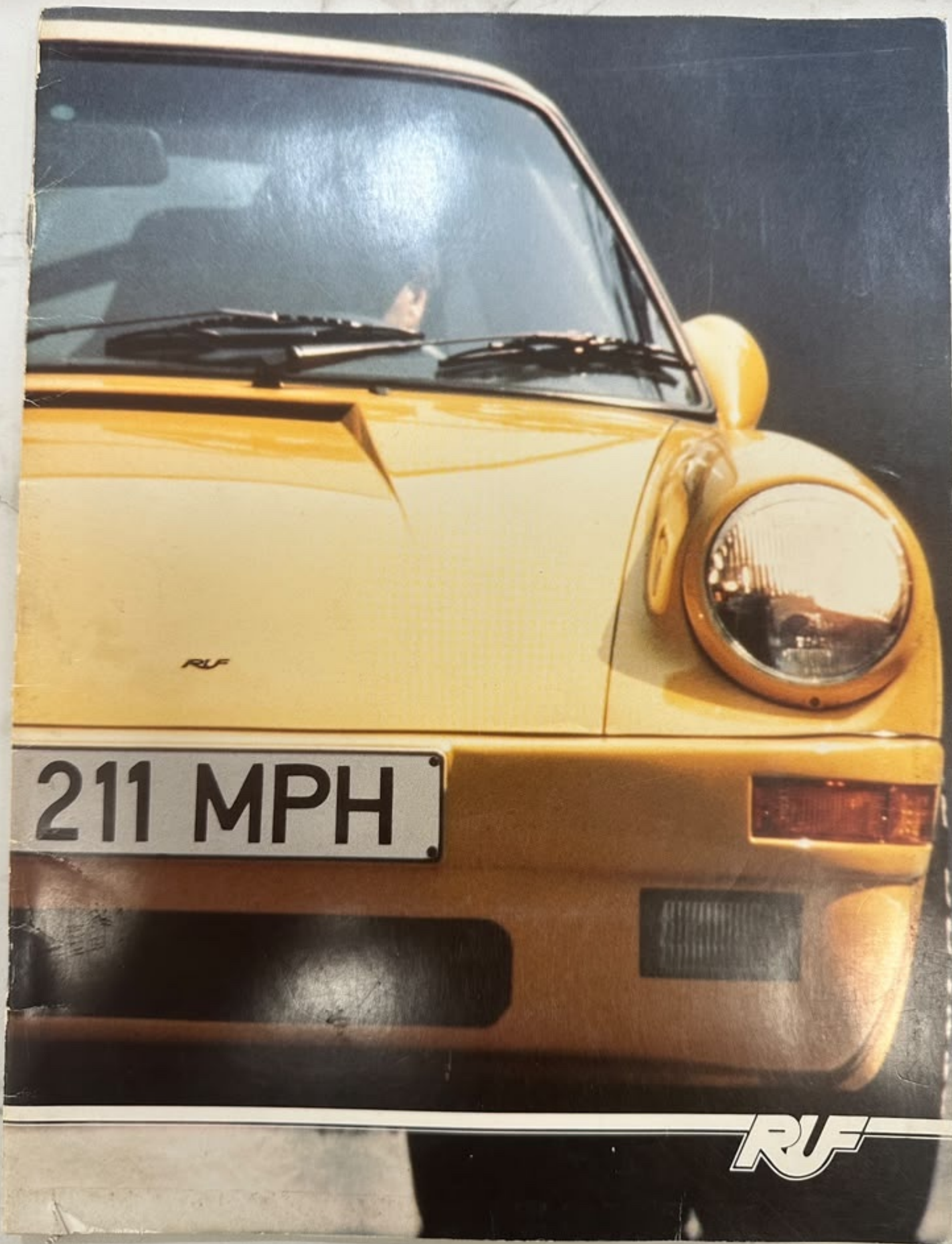




RUF

To Chris,

Best wishes

[Signature]



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RUF Autos . . . The Fastest Production Car in the World!

We all dream of possessing the best . . . the finest . . . the uniquely superb. RUF Automobiles are precisely that. The best of their kind. And the fastest production cars in the world.

RUF Automobiles GmbH, manufacturers of the fastest production cars in the world, dates back to 1939 when Alois Ruf's pronounced Luis Roof's father started with a gasoline station. At the same location, in the small country town of Pfaffenhausen, Germany, (west of Munich) the small gasoline station has grown into an ultra-modern manufacturing and research facility.

The new facility, built in 1979, has two 1000 h.p. engine dynamometers, a chassis dynamometer, a brake test dynamometer, frame and chassis jigs, a paint booth, an assembly area, and a full service maintenance shop. At this time there are plans on the drawing board to increase the scope of the facility should world-wide demand continue at its current pace.

RUF Automobiles GmbH, first attained their status as manufacturers of the "World's Fastest Production Car" in 1984. *Road & Track* magazine supervised the challenge between 17 of the world's "Super" cars (see the September 1984 issue of *Road & Track*). The RUF 911 Turbo came out on top with a speed of 186.2 MPH.

In April 1987, RUF Automobiles GmbH, won the prestigious challenge again. This time with the amazing speed of 211 MPH, 0 - 60 MPH in 4.0 seconds, and the ¼ mile in 11.7 seconds. See the July 1987 issue of *Road & Track* magazine, the competition was among the very best.

Frankly, for most people, owning a RUF car will remain a dream. Only a very select few will ever experience the speed, power, performance and excellence of ride that come with ownership.

For many years, RUF autos could be obtained only directly from Alois Ruf's facility in Pfaffenhausen,

Germany. And in Europe, clients still wait up to two years to obtain these handcrafted cars.

While RUF autos are still exceedingly rare, RUF Automobiles International, Inc., through its authorized dealers, can now offer a fortunate few here in the United States the opportunity to own their own RUF car.

These superb driving machines have obtained full U.S. certification from both the Environmental Protection Agency (EPA) and the Department of Transportation (DOT); and are recognized as having original manufacturer status with the U.S. government. Simply, this means that a RUF Automobile is **NOT** a "gray-market" car, and doesn't have the "certification", "federalization", and insurance problems.

Your achievements entitle you to own the best. Finally, it can be yours.

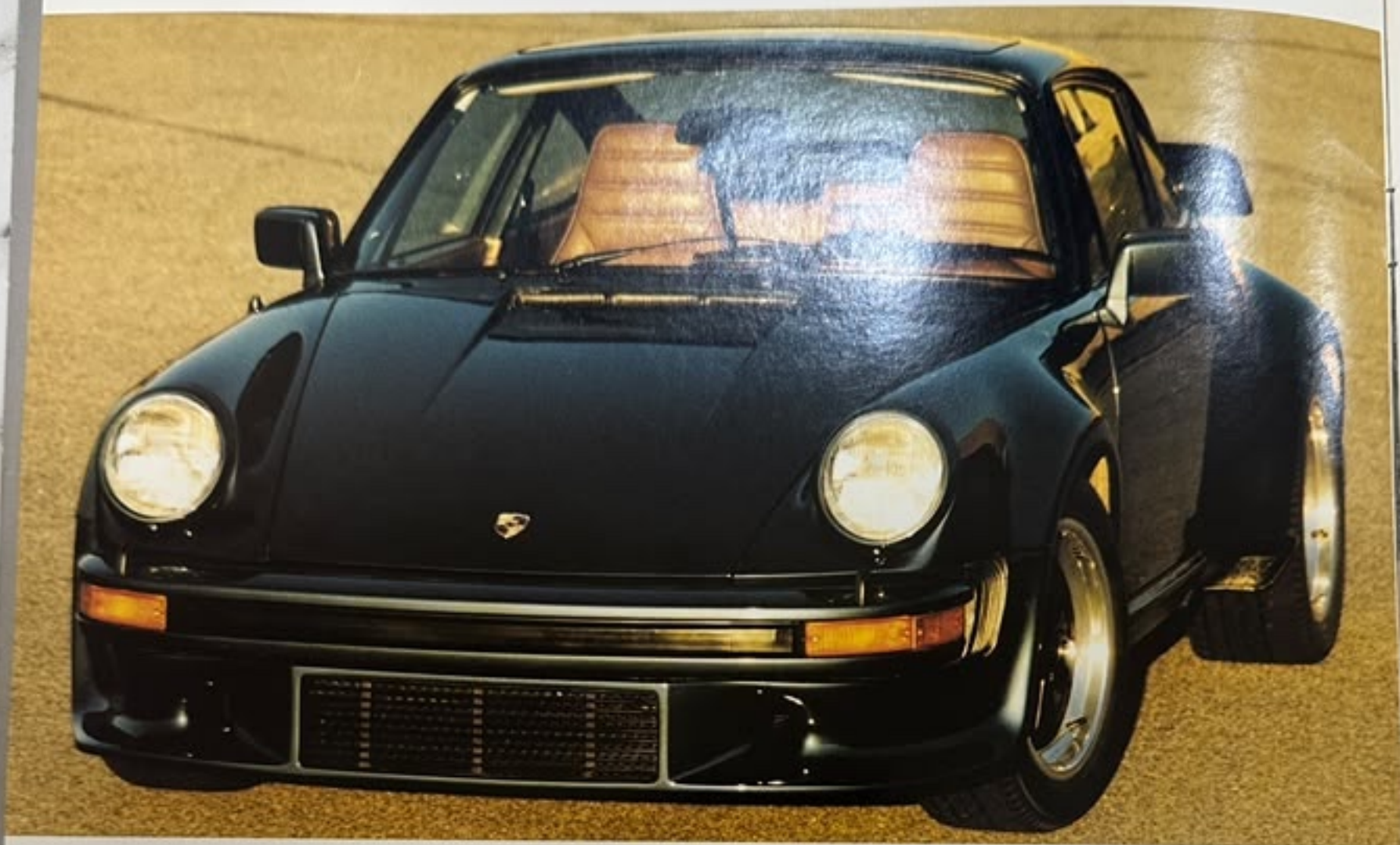
An Alternative . . . For Those Who Own a Porsche 911 or 911 Turbo

You may currently own a Porsche 911 or 911 Turbo. If that's the case, RUF Automobiles of Germany has trained and authorized a select few of its United States Dealers to

retrofit your own car, remanufacture its engine and create a RUF Car for you here in the United States. The result will be in precise compliance with all mechanical

specifications for an authentic RUF Car. We are proud to offer that alternative, and invite your inquiries.





The **RUF** 911 Turbo

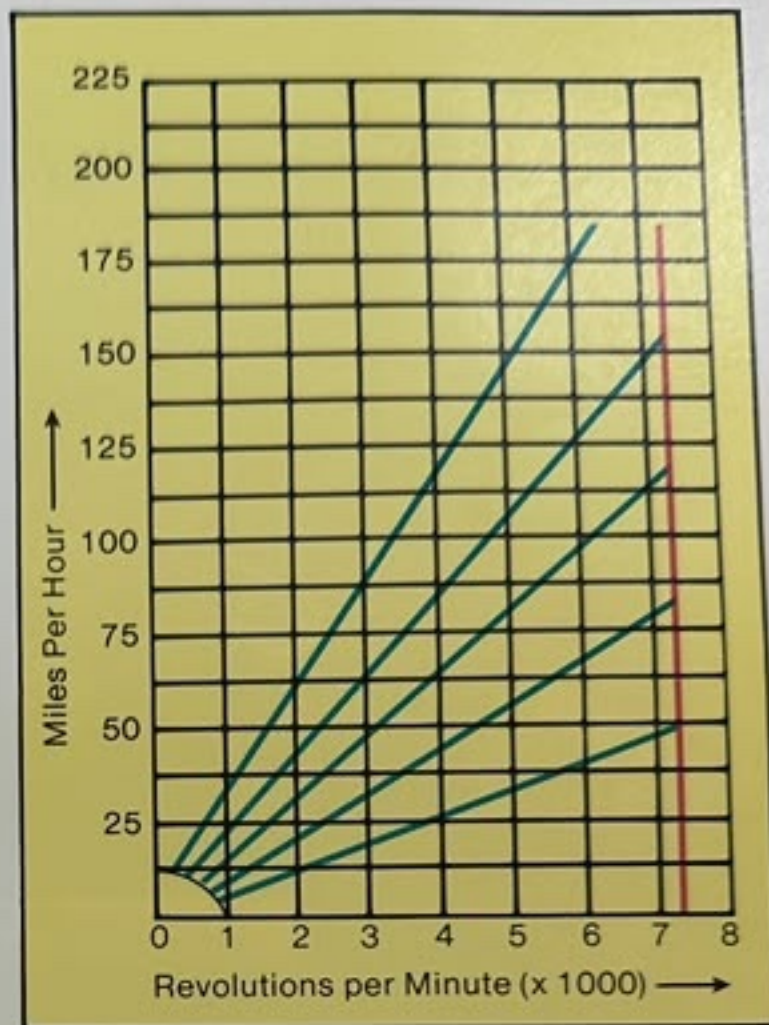
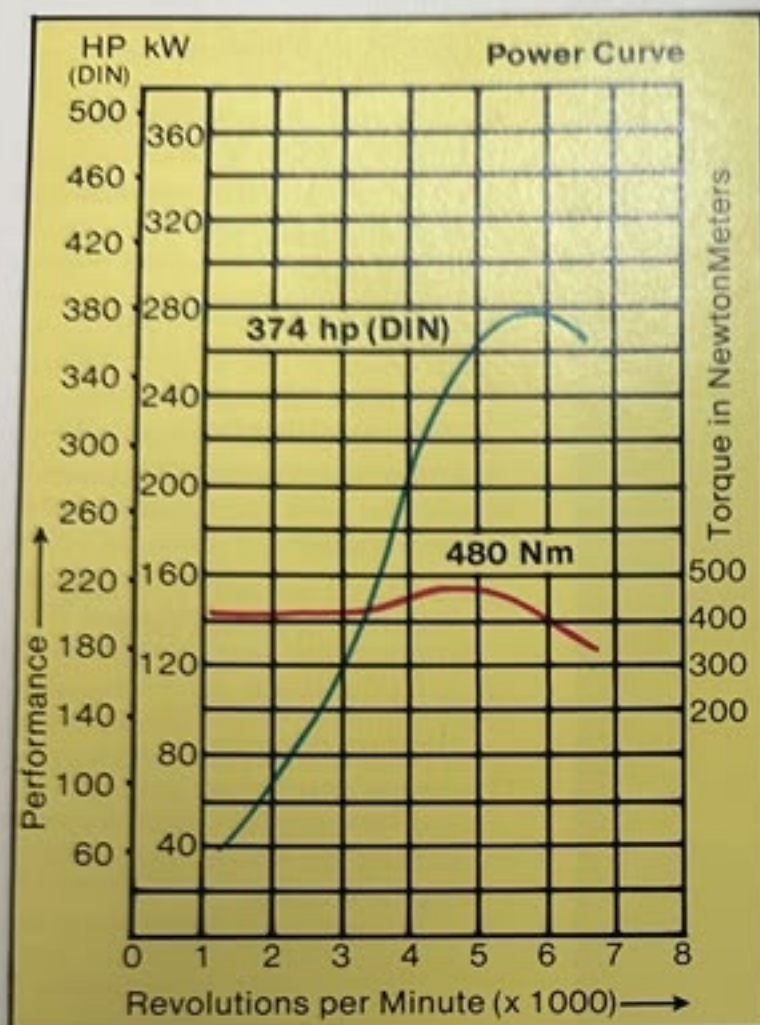
At 186 MPH, A Star is Born

The RUF 911 Turbo's remarkable speed alone is enough to warrant respect. This machine is no temperamental, delicate automotive racehorse; it's a reliable, solid vehicle, dependable on the open road with driveability that will astound you.

It is with great pride that we offer you the RUF 911 Turbo.

To special order a RUF 911 Turbo, call your RUF Authorized Dealer.

RUF 911 Turbo Technical Data



Motor:

Aircooled, horizontally opposed six cylinder, K27 turbocharger, L & R intercooler, overhead camshafts, 3366 cc, bore & stroke 98.0 x 74.4 mm, 7.0:1 compression ratio, 374 horsepower DIN (275 kw) @ 6000 RPM, 354 lb. ft. torque DIN @ 4800 RPM, Bosch K-Jetronic fuel injection, Bosch capacitor discharge ignition.

Drivetrain:

Five speed transaxle, 60% limited slip differential. Gear ratios: 2.78:1, 1.12:1, 1.00:1, 0.83:1, 0.63:1, final drive ratio: 4.00:1.

Suspension:

Front: McPherson Strut, 18.8 mm torsion bars, 22 mm stabilizer bar, RUF-Bilstein shock absorbers.

Rear: Independent trailing arms, 26 mm torsion bars, 20 mm stabilizer bar, RUF-Bilstein shock absorbers.

Steering: rack & pinion.

Brakes:

Disc rotors (front & rear) 300 mm diameter, cross drilled and ventilated.

Calipers: 4 pistons per caliper

Front caliper piston diameter: 38 mm

Rear caliper piston diameter: 30 mm

Optional Brakes: (330 CTR)

Disc rotors (front & rear) 330 mm diameter, cross drilled and ventilated.

Calipers: 4 pistons per caliper

Front: 44 mm & 36 mm

Rear: 42 mm & 36 mm

Tires:

Dunlop Denloc, front 235/40VR17, rear 255/40VR17.

Wheels:

RUF-Speedline, cast aluminum alloy, TUV & DOT approved.

Front: 9 x 17

Rear: 10 x 17

Acceleration:

0 - 60 MPH..... 4.6 seconds

0 - 100 MPH..... 10.4 seconds

1/4 mile..... 13.3 seconds

Top Speed:

173.6 MPH (Turbo body)

186.2 MPH (Carrera body)





RUF 3.4 Turbo Engine Kit

All the components necessary to revel in the power of a RUF engine. Run on a Schenck dynamometer, this engine produces at least 374 hp at 0.825 Bar of boost. At 1.0 Bar of boost pressure, this same remarkable engine produces 425 horsepower!

The kit consists of:

1. six 98mm pistons and cylinders (7.0 to 1 c.r.)
2. special air guides for cylinder cooling
3. six special "thermal barrier" seals (cylinder to head)
4. a pair of special camshafts
5. high efficiency K27 turbocharger
6. turbocharger mounting bracket with larger I.D. hole
7. four pipe exhaust muffler with matching body panels
8. larger intercooler (50% more surface area than stock intercooler)
9. air filter assembly specially modified to accept large intercooler
10. special fuel injection pressure damper
11. special crankshaft pulley and "V" belt, increases cooling fan speed, improves engine cooling

RUF Air to Air Intercooler

The RUF Intercooler is designed and manufactured by Laengerer & Reich Kuehlerfabrik GmbH. "L&R" is the same West German company that makes intercoolers for PORSCHE.

The RUF Intercooler has 50% more surface area than the standard intercooler supplied by PORSCHE. Yet, intercoolers are far more complex than "bigger is better". Not only must the intercooler dissipate the thermal energy (heat) of the compressed air charge, but the intercooler must be tuned to the intake tract

of the engine. Should the intercooler be too large or the routing of the intake charge be restrictive, there most definitely will be a loss of horsepower and unwanted "throttle lag."

A well designed intercooler, like that of RUF's, will provide the engine with a cool and dense charge of air; resulting in more engine torque, horsepower, and throttle response. The installation of a RUF Intercooler alone is worth 30 hp. When coupled with the more efficient K27 turbocharger and higher turbocharger boost pressures provided through the RUF Adjustable Boost Kit, even more horsepower can be realized.

It is impossible to draw conclusions from just dimensional measurements, when referring to intercoolers. The following data is for installation comparisons only.

Standard PORSCHE Intercooler
L 12.0" W 10.5" H 2.25"
20 rows of cooling tubes

RUF Intercooler
L 16.5" W 11.5" H 3.25"
31 rows of cooling tubes

KREMER - BEHR Intercooler
L 25.5" W 5.5" H 4.74"
43 rows of cooling tubes

GARRETTSON ENT. Intercooler
L 16" H 7" W 4.5"
28 cooling tubes

*NOTE: dimensions do not include intercooler tanks, just the cooling grids. The tanks can also be responsible for dissipating heat.

RUF 911 Turbo Camshafts

RUF Automobiles of West Germany, have done extensive engine testing on their Schenck dynamometers using different



camshaft profiles. They have developed camshafts for the 911 turbo engine that produce more horsepower throughout the entire RPM range. The camshafts were designed to be used with the standard K-Jetronic fuel injection system, a fuel injection system that will not tolerate "radical" camshafts. The RUF Camshafts can be used alone to improve the performance of your 911 turbo engine or their real potential can be realized when used in conjunction with the larger 98mm pistons and cylinders, K27 turbocharger, RUF Intercooler, and RUF Exhaust Muffler.

Valve lift, duration, opening and closing, have always been important considerations when comparing camshafts. There are

other more complex aspects to the design of camshafts that aren't as easy to understand and measure. The precise profile of the cam lobe determines the speed of the valve's opening and closing, and is extremely important to the performance and reliability of the engine. The conventional measurements tell only part of the story. Dynamometer testing and driveability tell the whole story. So keep this in mind when making the following comparisons.

PORSCHE 911 turbo camshaft (0.75mm @ overlap)
intake opens 3 ATDC | 216 degrees max lift 9.3mm
intake closes 33 ABDC
exhaust opens 29 BBDC | 217 degrees max lift 9.8mm
exhaust closes 8 BTDC

PORSCHE 911SC (turbo application) (1.00mm @ overlap)
intake opens 0 TDC | 232 degrees max lift 11.4mm
intake closes 52 ABDC
exhaust opens 40 BBDC | 217 degrees max lift 10.0mm
exhaust closes 1 ATDC

RUF turbo camshaft (1.90mm @ overlap)
intake opens 11 BTDC | 237 degrees max lift 9.5mm
intake closes 46 ABDC
exhaust opens 32 BBDC | 220 degrees max lift 8.6mm
exhaust closes 8 ATDC





RUF 5-Speed Transaxle for 911 Turbo

Advantages of RUF® 5-Speed Transaxle

1. Lower first gear for quick acceleration.
2. Closer ratios between all gears, allowing engine to remain "on the boost".
3. Lighter weight clutch assembly allows engine to "Rev" quicker and easier.
4. Engine speed is reduced for highway cruising, resulting in less engine wear, reduced fuel

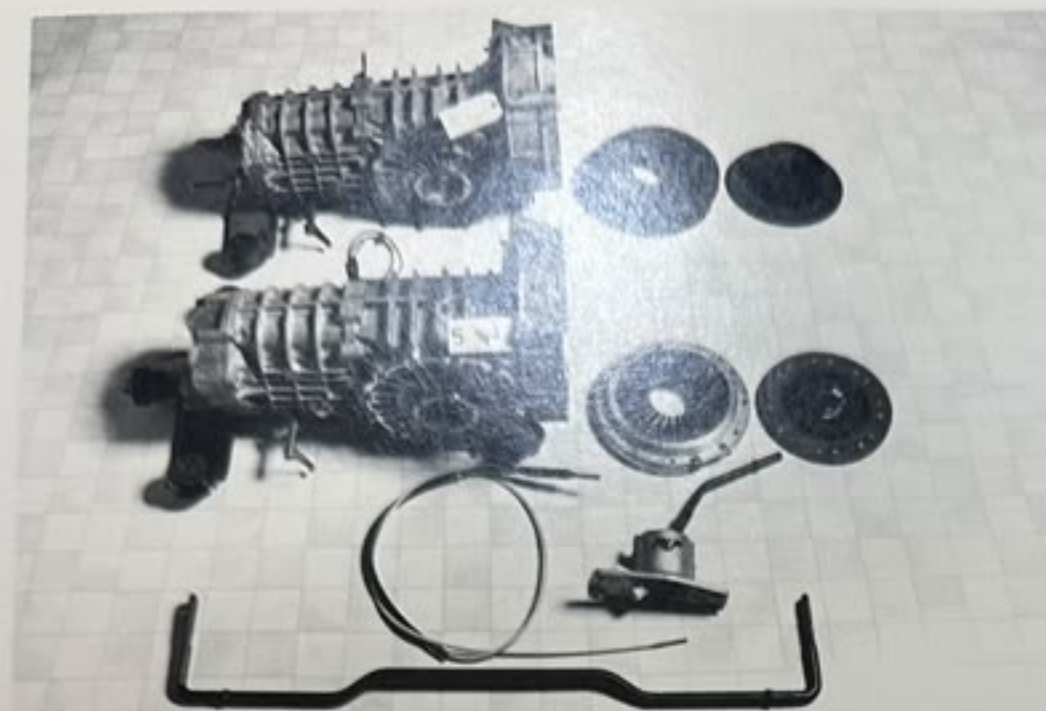
consumption, and quieter engine noise.

5. Optional ratios available for second through fifth gears, for those individuals who race their cars.

Kit includes:

1. complete transaxle with limited slip differential
2. lightweight clutch cover (11 lbs. vs. 24 lbs.)

3. heavy duty clutch disc
4. special length clutch cable
5. special 20mm diameter rear stabilizer bar
6. special "short shifter" assembly
7. clutch bolts
8. bell housing bolts
9. shift knob with new shift pattern



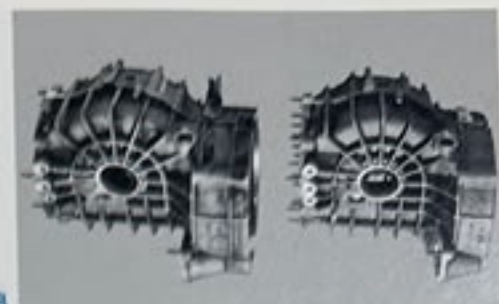
A



(photo A) This is a comparison photo of the Porsche 4-speed and the RUF 5-speed transaxles.

(photos B, C, D, E) At first glance they may appear to be the same, but the RUF 5-speed requires unique castings, a unique main shaft, and ring & pinion gears to accommodate the additional fifth gear. Second through fifth gears are optional 935 gears (not pictured).

(photo F) First and reverse gears are unique RUF gears.



B



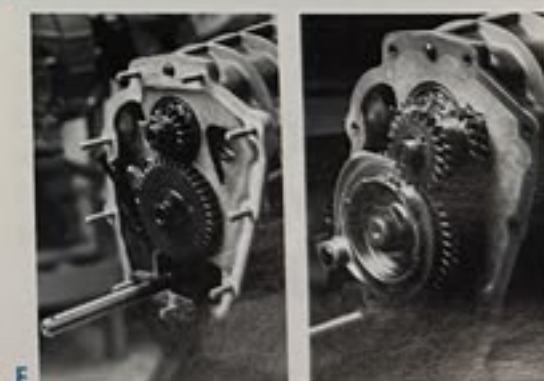
C



D



E



F

In photos B, C, D, E and F, stock Porsche parts are on the left, while RUF parts are on the right.

RUF



RUF 911 Carrera 260 hp DIN Engine Kit

The RUF 911 Carrera Engine Kit consists of:

1. six 98mm Mahle pistons and cylinders (10.3 to 1 c.r.)
2. final muffler (one L/S and one R/S tailpipes)
3. muffer valance (body panel)
4. right rear lower body panel (R/S tailpipe)
5. Ruf - Bosch "Engine Management Computer" (DME)
6. 8000 RPM tachometer with 6800 redline. 7000 RPM is at the one o'clock position. RUF logo is on the gauge face
7. (optional) primary muffler. This muffler replaces the catalytic convertor for "Off Road Use"

1978 through 1983 911 SC's special Ruf - Mahle pistons and cylinders are available to bring the displacement up to 3.2 liters and a resulting power output of 217 hp DIN.

RUF 17 Inch Wheels and Tires

RUF - Speedline Wheels

Manufactured by Italy's Speedline (makers of Formula One and Porsche 959 wheels), these aluminum alloy wheels satisfy exacting German TUV safety standards.

This larger diameter wheel has been designed to provide room for the larger brake discs and larger brake calipers contained in the CTR 330 Brake Kit (see page 12). Their open design provides improved cooling, while a large spoke radius ensures superior strength.

These wheels can easily be painted to match the color of your car.

911 Turbo

front

9 x 17 wheels

235/40VR17 tires

rear

10 x 17 wheels

255/40VR17 tires

911 Carrera

front

8 x 17 wheels

215/45VR17 tires

rear

9 x 17 wheels

235/40 VR17 tires

Denloc Tires

Dunlop Denloc tires were used by RUF Automobiles on April 12, 1987, to win the title of "World's Fastest Production Car" with a speed of 211 MPH!

Originally designed for Porsche's 200 MPH Model 959,



this ultra-low profile 40 series tire makes no sacrifices in riding comfort.

This tire represents the ultimate in safety, steering response, braking and wet weather performance, and features the remarkable "Run Flat Technology".

17 Inch Dunlop Denloc Race Tires

The 17 inch Dunlop Denloc Race Tires are presently available in sizes to fit the 911 Turbo. The rear tires are 10.5 inches wide with a 24.5 inch overall diameter. The diameter is very important, because the Porsche 911 suspension and steering geometry are very sensitive to the overall diameter of the tires. A small change, to a smaller tire, will have a great effect on the "scrub radius", causing the steering to feel

"twitchy" during braking and cornering, and "darting" in a straight line. Unlike other race tires currently on the market, these Dunlop Denloc tires are of the correct overall diameter for the Porsche steering and suspension.

Another advantageous feature of the Dunlop Denloc Race Tires is their radial design. Radial race tires have not been readily available to the public, up to this time. The 911 and 911 Turbo McPherson strut suspension does not work well with bias-ply tires (street or race). The front and rear suspensions go through a lot of camber and toe changes. Bias-ply tires do not work well or wear well with so much camber and toe change. Porsche designed the suspension to work with radial tires, so naturally radial race tires will work better and last longer than the old bias-ply race tires on the 911 and 911 Turbos.

Last, the safety provided by the Denloc Technology is probably the most important feature of these race tires. How could one put a price on the added safety margin provided by this new means of retaining the tire to the wheel. Imagine what could happen if a regular tire came off the wheel at 100 plus MPH. The Denloc Safety Bead inhibits the tire from coming off the wheel, allowing the driver to better control the car in case of a tire puncture.



RUF Front Spoilers

Choose from three distinctive models: two of quality German fiberglass, or one constructed of steel. All are available with RUF oil coolers.

RUF - Bilstein Shock Absorbers



RUF Automobiles of West Germany and Bilstein, the world famous manufacturer of high quality performance shock absorbers, have developed special shock absorbers for 911 and 911 turbo Porsches. Extensive testing was done at the famous Austrian race tracks, Osterreichring and Salzburgring, to finely tune these shock absorbers. Testing did not stop at the race track. The RUF shock absorbers are designed to be used on the streets as well as the race track. Because of their unique design and valving, these shock absorbers do not produce a

harsh ride normally associated with "high performance" and "racing" shock absorbers. The RUF-Bilstein shock absorbers do provide a firm ride and improved steering response needed in performance cars like the RUF 911 turbo and the RUF 911 Carrera.

RUF

RUF Accessories



- ☐ RUF Emblem (replaces turbo emblem)
- ☐ RUF Logo Hubcap for 16" Wheel (set of 4)
- * ☐ RUF 3.4 Turbo Engine Kit (374 hp DIN)
- * ☐ RUF Intercooler w/4-Pipe Muffler, Approx. 30 hp Increase (specify K-27/LDZ Turbo)
- * ☐ RUF 3.4 Carrera Engine Kit w/Muffler (260 hp DIN)
- * ☐ RUF 3.4 Carrera Engine Kit w/o Muffler (251 hp DIN)
- ☐ RUF DME for Carrera Engine Kit
- ☐ Carrera Primary Muffler (off road use only)
- ☐ RUF 3.4 Pistons & Cylinders (Turbo & Carrera)
- ☐ RUF 3.2 SCR Pistons & Cylinders
- ☐ KKK K-27 Turbochargers
- ☐ RUF Intercooler (specify K-27/LDZ Turbo)
- ☐ RUF Turbo Cams
- ☐ Turbo Short Throw Shifter/4 Speed/5 Speed
- ☐ 911 Short Throw Shifter/5 Speed
- ☐ RUF 5 Speed Turbo Transmission w/40% Limited Slip, Shifter, Pressure Plate, Clutch Disc & Cable
- ☐ 5 Speed Pressure Plate
- ☐ 5 Speed Clutch Disc
- ☐ 5 Speed Clutch Cable
- ☐ Limited Slip Differential - Specify % Lock
- ☐ RUF Turbo Brakes for 7 & 8.16" Wheels
- ☐ RUF Turbo Wheel Spacers w/Studs
- ☐ RUF-Bilstein Sport Shocks - Set of 4
- ☐ RUF Shock Tower Base (weld in)
- ☐ RUF Sport Sway Bars - 22/20
- ☐ RUF Fiberglass Spoiler/Oil Cooler - Turbo
- ☐ RUF Fiberglass Spoiler/Oil Cooler - Carrera
- ☐ RUF Steel Spoiler/Oil Cooler
- ☐ RUF Fiberglass Spoiler - Turbo
- ☐ RUF Fiberglass Spoiler - Carrera
- ☐ RUF Steel Spoiler

*Spoiler/Oil Cooler - Mandatory Option

RUF Accessories

- ☐ RUF Spoiler Grill
- ☐ RUF Oil Cooler
- ☐ RUF 930 4-Pipe Muffler w/Sheet Metal (K-27) (LDZ) Specify: '75-'79; '80-'82; '83-on
- ☐ RUF 911 Carrera Dual Outlet Muffler
- ☐ RUF 911SC Dual Outlet Muffler
- ☐ RUF Turbo Steering Wheel, Standard Hub
- ☐ RUF Turbo Steering Wheel, Extended Hub
- ☐ RUF 930 Tach Gauge
- ☐ RUF Carrera Tach Gauge
- ☐ RUF 911SC Tach Gauge
- ☐ 200 MPH Speedometer Gauge
- ☐ Numerical Oil Temperature Gauge
- ☐ RUF Boost Control Kit w/Gauge
- ☐ RUF Gas Pedal Linkage
- ☐ Footrest
- ☐ Leather Headliner
- ☐ Leather Sunvisors, Door Handles, Map Pockets and Pocket Doors
- ☐ Leather Covered Console w/Brake Handles
- ☐ Leather Tool Bag w/o Tools
- ☐ Leather Compressor Bag w/o Compressor
- ☐ Leather Convertible Cover
- ☐ Fitted Trunk Carpet
- ☐ Heated Windshield
- ☐ RUF 8" x 17" Wheel
- ☐ RUF 9" x 17" Wheel
- ☐ RUF 10" x 17" Wheel
- ☐ Tires 215 x 45 VR 17 for 8"
- ☐ Tires 235 x 40 VR 17 for 9"
- ☐ Tires 255 x 40 VR 17 for 10"
- ☐ Aluminum Fenders (PR)
- ☐ Aluminum Hood
- ☐ Fiberglass Front End
- ☐ Fiberglass Rear End





The Yellow Bird

At 211 MPH: The World's Fastest Car

When *Road & Track* gathered nine superb automobiles at Volkswagen's amazing Ehra-Lessien test track, everyone understood the reality; only one would be named the fastest of 1987. And, up against such competition as the Ferrari Testarossa, Lamborghini Countach 5000S Quattrovalvole and Porsche 959, the RUF Twin-Turbo... The Yellow Bird... took the day. And not just with speed — a remarkable 211 MPH — but with style.

"It went straight as an arrow and also handled well in the curves. The engine sounds absolutely magnificent and the power is amazing," said Paul Frere a former Gran Prix driver and Le Mans winner. Phil Hill observed, "The Yellow Bird is just steady as a rock at over 200 MPH."

With astonishing performance of 0 - 60 in 4 seconds and a ¼ mile in 11.7 seconds, their

enthusiasm is understandable.

Now, Alois Ruf will craft a very, very few more of this rarest of the rare: The Yellow Bird. Commencing

in 1988, a limited annual production run of 10 will be available. We invite the inquiries of the exceptional few.

Yellow Bird Technical Data

Motor:

Aircooled, horizontally opposed six cylinder, two turbochargers, two inter-coolers, overhead camshafts, 3366 cc, bore and stroke 98.0 x 74.4 mm, 7.5:1 compression ratio, 469 horsepower DIN (345 KW) at 5959 RPM, maximum torque 553 Nm at 5100 RPM, electronic fuel injection and ignition, "Bosch Motronic".

Drivetrain:

Five speed transaxle, 60% limited slip differential, rear wheel drive.

Suspension:

Front: McPherson strut, torsion bars, 22 mm stabilizer bar, Bilstein shock absorbers.

Rear: independent trailing arms, torsion bars, 20 mm stabilizer bar, Bilstein shock absorbers.

Brakes:

Disc rotors (front & rear) 330 mm diameter, cross drilled and ventilated. Calipers, 4 pistons per caliper
Front: 44 mm & 36 mm
Rear: 42 mm & 36 mm

Tires:

Dunlop Denloc, front: 215/45 VR 17; rear: 255/40 VR 17

Wheels:

RUF - Speedline, front: 8 x 17; rear: 10 x 17

Weight:

2530 lbs. (empty)

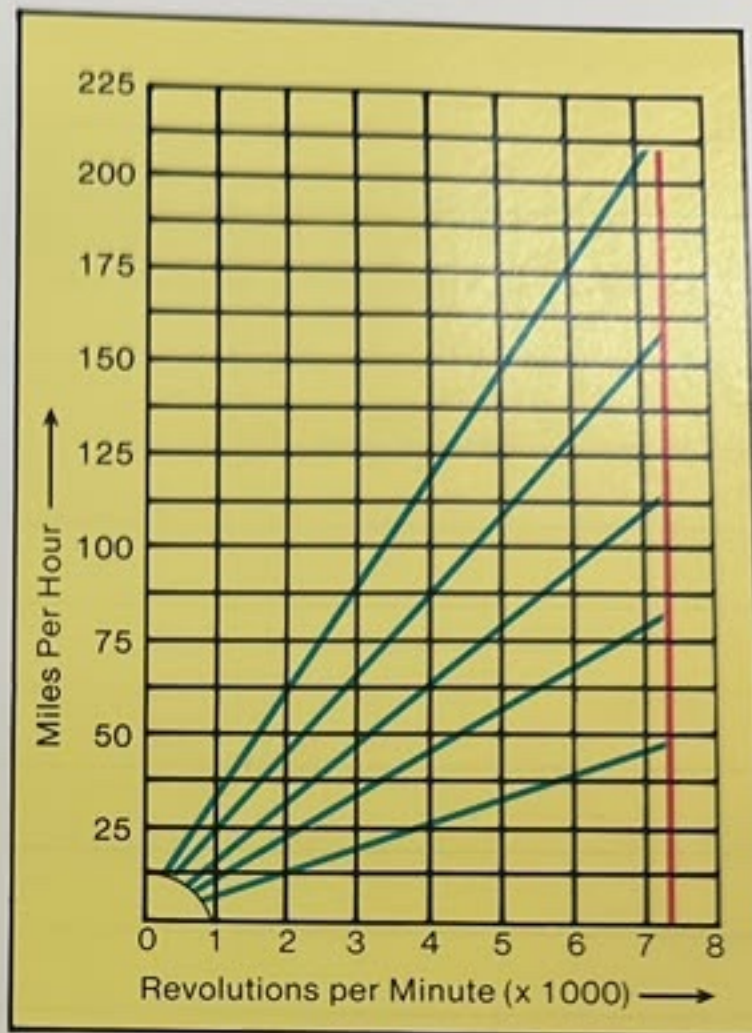
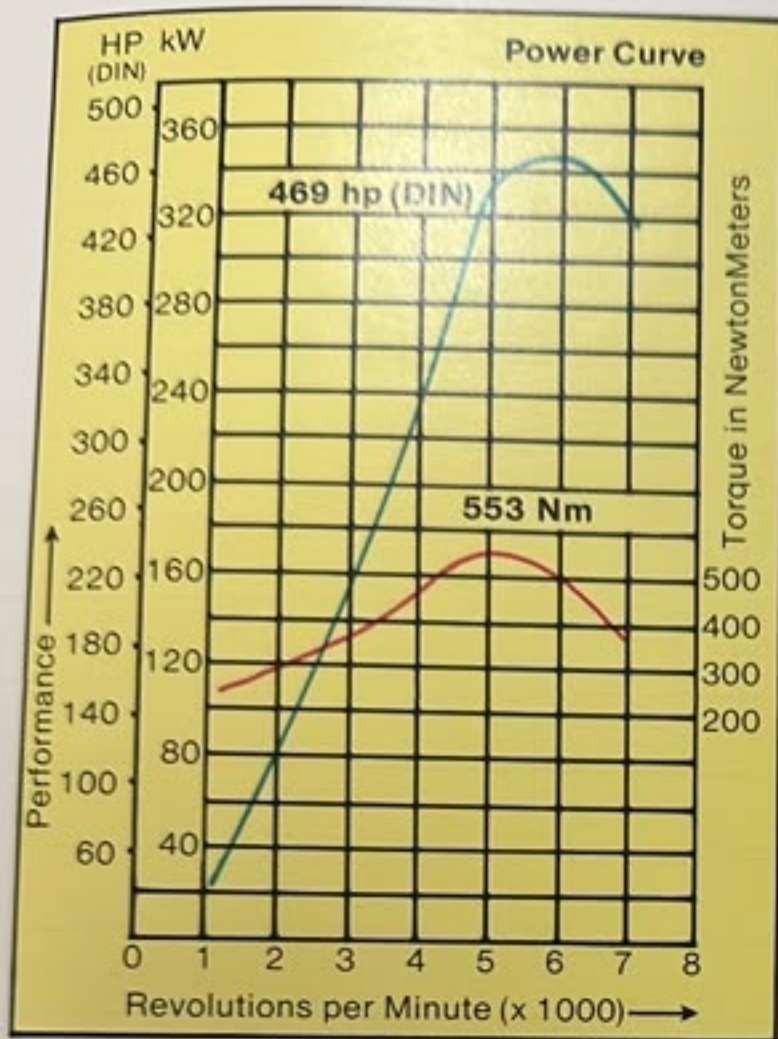
Acceleration:

0 - 60 MPH 4.0 seconds
0 - 100 MPH 7.3 seconds
¼ mile 11.7 seconds at 133.5 MPH

Top Speed:

211 MPH

Yellow Bird Technical Data



RUF

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

18

