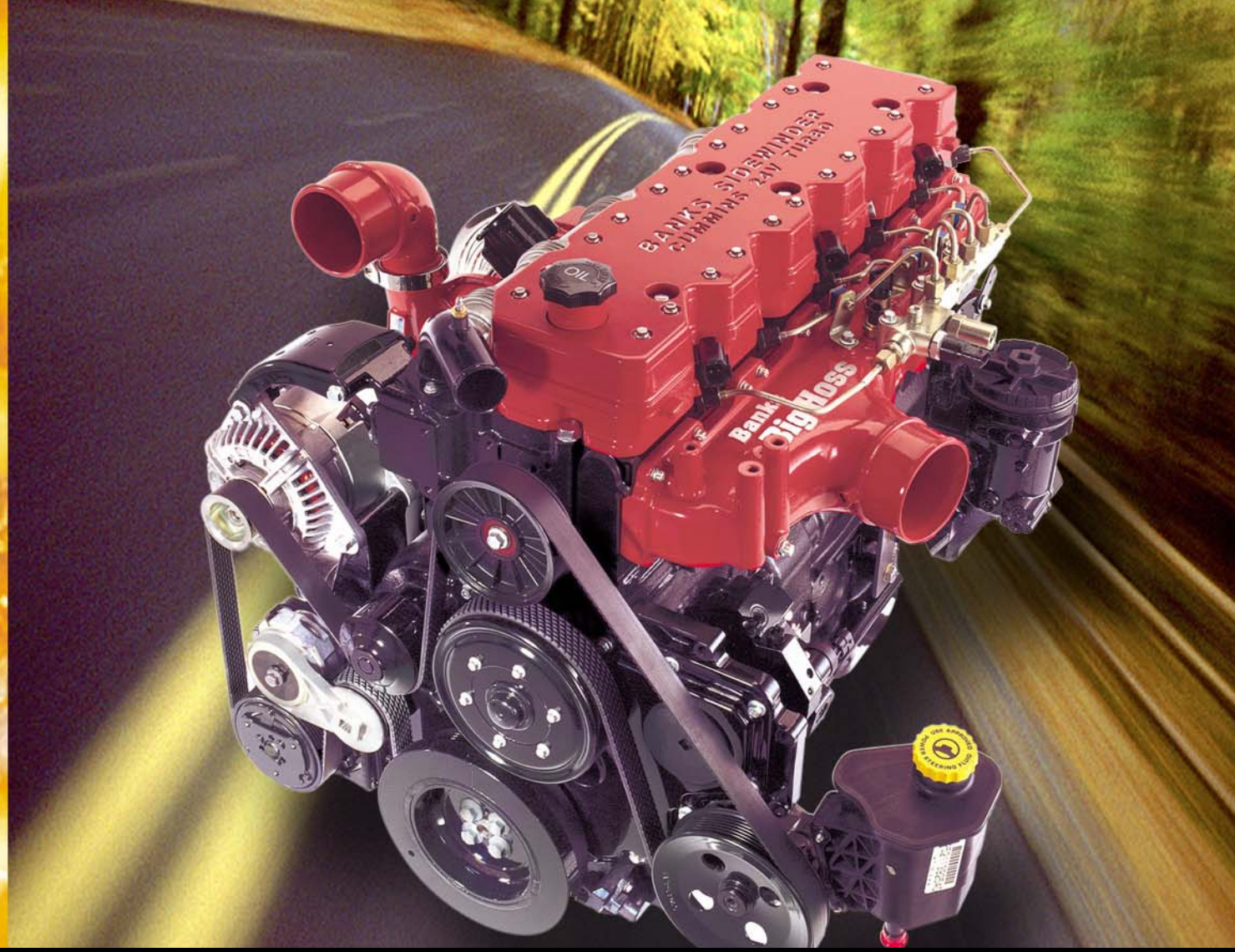
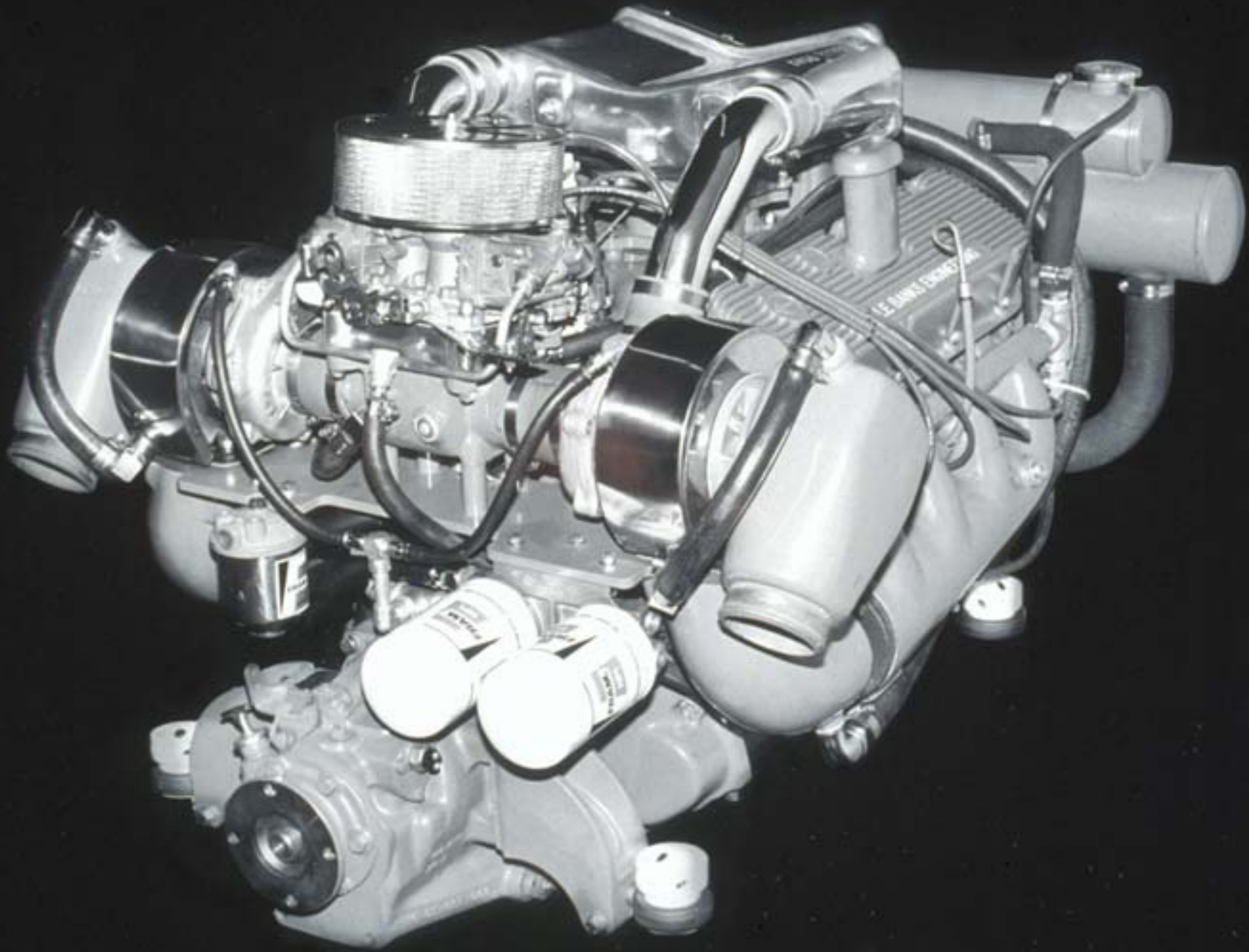
Gale Banks Engineering presents



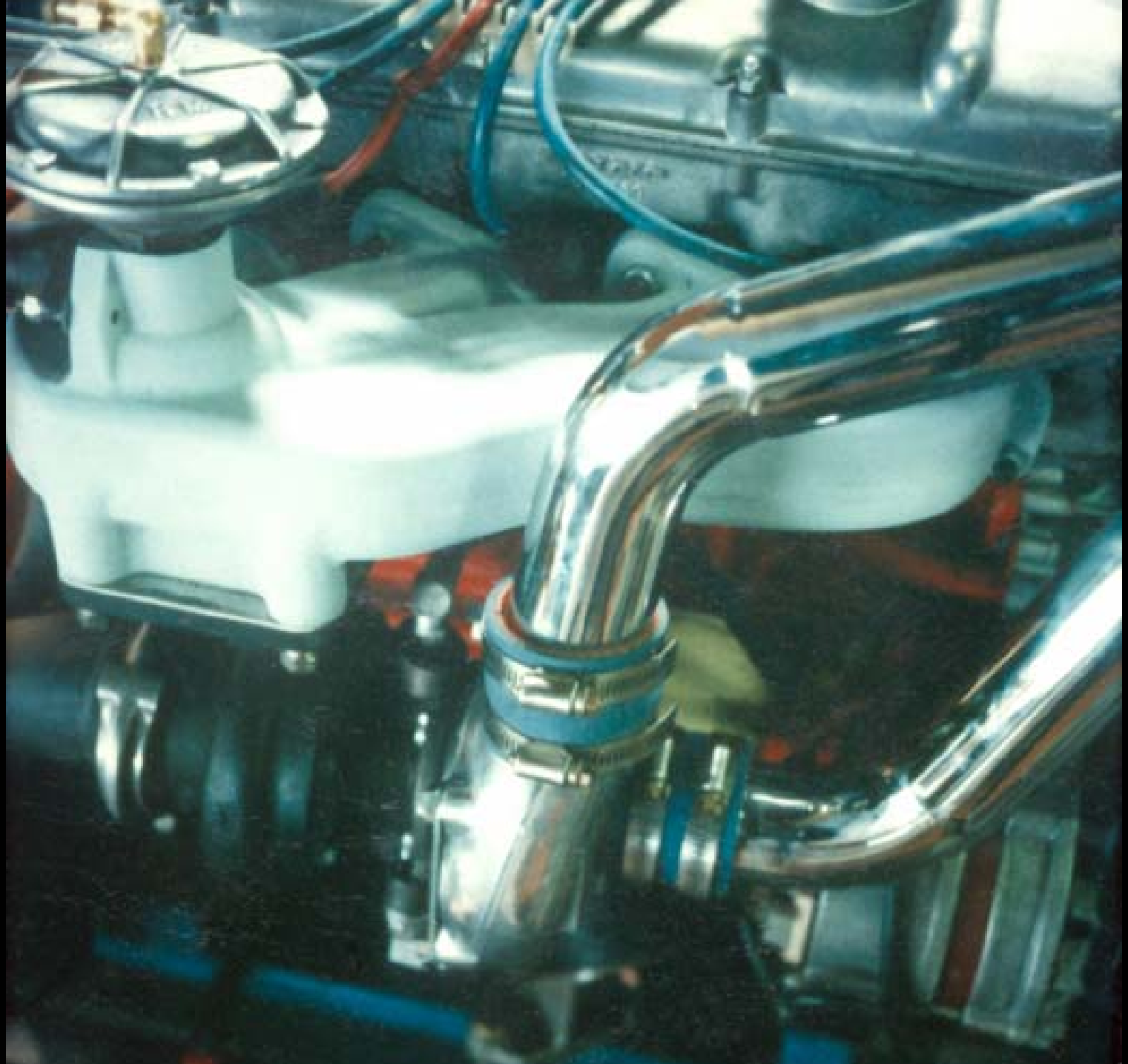
North American Market Challenges for Diesel Engines

BANKS CAMPUS -- AZUSA, CALIFORNIA



S·1
EXPRESS
Frostways

KJ-17



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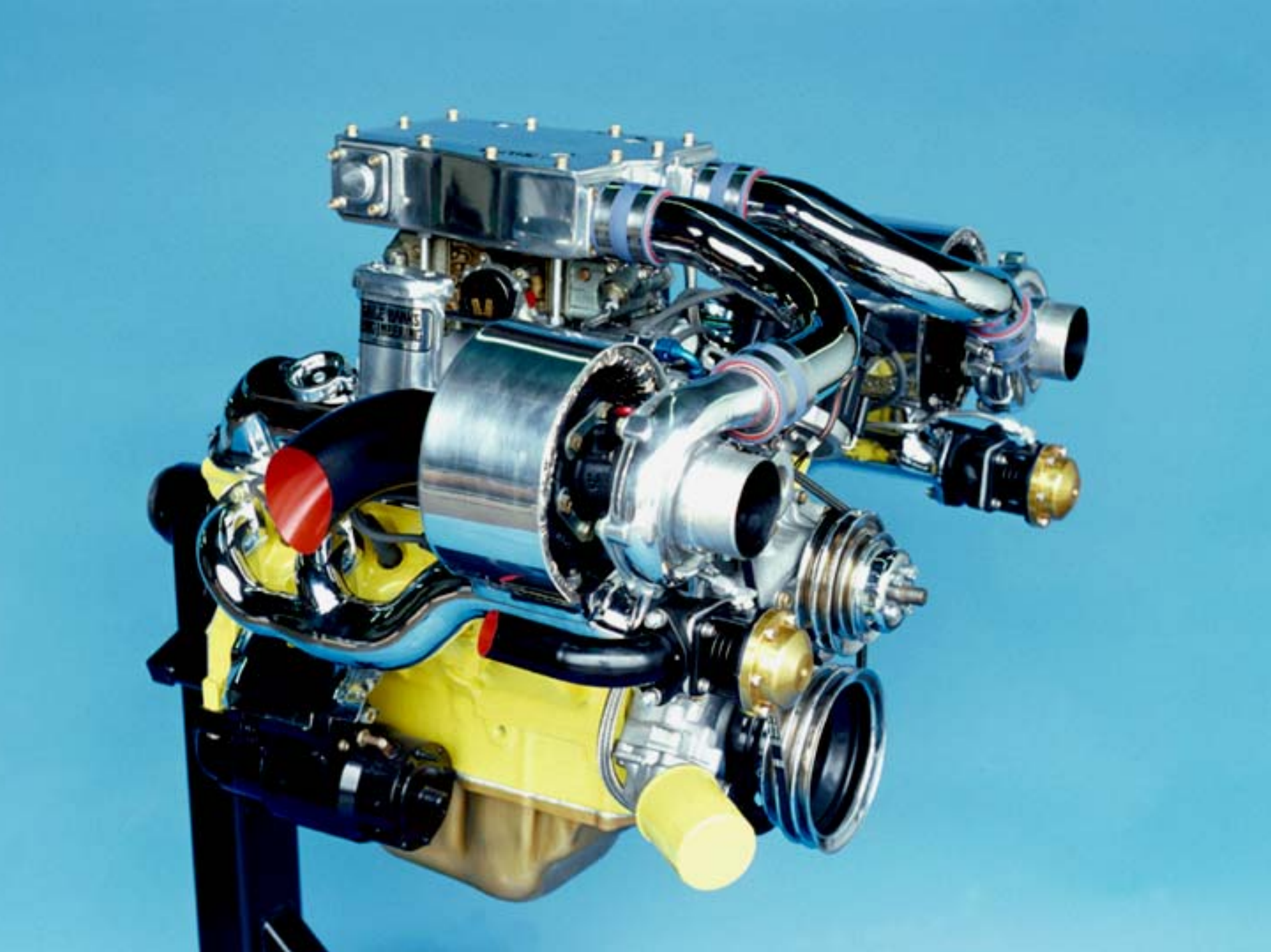
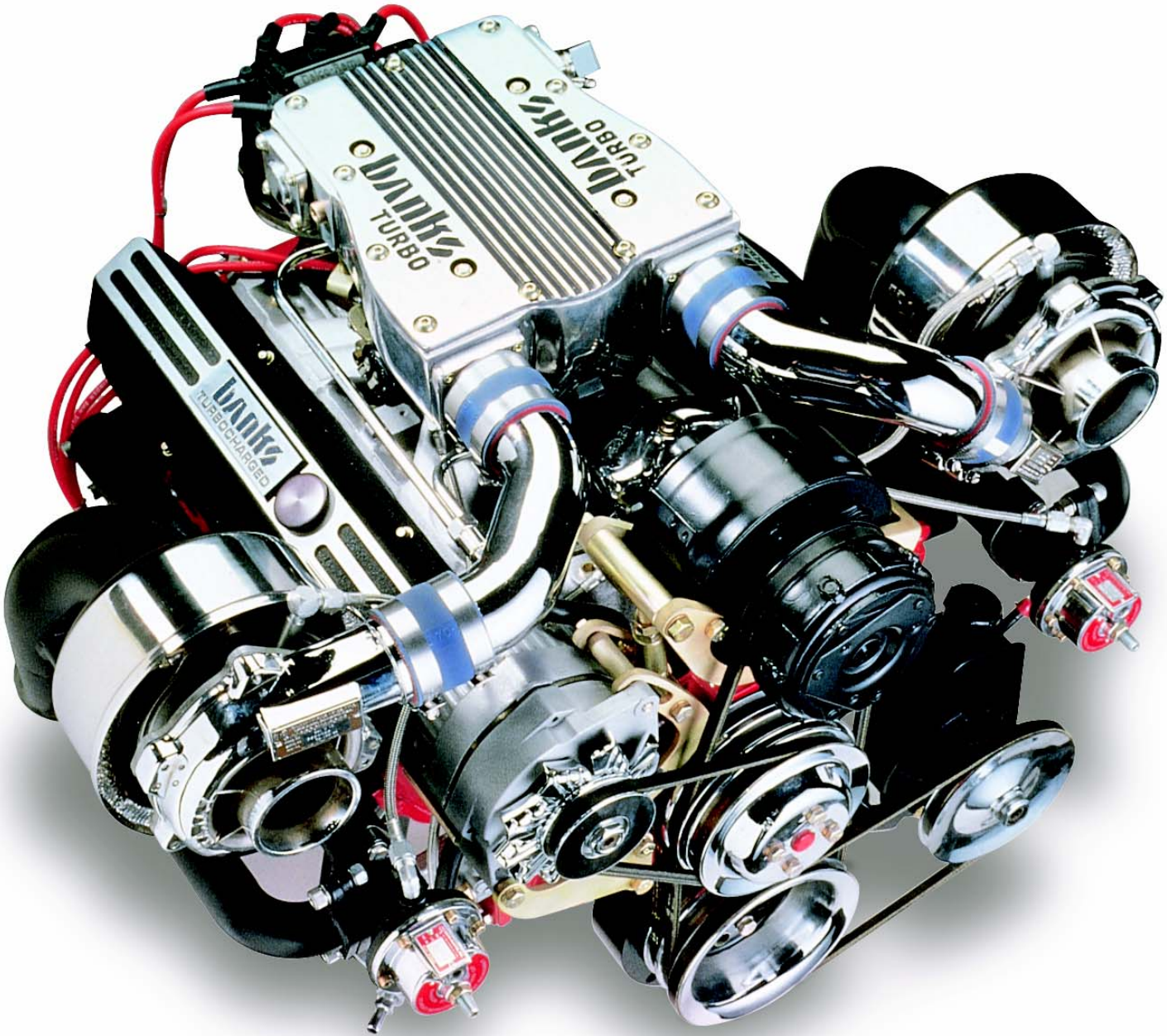


1981

Year of the Regal

Will they become the '57 Chevys of the '80s? These sleek and slippery "A-Special" coupes are breaking records on the track and in the showroom. Completely redesigned . . .


banks
TURBO
banks
TURBO
banks
TURBOCHARGED

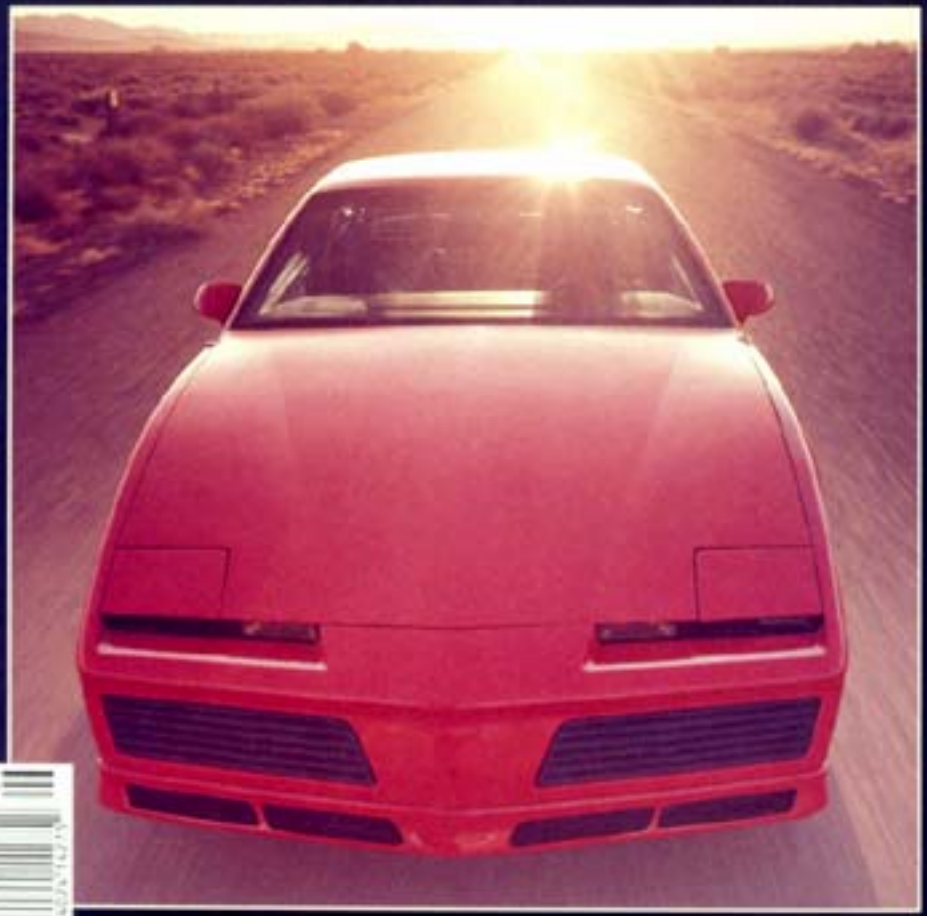
BMW 325e Two more cylinders and tons more torque

CAR AND DRIVER

JUNE 1984 • $2.25

BREAKING THE BARRIER!

200-MPH TRANS AM



banks TWIN-TURBO GTA
GOODYEAR
EAGLE
banks

LISTER JAGUAR: NOSTALGIA IS BETTER THAN EVER
STOCK CARS FOLLOW IN GRANT'S FOOTSTEPS

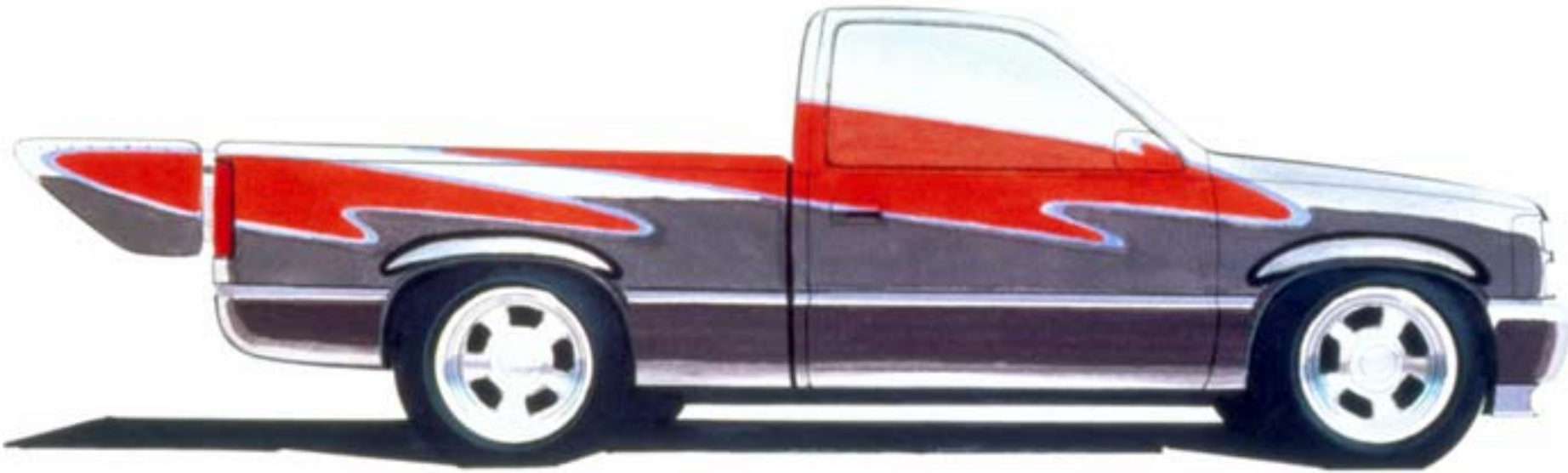
September 21, 1987
$1.25 USA $1.75 Canada

AutoWeek

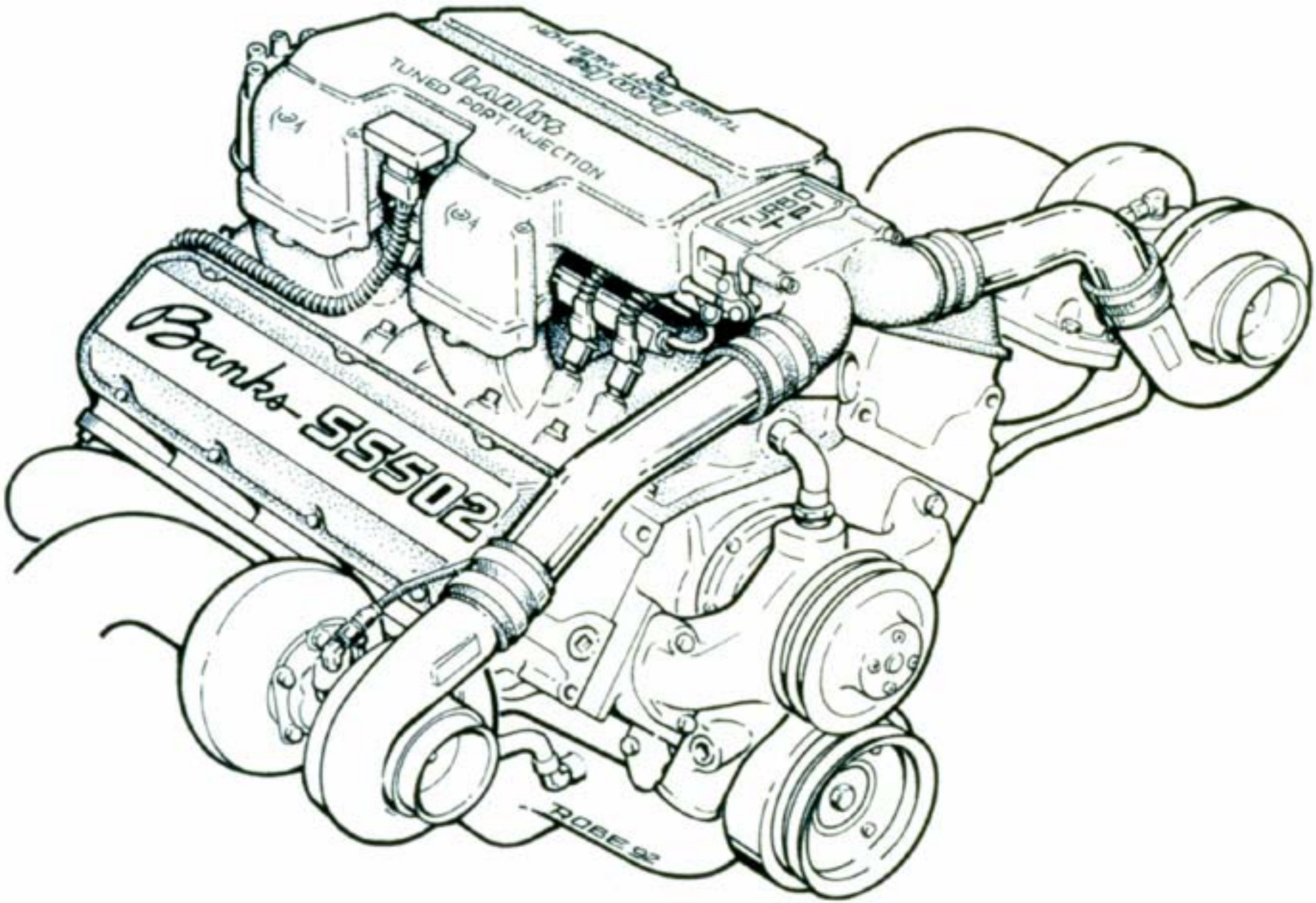
WORLD'S FASTEST PASSENGER CAR

George Romney: An elder statesman speaks out

Banks Engineering Trans Am blisters the Salt at 268 mph



Burke


banks
TUNED PORT INJECTION
TURBO TPI
Banks SS502
ROBE 92

GMC

One goes down in history. The other goes down your street.

The record-setting Syclone LSR.

The Syclone street machine.

On September 14, 1990, the Syclone LSR from GMC Truck rewrote the record books by becoming the first truck ever to break the 200 mph barrier in the flying mile. This specially modified Syclone clocked an amazing one-way speed of 210.069 mph in the IMSA speed trial.

For GMC Truck, the Syclone LSR represents our commitment to leadership in truck technology. You'll find every state-of-the-art advancement in engine design, fuel management, aerodynamics, handling and performance-tuned suspension in the new Syclone street machine.

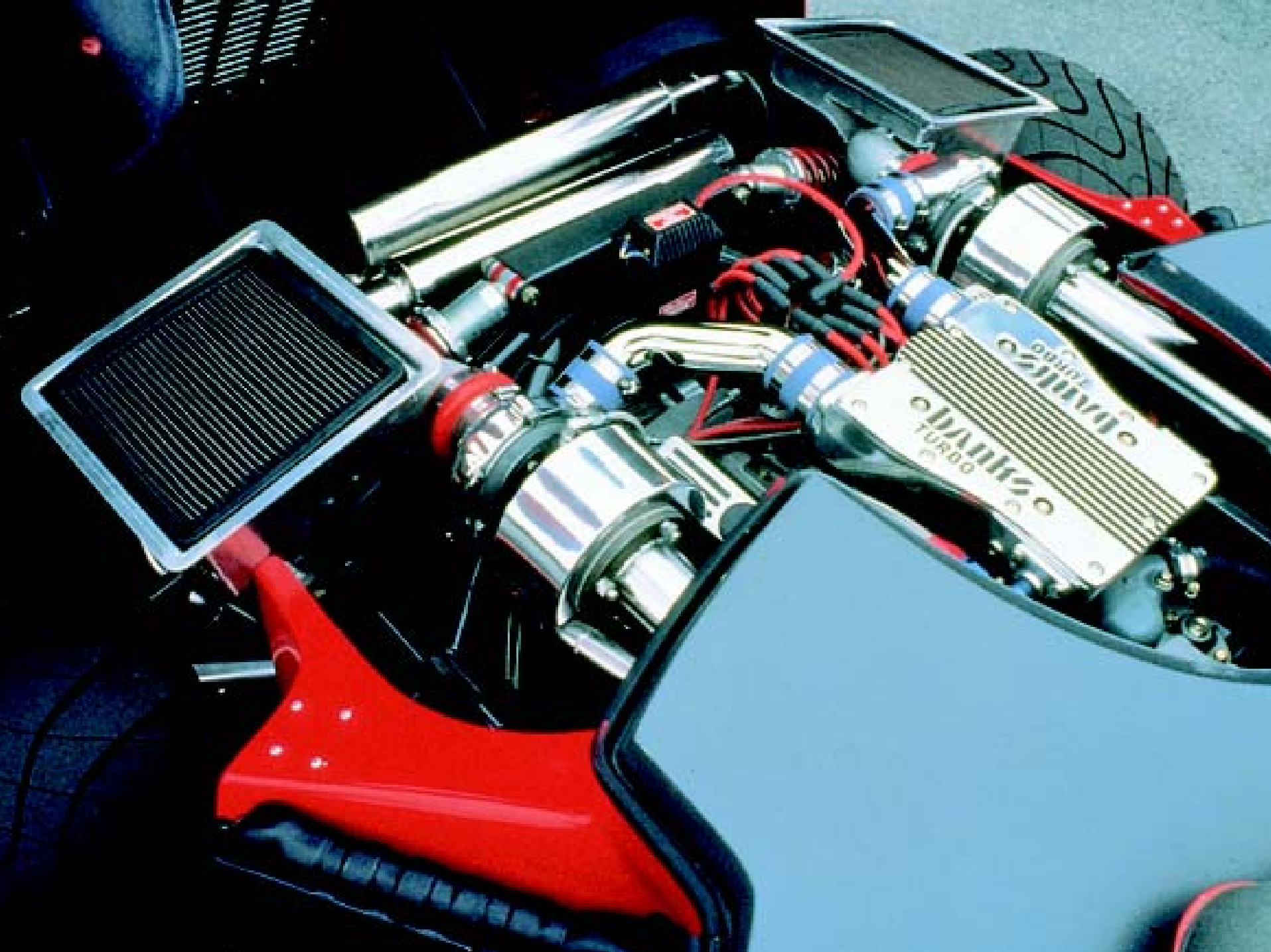
In January 1991, GMC Truck introduced to you the hottest truck ever to roam the planet. Your Syclone has a 280-horsepower, intercooled, turbocharged 4.3L V6 engine at heart. Its handling is clean and precise, with on-road all-wheel drive, 4-wheel anti-lock brakes, and speed-rated tires rounding out 16" aluminum wheels. Plus, with an M.S.R.P. of just $25,500,* it's a downright steal.

Call 1-800-SYCLONE.

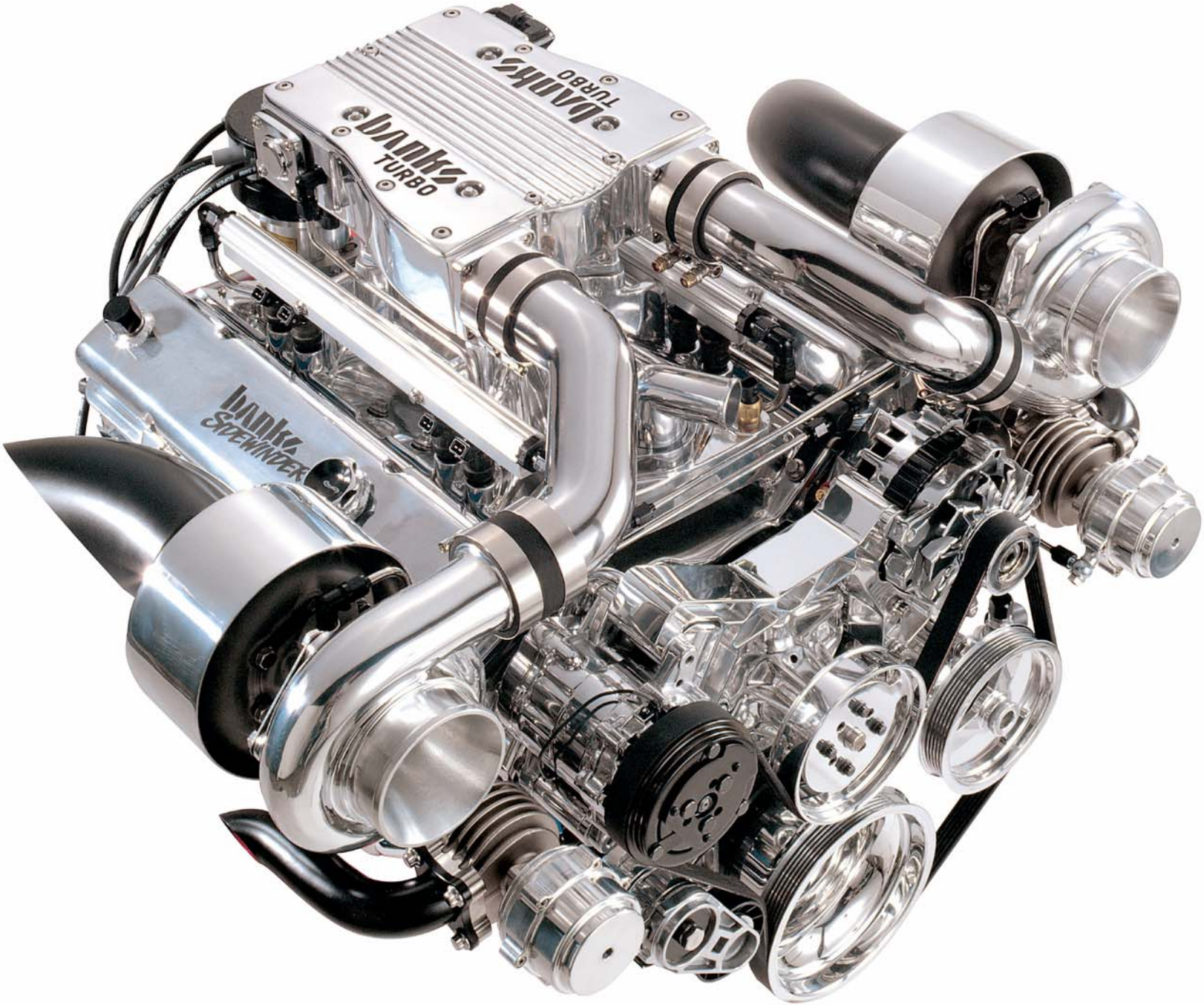
*

Syclone

EXCLUSIVELY FROM GMC TRUCK


TURBO

Banks
TURBOCHARGED


banks
TURBO
banks
SIDEWINDER

POWER SYSTEMS
BRAKE SYSTEMS
PERFORMANCE PARTS
DODGE
5.9L CUMMINS ISB
Six-Gun
DIESEL TUNER
MENU
SELECT
ALERT
Trucks | SUVs | Motorhomes

October 25, 1902
Gross Pointe, Michigan

Oldfield drives Ford's 999 to victory in the Manufacturers Challenge Cup

Both became the most recognized figures in motoring – Barney Oldfield as a driver and Henry Ford as a builder.

The message is clear:

Performance sells

And has to this day

GOAL:

Eliminate the stone-age perception of diesel

The Diesel Fuel Advantage

No octane limitation

Displacement being equal

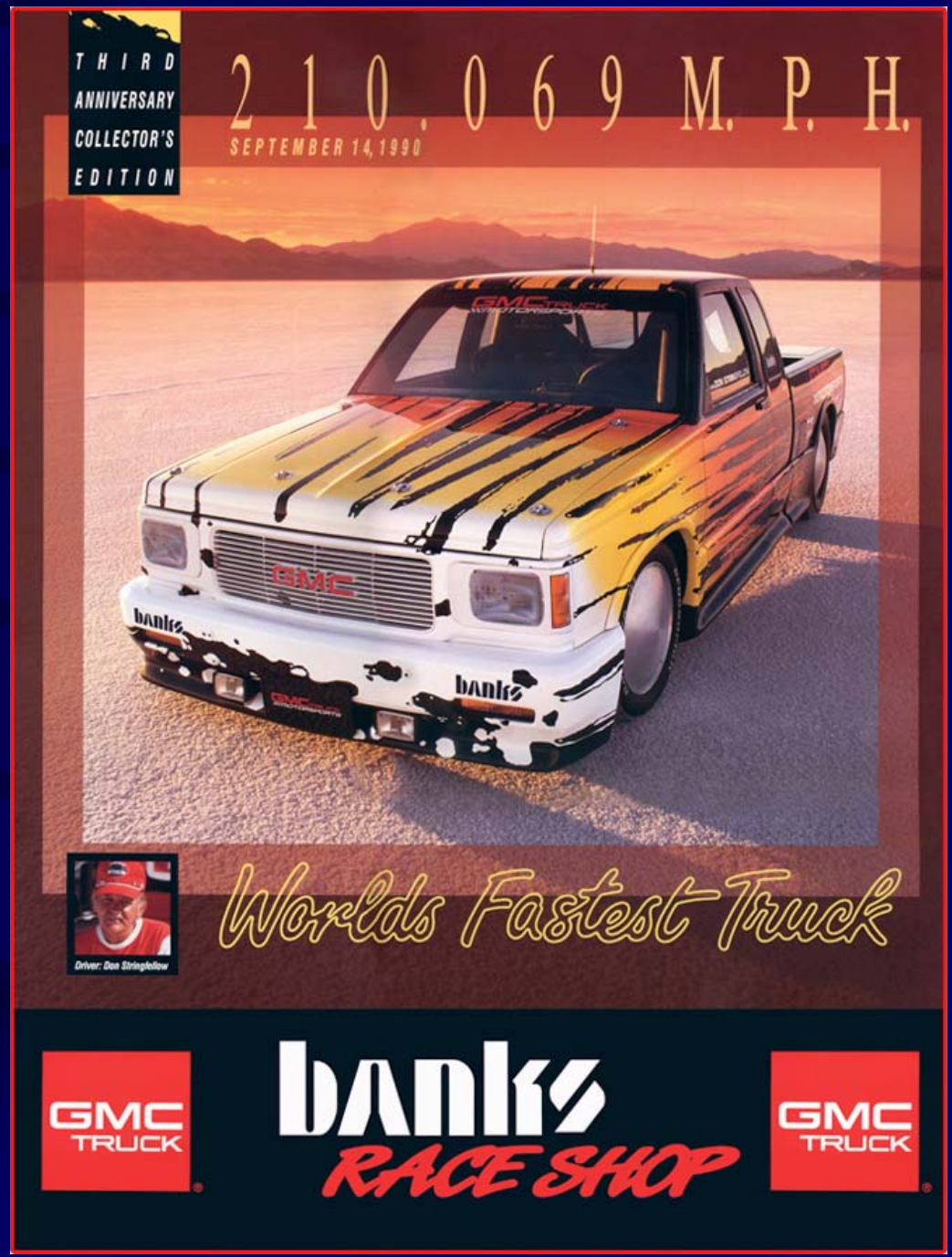
Diesel has greater potential

Banks / GMC Syclone

204 mph

300 CID

Racing gas



Ford / Roush Rocket Ranger

205 mph

371 CID

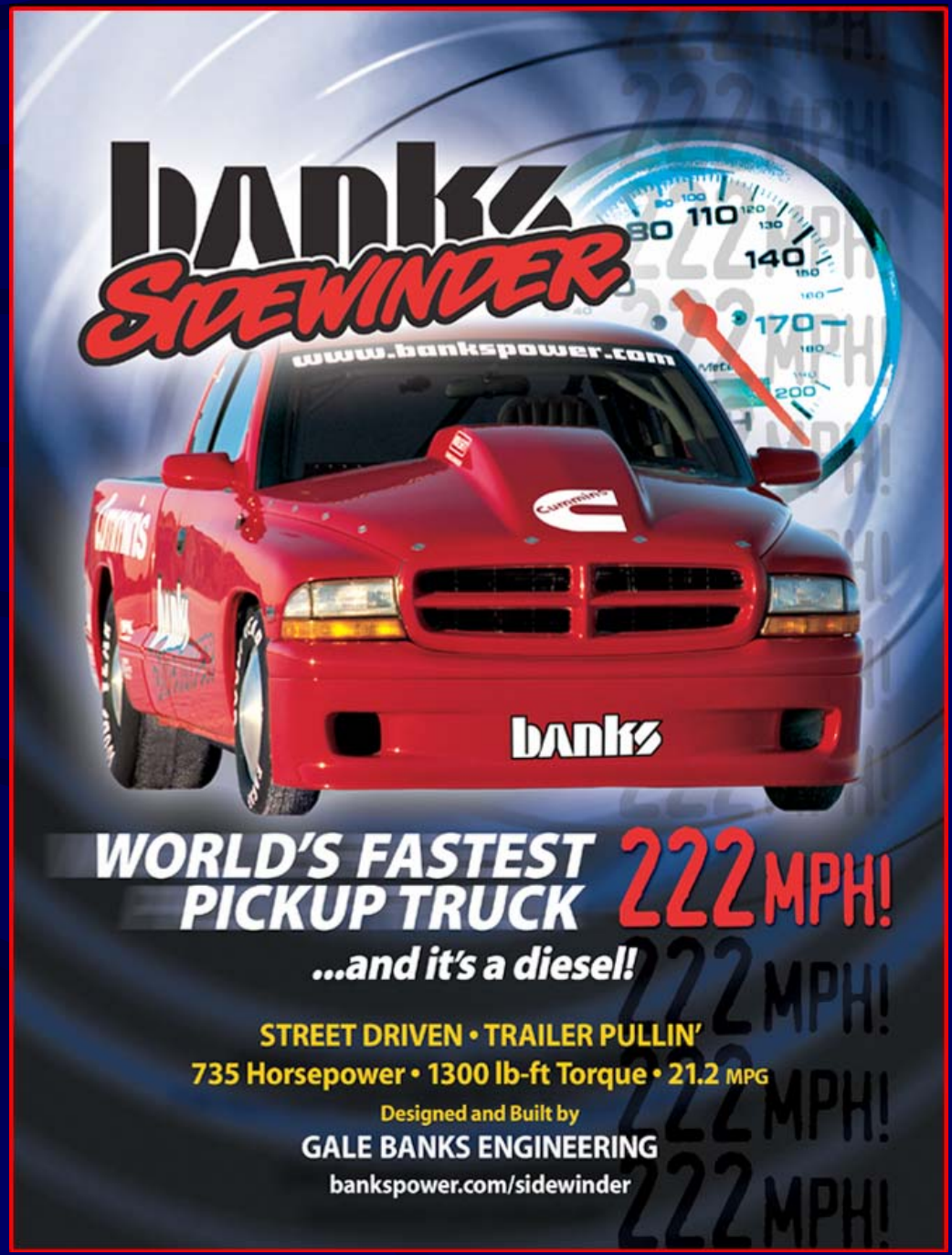
Racing gas

Banks Sidewinder

222 mph

360 CID

#2 diesel



BONNEVILLE
SALT FLATS
Recreation Area
Cummins
banks
banks

Diesel owns the 3/4 and 1-ton pickup market

Compared to gasoline offerings:

Diesel horsepower is now equal

Diesel torque is superior

The diesel option costs more yet the majority of these trucks are diesel powered

The light-duty solution

Don't design to equal gasoline performance

Design to blow them off

While maintaining diesel utility

We know diesel has come a long way, but *public perception is way behind*

SOLUTION:

High-visibility demonstrations of diesel's prowess

Move market demand to diesel by winning over the opinion leaders

The market will follow

NEED #1:

Reconsider basic engine design

Decrease engine mass

Increase specific power

Light-duty diesel

Reduce peak cylinder pressure

Sacrifice a little torque

Turn the engine faster

Produce more horsepower

Both torque and horsepower potential now greatly exceed gasoline

Lower torque reduces drivetrain mass requirement

Improve transient torque curve

With intelligent turbo machinery

BANKS
POWER
BANKS
VGT

NEED #2:

A comprehensive diesel fuel standard *with consideration of the high speed engine requirement*

The American automotive market

We do not have the same market forces as Europe

Diesel engines cost more

Americans buy performance

Performance always costs more…

There's the price justification for diesel

Let's make diesel the preferred automotive engine option

At any engine displacement

diesel should outperform gasoline

Banks Sidewinder

<u>Current power</u>:

125 hp/liter

4000 rpm max

735 bhp

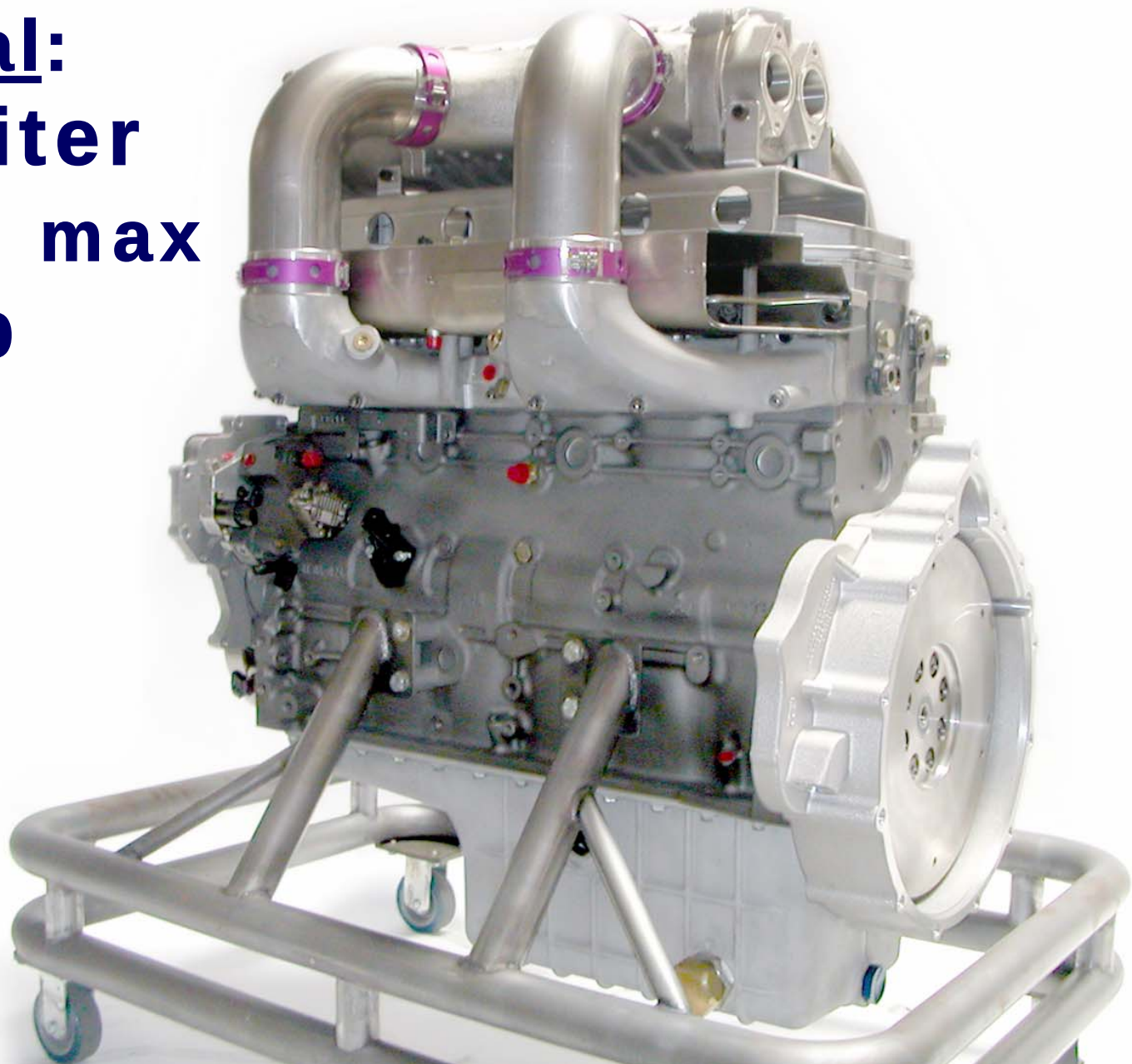
Banks Streamliner

Power goal:

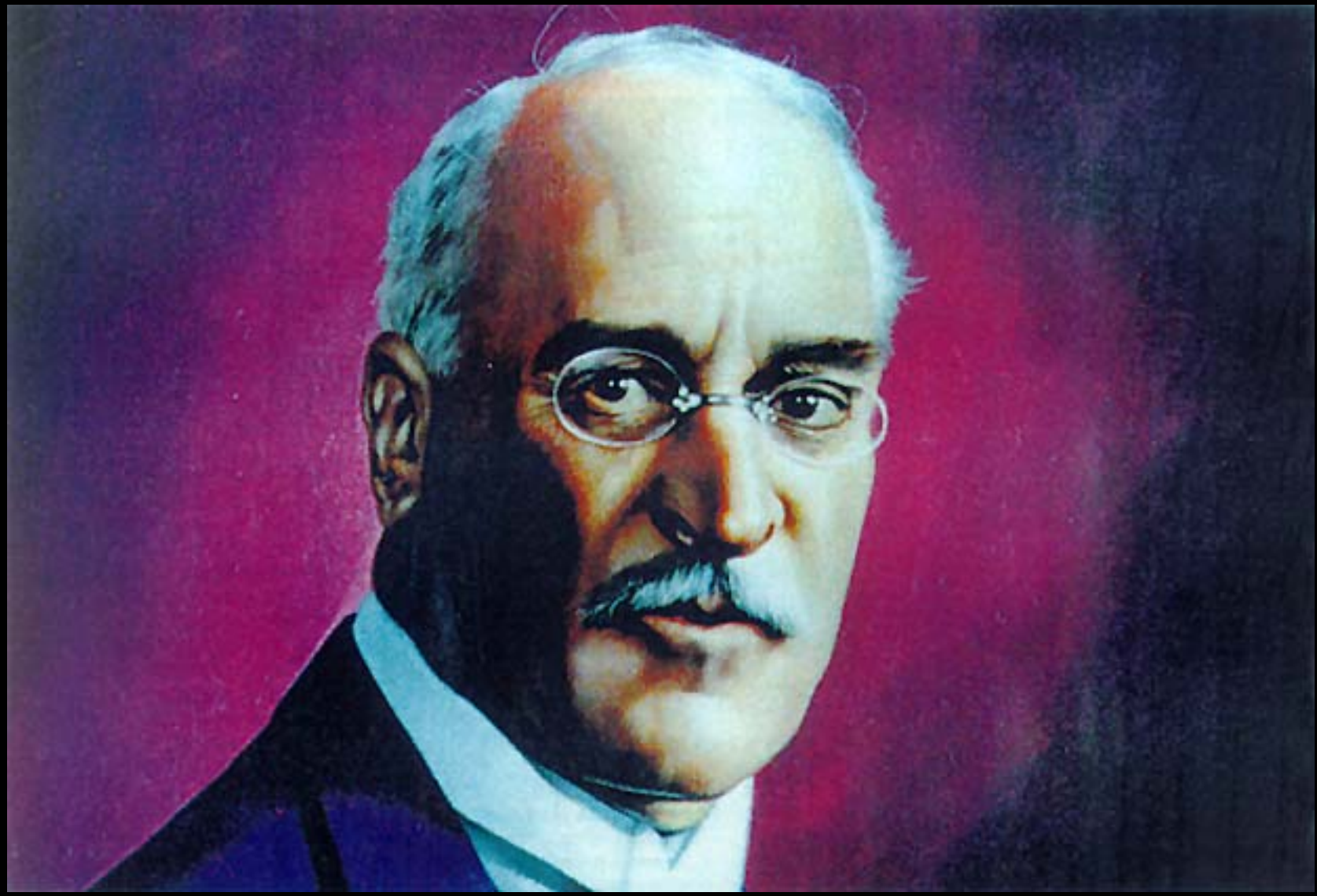
200 hp/liter

5500 rpm max

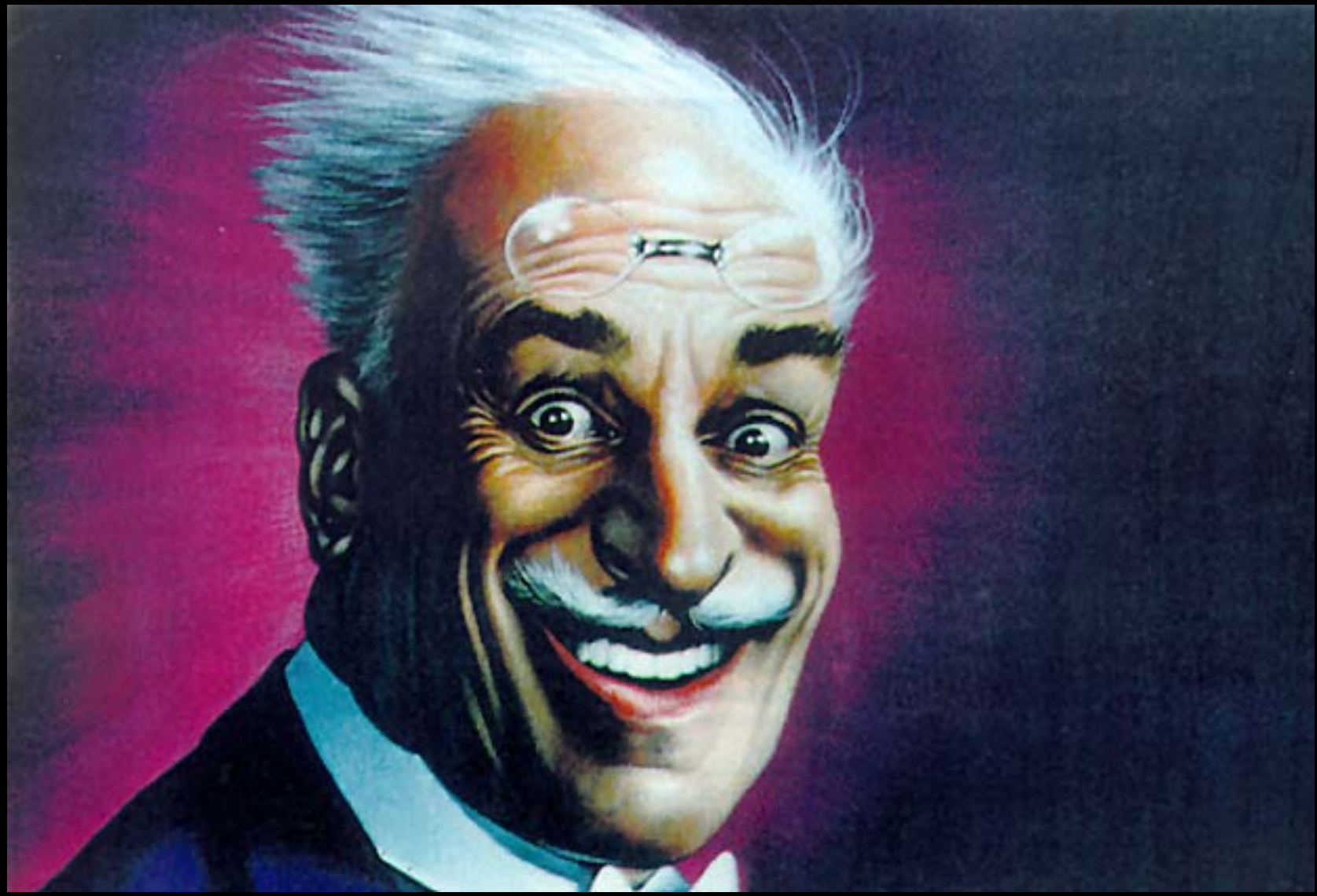
1180 bhp



BOSCH
Cummins
Banks
SIDEWINDER II
330



This is Rudolph Diesel



This is Performance Diesel