NORTH AMERICAN PROGRAM
OF
RACING AND RELATED ACTIVITIES
FOR THE MODEL YEARS
1968-1970

A Presentation to the
Ford Motor Company
Operating Policy Committee
July 12, 1967

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PURPOSE OF PRESENTATION

The purpose of this presentation is to review the progress of the North American Operations program of racing and related activities, to recommend the establishment of a long-range development program, and to recommend approval of proposed 1968 model year expenditures associated with the maintenance of a long-range racing program.

PAID ATTENDANCE DATA FOR MAJOR SPECTATOR SPORTS

(MILLIONS OF PERSONS)

	1961	1966	RATE OF GROWTH 1961 TO 1966
AUTO RACING	38.9	48.6	25%
BASEBALL	29.0	33.6	16
FOOTBALL	25.7	32.7	27
BASKETBALL		18.7	
WRESTLING		4.8	
TRACK & FIELD		2.9	
HOCKEY		2.8	
SOCCER		2.5	
BOXING		1.7	

NOTE: Horse racing and Greyhound racing, which had paid attendances of 67.6 million and 10.9 million in 1966 are not generally considered to be spectator sports because of the separate attraction of parimutuel betting.

THE WORLD OF MOTORSPORTS

For half a century, the Ford Oval has been closely identified with automobile racing. The success of Ford products in open competition, dating back to Henry Ford's triumph over Alexander Winton in 1901, has continually served to reinforce the reputation of Ford products for reliability, dependability and exciting performance.

Now, more than ever, Ford stands to benefit from a long - range, across - the - board, assault on the primary areas of motorsports competition. Auto racing is growing rapidly in the United States. In 1966, more spectators paid to witness auto races than either baseball or football games; and motorsports events attracted more spectators than all the basketball, wrestling, hockey, track and field, soccer and boxing events combined. Undoubtedly, spectators at racing events qualify themselves as prospects for car sales by the act of buying a ticket. Further, these spectators commit themselves to being influenced by the success of the products they see in action. And, in addition to the millions who witness automotive competition in person, the increasing attention of national television networks and weekly magazines raises the visibility level to heights undreamed of just five years ago, when Ford returned to the fray.

At Le Mans

Ford Wins Again; Set Distance Mark

6 Ford Cars for LeMans Race

Four New Mark IVs

Foyt, Gurney Ford Wins, Sets Le Mans Record

Foyt, Gurney To Fastest

rd Flashes LeMans Victory News

Drive Ford To New Record

Gurney, Foyt Win at LeMans

Foyt and Gurney Drive Ford To Record Victory at LeMans

1st All-U.S. Victory

Foyt And Gurney Win Le Mans

GURNEY, FOYT DRIVE MARK IV TO VICTORY

Ford Trims Ferrari At Le Mans

Ford Wins Again in Le Mans Race

Cars, Etc.

Fords With Top Driving Team Out to Repeat LeMans Win

Ford Grabs 2nd Le Mans Win

Gurney, Foyt Bring Second Straight LeMans Win For Ford; Record Time

Foyt, Gurney race victors

1967 RACING PROGRAMS IN REVIEW

In 1967, Ford Motor Company has continued to demonstrate competitive superiority in nearly all areas of endeavor:

At Le Mans, a second victory in as many years proved conclusively that Ford manufactures the finest racing machinery in the world.


Andretti Pilots Ford '500' Win
Andretti Drives Ford to Win in Daytona 500
94,255 Fans at Daytona See Andretti Win in Ford
Andretti Sparks 1-2 Ford Victory
Ford Survives Mishap-Ridden Race
Andretti Wins Daytona
Sports
Hap-Py Landings
Ford Enjoys Big Weekend In Racing
Andretti Gives Ford 500 Win
Andretti's Ford Roars to Daytona Victory
Andretti, Lorenzen Lead Ford Parade At Daytona
SPORTS
Andretti Tools Ford to Daytona Win
ESCONDIDAN FIFTH
Andretti Wins Daytona 500 With '67 Ford
Andretti, Ford Win 500; Lorenzen 2nd
Ford Gives Details Of Stronger Engine
Andretti Captures Daytona 500-Mile
Andretti and Ford Take Daytona Prize
Andretti, Fords Take '500' Honors
Andretti Wins With Ford
Andretti Leads 1-2 Ford Finis
Mario Andretti Wins Daytona 500 in Ford
Andretti Win Puts Ford Back in Front

In NASCAR competition, Ford stock cars have won four of the seven major races to date, and Mario Andretti's victory in the Daytona 500 received national attention, as did the retirement of Ford super-star Freddy Lorenzen. Incidentally, the scope of interest in stock car racing was illustrated by the publicity following Lorenzen's retirement. While it was strongest in the Southeast, the story was given prominent play in 48 of the 50 states, with strong impact not only in the Southeast, but the Midwest, Pacific Coast and Northeast.


SPORTS CAR GRAPHIC
JULY 1967 50¢
LAS VEGAS · RIVERSIDE · LAGUNA SECA
U.S. Road Racing Championships
EXCLUSIVE: PIPER / BUICK
Track Test & Technical Report
MATRA V-4 GT & NEW MG MIDGET
SEDANS at GREEN VALLEY
Dan and Pamella soon put an end to that nonsense!
forsale
GREEN VALLEY

On the Trans-American Sedan Championship circuit, the Mercury Cougar and Ford Mustang have been sensational. Both are in strong contention for the championship, and the battle between the two Ford products and Chevrolet's Camaro is largely responsible for the quickly growing popularity of the sport.


Grove's Mustang Shoots Down "Red Baron" at Maple Grove
Drag times
GROVE REPEATS AS 'FUNNY' KING
Kalitta-Ford Team Unbeatable in AHRA Winter Nationals Top Fuel Duel
It's Up, Up and Away for 'Back-Up' Swindle at Bee Line
Kalitta & Ford Powerplant Work to Perfection at NHRA Winternationals
WINTERNATIONALS
Don Prudhomme Wins
FORD TO 7.17
ELIMINATOR II
TOP FUEL: HEMIS OUT-I
FORD'S TOPSIDE-CAMMED
ULTIMATE HEMI TORQUER
Shartman's Cyclone Whirls 8.20, Sends Liberman Back to Jungle in York Battle
GALLERY OF GREATS
STOCKERS AND SMOKERS IN ACTION
PEGASUS
Canadian Centennial Go Draws Wilson Ford Entry

In national drag racing competition, Ford-powered rail dragsters have won all the honors in 1967; Ford and Mercury "funny cars" have dominated the exhibition circuit, as well.

Winners at Indianapolis

A. J. Foyt sets new track record on Goodyear tires—without a tire change

A. J. Foyt rolled his Goodyear tires to victory at an average speed of 151.207 miles per hour. A new track record.

Some people consider the Indianapolis 500 the toughest race in the world. For man. For his machine. And for his tires.

Goodyear's Blue Streak Speedway Specials went the full 500 miles without a single tire change. Goodyear developed this ultra wide tread racing tire. And the triumph at this year's Indy proves its success.

For your kind of driving, Goodyear introduces another winner: "Wide Boots." Goodyear's new Wide Tread tires for your car. With a tread almost one third wider than the tread on most passenger car tires.

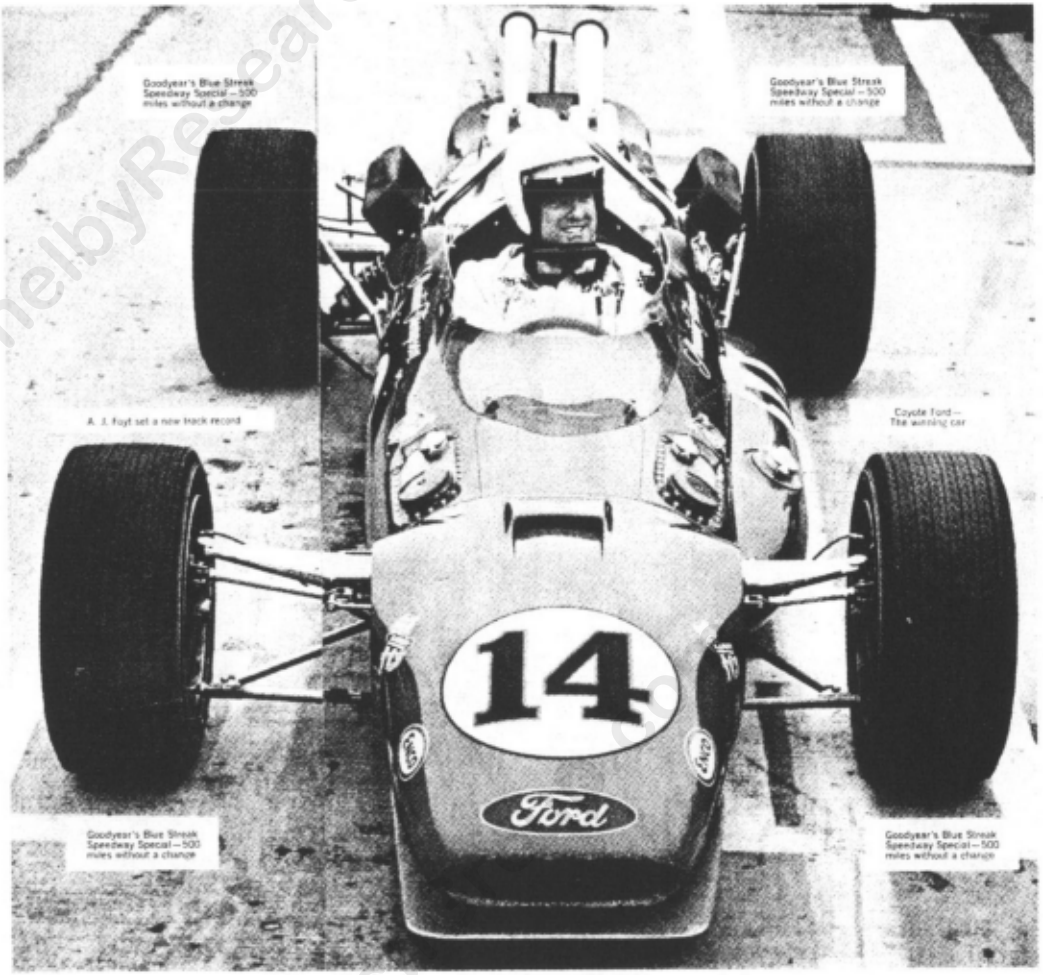
Get "Wide Boots." They're built a lot like racing tires. Low. Broad shouldered.

They start faster. Corner safer. Handle surer. Stop quicker. And they look great.

Try 'em on for size.

GOODYEAR

More People Ride On Goodyear Tires Than On Any Other Kind.



Ford power won Indianapolis for the third consecutive year.

1967 UNION/PURE OIL PERFORMANCE TRIALS BULLETIN:

Ford scores the all-time record win!

(Now even our competition knows why you're ahead in a Ford.)

Ford beats every car in its class.
Ford Custom 289 V-8 scores a nearly perfect mark in braking, acceleration, and fuel economy. 29 out of a possible 30 points. No car in history has ever done as well.
(Class IV)

Mustang beats every car in its class.
Beats them all in fuel economy, too, by taking first and second place as well.
(Class IX)

Fairlane beats every car in its class.
Beats them all in gas economy and braking, too.
(Class VI)

Fairlane GT beats every other entry in the Trials in acceleration regardless of size or engine. 25 to 70 mph in 5.585 seconds.
(Class VIII)

Nobody had more winners in the individual Trials than Ford. And you can see them all at your Ford Dealer's. Join our celebration with a winner of your own—a White Sale Special Ford Custom Sedan or a Ford Galaxie 500 Hardtop.

FORD You're Ahead in a Ford

SEE YOUR FORD DEALER FOR SPECIAL WHITE SALE SAVINGS.
HURRY! LIMITED TIME ONLY!

And finally, Ford, Fairlane and Mustang won their classes in the Pure Oil Trials, and Mercury won its class in the Mobil Economy Run.

NORTH AMERICAN OPERATIONS
HISTORICAL PERFORMANCE PROGRAM EXPENDITURES

(MILLIONS)

PROGRAMS	MODEL YEAR				
	1963	1964	1965	1966	1967
STOCK CAR RACING	$ 2.4	$ 3.8	$ 2.2	$ 3.3	$ 2.9
DRAG RACING	0.6	2.1	1.7	1.4	1.1
SEDAN & SPORTS CAR	0.6	0.2	0.5	0.4	1.0
INDIANAPOLIS	0.6	1.4	1.7	0.7	0.5
ECONOMY/RALLY	0.2	1.8	0.3	0.1	0.2
AUTOLITE PARTICIPATION	0.2	0.2	0.2	0.2	0.2
OTHER	–	0.2	0.1	0.2	0.2
ADMINISTRATIVE	0.5	0.6	0.7	0.9	0.9
SUBTOTAL	$ 5.1	$10.3	$ 7.4	$ 7.2	$ 7.0
LE MANS PROGRAM	$ –	$ 2.0	$ 1.7	$ 7.2	$ 7.6
TOTAL	$ 5.1	$12.3	$ 9.1	$14.4	$14.6

In pursuit of the 1967 performance program objectives, North American Operations spent a total of $14.6 million versus $14.4 million in 1966.

NORTH AMERICAN OPERATIONS
1967 MODEL YEAR PERFORMANCE PROGRAM
EXPENDITURES VERSUS BUDGET

(MILLIONS)

PROGRAMS	BUDGET	ESTIMATED ACTUAL	ACTUAL (O)/U BUDGET
STOCK CAR RACING	$ 2.5	$ 2.9	$(0.4)
DRAG RACING	1.4	1.1	0.3
SEDAN & SPORTS CAR	0.8	1.0	(0.2)
INDIANAPOLIS	0.5	0.5	–
ECONOMY	0.2	0.2	–
AUTOLITE PARTICIPATION	0.2	0.2	–
CONTINGENCY/OTHER	0.7	0.2	0.5
ADMINISTRATIVE	0.8	0.9	(0.1)
SUBTOTAL	$ 7.1	$ 7.0	$ 0.1
LE MANS	6.6	7.6	(1.0)
TOTAL	$13.7	$14.6	$(0.9)

NOTE: Expenditures for 1967 exclude anticipated payments to be made to Shelby American under terms of the current operating agreement as shown in Appendix H.

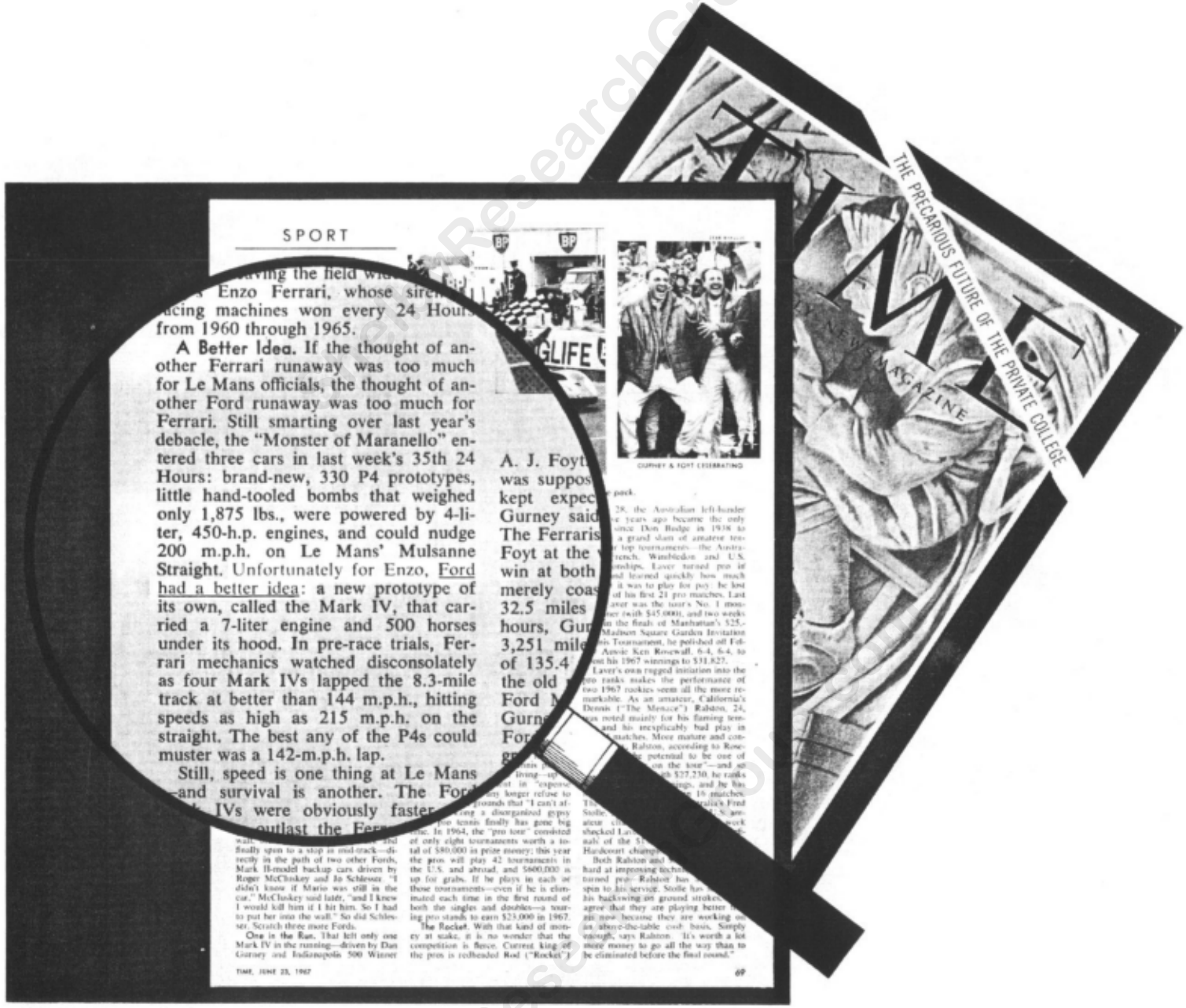
These expenses were incurred against a total North American racing budget of $13.7 million with a resulting overrun of $0.9 million. The regular domestic programs, for which a budget of $7.1 million was approved last July, were accomplished with an underrun of $0.1 million. However, Le Mans program costs exceeded the $6.6 million budget by $1 million as a result of the following complications:

Original plans assumed minimum changes to 1966 Le Mans engine, but early season performance of competition demonstrated a need for substantial improvements in performance, economy, durability and weight which necessitated an engine program overrun of $0.9 million.

Problems encountered shortly before the Le Mans race with wheel durability and sourcing, brake durability and windshields resulted in overruns of $0.3 million.

Four Mark IV vehicles were entered at Le Mans rather than three as originally planned, and all Mark IV's were rebuilt with new exterior configuration after wind tunnel tests indicated aerodynamic problems with the original shape. An overrun in the vehicle build program of $0.4 million resulted.

The Le Mans program overruns were partially offset by the budgeted $0.6 million provision for unforeseen contingencies.


SPORT
Enzo Ferrari, whose sire
ucing machines won every 24 Hour
from 1960 through 1965.
A Better Idea. If the thought of another Ferrari runaway was too much for Le Mans officials, the thought of another Ford runaway was too much for Ferrari. Still smarting over last year's debacle, the "Monster of Maranello" entered three cars in last week's 35th 24 Hours: brand-new, 330 P4 prototypes, little hand-tooled bombs that weighed only 1,875 lbs., were powered by 4-liter, 450-h.p. engines, and could nudge 200 m.p.h. on Le Mans' Mulsanne Straight. Unfortunately for Enzo, Ford had a better idea: a new prototype of its own, called the Mark IV, that carried a 7-liter engine and 500 horses under its hood. In pre-race trials, Ferrari mechanics watched disconsolately as four Mark IVs lapped the 8.3-mile track at better than 144 m.p.h., hitting speeds as high as 215 m.p.h. on the straight. The best any of the P4s could muster was a 142-m.p.h. lap.
Still, speed is one thing at Le Mans —and survival is another. The Ford
IVs were obviously faster
outlast the Fer
finally spun to a stop in mid-track—directly in the path of two other Fords, Mark II-model backup cars driven by Roger McCluskey and Jo Schlesser. "I didn't know if Mario was still in the car," McCluskey said later, "and I knew I would kill him if I hit him. So I had to put her into the wall." So did Schlesser. Scratch three more Fords.
One in the Run. That left only one Mark IV in the running—driven by Dan Gurney and Indianapolis 500 Winner
A. J. Foyt
was suppos
kept expec
Gurney said
The Ferraris
Foyt at the
win at both
merely coas
32.5 miles
hours, Gur
3,251 mile
of 135.4
the old
Ford M
Gurn
For
GLIFE
GURNEY & FOYT CELEBRATING
pack.
28, the Australian left-hander
e years ago became the only
since Don Budge in 1938 to
a grand slam of amateur tro
r top tournaments—the Austra-
rench, Wimbledon and U.S.
onships. Laver turned pro in
and learned quickly how much
it was to play for pay: he lost
of his first 21 pro matches. Last
aver was the tour's No. 1 mon-
ner (with $45,000), and two weeks
n the finals of Manhattan's 525-
Madison Square Garden Invitation
is Tournament, he polished off Fel-
Arnold Ken Rosewall, 6-4, 6-4, to
ost his 1967 winnings to $31,827.
Laver's own rugged initiation into the
ro ranks makes the performance of
wo 1967 rookies seem all the more re-
markable. As an amateur, California's
Dennis ("The Menace") Ralston, 24,
as noted mainly for his flaming tem-
and his inexplicably bad play in
matches. More mature and con-
Ralston, according to Rose-
potential to be one of
on the tour"—and so
h $27,230, he ranks
ngs, and he has
19 matches.
Stolle
ateur
shocked La
nals of the
Hardcourt champ
Both Ralston and
hard at improving tech
turned pro. Ralston has
spin to his service. Stolle has
his backswing on ground strokes.
agree that they are playing better
are now because they are working on
an above-the-table cash basis. Simply
enough, says Ralston. "It's worth a lot
more money to go all the way than to
be eliminated before the final round."
TIME, JUNE 23, 1967
69
THE PRECARIOUS FUTURE OF THE PRIVATE COLLEGE
NEW MAGAZINE

CONCLUSION: 1967 PROGRAMS IN REVIEW

Although costly, the performance program again has met its basic objective in 1967. Publicity and public awareness of Ford accomplishments appears to have reached a new high, keeping the Ford name and even our advertising slogans in frequent view of virtually every literate American. Witness the Time magazine report on Le Mans in which the writer states, "Unfortunately for Enzo (Ferrari) Ford had a better idea."

DAN GURNEY SPECIAL COUGAR

When sales promotion departments have availed themselves of the promotional opportunities afforded by the racing programs, the results have been exceptional. Lincoln-Mercury Division, for example, attributes nearly one fourth of May and June Cougar sales to its "Dan Gurney Special." This unit, with exception of a "Dan Gurney" decal, has little unusual equipment. The Gurney name and his association with our racing activity is largely responsible for the success of this vehicle in the market.

WARD'S AUTOMOTIVE REPORTS

Ford Scores Sales Successes in South And West as Racing Image Grows

A 1966 market analysis shows that its highly successful racing venture in the south is paying dividends for Ford.

The facts are that Ford Motor Co.'s 28.3% market slice in the South Atlantic states in 1966, the heart of the racing circuit, was its highest of any region in the U.S. and well above its national penetration of 26.0%. Chrysler Corp., too, did well there.

Coincidentally, total auto sales in the South Atlantic states increased in 1966 over 1965, refusing to follow the nationwide decline. In terms of total auto population, South Atlantic has shown the strongest 10-year growth in the country, making it a lucrative market.

Battle for Auto Sales Is Regional, Not U.S.-Wide

(Geographical Year 1966 Auto Market Penetration by Major Companies)

East of Mississippi River	GM	Ford	Chry.	AMC	Imports	Total
1. New England	46.5	24.9	15.4	3.7	9.5	100.0
2. Mid-Atlantic	49.3	22.9	16.6	3.2	8.0	100.0
3. E. N. Central	52.3	25.3	15.4	2.8	4.2	100.0
4. South Atlantic	44.9	28.3	15.6	3.0	8.2	100.0
5. E. S. Central	49.6	27.1	14.3	2.3	6.7	100.0
West of Mississippi River						
6. W. S. Central	50.8	27.6	13.5	2.6	5.5	100.0
7. W. N. Central	50.1	27.4	15.5	3.0	4.0	100.0
8. Mountain	44.8	27.2	15.4	3.4	9.2	100.0
9. Pacific	40.3	27.4	14.6	2.9	14.8	100.0
Alaska	36.6	25.0	16.3	4.7	17.4	100.0
Hawaii	33.3	23.0	20.0	4.1	19.6	100.0
U.S. TOTAL	48.2	26.0	15.4	2.9	7.5	100.0

Legend: (1) Includes Me., N.H., Vt., Mass., Rd. Is., Conn.; (2) Includes N.Y. N.J., Pa.; (3) Includes Ohio, Ind., Ill., Mich., Wisc.; (4) Includes Del., Md., D. of C., Va., W. Va, N.C., S.C., Ga., Fla.; (5) Includes Ky., Tenn., Ala., Miss.; (6) Includes Ark., La., Okla., Tex.; (7) Includes Minn., Iowa., Mo., N.D,. S.D., Neb., Kan.; (8) Includes Mont., Id., Wy., Col., N.M., Ariz, Utah, Nev.; (9) Includes Cal., Ore., Wash. Source: R. L. Polk & Co.
NOTE: The column headed "Imports" above is actually based upon 671,518 imports and miscellaneous U.S. makes of which the imports represented 658,123.

In the performance-conscious Pacific states Ford Motor Co. did so well (a 27.4% share) that it was the only U.S. auto company to sell above its national average in the area.

This was quite an accomplishment. The import cars figuratively ran wild on the west coast in 1966, chewing up a 14.8% slice of the auto market vs. 7.5% nationally, leaving only about 85% to the four domestic auto makers whereas in other parts of the country they left them 90% to 95%. In other words, the squeeze was really on in the Pacific states. In fact the total Imports topped Chrysler Corp. there.

Ford Motor Co. traditionally has turned in strong performances in the southern U.S. and on the west coast. But its image as a performance car hasn't hurt one bit. GM's market share in these two regions in 1966 were its lowest in the country.

In the nine-state South Atlantic region, Ford Div. topped Chevrolet Div. in new car registrations in 1966 with 322,648 to 310,793, posting victories in District of Columbia, Virginia, North Carolina, South Carolina, Georgia and Florida. In the three-state Pacific region Ford Div. led Chevy 240,114 to 211,477.

Also, a recent study published by Ward's Automotive Report suggests that Ford performance programs do have a pronounced effect on automobile sales. The report indicates ". . . that Ford Motor Company's 28.3 percent market slice in the South Atlantic states in 1966, the heart of the racing circuit, was its highest of any region in the United States and well above its national penetration of 26 percent." Ward's also states, "In the performance conscious Pacific states Ford Motor Company did so well (a 27.4% share) that it was the only United States' automobile company to sell above its national average in the area." Although Ward's probably overstates the sales effect of our racing programs, it does seem significant that the Company's penetration in these performance-minded areas continually exceeds the national average.

With these benefits in mind, continuation of a Company racing program is strongly indicated.

FORD FAIRLANE GTA

Joins the Supercar Spectrum

Genuine Imitation

IMITATION is the sincerest form of flattery, as the saying goes, and Pontiac undoubtedly is exceedingly praised in the excess of thinly disguised GTOs now on the road. This shouldn't be so novel to Pontiac, since its own Supercar's nameplate was borrowed from elsewhere. But the latest flatterer —indeed, perhaps the last possible one —fits the GTO long suit only barely; the Fairlane GTA from Ford is almost genuine imitation in that it doesn't quite match the mark set forth by the GTO.

Had Ford produced the first, rather than the final, Supercar (by present definition), there would have been lo for disappointment. But

between GTO and GTA, moreover, is immediately apparent to the senses. Whereas the former thunders away from the line in a ride like that of a runaway steam locomotive, the latter is hard-pressed to exhibit any brutality, much less sufficient force.

However, in checking back, we find that a showroom stock GTO is something CL has never formally tested. Tigers whose tails we've twisted have had the benefit of extra roar, coming from 3 x 2 Tri-Power carburetion and manifolding. In that light, then, perhaps the GTA doesn't fare too badly. A 1 x 4 GTO (335 bhp) may well be only as potent as the GTA. But the point is, hotter Pontiac engines are there on the order blank ready

GTO engine's camshaft is only re-

motely warmer (273/289 duration, 54° overlap) than the GTA, but the 3 x 2 shaft is substantially thawed out (288/302 and 63°). The differences in valve sizes (1.92 in. intakes, 1.65 exhausts) also say something about Pontiac's approach to manifold and head design.

Any GTA buyer, of course, has recourse to the various and well-known means used by hot rodders to polish a rough diamond. Ford Parts Div. has marketed, in the past, a 3 x 2 manifold for this engine and the larger speed shops have had reworked cylinder heads and exhaust headers. By fitting drag slicks, good headers, and a 3.50:1 or higher axle, e.t.s in the 14s—possibly the high 13s—should be within reach of a good driver. One other thing that would definitely shave seconds would be a 4-speed manual transmission rather than the 3-speed automatic which adds the final A to the car's title.

The disenchantment we have experienced with the "Sportsmatic" automatic (CL, Dec. '65) has not abated with subsequent GTAs. It is an admirable, if overdue, feature to manually control an automatic's gear selection by placing the shifter at the desired detent. Borg-Warner automatics and

those from Chrysler, of course, have been capable of this for some years now. The Ford attempt, however, has two distressing characteristics: A prolonged pause during gear changing, either up or down, and all-but-unusable action in downshifting into low. In the latter case, a downshift from second to low results in free-wheeling until road speed drops below 25 mph, when the shift occurs with a sudden

If the GT

Supercar,

rally, it co

fair utilitar

drawback f

driving, the

lize is fuel

premium fo

nature is ha

Walter Mitty

inspiring th

note. Realist

cause to object

As family

quite good.

opinion, ideal

ific conditions.

problem in bac

2-weeks-with-pa

the GTA comes with a sturdier suspension which improves handling qualities without, we discovered, causing any deterioration in riding softness: at least we could detect no unpleasant harshness.

Special tires fitted as standard are Firestone Super Sports, rated for 125 mph and incorporating the latest in tire technology. The level of stability demonstrated by

I can wait no longer. After reading your superb article on the Super Cars, I must voice my disgust with the Ford Motor Company.

For far too long, I have been reading of Ford's "Total Performance"—and how their great (and extremely successful) racing program will improve the breed. When, if at all, will we receive the benefits? The Mustang certainly hasn't given the consumer any benefit of the racing program. The Fairlane GT and Comet Cyclone are copies of the Pontiac GTO. The Cobra and Mustang GT 350 are anything but Ford production automobiles.

Where, then, has the public received engineering advancement? For a start, try the Chrysler Street Hemis, Corvair's fwd. engine and Toronado's fwd. The GTO was the first Super Car, and the Corvette (from non-racing Chevy) is still the only American Grand Touring car on the road.

How much longer must we wait for the Ford breed to really improve?

G. Cichanski
Columbus, Ohio

BLOWIN' SMOKE

January and March issues were great as well as your article on setting up the GTO in your February issue. Tests like these are a big help to us fellows who don't have the time to drag test our cars but still like a car with a little more spice than it would have in stock condition. The only problem is that you as yet haven't tested one of the hottest numbers out of Detroit

NEW PHOTO DIRECTOR

SS&DI is famous for its photo coverage of national drag events and the best cars in the country. And now we have Leslie Lovell to supervise photo operations. Leslie has covered many National events for NHRA and National Dragster, was chief photographer for Southwest Raceway in Tulsa, Okla., and did freelance photography for many of drag racing's publications and racing parts manufacturers.

yet, this being the 390" Mustang 2+2. All of the magazines are raving about this car and its performance as a super personal car. Why don't you and your fine crew get the jump on the competitors and run a series of articles on setting up this car for the street and strip.

[illegible] most of the time.

[illegible]'s see what you can come up with. Thanks for your time.

J. E. Dillon
Philadelphia, Pa.

We have not tested, and will not test a 390 Mustang because we don't see how this car, which has repeatedly tested in the 15-second bracket, can be called a high performance car.—Ed.

OUTLOOK FOR THE FUTURE: PROBLEM AREAS

Ford "Total Performance" — Image vs. Fact

In 1963, when Ford reentered the motorsports arena, the objective was to bolster a poor product image in the growing youth market until youth-oriented products could be developed. Despite the great success of the Ford competition program in recent years, and the tremendous impact that Mustang has had on the youth market, Ford suffers from a "credibility gap" between its performance image and the factual performance levels of its products.

Simply stated, performance-minded car buyers are profoundly impressed with the image projected by factory-backed race vehicles, but they are equally unimpressed with the Company's regular production equipment. In short, they can't buy the Ford performance image at their neighborhood Ford or Mercury store. Evidence of the Ford "credibility gap" is quite apparent in the pages of the "buff" magazines read religiously by millions of young Americans. Ford products receive far less attention than GM, and on occasion, we have been accused of manufacturing a " . . . genuine imitation that doesn't quite match the mark set forth by the GTO." Another magazine denies that the 390 Mustang is a high performance car.

NATIONAL HOT ROD ASSOCIATION
1967 WINTERNATIONALS

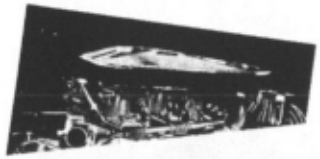
CLASS	CLASS WINNERS					
	TOTAL	CHEVROLET	BOP	CHRYSLER	FORD	OTHER
FUEL DRAGSTER	1	0	0	0	1	0
FACTORY EXPERIMENTAL	4	0	0	0	4	0
SUPER STOCK	9	2	1	6	0	0
STOCK						
A-D MANUAL	4	3	1	0	0	0
B-D AUTOMATIC	3	0	1	1	0	1
E-K MANUAL	7	6	0	0	1	0
E-I AUTOMATIC	5	2	3	0	0	0
OTHER	25	10	1	9	3	2
TOTAL	58	23	7	16	9	3

The effect of GM's "muscle car" product and merchandising philosophy becomes crystal clear when analyzing results of the major National Hot Rod Association drag meets. In the Winternationals, Ford-powered vehicles, through efforts of the performance program won the exotic "Dragster" and "Factory Experimental" classes; but in the "Stock" classes, where regular production equipment with little or no modification is raced – the real grass roots of drag racing and the youth market – the Ford performance reputation was decimated by General Motors. Results of the Springnationals were virtually the same as far as Ford was concerned; and, in fact, the record books demonstrate that GM supremacy in "Stock" classes has prevailed for more than a decade. The limited popularity of Ford products on the drag strip is indicated by the fact that only 24 of the 247 stock class entries in the Springnationals were Fords.

This problem is crucial not only to Company performance program management; it is foremost in the minds of knowledgeable dealers, and was the subject of considerable discussion in a recent meeting of the Ford Division Dealer Council.

Chevrolet warrants all its high-performance engines for 5 years or 50,000 miles.

(Including both our 396s and all four of our 427s)



As an express condition of this warranty, once every 6 months the own... is re...

The provisions of this ... shall not apply ...

F70 x 14 wide oval rubber is standard. Redlines or thinline whitewalls.

The Great One. Standard safety features include backup lights and a four-way hazard warning flasher.

Reclining passenger seat and head rests for both front seats cost extra. But why not indulge a little?

The enormously capable Quadra-Power 400. Standard. 366-hp at 5100 rpm. 438 lb.-ft. at 3600 rpm.

You say you never get tired of looking at The Great One? Neither do we. Let's pause and admire.

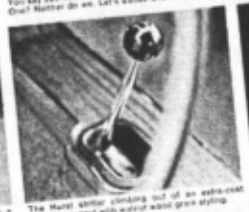
The extra-cost custom sports steering wheel. Even though it's not real wood, it still looks sensational.

The Rally I wheel in the steel at entrance at a wide oval whitewall. Extra-cost.

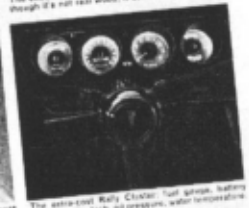
If you're wondering why we mounted the tach (extra-cost) on the hood, you're not alone.

What other cars must feel like as they watch The Great One slide by. Sliding by: the GTO headlights.

The extra-cost heavy-duty 3-speed comes with a floor-mounted Hurst shifter at no extra cost.

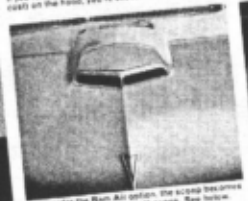


The Hurst shifter climbing out of an extra-cost console covered with walnut wood grain styling.



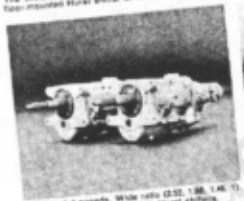
The extra-cost Rally Cluster: fuel gauge, battery light, speedo, tach, oil pressure, water temperature.

Our great Rally II wheels. Extra-cost. Wider white walls are available, but not on wide oval tires.



If you order the Ram Air option, the scoop becomes an actual good-grief-it's-real scoop. See below.

Heavy-duty rear axle assembly. For extreme-duty service. Mandatory with 3.90:1 and 4.33:1. Extra-cost.



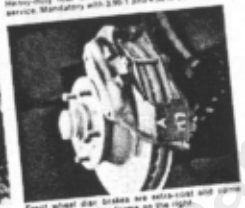
Extra-cost 4-speeds. Wide ratio (2.52, 1.68, 1.46, 1). Close ratio (2.20, 1.64, 1.28, 1). Hurst shifters.

Extra-cost Turbo Hydra-Matic with Hurst dynamist. Right stalk is for optional stick shift control.

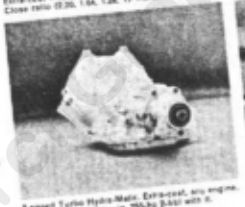
Our 8-track stereo tape player. It sounds unbelievable even in an open convertible. Extra-cost.

You should try our already stiff suspension before you pay extra for the stiffer shock absorbers we have.

Extra-cost Ram Air option with functional scoop, high-output cam, springs, 4.33:1 axle only.



Front wheel disc brakes are extra-cost and come with power. The hole forms on the right.



3-speed Turbo Hydra-Matic. Extra-cost. Any engine. You can get a 400 cu. in. 350-hp 3-bbl with it.

Standard safety features include a lane change feature incorporated in direction signal control.

Another standard safety feature is a dual master cylinder brake system with warning light.

Pontiac GTO

Now you know what makes The Great One great.

Because of the proliferation of high performance models and options, Chevrolet and Pontiac are well prepared to conquer the youth and performance market —— a market which is important in terms of making current sales and more importantly, establishing long-range buying patterns of young customers. Advertisements such as those shown here obviously are aimed directly at this market and are envied by our performance conscious dealers.

1966 MAXIMUM PERFORMANCE ENGINE PRODUCTION
INTERMEDIATES

MANUFACTURER & CAR LINE	ENGINE		VOLUME	PERCENT OF CAR LINE
GENERAL MOTORS				
TEMPEST	389 6V	360 HP	19,045	5.3%
CHEVELLE	396 4V	360 HP	24,811	5.5%
	396 4V	375 HP	3,099	0.7%
F-85	400 4V	350 HP	19,881	8.7%
	400 6V	360 HP	2,129	0.9%
CHRYSLER CORPORATION				
BELVEDERE	426 8V	425 HP	1,703	0.1%
CORONET	426 8V	425 HP	1,254	0.5%
TOTAL			71,922	4.9%

In 1966, nearly 72,000 intermediate vehicles were sold with engines of at least 350 horsepower. Virtually all of these "super cars" were GM products, and installation rates of maximum performance engines ranged from 5.3 percent on the Tempest to 9.6 percent on the F-85.

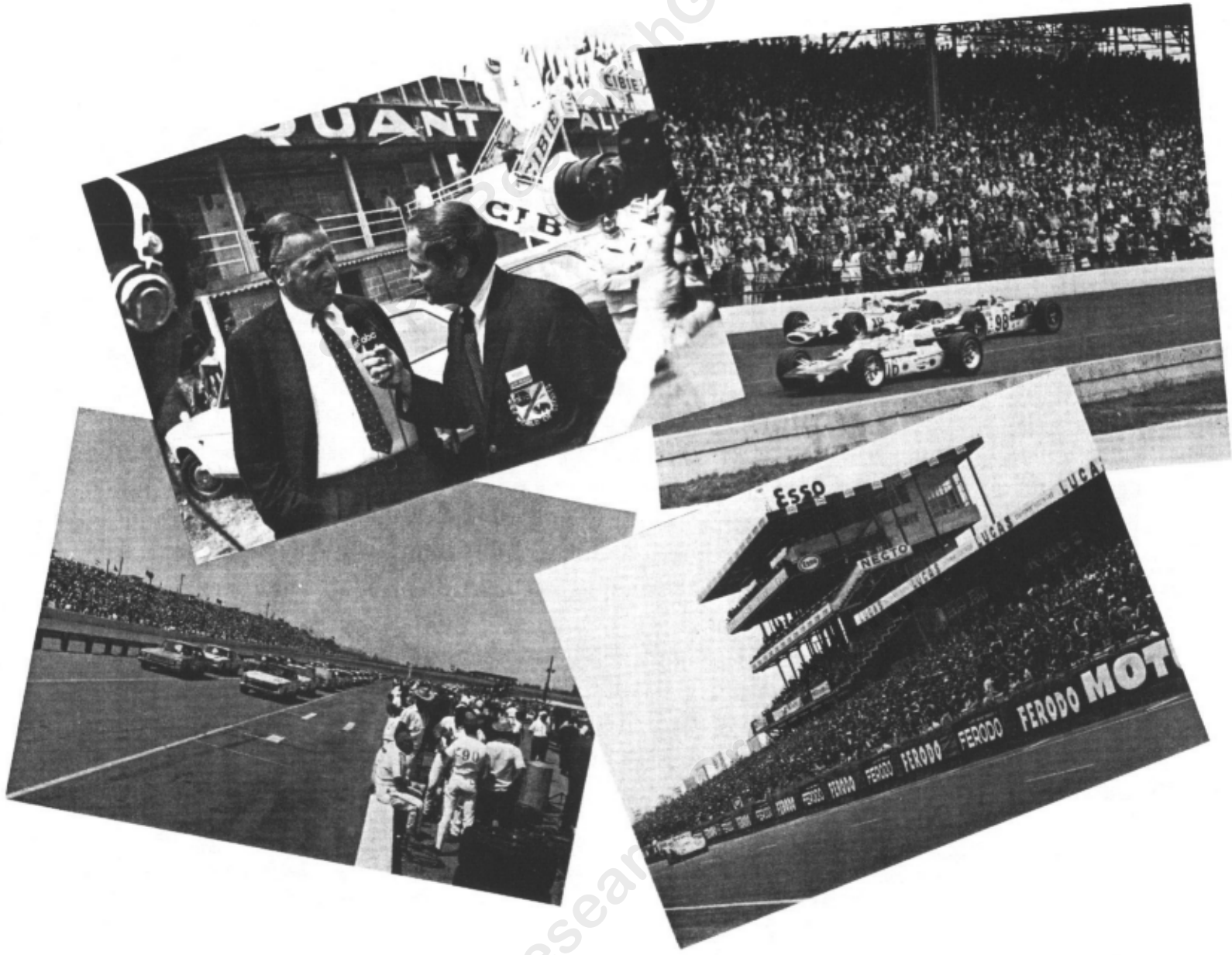
Unfortunately, we were unable to participate in this market, as performance is the major commodity, and the Ford powertrain performance doesn't measure up. We have fewer optional engines, real performance accessories are severly limited, exhaust systems are too restrictive, and good axle ratios and locking differentials are not available.

These deficiencies also are felt in the performance programs, because the task involved in bringing Ford power to racing supremacy begins with basic production equipment.

Escalation of Technology

In addition to the voids in our performance product offerings, the corporate performance image is threatened on another front – the escalation of technology in racing hardware. An implicit statement of this threat was made by "Sports Illustrated" in reporting this year's Indianapolis 500. The magazine suggested that "Gentlemen Junk Your Engines" would have been more appropriate than the traditional greeting at the start of the "500."

A whole new generation of racing power plants is lurking in the wings, and one leader of this "silent generation" – the Pratt & Whitney turbine – stole the show from Ford for 197 of the 200 lap performance. Whatever the rules for 1968, Ford must face this challenge, and the Ford engine will be threatened more seriously than ever before. In addition to turbine power, we face the onslaught of turbo-charged and otherwise modified, high-rpm, multi-cylinder European, American and Japanese Grand Prix engines.


Esso
FERODO

OUTLOOK FOR THE FUTURE: GENERAL RECOMMENDATIONS

With the boom in attendance and the increased media coverage motorsports events are experiencing, it is imperative that Ford Motor Company meet these new challenges with an integrated program of racing and product development. If auto racing is to provide an important marketing medium in the future, we must abandon our historical approach to motorsports planning, i.e., determining in July of each year which programs will be undertaken in the succeeding few months. The key to success in competition, on the race track or in the showroom, is long-range planning.

Chevrolet, for example, adopted a long-range performance engine program in December, 1953, and has had a continuing product development program to ensure that high performance engine components for the full V-8 engine series have been engineered at the factory, merchandised through the Corvette program, and made available on the accessory market. As a result, Chevrolet has a highly successful race program, which functions entirely on the very popular production equipment. Ford must find a way to stem the tide.

Accordingly, it is recommended that the Company establish a long-range performance product development program. In order to close the gap between the performance programs and our regular products, and to stay ahead of the rapidly changing "state-of-arts," this plan must be focused on the following three general points:

1. Accelerating the development of high performance powertrains which will compete with the regular product offerings of GM and Chrysler in the "muscle car" market.

2. Anticipating future race program requirements as they relate both to regular production and exotic powertrain equipment, and funding advanced development projects to meet these requirements.

3. Coordinating current and future race programs with Company Sales Promotion and Public Relations activities to maximize the promotional benefits of racing.

OUTLOOK FOR THE FUTURE: SPECIFIC RECOMMENDATIONS

The financial implications of a long-range development and racing program are, of course, dependent upon the areas of competition selected for the approaching years. Potential programs being considered for the future include:

1. Advanced Engine Development
2. Sedan Racing
3. Stock Car Racing
4. Drag Racing
5. Economy Events
6. Indianapolis (Championship) Racing
7. Autolite Participation
8. Sports Car Racing (Can-Am Series and/or Le Mans)

RELATIVE PERFORMANCE LEVELS OF 1967 INTERMEDIATE SIZE VEHICLES

PLYMOUTH BELVEDERE	FORD FAIRLANE	CHEVROLET CHEVELLE	PONTIAC TEMPEST
426 CID 425 HP GTX $3,136.36	427 CID 425 HP $3,078.21	396 CID 375 HP SS 396 $2,557.68	400 CID 360 HP GTO (RAM AIR) $2,724.45
440 CID 375 HP GTX $2,679.01		396 CID 350 HP SS 396 $2,455.03	400 CID 360 HP GTO $2,580.54
	390 CID 320 HP $2,338.21	396 CID 325 HP SS 396 $2,373.68	400 CID 335 HP GTO $2,521.15
383 CID 325 HP $2,352.81		327 CID 325 HP $2,359.73	
383 CID 270 HP $2,312.41	390 CID 270 HP $2,276.61	327 CID 275 HP $2,278.38	326 CID 285 HP $2,301.25
318 CID 230 HP $2,110.61		327 CID 250 HP MEMO: REL. FOR 1968	
273 CID 180 HP $2,086.26	289 CID 200 HP $2,074.19	283 CID 195 HP $2,064.45	326 CID 250 HP $2,106.94

NOTE: All prices shown are wholesale delivered for base 2 Door Hardtop with radio, H.D. suspension, and 4 speed transmission (3 speed transmission on engines less than 260 horsepower).

Advanced Engine Development

Currently, there are two general problems relating to engine development that affect the performance image and competition activities of the Company. First, as indicated by the above chart, competitive engine options are lacking in the medium and top-of-the-line V-8 offerings. Second, the sedan racing and stock car racing programs are in need of new engines in the immediate future to remain competitive. Relative to the first point, the Engine and Foundry Division has planned for high performance manufacturing capability on the 335 CID and 385 CID series engines. Incorporation of these high performance engines into the regular product line is currently planned for the 1970-72 period which should help Ford regain prestige lost on the drag strip and in the youth market. As a temporary measure, a 360 horsepower 390-4V engine will be released for the intermediate vehicle lines.

Regarding the second problem, a racing version of the 302 CID engine is required for the 1968 sedan racing season and a 385 CID stock car racing engine will be needed by January, 1969. As funding was not provided for these engines in the product programs, it will be necessary to request incremental budget in addition to the product program budget for development effort. The Engine and Foundry Division estimates that $0.6 million for the sedan engine and $1.5 million for the stock car engine will be required. The specific race program recommendations which follow are based on approval of these advanced development projects.


TERLINGUA RACING TEAM
17


16

Sedan Racing

One of the fastest-growing segments of the motorsports scene is represented by the Sports Car Club of America's Trans-American Sedan Championship series. Currently, Mercury Cougar is one point ahead of Mustang in the contest for the Manufacturer's Trophy, with the Chevrolet Camaro in hot pursuit, only three points behind Mustang. In the small-bore category, Porsche and Alfa-Romeo are nearly deadlocked; with Cortina out of the running this year awaiting sanction of a new and fully competitive vehicle for next year.

Sedan racing is particularly valuable as a marketing medium. The audience is similar in profile to the typical SCCA member, i.e., median age 31, earns more than $11,000 annually, owns 2.25 cars, married with two children, college graduate, and professional career. Further, the events are widely scattered throughout the United States which provides unique sales promotion opportunities at the point-of-sale.

Last year, Mustang won the Trans-Am series easily in the hands of private owners and Ford's only participation was in the form of small prize money payments. This year, two Mustangs and three Cougars are being entirely supported by the Company through Shelby American and Bud Moore Engineering.

Ironically, the fastest growing group of cars in the series is the Chevrolet Camaro Z-28, an RPO unit which is raced by independents as well as factory supported Chevrolet dealers. The only competitive Ford products entered are those professionally prepared by Shelby American and Bud Moore.

Company victories, to date, can be attributed to superior vehicle handling, and better team management. However, Chevrolet recently completed an extensive test and development program which should make the Camaro teams extremely competitive for the remainder of the 1967 season and next year.

With the prestige of the Mustang, Cougar and Cortina at stake in the million unit sporty car market, it is imperative that Ford products are kept competitive. The basis for keeping the 1968 Mustang and Cougar competitive in sedan racing rests in development of a superior powertrain incorporating the 302 CID engine discussed previously and an improved locking rear axle. Assuming availability of the new engine, two Company supported Mustangs and Cougars will be raced, and two Cortinas will be entered in the "Under Two-Liter" class.

Expenses for the 1968 program are projected at $0.9 million, which is $0.1 million less than was spent in 1967. As shown in Appendix A, the saving results from reduction of Mustang/Cobra customer assistance.

PAID ATTENDANCE DATA FOR EARLY SEASON NASCAR STOCK CAR RACE EVENTS

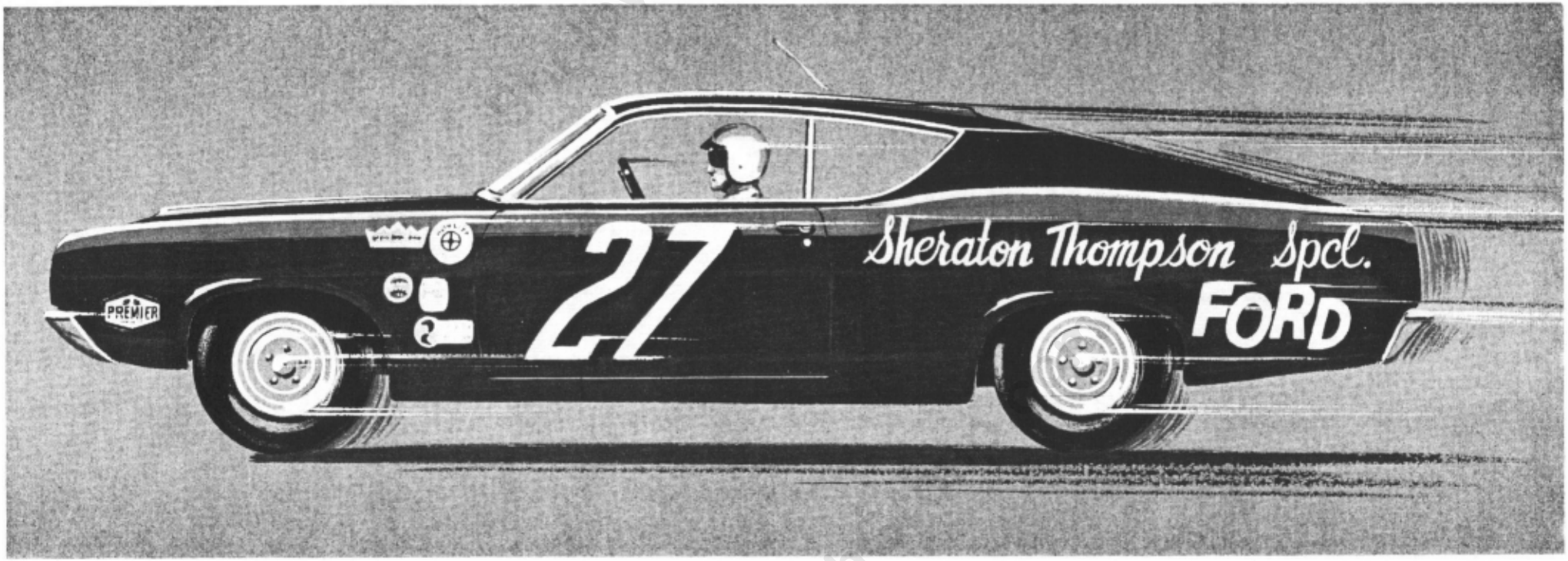
	1965 a/		1966		
	ATTENDANCE	WINNER	ATTENDANCE	WINNER	A1
MOTOR TREND 500	61,000	FORD	60,000	FORD	
DAYTONA 500	75,000	FORD	88,000	PLYMOUTH	
ATLANTA 500	50,000	FORD	70,000	PLYMOUTH	
REBEL 400	20,000	FORD	12,000 b/	PLYMOUTH	
WORLD 600	55,000	FORD	45,000 b/	PLYMOUTH	
ROCKINGHAM 500			40,000 b/	PLYMOUTH	
FIRECRACKER 400	39,000	FORD	46,000 b/	DODGE	

a/ Chrysler factory sponsored vehicles did not compete in 1965; however, independent Chrysler entries were numerous.

b/ Attendance was reduced substantially as a result of withdrawal of factory sponsored Fords during SOHC engine dispute with NASCAR.

Stock Car Racing

Stock car racing, as demonstrated by the Ward's Automotive Report cited earlier, remains the best area to substantiate the relationship between factory participation and new car sales. In 1966, nearly six million persons paid to witness more than 2,000 stock car races at 166 tracks in the United States. In 1967, attendance at both USAC and NASCAR stock car racing events will break all previous records if early season experience continues. Although Ford products have an excellent record to date, with four victories in the seven major events of the NASCAR season, competition is severe. With the growing attendance at stock car events and the relatively poorer showing of GM products in stock car racing versus other forms of competition, it is highly probable that GM will seek to improve the Smokey Yunick/Curtis Turner '67 Chevelle which was entered this year.



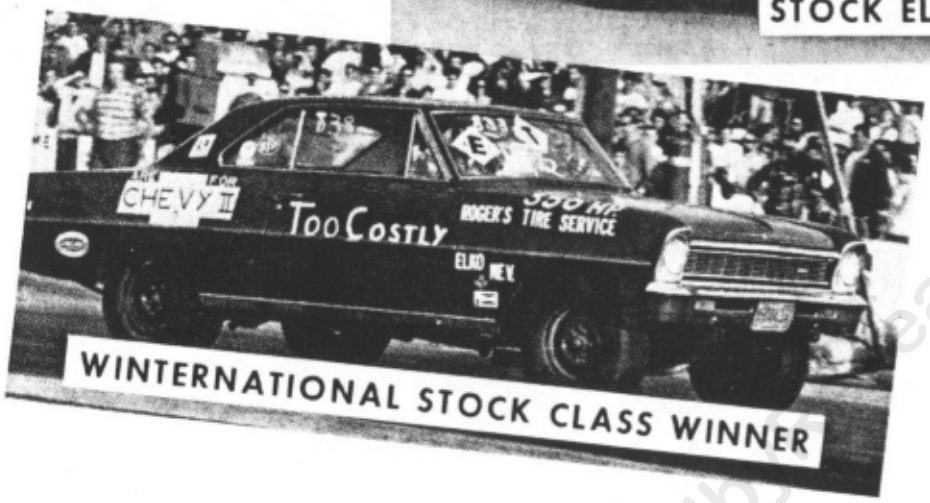
In view of the increasing competitive pressures, it will be necessary to replace the current 427 CID wedge engine which has been the stock car racing "standby" for many successful seasons. The current plan calls for development of the 385 CID series engine for the January, 1969 Riverside race, and continued use of the existing engine until then. Although it would be foolhardy to expect a highly successful season during the final year with the wedge engine, it is expected that we can win enough races to protect the Company's reputation until an aggressive campaign can be resumed with the new engine.

A program similar to 1967 will be employed again in 1968. Vehicle model and body style will depend to some degree upon 1968 rules, but Fairlane fastback models currently appear to be the most likely choice for all entries. As shown in Appendix B, stock car racing expenditures are projected at $2.7 million or $0.2 million less than in 1967.

FORD SOHC DRAGSTER

COMET FUNNY CAR

STOCK ELIMINATOR



WINTERNATIONAL STOCK CLASS WINNER

SUPER STOCK CLASS WINNER

Drag Racing

Of all areas of motorsports, drag racing continues to be the largest in terms of total attendance. Official figures show that almost 15 million persons paid admission at more than 10,000 drag racing events on 750 sanctioned tracks in 1966. But unofficial estimates including attendance at the unsanctioned tracks, raise the total attendance figure to something on the order of 30 million at nearly 5,000 tracks.

As previously indicated, Ford recognition has been achieved primarily in the exotic classes of drag racing competition. However, in events scheduled by the National Hot Rod Association in 1966, 326,000 or 81 percent of all entries were in the "Stock" classes. Unfortunately, over 95 percent of all records in these classes are held by the competition.

As most drag racing spectators are under 25 years of age – a group which will increase in size more than 40 percent by 1975 – it is highly desirable that the regular Ford products present a fully competitive image. Accordingly, a defensive program in drag racing is required for the next several years until regular Ford products in the hands of independents can hold their own. Such a program anticipates direct sponsorship of three outstanding teams whose skill and experience, together with Ford support, may achieve some prominence with 427 Fairlanes in the "Stock" classes.

Additionally, as there are only a few "Stock" classes in which direct support can be productive, it will again be necessary to resort to the use of "show-stealer" tactics by entering three SOHC-powered AA/Fuel Dragsters and four SOHC Factory Experimental Mustangs in the regional and national drag events.

As shown in Appendix C, it is proposed that expenditures of $1.0 million be budgeted for the 1968 drag program, a reduction of $0.1 million over 1967. Similar programs are anticipated beyond 1970, when availability of high performance 335 and 385 series power plants will provide for competitive entries in additional "Stock" classes.

1967 ECONOMY EVENTS
CLASS WINNERS

MOBILE ECONOMY RUN WINNERS

CLASS	VEHICLE	ENGINE CID
A	PLYMOUTH VALIANT	170
B	PLYMOUTH BARRACUDA	273
C	MERCURY CAPRI	200
D	PLYMOUTH BELVEDERE II	273
E	CHEVROLET IMPALA SS	327
F	BUICK LE SABRE 400	340
G	CHRYSLER 300	440

PURE OIL TRIALS WINNERS

CLASS	VEHICLE	ENGINE CID
I	OLDS TORONADO	425
II	OLDS DELMONT 88	425
III	OLDS DELMONT 88	330
IV	FORD CUSTOM	289
V	OLDS CUTLASS SUPREME	330
VI	FORD FAIRLANE	200
VII	RAMBLER AMERICAN	199
VIII	OLDS 4-4-2	400
IX	FORD MUSTANG	289

Economy Events

For the past several years a Company team has managed the preparation and driving of vehicles entered in the Mobil Economy Run and the Pure Oil Trials. Although sponsors of these events will enter Company products if we choose not to participate, experience has shown that use of a factory team is the only means of ensuring that Ford products will be expertly handled. In 1967, one class victory was posted by a Company product in the Mobil Economy Run and three classes were won in the Pure Oil Trials. Although these victories did accomplish the objectives set forth in last year's review (to produce ". . . a single win in the Mobil Economy Run and a couple of class victories in Pure Oil . . "), such limited success does little to enhance the Ford reputation. As a defensive measure, however, the Ford victories help prevent complete domination by a single manufacturer as occurred in 1966 when GM won nearly every class and advertised accordingly, while Ford won nothing.

In 1968, chances for success in the economy events are limited for two reasons:

1. It will be very difficult to "plant" specially built vehicles where they will be selected by the sanctioning groups. In 1967, special "close tolerance" production runs were scheduled at assembly plants supplying vehicles to Los Angeles and Daytona area dealers for the Mobil and Pure events. However, standardization of emission control equipment in 1968 will permit Mobil to easily select vehicles from a larger area extending beyond the California border. The Pure Oil Trials are being moved from Daytona to Riverside, California which also will complicate the vehicle selection procedure.

ANTICIPATED 1968 ECONOMY RUN ENTRIES
INTERMEDIATE/EIGHT CYLINDER CLASS

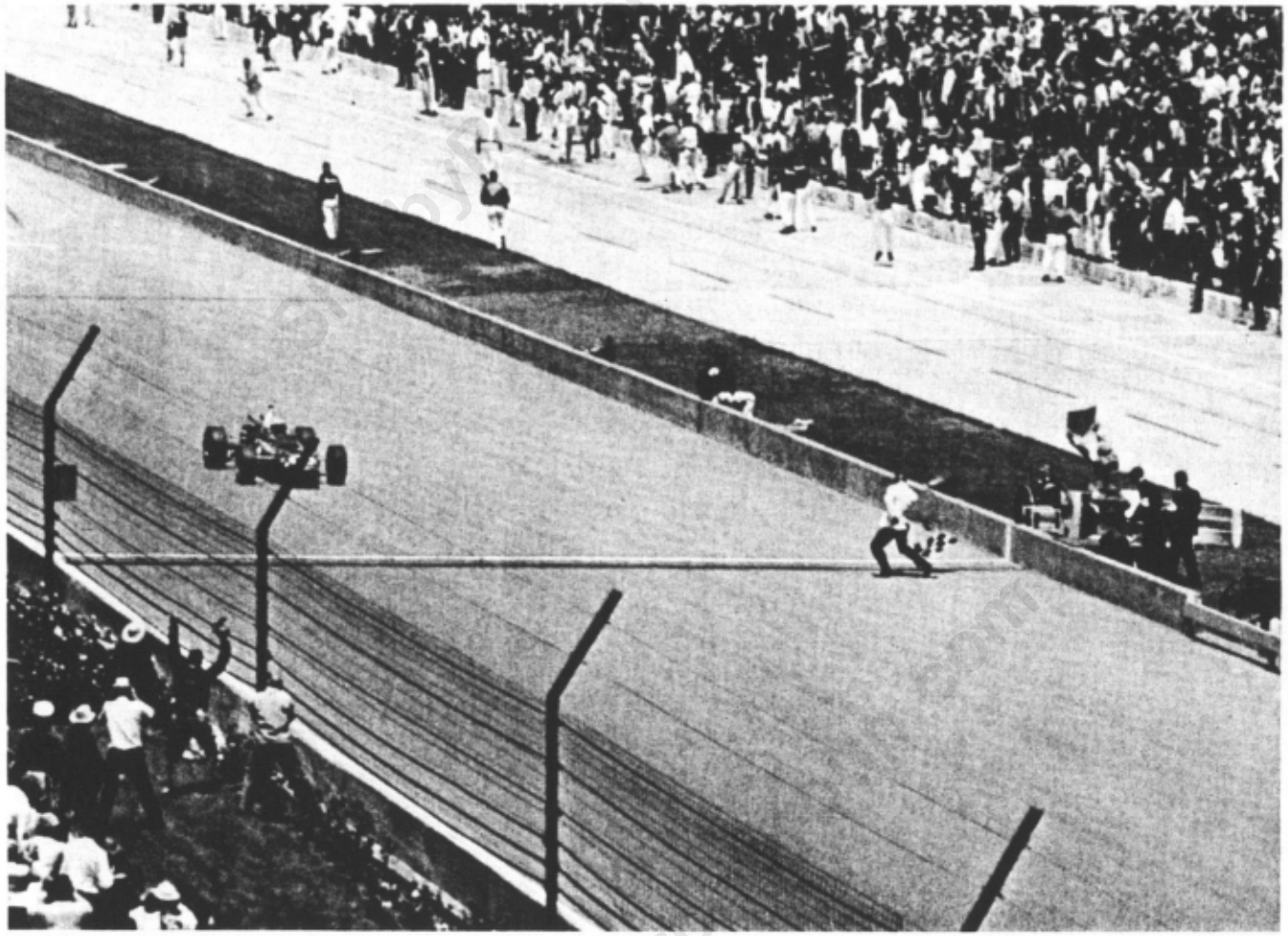
VEHICLE	POWERTRAIN		
	ENGINE DISPLACEMENT & CARBURETION	TIRES	AXLE RATIO
OLDSMOBILE CUTLASS	350-2V	7.75 x 14	2.78
OLDSMOBILE CUTLASS SUPREME	350-4V	7.75 x 14	2.78
PONTIAC TEMPEST	350-2V	7.75 x 14	2.56
PONTIAC TEMPEST	350-4V	7.75 x 14	2.56
PLYMOUTH BELVEDERE & DODGE CORONET	273-2V	7.35 x 14	2.94
DODGE CHARGER	318-2V	7.35 x 14	2.76
CHEVELLE	307-2V	7.35 x 14	3.08
CHEVY II	307-2V	6.95 x 14	2.73
BUICK	340-2V	7.75 x 14	2.78
RAMBLER	290-2V	6.95 x 14	3.15
FAIRLANE & COMET SPORTS COUPE	289-2V	7.35 x 14	2.79
FAIRLANE 500 & CYCLONE	302-2V	7.35 x 14	2.79

TOTAL FORD 4 VEHICLES 2 POWERTRAINS

TOTAL FIELD 15 VEHICLES 12 POWERTRAINS

2. As the classes are normally structured to accommodate vehicles of a given body size with a base six or base eight cylinder engine, it is difficult to compete in some classes because nearly all Ford vehicles have the same base engine. In the 1967 events, for example, the 289-2V was the only eligible engine in six of the 16 Mobil and Pure classes. In 1968, the proliferation of competitive models and powertrains again puts Ford at a substantial disadvantage. For example, as shown above, the Company will have only four entries in a field of 15 in the 1968 intermediate class, and, since the Fairlane and Comet have identical powertrains, Ford will have only two powertrains represented in a field of 12 powertrain entries.

In spite of these problems, a defensive campaign must be waged again in 1968 to prevent the competition from completely dominating the economy events. Accordingly, expenditures of $0.3 million, or $0.1 million more than 1967, are proposed for participation in the 1968 economy events (Appendix D). Participation also is anticipated for the next several years and a close liaison will be maintained with the product development areas to take full advantage of all future changes in the basic product.



Indianapolis (Championship) Racing

In its present state of development, the Ford Indianapolis engine may not be competitive in 1968. As mentioned earlier, the new power plants expected to compete in next year's "Indianapolis 500" and 12-15 other USAC championship events, will be both advanced and diverse. With this prospect in view, the possibility of withdrawing from competition in the championship series has been seriously considered. There are several valid reasons opposing withdrawal, however, including the following:

1. Ford is not really in a position to withdraw, since virtually all of the 60-70 Ford engines running in the Championship Series are independently owned by teams who purchased them through the Ford distribution system established in 1965. These teams have the option to continue competing with the Ford engine irrespective of what the Company does in the future.

2. The Ford engine probably can be made competitive for 1968, and perhaps 1969, with further development of the current engine design.

3. The "Indianapolis 500" continues to be the nation's largest and most widely publicized motorsports event. At Indianapolis this year about 600,000 fans viewed four days of qualifications, 350,000 fans saw the race and another 500,000 saw the closed circuit television broadcast. The Company cannot afford to be represented in this event by less than the best equipment possible—win or lose—especially if the cost of improving the current engine is reasonable.

Accordingly, it is proposed that a program for continuing development of the DOHC Ford engine be pursued for the 1968 Championship season, and that engineering studies be started immediately to determine the best power plant alternatives for 1969 and beyond. Such studies probably would consider further refinements to the existing engine for 1969 and development of a turbine-powered Ford vehicle for 1970. Racing a Ford turbine vehicle in 1970 appears particularly attractive as timing would precede slightly or coincide with introduction of a commercial turbine-powered vehicle.

As shown in Appendix E, Indianapolis program expenditures during the 1968 model year are projected at $0.6 million versus $0.5 million in 1967. The increase of $0.1 million provides for advanced power plant studies for 1969 and beyond.

Autolite Racing Participation

In the parts and accessories business, perhaps the most difficult marketing problem is to create a distinction in the public mind between competitive products which look alike, perform the same function and are equally mystifying in their operation – a spark plug, for example. One of the means through which a distinction may be created is "expert testimony," another is "mental saturation."

The Autolite name, through its association with racing, has been brought into public view by both expert testimony from successful racing personalities and saturation techniques involving prominent and numerous displays of Autolite identification on race vehicles and race facilities. In order to attain a competitive level of product endorsement and visibility in the racing community, the Company has spent approximately $0.2 million annually on endorsement contracts with race teams and race tracks, and on technical assistance offered to teams using Autolite equipment. While the approach appears to be productive, it has been easily duplicated by the major competitor, Champion, and a "Mexican Standoff" now exists in which the advantages to be derived from race program association appear to be evenly divided. Further investment directly into auto racing would probably provide only marginal return and it appears that other avenues of race program association should be explored.

Target: 200 mph Mustang

photography: Eric Rickman

With a $30,000 Ford Indy V8 sitting around, you just have to figure out something for it to do. Why not stuff it into a Mustang and go after some National and International speed records at Bonneville? Maybe this could be the world's fastest Mustang?

BY JOHN THAWLEY ● "How fast do you figure you could make a stock-bodied Mustang go if you put a Ford Indy engine in it? An Indy engine? How big are these rigs? . . . 255 cubes. Well, if you leave the Mustang body stock, you've got a lot of frontal area to push along, but that Indy engine puts out the punch. Don't the Indy cars hit about two hundred in the straights? I don't know how fast you could get one to move a Mustang. Well, let's find out."

And, as is often the case, a bench-racing session turns into a project. This project consumed 34 days, ended with two records, a blown piston, and generated a lot of enthusiasm for another crack at two hundred miles per hour on the salt.

The story is this. The West Coast Division of Autolite turned up with a "spare" Ford DOHC Indy engine. The little bomb was complete and ready to run but had never been in a car. The only catch was that it had served many an hour on a dyno in Dearborn and was therefore far from being a "new" engine. But this is a minor point to consider when you are looking at the engine and someone asks the inevitable question.

This was not what you would call a "bolt-in" engine swap, but since it may never be done again, we'll skip most of the details. The engine was set as far back as possible without having to perform major surgery on the firewall. Motor mounts were fabricated, and the engine was set into place. A Ford four-speed transmission was bolted to the bellhousing which covered a Schiefer clutch. The housing was then wrapped with a Wedge Engineering scattershield. (Remember, this engine is designed to turn in excess of 9000 rpm.) An open driveshaft connected the transmission to a '66 Ford Galaxie rear end running a 3.50 gear. There's not much else to say about the drive line. Shelby American traction bars help the stock Mustang leaf springs. Shocks are Autolite (what else?). Boots for the rear are Firestone Bonnevilles measuring 8.20 x 15.

The front suspension got a little more attention. Wade Car Engineering fabricated a hot rod-type dropped tube axle. Trailing radius rods and coil-wrapped Autolite X-D shocks control movement. Ford Econoline spindles mount the Cragar Super Sport wheels wearing 5.50 x 15 Bonnevilles. In the rush, no one ever got around to a measurement, but it appears the front of the car is about two or three inches lower than a stock Mustang. By now, you've eyeballed the pictures and figured out there are no front brakes. Right, but that Deist chute attached just above the rear bumper wasn't put there for looks. Don't worry about the brakes; it'll stop.

Inside, there are no tricks or frills — just years of race car experience put into practice. A roll cage constructed of tubing surrounds the driving compartment. The front bucket on the passenger side is removed and replaced with two ten-gallon tanks. One is for fuel, the other for oil (this is a dry-sump engine). For added bracing, two tube struts run down the inside of the fastback. For ballast, the original fuel tank was retained and filled with water. The Mustang instrument panel wound up under a bench and was replaced by a flat piece of aluminum holding a tach, oil temperature, water temperature and oil pressure gauges.

The original intent was to keep the body stock, but how do you keep anything stock around guys like Art Chrisman, Chick Hiroshima and (would you believe!) Ak Miller. That's right, this crew plus Danny Eames, the Manager of Product Performance and Evaluation for Autolite, are the ones who put the "34-Day Wonder" together. Back to the body.

The door handles and the windshield wipers came off. Up front, the headlights got punched out and flexible tubing routed from the openings to a pair of air boxes covering the injectors. For ease of servicing, the hood was fitted with NASCAR-type hood pins. That's it. Bumpers, emblems and even a license plate on the rear were retained. Is that stock enough?

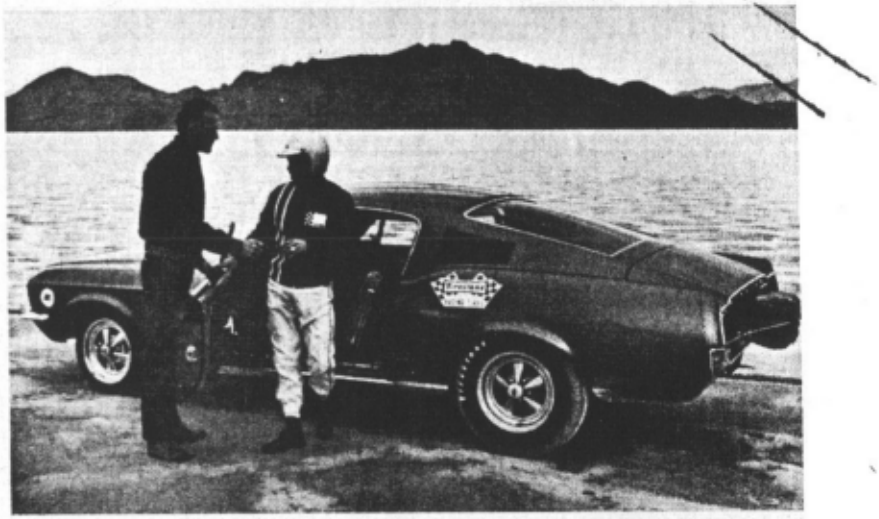
By now, you're probably wondering what took three or four guys in a fully-equipped shop more than a month to drop one engine in one Mustang. Well, for starters try some of these time-consuming chores. The dry sump oiling system needs tubing snaked back to the tank in the driver's compartment and also lets the Lotus/Indy car radiator since part of the radiator actually is an oil cooler. The net result of this one little project is a bushel basket of tubing to be cut, fitted, attached and tied down. On a double overhead cammer that idles between 1500 and 2000 rpm, the oil system had better be right the first time. Rebuilding one of these jobs makes the second time a long time coming. Doug of Doug's Headers fame was handed the job of doing something about the exhaust. The tubing flows back and into the inner fender panels and then downward into short collector tubes. The more tubing you've botched up trying to make headers, the more you appreciate this job.

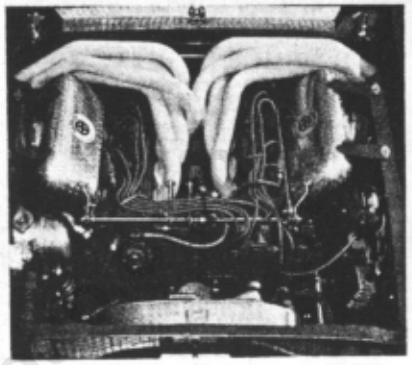
A schematic of the ignition system looks simple enough, but somehow things are never quite the same when you are staring at a double handful of goodies like ballast resistor, transistorized amplifier, magnetic (breakerless) distributor, terminals and a gob of wire. In the process of putting the car together, it was decided the little pony deserved a snappy paint job. Dean Jeffries of customizing fame did the honors with a metallic blue spraying. All of this takes time, and poof, you've worked through a month.

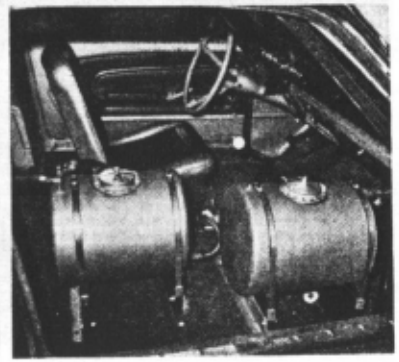
What's the rush? We almost forgot. The USAC timing team will be at the Bonneville salt flats for some other people eyeing various world Land Speed Records. This time of year, you're also playing "footsie" with Old Man Winter. You get the picture.

The car was finished just in the nick of time. An old race car trailer was borrowed from rodder Buzz Lowe, the Mustang loaded, tied down and — "zingee" — off into the night for Bonneville.

On arrival, the car was untrailered, fueled, oil heated and the engine fired for the first time since being in the car. That's right. The car was built and hauled more than a thousand miles out in the middle of nowhere before the engine was turned over. How's that for cutting it thin? The engine ran rough — uneven, too rich and too cold. The temperature on the flats was in the 40's and 50's during daylight hours from start to finish of this session on the salt, and the lack of heat was never entirely overcome. On the first firing, because of the plugs and the fact the car was simply driven around the pit area at slow speed, the oil temperature actually dropped. Factory specs on the engine say minimum oil temperature should be 190° F. That huge oil tank, yards of oil line, super-efficient Lotus radiator for oil and water and no thermostat compounded the cold lube problem. The plugs were changed several times, the oil reheated and things began to sound a little better. The temperature refused to rise, and the car was hauled back to Wendover for the day. *(Continued on page 32)*







Up front a Lotus/Indy radiator replaces the stock Mustang cooler; it doubles as an oil cooler. It proved to be super-efficient. Autolite transistorized ignition hangs from the fender panel. Dang tends the headers. Danny Eames, shown with Andretti, headed up the project. Eames has driven more miles on the salt than any other man. It was Andretti's first trip. Oil and fuel tanks occupied the passenger's space in the Mustang. Note the roll cage.

Early in 1967 an experiment was tried in which a Mustang was equipped with an Indianapolis DOHC engine and run on the Bonneville Salt Flats under the name Autolite 1. With Mario Andretti at the wheel, two land speed records were established and the novel vehicle generated substantial publicity. It became obvious that performance-oriented publicity for the Autolite name was quite easily achieved by making Autolite the primary name, rather than just a passenger, on something more exciting than a spark plug and more tangible than an endorsement.

With this in mind, it is proposed that a program of direct race program participation be continued at slightly reduced levels and that further programs be pursued consistent with the Autolite 1 concept. Several possibilities are being considered to succeed the Autolite 1, including the first world land speed record for an electric car. The record would be set with a specially built vehicle powered by Autolite batteries and starter motors on the Salt Flats at a speed of approximately 100 miles per hour.

Program expenditures for Autolite participation again are projected at $0.2 million (Appendix F) for 1968. Future programs are anticipated but will not be defined until next year pending evaluation of the new ventures in 1968.

While on the subject of Autolite, another facet of the performance market should be examined – high performance parts.

Presently, the Ford parts system is unable to accommodate the low volume, but complicated parts warehousing system required to service wholesale and retail high performance parts orders. As a result, Ford owners desirous of improving the performance of their vehicles grow frustrated in trying to purchase the so-called goodies which are readily available and actively promoted by GM for their vehicles. The solution to this problem can probably be found by analyzing the General Motors system and duplicating it.

At this point, budgetary considerations are too remote for discussion, but conceptual approval is now being requested to permit Autolite-Ford Parts Division to proceed with a study of the GM system.

With this final link in the chain, Ford Motor Company should be able to pursue the youth and performance market to the fullest extent– a pursuit which should yield both short-term returns in conquest sales and long-term returns from setting buying patterns now for millions of young Americans.

Sports Illustrated

THE GLORIOUS DOUBLE

Sports Car (Le Mans/Can-Am) Racing

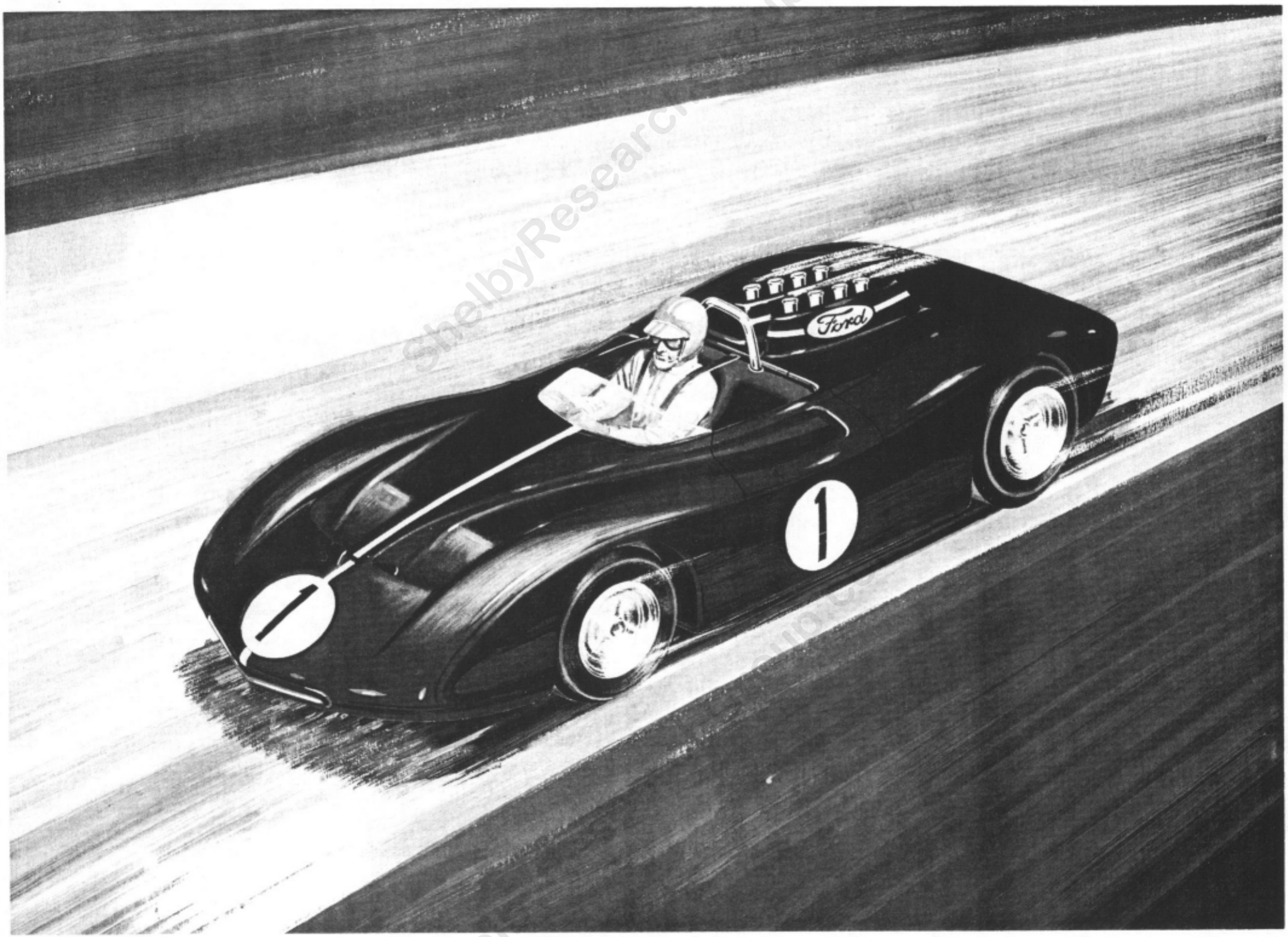
Consistent with previous indications that Ford would compete at Le Mans in 1968, a preliminary program was started several months ago to develop an all-new 427 CID aluminum engine, a new automatic transmission and a substantially modified Mark IV vehicle. Assumptions for the 1968 program originally included participation at all major long distance events on a scale comparable to the past two seasons and also included race testing two open-top models of the Mark IV vehicle in the Canadian-American (Can-Am) Challenge Cup series this fall. Preliminary cost estimates for the 1968 Le Mans program on this basis approach $10 million.

Before this program is continued, three factors which suggest cancellation should be considered:

1. A new rule prohibiting use of the new 427 engine is certain unless U.S. promoters and competitors, including Ford, register strong objections and are able to present a convincing case against the change.

2. The Le Mans program continues to be a very costly venture. It is difficult to justify expenditures of the $7-$10 million magnitude on a single race program, particularly when the entire investment rides on the outcome of a single event in which the probability of success is always relatively low.

3. Although the impact of Ford success at Le Mans has been sizeable, there are several attractive alternatives to spending the large sums required to sustain a program on a scale similar to the past two years.


Ford
1

In line with these three points, plans for 1968 could include:

1. Not returning, or

2. Returning on a maximum effort basis with new vehicles and powertrains. Program costs, as previously discussed, are estimated at $10 million, assuming use of a new 427 CID engine, and probability of winning is projected at 60 percent. Costs could increase if new rules require a three liter engine and probability of winning would decrease greatly.

Considering these alternatives, it is recommended that participation at Le Mans be discontinued. Although nearly $1 million has been spent on the 1968 program to date, this investment can be well utilized if directed toward this fall's Can-Am series of races for modified sports cars. This race series, which is an American scene attraction of growing proportion, is a natural for Ford machines, and development work on the 1968 Le Mans program has yielded two very promising Can-Am type vehicles which are ready to race. Substantial effort still remains on the new aluminum Le Mans engine and it is therefore recommended that the new engine program be discontinued. But, even with modified 1967 powertrains, the new vehicles should be among the strongest contenders in the entire Can-Am field.

The opportunities presented by Can-Am participation are greater than ever this year. The six-race series is expected to outdraw the Indianapolis 500 and, in addition, television networks are negotiating for the rights to broadcast all six events live. Entry by Ford would be particularly attractive since the series is now dominated by Chevrolet, which provides a natural publicity break for Ford. Because of the relatively wide-open rules of this series, it will be viewed by the press as a no-holds-barred, outright confrontation between the engineering capability of General Motors and Ford. And, because of the high caliber audience attracted to this form of motorsports, the winner in this showdown can expect to reap the results in dealership closing booths.

Entering the Can-Am series with two new open-top vehicles and providing Ford engines to some of the most competitive independent entries will cost $1.7 million including the $1 million which has been spent to date (Appendix G). Continuation of the Can-Am program into the future is not being considered at this time; however, final resolution of the Company's future in modified sports car racing should be deferred until after completion of the Can-Am series in November.

NORTH AMERICAN OPERATIONS
SUMMARY OF PROPOSED EXPENDITURES FOR THE MODEL YEAR 1968
(MILLIONS)

PROGRAMS	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (O)/U 1967
SEDAN RACING	$ 0.9	$ 1.0	$ 0.1
STOCK CAR RACING	2.7	2.9	0.2
DRAG RACING	1.0	1.1	0.1
ECONOMY EVENTS	0.3	0.2	(0.1)
INDIANAPOLIS (CHAMPIONSHIP) RACING	0.6	0.5	(0.1)
AUTOLITE RACING PARTICIPATION	0.2	0.2	–
LE MANS	1.0 a/	7.6	6.6
ADMINISTRATIVE	0.9	0.9	–
CONTINGENCY PROVISION/OTHER	0.7	0.2	(0.5)
SUBTOTAL CONTINUING PROGRAMS	$ 8.3	$14.6	$ 6.3
ADVANCED HIGH PERFORMANCE ENGINE DEVELOPMENT	$ 2.1	$ –	$(2.1)
CANADIAN AMERICAN CHALLENGE CUP	0.7	–	(0.7)
TOTAL	$11.1	$14.6	$ 3.5

a/ Represents expenditures on advanced development for the 1968 Le Mans program committed during the 1967 model year.

SUMMARY OF PROPOSED PROGRAMS

In summary, North American Operations proposes the following for the 1968 model year:

1. Continuation of six basic programs including Sedan, Stock Car, and Drag Racing, Economy, Indianapolis and Autolite Racing Participation.

2. Development of engines for Sedan and Stock Car Racing.

3. Participation in the Canadian-American Challenge Series for modified sports cars.

Expenditures for the six basic programs are forecasted at $8.3 million. Excluding Le Mans program expenses in 1968 and prior years, the proposed basic program costs for 1968 of $7.3 million are approximately equal to the 1965-67 average of $7.2 million.

Additionally, expenditures of $ 2.1 million for advanced engine development and $0.7 million for Can-Am sports car racing increase the proposed 1968 model year budget to $11.1 million.

SEDAN RACING
$(000)

FORD DIVISION	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (O)/U 1967
MUSTANG SEDAN RACING CONTRACT WITH SHELBY AMERICAN, INC.	$300	$300	$ –
MUSTANG/COBRA CUSTOMER ASSISTANCE	100	200	100
SUBTOTAL	$400	$500	$ 100
ENGLISH FORD			
CORTINA SEDAN RACING CONTRACT WITH YET UNDETERMINED U.S. RACING TEAM	$ 81	$ 50	$(31)
CORTINA CUSTOMER ASSISTANCE	130	–	(130)
SUBTOTAL	$211	$ 50	$(161)
LINCOLN-MERCURY			
COUGAR SEDAN RACING CONTRACT WITH BUD MOORE, ENGINEERING	$300	$400	$ 100
TOTAL PROGRAM	$911	$950	$ 39

The proposed 1968 sedan racing program of $911,000 is $39,000 less than the program maintained in 1967.

Mustang Program — A contract will be negotiated with Shelby American to enter two Mustang sedan racers in the 1968 Trans-American series. The contract will be based on current estimates of 1967 program expenses including engineering development, build of two race vehicles and one spare ($85,000), spare parts ($55,000) and race operations including vehicle rebuilds between races ($160,000). Because of anticipated success of the Shelby American team, assistance to independent entries will be reduced from $200,000 to $100,000.

English Ford Program — A contract will be negotiated with a U.S. racing team of proven capability to enter two vehicles in the 1968 Trans-American series of races. Build of two vehicles and one spare is estimated at $51,000 and race operations expenses are projected at $30,000. Additionally, a semi-completed vehicle will be loaned to one prominent individual in each of seven SCCA regions; associated construction costs are estimated at $84,000. Prize money for winners of independently entered Cortinas will be offered at an estimated cost of $31,000 and subsidies on parts purchased by individual race teams will be provided at a projected cost of $15,000.

Cougar Program — A contract for a Cougar sedan racing program will be negotiated with Bud Moore Engineering on the same basis as the Mustang program with Shelby American (see above). A reduction of $100,000 from 1967 is anticipated based on reducing entries from three to two.

APPENDIX A

STOCK CAR RACING
$(000)

FORD DIVISION	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (OVER)/UNDER 1967
VEHICLES	$ 320	$ 314	$ (6)
ENGINES	529	579	50
RACE CAR REPAIR & MAINTENANCE	410	407	(3)
RACE EXPENSE	627	692	65
ENGINEERING SUPPORT TESTING AND DISC BRAKE DEVELOPMENT	270	264	(6)
CONTINUING ENGINEERING ON 427 WEDGE	350	150	(200)
SOHC ENGINE – INVENTORY DEVALUATION	–	264	264
WAREHOUSE OPERATIONS	150	150	–
LINCOLN-MERCURY DIVISION	–	104	104
TOTAL PROGRAM	$2,656	$2,924	$ 268

As shown above, the proposed 1968 Stock Car Program provides for expenditures of $2,656,000, a decrease of $268,000.

Vehicles — The proposed program is to build twenty vehicles at a per-unit cost of $16,000. Ten vehicles will be run in NASCAR events and six vehicles will be used on the USAC circuit. Four cars will be built as test units and back-up cars.

Engines — 212 wedge 427 tunnel port engines will be required to support entries in 17 NASCAR and 6 USAC races. Race-prepared engines cost $2,330 each for a total engine piece cost of $494,000. A $30,000 provision for 385 series engine tooling is also included resulting in a total engine cost of $529,000.

Race Car Repair and Maintenance — The repair and maintenance costs to support five NASCAR teams and three USAC teams are forecasted at $410,000.

Race Operations — An estimated $627,000 will be required to provide field management, race team wages, transportation, travel and living expenses and other outside services.

APPENDIX B

Engineering Support

Engineering, development, and testing of the 1968 model race vehicle configurations and the design of a special disc brake for stock car use will require expenditures of approximately $270,000. Continuing engineering on the 427 FE engine through June of 1968 will require expenditures of $350,000. Adaptation of the 385 series high performance engine for introduction into Stock Car racing is planned for January, 1969. (See Engine Program)

SOHC Engine — Inventory Devaluation

The 1967 program anticipated using 203 SOHC engines at a per-unit cost of $3,200. Subsequent NASCAR rules announcement prevented use of SOHC engine and necessitated inventory value adjustment to $1,900 per unit market value to permit retail liquidation of stock. Further inventory adjustments are not anticipated.

Warehouse Operations

The operation of the parts warehouses at Holman and Moody to support racing activities and the sale of unique racing parts will require approximately $150,000.

Lincoln-Mercury Division

The Stock Car Racing Program for Lincoln-Mercury Division will be discontinued for 1968.

APPENDIX B

DRAG RACING PROGRAM
$(000)

	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (OVER)/UNDER 1967
VEHICLES	$ 86	$ 115	$ 29
ENGINES	112	112	–
RACE OPERATION & SPARE PARTS SUPPORT	602	413	189
ENGINEERING & TEST	200	72	(128)
SOHC ENGINE – INVENTORY DEVALUATION	–	242	242
LINCOLN-MERCURY DIVISION PROGRAM	–	100	100
TOTAL PROGRAM	$1,000	$1,054	$ 54

The proposed 1968 Drag Racing Program shown above of $1.0 million is $54,000 less than the estimated 1967 Program.

Vehicles — Two 1967 lightweight fiber glass Mustangs will be updated with new fiber glass to 1968 model vehicles at a cost of $6,000 and eight Stock Class cars will be prepared at a cost of $80,000. A pair of Fairlanes, one with 427-8V and one with 427-4V, will be given to each of three teams. Two Fairlanes will be held as spares.

Engines — Forty SOHC engines at a per-unit cost of $1,900 will be required to support the Exhibition and Dragster cars and thirty 427 wedge engines will be used to support the Stock Class entries. Total engine costs are estimated at $112,000.

Race Operations and Spare Parts Support — Race operations and spare parts support for the Drag Council and qualified independents is estimated at $602,000 or $189,000 over last year. This increase is largely due to added Stock Class support for independents.

Engineering and Test — Improvement of the automatic transmission and drag vehicle testing is forecasted at $200,000.

SOHC Engine — Inventory Devaluation — The 1967 Program included funds to devalue the inventory of the SOHC engines from a per-unit cost of $3,200 to a market value of $1,900. Further inventory adjustments are not anticipated.

Lincoln-Mercury Division — The Drag Racing Program for Lincoln-Mercury Division will be discontinued in 1968.

APPENDIX C

ECONOMY PROGRAM
$(000)

	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (O)/U 1967
MOBIL ECONOMY RUN	$152	$120 a/	$(32)
PURE OIL TRIALS	146	106 b/	(40)
TOTAL PROGRAM	$298 c/	$226	$(72)

a/ Excludes $29,000 funded by Product Engineering to conduct a "simulated" Mobil Run for evaluation purposes.

b/ Excludes $67,000 funded by Product Engineering for a special build program to facilitate selection of optimum performance vehicles.

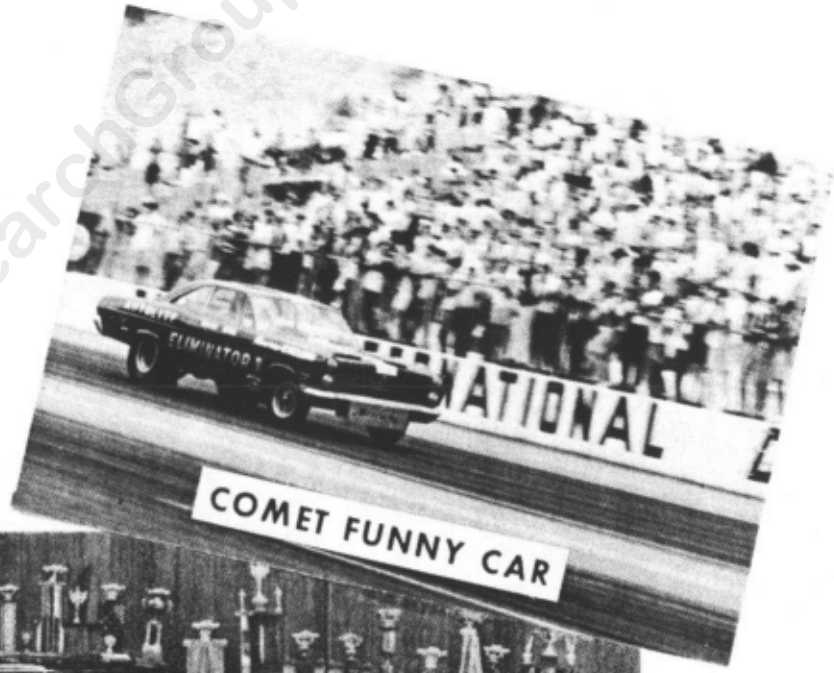
c/ Excludes an $800,000 engineering program budgeted by the Product Engineering Office to provide the following:

- Fuel economy improvement for 200 CID engine – Light Vehicles ($115,000)
- Product evaluation for Mobil and Pure Oil Events ($140,000)
- Advanced fuel economy and exhaust emission development ($525,000)

In view of the increasing competitive pressures, it will be necessary to replace the current 427 CID wedge engine which has been the stock car racing "standby" for many successful seasons. The current plan calls for development of the 385 CID series engine for the January, 1969 Riverside race, and continued use of the existing engine until then. Although it would be foolhardy to expect a highly successful season during the final year with the wedge engine, it is expected that we can win enough races to protect the Company's reputation until an aggressive campaign can be resumed with the new engine.

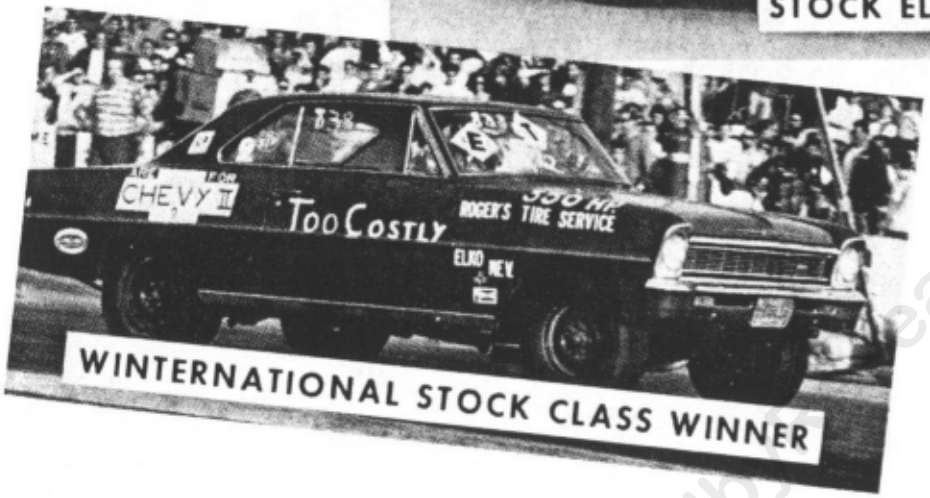
A program similar to 1967 will be employed again in 1968. Vehicle model and body style will depend to some degree upon 1968 rules, but Fairlane fastback models currently appear to be the most likely choice for all entries. As shown in Appendix B, stock car racing expenditures are projected at $2.7 million or $0.2 million less than in 1967.

FORD SOHC DRAGSTER



COMET FUNNY CAR

STOCK ELIMINATOR



WINTERNATIONAL STOCK CLASS WINNER

SUPER STOCK CLASS WINNER

Drag Racing

Of all areas of motorsports, drag racing continues to be the largest in terms of total attendance. Official figures show that almost 15 million persons paid admission at more than 10,000 drag racing events on 750 sanctioned tracks in 1966. But unofficial estimates including attendance at the unsanctioned tracks, raise the total attendance figure to something on the order of 30 million at nearly 5,000 tracks.

As previously indicated, Ford recognition has been achieved primarily in the exotic classes of drag racing competition. However, in events scheduled by the National Hot Rod Association in 1966, 326,000 or 81 percent of all entries were in the "Stock" classes. Unfortunately, over 95 percent of all records in these classes are held by the competition.

As most drag racing spectators are under 25 years of age – a group which will increase in size more than 40 percent by 1975 – it is highly desirable that the regular Ford products present a fully competitive image. Accordingly, a defensive program in drag racing is required for the next several years until regular Ford products in the hands of independents can hold their own. Such a program anticipates direct sponsorship of three outstanding teams whose skill and experience, together with Ford support, may achieve some prominence with 427 Fairlanes in the "Stock" classes.

The proposed Economy Programs for 1968 remain essentially unchanged versus 1967 and are forecasted at $298,000. Current plans are to again conduct a simulated Mobil Economy Run and Pure Oil special build program similar to those undertaken by the Product Engineering Office in 1967. In 1968, however, these programs will be funded entirely by the Special Vehicles Activity and account for increases versus 1967 of $72,000.

APPENDIX D

INDIANAPOLIS PROGRAM

$(000)

	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (O)/U 1967
CONTINUING ENGINE DEVELOPMENT	$270	$292	$ 22
REPRICING AND/OR OBSOLESCENCE	75	11	(64)
ENGINE TOOLING AMORTIZATION	–	108	108
T & C TRANSAXLE ENGINEERING	–	33	33
VEHICLE AND COMPONENT TESTING	100	–	(100)
ADVANCED POWER PLANT STUDIES	100	–	(100)
INDIANAPOLIS RACE OPERATIONS	15	24	9
WARRANTY AND POLICY EXPENSE	80	92	12
TOTAL PROGRAM	$640	$560	$(80)

The proposed 1968 Indianapolis program of $640,000 exceeds the 1967 program by $80,000. As shown above, the increase is primarily attributable to expenses associated with vehicle and component testing, in addition to advanced powerplant studies.

Continuing Engine Development — In order to retain our competitive position at Indianapolis in 1968, it will be necessary to continue with development of the current engine design for maximum power and durability. This may include development of a new crankshaft and connecting rods, new ribbed oil pan for added strength and new cam shafts. A new fuel injection system will also be analyzed for possible application in 1968. Total engine development expense is forecasted at $270,000.

Repricing and/or Obsolescence — As a result of the above mentioned engine modifications, obsolescence costs on parts in stock may occur and are forecasted at $75,000.

Engine Tooling Amortization — 1967 concluded a three year write-off engine tooling costs incurred on the current engine design. New engine tooling will not be capitalized in the future; accordingly, amortization will not continue.

T&C Transaxle Engineering — As current transaxle design levels are considered sufficient for 1968, additional program costs are not anticipated.

APPENDIX E

Vehicle and Component Testing	To ensure that Ford-powered vehicles are competitive in every respect, the most promising entries will be brought to Dearborn for wind tunnel testing including potential use of elevated anti-lift devices. In addition, new vehicle and powertrain components, such as the engine modifications described above will be track tested. Total vehicle and component testing expense is forecasted at $100,000.
Advanced Powerplant Studies	Expenses associated with engineering investigations of turbine engine and/or other potential powerplants for utilization in 1969-1970 are forecasted at $100,000.
Indianapolis Race Operations	Primary logistical support of race team and technical personnel, courtesy vehicle loans, etc. – estimated at $15,000.
Warranty and Policy Expense	Unanticipated component failures generated repair and replacement expenses of $92,000 in 1967. For 1968 a provision of $80,000 has been established for this purpose.

APPENDIX E

AUTOLITE PARTICIPATION

$(000)

PROGRAM SUPPORT	1968 PROPOSED BUDGET	1967 ESTIMATED ACTUAL	1968 (O)/U 1967
STOCK CAR RACING	$ 60	$ 65	$ 5
DRAG RACING	20	25	5
SEDAN AND SPORTS CAR	10	10	–
INDIANAPOLIS	80	95	15
OTHER/MISCELLANEOUS	65 a/	15	(50)
TOTAL	$235	$210	$(25)

a/ Includes $50,000 provision for new programs such as electric car world land speed record assault, Miss Autolite marine racing support or other discretionary programs which arise as a result of current developments within the racing community.

For 1968, Autolite will again provide prize money, technical assistance and parts in support of the major race programs including, primarily, stock car racing and Indianapolis. The number of endorsement contracts will be reduced with a savings of $25,000 versus 1967 by eliminating agreements with race teams which have not performed to expectations in 1967. These savings, together with a $25,000 increase in total budget, will provide a new program provision of $50,000 which will be used to support unique programs featuring the Autolite name. These unique programs remain undefined at this time as attempts will be made to relate each new program to current developments within the racing communities. A budget of $235,000 for Autolite participation is proposed for the 1968 model year.

APPENDIX F

CANADIAN-AMERICAN CHALLENGE CUP SERIES

$(000)

	1968 PROPOSED BUDGET
1968 LE MANS SUNK COST	
VEHICLES	$ 150
DESIGN ENGINEERING, DEVELOPMENT AND CONTINUING ENGINEERING	55
ENGINE DEVELOPMENT	720
TRANSMISSION DEVELOPMENT	100
SUBTOTAL – 1968 LE MANS	$1,025
1968 CAN-AM PROGRAM CONTINUATION	
ENGINES	$ 170
TRANSMISSIONS	150
TEST EXPENSE	20
RACE EXPENSE	120
SPARE PARTS	30
RACE CAR REPAIR AND MAINTENANCE	100
RACE TEAM MANAGEMENT	25
INDEPENDENT RACE TEAM SUPPORT	100
SUBTOTAL – 1968 CAN-AM	$ 715
TOTAL PROGRAM	$1,740

As a substitute for the 1968 Le Mans program, it is proposed that Ford enter the Canadian-American (Can-Am) Challenge Cup series at an estimated cost of $1,740,000 of which $1,025,000 has already been spent on advanced preparations for Le Mans 1968.

1968 LE MANS SUNK COST

Vehicles	Two extensively modified, open-top Mark IV vehicles are in final stages of completion at a per unit cost of $75,000.
Design Engineering	Design engineering involved in modifying the Mark IV design has been completed at a cost of $25,000. Continuing engineering throughout the test period and race series is estimated at $30,000.
Engine Development	Four Indianapolis DOHC engines were purchased and reworked to power Le Mans vehicles during the Can-Am and Le Mans test programs pending final availability of the new 385 aluminum engine. DOHC engine costs were $30,000 per unit; sunk costs on 385 aluminum engine were $600,000 at time of program cancellation.
Transmission Development	Engineering studies on a new automatic transmission were completed with associated costs of $100,000.

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1968 CAN-AM PROGRAM CONTINUATION

Engines — The four DOHC engines discussed above will be used in one of the two Can-Am vehicles. Four 1967 Le Mans-type engines will be assembled at a cost of $25,000 per unit for the second Can-Am vehicle. Additionally, $70,000 is budgeted for engineering required to convert to Le Mans engine from a high durability, optimum power engine, to a maximum power, three-hour durability engine.

Transmissions — Transmission and Chassis Division estimates that assembly of sufficient quantity of automatic transmissions plus continuing engineering support for the Can-Am series will cost $150,000.

Test Expense — Four Romeo Proving Grounds tests are scheduled at an estimated cost of $5,000 per test.

Race Expense — Transportation of equipment and personnel, insurance, drivers' fees, entry fees and all other expense incidental to participating in the six Can-Am events. Costs based on $10,000 per car per event for two cars at six events.

APPENDIX G

Spare Parts	Spare parts, primarily suspension components and wheels are estimated at $15,000 per vehicle for entire series.
Race Car Repair and Maintenance	Cars will be rebuilt after each of first five races to repair damage, replace worn parts and incorporate latest design changes. Expense includes procuring components of revised design resulting from design changes and is estimated at $10,000 per car for each of first five events.
Race Team Management	The services of two experienced pit crews will be obtained from Shelby American and/or Holman & Moody. Crew of six persons per car is planned at average cost per crew member of $350 per event.
Independent Race Team Support	As Ford will have only two vehicles and at least six prominent Ford drivers intend to drive in the Can-Am series, four will be driving Chevrolet-powered vehicles unless an acceptable Ford engine can be made available. It is planned to provide three specially built 351 CID engines to each of the four Ford drivers in independently entered vehicles. Per unit engine cost is $8,000.

APPENDIX G

SHELBY AMERICAN, INC.
SALES AND PROFIT SUMMARY

	FISCAL YEAR ENDING JUNE 30		
UNIT SALES	1965	1966	1967
MUSTANG – GT 350/500	300	2,335	2,684
COBRA	216	189	111
TOTAL	516	2,524	2,795
DOLLAR SALES AND PROFITS (000)			
OPERATING PROFIT/(LOSS)	$ (311)	$ 310	$ (764)
FORD PROFIT GUARANTEE PAYMENT	$ – a/	$ 101 a/	$ 814
NET PROFIT/(LOSS) BEFORE TAXES	$ (311)	$ 411	$ 50
NOTES:			
1. Operating Advances from Ford Motor Company at end of period	$2,265	$2,589	$4,065
2. Reserves for liquidation losses and profit guarantee payments at June 30	468	918	2,000

a/ Profit guarantee payment based on combined 1965 and 1966 fiscal years.

In 1965, Shelby American incurred an operating loss of $311,000, primarily because of launching difficulties which resulted in reduced production levels. These losses were offset in 1966 by operating profits of $310,000. A profit guarantee payment of $101,000 was made in 1966 ($50,000 per year as provided in the profit guarantee agreement with Shelby American).

Preliminary indications are that Shelby American will sustain an operating loss of $764,000 in 1967. Losses again resulted from launching problems and associated declines in production/sales volumes. Accordingly, a profit guarantee payment of $814,000 will be made from the existing reserve of $2 million. In addition, a $400,000 reserve will be established for anticipated parts obsolescence pending completion of a study of production materials and high performance parts inventories.

A reorganization of Shelby American operations and a resourcing of 1968 model production to Smith Plastics in Ionia is currently in process. Preliminary information indicates that important operating and financial benefits should result from these changes. Specific plans and projected financial results will be submitted for approval in the near future.

APPENDIX H