

Road Testing the **CUNNINGHAM**

"It's like harnessing Niagara Falls or the kick of a Jato-assist," Ted Koopman says of Briggs Cunningham's custom built coupe, perhaps America's finest and certainly most expensive automobile

By TED KOOPMAN
ASSOCIATE EDITOR, CAR LIFE

AHAPPY blending of Italian artistry and American acumen, the Vignale-bodied Cunningham coupe establishes a new standard of comfort and performance that finds U.S. production models suffering by comparison.

With simplicity its keynote, the subtle merging of curving surfaces and minimum use of chrome are indicative of character and good taste—refreshing as a sea breeze in summer.

Race car poise is exploited by the use of large wheel openings, creating an impression of speed which becomes reality under the savage thrust of the modified Chrysler power plant. Driving this car is not unlike harnessing Niagara Falls and a suddenly opened throttle parallels the kick of a Jato assist rocket. At this juncture, the Cunningham's superior suspension and balance becomes apparent as the car explodes into action without sign of

wheel spin or the scream of tortured rubber.

This ability to utilize the engine's brute force accounts, in part, for the fantastic acceleration of 6.45 seconds from a standstill to 60 MPH—an amazing performance in a car powered by a production engine, stock except for four Zenith carburetors and dual exhaust system.

Fuel economy is equally surprising, averaging well over 20 miles per gallon at cruising speeds of 70 to 75 MPH, a figure unattainable in production cars of comparable size. No single feature may be credited for this spectacular performance, although a major reason is the exceptional power to weight ratio which approximates 14 pounds per horsepower.

Weighing but 3,140 pounds curbside, it is nearly 1,000 pounds lighter than a comparable production coupe, a weight reduction gained by the employment of lightweight tubular and box-section frame members to form a structure highly resistant to bending or twisting loads. Further weight reduction arises from the body design which has been stripped of all non-functional poundage.

This Cunningham coupe must not be confused with the Le Mans competition model, although possessing many features found in its famous relative. Its origin stems from the 1950 Le Mans 24-hour race in which Briggs Cunningham competed with two somewhat modified stock Cadillacs, one of which was fitted with a specially designed body.

The success of this venture inspired further efforts and plans were drafted for three competition cars to be entered in the 1951 event. Under the rules governing Le Mans competition, all cars must be a prototype of a proposed production model or of standard production. To qualify under this second alternative, a minimum of 25 cars must be produced.

To meet these conditions, Cunningham was faced with the problem of building these additional cars while concentrating on the three racing models. His original plan called for a car equally suitable for racing or highway use but, finding too many compromises necessary, he modified the competition model to bring it in line with passenger car requirements.

Major differences are in suspension.

The competition model abandoned the independent front wheel suspension for solid front axle and torsion bar springing. In the production model the DeDion type rear end was replaced with a modified Chrysler banjo with special radius rods and coil springs. Engine modifications are more extensive in the competition car; transmissions with four or five speeds are used and brakes are modified to meet the exacting demands imposed by road racing.

The difficulty in locating experienced coachbuilders and lack of manufacturing space resulted in an agreement with Alfredo Vignale, of Torino, Italy, one of Europe's most successful body builders, to furnish and mount a body on the Cunningham chassis which was to be shipped by air to Italy and returned to the States ready for the salesroom floor.

Competition bodies are built at the Palm Beach plant, but in a separate building allotted to the racing division.

Thus, in the Vignale-bodied car, we have a well-mannered family automobile equally at home on highly congested city streets or the superhighway. Cruising safely and with comfort at speeds far in excess of those smiled upon by law enforcement officials, the Cunningham has the capacity to maintain those speeds hour after hour, indifferent to road conditions.

Performance of this sort speaks well for suspension and balance and, in this car, the weight is equally distributed when two persons are aboard. Front suspension is made up of Ford and Mercury components, modified to provide ample and well controlled vertical motion without sacrificing stability or resistance to roll. Cornering is positive, body roll reduced to a negligible degree and high speed float entirely eliminated.

Driving is effortless, there being no tendency to wander at any speed, and in any but extremely strong cross winds, the car goes down the road as true as a bullet. Steering ratio is a compromise between the slow, merry-go-round ratio of today's production cars and the ultra-fast racing set up, with three turns required to complete the lock to lock cycle.

This in itself is a safety feature of no small note permitting accurate cornering and, with the terrific low speed torque, recovery from slides or skids is routine.

The rear suspension adds materially to the outstanding roadability of the car, the coil springs carrying the modified Chrysler banjo being dampened by dual sets of shock absorbers—Delco truck units combined with airplane type Munroe shocks.

No need here either, for the power assist brake considering the small amount

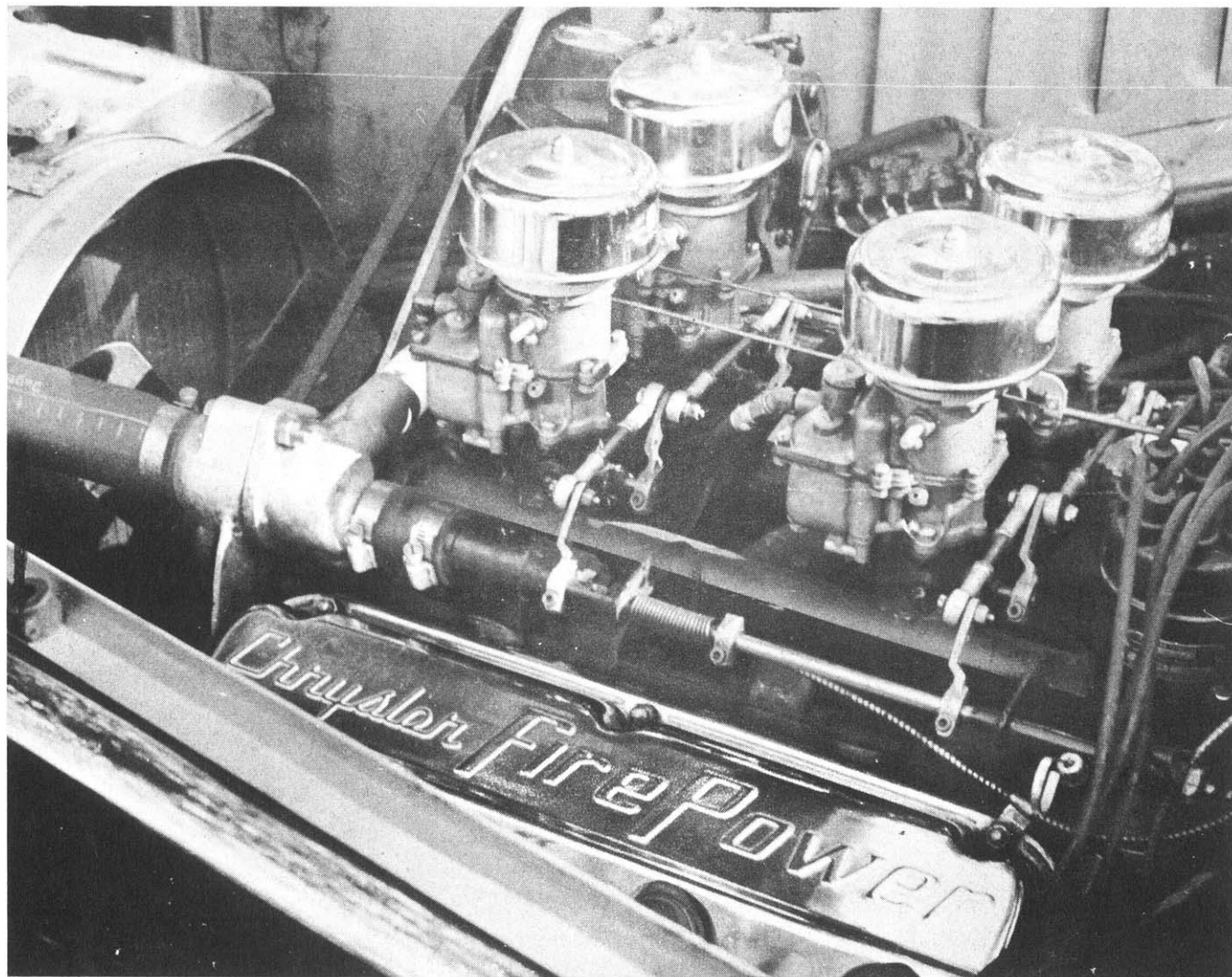
of pedal pressure required for normal stops. No one under normal conditions enjoys the thoughts of a panic stop from 60 MPH. The Cunningham, however, came to a screaming stop in less than 150 feet without pull in either direction or sign of fishtailing. Front end declination was very slight, especially when compared to our weak-kneed production cars.

The brakes, made up from Mercury and Ford parts and modified by the Cunningham engineers, also are reasonably free from fade. Stabilizer bars, front and rear, are well designed and located to contribute generously to the excellent handling.

A number of transmissions have been used in the various cars, this one being equipped with a standard 3-speed Cadillac synchro-mesh unit driven through a stock Cadillac clutch. That the combination is effective can be determined from the acceleration through gears, but conditions arise wherein a fourth speed would be highly advantageous.

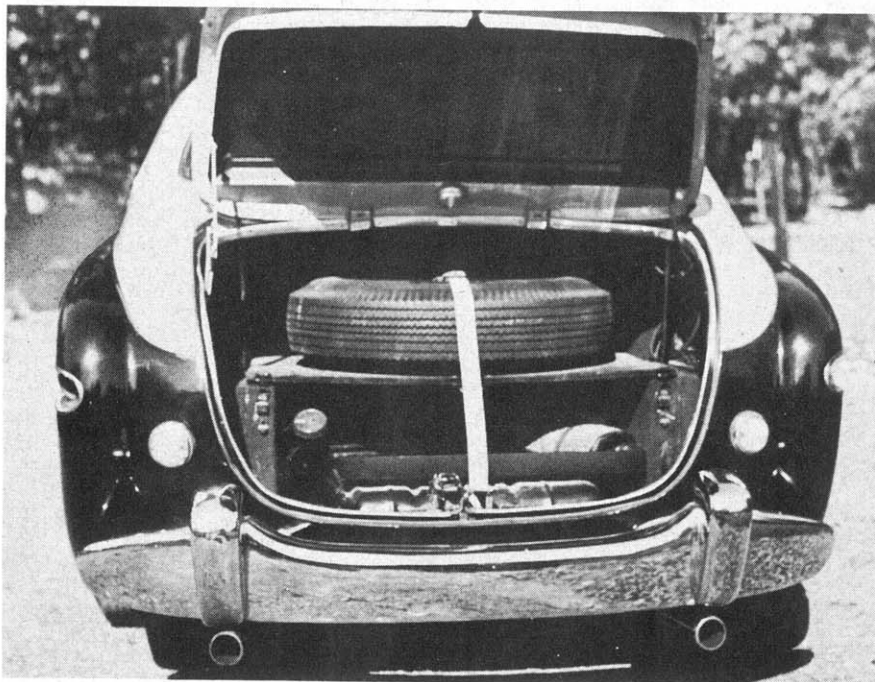
Where the complete Chrysler torque converter drive has been employed, acceleration is even faster than with the synchro-mesh unit but lacks the selective control of manual shifting.

An overall evaluation of the chassis leaves little or nothing to justify critical comment although the solid-beam front



Ted Koopman Photo

Unique quad-carburetor linkage was designed and made by Cunningham.



Small trunk capacity; bumper is rugged.

Ted Koopman Photo

at the low speed torque of this huge power plant. For the Chrysler is huge in comparison to European standards where 1.5 liter (91 cubic inch) engines are constructed to produce up to 500 HP in extreme designs and twice that of our power plants on the average.

In the eyes of Continental and British engineers, the 5½-liter Chrysler with its meager output of 210 BHP, is deemed inefficient, wasteful and clumsy. There is little that can be said in rebuttal, except the reminder that the slower turning, medium output Chrysler will be running satisfactorily when the over-worked foreign-made engines have become fodder for the steel mills. There still is no substitute for cubic inches.

Two outstanding advantages of the Cunningham can be found in the stock American engine and the fact that the car is assembled entirely from standard production components, with Ford and Mercury parts predominating. This represents considerable saving in maintenance which, with the fuel economy, brings operating costs to a level that challenges the 'economy cars' in cost per mile transportation—except in the matter of purchase cost.

axle employed in the late model competition cars would be a desirable addition.

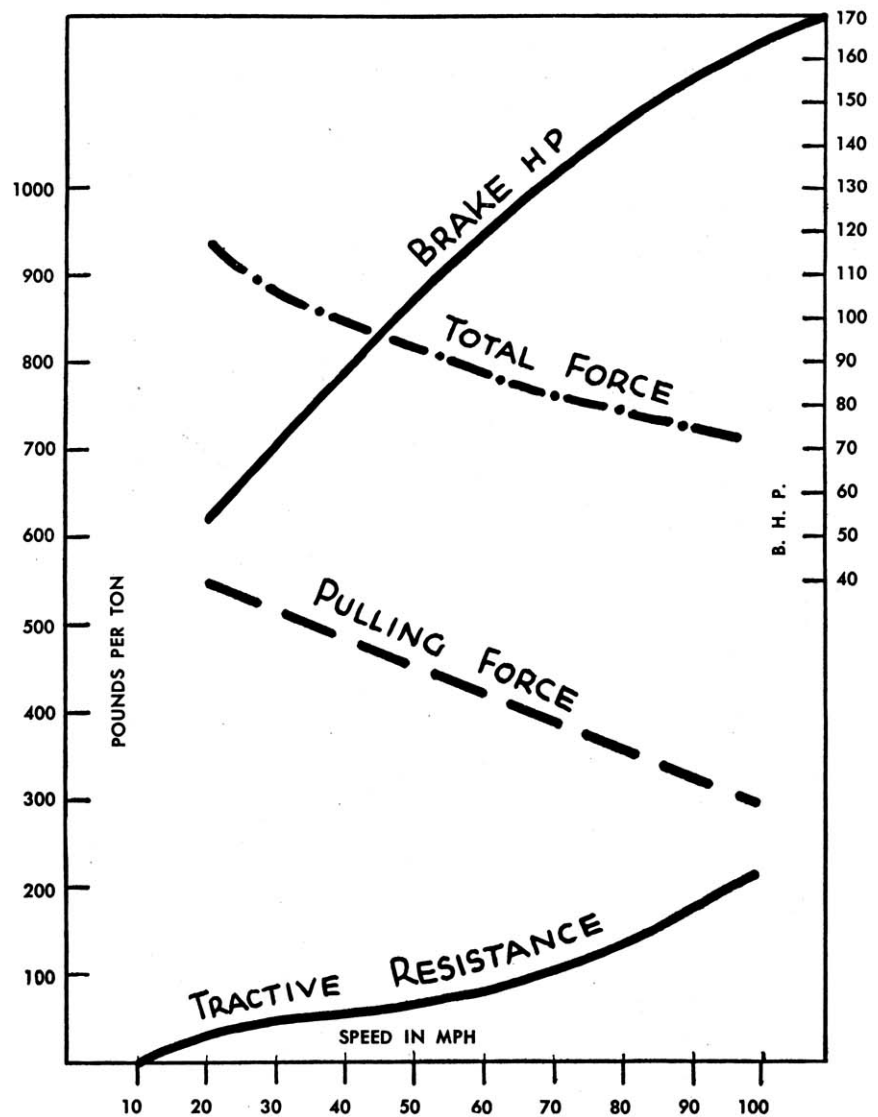
The '52 Chrysler V8 engine utilizes the Cunningham 4-carburetor intake manifold with the four Zenith carburetors controlled by a masterpiece in linkage of Cunningham design. Wiring, oil and gas line fittings are the best available and the shrouded fan and large radiator capacity provide adequate cooling under the most severe conditions.

Classed as a limited production automobile, the Cunningham incorporates many of the features normally confined to custom built equipment and, with the Vignale body, captures the charm of Continental styling without the annoying maintenance problems common to so many of the foreign cars.

Lack of suitable testing facilities for the over 100 MPH speeds of cars such as the Cunningham presents a serious problem and, for that reason, I was content to accept certified factory test reports showing the car had been driven to its maximum speed of 126.52 MPH. This could be increased considerably by the substitution of a 3.27 rear end ratio for the present 3.54 gear and the removal of the hydraulic valve lifters which limit the crank speed to about 4300 RPM. With mechanical lifters in their place, 5000 RPM becomes practical and with the more favorable gearing, top speed would be upped to around 140 MPH.

By any standard, the car rides extremely well, the use of dual shock absorbers makes it possible to negotiate the roughest roads without excessive vertical motion. Little or no road shock is transmitted to the steering wheel and its position in relation to the driver allows for completely relaxed operation.

The experienced sport car driver, accustomed to small displacement, fast turning engines, would feel lost without his four or five-speed gear box but amazed



Performance statistics of '52 Cunningham coupe.

In the case of this hard-top model, the cost in New York, including Federal and local taxes, is slightly less than—take a deep breath—\$10,000 and will vary according to equipment.

It is impossible to describe Vignale's accomplishment of the Cunningham body without being accused of sales promotional tactics. Graceful, sleek and roomy, it imparts an air of lightness and delicacy to the comparatively large chassis.

Ample headroom is provided despite an overall height of only 51 inches and the divided front seat of pleated beige leather provides for individual adjustment. Each back has an armrest at the inner edge which, when not in use, folds into a recessed pocket flush with the surface to provide accommodations for a third passenger.

The lowness of these seats give the impression of discomfort, a conclusion quickly altered by the welcome support of the raised front edge and sprawling leg room. Backs are of greater height than in American cars and, with the passenger slouching slightly, the top becomes a comfortable head support. Floor, fire dash and side panels are lined with matching fabric, the door panel being faced with leather duplicating the seat upholstery in color.

Visibility is an outstanding feature, especially forward where the wide windshield and sloping hood bring the road closer to the driver. No distortion is present in the curved sections of glass, the single obstruction arising from the area between instrument panel and windshield, which—in certain degrees of sunlight—is picked up on the lower portion of the glass with considerable reduction in visibility.

Vignale's treatment of the stock Stewart-Warner instrument group is effective but not as easily read as it would be if placed horizontally across the panel. In addition to the usual gauges, a Sun tachometer and oil temperature gauge make up the group. A push button radio tuner occupies the center portion of the panel with heater controls adjacent to the right.

Actuated by mechanical linkage, the trunk lid opens to disclose a luggage compartment of limited capacity, a situation overcome to a degree by the luggage rack located inside the body at the rear of the seats. Designed to accommodate fitted cases, it also provides two emergency seats for two thoroughly uncomfortable passengers.

Hardware is of the highest quality and rugged design the door catches more positive in action than any previously noted. The ease with which the doors may be closed brings nostalgic memories of similar conditions found in early luxury automobiles.

Safetywise, the interior is but little above the average. The seat adjusting mechanism appears positive and secure but would follow the usual pattern in case of impact. However, seat belts securely fastened through the frame would bring the safety potential to an acceptable level.

The exterior is unusually free from protruding accessories, the flush door handles leaving the sides completely un-



Front-hinged hood provides easy access to engine.

Ted Koopman Photo

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Buick	1949-52	Kaiser-Fraser	1947-52
Cadillac	1948-49	Mercury	1941-51
Chevrolet	1949-53	Nash	1949-52
Chrysler	1949-50	Oldsmobile	1948-50
De Soto	1949-52	Packard	1949-54
Dodge	1949-54	Plymouth	1949-54
Ford	1941-53	Pontiac	1952
Henry J.	1951-53	Willis	1952-53

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hampered and the elimination of a radiator hood ornament completes the perfect exterior.

In addition, the low center of gravity, excellent directional stability and positive steering mechanism are valuable contributions to the overall safety. By and large the car offers a maximum of high-way safety and passenger protection.

The manufacturing and distribution of a limited production car offers serious problems. Inadequate facilities for testing components over a lengthy period place the burden of mechanical failure on the purchaser. On the test car, the original steering linkage and suspension components were found to be unfit for the service expected, necessitating the automobile's return to Florida and the installation of a redesigned suspension and corrections to the steering geometry.

Such a situation is expensive for both parties and, although the Cunningham organization cooperated to the limit of their ability, it is impossible for them to pre-determine the adaptability of all components. This is a perfect illustration of the advantages of months and years of proving ground testing.

Sold through foreign car dealers, quality service is not commonplace although many of these organizations have a standard of workmanship far above the domestic level. Even so, the car tested was delivered in a supposedly serviced condition by one of the better companies only to encounter serious trouble within 100 miles of driving. Wheel bearings had not been properly packed and came close to seizing before the oversight was discovered.

The master cylinder was without a filler plug; the gasoline filter was carelessly mounted and fell off; and the voltage regulator was ruined by the grounding of the negative battery terminal in a system designed for positive ground.

These incidents illustrate the importance of the organization behind an automobile and that research and service are as vital to the purchaser as the manufacturing processes.

Much credit is due the B. S. Cunningham Co. for their efforts to straighten out the kinks that developed and for producing a vehicle with the outstanding characteristics embodied in this one. Don't get me wrong—this is a CAR! ☆ ☆

Performance Data Cunningham Coupe
Production No. 12

Weight (car and two passengers) 3,129 pounds curbside.

	MPH	RPM	FLYWHEEL AVAILABLE HP
Standard Cadillac 3-speed synchro-mesh transmission.	20	975	53
Tires: 7.60 x 15.	30	1400	75
Inflation: Front 28 pounds	40	1850	96
Rear 24 pounds.	50	2200	120
Weather: Clear and dry.	60	2550	138
Temp. 62° F.	70	2800	161
Wind: Still to 2 MPH	80	3300	192
Barometer 30.6	90	3750	****
SPEEDOMETER ERROR:	100	4100	****
Variation negligible			

Acceleration

Standing 1/4 mile:	17.55 seconds
0 to 60 MPH (1st and 2nd)	6.85 seconds
0 to 90 MPH (1st and 2nd)	9.95 seconds
0 to 100 MPH (all gears)	11.01 seconds
30 to 60 MPH (2nd)	3.71 seconds
60 to 80 MPH (2nd)	3.30 seconds
60 to 90 MPH (2nd)	3.60 seconds

TOP SPEED:
Average of four runs
126.52 MPH (3.54 rear axle)
Maximum with mechanical lifters (estimated) . . . 140.00 MPH (3.27 rear axle)

Brakes

From 60 MPH—stopping distance 144 feet.
TRACTIVE EFFORT: (recorded by the Perfometer)
Pull in pounds per ton.
In first speed: off the scale at 700 pounds.
In second speed: 600 pounds
In third speed: 425 pounds
TRACTIVE RESISTANCE:
18 pounds per ton at 20 MPH
80 pounds per ton at 60 MPH

Fuel Consumption

200 miles town and country driving
17 MPG (moderate to heavy traffic)
300 miles cross country travel
23 MPG (speeds up to 75)

Specifications

Wheelbase	105 inches
Overall length	194 inches
Overall height	51 inches
Overall width	64 inches
Tread, front and rear	58 inches
Steering l to l	2 3/4 turns
Shipping weight	2,840 pounds
Curb weight	2,950 pounds
Weight distribution	51%/49%

Engine

Chrysler V8
Quad intake manifold
Four Zenith Carburetors
2 inch dual exhausts with Porter mufflers
Steering: Modified Dodge truck with Ford and Mercury linkage.
Pitman Arm: 1941 Ford.
Front suspension—Ford and Mercury modified.
Brakes: Mercury and Delco modified.

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