

# 25 IMPORTANT ADVANTAGES THAT YOU GET WITH HYDRA-MATIC DRIVE

- |   |  |
|---|--|
| 1. No Gears to Shift                            | 15. Impossible to Stall Engine Under Load                  |
| 2. No Clutch to Press                           | 16. Low Engine Speed in Fourth Gear Cuts Down Vibration    |
| 3. No Clutch Pedal on Floor                     | 17. No Slackening of Speed Between Shifts                  |
| 4. No Clutch Parts to Wear Out                  | 18. Drive is Always in Gear—No Free Wheeling               |
| 5. No Gear Teeth to Chip                        | 19. Saves Half the Driving Effort                          |
| 6. Faster Getaway                               | 20. Eliminates Jerky Starts                                |
| 7. Quicker Pick-up for Passing                  | 21. Damps Out Torque Reaction, Vibration and Engine Shocks |
| 8. Smoother and Quieter Operation               | 22. Decelerates with Pneumatic Ease                        |
| 9. Safer Car Control                            | 23. Slows Down Propeller Shaft Speeds                      |
| 10. Better Gas Mileage                          | 24. Gives Better Traction on Slippery Surfaces             |
| 11. Reduced Oil Consumption                     | 25. Makes Anyone a Better Driver                           |
| 12. Less Wear on Motor Parts                    |  |
| 13. Impossible to Clash Gears in Forward Motion |  |
| 14. Improved Hill Climbing Ability              |  |

# HYDRA-MATIC

# DRIVE

TUSCORA MOTOR CO.  
AUTOMOBILE SALES AND SERVICE



*Designed, Developed  
and Introduced by*  
**OLDSMOBILE**

**STYLED TO LEAD**  
**BUILT TO LAST**



# TO START YOUR CAR

## YOU USED TO

- |                             |                             |                              |
|-----------------------------|-----------------------------|------------------------------|
| 1. Step on the starter      | 6. Release the accelerator  | 11. Release the accelerator  |
| 2. Depress the clutch pedal | 7. Depress the clutch pedal | 12. Depress the clutch pedal |
| 3. Shift into low           | 8. Shift into second        | 13. Shift into high          |
| 4. Release the clutch pedal | 9. Release the clutch pedal | 14. Release the clutch pedal |
| 5. Step on the accelerator  | 10. Step on the accelerator | 15. Step on the accelerator  |

**TWELVE IRRITATING IN-BETWEEN STEPS HAVE BEEN ELIMINATED**

## NOW YOU . . .

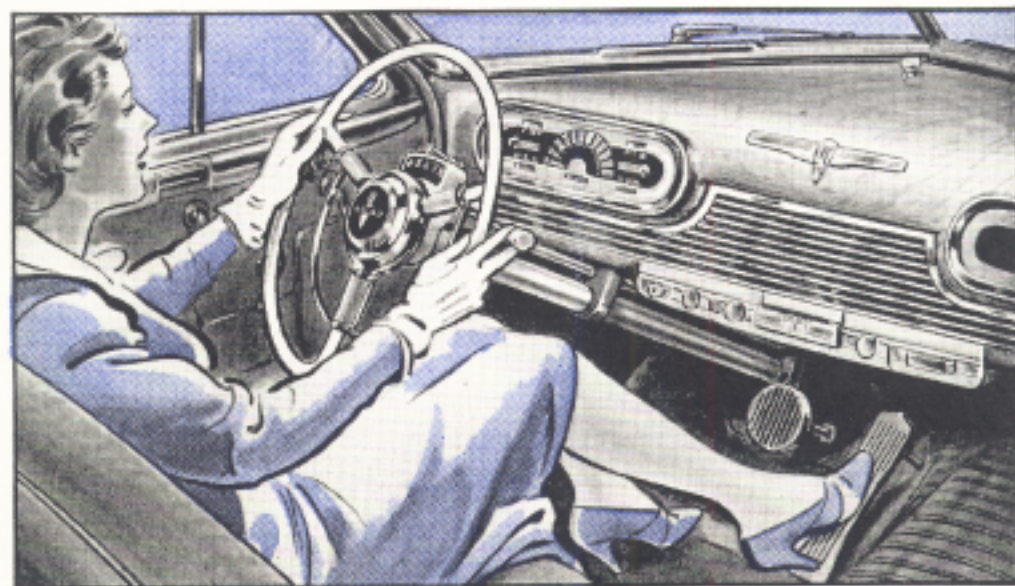
1. *Start the Engine!*
2. *Select your Direction!*
3. *Step on the Gas!*

THINK OF IT! Twelve out of the fifteen motions ordinarily required to start your car are eliminated by Hydra-Matic Drive, every time you get away from a stop-light. That adds up to thousands of motions in the course of a day's driving. As a result, you can drive farther with less effort—end up the day refreshed and relaxed instead of being worn and tired. And your driving is better, because you can concentrate your energy on the essential requirements of driving.

# HYDRA-MATIC DRIVE

*Proved in the Hands of Thousands of Owners through Millions of Miles of Driving*

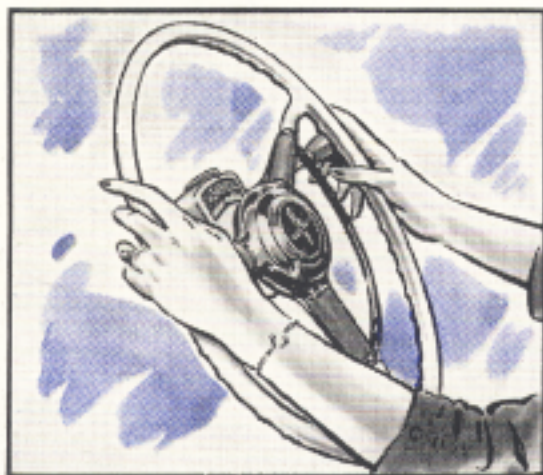
Put aside all your old ideas of driving before you take the wheel of an Oldsmobile with Hydra-Matic Drive, and prepare yourself for a totally new experience. Hydra-Matic Drive is an entirely original development in car control that makes driving so infinitely simple and easy as to be almost unbelievable. It was designed and developed by Oldsmobile, and introduced in the 1940 line. Many thousands are in use today. Owner reports covering millions of miles of driving show unprecedented enthusiasm and satisfaction. Still the newest, most thrilling engineering improvement in motoring, its tremendous advantages have been established and proved by actual owner experience. *Hydra-Matic Drive is optional at extra cost on all Oldsmobile Models.*





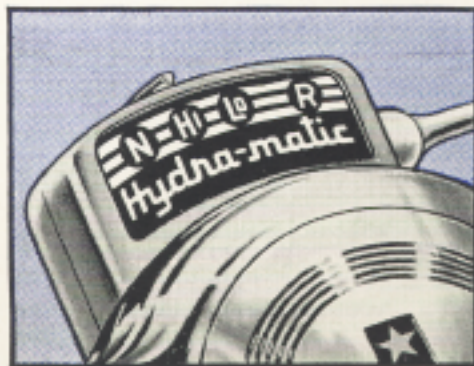
# WHAT IT IS!

Hydra-Matic Drive is a combination of (1.) a high efficiency liquid coupling and (2.) a fully automatic four-speed transmission. The principles behind it are well-known and time-tested—but they have never been combined in a motor car before. Although Hydra-Matic Drive is entirely new, there is nothing new for the driver to learn, because it is so simple to operate. If you had never driven before in your life, you could learn in a few minutes with Hydra-Matic Drive.



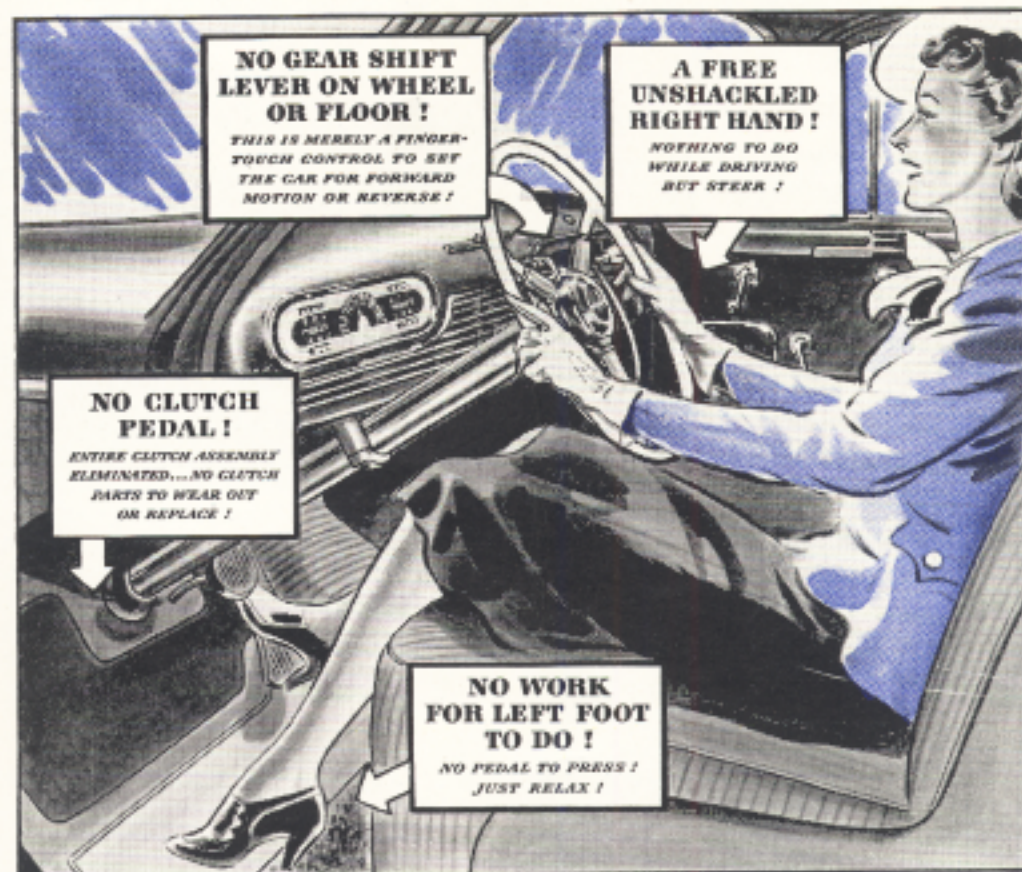
## A Completely Automatic System of Control

Hydra-Matic Drive is completely automatic in operation. There are no gears to shift! There is no clutch to press! No more mental and physical co-ordination is required than in pointing your fin-



ger. Yet the driver has instantaneous choice between blazing performance and rigid economy. Everything is automatic. When you want to stop, you step on the brake pedal. When you want to start again, you step on the gas. The only other things you have to do are select your direction—and steer. The transmission selects first, second, third, or fourth speed automatically—choosing whichever speed is best for the purpose. Power is transmitted through the turbine principle, the same method that is used to propel giant ocean liners.

# HOW TO USE IT!



**NO GEAR SHIFT LEVER ON WHEEL OR FLOOR!**

*THIS IS MERELY A FINGER-TOUCH CONTROL TO SET THE CAR FOR FORWARD MOTION OR REVERSE!*

**A FREE UNSHACKLED RIGHT HAND!**

*NOTHING TO DO WHILE DRIVING BUT STEER!*

**NO CLUTCH PEDAL!**

*ENTIRE CLUTCH ASSEMBLY ELIMINATED...NO CLUTCH PARTS TO WEAR OUT OR REPLACE!*

**NO WORK FOR LEFT FOOT TO DO!**

*NO PEDAL TO PRESS! JUST RELAX!*

The Hydra-Matic Drive direction-control lever, conveniently located just below the steering wheel, is in no sense a gear shifter, as all action is automatic. The position farthest to the left is neutral, and is used when parking. The next position, to the right, is "Hi," and is used for all normal driving. Once in "Hi," it is not necessary to move the lever for starting, stopping or accelerating. The third position is marked "Lo." This speed

is used only when descending steep hills, or for exceptionally heavy pulling through mud or sand, when it may be desirable to hold the car in first or second gear. The fourth position, farthest to the right, is reverse. A lifting movement is required to place the control in Reverse position. This is to guard against accidental change from forward to reverse. At night, a soft light illuminates the position in which the lever is set.



# ALL YOU DO TO DRIVE IS THIS—

## 1. STEER



## 2. STEP ON IT



## 3. STOP



There are five functions required of the driver of an ordinary car. He must steer. He must shift gears. He must feed gasoline. He must operate the clutch. He must use the brake. Three of these are absolutely essential to car operation. Hydra-Matic Drive eliminates the other two—shifting and declutching. (1) You still have to steer—as you always will. But even steering is easier, because you can

keep both hands on the wheel. The Hydra-Matic direction lever can be controlled by a flick of the finger. (2) Every change in speed is controlled by the accelerator pedal. There is no need to ease up on the gas to allow a gear changer to operate—no slow up interval while you press a clutch. (3) Stopping is smoother and safer, because deceleration is oil-cushioned.

## Eliminate Half the Effort of Driving



### NO SHIFT

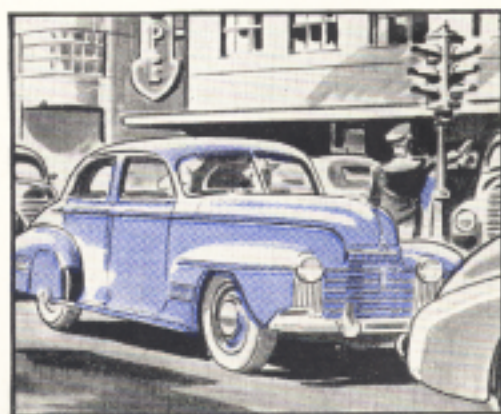
Did it ever occur to you that driving a car requires the use of all four members? Both hands and both feet are occupied. But not with Hydra-Matic Drive. Because there is no clutch, your left foot is free. And



### NO CLUTCH

your right hand is released from the effort of shifting gears. With Hydra-Matic Drive, you select the direction (just as you do in walking), guide the car, and apply the brakes. Everything else is automatic.

# PERFORMANCE IS STEPPED UP TO GLORIOUS NEW HIGHS



## No Chance to Stall the Engine

There are two common causes of engine stalling. First, the use of the incorrect gear ratio, thus calling upon the engine for more power than it can deliver at low car speed. Second, too abrupt use of the clutch. Hydra-Matic eliminates both. The engine cannot stall under load.

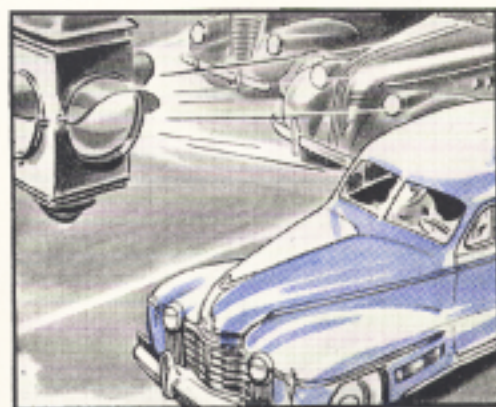
## No Jerking or Bucking in Starting

Jerking or bucking in starting a car is usually the result of improper clutch engagement, or uneven feeding of gas in low gear. With Hydra-Matic Drive, you step on the accelerator and get smooth, swift acceleration every time.



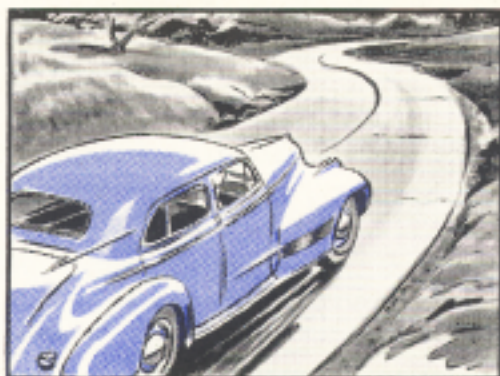
## Getaway is Amazingly Improved

With manually operated transmissions, even the most expert driver is bound to lose headway while shifting from one speed to another. Hydra-Matic Drive is always in gear. Changes in gear ratio are made instantaneously and automatically, at exactly the right time.





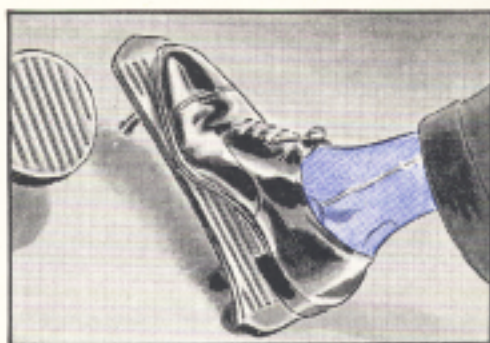
## *You Get a Smooth, Even Flow of Power at All Speeds, Under All Conditions*



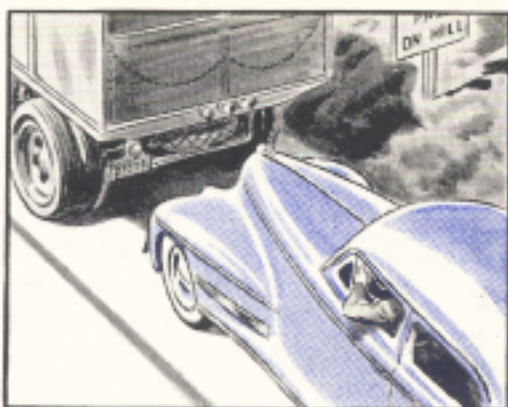
One of the most astonishing differences between Oldsmobile with Hydra-Matic Drive and ordinary cars is the amazingly smooth, liquid flow of power in both town and country driving. It's a definitely new sensation in motoring performance—an added pleasure you'll never want to be without after you have once tried it.

## *Increased Acceleration Is Instantly Available for Passing Cars or Climbing Hills*

For an extra burst of power, when the car is traveling under 55 miles per hour, step all the way down on the accelerator. A special accelerating speed goes into operation instantly to pass other cars in a jiffy or pick up speed on hills. The car returns to direct drive automatically when you let up on the gas or attain a speed of 65 miles an hour.

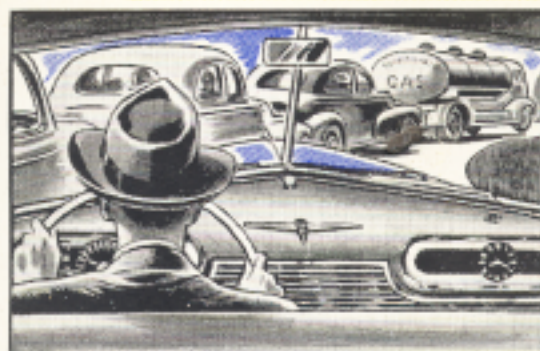


## *You Can Slow Down to a Crawl on Hills*



What is more maddening than getting stuck behind a slow-moving truck on a long, steep hill? In most cars, you have to shift to second, or even low gear, or else the engine is apt to stall. With Hydra-Matic Drive, you simply slow down and follow along—even as low as 1 mile an hour—until you have a chance to pass with safety. There's no need to shift—no chance to stall the engine—no unpleasant jerkiness.

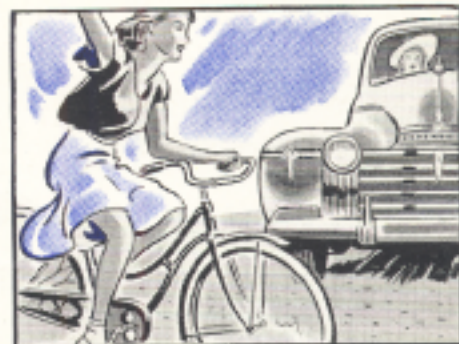
## *You Can Creep Along in Traffic Without Any Shifting to Do*



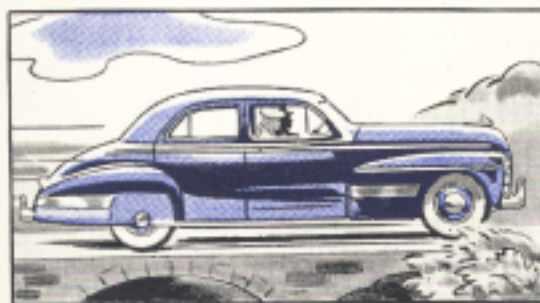
Driving in traffic is irritating enough without the annoyances of constant gear-shifting, keeping your foot on the clutch, or having the engine stall. Hydra-Matic Drive ends all these. To start—step on the gas. To stop—step on the brake. In between, creep along as slowly as you like without stalling.

## *Stops Are Smoother and Steadier*

Not only is there less danger of skidding during a quick emergency stop with Hydra-Matic Drive, but every stop you make is smoother, steadier and safer. Because the liquid coupling in Oldsmobile's Hydra-Matic Drive acts as an oil cushion, you come to a smooth, straight-line stop with pneumatic ease, even on slippery pavement.



## *You Cruise Smoothly and Quietly Without Annoying Vibration*



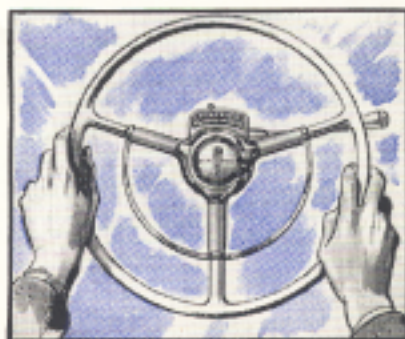
In Hydra-Matic Drive, the engine and the driving mechanism are connected through a cushion of oil. Engine torque reaction, shake, and vibration are damped out. Since fourth gear is a direct drive, the propeller shaft revolves at relatively slow speed, still further eliminating vibration.



# IMPORTANT SAFETY ADVANTAGES OF HYDRA-MATIC DRIVE

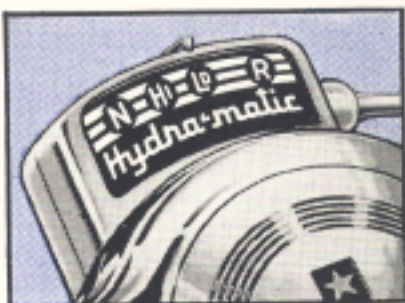
## *You Keep Both Hands On the Wheel*

It's axiomatic that two hands are safer to steer with than one. In an Oldsmobile with Hydra-Matic Drive, you rarely need to take either hand from the steering wheel while the car is in motion. After you have once selected the direction, everything else about driving is automatic except steering, feeding the gas, and stopping.



## *Special "Lo" Speed for Descending Steep Hills*

The safest way to descend a steep hill is to use the engine compression as a brake. Hydra-Matic Drive provides a special "Lo" speed for this purpose. At any car speed below 40 M.P.H., you can flick into "Lo" from "Hi" instantly. At speeds above 40 M.P.H., a special "cut out" automatically takes the "Lo" range out of operation since it can serve no purpose at the higher speeds.



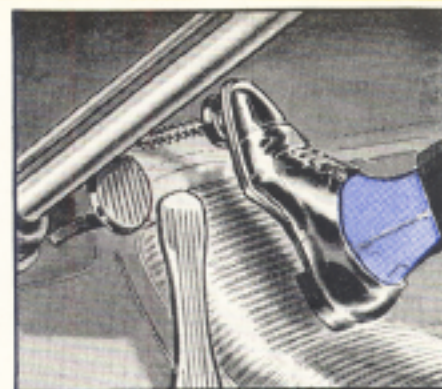
## *You Get Better Trac- tion on Snow and Ice*

Hydra-Matic Drive greatly reduces two major causes of skidding. Loss of traction through improper use of the clutch is eliminated, because there is no clutch to misuse. The car is constantly in gear. Power shocks to the rear wheels, caused by suddenly stepping on or releasing the accelerator, are tempered by the oil cushion of Hydra-Matic Drive's liquid coupling. The danger of driving on wet, slippery, or icy roads is greatly diminished.



## *Starter Automatically Shifts Control Lever to Neutral*

Even though you leave the Hydra-Matic direction-control lever in "Hi," "Lo," or "Reverse" position when you turn off the engine, an interlocking connection between the starter button and the Hydra-Matic control lever automatically shifts the control to "Neutral" as soon as you step on the starter. This makes it impossible to move the car inadvertently by starting the engine.



## *Reverse Gear Lock for Parking on Hills*



The car may be locked in gear while parked on a steep incline by placing the Hydra-Matic Drive control lever in "R" position after the engine has stopped. This action locks the transmission mechanically when the motor is shut off, making it impossible for the rear wheels of the car to turn.

## *Driving Is Less Fatiguing*

The thousands of arm and leg movements saved in a day's driving in an Oldsmobile with Hydra-Matic Drive would, in themselves, cut down fatigue tremendously through saving of physical effort alone. But, in addition, all driving is made easier by Hydra-Matic Drive. The car is easier to handle in traffic—cruises more smoothly and quietly on the open road—starts and stops with less effort on the part of the driver.



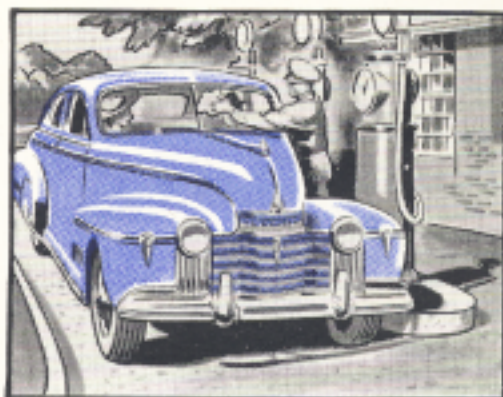


# HYDRA-MATIC DRIVE CUTS OPERATING COSTS

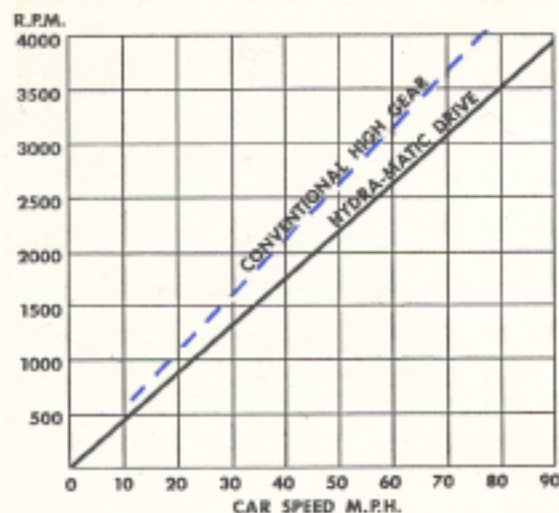
Even if it cost more to drive an Oldsmobile with Hydra-Matic Drive, the sensational extra performance, the extra safety and satisfaction, and the tremendous saving in driving effort would outweigh any extra operating cost. But actually, Hydra-Matic Drive saves money every mile, with measurable savings in gasoline, tires, and maintenance expense.

## *Slower Engine Speeds Save Gas*

Because the number of engine revolutions is reduced approximately 20 per cent at boulevard speeds in the city and at cruising speeds in the country, there is an attendant saving in the consumption of gasoline. Loss of power in starting is also reduced because the car is always in gear and speed changes are made efficiently and automatically.



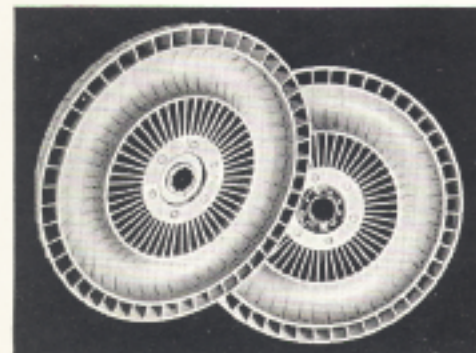
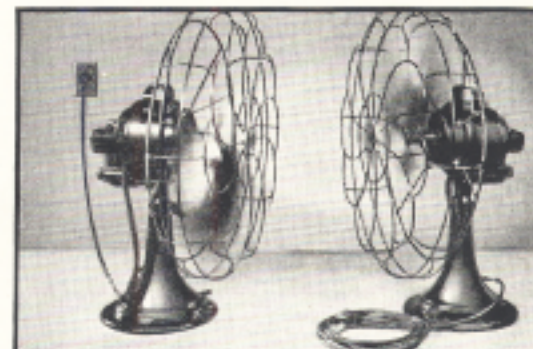
## *Saves Wear and Tear on Tires and Moving Parts*



Wear and tear on bearings, pistons, cylinder walls and all reciprocating parts is materially lessened by slower engine speeds. There are no clutch facings and clutch parts to be replaced. The slow-moving propeller shaft and universal joints are less subject to shock and wear. Smoother starts and stops reduce tire scuffing and result in longer tire life.

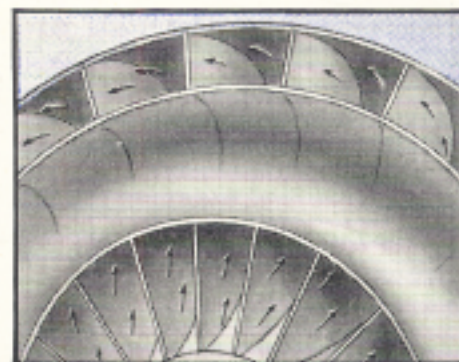
# SIMPLE IN CONSTRUCTION EFFICIENT IN OPERATION

The whole Hydra-Matic Drive mechanism is inherently simple, and employs engineering principles which have been proved through years of practical application. Oldsmobile merely converted these principles to the transmission of power in an automobile. The principle of the liquid coupling can be illustrated by placing two electric fans so they face each other—one with the power connected and the other so that it will run free. As the speed of the power-driven fan is increased, the power impulse is transmitted through the air. The free-running fan



commences to revolve and gains speed until it is revolving almost as rapidly as the other. The same action takes place in the liquid coupling, except that oil takes the place of air. Essentially, the liquid coupling is a closed circuit turbine, consisting of a primary shaft and impeller, and a secondary shaft

and runner. The impeller is driven by the engine, and through the turbine principle, drives the runner, which connects with the rear wheels through the automatic transmission and propeller shaft. Diagram at right shows the flow of oil through the rotor vanes. There are no fine running clearances or heavily loaded bearings. The entire operating mechanism is simplicity itself.



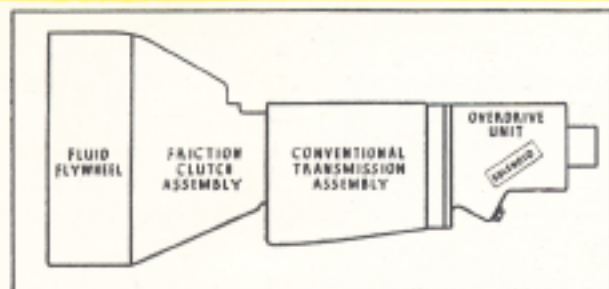
*However, the liquid coupling offers little or no advantage in car operation unless it is combined with an automatic transmission.*



# MORE THAN JUST A FLUID COUPLING...MORE THAN AN AUTOMATIC TRANSMISSION

Oldsmobile is the original "clutchless" car! Hydra-Matic Drive was designed, developed, and introduced by Oldsmobile, and differs greatly from fluid couplings, power shifts, and automatic clutches. Remember, if the car has a clutch, it *doesn't* have Hydra-Matic Drive—and it *will not* deliver the performance, ease of operation, or economy you get with Hydra-Matic Drive. It takes a combination of both fluid coupling and automatic transmission to give superlative results.

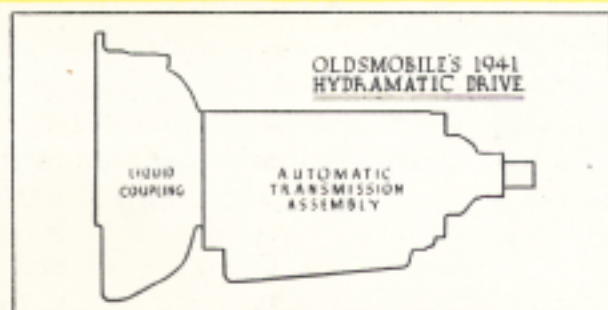
## Typical Fluid Flywheel Coupling



The drive diagrammed above does not eliminate any unit of the old-fashioned transmission system. It merely super-

imposes two extra accessory units upon the conventional drive—the fluid flywheel coupling and an over-drive.

## Hydra-Matic Drive Coupling



Oldsmobile's Hydra-Matic Drive is self-contained and requires no extra attachments. It replaces both the conventional clutch and the transmission.

# WARRANTED FOR ONE YEAR

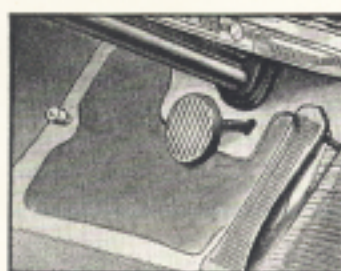
The Oldsmobile Division, General Motors Sales Corporation, warrants each new Hydra-Matic Drive Assembly to be free from defects in material and workmanship under normal use and service for one year after making delivery of new assembly to the original purchaser, provided only Oldsmobile Hydra-Matic Fluid was used in the assembly and the fluid changed at the end of the first 5,000 miles and at 10,000-mile intervals thereafter for the duration of the Warranty period. Provided work is done by an authorized Oldsmobile dealer, the Oldsmobile Division will accept charges for material and labor to replace transmission parts—charges to be based on factory established rates—and will, in addition, accept all transportation charges of returned parts during the above ascribed Warranty period, which upon our examination shall disclose to our satisfaction to have been thus defective.

## Special Fluid for Hydra-Matic Drive



A special lubricant—known as Oldsmobile Hydra-Matic Drive Fluid—has been developed for use in Hydra-Matic Drive, and is available at authorized Oldsmobile dealers. It is an all season lubricant, equally efficient in summer or winter. Hydra-Matic Drive Fluid does not thin or thicken (change its viscosity) for at least 10,000 miles of service and prevents the formation of varnish. Only this fluid should be used in the Hydra-Matic Drive. In cases of emergency, when Hydra-Matic Drive Fluid is not available, any good grade of 20-W engine oil will operate satisfactorily for a temporary period. When such oil is used, however, it should be replaced as soon as possible by Oldsmobile Hydra-Matic Drive Fluid.

## Why Brake Pedal Location is Unchanged



One of the first questions you might ask is, "Why not move the brake pedal so that the left foot may operate it?" While this change is perfectly feasible and has been thoroughly tested by Oldsmobile engineers, it is not considered desirable at the present time, as it would necessitate a change in driving habits. As it stands, there is nothing new to learn in order to operate Hydra-Matic Drive. You do everything exactly

as you always have, except that many hand and foot motions are eliminated. The brake pedal in position for left foot operation is available on special order at extra cost.