

AUTOMATIC

transmissions for high-performance cars are nothing particularly new, according to Zora Arkus-Duntov, Chevrolet's engineer in charge of Corvette chassis and power development. He specifically points to the widespread use of Wilson pre-selector gearboxes in the era preceeding WW-II; ten years ago he predicted automatics would once again be racing.

Now, Mr. A-D and crew have adapted the sturdy old Powerglide to fit behind the latest series of 427-cu. in. engines in the Corvette chassis. Chevrolet will soon offer it as an option for the 390-bhp version and in the offing there may be one for the 427/425.

Only minor changes in the converter section were necessary to make the adaptation (remember, Chevrolet had offered this unit behind the 340-bhp 409s in sedans in '63-'65). Maximum upshift speed has been boosted to 5500 rpm for the 427, which makes the performance—even for a compromise-ratioed 2-speed—pretty stout. Chevrolet will recommend 3.36:1 axle ratios for the 427/Powerglide Corvette which, with the 1.76:1 first gear ratio, gives it a 0-72 mph range in Low.

Car Life tried out a 427/390 Powerglide Corvette on the rural roads around the Chevrolet Engineering Center at Warren, Mich., and was more than mildly pleased by the strength and smoothness of performance. However,

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the test car had a 3.7:1 axle and its acceleration was of the 14-sec. quarter-mile variety.

Why doesn't the Corvette 427 get the 3-speed Turbo Hydra-Matic? We asked that question, too. There were two reasons: 1) The 2-speed is 60 lb. lighter, and 2) the THM unit would require modification of the frame (probably a removable crossmember to allow transmission removal and installation).

Why an automatic for the larger Corvette engine? Although sales of the Corvette were up to some 21,000 units in model-year '65, only 8.6% were Powerglide-equipped and Chevrolet feels it might be missing some business. Four-speed manual transmission installations accounted for 89%. —Dennis Shattuck

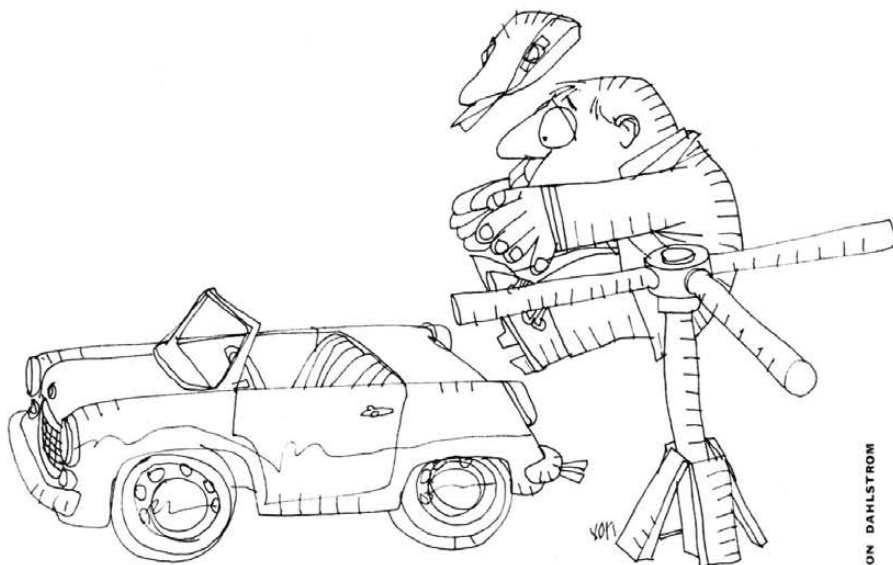
SAY, says old salt bear Bill Dredge in a note from Studebaker public relations office, "I

was most impressed with your back-of-the-book editorial 'Slipped Discs' (CL, Nov. '65). But I wish you could have made some mention of the fact that Studebaker is the only U.S. automobile which offers a disc brake option on EVERY vehicle in the lineup and HAS offered disc brakes on every car in the line since the start of the 1963 model year—which is some little time ago."

His point is well taken, and Dredge goes on to shove the needle home: "It seems to me that when one manufacturer does try his damndest to provide maximum safety equipment to auto buyers, that he rates at least one line in an editorial which points out that nobody else is doing very much about the brake situation."

Can we make amends, Bill, by quoting you that the Studebaker discs "are the most trouble-free single component on our automobiles"? Or that you have "not found need to go to exotic new ventilated double-dipped forms of discs"? And, as you point out, "The original caliper disc design provided to us by Bendix, U.S. pioneers of caliper discs, continue to serve us very well indeed with pucker mileages well in excess of 20,000 miles even in severe service."?

Dredge makes one more point worth noting: During the past three to 10 years, Studebakers have come with such standard equipment as dual master cylinder, 2-speed wipers, windshield washers, front seat belts, parking brake warning



What's In a Name? . . .

TURNPIKE

LATE IN medieval times, military strategists dreamed up a device with which to block sudden attacks by small companies of horsemen. Four metal-tipped pikes with their shafts sawed off short were mounted on a

vertical axis to form an armed cross. Erected at a city gate, this contrivance permitted men on foot to pass easily—but effectively blocked persons astride their mounts.

As late as the time of Columbus this

kind of "turn pike" was so familiar that its name appeared in figurative as well as literal senses. More than one poet of the epoch referred to a man's whiskers as "turnpikes to resist the assaults of love."

After the development of new weapons made city walls and gates obsolete, the name of the old defensive barrier was applied to toll gates and turnstiles where fees were collected. In 1723, Sir John Mandeville complained that poor travelers were stopped every ten miles by turnpikes.

The devices really must have been common, especially in Britain, because, before the middle of the 18th Century, the name of the barrier was attached to any road or highway open only to those who had paid fees. Daniel DeFoe, author of *Robinson Crusoe*, described a tour of England in 1748 and mentioned a road that he considered "one of the worst turnpikes around London."

Because many governmental units on both sides of the Atlantic used part of the revenue collected from toll roads to keep them in repair, they were generally superior to free or public roads. In modern times the much-used traveler's term has expanded in meaning with the result that any superhighway, free or toll, is likely to be called a *turnpike*. —Webb Garrison

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NEWS & VIEWS *continued*

lights and "full safety frames for impact resistance since time immemorial." All Studebaker had to add to match the government-guided safety equipment this year were rear seat belts, padded sun visors and outside mirrors.

LOTUS dreamers now have a new version to delight them. Since Jim Clark's victory at Indianapolis, Colin Chapman's Lotus marque has taken on new glamor for status-seeking Yankees. The greater activity and interest around Lotus dealerships could have been predicted, despite the rather large pricetag on a rather smallish, connoisseur's type conveyance, the Elan.

But 200 or so Ford dealers are set to toil in this enthusiast field with a reverse twist on the Lotus-powered-by-Ford combination. They're marketing a Ford-powered-by-Lotus, the English Cortina-Lotus (see "Modern Model A," CL, Sept. '63), the first shipload of which arrived just in time to become Christmas presents.

The Lotus-modified 4-cyl. English Ford engine lurks under the hood, prepared to produce on demand 105 bhp (from 95 cu. in.) with the aid of beautifully tooled double overhead camshafts and a pair of Weber DCOE dual-throat carburetors. It is pure *aficianado*, eminently suitable for those addicted to stringback driving gloves.

As for the Ford Cortina portion of the package, this is somewhat altered from the earlier, non-imported versions of the car. It is now basically the Cortina GT, with the familiar Hotchkiss rear axle layout and standard steel doors and hoods. But it does have front-wheel disc brakes (power assisted) and an exceptional rack-and-pinion steering via an imitation wood-rimmed wheel.

By reverting to more regular production pieces, however, the price has been kept "competitive," according to FoMoCo Import Manager Ron Platt (who neglected to say what there was for it to compete with). Though not firmed up by press time, our guess is just under \$2700—without racing roll cage (which is available from Bill Stroppe's racing shop in Long Beach, Calif.). And it still corners, when pushed hard, in that peculiar characteristic stance with inside front paw held high. —Gene Booth

SIGNS have been getting stronger that Fisher Body Division of General Motors is executing more and more engineering management over the passenger cars produced by the five divisions. Latest indicator to cross the desk is a service manual published, for the first time, by Fisher to cover all its bodies regardless of nameplate.

Service manuals from the divisions, moreover, concentrate on engine and powertrain repairs to supplement the Fisher volume. As a matter of information, Fisher builds seven basic bodies: A

—Chevrolet, Pontiac, Oldsmobile and Buick "intermediates"; B—full-size Chevrolet, Pontiac, Oldsmobile and Buick; C—luxury Cadillac, Buick and Oldsmobile; D—Cadillac Fleetwood Seventy-Five; E—Tornado and Riviera; X—Chevy II; and Z—Corvair. Each basic shell, of course, has several variations for body style and exterior paneling.

AWARD time found *Car Life* Publisher John R. Bond and Editor Dennis Shattuck in Detroit presenting the CL Annual Award for Engineering Excellence to General Manager Harold N. Metzger of Oldsmobile Division for the design and development of the front-wheel-drive Tornado.

In accepting the Award, during the luncheon at the Detroit Athletic Club, Metzger observed that the Tornado was among the most satisfying projects he had worked on in his long career with



METZGER, center, receives CL's award from Bond and Shattuck.

Oldsmobile. The other two, he confided, were developing the first Rocket V-8 engine and the Hydra-Matic transmission.

As in the past, this year's Award was a distinctive design by Gene Garfinkle of Presentation Design in Newport Beach, fabricated by Len Cheslak of Cheslak Design Associates. It was shaped to symbolize the Oldsmobile Rocket trademark.

BEEFS must be at an all-time high, if our informant is correct. Chevrolet dealers, we understand, now have a 400-page guidebook for handling owner relations—keeping customers happy so they'll keep being customers.

HARD-driving car owners who spend some time on the dragstrips or raceways may want to try a newly developed racing motor oil from Valvoline Oil Co. Called, honestly enough, Valvoline High Performance Racing Motor Oil, it is a blend of special lubricant stocks and recently developed additives. It's available in 30, 40 and 50 SAE grades.

Among the special additives, two anti-foamers control surface tension and break bubbles before they can produce oil pump cavitation. Another coats parts to offset extreme pressures under heavy load conditions. Lab tests even show a

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NEWS & VIEWS_{continued}

3% gain in rpm at constant throttle, compared to normal 50 weight oil, and measurable (though unstated) bhp gains.

SHOW a doctor a traffic fatality and he becomes an auto safety design expert. The observation, while not original here, seems to bear repeating now that the subject has achieved high political priority. Whether the new president of the American Association for Automotive Medicine is the exception that proves the rule, however, remains to be seen.

Dr. John D. States, clinical instructor in orthopedic surgery at University of Rochester School of Medicine, who recently became head of the doctors' group, reiterates the complaint that interior devices and lack of padding contribute to fatalities in accidents. "I believe it is time for engineering and design efforts to be directed toward the unrestrained occupant," the physician says. He wants to see "safety standards concerned with dashboard padding, instrument and control design, steering wheels and columns, windshield glazing and seat design."

The AAAM chief points out that interior safety considerations have been predicated on the use of restraint systems (seat belts), but issues an estimate that "it is going to be impossible to achieve more than a 30% usage rate" of such devices even when nearly all cars are so equipped. "Extensive redesign of the dashboard to improve padding characteristics and contours, and efforts at

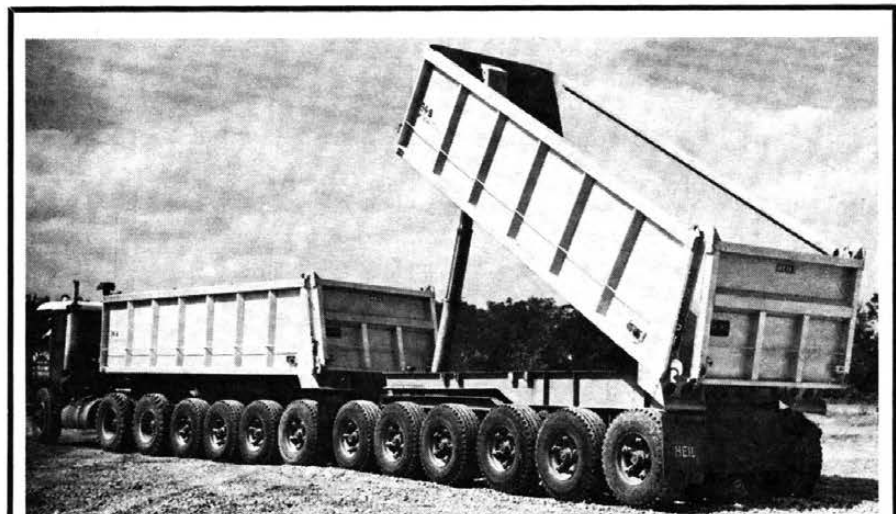
knee protection and coordination with windshield design may make it possible for the unbelted occupant to withstand nearly as intense an impact as a belted occupant," Dr. States declares.

Drawing on his past experience as a physician for sports car races, Dr. States also calls for automobile design which incorporates roll bars around the passenger compartments, particularly for convertibles.

TIRE testing machine now used by GM Research Laboratories has a 10-ft. moving roadbed to run tires against. Joseph B. Bidwell, head of lab's engineering mechanics department, reports one conclusion about radial ply tires: Potentially higher cornering stiffness can produce faster response, but lower camber stiffness reduces vehicle understeer. Less understeer, he says, must be compensated for by suspension changes.

KIDS ought to be strapped down in cars. It's downright immoral, un-American, and almost criminal if they're not—not just because of sibling safety, of course, but more to keep them off of the driver's nerves.

One of the best ways we've seen to accomplish this is the baby bucket offered by Ford and Lincoln-Mercury dealers for \$29.95. With this vinyl and foam perch, offspring are trained young to be well strapped down in one spot any time they are in the car. There's compensation from the youngster's point of view: The seat is raised enough to let him see out the windows. ■



HOW'S THIS FOR WHEELIES?

If you're down in the dumps about tire bills, think of Bert Cuyler up there in Michigan. He's president of a company which operates two of these Super/Dumpers for a total of 43,400 ton-miles per day. Each of these King Kong cabovers rides on 30 tires while carrying 62-ton payloads at speeds up to 60 mph. Do you think Bert shudders when he signs checks for tires? No, sir, he grins. Those ten rear axles once were fitted with duals—which made buying tires something akin to keeping a centipede properly shod. Bert's solution to the problem was use of U.S. Rubber's Fleet Uni-Master tires in single array to do the double duty of the previous duals. But he still has quite a roll to pay.