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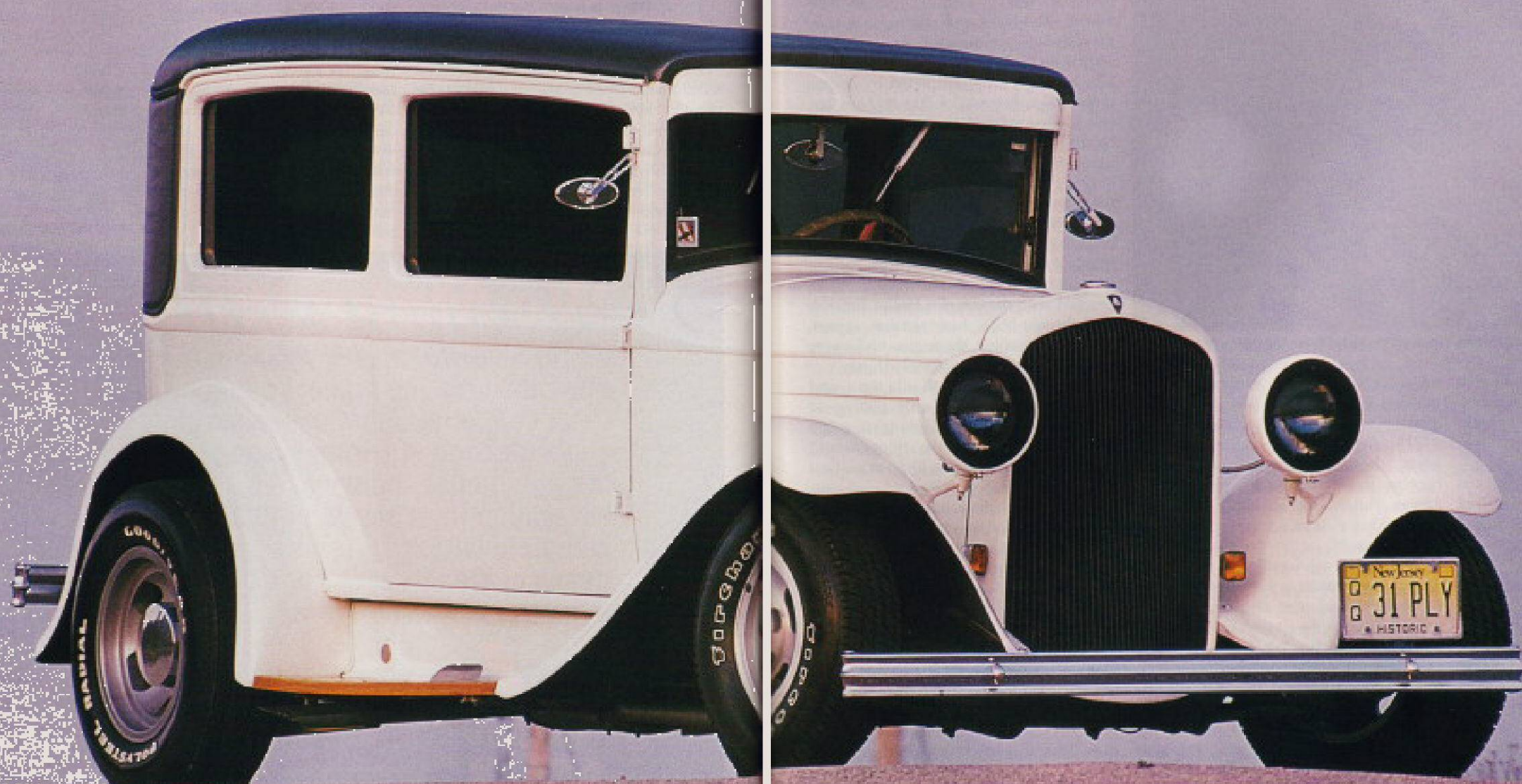


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# Dare to be different



## Pristine '31 Plymouth is all-steel and all-Mopar

By Jim Donnelly

Photography by Jim Dietler

**B**ACK IN THE DAY WHEN THIS Plymouth PA sedan was new and sedately rolling along, Plymouth was already a strong third in the sales race behind Ford and Chevrolet, despite the fact that the brand was only five years old. In 1931, Chrysler built just under 107,000 PAs, just over 23,000 of them two-door sedans like this one, owned by Bob Frank.

Distinguishable by their smartly

rounded radiator shells and oval rear windows, Plymouths were all over the place in 1931. But today, as street rods—especially with an all-Mopar powertrain—they're exceedingly rare finds. The eye-catching bodywork immediately makes the car stand out from the steel and fiberglass ocean of rodded Fords. An added bonus is completing the heritage by installing a stout Chrysler-built engine, a break with the norm in its own right.

Building a Plymouth of this vintage would be a challenge, and a reward, for any rodder. The galaxy of reproduction body parts, trim pieces and mechanical bits that exist for vintage Fords are not nearly as numerous for Chrysler products. Build a car like this, and you'll surely be recognized as an individualist among your hot rod peers.

"I like it," Bob said. "It's a little bigger than a '32 Ford but a lot harder to build.

If it was a '32 Ford I would've had it on the road in a year. As it was, I had to go to car shows and find pieces, and measure everything up to make sure it would fit."

Bob's sanitary white '31 sedan is a rod that is at once both subtle and attention getting, especially among the Pentastar set. Bob knows why. Before he heavily redid the Plymouth five years ago, it had a small-block Chevy for power.

"The best thing about having a Mopar

is the Mopar engine," he said. "When I'd go to a show and these Mopar guys would see that the Plymouth had a Chevy engine in it, they'd practically start throwing rocks at me."

Bob lives in Harrington Park, New Jersey, and has devoted his life to building things: custom homes by day, cars and street rods in his spare time. When it comes to brand loyalty, he exhibits no prejudice: His current project is a 1968

Chevrolet short-bed pickup that is going to be turned into a big-block Pro Street stormer. His daily transportation is a 2000 Ford Mustang GT.

The Plymouth's metamorphosis has lasted a generation. In 1971, Bob owned a '31 Plymouth PA coupe that he was hoping to eventually restore. The coupe needed new fenders, but instead of scouring for those components, he spotted a classified ad in a local newspaper offering a com-



340-cu.in. Plymouth engine has a Holley throttle-body fuel injection, ported heads and Sanderson headers.

plete '31 sedan for sale with a valid title. He contacted the owner, and soon realized he wasn't getting a typical parts car: The hood and grille shell were gone—the owner had tried to cram a 426 Hemi into the car.

"I could have had a blueprinted 426 Hemi, but he wanted \$1,200 for the car and the engine, and I didn't have it, or the skill to handle the project. So I bought the car without it for \$800."

The Plymouth has actually led three lives as a street rod. The first didn't last long. In 1972, he dropped a 1965 Chevrolet 327-cu.in. small-block and a Turbo-Hydramatic 400 transmission into it and took it on the road, despite having no interior. The handling and braking were so poor he almost immediately parked it. Bob pushed the car into his garage and there it sat. And sat. And sat some more, through four presidential administra-

tions. Bob would occasionally make some motions at working on it, but always got distracted. Then, in 1987, things changed.

"I was at the point of selling it several times," he said. "My wife was on me because it was taking up space in the garage. Finally, she said either work on it or get rid of it. It took me 17 years to get it on the road."

The second-edition PA hit the streets after getting built with a lot of 1970s technology that was already seriously outdated when the project was completed. It still had the 8-3/4-inch Chrysler rear that was in the car when the previous owner attempted the Hemi transplant. From salvage yards, Bob acquired Corvair front-end parts to replace the Plymouth straight axle, and a Jaguar rack-and-pinion assembly. The car even had square headlights for a time.

In 1994, weary of being hectored by Chrysler nuts, Bob again parked the car for a major rebuild, focused around putting an all-Chrysler drivetrain in it. The first step was buying a 340-cu.in. Plymouth short block and rotating assembly that had been intended to be a race engine for an acquaintance's 1971 Duster. The assembly was completed by engine builder Ken Kopecki of Edison, New Jersey. The completed engine was built by North Jersey Performance & Machine, of Emerson, New Jersey.

Once the car's rebuild was completed, Bob immediately realized he had serious driveability problems. The original short block had been fitted with a race-spec Mopar Performance cam with an aggressive .488 lift and .298 duration. When coupled with the 900 cfm Holley Pro-jection throttle-body fuel-injection system originally installed, the engine had a very rough idle and was extremely thirsty.

"I could never get it to idle right, and with 3.23 gears, I was only getting 10 mpg," he said. "Plus, if you were going slowly in a parade, the thing would overheat in five seconds. I had to make it more streetable."

Bob accomplished that by making two changes. The first was to replace the original cam with a milder Mopar Performance unit matching the grind for the 440 Six-Pack. He also switched to new, lower-volume Holley 950 Commander four-barrel throttle-body injection with 700 cfm capacity. It's an uncommon element of cybertech on a pre-war street rod. He said tuning it is a snap, by connecting its digital control unit to the data port of his Dell Pentium 4 notebook downloaded with Windows-compatible Holley mapping software.

Mann's Garage in Westwood, New Jer-



Hand-cut oak flourishes offset burgundy interior.



Diminutive oak dashboard snugly accommodates air conditioning outlets. Steering column is GM.

sey, fabricated an exhaust system based around ceramic-coated Sanderson Block Hugger headers. They bent a set of dual 2-1/2-inch aluminum tailpipes, fitted with Turbo Action mufflers, with a central H-pipe to quiet things down just a tad.

Closter Automotive Transmission in Closter, New Jersey, rebuilt the Plymouth's 904 TorqueFlite three-speed automatic Bob had installed earlier, after its first torque converter came apart. The job included installation of a B&M two-speed shift kit and a Pro-Torque converter with a 2,400 rpm stall speed. The 8-3/4-inch rear came from a 1968 Dodge Coronet, has Positraction, stock Chrysler drum brakes, and originally had 4.10:1 rear gearing, until Bob swapped in a 3.23 center section. At least for the moment, it is located by the last original mechanical components on the car, authentic 1931 Plymouth semi-elliptic leaf springs.

For the front suspension, Bob turned to Martz Chassis Engineering of Bedford, Pennsylvania, a builder of street rod parts and racecar chassis. They fabricated and shipped Bob a weld-in independent front setup with Martz tubular A-frames and spindles, 1970s Chevelle 10-inch solid brake rotors, single-piston Chevrolet S10 calipers, a steering rack from a Chrysler K-car and press-in Chrysler ball joints. Bob fitted in a tilt steering column from a 1986 Oldsmobile Cutlass with stock column shifter. PRO Shocks coilovers are used up front; the rear shocks are adjustable Monroes originally intended for a 1970s Lincoln.

The PA sedan body was largely intact, although Bob had to weld in several patch panels, mostly around the running-board aprons, which a friend cut from a discarded 1948 Ford hood and MIG-welded into place. In 1931, Plymouths



Dirt track-bred Martz front suspension combines tubular A-arms and PRO Shocks coilovers.

had wood floors, and Bob first replaced the rotted original with plywood, then oak, before welding in a universal floor-board kit from Bitchin Products. R&R Fiberglass of Cleveland, Tennessee, provided a reproduction fiberglass 1932 Plymouth PB grille shell, which Bob filled with a repro '32 Plymouth grille from Alumicraft of Bellwood, Pennsylvania. The cooling system from Walker Radiator Works of Memphis, Tennessee, is a three-row brass unit that Bob acquired around 1988. The hood is from steel body panel specialist Rootlieb of Turlock, California.

Later, Bob removed the older, cracking burgundy paint with a combination of aircraft stripper and hand sanding. Three coats of RM Automotive Finishes lacquer primer went onto the sheetmetal. Antique Auto Works of Bergenfield, New Jersey,



## Owner's view

### DON'T EVEN ASK BOB FRANK

How many hours he's sunk into his '31 Plymouth street rod. The car's been reinvented several times, and now he's almost satisfied with it, and likes using it to pull his restored 1946 Kenskill Teardrop travel trailer.

"It's evolved quite a bit since I first put it on the road. The driving force, for me, is to make it ride good, and also look good. I was looking for the right stance and, at first, lowered it too much, to the point where there was no suspension left. But now, it has a good ride with safety and reliability.

"Since I installed the new front end, the car has handled like a dream. It almost has a sports-car feel and it also rides as hard as a sports car. I cruise on all those Jersey highways at 65 or 70 mph with no problems. Before I got the stance right, it sat too high up, and the front end would start airplaning at about 50 mph. It holds the road really well.

"Before I put in the 340, it had a 327 Chevy with 350 horsepower, and this feels a lot stronger. It's got lots more bottom-end torque, and it's so good off the line. I don't race it, and I'm not looking to burn rubber anymore, but the 340 has more power than you'll ever need. Believe me, there's enough of it to scare you.

"It still needs some work. The leaf springs are going to have to be replaced. I had them recurved, but they're settling down again, so I'm going to put a four-bar system on it. The chassis still needs filling and smoothing. I've owned the car for 30 years; it's become part of the family, and I expect to continue updating it for another 30 years. Driving down the road at highway speeds and having people stare at the car or smile is a great feeling."

—Jim Donnelly



Vented hood side panel, body-color headlamps augment sweeping PA fender contours.



### '31 Plymouth PA Specifications

<b>Body:</b>	
Type .....	Two-door sedan
Material .....	All steel
Color .....	RM Automotive Finishes Arctic White, basecoat/clearcoat
<b>Chassis:</b>	
Construction .....	Body on stock frame
Steering .....	Chrysler K-car rack and pinion, manual
<b>Suspension:</b>	
Front .....	Equal-length control arms, PRO Shocks coilovers
Rear .....	Semi-elliptic leaf springs, Monroe adjustable shocks, Lakewood traction bars
<b>Brakes:</b>	
Front .....	1970s Chevrolet Chevelle 10-inch solid rotors, 1980s Chevrolet 5-10 calipers
Rear .....	1968 Dodge Coronet 9-inch drums
<b>Wheels:</b>	
Front .....	Fenton slotted mag-type, 14x5-inch
Rear .....	Fenton slotted mag-type, 15x7-inch
<b>Tires:</b>	
Front .....	Firestone Firehawk radial P205/70-14
Rear .....	Goodyear Polysteel radial P215/75-15
<b>Engine:</b>	
Year/type .....	1971/Plymouth OHV V-8
Displacement .....	340 cubic inch
Bore x stroke .....	4.04-inch (+.030 over) x 3.31 inches
Compression ratio .....	10.0:1
Horsepower .....	500 (approx.)
Camshaft .....	Hydraulic, Mopar Performance
Lifter type .....	Roller
Cylinder heads .....	Mopar Performance, ported
Pistons/bearings .....	Unknown
Fuel system .....	Holley 950 Commander fuel injection, 700 cfm
intake manifold .....	Mopar Performance dual-plane
Ignition system .....	Mopar Performance electronic, Accel coil
Cooling system .....	Walker radiator, 3-inch core
Exhaust system .....	Sanderson Block Huger headers, Turbo Action mufflers
<b>Transmission:</b>	
Type .....	Chrysler Torqueflite 904, 3-speed automatic
Torque converter .....	Pro-Torque, 2,400-stall
Shifter .....	Stock GM
<b>Rear Axle:</b>	
Year/type .....	1968 Dodge Coronet
Ratio .....	5.25:1
Axles .....	Stock Chrysler
<b>Interior:</b>	
Seats .....	Nissan Maxima
Dash .....	Stock 1951 Plymouth, wood/vinyl overlay
Upholstery/Color .....	Naugahyde and vinyl/burgundy
Steering wheel .....	Stock Oldsmobile Cutlass
Carpet color .....	Burgundy
Gauges .....	VDO
Stereo .....	Pioneer AM/FM mini-CD

applied the finish, three coats of RM Arctic White basecoat lacquer topped with a single application of Du Pont urethane clearcoat. The chassis was sprayed gloss black, and Bob accented the 1970s Fenton slotted wheels with burgundy lacquer before topping them with Al's adaptor polished caps from Al's Antique Auto Parts in Newcastle, California.

Bob chose a highly unusual source for his interior basics: a 1982 Nissan Maxima, which he found demolished in a local salvage yard. The reason was, the leather front buckets and rear bench seats were virtually a drop-in job, because the width of that Maxima's interior and the PA sedan's are nearly identical. The wrecked Maxima also contributed the front and rear armrests, which went onto door panels Bob cut from 1/8th-inch Masonite. The front three-point harnesses with inertia reels and rear seat belts also came from the Maxima. D&D Auto Upholstery of Bergenfield, New Jersey, did the interior upholstery in burgundy vinyl.

Juliano's Hot Rod Parts of Vernon, Connecticut, supplied a power window kit and related hardware. The HVAC is from Air-Tique, flowing 360 cfm of R-12 refrigerant-cooled air through three dash vents. Bob fitted polished oak to the stock Plymouth dash, filling its instrument cluster with VDO analog gauges. The



Early rod rendition had small-block Chevy power.



Plymouth's evolution lasted 17 years.



Nissan Maxima front seats are a perfect fit in the Plymouth's narrow interior.

sound system is an in-dash Pioneer AM-FM stereo with mini-CD player, and Bob plans to add a six-disc Pioneer CD changer under the rear seat.

Bob said his ultimate goal was to transform the Plymouth in terms of performance and appearance. He reached it, without compromising his desire to make a clear break from the hordes with both his car and its engine.

"Back in the '70s, everybody had a Model A or some kind of a Ford with a Chevy engine," he said. "I've never been one for the standard cookie-cutter kind of thing. At the time I got this Plymouth, I'd just gotten rid of a '39 Chevy. I guess I am more of a Chevy person than Mopar, but I really like this Plymouth." ■



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