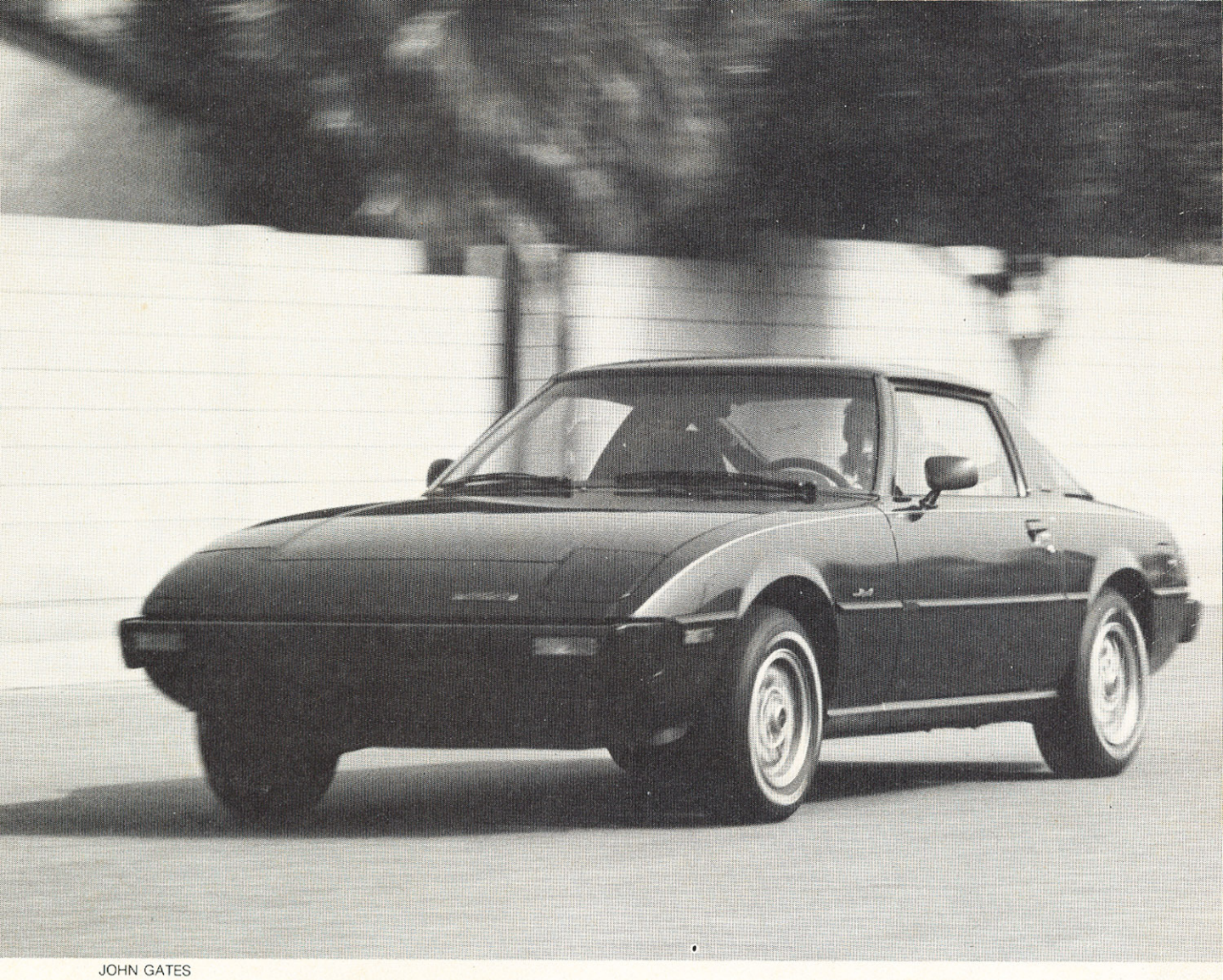


JOHN GATES

Pocket ROCKET

The Mazda RX-7 Turbo: homespun killer car

by Ro McGonegal

Blew his eyes out. The guy in the 924 Turbo never knew what hit him. What had started as a bit of sport ended with the non-surgical removal of an inch or so of his manhood. The slate gray RX-7 had spit in his face and then hooked it down the nearest off-ramp, leaving the driver of the Porsche feeling like he was covered with a thin coat of slime. *God,* he thought, *that was a real bad dream. If I ever see that turkey again, things will be a lot different, you can bet your Weissach on that.*

A week later, on that same stretch of interstate, the man in the Porsche gets an eerie feeling over his right shoulder. The hot tingle plays across the top of his head. *Hmmm,* he muses, *that car's got flipped-up headlights. Must be some sucker in a 924. I'll just slip the lever back into 4th and lay on it when he can see the whites of my eyes.*

Any half-second now and I'll let this miscreant have it out the tailpipe. Just let him come alongside and . . . nah, couldn't be that *Mazda again. My God, he's not even looking over, he's just . . . Maybe 3rd gear . . . no, no, it's all over . . . again.*

The antagonist in this vignette is an unassuming man named Bob Richards. A man, who, by his own admission, is "no driver." But he does like the feeling he gets having a rocket in his pocket, and he swears this tale is true.

Richards owns a very successful business (Pacific T-Top, 7611 Slater, Huntington Beach, CA 92647, (714) 842-3015) and was looking to expand

same by marketing a recently produced line of BAE turbocharger kits for the rotary RX-7. The result is a pint-sized killer car that anyone can have for less than half the price of an "exotic."

The Pocket Rocket is an absolute bomb, a futuristic approach to a good mileage/exceptional performance sandwich that probably hasn't existed until now. In the past, agility and litheness of the basic car notwithstanding, you either got your performance and paid for it, or you took your conservation and paid less. There was little, if any, melding of the two.

The heart of the matter is an internally stock twin-rotor engine, which, with the aid of a 6-pound-boost turbocharger, makes 170 horsepower from the equivalent of 70 cubic inches. Putting that into perspective is easy: modern 300-cubic-inch V-8s don't make that much real horsepower.

The hot-air blower works on the rotary exactly as it works on a reciprocating engine, but the similarity ends there. The piston engine is full of parts that go up and down, as well as around; but the twin rotors spin on a common shaft, just as the impellers in the turbocharger spin on their common shaft. A graphic example of one hand washing the other.

At this point, you step into the bizarre world of spun-upon spinners. The first apparent difference is noise. With the puffer at work, the snail-quiet Wankel becomes a seething, burbling echo can, alive with what *sounds* like the whirring of shafts and gears. At high rpm, the rotors' pitch changes drastically, and you are assaulted by a midnight cat-shriek from the oversize exhaust. That curious sound is akin in fear-quotient to the whooper siren on a police vehicle.

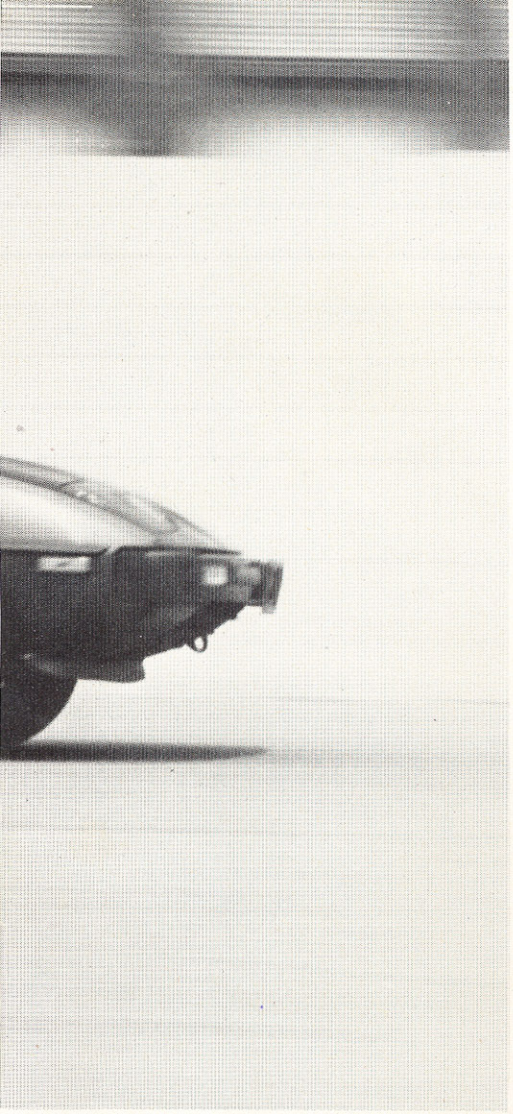
Then you notice that the rotary's inherent smoothness becomes even creamier in the presence of the turbo, and this is best felt during normal operation and at freeway speed. A light touch on the throttle propagates a mild boost condition, and the RX-7 flows around the obstruction in less time than you think it did. You are suddenly in a time warp that puts you far enough ahead of what you were passing to make you want to let off the gas.

That's one way of engaging the turbo. There's another, more pleasurable way to do the same thing—a way that soon becomes habit. You mash the accelerator through low gear, and at the point of gear change, when the turbo hot air is already flowing heavily, you pull the lever into 2nd and land smack in the middle of a full-boost condition. Even though the tires spin, you and the car are catapulted in a frenzy of engine ring and heartbeat. And you can keep this up as long as you've the highway and the inclination. It's like having a birthday every day.

You can begin this madness at 4500 rpm without spinning the tires too much and find a low-15-second/90-mph time card waiting at the end of the quarter mile. But if you want to go faster, you can install a larger-diameter fuel line and hook it to a good electric fuel pump. If you don't, the rotary will run out of gas as soon as you plop it in 4th gear.

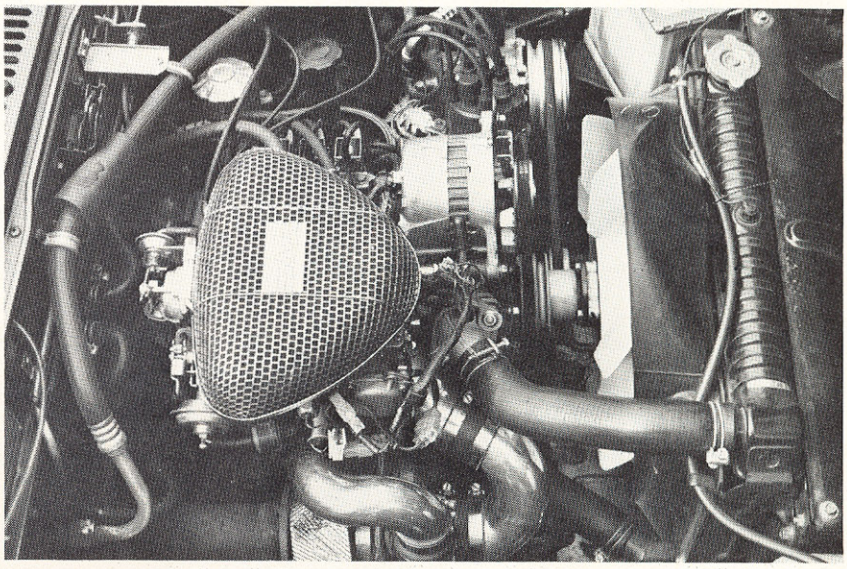
At lower speed, say 0-60, where 95% of all ego-action happens, the turbo RX-7 will stick to the side of an "exotic" like a leech and stay there upwards of 130 mph.

But before you can harass the purists, you've got to get the $1595 kit and put it on, which Richards says can be done by any competent wrench. The array includes the turbocharger and installation kit, which consists of necessary ducting, oil lines, manifolding and a plenum for



rotary's weak point: cold start and cold driveability. For the first minute or so, it's best to have the choke all the way out. That helps with cold-throttle tip-in and maintaining idle speed. Otherwise, you'll have to keep one foot on the gas at all times until the spinner warms.

And, according to Richards, at least 40 leadfoot wackos already had that experience before we arrived. Except for a slight crink in the rear universal joint, we never would have guessed. *Sports Car Graphic* is about cars not necessarily for the masses. It's about cars that are fun to drive and fun to be in. At $11,500 or less, the turbo RX-7 is a whole lot more fun to drive than cars costing twice as much. SCg



Exhaust is 3-inch-diameter, straight off the turbo housing; then, it necks down to 2½ inches through the turbo muffler.

MAZDA RX-7 HORSEPOWER COMPARISON

RPM	STOCK	TURBO
2500	52	63
3000	60	75
3500	72	94
4000	82	110
4500	90	130
5000	100	160
5500	104	171
6000	98	166
6500	90	162

PERFORMANCE (in seconds)

	0-60	¼-mile
924 Turbo	7.7	16.3
911SC	6.3	15.3
Corvette L82	6.6	15.3
RX-7	8.9	17.0
RX-7 Turbo	6.5	15.2

the stock RX-7 4-barrel carburetor. In the interest of driveability, the carb requires a spring change in its secondary diaphragm to eliminate hesitation when all four barrels are opened.

During our term with the turbo, weather ranged from rainy 50s to very dry 80s, and we discovered that, while the turbo presented no new problems in reliability, it did nothing to alleviate the

ROAD TEST DATA

Turbo RX7

GENERAL

Vehicle type	Front-engine, rear-drive, 2-pass. sports coupe
Base price	$9945
Options on test car	Pacific T-Top moonroof, turbocharger conversion
Price as tested	$11,838

ENGINE

Type	Twin rotary (Wankel)
Displacement	70 cu. in./1146 cc
Compression ratio	9.4:1
Fuel system	Turbocharged, 4-bbl carburetor
Recommended fuel	Unleaded
Emission control	Air injector, thermal reactor
Valve gear	N.A.
Horsepower (SAE net)	See comparison chart
Torque (lb.-ft., SAE net)	N.A.
Power-to-weight ratio	14.2 lb./hp

DRIVETRAIN

Transmission	5-speed manual
Final drive ratio	3.90:1

DIMENSIONS

Wheelbase	95.0 in.
Track, F/R	55.9/55.1 in.
Length	168.7 in.
Width	65.9 in.
Height	49.6 in.
Ground clearance	6.1 in.
Curb weight	2420 lb.
Weight distribution, F/R	53/47%

CAPACITIES

Fuel capacity	14.5 gals.
Crankcase	4.0 qts.
Cooling system	9.5 qts.
Trunk capacity	23.4 cu. ft.

SUSPENSION

Front	Independent, MacPherson struts, transverse link, coil springs, shocks, stabilizer bar
Rear	Solid axle, 4-link longitudinal arms, Watts link, coil springs, shocks

STEERING

Type	Recirculating ball
Turns lock-to-lock	3.7
Turning circle, curb-to-curb	31.5 ft.

BRAKES

Front	8.9-in. ventilated discs, power assist
Rear	7.9-in. finned drums, power assist

WHEELS AND TIRES

Wheel size	13 x 5.5 in.
Wheel type	Aluminum alloy
Tire make and size	Bridgestone 185/70HR13
Tire type	Steel radial
Recommended pressure (psi), F/R	N.A.

ACCELERATION

0-30 mph	2.73 secs.
0-40 mph	3.87 secs.
0-50 mph	4.91 secs.
0-60 mph	6.48 secs.
0-70 mph	8.29 secs.
0-80 mph	10.50 secs.
Top speed	130 mph (est.)
Standing quarter mile	15.21 secs./89.60 mph
Passing times (40-60 mph)	2.61 secs.
(50-70 mph)	3.38 secs.

BRAKING

30-0 mph	33 ft.
60-0 mph	146 ft.

FUEL CONSUMPTION

EPA City	16 mpg
SCG 73-mile test loop	24.3 mpg

SPEEDOMETER

Indicated	30	40	50	60
Actual mph	30	40	50	60