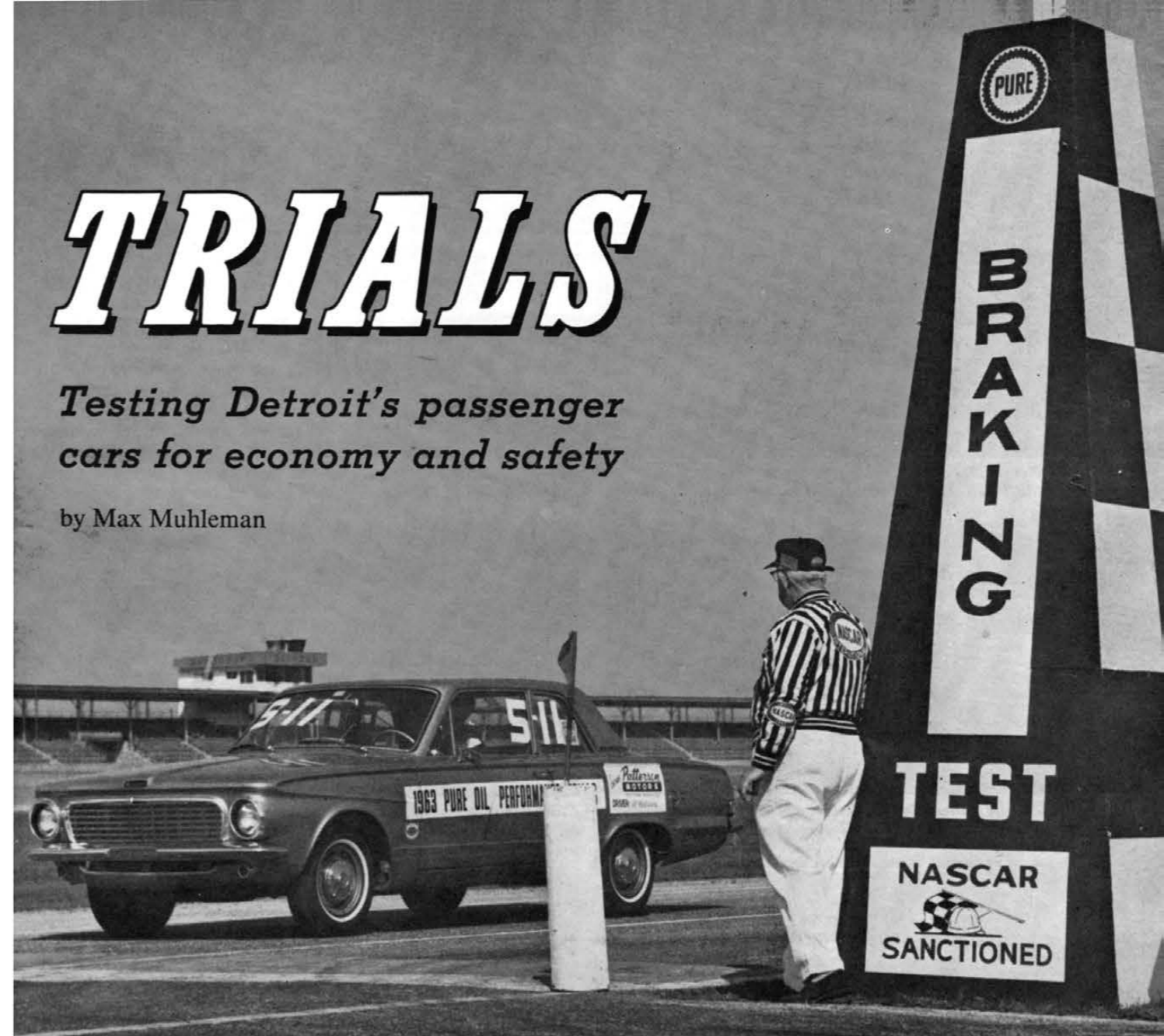




DAYTONA



TRIALS

Testing Detroit's passenger cars for economy and safety

by Max Muhleman

ONCE UPON A TIME there was an organization—the Pure Oil Company—that decided to stage a series of tests. These tests were designed to determine the best all-around-performance automobiles made in America. Not the speediest cars, mind you, or the most economical or the swiftest-stopping. What they sought were the automobiles that represented the best combination of economy, acceleration, and braking—and that's precisely what the 1963 Pure Oil Performance Trials accomplished.

The first requisite of such a test is a fair set of rules. To this end Pure Oil and the officiating National Association for Stock Car Auto Racing went the extra mile. In order to cover the entire range of American-made autos, six classes were established according to engine size. The classes and the 1-2-3 winners were:

- ▶ Class I—401 to 450 cubic inches (high-performance and luxury V-8 engines). 1, Ford; 2 (tie), Plymouth and Pontiac.
- ▶ Class II—362 to 400 cubic inches (large V-8 engines). 1, Ford; 2, Plymouth; 3, Pontiac.
- ▶ Class III—321 to 361 cubic inches (medium V-8 engines). 1, Chevrolet; 2, Pontiac; 3, Rambler.

- ▶ Class IV—259 to 320 cubic inches (small V-8 engines). 1, Plymouth; 2, Chevrolet; 3, Ford.
- ▶ Class V—201 to 258 cubic inches (large six-cylinder and compact V-8 engines). 1, Plymouth; 2, Buick; 3, Olds.
- ▶ Class VI—131 to 200 cubic inches (compact four-cylinder and six-cylinder engines). 1, Pontiac; 2, Rambler; 3 (tie), Buick and Chevrolet.

Perhaps the most significant rule of all was a new one which limited each manufacturer to two cars in each class and required that the same cars compete in all three tests with the same drivers. This not only kept mechanics from tuning one car for economy and another for performance but also minimized the special skills of such drivers as Les Viland, Rambler's miracle mileage man, and Marvin Panch, the stock car chauffeur who seems to be at his best in braking contests.

The three areas of competition—economy, acceleration, and braking—were designed to simulate reasonably normal driving demands as much as possible. The economy test saw each car run as far as possible on one gallon of gasoline over a special 3.7-mile course, which included one complete

stop and a 1610-foot, 65-mph minimum speed zone each lap. It was further required that each car maintain a minimum average speed of 40 mph for the entire run. The acceleration test measured the time it took for a car to accelerate from 25 mph to 70 mph. The braking test showed each car's ability to stop in a single traffic lane under emergency conditions (a 60-mph panic stop) after a qualifying series of 21 slower stops had been made within a specified time limit.

A total of 57 automobiles participated in the trials, staged the last week in January under generally good weather conditions at Daytona Speedway in Daytona Beach, Florida. There were 12 entries in Class I, including Buick, Chrysler, Chevrolet, Ford, Plymouth, and Pontiac. Class II had nine entries from Ford, Mercury, Olds, Plymouth, and Pontiac. Class III saw seven entries from Chevy, Dodge, Pontiac, and Rambler. Class IV had seven entries from Chevrolet, Ford, Plymouth, and Studebaker. Class V totaled 11 entries from Buick, Chevy, Dodge, Ford, Olds, and Plymouth. Class VI had 11 entries from Buick, Chevy, Ford, Mercury, Pontiac, and Rambler.

Had the trials been concluded following the economy and



NASCAR officials install pre-measured gallon of pump gas for economy section of tests. Distance must be traveled within a minimum time limit and includes several stops and starts.



Driver Bud Faubel prepares for economy section of the trials as NASCAR officials fill fuel can. Bud's Plymouth Belvedere won his class in this event with 23.371 mpg.

acceleration tests, three of the six class winners would've been changed and Plymouth would've walked off with four class wins instead of two. Ford's excellent showing in the braking test brought it from second to first in Class I and from third to first in Class II on the final day. In both cases, Plymouth led going into the braking test. Likewise, Pontiac bumped Rambler from the Class VI title when its Tempests outstopped two Rambler Americans (although one American bettered both Tempests in the event).

Since any stock options made available by the manufacturer were eligible, it was interesting to note the combinations used by the class winners. Ford's



Rambler American with six-cylinder engine and overdrive transmission won Class VI economy honors at 29 mpg.



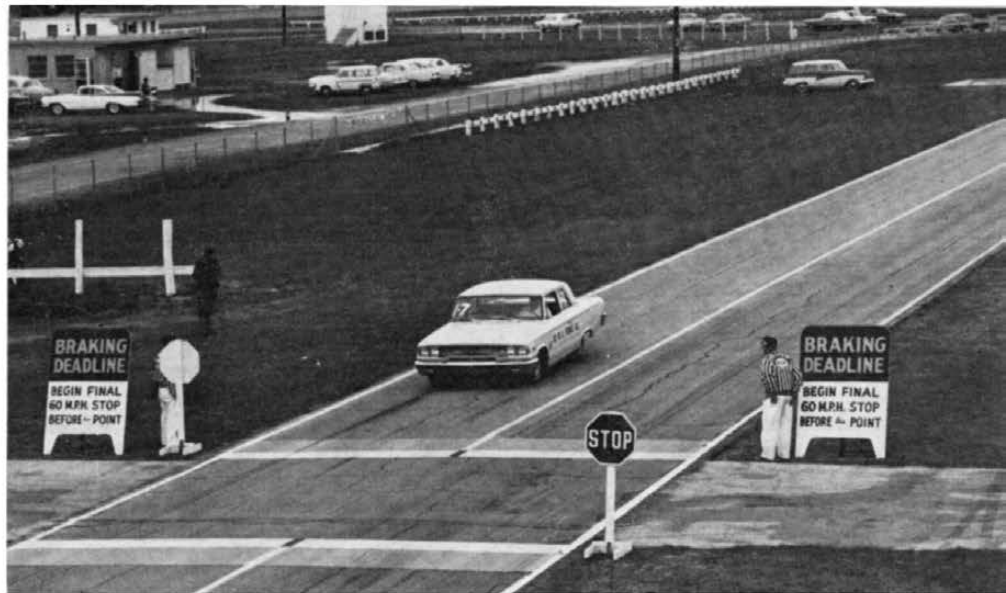
Completely out of fuel, driver Smokey Yunick pushes Pontiac Catalina off the course after clocking 18.123 mpg with big 421-cubic-inch V-8.

PHOTOS BY CHARLES NERPEL, DAYTONA SPEEDWAY



FUEL ECONOMY COURSE WAS LAID OUT TO INCLUDE SIMULATED START-AND-STOP TRAFFIC CONDITIONS, WITH AN AVERAGE SPEED OF 40 MPH.

Class I champs consisted of two Galaxie 300 models, one with a 427-cubic-inch engine with two carburetors, the other sporting a 406-inch engine with three carbs. Both had three-speed transmissions with overdrive (only such transmission setups in that class). Both Class II-winning Fords were Galaxie 300 models with 390-inch engines, single four-barrel carbs, and three-speed overdrive transmissions. Chevrolet's Class III crown was won by two Bel Airs with 327-inch engines, single four-barrel carbs, and four-speed transmissions. Plymouth's Class IV winners were 318-inch Belvederes with single two-barrel carbs and three-speed transmissions. Plymouth did it in Class V with its 225-inch six-cylinder Valiants, both with single two-barrels and three-speed transmissions. Pontiac's Class IV-champion Tempests packed the 195-inch four-cylinder engine with single



Braking segment of the trials required 21 simulated boulevard stops within a specified time limit, followed by a maximum-effort stop from 60 mph to test brake fade effect.



SMOOTH DRIVING BY MARVIN PANCH GAVE FORD FAIRLANE SHORTEST STOPPING DISTANCE OF ENTIRE MEET, TWO CLASS WINS FOR FORD TEAM.



Riding observer Wally Forrest, who worked electronic timing device, survived nearly 60 panic stops during brake-testing phase.



Maximum-effort stops were judged on the basis of total braking distance and the ability of the car to remain within the limits of its designated traffic lane. Fifth wheel distance-measuring device was actuated by brake pedal, recorded tenths of feet.

DAYTONA TRIALS *continued*

four-barrel carbs and four-speed transmissions.

For an idea of the importance of overall performance in these trials, let's see how the winners fared in each test.

The big Fords in Class I placed sixth (the "427") and seventh ("406") in the economy test, the "427" getting 14.272 mpg and the "406" getting 14.080 mpg. A Chrysler 300 was Class I economy champ, getting 17.382 mpg with its 413-inch engine. The Fords were fourth ("427") and sixth ("406") in acceleration—this test won by a Pontiac which scooted from 25 to 70 mph in 4.879 seconds as compared to 5.296 seconds for the "427" Ford and 5.857 seconds for the "406." In brak-

ing, the "406" Ford placed second, stopping from 60 mph in 178.3 feet, and the "427" Ford was third with a 184.1-foot stop. A Pontiac Catalina was first, stopping in 174.2 feet.

Ford's Class II winners were fourth and fifth in economy with 16.066 and 16.018 mpg. A Pontiac won the economy test in the class with 18.552 mpg. They were fifth and seventh in acceleration, with 7.4 seconds by the fifth-place car. A Pontiac won the test with 6.1-second burst. But they were first and second in braking, the winner stopping in 169.5 feet. Next best was Pontiac's third-place 190.5 feet.

Chevrolet was first and second in Class III's economy test, the winning Bel Air getting 20.079 mpg. They were third and fourth behind two Tempests in acceleration by little more than a

second each—and third and fourth in braking behind a Rambler Ambassador and a Tempest.

Plymouth's Class IV-champ Belvederes were first and second in economy, topped by a 23.371-mpg performance; first and second in acceleration; and fourth and fifth in braking. A Ford Fairlane won the braking test with a 176.7-foot stop (to 189.8 feet for the fourth-place Belvedere).

Plymouth squeezed out its Class V win with first (25.396 mpg) and third in economy, fifth and sixth in acceleration, and sixth and ninth in braking. An Olds Jetfire won the acceleration test, and a Ford Fairlane won braking honors with a 158.2-foot stop that was the best recorded by any car.

Pontiac's Tempests were slow starting toward their Class VI title, placing seventh and 11th in economy, first and second in acceleration, and fourth and seventh in braking. A Rambler American, pushed closely by a Chevy II, won economy at 29.184 to 28.429 for the Chevy II, and a Mercury Comet took braking.

Scoring was done on a basis of 10 points for first place in each test in each class, nine for second, and so on down the line. Each test included provisions for penalties also. Failing to come to a complete stop at the stop sign in the economy test, for instance, penalized a car three mpg. Not beginning the acceleration test at a constant speed penalized a car four seconds. Moving out of the single lane while stopping in the braking test penalized a car 20 feet.

Complex timing equipment, designed by Pure Oil engineers, was mounted in each car for the acceleration and braking tests. The equipment worked beautifully, timing to an accuracy of .001 second. Before any car began competition, it had to pass a rigorous tear-down and inspection by NASCAR officials, after which cars were sealed and impounded until the trials were over. The sharp-eyed NASCAR inspectors turned back several entries at least once before accepting them for violations ranging from use of non-production items to oversized engines.

Heaviest concentration of entries came from Chevrolet, Ford, Pontiac, and Rambler. Chevy had Paul Prior and Vince Piggins overseeing the operation; Ford had Homer Perry directing its Holman & Moody-entered automobiles; Pontiac's interests were attended to by famed racing mechanic Smokey Yunick; and Rambler's efforts were headed by Les Viland, who turned in the best mileage figure recorded—the 29.184 mpg in a Rambler American. Best 25-70-mph acceleration time recorded was the 4.87 seconds whipped off by Johnny Allen in a four-speed



Pontiac Catalina, driven by Smokey Yunick, nears the end of the 25-to-70-mph test for passing-speed acceleration, winning this phase for Class II cars at 6.199 seconds.



Competing cars were run singly against time and distance and under watch of NASCAR officials. Hoods and fuel tanks were sealed, and tinkering was prohibited.



Chrysler 300, Class I winner for economy with 17.382 mpg, is waved off starting line as NASCAR officials complete fuel line hookup on next-in-line Plymouth.

MOTOR TREND's Safety Award is presented by Editor Nerpel to A. J. Hammerstrom (right).

Pontiac Catalina packing a 421-inch engine and one four-barrel carburetor.

Only automatic-transmission entries were a Buick LeSabre in Class I; a Mercury Monterey, two Olds Starfire coupes in Class II; a Dodge 880 in Class III; a Studebaker Avanti in Class IV; a Buick Special and Dodge Dart in Class V; and a Buick Special in Class VI. Trials officials say they almost certainly will require that one of the two cars allowed each manufacturer in each class have an automatic transmission model next year.

It was a most interesting comparison — a unique match that didn't necessarily prove ultimate economy or power but came closest of any such event to telling the average American motorist the best bets of the year for all-around performance in every price range.

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Impounded entries couldn't be moved anywhere without a NASCAR official present and were kept under constant surveillance during entire test to assure fair performance.



Class winners (from left): Class I and II — Marvin Panch and Bill Humphrey, Ford; Class III — Bill Horton, Chevrolet; Class

IV — Bud Faubel, Plymouth; Class V — Al Holovics, Valiant; and Class VI — Smokey Yunick and Johnny Allen, Pontiac Tempest.