

Oldsmobile



**HYDRA-MATIC
DRIVE**

1 WHAT IT IS

2 WHAT IT DOES

3 HOW TO USE IT

4 HOW IT WORKS

5 WHY YOU'LL WANT IT

1

2

3

4

5



DEVELOPED, PROVED AND INTRODUCED BY

OLDSMOBILE

BUILT AND BACKED BY

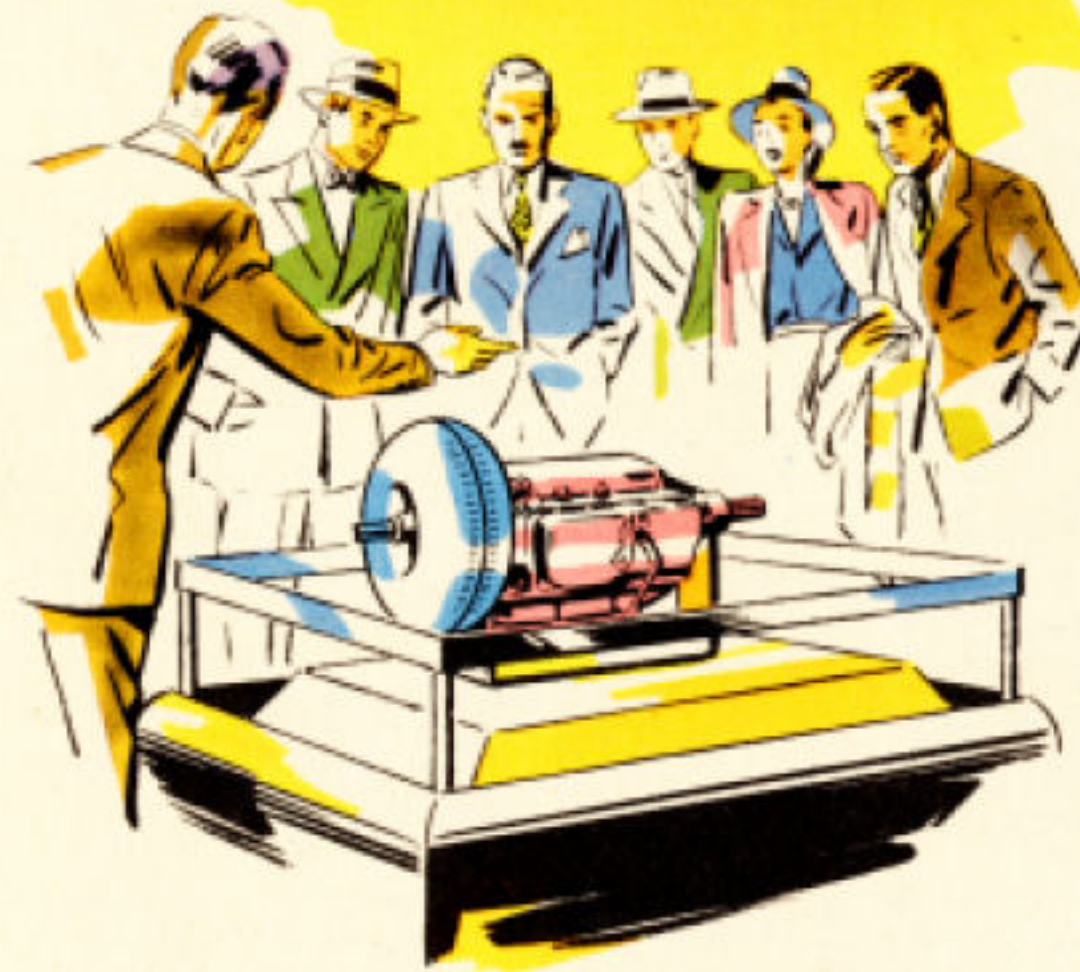
GENERAL MOTORS

WHAT IT IS



The New General Motors HYDRA-MATIC DRIVE

**Most Important Automotive
Advancement Since the
Self-Starter**



The streamlined automobiles of today are a far cry, in appearance, from the pioneer models of the "horseless carriage" era. But the process of *driving* a motor car—an *ordinary* motor car—hasn't changed as much as you might think. In most automobiles, for example, you still must push a clutch every time you shift gears . . . and you still must shift gears almost constantly in traffic, if you want to enjoy any kind of performance. It wasn't until Oldsmobile introduced Hydra-Matic Drive to the public in the fall of 1939 that motorists discovered how really simple operating a motor car could be. Hydra-Matic Drive has literally *changed* the driving habits of thousands of owners from coast to coast. And today, as a result of many years of constant proving and improving, Hydra-Matic Drive hits its all-time peak.

1

2

3

4

5



A VASTLY SIMPLIFIED METHOD OF CAR CONTROL

Hydra-Matic Drive is a revolutionary new type of automobile transmission which reduces driving to its simplest possible terms. It actually takes over much of the work which you, as the driver, used to do. And it *does this work so perfectly* that, not only is your driving simplified, but also, *performance of the car is remarkably improved.*

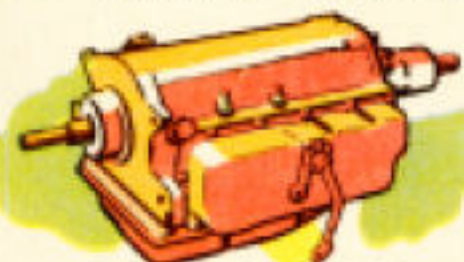
Hydra-Matic Drive is a self-contained unit which *takes the place* of the conventional clutch and transmission. Unlike some other "drives," Hydra-Matic is not just an accessory mechanism super-imposed on the ordinary transmission system. It is entirely *new and different in every way*, yet its operation is just as simple and easy to understand as A . . . B . . . C . . .

A TAKE A FLUID COUPLING



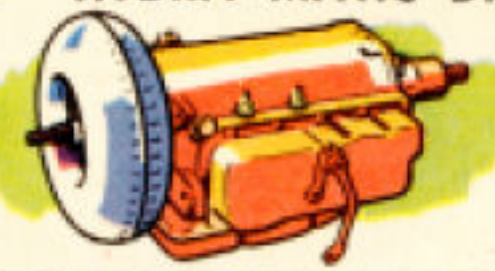
One important part of Hydra-Matic Drive is its fluid coupling, a cushion of oil between engine and driving mechanism.

B ADD A FULLY AUTOMATIC TRANSMISSION



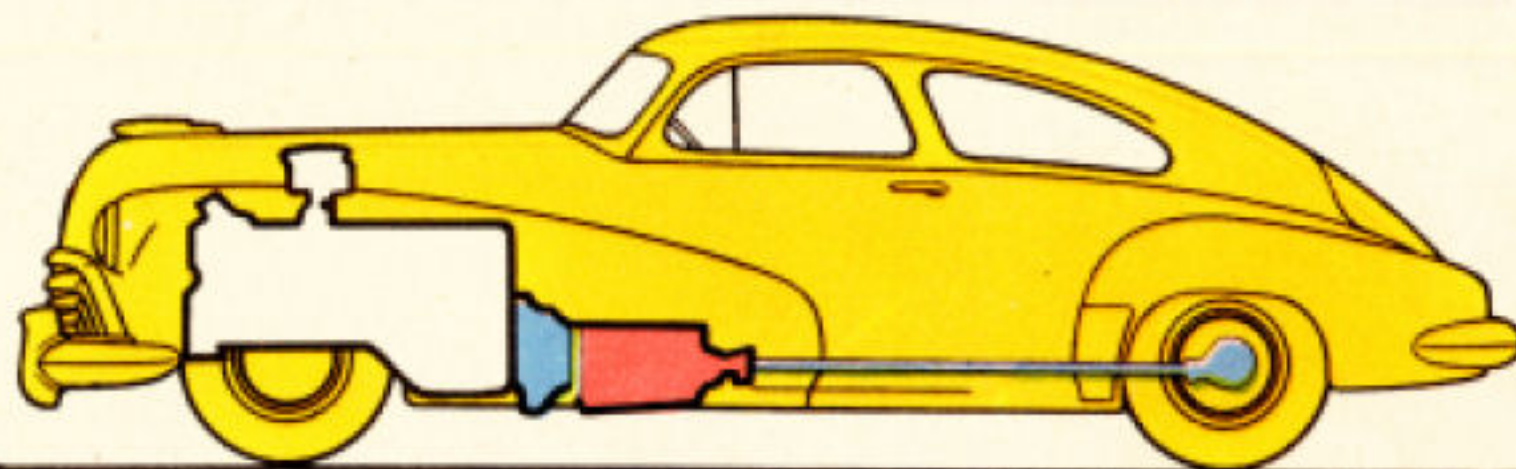
The heart of Hydra-Matic Drive is its four-speed transmission, a "mechanical brain" which shifts gears *automatically.*

C THE COMBINATION IS HYDRA-MATIC DRIVE



"Hydra" for fluid coupling . . . "Matic" for automatic transmission. *Both* are necessary to give you truly modern driving.

IT'S THE COMBINATION THAT COUNTS



FLUID COUPLING AUTOMATIC TRANSMISSION

Directly behind the engine in a car equipped with Hydra-Matic Drive is a modern, high efficiency fluid coupling, shown in blue in the diagram above. The driving force from the engine is conveyed through this hydraulic unit of whirling oil, which gives a "cushioning effect"—a smoother, more flexible flow of power to the rear wheels . . . *But that's only half the story.*

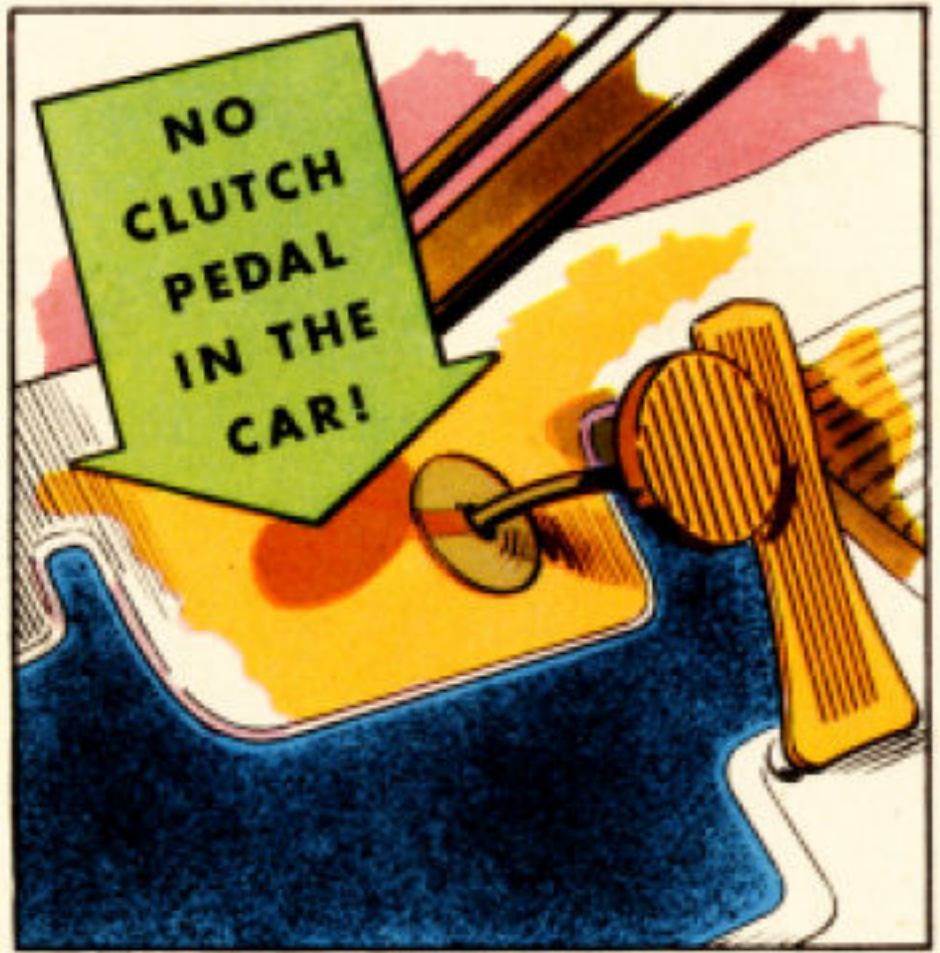
It takes a fluid coupling PLUS a fully automatic four-speed transmission to make a Hydra-Matic Drive.

The automatic transmission, located just behind the fluid coupling and indicated in red on the car shown above, takes over

where the fluid coupling leaves off. It provides advantages which no fluid coupling alone could possibly give.

The thing to remember is this:—It's the *combination* of a fluid coupling and a fully automatic transmission that makes Hydra-Matic Drive different. It's the *combination* of the two that enables Hydra-Matic Drive to give such exceptional driving ease, such unequalled performance, such outstanding economy and safety.

IT ELIMINATES THE CLUTCH PEDAL and Conventional Clutch Mechanism Entirely.



Hydra-Matic Drive's exclusive combination of a fluid coupling and a fully automatic transmission takes the place of the conventional clutch mechanism entirely. All the functions ordinarily performed by a friction-type, foot-operated clutch are taken care of *automatically* with Hydra-Matic Drive. This means there are no conventional clutch facings to wear out . . . and to be adjusted. There's no clutch pressing for the driver to do. *There's not even a clutch pedal in the car.*

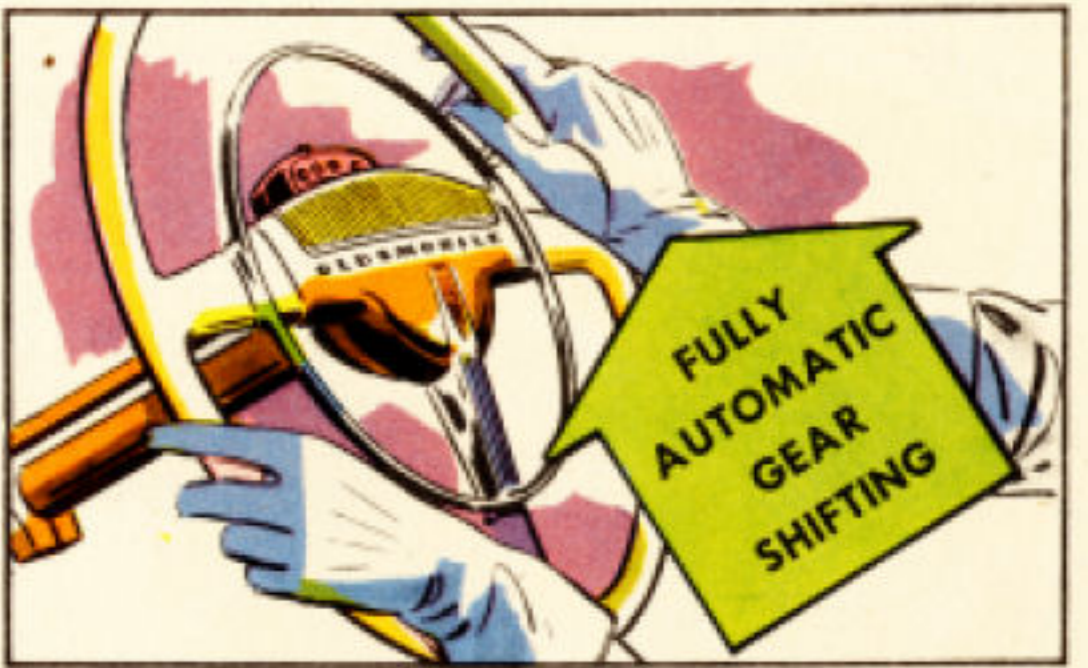
Nothing for Your Left Foot to Do

Clutch in . . . clutch out . . . clutch in . . . clutch out . . . up to 300 times an hour. That's how much work your left foot does, according to scientific Effort-Meter tests, when you're driving in traffic the *old-fashioned* way. But not with Hydra-Matic Drive! In a Hydra-Matic Oldsmobile your left foot *r-e-l-a-x-e-s*. There's no danger of letting your clutch out too late, or in too soon, or "riding" the clutch as you drive. Your left foot can do no wrong . . . *because your left foot does nothing at all!*

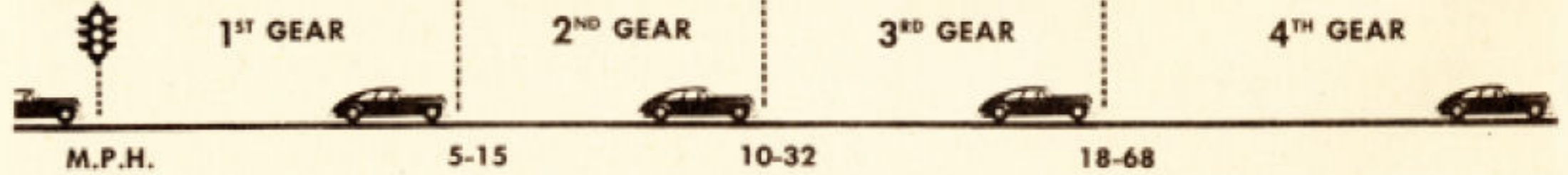


IT SHIFTS GEARS AUTOMATICALLY Through Four Forward Speeds!

Hydra-Matic Drive provides *fully automatic shifting*. You select the direction in which you want to go—forward or back—and Hydra-Matic Drive does the rest! Suppose you're standing at a traffic signal. The light turns green. You step on the gas. *And that's all you do!* As your car reaches a speed somewhere between 5 and 15 miles per hour, you are shifted *automatically* into second . . . between 10 and 32 m.p.h., you are shifted to third . . . and between 18 and 68 m.p.h., to a special economy fourth gear. The exact speeds at which those shifts take place depend on the action of your accelerator foot. If you step down hard, the shifts come at the higher speeds. If you step down softly, the shifts come earlier. Hydra-Matic Drive almost seems to "think," the way it responds to your commands!



YOU'RE ALWAYS IN THE RIGHT GEAR AT THE RIGHT TIME . . . AUTOMATICALLY!



2
3
4
5



... ALL YOU DO TO START YOUR CAR IS —



SELECT YOUR DIRECTION

A finger touch sets the direction lever for forward, or for reverse. Once you've set it, forget it . . . until you want to change direction again!



STEP ON THE GAS . . . AND GO!

Your foot on the accelerator determines how fast you go. Hydra-Matic Drive does everything else, keeping you always in the proper gear for each speed.

14 DRIVING MOTIONS
REDUCED TO
ONLY 2

Few people realize what a complicated routine the driver of a standard transmission car must follow in order to go from a standing start to normal driving speed. The diagram above illustrates this. Compare it with the simplicity of Hydra-Matic driving, where all the gear shifting and clutch pushing are handled *automatically*.

HYDRA-MATIC DRIVE MAKES ALL DRIVING SIMPLER

In a Hydra-Matic Oldsmobile, you never push a clutch. You never shift a gear. Don't be misled by the lever you see on the post of the steering wheel. This is in no sense a gear shifter. It is simply a direction control lever, operated with finger-touch ease, used to select the direction in which you want to go. It can be set in any of four positions:

"N" or "neutral," the position farthest to the left, is used only for more or less permanent stops.

"Dr," next to the right, is the gear for all normal forward-speed driving. You stay in "Dr" at stop streets, traffic lights, or even for short-period parking.

The third position is marked "Lo." This is seldom used . . . only for descending steep hills, or for continuous heavy pulling, when it may be desirable to keep the car in first or second gear.

The farthest position to the right is "R" or "reverse." In order to prevent accidental change from a forward speed to reverse, a lifting movement is required to place the control in this position. For your convenience at night, a soft light illuminates the position in which the lever is set.

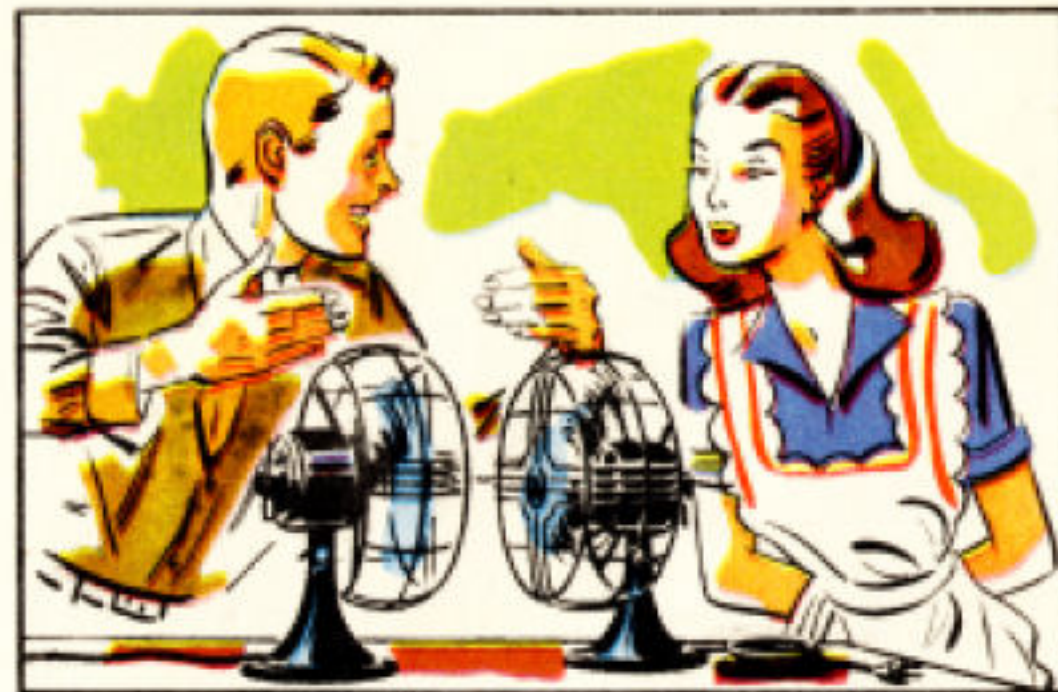


A FREE RIGHT HAND

With no gears to shift, your right hand is always free for steering.

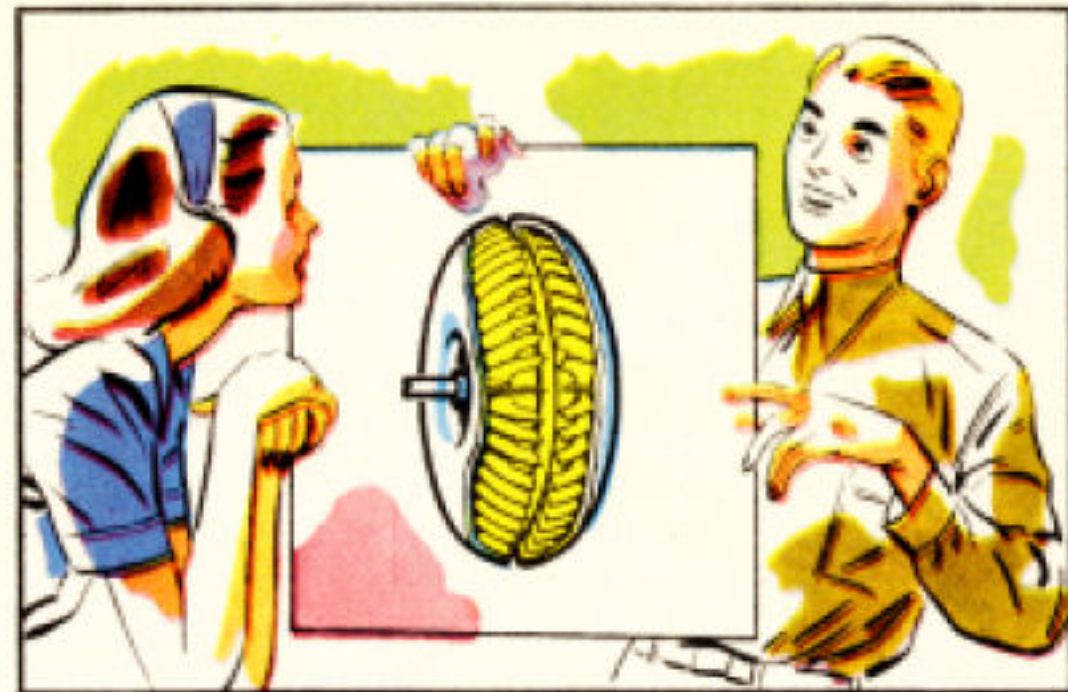
A FREE LEFT FOOT

With no clutch to press, your left foot can be kept relaxed.



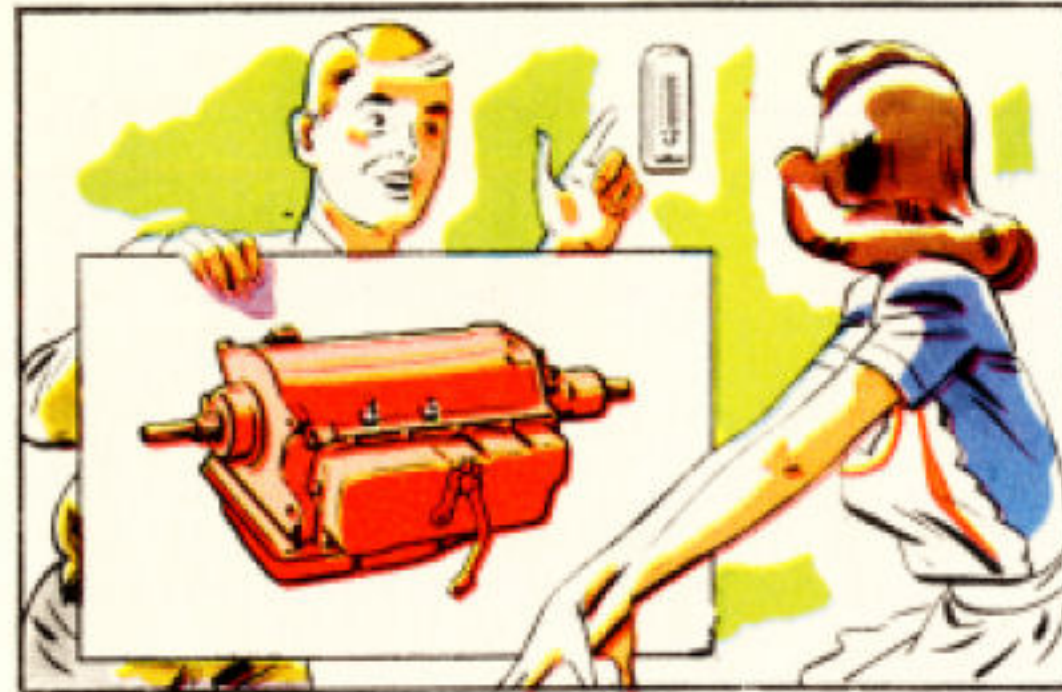
IMAGINE TWO ELECTRIC FANS

Here is a man showing his wife the basic, time-tested principles on which Hydra-Matic Drive operates. He has placed two electric fans close together, directly facing each other. One is plugged into a wall socket. The other is not connected, but is left to run free. Now watch! . . . the first fan starts, gains speed, and its power is transmitted through the air. Soon the second fan starts revolving, too. Faster and faster it whirls about, until, without any direct power hook-up at all, it is spinning almost as fast as the electrically driven fan!



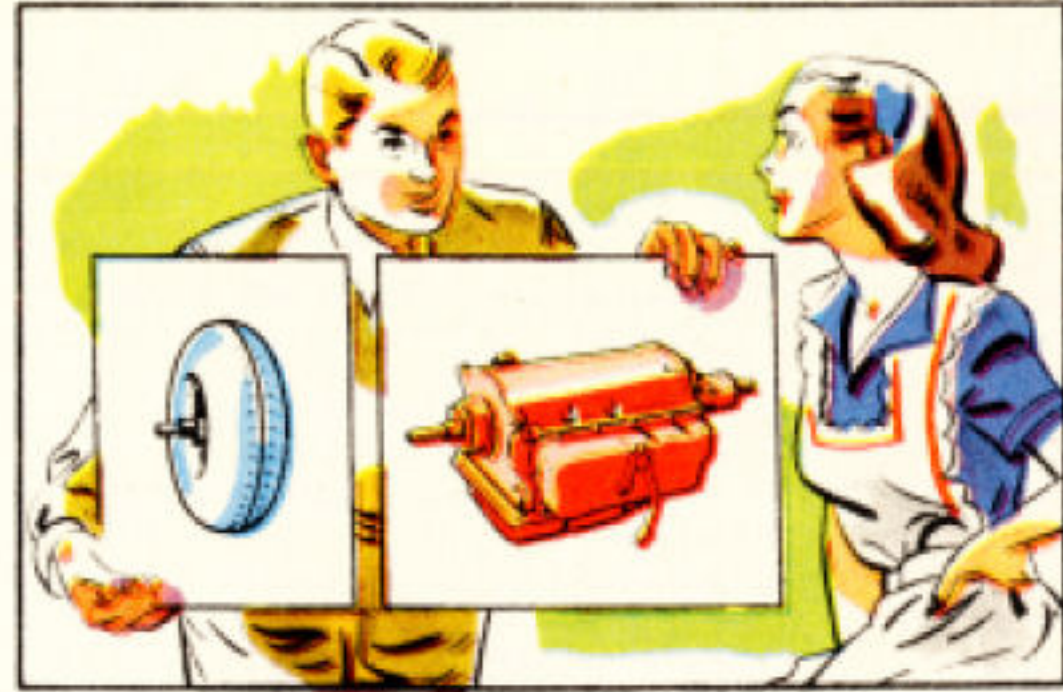
THAT'S HOW THE FLUID COUPLING WORKS

For the two electric fans, substitute two "grapefruit-shaped" units, called torus members, such as are illustrated above. For the air in between, substitute a bath of oil. Now the rear torus is connected to the engine and turned by it. The power is transmitted *through the whirling oil* to the front torus member. The front member, which thus is turned by the fluid, is connected through the driving mechanism to the rear wheels. *But Hydra-Matic doesn't stop there.* The next step, and an important one, is the transmission . . .



THE TRANSMISSION IS AUTOMATIC . . . LIKE A THERMOSTAT

The transmission in an Oldsmobile with Hydra-Matic Drive "governs" the power that is brought into it, by shifting gears, automatically, through four forward speeds. Just as the thermostat in your home "knows" when the furnace should be turned up or shut down, this amazing transmission "knows" what gear ratio the car should be in, at any given time, for the best possible performance and greatest possible economy. What's more, it sees to it that your car *is in that correct gear . . . all without any effort on your part!*



THE COMBINATION MAKES HYDRA-MATIC DIFFERENT

There have been a great many new "drives" offered to the public—fluid couplings, power shifts, automatic clutches, and the like—but Hydra-Matic Drive is unique because it has *both* a high efficiency fluid coupling and a completely automatic 4-speed transmission. That's why Hydra-Matic Drive is completely automatic. That's why Hydra-Matic Drive does away with all clutch-pushing and all gear-shifting. And that's why Hydra-Matic Drive delivers so much extra performance, extra safety, extra economy, and extra dependability.

A NEW HIGH IN PERFORMANCE

**Flashing Getaway When You Need It**

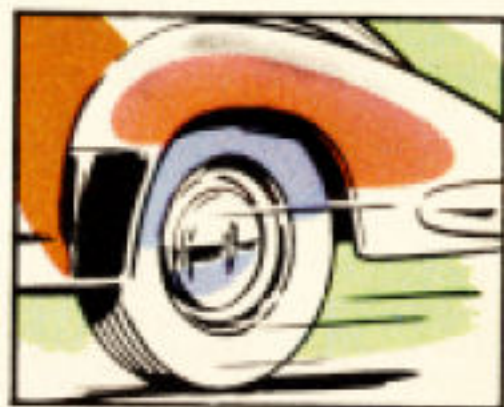
In a standard transmission car, even the most expert driver loses headway while shifting from one speed to another. Hydra-Matic Drive eliminates these pauses. Gear changes are made instan-

taneously and automatically, always at exactly the right time to give you the kind of performance you want.

Smoother Flow of Power to the Wheels

Because of the cushioning effect of the fluid coupling, and because of the perfectly executed automatic shifting, you get a remarkably smooth, liquid flow of power at all times in an Oldsmobile with Hydra-Matic Drive. Whether in town or country driving, you'll

notice the difference in smoother, more flexible performance.

**Special Pick-Up Gear for Passing**

For an extra burst of power, when the car is traveling under 55 miles per hour, you step all the way down on the gas. A special pick-up gear goes into operation instantly, whisking you by other cars in a hurry. You switch back to fourth gear automatically

when you let up on the gas or reach 65 miles per hour.

**A Thrill on a Hill**

The special pick-up gear gives you power to gain speed even on long, steep hills. But Hydra-Matic Drive's hill-climbing advantages don't stop there. If you're following a truck, for example, you can slow down to a crawl without

shifting. You can even stop dead on a hill . . . and start up again . . . without tricky "clutch-and-brake" footwork.

A NEW TYPE OF DRIVING COMFORT

**You Can Relax in Heaviest Traffic**

Think of the annoyance of driving in traffic the old-fashioned way. Clutch . . . shift . . . de-clutch . . . Clutch . . . shift . . . de-clutch. Over and over again. But with the Oldsmobile Hydra-Matic

Drive, all you do is work the accelerator . . . to creep along as slowly as you like . . . or to leap ahead in a flash.

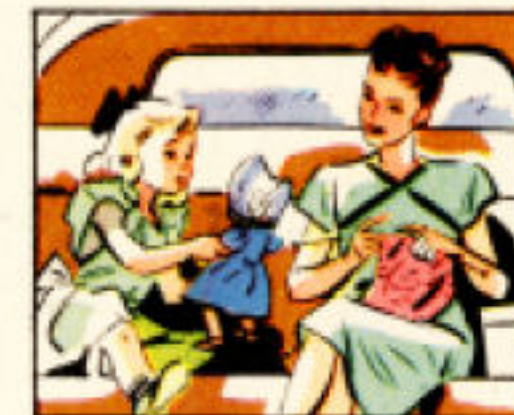
No Jerky Starts No Stalling the Engine

Hydra-Matic Drive makes every driver a better driver. Such common faults as jerking and bucking—or stalling the engine under overload—are generally caused by im-

proper gear-shifting or inexperienced use of the clutch. Hydra-Matic Drive makes both faults impossible—keeps you *always* in the right gear at the right time.

**Stops Are Smoother and Steadier**

Deceleration, too, is made smoother and easier in an Oldsmobile with Hydra-Matic Drive. The fluid coupling acts as an oil cushion, helping to bring you to a smooth, straight-line stop every time. Hydra-Matic Drive is always in gear, which greatly reduces chances of sudden skidding.

**You Cruise Smoothly Without Vibration**

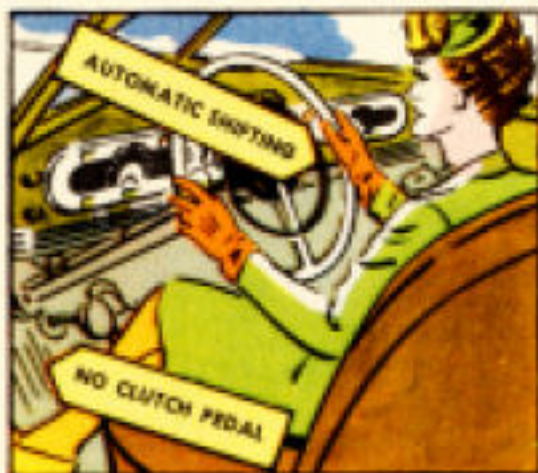
The fluid smoothness of Hydra-Matic Drive brings a new experience in motoring comfort to driver and passenger alike. Engine torque reaction, shake, and vibration are damped out by a cushion of

oil. And the direct-drive fourth gear brings slower propeller shaft speeds, still further reducing noise and vibration.



WHY YOU'LL WANT IT

EASIEST DRIVING YOU'VE EVER DONE



THE DIFFICULT OPERATIONS ARE ELIMINATED

The hardest thing about driving an ordinary car is the complicated hand and foot co-ordination that's required. While the left foot is pushing the clutch, and the left hand is steering . . . the right hand must be carefully shifting gears, and the right foot must be operating the accelerator . . . all in perfect

timing. Contrast this with Hydra-Matic Drive, which reduces motor car operation to the simplest possible terms. There's no more clutch pushing. There's no more gear-shifting. There's no more difficult hand-and-foot "team-work." All you do is "steer-step on it-and stop" . . . and relax and enjoy yourself!



Makes Driving Easier to Learn, too!

Hydra-Matic Drive makes the operation of an automobile so simple that a person who had never driven could learn—literally—in just a few minutes' time. And for anyone who already drives, there's nothing new to learn at all—just a new freedom to enjoy!



SCIENTIFIC TESTS SHOW HOW MUCH EFFORT HYDRA-MATIC DRIVE SAVES

Illustrated above is the "Effort-Meter," a scientific instrument designed by Oldsmobile engineers to measure the number of driving operations saved by Hydra-Matic Drive on any given trip. "Effort-Meter" test runs have been held in 36 of America's largest cities, and these have demonstrated conclusively that Hydra-Matic Drive saves *hundreds* of hand and foot motions in a typical drive through city traffic. In Boston, for example, it was found that 512 driving operations—297 clutch pushes and 215 gear shifts—were eliminated in an hour's driving—a real saving in effort and energy for any driver.

WHY YOU'LL WANT IT



SAFER DRIVING—FOR YOU AND YOUR FAMILY



TWO HANDS ALWAYS ON THE WHEEL

Safety authorities are unanimous in agreeing that you have better control of an automobile with two hands on the steering wheel than you do with only one. That's why Hydra-Matic driving is safer driving. You never need to take either hand away from the steering wheel, even for a moment, in order to shift gears. Once you've selected your direction, everything is automatic except steering, feeding the gas, and operating the brake.

Special Range for Mountain Driving

The safest way to descend a steep hill is in low gear, using the engine compression as a brake. Hydra-Matic Drive's "Lo" speed range keeps you in first or second for this purpose.



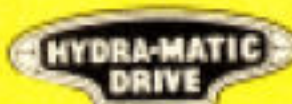
SKIDDING ON SLIPPERY ROADS REDUCED

Two of the most important causes of skidding are eliminated or greatly reduced with Hydra-Matic Drive. Skidding is often caused by misuse of the clutch when driving on slippery surfaces. But with Hydra-Matic Drive there is no clutch to misuse, so better traction is maintained. Skidding, too, is sometimes induced by power shocks to the wheels. Hydra-Matic Drive's "cushion of oil," however, tempers such sudden shocks and averts resulting skids.



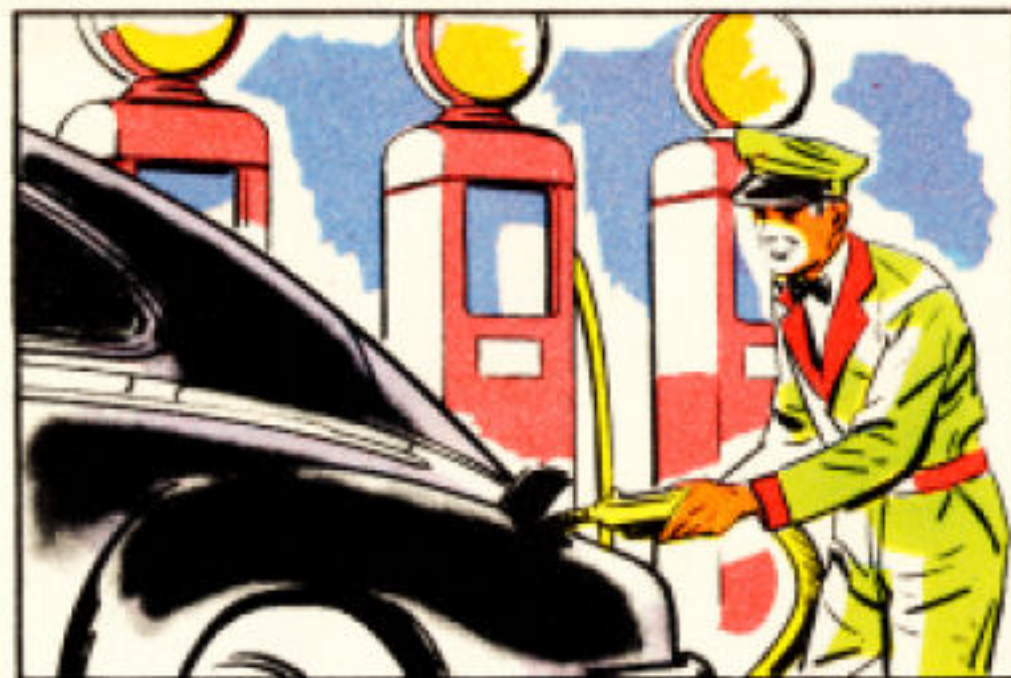
Driving is Much Less Tiring

Hydra-Matic Drive, by actual test, saves an average of 419 arm-and-leg motions per hour of traffic driving. This means you become less fatigued—drive more alertly and safely.



WHY YOU'LL WANT IT

HYDRA-MATIC ECONOMY CUTS OPERATING COSTS

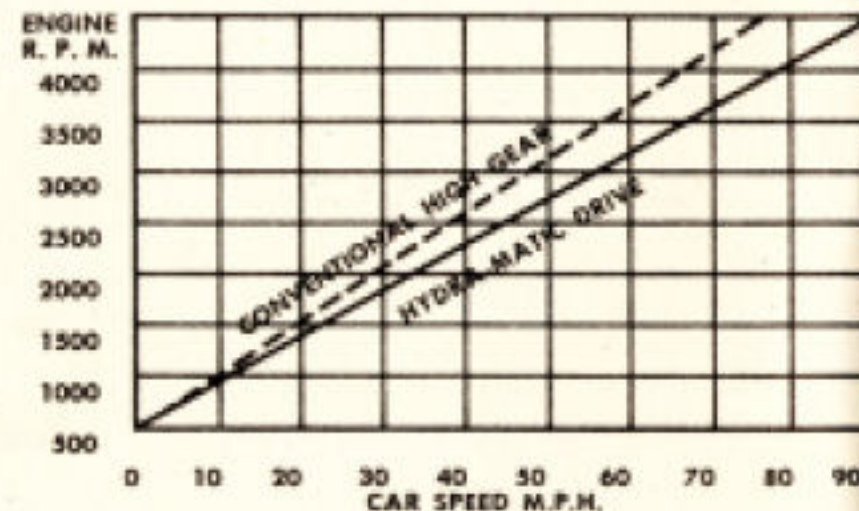


SAVES 10% TO 15% ON GAS AT CRUISING SPEEDS

Hydra-Matic Drive's direct fourth speed forward reduces engine revolutions by approximately 20 per cent at boulevard speeds in the city and at cruising speeds in the country. This means you go farther on fewer gallons of gas—a saving of 10 to 15 per cent by actual test. Loss of power in starting is also reduced, because the car is always in gear, and speed changes are made efficiently and automatically. Even if it cost more to drive a Hydra-Matic Oldsmobile, the extra performance, extra safety, and extra driving ease would be well worth the difference. But actually, Hydra-Matic Drive saves money every mile you drive!

SAVES WEAR AND TEAR ON TIRES AND MOVING PARTS

Slower engine speeds also mean slower wear . . . on bearings, pistons, cylinder walls, and all reciprocating parts. The slower moving propeller shaft and universal joints are less subject to shock. And the liquid smoothness of Hydra-Matic Drive in stopping and starting reduces tire scuffing and results in longer tire life.

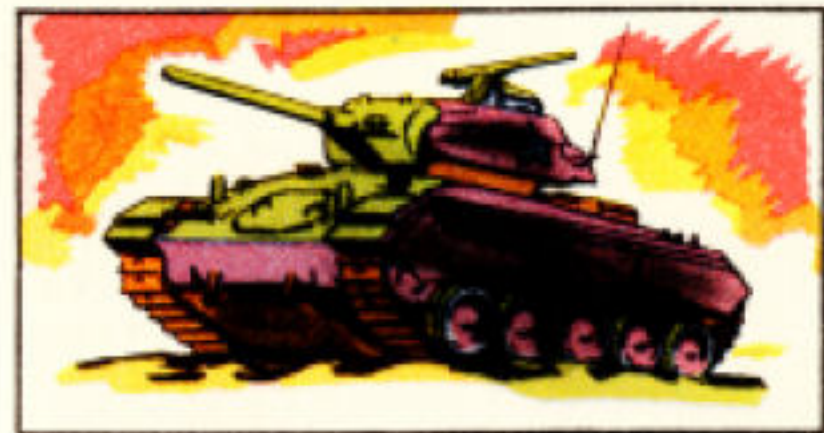
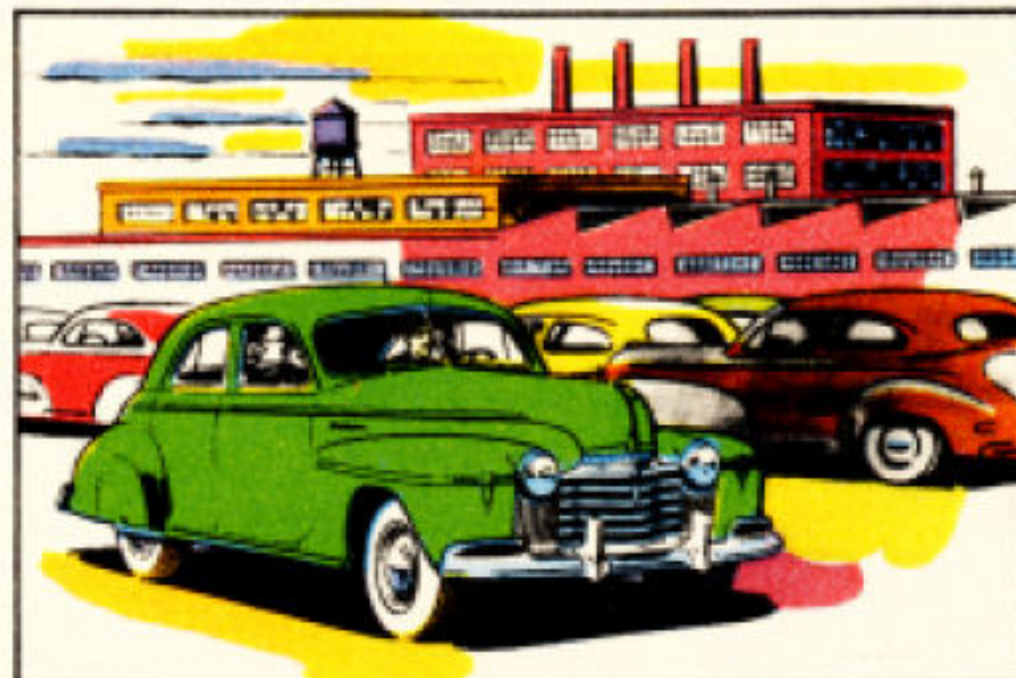


WHY YOU'LL WANT IT

PROVED BY BILLIONS OF MILES OF DRIVING

ON THE HOME FRONT

Since Oldsmobile introduced Hydra-Matic Drive to the motoring public on its 1940 models, thousands of enthusiastic Oldsmobile owners have driven billions of "no-clutch, no-shift" Hydra-Matic miles. When the war came along, it put these Hydra-Matic Drive Oldsmobiles to an unusually severe test, subjecting them to the punishment of year after year of extra hard, extra steady use. The service records, and the reports of owners, show that Hydra-Matic Drive has definitely come through with flying colors . . . providing dependable, economical, trouble-free transportation for many thousands of America's war-busy drivers.



ON THE BATTLE FRONT

Soon after Pearl Harbor, this famous General Motors transmission was adapted for use in the Army's light tanks and other fast-stepping military vehicles. In battles all over the world, Hydra-Matic Drive proved that it could "take it," even under toughest combat conditions. Out of this war experience have come many improvements in Hydra-Matic Drive design, resulting in smoother operation, finer performance and even greater reliability.

Oldsmobile



GM

**GENERAL
MOTORS**