

EXPLOSIVE STREET MACHINE NATS!
COVERAGE

October 1990 \$2.95 U.K. £1.75

13-SEC. FAST!

HOT ROD

HOT & EASY

LOW-BUCK POWER



FACTORY GMC TRUCK

**HOT, NEW '91s
PERFORMANCE-CAR PREVIEW**

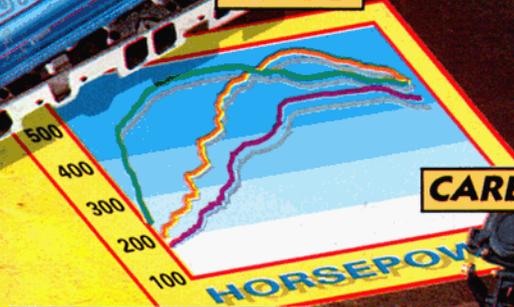
**25
CHEAP
HP
TRICKS**



HEADERS



HEADS



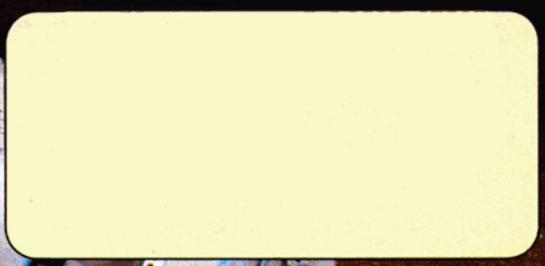
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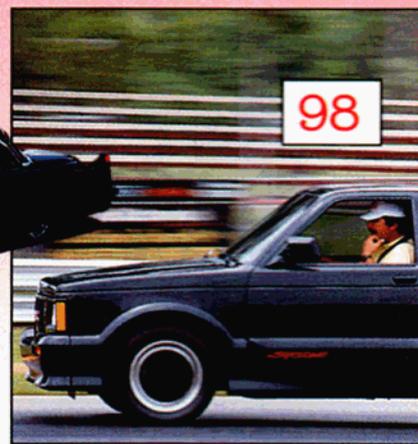
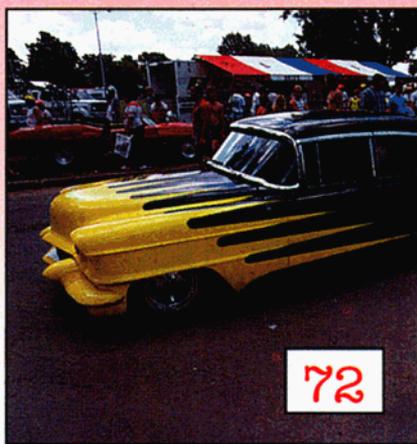


**300-HP BUDGET
SMALL-BLOCK TEST**



HOT ROD *October*

THE WORLD'S MOST WIDELY READ AUTOMOTIVE MAGAZINE



COVER SECTION

24 **25 LOW-BUCK LOWDOWNS**
Budget plans to boost power

33 **PREP SCHOOL**
The keys to low-buck, hi-po cylinder heads

40 **BUDGET BLASTER**
Power building the Mr. Goodwrench 350 Chevy

54 **LOW-FAT RAT**
The Impastato budget Rat motor

58 **APPLE PIE POWER**
American Speed's mail order Mouse motors

FEATURES

20 **PRO TUB**
Johnny Young's daring '51 Pro "Nashty" delivery

64 **THE "OTHER" '55**
Ron Martin's big, bad 514-inch Mainliner

67 **THE YELLOW PRO OF TEXAS**
An X-ray look at the Reher-Morrison Pro Stocker

71 **CLAIM JUMPER**
Keith McNeal Jr.'s 11-second cover Camaro

72 **STREET DREAMS**
The too-cool 1990 Street Machine Nationals

80 **GO MAD**
Mike Lipis' insanely beautiful '57 Pro Nomad

82 **NEW CAR PREVIEW SECTION**
1991 PREVIEW
What's new from Ford, Chrysler, and GM

96 **IT'S A WILD, WILD WILLYS**
Jack Willison III's Rat-ified '40 Willys

98 **ROAD TEST**
SYCLONE A COMIN'
GMC's 13-second, turbo, 4.3L, AWD S-15 jammer

102 **WHITE ON**
The bright light is from Larry Joel's '33 cabriolet

DEPARTMENTS

Volume 43 Number 10

7 STARTING LINE	14 RODDIN' AT RANDOM	119 OCTOBER EVENTS
9 REACTION TIME	106 BIKE TEST	133 SWAP MEET
12 NEW STUFF	108 PIT STOP	136 FINISH LINE

THE COVER: Power the low-buck way is what we're driving at this month, and Keith McNeal Jr.'s launchin' '69 big-block Camaro exemplifies this approach. While the Camaro may not be low-buck, it certainly is quick, with low-11-second e.t.'s, and it's got a lock on good looks to boot. We'd also like to acknowledge Milan Dragway for its assistance in shooting our cover, as well as the able photography skills of PPC photographer Scott Killeen.—J.S.

Starting Line

I'm confused. I thought I had it all figured out. Until now, all-wheel drive (AWD) has always seemed to be an answer to a question that didn't need to be asked. Why bother with the complexity of converting a front-wheel-drive car into a performance all-wheel driver when it would be much simpler to build a rear-wheel-drive car that would be easier to work on and would perform almost as well? This viewpoint fit comfortably into my opinion of performance cars; my life was simple; and all was right with the world.



But that was until I drove the new GMC Syclone turbo 4.3-liter S-15 pickup.

Now my nice, cozy world is more complex with the addition

“ . . . CONTEMPLATE CONVERTING AN EARLY CAMARO TO AWD . . . THAT COULD TURN MID-11s IN THE QUARTER AND WAX ANYTHING SHORT OF AN INDY CAR IN A ROAD RACE!”

of this amazing little truck. I understand that a pickup needs some kind of traction advantage because of its reduced weight over the rear tires. Plug in a 280-horse turbocharged and intercooled V6, and traction becomes a serious problem. That's why the Triad engineers, who developed this package, created a real factory hot rod by utilizing off-the-shelf AWD GM parts to generate a mini-truck that could leap tall buildings in a single bound.

Driving this little pocket rocket is an amazing experience. You can brake torque the engine up against the torque converter until you crank up about eight pounds of boost, just like in the Buick Grand National. Then, when the Christmas Tree comes down, lift off the brake, and nail the throttle. The truck immediately *leaps* off the starting line and makes a slight move to the left, a result of the torque-steer characteristics of the front-wheel drive. The launch is so strong, you'd swear you're on a hard mid-12-second pass. Then it's a matter of stab and steer for the rest of the run, usually resulting in 13-teens at about 98 to 99 mph. Even better, in the rain, this rascal only slows down about three to four tenths of a second! For comparison, I have a mid-12-second 383 Chevelle that won't do the first 60 feet as quickly as this bone-stock pickup truck does; and my Chevelle leaves hard!

Of course, being the demented person that I am, I immediately began to contemplate converting an early Camaro to AWD and dropping in a mega-torque, TPI 400-inch small-block that could turn mid-11s in the quarter and wax anything short of an Indy car in a road race! Is there room in our world for bad-boy all-wheel-drive performance cars? If the GMC Syclone is any indication of the future, the answer is an unqualified yes! If nothing else, AWD offers another intriguing avenue for ultimate street performance.

Check out "Syclone A Comin'" on page 98 for more details on this mighty pickup.

As product planners are wringing their hands and sweating bullets over new bells and whistles that they hope will attract reluctant buyers, one GM division is making a bold move to take command of the high-perfor-

mance car (and truck) market. Its assessment of performance-minded buyers is dead-on target—always give the buyer maximum bang for his buck, and you've got a friend (or customer) for life. Surprisingly, it took a

truck manufacturer to finally build a modern performance vehicle that outperforms virtually every musclecar ever built and

most of the so-called performance cars currently available. Trucks are clearly the hottest market these days, and GMC is poised to take on all challengers with its spectacular new '91½ Syclone S-15.

The Syclone may be the most significant domestic performance vehicle built in the last 20 years. With a 280-hp turbocharged/intercooled V6, all-wheel-drive (AWD), 4-wheel Kelsey-Hayes antilock brakes, superb handling, aggressive styling, and a brutal performance content, it's the new

GMC'S JAMMIN' NEW 13-SECOND, AWD, TURBO- CHARGED V6 S-15 PICKUP

By John Baechtel

Syclone a comin'



bad boy on the block. If Chevrolet's 454 SS is supposed to be "the pick-up from hell," then the Syclone is the devil's own chariot. Its staggering performance level is three-full-seconds and 15-mph faster than the 454 SS truck in the quarter-mile. Comparing jet propulsion to propellers is roughly the same analogy. If you feel the need for speed, the Syclone will oblige you with 5.0-second zero to 60 times—in the rain. On dry pavement, zero to 60 blinks by you in a mere 4.6 seconds, and as an overall performance vehicle, the Syclone handles as well as any pre-IROC F-body, stops on a dime, and runs rings around anything available in this country—short of a ZR-1 Corvette. We're talking 13 seconds flat at just over 100 mph in the quarter-mile. The ZR-1 will run more mph in the quarter, but the Syclone will outlaunch the ZR-1 and match the e.t.'s.

The Syclone was conceived as a total performance package, with its marketing and production build managed by PAS, Inc., of Troy, Michigan, and engineering and development of prototype units accomplished by Triad Services, Inc., of Troy—the same talented team that brought you the turbocharged 20th-anniversary Trans Am. The design philosophy is based on the classic hot rodder notion that most of the necessary hardware already exists somewhere in the giant GM parts bins. By incorporating the proper mix of existing components,

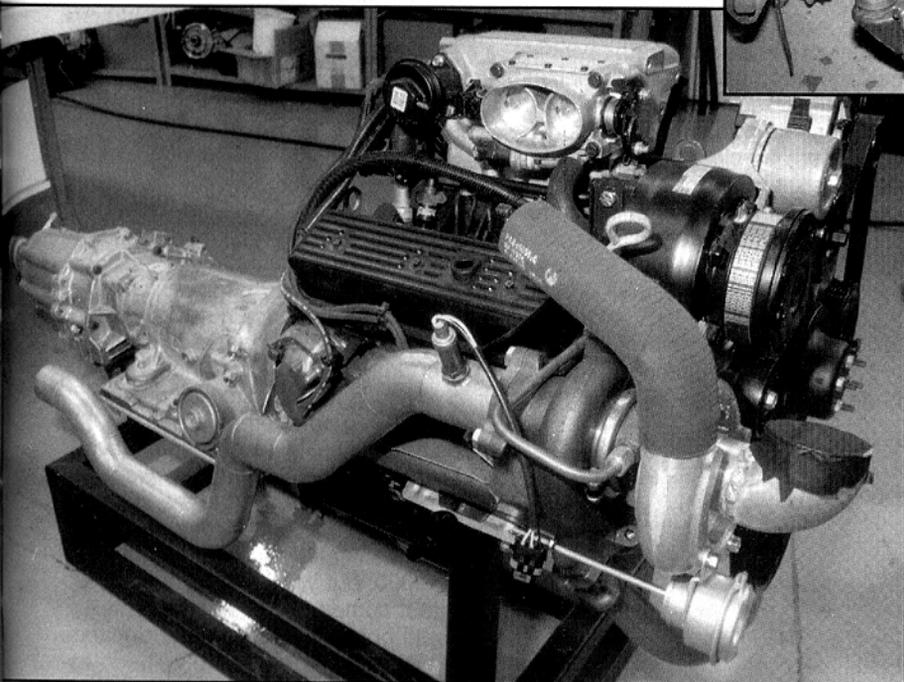
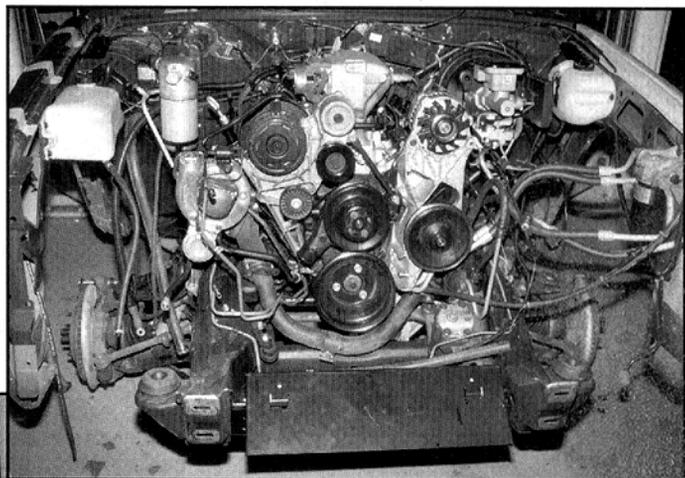
the vehicle could achieve a quantum leap in performance and still maintain reasonable costs. It began with a specific performance goal, and the package was engineered to meet that standard. The goal was a totally integrated performance package that combined optimum driveability, handling, ride quality, and AWD performance. Low- to mid-13s at 100 mph and a zero to 60 in less than five seconds was the target zone, and the Syclone scored a perfect bull's eye. The Syclone brings a lot more to the party than just an attitude and a big ad budget. GMC means business, and what better way to blow your doors off than with a full-blown Syclone?

The original prototype utilized a 3.8L Buick Grand National engine, but those engines are no longer available, so the 4.3L CPC 90 V6 (read "Chevy V6") was enhanced for the application. Turbocharged, inter-cooled, and port fuel injected, it delivers a whopping 280 hp and 360 lbs.-ft. of torque. The intercooler is a water/air unit with a separate pump, coolant reservoir, and heat exchanger. It provides the necessary inlet-air-temperature reduction to maintain the

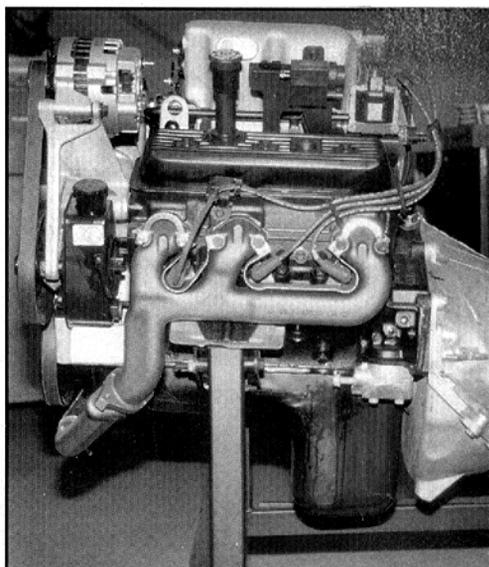
14-psi boost level that creates all that power. The turbocharger is a Mitsubishi unit with a water-cooled center housing for greater durability. This engine has passed all the standard durability tests, including a minimum of 200 hours with variable throttling between peak torque and peak horsepower. This testing demonstrated the reliability of the new hypereutectic pistons, which are the same pistons slated for use in the '92 5.7L V8s. Rounding off the package is a 2¼-inch-diameter dual exhaust system, which uses the stock S-15 4.3L catalytic converter. The combination is quiet enough that no muffler is necessary.

The AWD Safari van (Astro van) provided many of the drivetrain and

The 4.3L V6 is already at home in the S-15 chassis. The primary change is the new hardware that supports the turbocharged application. The turbocharger's intercooler-radiator housing is seen at the bottom center.



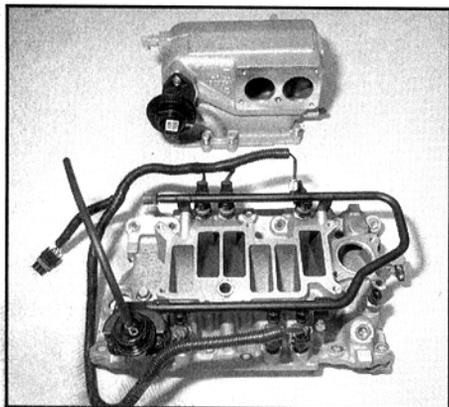
The factory hot-rodded 4.3L Vortec V6 delivers 280 horsepower at 4400 rpm and 360 lbs.-ft. of torque at 3600 rpm. A water-cooled center housing on the Mitsubishi turbocharger keeps bearing temperatures down and guards against oil coking at engine shutdown.



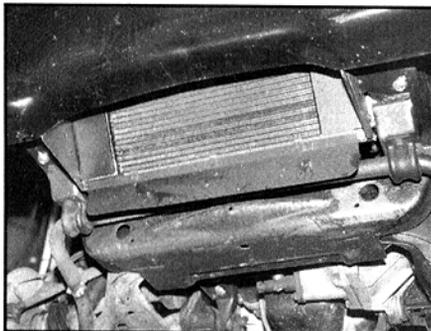
New exhaust manifolds and a cross-over pipe were designed for the Syclone. Note the extra-deep sump oil pan.

suspension components that make the Syclone possible. New S-15

Syclones will be fitted with the van's AWD front differential and torsion bar suspension right on the Shreveport, Louisiana, production line. A performance-calibrated Corvette TH700-R4 4-speed automatic transmission, coupled with a transfer case and a viscous coupling, is mated to the back of the V6 engine. A specially designed and constructed torque converter delivers approximately 2000- to 2200-rpm-stall speed, while the transfer case and viscous coupling provide a 35/65-percent front to rear torque split, respectively, under full load. The viscous coupling passes 65 percent of the engine's torque straight through to the rear wheels, while the outer half of the coupling drives a belt chain in the transfer-case housing that routes the remaining 35 percent of the torque to the front differential. The AWD package added less than 200 pounds to the vehicle, and



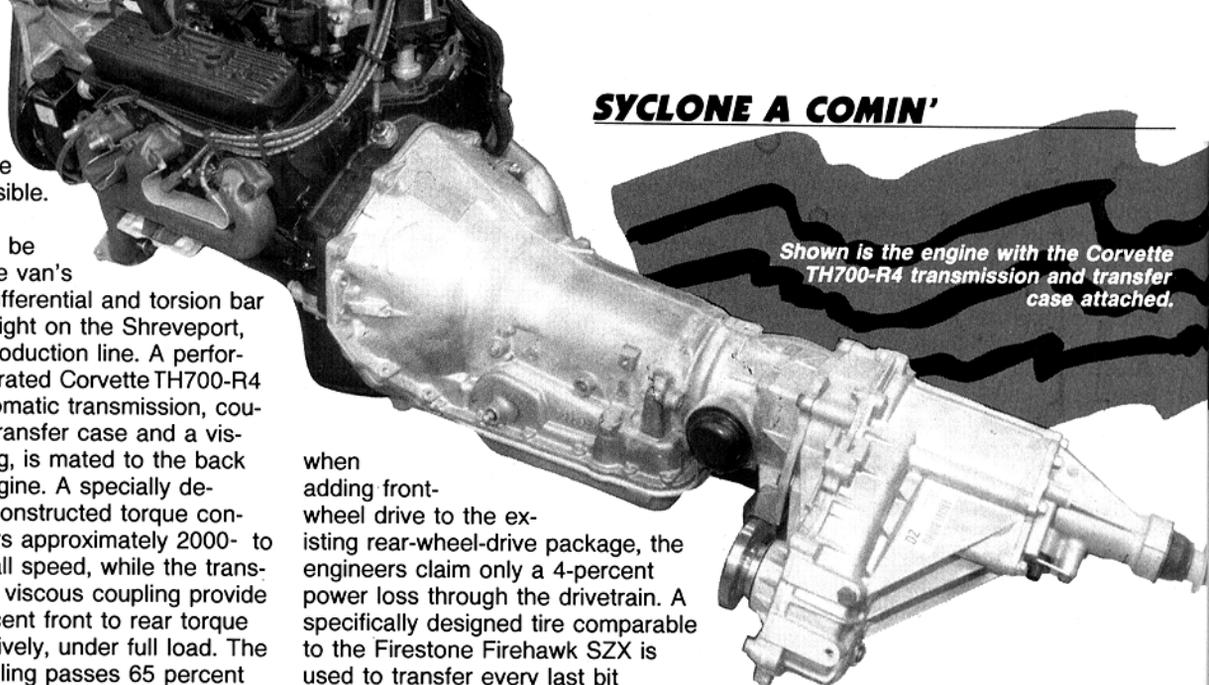
The new port-injection aluminum intake manifold is plumbed for double-batch injection. The two-piece unit features a plenum specifically sized for optimum power.



Seen behind the front airdam, the intercooler heat exchanger incorporates a lower lip to help direct air through its core. No doubt an intercooler stone guard will be one of the first aftermarket products out next year.

100 HOT ROD OCTOBER 1990

SYCLONE A COMIN'

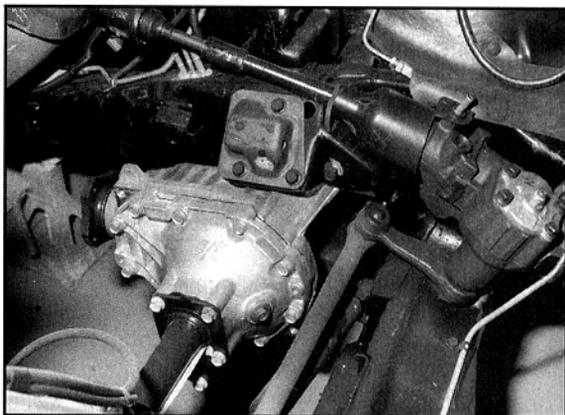


Shown is the engine with the Corvette TH700-R4 transmission and transfer case attached.

when adding front-wheel drive to the existing rear-wheel-drive package, the engineers claim only a 4-percent power loss through the drivetrain. A specifically designed tire comparable to the Firestone Firehawk SZX is used to transfer every last bit of power to the ground.

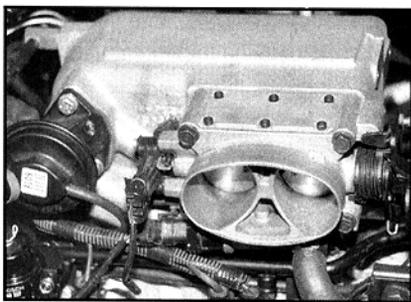
GMC was also keenly aware of the need to make the Syclone visually attractive—hence the subtle yet aggressive styling package that includes a front airdam with integrated road lamps, unique lower rocker panels, a two-tone body appliqué package, a tonneau cover, 16-inch aero-styled wheels, speed-rated tires, and a monochromatic black paint treatment. Standard interior appointments include power windows and door locks, cruise control with a leather-clad tilt wheel, air conditioning, a heavy-duty battery, tinted glass, and an AM/FM/cassette stereo. Recontoured sport bucket seats with lumbar support have a unique cloth covering that matches the door trim, and a floor console with automatic shift control and storage space is provided. The analog gauge cluster incorporates a tachometer; turbo boost, oil pressure, and coolant-temperature gauges; and a 140-mph speedometer.

Think of it as an integrated total-performance system. GMC wanted to



A front differential from the Safari van is virtually a bolt-in in the S-15 chassis. Minor changes were made to ensure correct prop-shaft angles.

address a particular market without stepping on anyone's toes; however, the product is so good that it clearly steps on everyone's toes. We say, "Thank God for GMC." In its wisdom, GMC has not only built the ultimate American performance vehicle, but it has also ensured that speculators won't drive the price out of sight the way they did with the Buick GNX and the turbocharged Trans Am. The Syclone is not a limited-production vehicle. To paraphrase a popular commercial, GMC's philosophy suggests that you, "Buy all you want, we'll make more." True, the initial offering is a little pricey for some of us at an estimated range of \$25,000 to \$28,000, but you have to remember that it comes with everything you could possibly want in a performance vehicle—car or truck. We've been assured that an unlimited supply of these trucks will be offered so you won't be at the mercy of an unscrupulous dealer who might see this as



The inlet system incorporates the high-flow throttle body from the 5.7L L98 Corvette engine.

SPEC SHEET

'91½ GMC SYCLONE AWD

RETAIL:

Base Price.....\$25,000 to \$28,000
Price As Tested.....N/A

ENGINE:

Type.....OHV 90-degree V6
Bore & Stroke.....4.00x3.48 inches
Displacement.....262 cid, 4.3L
Compression Ratio.....8.35:1
HP, SAE Net @ rpm.....280 @ 4400
Torque, SAE Net @ rpm.....360 @ 3600
Induction System.....Turbocharged/intercooled with sequential multiport EFI
Maximum Boost.....14 psi

DRIVETRAIN:

Transmission.....4-speed automatic with overdrive, Hydramatic TH700-R4
Axle Ratio.....3.42:1 limited slip
AWD Transfer Case.....From Safari L-Van

CHASSIS:

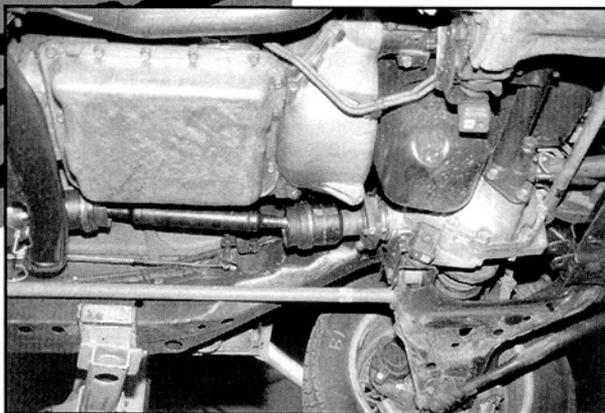
Front Suspension.....Independent with torsion bars, lower spring rate and ride height, revised jounce bumpers, and 32mm stabilizer bar
Rear Suspension.....Semi-elliptic leaf springs with Salisbury axle
Steering.....Recirculating ball with 13/16.0:1 variable ratio
Brakes.....Power-assisted
Front: 10.5-inch discs
Rear: 9.5-inch drum
Wheels.....16x8-inch cast-aluminum alloy
Tires.....245/50VR16 Firestone all weather

GENERAL:

Curb Weight.....3526 pounds
Wheelbase.....108.3 inches
Fuel Capacity.....20 gallons

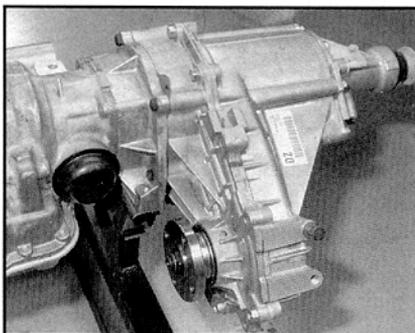
PERFORMANCE:

Power to Weight.....12.59 lbs./hp
0 to 60 mph.....4.6 seconds
Quarter-Mile.....13.06 @ 100.2 mph
60 to 0 mph.....131 feet
Skidpad......82g

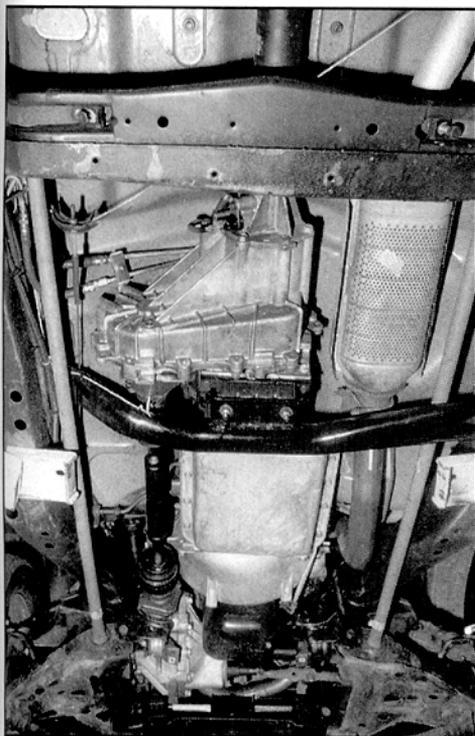


The front differential prop shaft uses double U-joint connections for maximum durability.

The transfer case features a redesigned housing to clear the floor of the S-15. The viscous coupling is located directly inline behind the transmission where it passes 65 percent of the torque to the rear wheels. Thirty-five percent is directed to the front differential via a belt chain in the transfer case.



Triad Services used the Edge Performance Monitor data-acquisition system to gather all its road data during the vehicle-development phase. The Edge system is currently used by numerous race teams and product-development groups.



This view illustrates the drive-train layout with the viscous coupling to the rear and the transfer case driving the auxiliary prop shaft to the front differential. Also note the torsion bar suspension.

an opportunity to fatten his profit margin. GMC wants you to have this truck for a reasonable price, so shop around and make your best deal. After all, this is the pickup that will walk all over the "pickup from hell," and there's no reason why you shouldn't be able to get a hell of a deal on one. **HR**



Because the front wheels also provide drive, the Syclone does have some torque steer at launch (see front tire), but it's easily managed.