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SILVER-SIDED DAWN

Hemmings Muscle Machines - FEBRUARY 1, 2007 - BY [DANIEL STROHL](#)

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After half a century, the 1957 Rambler Rebel retains all its charm

How often does a single performance figure define a car? Horsepower figures get inserted into ad copy, engine displacement badges adorn fenders and quarter-mile times even get a little play. But manufacturers, reviewers and the buying public still see a car in multiple aspects: Design, handling, interior and price all figure into the car's overall desirability.

For the 1957 Rambler Rebel, though, the story all boils down to seven and a half seconds.

By 1957, zero-to-60 times started to drop rapidly in step with the ongoing horsepower war

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among the major domestic manufacturers. Chrysler's Hemi engines expanded to 392 cubic inches and up to 390 horsepower, Chevrolet made its Hot One hotter with the introduction of Rochester fuel injection and Ford toyed with supercharging its Y-blocks.

Nash's Rambler brand, just three years removed from George Mason's merger of Nash and Hudson to form American Motors, had little going for it in the horsepower wars. Regardless, George Romney, who took the reins of American Motors when Mason died shortly after the merger, handed his new Rambler a slingshot and shoved it into the arena with all the giants.

The reasoning behind the Rebel seems rather vague now, 50 years after its brief appearance. Some have speculated that Romney, the former managing director of the Automobile Manufacturers Association, knew of the impending AMA racing ban and wanted to get a hot car in before it took effect. Some have told tales of enthusiastic young gearheads in the American Motors ranks, eager to wring the potential out of a new engine program. It could have been desire on Romney's part to capture the performance market that the Hemis and fuelies readily provided for. Some have even pointed to the legacy of the speedway-domeingering Hudson H-Twin cars.

Whatever the reasoning, American Motors began to lay the foundations of the Rebel two years before, with the introduction of the newly redesigned 1956 Rambler. In the day's definitions, the 108-inch wheelbase unibody Rambler fell under the compact category. Stylists Bill Reddig and Ed Anderson incorporated the Nash-Healey's Pinin Farina-designed inboard headlamps and a dramatic reverse-sloped C-pillar.

Economy reigned supreme at American Motors in those days, so unsurprisingly, the company never offered a V-8 until 1955, when Romney worked out a deal with Packard: Buy parts from us and we'll buy your V-8 engines. On the surface, the deal made sense. American Motors could quickly offer a V-8 without spending the man-hours and money to develop a completely new engine, plus the company would be able to bolster the bottom line by selling parts to Packard. But Packard didn't hold up its end of the deal, angering Romney in the process. Besides, the Packard engine--all 320 cubic inches, 208hp and 300-lbs.ft. of torque out of a two-barrel carburetor--proved less than capable of moving around its bulk plus the Ambassador that surrounded it. For 1956, Packard discontinued the 320 V-8, leaving only the 352 V-8, but the 352's additional 12 horsepower and 20 pound-feet didn't exactly set AMC afire. Besides, Packard had its own troubles and wouldn't build the engine after 1956.

So, in 1955, Romney set his chief engineer, Meade Moore, on the task of developing a new overhead-valve V-8 specifically for the American Motors products. For introduction, say, in the 1956 model cars.





Fortunately, Moore had recently hired an engineer named David Potter. According to Edrie Marquez's book, *Amazing AMC Muscle*, Potter had previously worked with Kaiser-Frazer but, when that company moved its automobile production to Argentina, leaving only Kaiser-Frazer's Jeep and military vehicle divisions in the United States, Potter headed over to Kenosha. While with Kaiser, though, starting in about 1951, he had developed an all-aluminum 288-cu.in. V-8. That engine never made it past the experimental stage because Kaiser didn't have the money to develop the engine, according to Mike Sealy's article on AMC V-8 engines on allpar.com.

According to Sealy, Potter remained rather vague when interviewed in the 1970s about whether he brought the engine design with him or simply redesigned it from scratch when he got to American Motors. "But surviving pictures of the K-F 288 show an engine that appears identical to the first-generation AMC V-8," Sealy wrote.

Within 18 months, Potter had the engine ready for production. Moore and Potter revised the design to use iron instead of aluminum. Though this resulted in a heavier engine--about 640 pounds--it was also incredibly strong. They decided to introduce the engine with two displacements, varied by bore because casting blocks with multiple different bores proved less expensive than forging crankshafts with multiple different strokes. Aside from the forged crankshafts, both with a 3.25-inch stroke, the engines benefited from forged connecting rods.

The smaller of the two new engines, the 250, had a 3.5-inch bore and debuted in mid-1956 in the Ambassador Special and Hudson Hornet Special. While it held the title for the smallest American V-8 at the time, it also produced 190hp through its two-barrel carburetor, more than either of Chevrolet's contemporary two-barrel V-8s. In 1957, American Motors made the 250 available in the Rambler, as Romney intended.

The big news out of American Motors for the 1957 model year, though, came on December 8, 1956, when the company formally introduced the Rambler Rebel at the National Auto Show in New York. On the outside, it looked like a Rambler four-door hardtop (Rambler had no two-door models at the time) prepped for the show circuit with a special Silver Grey paint set off by copper anodized side spears. That is, until American Motors executives opened the hood to reveal a Bendix fuel-injected 327.

While American Motors introduced the four-barrel carbureted 327 in the 1957 Ambassadors a little more than a month earlier, the company announced its work on the fuel-injected version in a press release four days before the show. The press release touted the Rebel as the world's first production car with electronic fuel injection and claimed the EFI 327 would produce 288hp. Additional tweaks--replacing the Ambassador engine's hydraulic lifters with solid ones and increasing the compression ratio from 8.5:1 to 9.5:1--helped the Rebel's 327

arrive at that number.

When the first Rebels arrived in customers' hands, though, American Motors replaced the Bendix fuel-injection unit with the same Carter WCFB four-barrel carburetor used on the Ambassador 327. Apparently, Bendix's system wasn't quite ready for prime time--Bendix had successfully created an electronic fuel-injection system for airplanes during the Korean War, but adapting the transistor-based system to automobiles, with their infinitely varying throttle demands, proved troublesome. Bendix did supply fuel-injection units for 35 Chrysler cars the following year, but all of those required warranty replacement with carburetors and only one such DeSoto exists today with its fuel-injection unit intact and running (see *Hemmings Classic Car* #1, October 2004).

With the carburetor, though, the Rebel's 327, complete with the solid lifters and 9.5 compression, still pumped out 255hp. Besides dual exhaust, the Rebel came with a host of standard equipment. All 1,500 that American Motors produced before the AMA ban had the show car's silver paint and copper trim, adjustable shocks, stabilizer bars, custom interior trim and a radio with a trunk-lid-mounted antenna. While regular Rambler buyers could buy their cars with a column-shifted, non-overdrive three-speed manual transmission, Rebel buyers who wanted three pedals had to take the overdrive. They could opt for GM's four-speed Hydra-Matic, though that transmission came with higher 3.15 rear axle gears.

Motor Trend decided to round up all the hot production cars of 1957 for its April issue. Aside from the Corvette, the comparison test included just about every proto-muscle car we hold in such high esteem today: the Chrysler 300-C, Ford's supercharged Thunderbird (and a supercharged Fairlane sedan), Studebaker's Golden Hawk, Oldsmobile's J-2 Rocket, and a fuelie Chevrolet Bel Air. The Rebel looked decidedly out of place stacked against those cars; it had the lowest horsepower rating and the only naturally aspirated, single-four-barrel engine of the 13 cars.

However else *Motor Trend* tested the cars, only the zero to 60 test now stands out, not for the winner's time (It was the fuelie 'Vette's 7-second dash), but for the time recorded by the car that came in second. The Rebel notched a half-second slower time to 60 mph than the Corvette, prompting many people--American Motors among them--to claim the Rebel the fastest sedan in America. American Motors made laminated copies of the article for each of its dealers to prominently display and, to this day, enthusiasts wonder how that test would have turned out had Bendix worked out the Rebel's fuel-injection system. No doubt the Rebel's 4.10:1 rear gear ratio had something to do with its placing, but American Motors did make the ratio standard in manual transmission cars.

Just as quickly as it started though, the Rebel's time in the spotlight ended. American Motors

facelifted the Ramblers for the 1958 model year and, while the Rebel name continued for all V-8 Ramblers, American Motors fully complied with the AMA ban and restricted the 327 to the Ambassador.

Bill Lenharth, director of the Research Computing Center at the University of New Hampshire, has a good Rebel addiction going on. He bought his first, a manual-shifted one, for \$100 in 1966, but it essentially rusted away shortly after. He pined for another one until 1988, when he found another Rebel, this time with an automatic. Still not satisfied, he drove that one until he bought another manual transmission Rebel out of Montana in 1990. He has since collected every bit of information he could on the Rebel and is currently in the process of assembling it all in book form.

Lenharth claimed to have wicked his car up to three-figure territory once out on I-95. While we had the entire New Hampshire International Speedway to ourselves for the photo shoot, I thought it better to let him do the race driver impersonation that day. Other than the feel of a 50-year-old bench seat, nothing about the driver's seating position felt awkward--the way 50-year-old cars normally do.

The normal H-pattern applied to the three on the tree, but the clutch felt awfully heavy while the throttle felt awfully light. Getting the two to synch the first time out took a good amount of effort. I should have simply mashed the throttle; after all, Bill does it all the time and it wasn't like I had anything but the retaining wall to worry about.

Considering the fact that American Motors first let the press drive the Rebel on the sands of Daytona Beach (see *HMM* #6, March 2004), I thought it appropriate to shoot the Rebel here on a NASCAR track. The glass-smooth surface hardly let me get a feel for how the Rebel would handle on typical streets, but the 12-degree banking of the track gave me a good impression of the leaning involved in taking a Rebel around corners--the body of the Rebel remained absolutely flat through the turns while the radial tires remained planted to the track.

The 327 through the dual exhaust sounds deceiving. It sounds like no other V-8 I've heard, but at the same time synthesizes everything you'd expect in an American V-8's symphony. At 60 mph and with the overdrive on, the 327 sounded and felt about 1,000 rpm higher than its actual 2,000 rpm speed. The Rebel felt lighter and more nimble than its contemporaries, though its 3,353-pound shipping weight is 37 pounds higher than a 1957 Chevrolet 210 with a V-8.

Pulling the Rebel down from speed with its four-wheel power drums likely would try my patience with all the chowderheads on the New Hampshire roads, but doing so on the track just results in nice, smooth and fairly repeatable braking distances.

With reluctance, I handed the keys back to Lenharth. We only had use of the track for so long, and I would have liked to spend a few more hours (OK, days) with the Rebel. Whether I'd like to own it is another question--Bill has no qualms, apparently, about driving his one-of-1,500 50-year-old car all over the place.

But I sure can appreciate the bark of the exhaust and the chirp of the tires as he takes one last lap around the speedway.

Owner's View

"I just like the looks, the way it performs," Bill Lenharth, 60, said about his 1957 Rebel. "I always thought it was underappreciated, but it really outperformed the '57 Chevys, and it just looks like it's going fast.

"The whole idea of how it was built and came in and out in one year is just amazing to me. I like preserving a car that's so rare, and it's always a treasure hunt when I find something unique to it.

"The whole look of the car is a little more conservative than the big fins and the chrome that every other manufacturer got into at the time. I'll tell people I have a Rambler, and they get bored, ask me why I'd want to mess with something like that. But then I drive up in it and they're really paying attention." --Daniel Strohl

PROS

- + For its age, it goes like stink
- + Sure to prompt "first muscle car" debate
- + Love-it or hate-it styling

CONS

- Not the best handling for modern traffic
 - Where will you find that trim or interior?
 - Love-it or hate-it styling
-

Club Scene

AMC Rambler Club
6 Murolo Road
North Grosvenordale, Connecticut 06255
860-923-0485
www.amcrc.com
Dues: \$24/year • Membership: 1,000

Nash Car Club
1N274 Prairie
Glen Ellyn, Illinois 60137
630-469-5848
www.nashcarclub.org
Dues: \$30/year • Membership: 1,700

Specifications

Price

Base price: \$2,786

Engine

Type: OHV V-8, iron block
Displacement: 326.7 cubic inches
Bore x Stroke: 4.00 inches x 3.25 inches
Compression ratio: 9.0:1
Horsepower @ rpm: 255 @ 4,700
Torque @ rpm: 345-lbs.ft. @ 2,600
Valvetrain: Mechanical valve lifters
Main bearings: 5
Fuel system: Single Carter WCFB four-barrel carburetor, mechanical pump with vacuum booster
Lubrication system: Pressure, gear-type pump
Electrical system: 12-volt
Exhaust system: Dual exhaust

Transmission

Type: Borg-Warner T-85 three-speed manual with automatic overdrive, 10.5-inch clutch
Ratios 1st: 2.57:1

2nd: 1.55:1
3rd: 1.00:1
4th: 0.70:1
Reverse: 3.15:1

Differential

Type: American Motors Model 39
Ratio: 4.10:1

Steering

Type: Gemmer worm and roller with Monroe linkage-booster
Ratio: 17.2:1
Turns, lock-to-lock: 3.5
Turning circle: 37.4 feet

Brakes

Type: Hydraulic, 4-wheel boosted drum
Front/Rear: 9.0-inch drum

Chassis & Body

Construction: Unitized steel
Body style: Four-door hardtop
Layout: Front engine, rear-wheel drive

Suspension

Front: Independent, upper and lower control arms; coil springs; stabilizer bar
Rear: Torque tube; coil springs; anti-sway bar

Wheels & Tires

Wheels: Stock stamped steel with hubcaps
Front: 15 x 5.5 inches
Rear: 15 x 5.5 inches
Tires: Black Diamond whitewalls
Front: 205/75R15
Rear: 205/75R15

Weights & Measures

Wheelbase: 108 inches
Overall length: 191.1 inches

Overall width: 71.3 inches
Overall height: 58.4 inches
Front track: 57.8 inches
Rear track: 58.0 inches
Shipping weight: 3,353 pounds

Capacities

Crankcase: 6 quarts w/filter
Cooling system: 21 quarts w/heater
Fuel tank: 20 gallons
Transmission: 4 pints
Rear axle: 4 pints

Calculated Data

Bhp per c.i.d.: 0.78
Weight per bhp: 13.15 pounds
Weight per c.i.d.: 10.26 pounds

Production

Rambler produced 1,500 Rebels in 1957; all had the four-door hardtop bodystyle

Performance

Acceleration:
0-60 mph: 7.5 seconds*
1/4 mile ET: 16.12 seconds @ 87.54 mph
Top speed: 110-plus mph
*From the April 1957 issue of *Motor Trend*

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