

# MERCURY MAGAZINE

PUBLISHED BY THE FORD MOTOR COMPANY OF CANADA, LIMITED

MAY, 1966

## Welcome to the Club

There's a certain esprit de corps among Ford of Canada car owners. We belong to the same family.

We don't actually honk when we see each other—if we did, our progression down the road would be very noisy indeed and the law would object. We just make a mental note, "there's another one."

### For club members only

As this mutual admiration society exists, we think we should make it official with a publication of our own. Hence this first issue of the "Mercury Magazine" mailed exclusively to Comet, Meteor, Mercury and Lincoln owners.

To be issued several times a year, the "Mercury Magazine" will contain holiday hints, maintenance tips, general and specific automotive information and details of the new models in advance of the general public.

### Inside you'll find—

In this issue, for example, we list for you sources of information for a Canadian holiday. Safety is very much in the news and we tell you what the Ford Motor Company is doing about it. It's always fun to look behind the scenes in the Engineering Department. We learn how they develop that smooth ride with an electro-hydraulic car. Read about the chronological development of car improvements and what's new in wagons and what's offered in options. Tips on getting your car ready for summer driving, and if you are selling your car, how to get the most for it. And there's a special section for the ladies too.

We hope you find reading the "Mercury Magazine" useful and enjoyable; your comments and suggestions would always be welcomed.

The Editor  
PO Box 2700  
Terminal A Toronto



THIS MERCURY PARKLANE PUTS THE COMFORT INTO ANY TRAVEL VACATION

## This Year See Canada by Car

This year thousands of Canadian families are planning a motoring vacation. There's plenty to do and see in Canada—cities, the great outdoors, historic sites, mountains, lakes, you name it. There are so many vacation choices, in fact, that it's hard to know where to begin in making your plans.

You'll enjoy your trip more if you plan in advance, and here's a good way to start. Pick the region you want to see and write to the appropriate tourist bureau for information and literature. If you state your specific interests, you will get detailed information.

### Here's where to write:

Newfoundland.....	Tourist Development Office, St. John's, Nfld.
Prince Edward Island.....	Travel Bureau, Charlottetown, P.E.I.
Nova Scotia.....	Travel Bureau, Halifax, N.S.
New Brunswick.....	Travel Bureau, Fredericton, N.B.
Quebec.....	Dept. of Tourism, Fish & Game, Quebec, P.Q.
Ontario.....	Dept. of Tourism & Information, Toronto, Ont.
Manitoba.....	Tourist Development Branch, Winnipeg, Man.
Saskatchewan.....	Travel Bureau, Regina, Sask.
Alberta.....	Government Travel Bureau, Edmonton, Alta.
British Columbia.....	Government Travel Bureau, Victoria, B.C.
Yukon Territory.....	Dept. of Travel & Publicity, Whitehorse, Y.T.
Northwest Territories.....	Northwest Territories Tourist Office, 150 Kent St., Ottawa, Ont.
Nat'l. Parks of Canada.....	Canadian Gov't. Travel Bureau, Ottawa, Ont.



LEFT, FORD TECHNICIAN PREPARES DUMMY FOR TEST. RIGHT, VEHICLE IS DROPPED THIRTY FEET, SIMULATING CRASH

## Thinking About Safety? So is the Ford Motor Company

Safety is built into automobiles in two principal ways: by making the total vehicle as reliable as possible, and by incorporating features which lessen the chance of injury if accidents occur.

The ability of the driver to avoid accidents in critical situations has been improved over the years by refinements in steering, brake and suspension systems and through engine designs providing increased torque in the passing range.

Ford Motor Company pioneered in 1955 the industry's first "safety package," which included safety door latches; seat belts; deeply dished, energy-absorbing safety steering wheel; seat anchors; padding for instrument panels and visors, and a shatter-resistant rearview mirror.

### Improvements year after year

Since then, Ford safety engineers have improved these features time and again. For example, Ford-built vehicles now

have a fourth generation of safety door latches, with more than double the resistance to opening under strain. Energy-absorbing characteristics of Ford's instrument panel padding also has been doubled since 1955.

Many safety features are newly installed as standard equipment in Ford Motor Company's 1966 automobiles. They are padded instrument panel, padded sun visors, outside rearview mirror, four-way emergency flasher, front and rear-seat belts, back-up lights and windshield washers. An improved windshield with twice the safety effectiveness of previous windshields also is installed in all 1966 Ford-built cars.

### Safety options

In addition, the company continues to offer a broad range of safety options and accessories, such as door-ajar warning lights and seat-belt reminder lights.

To aid in developing designs for maxi-

mum vehicle safety, Ford engineers have conducted hundreds of car-to-car and car-to-barrier crash tests, as well as roll-over tests and experiments in which cars are dropped "nose-down" by a crane.

### Ford first with safety centre

Early in 1965, Ford announced plans for the industry's first Automotive Safety Centre, where the most advanced equipment tests the safety aspects of newly developed vehicles and evaluates vehicle safety information from both inside and outside the company.

Design of safety features and other elements of the vehicle to reduce injuries is evolutionary, not revolutionary. One of the biggest opportunities to reduce injuries is in the area of front-end collapse of the vehicle. Engineers try to lower the collapse rate or extend the time through ingenious design—resulting in greater energy absorption of the car components. As these improvements are developed they are incorporated into new models, year by year.

### It's up to the driver, too

All of these factors relate to the vehicle itself, but there are many other factors in highway safety which require improvement through the efforts of individuals and organizations. These include driver training and licensing requirements, road design and traffic control, law enforcement and public education.

To further its support of the driver education program in Canadian high schools, the Ford Motor Company of Canada has increased its payments to dealers who provide schools with courtesy cars.

### Dealer co-operation with schools

"This move will make it easier for our 800 dealers across Canada to provide cars free of charge for the many driver education programs now underway at Canadian secondary schools," said John B. Naughton, Vice-President—Sales and Marketing.

"These driver education programs are turning out some of the best-prepared drivers on our Canadian roads and anything we can do to assist the programs will go a long way to making our highways safer places on which to drive."

Now, 254 Canadian high schools operate driver education courses. The first program of this type began at the Kitchener-Waterloo (Ontario) Collegiate in 1948. During 1965, more than 9,200 students were enrolled in courses across Canada, which cover 25 hours of classroom study and 6 to 8 hours of behind-the-wheel instruction. Besides its financial assistance to the program Ford of Canada encourages its dealers to seek out high schools without driver education courses and offer them the free use of cars for instruction.



THIS FULLY RESTORED 1917 MODEL T FORD TOURER STILL RIDES CANADIAN HIGHWAYS



THIS 1966 METEOR MONTCALM CONVERTIBLE IS A FAR CRY FROM THE 1917 MODEL T TOURER SHOWN AT LEFT

## They Don't Build Them the Way They Used to— They Build Them Better Now!

You still meet the hard-core "good old days" type of motorist, who maintains that they don't build cars the way they used to.

This may be an interesting conversational gambit, but it can't be supported by fact. Remember when a large percentage of the motoring public drove in summer only, putting their car up on blocks throughout the winter. Mounted on blocks, a car should last forever.

Today's cars travel more miles in all seasons, at higher speeds, quietly, with a minimum of driver effort, and with a maximum of comfort and safety.

### Motorized Buggies

Let's just examine the chronology of automotive engineering: Early cars had wooden bodies and strongly resembled buggies. They rarely had tops, doors or windshields, usually were steered by levers, and had about the same degree of roadability as the buggy.

By 1920, left-hand drive made for safer passing of oncoming vehicles, electric lights replaced oil and gas equipment, and driver controls were made more accessible.

### What about those 4-wheel brakes?

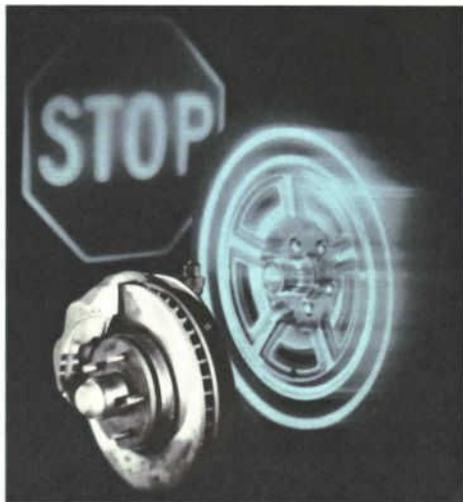
During the 1920's laminated glass was installed (Ford was the first to make safety windshields standard), automatic windshield wipers were introduced, and heaters and defrosters provided greater comfort and visibility in cold weather. Four-wheel brakes were designed, followed by hydraulic brakes. All metal wheels increased strength and durability, and shock absorbers improved riding

quality and steering control. Special ignition wiring cut car radio static.

During the 1930's, all metal bodies were introduced, and low pressure tires reduced road shock and cut down the incidence of blowouts. Foot-operated switches dimmed new sealed-beam headlights, and instrument panels were equipped with indirect lighting. Automatic electrical gauging machines insured precision parts. In 1931, Ford



STEREOSONIC DE-LUXE TAPE MUSIC SYSTEMS



POWER ASSISTED, FADE RESISTANT DISC BRAKES

made the first V-8 engine the average motorist could afford.

### A shift to Automatic

During the 1940's, the industry brought out automatic windshield washers, directional turn signals and automatic transmissions.

The 1950's produced power steering and power brakes, tubeless puncture-resistant tires, better headlights, and considerable improvement in visibility. Ball-joint front suspensions made for a smoother ride.

The sixties brought car-free maintenance—30,000 miles between major lubrications—6,000 miles between oil changes. Engineering excellence had progressed to the stage that the motorist could be assured of a 24,000 mile, or two-year warranty.

### This is total performance

To Ford, total performance means power to stop as well as to go. It means dependable, smooth acceleration that permits vehicles to merge quickly and easily with expressway traffic. It means quick, precise, steering, road-holding ability, unflinching traction, resistance to skids, good visibility, stable cornering, controls that are easy to reach and to operate. It means a comfortable, quiet, vibration-free ride, well-designed seats and instruments that are easy to read. Total performance, in short, is all the things that enable a driver to make his car do exactly what he wants it to do with minimum strain, fatigue and distraction.

Let's face it—they don't build cars the way they used to. They build them infinitely better, now.

# HOW A CAR IS ASSEMBLED

The miracle of mass production began in the automotive industry more than 50 years ago, when Henry Ford conceived the idea of moving a car chassis through the plant and adding parts, instead of building up one car at a time in a stationary location.

Assembling the more than 15,000 parts that go into a modern automobile is like putting together a giant mechanical jigsaw puzzle. Each car or truck is built to an individual order. A central scheduling unit programs each car through the four main assembly areas—body, paint, trim and chassis. Through precisely coordinated organization and split-second timing, parts and sub-assemblies meet on the final line at just the right moment to make each car exactly as ordered.

The flow of materials, the gradual build-up of body and chassis, and the final dressing and adjustments are depicted on this page. Each of Ford Motor Company's automobile assembly plants differ slightly in arrangement; and current product differences call for some variations in assembly technique and sequence.

**STOCKS AND SUPPLIES**—By rail and truck, parts and materials from hundreds of suppliers arrive at the unloading dock. Ford uses special rail cars and shipping containers to prevent parts damage en route to the plant. Stamped steel body parts, frames, engines, transmissions and thousands of other pieces are fed from here into the hungry assembly system. Typically, an assembly plant maintains enough stock for about five days' production.

**ENGINE "DECKING"**—The chassis, assembled on this line, consists of the frame, springs, wheels with tires and brakes, fuel tank, bumpers, exhaust system and the power train. (In uniframe construction, the welded underbody serves as the frame.) Engines are built up, inspected and "hot-tested" at another Ford plant, but certain "dress-up" operations—adding transmission, fuel pump, generator and fan—are performed at the assembly plant. As the engine is lowered effortlessly into place with a power hoist, engineers say it is being "decked."

**FRAMING FIXTURE**—The first step in car assembly is to build the body. In separate but simultaneous operations, floor and side panels are assembled in huge presses and body side fixtures. The body then takes shape in holding fixtures called "bucks" or "gates", which correctly mate the parts for welding. Braces and brackets are spot-welded to give added strength and to serve as fastening supports for other components.

**METAL FINISHING**—Certain joints in the body metal are filled with solder which is ground down to blend with the steel, forming smooth surfaces. Car doors are fitted with the help of a precise holding fixture and the deck lid is added. All metal surfaces are finished to remove imperfections, and the body thoroughly cleaned before going to paint.

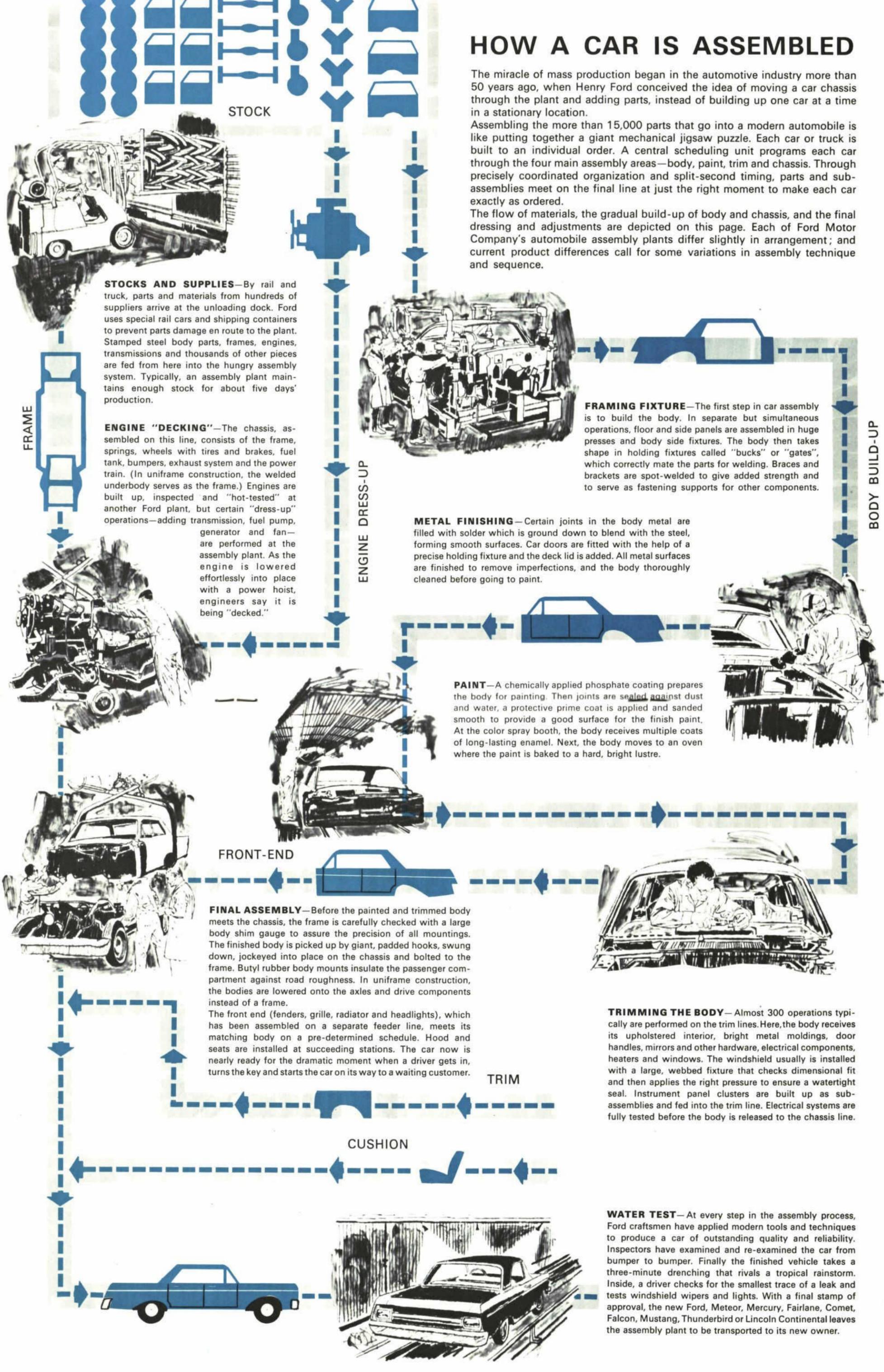
**PAINT**—A chemically applied phosphate coating prepares the body for painting. Then joints are sealed against dust and water, a protective prime coat is applied and sanded smooth to provide a good surface for the finish paint. At the color spray booth, the body receives multiple coats of long-lasting enamel. Next, the body moves to an oven where the paint is baked to a hard, bright lustre.

**FINAL ASSEMBLY**—Before the painted and trimmed body meets the chassis, the frame is carefully checked with a large body shim gauge to assure the precision of all mountings. The finished body is picked up by giant, padded hooks, swung down, jockeyed into place on the chassis and bolted to the frame. Butyl rubber body mounts insulate the passenger compartment against road roughness. In uniframe construction, the bodies are lowered onto the axles and drive components instead of a frame.

The front end (fenders, grille, radiator and headlights), which has been assembled on a separate feeder line, meets its matching body on a pre-determined schedule. Hood and seats are installed at succeeding stations. The car now is nearly ready for the dramatic moment when a driver gets in, turns the key and starts the car on its way to a waiting customer.

**TRIMMING THE BODY**—Almost 300 operations typically are performed on the trim lines. Here, the body receives its upholstered interior, bright metal moldings, door handles, mirrors and other hardware, electrical components, heaters and windows. The windshield usually is installed with a large, webbed fixture that checks dimensional fit and then applies the right pressure to ensure a watertight seal. Instrument panel clusters are built up as sub-assemblies and fed into the trim line. Electrical systems are fully tested before the body is released to the chassis line.

**WATER TEST**—At every step in the assembly process, Ford craftsmen have applied modern tools and techniques to produce a car of outstanding quality and reliability. Inspectors have examined and re-examined the car from bumper to bumper. Finally the finished vehicle takes a three-minute drenching that rivals a tropical rainstorm. Inside, a driver checks for the smallest trace of a leak and tests windshield wipers and lights. With a final stamp of approval, the new Ford, Meteor, Mercury, Fairlane, Comet, Falcon, Mustang, Thunderbird or Lincoln Continental leaves the assembly plant to be transported to its new owner.



FRAME

STOCK

ENGINE DRESS-UP

BODY BUILD-UP

FRONT-END

TRIM

CUSHION



A FORD PSYCHOLOGIST OPERATES THE ELECTRIC CONSOLE IN REAR SEAT OF FORD TEST CAR

## What's New in Engineering? The Electro-Hydraulic Car

How does the designer match a new car to the driver's psychological needs and to his physical limitations?

This is the task of Human Factors, one of the most challenging areas within Ford Motor Company automotive safety research. Ford Human Factors specialists, most of them psychologists, are probing deeply into people's physical and mental makeup—at least into the areas that appear to be significantly affected by vehicle design or involved in vehicle operation.

A major problem in Human Factors research is to devise reliable ways of measuring reactions of test drivers to engineering aspects of a vehicle in terms meaningful to the design engineer. In their pursuit of this objective, Ford psychologists and engineers are working together to produce a new generation of complex testing devices in the automotive industry.

### Back seat driver

One such device is the Ford Electro-Hydraulic Car. Except for an elaborate control console filling half the rear-seat area, the Ford E-H Car appears to be a standard Ford Product. If a car thief were

to steal this vehicle and not look at the rear compartment, he could drive it away and never notice anything unusual—unless a Human Factors specialist happened to be at the control console in the rear seat.

Then the thief might begin to notice something strange about the car: it would never steer the same way for very long. One instant it would steer like a large, heavy car, the next like a tiny sports car, and then like a loaded truck. To add to his troubles, the thief would find the wheel difficult to budge one instant, and hanging loosely in his hands the next. Then, to his horror, he would discover that, when he turned the steering wheel left, the front car wheels would turn right! At this point, it seems likely the thief could be persuaded to return the car, and perhaps try some other line of work. If he weren't yet ready to admit defeat, the man in the rear seat could steer the car wherever he wished by turning a small knob on the control board.

### Safe and easy steering

The Ford Electro-Hydraulic Car represents a sizable investment toward the

development of more maneuverable passenger cars. Ford safety research people feel that increased maneuverability—if it can be provided with safe steering ratios and effort levels—should give drivers a wider margin for avoiding certain accidents.

In the E-H Car, unique in the industry, the normal mechanical linkage between steering wheel and front wheels has been replaced by two electro-hydraulic servo valves. The electric side of the valves, which is controlled from the rear seat, tells the hydraulic side of the valves what to do. One valve controls steering ratios, and hence, the front wheels; the other controls steering wheel effort or torque.

In ordinary steering systems, steering effort is an integral function of steering ratio—the lower the ratio the higher the effort. In the E-H Car, however, these two factors are independent and can be artificially combined as the console operator desires. Since the interrupted mechanical linkage has eliminated all normal "road feel", a hydraulic motor artificially replaces the road feel, if desired.

### Pick any ratio

Simply by turning knobs, the operator can feed a wide range of steering ratios into the system: from 1:1 to 500:1. (The average car's steering ratio is about 23:1.) The operator can make the ratio fixed, or variable to any degree he wishes. Steering wheel effort can be varied from a few ounces to 30 pounds—the equivalent of a loaded light truck.

"Control of these steering factors," explained Dr. John Versace, Manager of Ford's Human Factors Research Department, "in effect enables us to build and rebuild one steering system after another within seconds, even while the car is moving.

"With the Electro-Hydraulic Car, we can try out an endless number of steering system variations very quickly and on many test drivers. Recording equipment in the car shows how the drivers are reacting to each system.

### Computer figures it out

"When we arrive at what most drivers feel is a preferred system," Dr. Versace continued, "we use computers to find out what kind of car—that is, caster, camber, vehicle weight distribution, tire pressures, steering gear box ratio, and so on—will give us this preferred system.

"In this way we are able to circumvent all those painstaking mechanical changes in steering and suspension we once went through looking for the ideal system. We still consider the E-H Car in the experimental stage, but we believe it will be feeding practical information to our product design engineers very soon."

# It's the Girls Who Get Ready and Set to Go

On a family trip, it's usually Dad who does the driving, but it's the gals who get ready to go. They're the planners, packers, provisioners and co-pilots.

So here are a few memos for motoring mothers to help make their job easier:

## MILES



Two hundred miles is a comfortable distance to travel in one day, allowing plenty of time for sight-seeing, a leisurely lunch, and finding sleeping accommodations before dark.

## FOOD



Picnics along the way can reduce food costs, and they're a necessity if you travel in areas where restaurants are few and far between.

## CLOTHES



The first principle of experienced travelers is travel light. One large wardrobe suitcase and one small overnight bag are enough for the average vacation trip.

## CHECK



You won't forget anything important if you use this check-list:

### WOMEN

Sleep wear	Dresses
Shoes and slippers	Skirts
Stockings	Slacks
Gloves	Shorts
Scarfs	Sweaters
Underwear	Jewellery
Blouses	Cosmetics

### MEN

Pyjamas	Socks
Slippers	Sports Wear
Shaving equipment	Dress shirts
Underwear	Handkerchiefs
	Ties

### CHILDREN

Suitable clothing    Games and toys

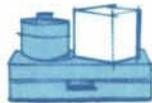
## GENERAL

Soap	Playing cards
Toothbrushes and paste	Stationery and pens
Wash cloths and towels	Raincoat
Facial tissues	Insect repellent
Combs and hair brushes	Sunburn lotion
Safety pins and sewing kits	Picnic accessories
Hair pins	Portable radio
Scissors	Camera and film
Nail clippers and file	Life preservers
Alarm clock	Golf clubs and tennis rackets
Aspirin	Sun glasses
Books and magazines	Flashlight
Travel iron	First aid kit
	Car pillows
	Blankets
	Thermos bottle

## FOR CAMPING

Tent	Cooking and eating utensils
Ground Sheet	Grill
Canvas cots or Sleeping Bags	Hunting and/or fishing licenses
Camp stools	
Blankets	

## PACKING



And now, some packing tips—

For ladies—shoes should be placed in shoe bags so they don't get other clothes dirty. If you don't have shoe bags, try using your husband's old socks.

Laying tissue paper into folds of garments is important in avoiding wrinkles and creases.

For spillables or breakables like perfume or cold cream, use pliofilm bags.

Sweaters take up less space and get less wrinkles if they're rolled instead of folded.

For men—put heavy items, such as shoes and shaving kit in bottom of bag. Place shoes in old socks. Save space by packing socks in shoes.

To pack suit, or slacks and sport coat, lay trousers out flat and place buttoned-up coat on top, then fold the trousers legs over. Fold the bottom of the coat up and over the trousers. Then place the compactly folded suit flat in the back to form second layer.

Put shirts face to face, collars at opposite ends. Protect collars by filling necks with handkerchiefs. Fold ties over centre pages of magazine.

O.K. Dad, we're ready now. Let's go!

## How to get the most on your trade-in

Some people think there's a fixed value for every used car, depending on the model and the year, and you'll get that price no matter what the condition of your trade-in. Not so.

Remember, the dealer has to re-sell your car. The better the condition of your car, the easier he can sell it, and the more you make on the trade.

Most car dealers judge trade-in prices according to three categories: clean, average, and well used. A little effort may move your trade-in from a lower to a higher category . . . and make you hundreds of dollars.

If you're thinking of having your car appraised, it might help to look over these easy ways to boost used car value.

It's smart psychology to give the interior a good going-over. Empty ash trays . . . whisk upholstery clean . . . sweep the floors . . . dust and clean the instrument panel and rear window package tray. If floor mats are in bad repair, or seat covers are torn and ragged, discard them. You'll expose areas that now look reasonably unworn.

Give your car a good washing. Shine up bumper and chrome strips with a good polish. An investment of \$10 or so for small repairs could add as much as a hundred dollars to your car's value.

Timing is an important factor. If you wait until your car is ready to expire, your trade-in allowance will show it. In fact, research shows that by trading every 2½ years, you're often spared high repair bills. And you're always driving a late-model car, covered by warranty up to two years.

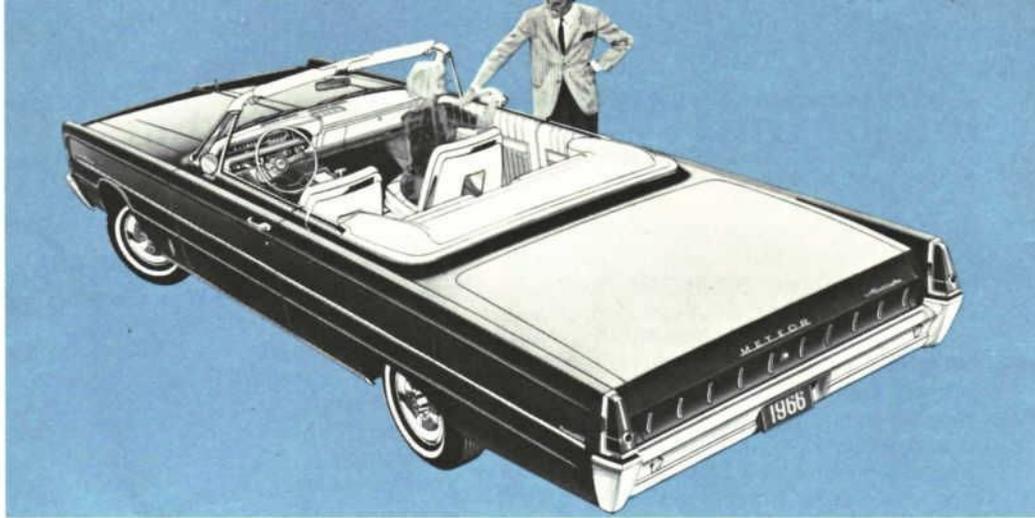
Best rule of all, put yourself in your dealer's shoes. Make your trade-in look like something he'd be proud to display on his used car lot.

You'll drive a better bargain home from his showroom.

# Spring Sports Specials

It feels like there's spring in the air when you drive one of the Mercury Spring Sports Specials! That's what a lot of people are saying about the impressive array of cars down at the Meteor-Mercury Dealerships right now. The Spring Sports Specials, in the complete colour range and with a choice of every option you could want include such impressive models as the Mercury Hardtops, the Comet Cyclones, the Meteor S33 Convertibles and the Meteor Wagons (the ones with the Magic Door-gate that swings open like a door, swings down like a tailgate).

There's no time like the spring to see the Mercury Spring Sports Specials: they're blossoming down at your Meteor-Mercury Dealer now, come on down and see them.



METEOR MONTCALM S33 CONVERTIBLE



MERCURY PARKLANE 2-DOOR HARDTOP

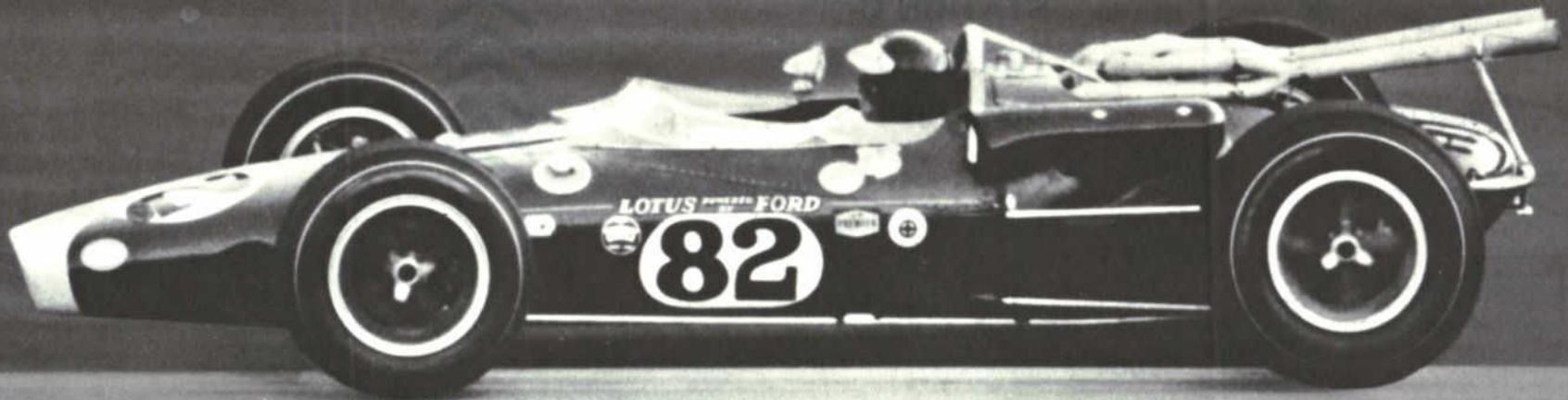


METEOR MONTCALM 4-DOOR WAGON



COMET 2-DOOR CYCLONE GT

# BUILD YOUR OWN BEAUTIFULLY DETAILED SCALE MODEL OF THIS GREAT FORD LOTUS INDIANAPOLIS WINNER...



*This true to life 1/25 scale model is a replica of the famous Ford Lotus racer. Driven by Jim Clarke, this power packed machine, with its Ford specially designed dual overhead cam engine, scorched over the "Indianapolis 500" track to win the 1965 running of this world famous event. Many fascinating hours will be spent in the building of, and enjoying this authentic fully detailed model.*

## Here's all you have to do:

- 1) Complete the area requesting detail of your name and address etc.
- 2) Take this special order form along to your local Mercury dealer, and have him countersign where indicated.
- 3) Fold up the order into its mailing form. Include your cheque or money order for \$1.50. Seal and mail. No stamp required.

PLEASE ALLOW TEN DAYS FOR DELIVERY.

Please ship me.....(quantity limited to two per order) of your Ford Lotus model car kits. I have endorsed cheque/money order for \$..... which includes appropriate provincial sales tax.

Name.....

Address.....

City..... Prov.....

Dealer Name.....

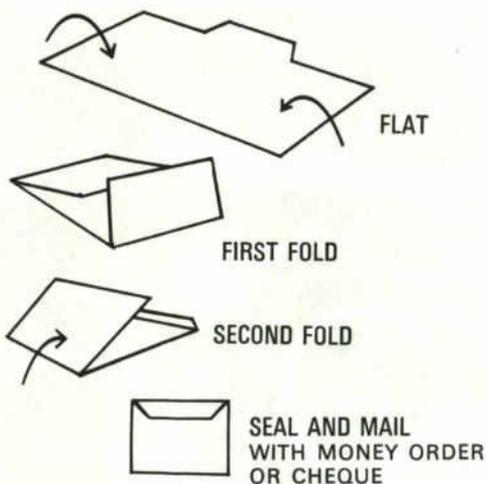
Dealer Signature.....

All orders for the Ford Lotus model car kit must be countersigned by a Mercury dealer representative available at any Mercury showroom. Unsigned orders or orders without sufficient payment cannot be filled.

## Mercury Dealer Representative

Upon request please sign this special order form for the Ford Lotus model kit. Be sure to include with your own dealership name.

## HOW TO FOLD THIS SPECIAL MAIL ORDER FORM



### BUSINESS REPLY CARD

No Postage Stamp Necessary if Mailed in Canada

6¢ POSTAGE WILL BE PAID BY  
MERCURY MAGAZINE FORD LOTUS OFFER

BOX 370  
STATION U  
TORONTO  
ONTARIO



IF UNDELIVERED RETURN TO:



P.O. Box 2700, Terminal A,  
Toronto, Ontario



Zephir Buteau  
St Lambert  
Levis Co Que  
Mer3

