ROAD TEST:

'54 HY-DRIVE PLYMOUTH

BY GEORGE JOHNSON

MORE than half a million motorists will become owners of 1954 Plymouths during the coming months. This fact, along with its status as one of the Big Three in the low-priced field, makes it one of the most important cars in the world. With this in mind, the MOTOR LIFE road crew conducted a series of extensive tests in order to accurately evaluate the car.

More than a thousand miles of city and open highway driving were included in the tests, plus some exceptionally severe handling experiments made on the spacious surface of a desolate California dry lake bed. The car selected to be put through these paces was a deluxe Belvedere four-door sedan equipped with optional power steering, Hy-Drive transmission and sporty-looking wire wheels.

Weather conditions during the tests were ideal. However, in assessing the performance data, it should be noted that the acceleration and top speed runs were made at an altitude of more than 3,000 feet—a factor which placed the car at a distinct disadvantage in comparison with other vehicles tested at the former MOTOR LIFE site in an area that was only a few hundred feet above sea level.

ACCELERATION

Despite the handicap of altitude, the Plymouth recorded respectable figures for the family-type automobile. The Hy-Drive absorbed some of the speed noted in the 1953 model, which performed better with a standard transmission. This, naturally, is to be expected. However, the Plymouth does claim to have some of the features of the normal shift since acceleration can be substantially improved by reverting to use of the available clutch. In city traffic, the car behaved very well in this respect and held its own.

TOP SPEED

Six runs were made through the measured mile, half-mile and quarter-mile—with results in each being carefully tabulated and checked. A difference of nearly five mph was noted between the slowest (81.40) and fastest (86.17) trip. During the speed check the car held to the road extremely well with absolutely no sign of strain evident from the engine.

MILEAGE

In this department, the optional torque converter transmission convenience again was obtained at the sacrifice of performance. But the Hy-Drive still was more effective than the average automatic unit. The fuel-flow meter registered a peak of 22.4 mpg at 30 mph, evidently the ideal operating speed for maximum economy for the car.

ENGINE

The Plymouth's engine is the familiar six-cylinder L-head that has given many motorists dependable service. No basic changes were made by the company which can be expected to introduce a V-8 design in the line before long. Operation is reasonably quiet and smooth with no undue noise at any speed. The engine compartment is roomy and all components, except for fuel pump and distributor, are easily accessible. The addition of power-assisted equipment has not caused overcrowding. Modification possibilities are discussed by Roger Huntington in his analysis of '54 engines, in this issue.

TRANSMISSION

Although first introduced last year, this still is one of the departments that rates attention when discussing the new features of the car. The optional Hy-Drive is a torque converter coupled to the standard Plymouth transmission and functions along the same lines as the Chrysler fluid drive, but is an improvement since it permits forward movement without variation in throttle pressure. One of the most attractive points about the Hy-Drive is its price ($145.80), which places it substantially under other no-shift transmissions. The single bad feature is the use of the customary automatic transmission position indicator on the steering column. This caused drivers new to the unit some confusion since they did not expect the gear lever to follow the conventional shift pattern.

HANDLING

This was one of the top features the test drivers discovered in the '54 Plymouth. For a car of its type, it went through turns extremely well and the only major difficulty encountered was in adjusting driving techniques to the power steering, which requires an absolute minimum of effort. Control was a special problem when taking the car through a tight corner at high speed—the steering wheel was not the usual steady grip for the driver since it was so responsive to the slightest pressure.

RIDE

Like all Chrysler automobiles, the Plymouth has a good seating position for both driver and passengers. Legroom is adequate both front and rear, while the chair-high seats give excellent visibility. Rough spots in the road are taken with a soft bounce that adds to comfort but corners develop consequent body sway.

EXTERIOR

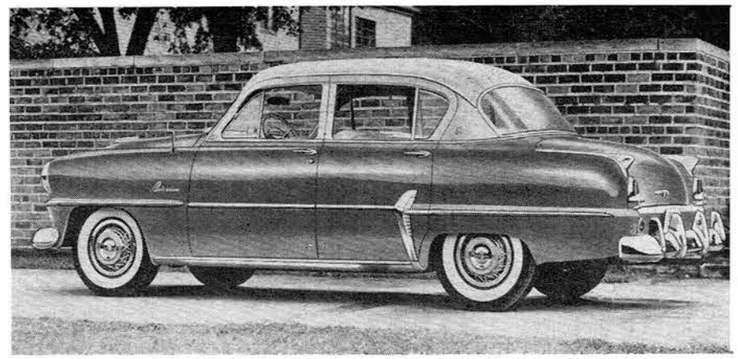
Normal styling changes were made in grille and trim by Plymouth for '54, with a modest increase in overall length. However, the characteristic body lines have been carried over from last year. Increased protection is now available to the front and rear through added bumper guards. The wire wheels contributed to the attractiveness, but on two wheels of the test car the valve stem holes were not properly aligned with those in the rim. The body paint was up to standard and showed no defects.

INTERIOR

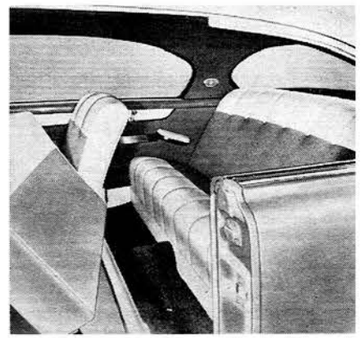
Instruments and glove compartment were centrally located on dash and within easy reach for the driver. Arm rests were favorably commented upon, as were the 1½ turns necessary to lower the front window. And seating is high enough so a fairly tall driver could see the right front fender. The location of the clock atop the dash was a distraction at night, although rest of the glassed instruments were suitably hooded to reduce reflections. The upholstery, which harmonized with the exterior colors, was smooth and obviously designed for easy housekeeping.

GENERAL

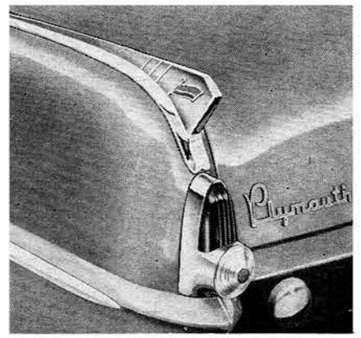
With its power steering, the Plymouth is unsurpassed for ease of control in traffic and while parking. Women drivers probably would find it an exceptionally desirable vehicle for this feature, plus its wide range of attractive color schemes.



Classic lines of Belvedere sedan are typical of new Plymouth. All of 11 body types are longer than last year's cars and carry transmission and steering changes

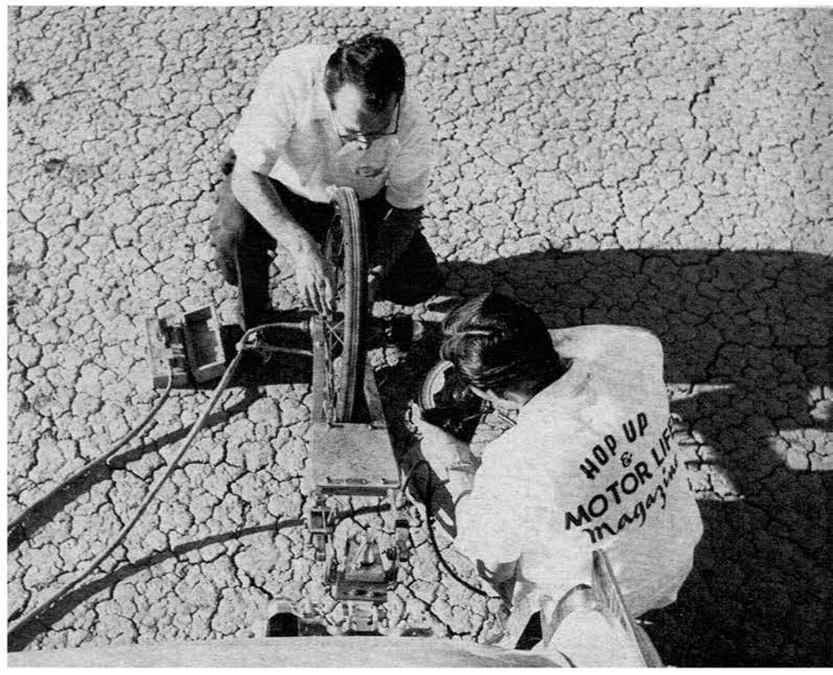


Most noticeable in the '54 Plymouths are the brightly colored vinyl interiors



New taillight assembly and rear fender treatment are features on '54 models

With the cracked surface of a dry lake bed forming the background, members of the Motor Life test crew make final adjustments of the electric fifth wheel and the rev counter (on ground at left) and the speedometer (held in hands at right).



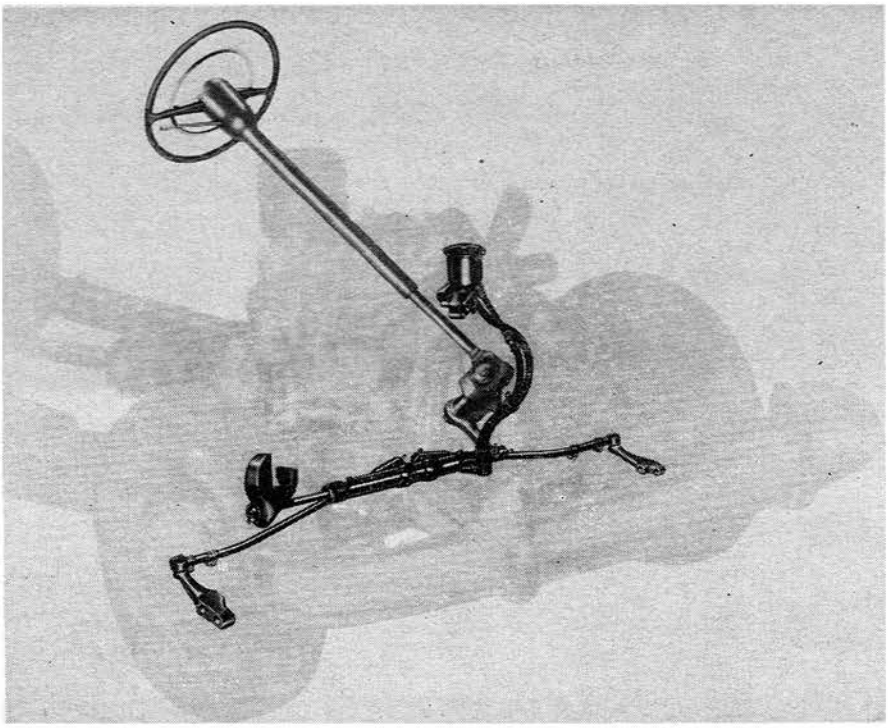
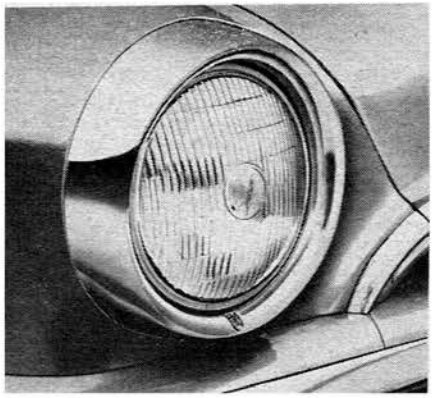


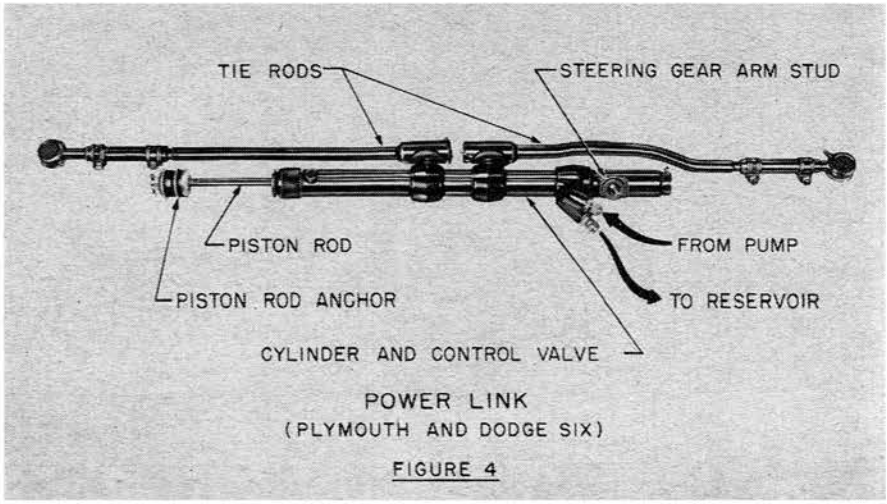
Illustration shows component parts of power link which replaces drag link of conventional steering linkage. Pressure is provided by oil pump attached to generator



New head lamp bezels are lengthened to project beyond the lamp rim for style

Test crew checks instruments following the runs for mileage and acceleration

Plymouth power steering for all '54 models is shown in the photo at top. The bottom picture points out the components of the link type system in the chassis



POWER LINK
(PLYMOUTH AND DODGE SIX)

FIGURE 4

The car has been a big seller in the past and undoubtedly will continue to be in 1954, a factor which carries considerable weight when estimating potential trade-in value. Its strongest points are in the family-car class where it offers numerous advantages, among them a roomy passenger compartment and trunk space. Its mechanical features have been tested by time and can be counted upon to be dependable. The low-priced field is hotly competitive and Plymouth has put out a formidable entry for 1954.

GENERAL SPECIFICATIONS

MAKE & MODEL: 1954 Plymouth Belvedere four-door sedan
ENGINE: six cylinder inline L-head
HORSEPOWER: 100 @ 3,600 rpm
DISPLACEMENT: 217.8 cubic inches or 3,505 cubic centimeters
COMPRESSION RATIO: 7.1 to 1
BORE & STROKE: 3¼x4⅜
MAXIMUM TORQUE: 177 lbs.-ft. @ 1,200 rpm
TRANSMISSION: Hy-Drive (standard shift with torque converter)
REAR AXLE RATIO: 3.73 (3.73 without Hy-Drive, 4.10 with overdrive)
WHEELBASE: 114 inches
TREAD: 55⅞ front, 58½ rear
OVERALL LENGTH: 193½ inches
OVERALL WIDTH: 74¼ inches
OVERALL HEIGHT: 61¾ inches
ELECTRICAL SYSTEM: six volt
TIRES: 6.75 x 15
FUEL CAPACITY: 17 gallons
TEST WEIGHT: 3,524 lbs.
POWER/WEIGHT RATIO: 33.9 unloaded

PRICES

(The figures quoted are the advertised-delivered retail list prices as suggested by the factory. They include Federal taxes, recommended delivery and handling charges. They do not cover transportation costs, state or local taxes, optional equipment or any other charges that may be made by a dealer.)

	Plaza	Savoy	Belvedere
Four-Door	$1,765	$1,872.50	$1,953.25
Two-Door	1,727.25	1,835	
Club Coupe		1,842.50	
Business Coupe	1,617.50		
Convertible		2,220	2,301
Hardtop		2,064	2,145
Station Wagon	2,064	2,207.25	2,288

ACCESSORIES:

Hy-Drive	$145.80
Overdrive	97.55
Power Steering	139.75
Power Brakes	———
Radio	82.50
Heater	56.25
Directional Signals	13.30
White Sidewalls	26.65 (extra per set)
Wire Wheels, chrome	179.00
Wire Wheels, painted	102.50

TEST CONDITIONS

WEATHER: clear
TEMPERATURE: 71 degrees
WIND: none
ALTITUDE: 3,063 feet above sea level
MILEAGE AT START: 3,302
MILES COVERED: 1,216
GASOLINE: 91 octane
OIL: 30 weight

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PLYMOUTH TEST

(Continued from page 38)

EQUIPMENT: electric fifth wheel, electric speedometer, electric odometer, fuel-flow meter, Perfometer, calibrated clocks.

SPEED TEST SURFACE: asphalt

SPEED COURSE: surveyed quarter-mile, half-mile and mile

PERFORMANCE

ACCELERATION IN SECONDS:

Standing Quarter-Mile	22.4
0-30 mph	6.1
0-45 mph	13.3
0-60 mph	24.5

TOP SPEED:

Fastest One-Way Run	86.17 mph
Slowest One-Way Run	81.40 mph
Average of Six Runs	83.10 mph

FUEL CONSUMPTION:

Steady 30 mph	22.4 mpg
Steady 45 mph	20.7 mpg
Steady 60 mph	16.5 mpg
Total Test Mileage	1,216 miles @ 16 mpg

SPEEDOMETER CORRECTIONS:

Indicated	Actual
30 mph	27.5 mph
45 mph	42.9 mph
60 mph	56.3 mph

STEERING:

Turns, Lock-to-Lock	3¼
Turning Circle	39 feet

HIGH SPEED HANDLING

(Continued from page 43)

more time in air than on the ground are another high speed hazard. It just isn't possible to produce a spring and shock absorber combination that will give "feather-bed, baby-buggy" ride at low speeds without sacrificing control at high speeds. It could be done if the car buyer would go for shocks adjustable from the dash, but such devices are not plentiful so stiffer shock action will have to be substituted in your car.

The most inexpensive way to do this is to add an extra shock absorber at each wheel. Before you do this, be warned that you can't have your cake and eat it too.

The addition of the extra shocks will give you a wonderful feeling of security at high speeds, but at a slower pace your car will ride like a child's toy wagon on a cobblestone street.

One of the easiest methods of obtaining better handling qualities in your car with the least sacrifice in riding comfort is the replacement of squashy air-ride tires with the standard size. Higher tire inflation pressures mean less deforming of the rubber in high-side thrust during turning maneuvers.

Any change in tire size, if the diameter is different, should be accompanied by a wheel alignment job, with a competent expert doing the work. Wheels that fight each other because of misalignment reduce adhesion to the road so much that this point cannot be underestimated.

IN THE NEXT ISSUE:

- FIRST FULL REPORT ON GM'S EXPERIMENTAL CARS FOR 1954
- SPECIAL DESIGN STORY ON AMERICA'S FIRST GAS TURBINE AUTO
- HOW TO LUBRICATE YOUR CAR AT HOME FOR POSITIVE RESULTS