 DNF's for an undefeated season. In 1972 Son Gary, at 19, decided to join Dad for a crack at what he'd been watching for nine years. Both Bob and Gary had their share of checker flags and the season ended with the sale of the car and Gary heading back to school. One of these days Bob will be back.



average lap speed chart

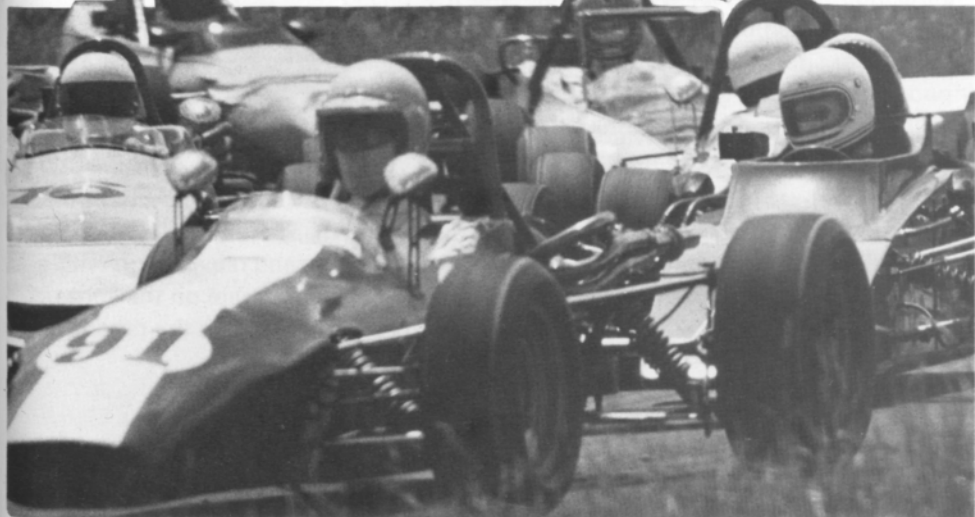
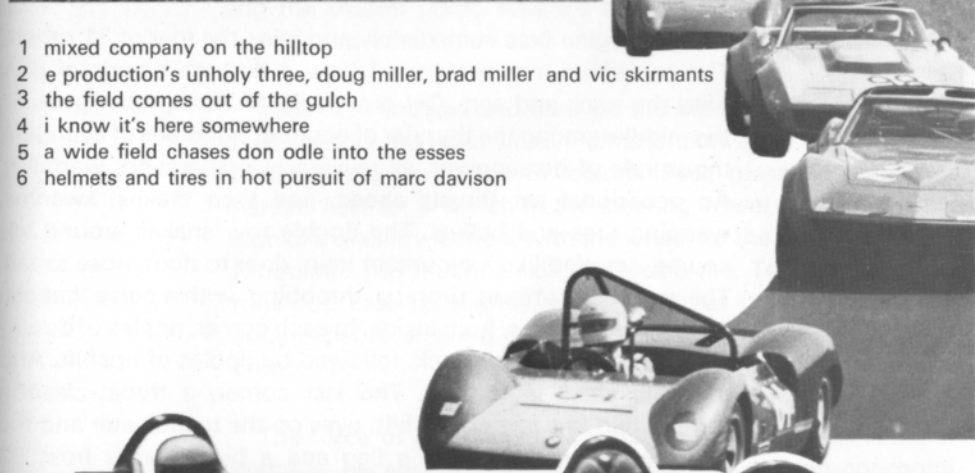
| Min/Sec | MPH | Min/Sec | MPH | Min/Sec | MPH |
|---------|--------|---------|--------|---------|--------|
| 1:00 | 85.326 | 1:17 | 66.488 | 1:34 | 54.463 |
| 1:01 | 83.927 | 1:18 | 65.635 | 1:35 | 53.890 |
| 1:02 | 82.574 | 1:19 | 64.805 | 1:36 | 53.329 |
| 1:03 | 81.263 | 1:20 | 63.995 | 1:37 | 52.779 |
| 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 | 58.176 | 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 | Dr. Leonard Armstrong | Porche 906 | 1:17.8 | 6-73 |
| CSR | Warren Purdy | Lotus 23 | 1:19.4 | 6-73 |
| 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 | 1:19.4 | 6-73 |
| EP | Doug Miller | Porche | 1:17.8 | 6-73 |
| FP | Gary Riddell | MG Midget | 1:20.4 | 6-73 |
| GP | Frank Cizek | Spitfire | 1:20.5 | 6-73 |
| HP | Mike Baldwin | Sprite | 1:22.3 | 6-73 |
| AS | Warren Tope | Mustang | 1:18.6 | 5-71 |
| BS | Larry Clingman | Datsun | 1:20.4 | 6-73 |
| CS | Ken Navarre | NSU | 1:22.7 | 9-72 |
| DS | Dave Hoffman | NSU | 1:27.3 | 9-72 |
| SSS | Fred Hafner | Pinto | 1:34.7 | 7-72 |
| FB | Bill Halandal | Lotus 51C | 1:12.6 | 6-73 |
| 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 | Robert Long | Walker | 1:21.3 | 8-72 |
| FSV | Jim Purcell | | 1:13.1 | 6-73 |



1 mixed company on the hilltop
 2 e production's unholy three, doug miller, brad miller and vic skirmants
 3 the field comes out of the gulch
 4 i know it's here somewhere
 5 a wide field chases don odle into the esses
 6 helmets and tires in hot pursuit of marc davison

this is a reprint from the old "Sports Car Graphic"

paul van valkenburgh

... The engine fires immediately and joins the roar of 31 others. The car ahead moves away—follow it through clouds of dust onto the track and sort. Get organized into the proper pairs. In the middle, among the thunder of engines, hundreds of cylinders, thousands of horsepower, all revving in preparation, warming. An occasional car thrusts ahead, and then brakes, swerves, warming tires and brakes. The double row snakes around the course, coupled like a mountain train, door to door, nose to tail. The engines in unison, droning, throbbing, with a pulse that can be felt from all sides, from inside. In each corner, ripples of downshift pass through the pack, followed by ripples of upshift. And the cars close in, tighter. The last corner, a throat-clearing throttle blip, the last downshift, eyes on the tachometer and the gap ahead and the starter's flag and a blast comes from 32 throttles hitting the floor simultaneously.

tic

Watch for an opening watch for an opening watch the tachometer watch for cars on both sides, funnel into the first turn. Accelerate, hard, hardest. There isn't time to sense euphoria from the rap and whine of pent-up explosions pouring from the pipes, they can't even be distinguished from the others in such a tight pack. There is the micro-pause and reexplosion with each clean, hard shift. Watch the tach, concentrate on the shift point, even while sorting into the proper line. Catch the other gauges in between if there is a clearing . . .

tic

Look for a draft, a tow, close up on the next car, try to maintain the gap in feet, which is a gain in seconds. Mirror. Check mirrors. But only a flash of time is allowed, and the mind will

sort images when it can. The sense of speed is irrelevant, the roar of the wind, the rush of roadside, the whine of the engine—unimportant. The all-dominant conscious thought now is judging the shutoff point. Where's the shutoff marker? it must be coming up . . .

tic

There. Off the gas and *hard* on the brakes. Jam at first, then modulate as the nose sinks. Full attention is on feathering the pedal at the very edge of lockup. Feel, press, harder, letup, harder. Feel for a twitch in the steering wheel, feel for the first sign of instability, correct with the wheel for the slightest swerve. Modulate. Too much, a skid, flatspot a tire. Too little, the road runs out. Ease up slightly, just enough, as the car responds to imperceptible steering movement and starts to yaw into the corner . . .

tic

The force of *g*'s straining against belt and harness is imperceptible, because it is irrelevant. Now just enough concentration is diverted from the path to select another gear. Four to three or two? The clutch pedal moves in automatic response to position changes at the shift lever. Blip the throttle just enough to match engine and gear. It can only be done by computer or instinct. Rationality and senses aren't enough. Now watch for the apex point. Follow the path you know. Aim to put the inside front tire right *on* the apex.

tic

Feel the car, *know* what it's doing, feel the steering force, feel the tail twitch, feel the steer angle. Sense the slip angle, the yaw angle, listen to the engine, listen for tire squeal or wheelspin, but concentrate on the *right* path. Muscles strain from holding head, arms, even legs and feet against lateral forces greater than the earth's gravity. It won't be noticed while other inputs are in command, but later. Head up, eyes parallel with the road, which way is down, the senses don't agree. *Hit* the apex, switch attention

to the next road reference . . .

tic

Out, Easy on the gas, more, more, more, *hard*, floor it. Ride the car out, out to the edge in a violent unstable drift and wind it up again. Keep moving the wheel, feeling it, feeling the limit. But straighten out as soon and smoothly as possible. The mind is inundated with thousands of tiny cues, inputs. There is no room for comprehension of pain or discomfort. Not now. The mind is overwhelmed in processing more current and critically important data about where and when to do what. Milestones or events such as who was just passed, are not stored and won't be remembered.

tic

But *concentrate*. Focus on the reference points that mean so much. Nothing beyond matters for now. The macroinputs are to be ignored, it's the microchanges that count. The exhaust wail doesn't exist until it is punctuated with one, or two, heart-sinking skips. The change in pitch isn't noticed until the wrong rate of change signals breakaway. The absolute force of lateral *g*'s isn't accurately/humanly measurable, but the most barely perceptible change, jerk, twitch, means everything. A change in traction, or road coefficient, and the correct response at the wheel must be instinctual.

tic . . . tic

The color or length or width of the road means nothing, it's those tiny, consciously unidentifiable marks that matter. The peculiar smell of hot engines and grinding rubber and smoking brakes is so common and expected, unless there is the slightest change in their proportions. Speed alone is an irrelevant quantity, but the tenths-of-a-second change in elapsed time per lap mean gain or lose. *Concentrate*. Watch for the next marker. Watch for the pit board. Select the most critical information. Minus six-point-four. Subtract from the last signal, minus eight-

point-two. Gaining one-point-eight seconds in two laps. *Catch* him! Inches, feet, farther past the brake points. *Push* him!

tic . . . tic . . . tic

Concentrate. Now concentrate on forcefully relaxing between shifts in the long straights. Stay aware of those most ethereal of sights, sounds, feelings. But *catch* him. Remember the heat, heavy breathing, heartpound, for over two hours. Limits of stress available, attempted, far above other human endurances. Next lap. Next pit signal. How much time left? Fourteen laps. A yellow flag. Flagmen waving. Spectators are up there too. They don't know, there's no *way* they could ever know. *Hit* the apex. Attention to the next road reference. Out. Easy on the gas, more, more, more. *Hard*, floor it. Ride the car out, out to the edge in a violent unstable drift and wind it up again. Again. Again.

tic . . . tic . . . tic . . . tictictictictic

"Here's the winner, folks. Still in his car. Here, tell the folks . . . what's it like out there?"

"Well, it was hard . . . it was . . . ah . . . hot . . . ah . . . gee . . . it's kind of hard to put into words . . . you know?"

tic.



1

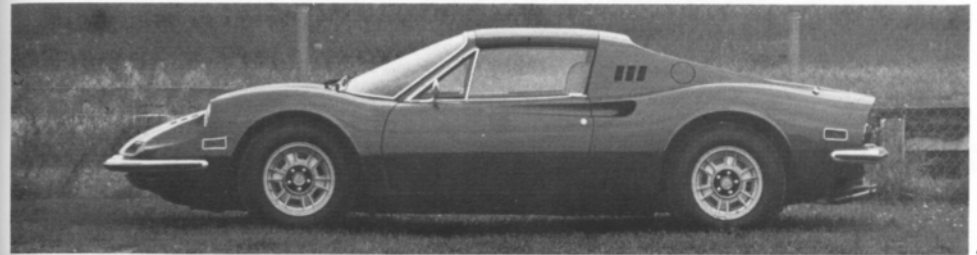


2



3

- 1 lou higgins at the ready
- 2 big production and showroom stock mix it up in the curve
- 3 lynn conner leads the pack into the esses
- 4 pace car personality compliments of scu
- 5 don brown and marc davison in the gulch turn
- 6 vince muzzin's ff heads the grid



4



5



6

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 914S; 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 Giulia 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.

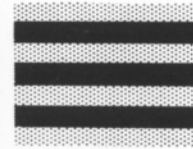
SPORTS RACING

- 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



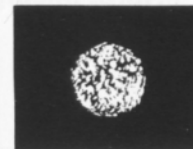
yellow with red stripes

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



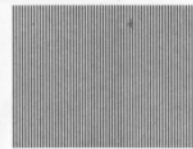
black

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



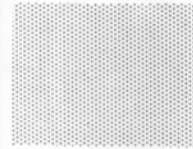
black with orange ball

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



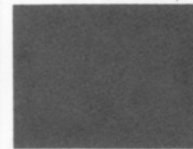
green

(Or no flag) Course is clear.



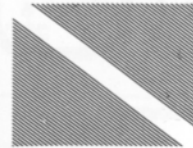
yellow

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



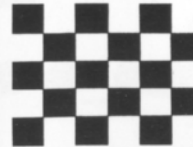
red

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



blue with diagonal yellow stripes

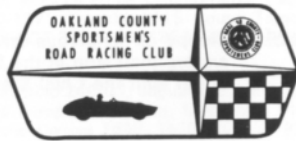
(Motionless) Another competitor is following you closely.



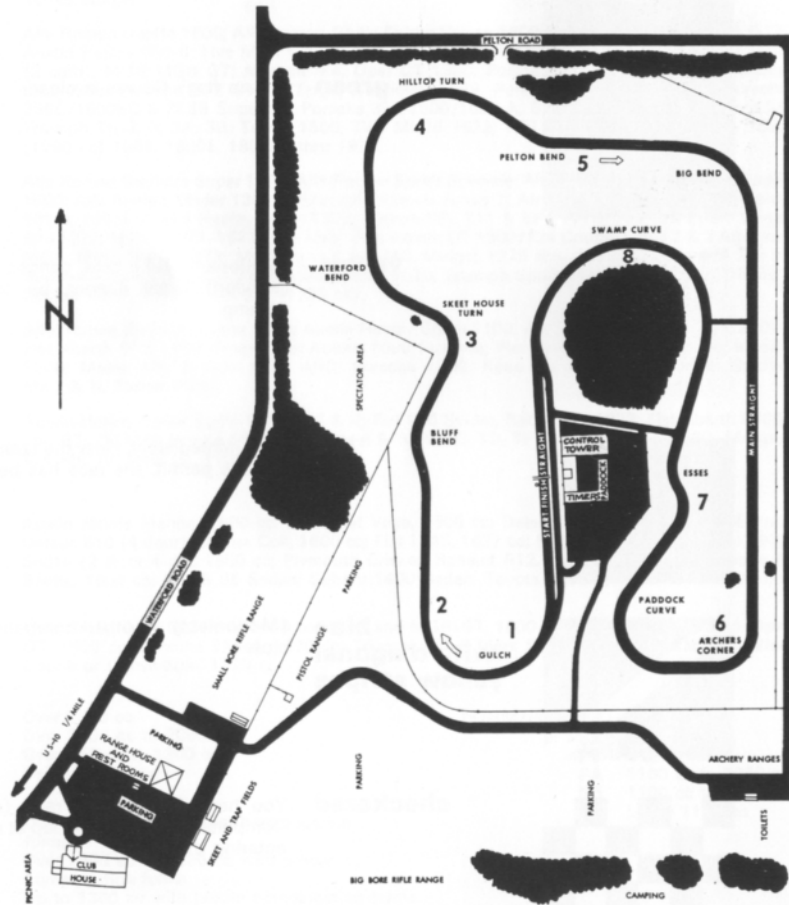
checkered

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



sports car activities

- August 11-12 Waterford Drivers School
- August 25-26 Waterford Race
- September 1-2 Porche Club Gymkhana
- September 9 Corvette Club Gymkhana
- September 29-30 Waterford Race