1983 Ranger

Marketing Manual

1983 Ranger

PREFACE

The 1983 Ranger is a new-sized truck designed to meet the broad range of needs of today's compact pickup buyers. With a base payload rating that is 20% greater than S-10 and features such as double wall construction and a ladder-type frame, Ranger will appeal to the needs of a traditional truck buyer. On the other hand, Ranger's new size combined with its Twin-I-Beam suspension provides significant competitive advantages in terms of passenger room and riding comfort, particularly versus the imports. This manual is designed to give you an in-depth understanding of Ranger's features and the competitive advantages they represent.

The first chapter presents data and trends on the light truck market—with particular emphasis on compact trucks. It provides a profile of the typical purchase motivations of pickup truck buyers. It also defines the competition and how Ranger fits into the market. The objective is to provide you with an understanding of the types of prospects you can expect and the Ranger sales appeals that might be most effective with these prospects.

The next three chapters of the manual deal with specific market appeals of Ranger. Chapter II deals with the concerns of traditional truck buyers and issues such as fuel economy.

Chapter III presents those Ranger characteristics that are particularly important to compact truck buyers: manufacturing quality, fuel economy, size efficiency, and serviceability.

Chapter IV deals with motivations and concerns such as ride and handling and passenger comfort. Attributes such as these are especially important to people who use trucks as a substitute for a car much of the time.

Chapter V of the manual suggests the use of applications selling (selling based on use) in presenting Ranger, and defines competitive strengths. Finally, detailed technical specifications on the Ranger are provided at the end of the manual.

We believe this manual will assist in developing your market and product knowledge to help present Ranger to your prospects. It should be valuable in preparing you to capitalize on the sales opportunities presented by the new sized 1983 Ranger.

When you stack Ranger up against any of its competitors. . . domestic or import. . . you will find that it is more than just a lot of promises. . . *it delivers!!*

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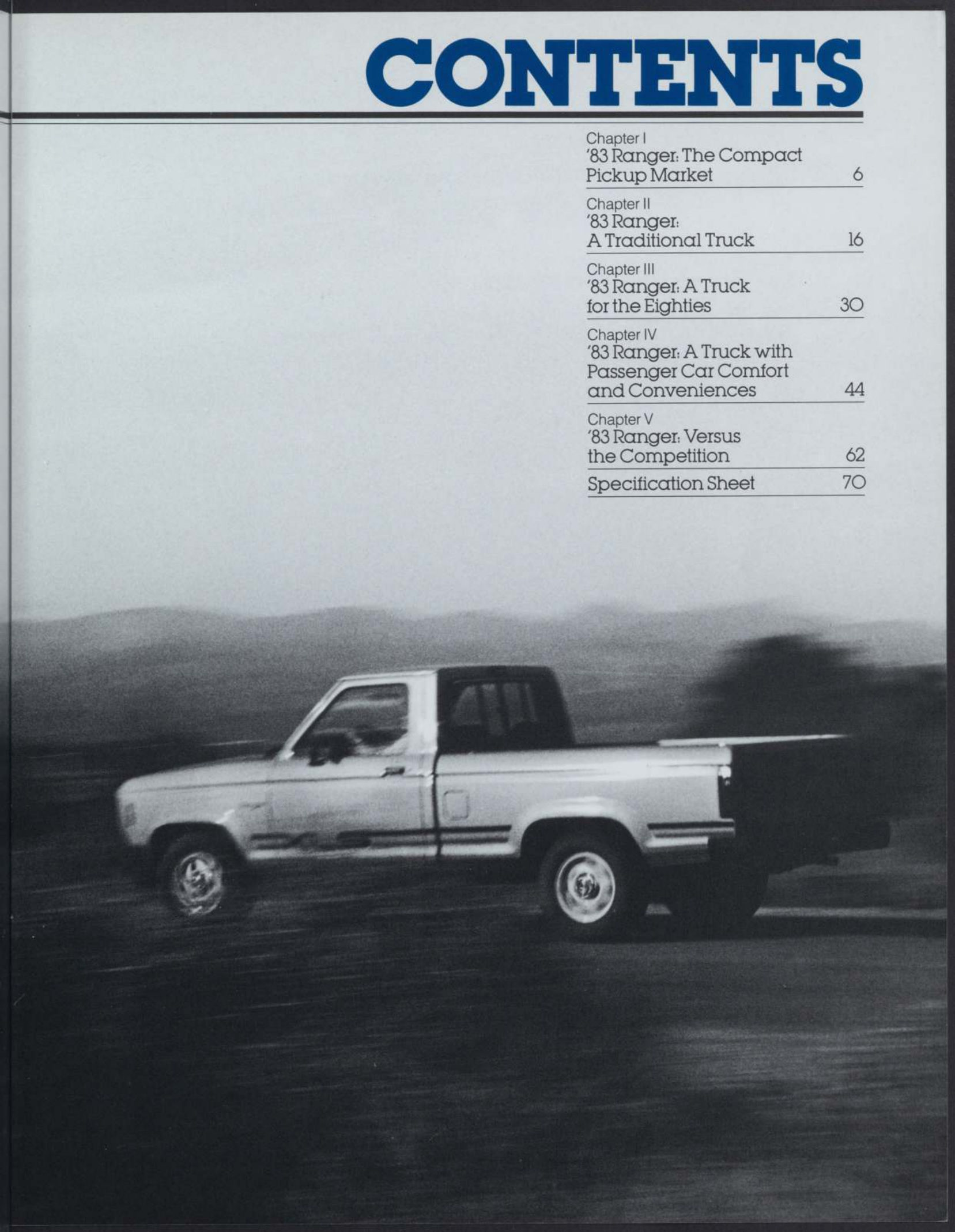
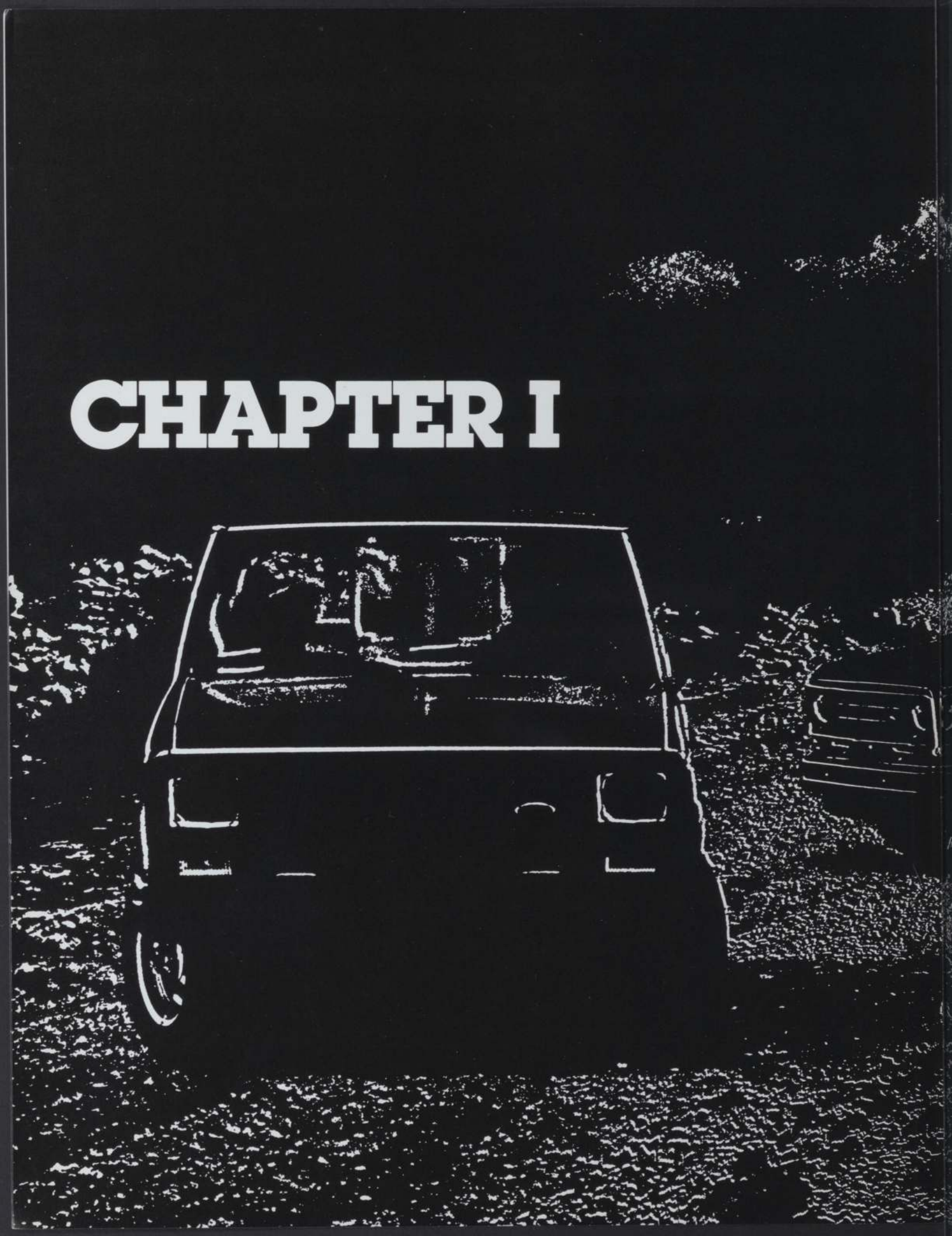
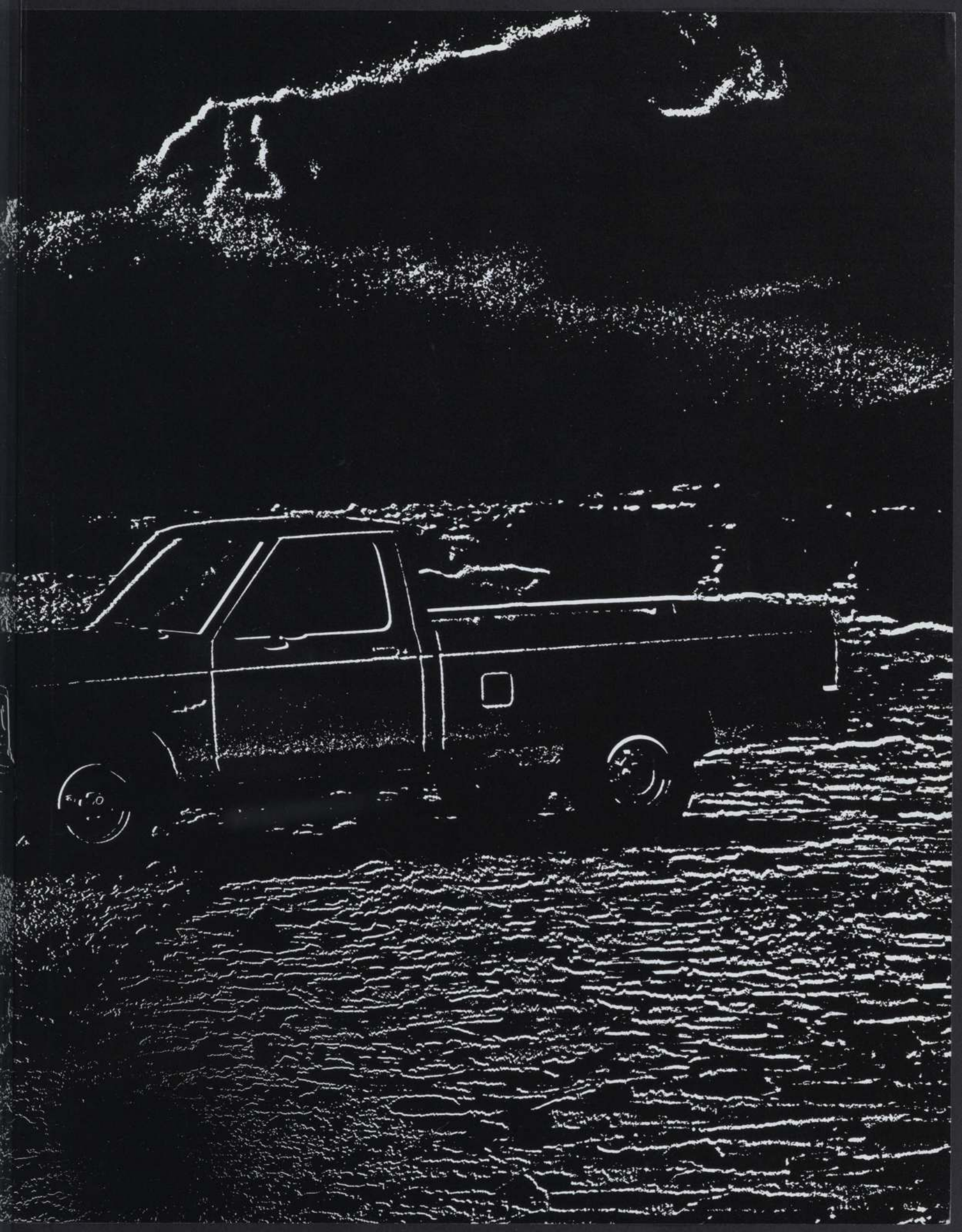


CHAPTER I





The Compact Segment of the Light Pick-Up Truck Market

Ford Motor Company has long been a dominant force in the truck market. Its light pickup and panel trucks were commonplace on the city streets and rural roads of America in the '20's and '30's for both commercial and agricultural use. As with cars, traditionally Ford's major competitor has been Chevrolet. Throughout most of the '50's and the '60's, Chevrolet held a slight advantage. However, Ford has outsold Chevrolet in the past eleven years, including the last five years in a row.

During the past decade, the compact pickup segment of the truck market has grown at an ever-increasing rate. In 1970, for example, compact pickup sales (primarily Toyota and Datsun) totalled nearly 62,000. 1981 sales totalled over 500,000 vehicles. This year, both Ford and Chevrolet have introduced new domestic compact pickups—Ranger and S-10; and Dodge has introduced what is expected to be a relatively low volume Rampage. Stimulated by these new domestic entries, sales of compact pickups are expected to continue to increase substantially in the next few years. One of the many reasons for optimism about Ranger's sales potential is that it is a completely new breed of compact pickup. It provides the advantages of a full-size truck, yet retains the efficiency and handling of a compact. Total development costs during the five years preceding its introduction were over $600,000,000.

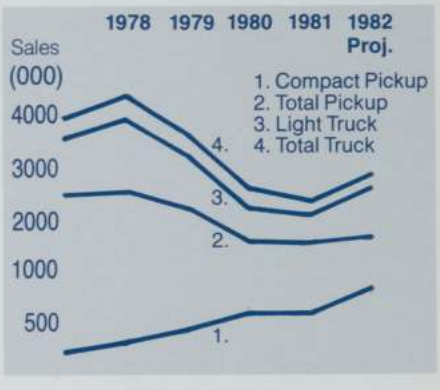
How did Ford reach the point of having what they consider an ideal product for this market segment? What are its advantages over import pickups? What will its appeal be to prospects previously only interested in full-size pickup trucks? This first chapter of the manual will deal with the answers to these and other questions.

Growth in the Compact Pickup Segment

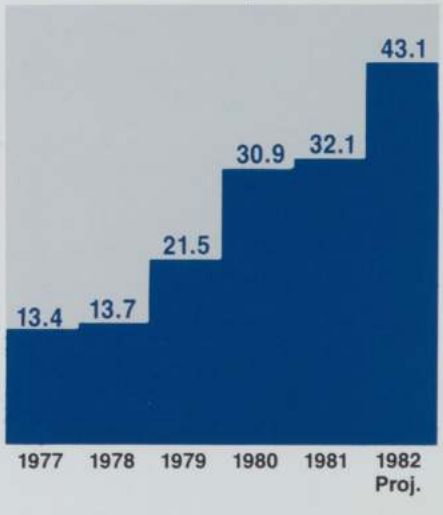
The compact pickup segment of the light truck market has only gained prominence in the past five years. A decade ago, its impact in the market place was insignificant. During the early '70s, its growth was relatively flat. However, in 1978 there were major readjustments in the market due to the energy crunch. The result was a decline in truck sales, with the exception of the compact segment, which ran counter to the trend and showed significant growth. That growth is expected to continue through the 1980's. The dominant vehicles in this segment of the market have been Datsun and Toyota. Captive imports such as Ford's Courier and Chevy's Luv comprise a significant, but lesser, market share.

The charts below show recent trends for the pickup and light truck segment of the market, as well as for the total truck industry.

Truck Sales Trends



Compact % of Total Pickup Sales




MARVIN
COLD PROCESS
ROOF CEMENT
MARVIN
DRIVEWAY MORTAR

THE TRUCK INDUSTRY REACHED AN ALL-TIME HIGH IN 1978 WHEN OVER 4 MILLION TRUCKS WERE SOLD.

- ☐ The steady decline in the truck industry since that time can, in large measure, be attributed to the energy crisis as well as general economic considerations. Nonetheless, the outlook for the future is positive, with a significant rebound expected over the next few years.
- ☐ Light truck sales as a share of the total market have declined only slightly from 1977 to 1980, and should regain their former position in the next two years. Light trucks include vans, buses, utility vehicles, and heavy duty wagons, as well as pickups.
- ☐ Pickup sales, including both standard and compact, have gained market share in the past few years and are expected to continue to do so. By the end of 1982, they should comprise about 70% of the market.
- ☐ Full-size pickups have followed the pattern of the total industry, peaking in 1978 at over 2 million units and experiencing a steady decline since then to slightly more than 1 million units. The full-sized pickup market share, which had been 59.2% in 1977, was under 40% in 1981. While this market segment is expected to bounce back over the next few years, it is still expected to be a lower share of the total truck industry than it was, in large measure due to the projected growth of compact truck sales.
- ☐ Compact pickup sales have grown dramatically since 1978 and exceeded one-half million units in the 1981 calendar year. Projections are for a significant increase in the compact pickup segment of the market in 1982 due primarily to the Ranger and Chevy S-10 introductions. By 1985, this segment of the market is projected to more than double its current volume to a level of over one million units a year.
- ☐ The compact pickup market segment is expected to grow from 7.6% of truck industry sales in 1978 to about 30% in 1982.
- ☐ While Datsun and Toyota in combination sell over 240,000 units, or about 47% of the market currently, their share is expected to drop to approximately one-third of the market in 1982. By 1983, it is projected that the Ranger and S-10 will comprise over 50% of the compact pickup segment of the market, and by the mid-1980's, it is projected that their share will comprise about 57%.

As a benchmark, 1977 and 1981 calendar year sales results for the compact pickup segment are shown in the chart below.

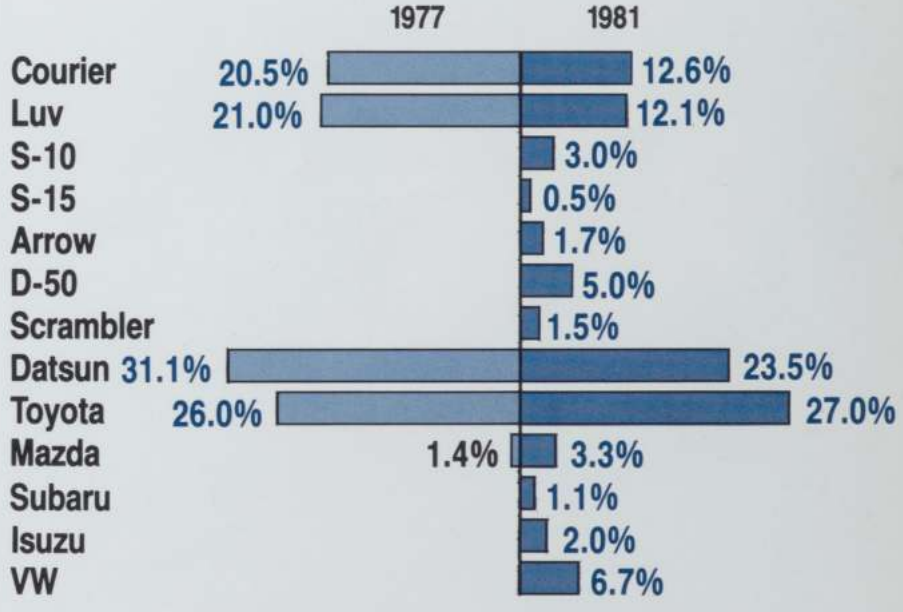
What Do These Industry Trends Mean To Salespeople?

Many people who have, in the past, bought a full-sized truck will, for economy-related reasons, consider purchasing a compact pickup. This suggests that buyers trading down in size will look for the same characteristics and functions in their new vehicle as in the one they owned before. Thus they will want a rugged pickup. Many of these prospects may perceive that, since compact pickups are smaller in size, they may not be as rugged. And that is the advantage Ranger has: it has full-size pickup features; yet does not sacrifice the economy you would expect to find in a compact.

On the other hand, those prospects moving up to the Ranger because they want more "truck-type" features in their pickups will still want the economy, efficiency, and quality they found in their import compact pickups.

In short, you will find that the market has moved toward a small pickup with a broad range of desirable features: big tough truck capabilities, economical small truck efficiency, as well as comfortable ride and handling. Ranger was designed to have this broad range of appeal. The following sections of this manual examine the Ranger features that contribute to creating this appeal. But before looking at these features in detail, let's take a closer look at purchase motivations of buyers in this market segment—what compact pickup buyers are looking for and what benefits they will perceive.

Compact Pick-up Sales % of Segment



Compact Pickup Buyer Motivations

What are the key reasons for buying a compact pickup? How are compact pickup buyers different from full-sized pickup buyers? The following chart sheds some light on these questions.

You might be surprised to note that there is not as much difference between full-size and compact pickup motivations as you might have expected. Economy still rates high for both; workmanship and engineering appear to be somewhat less important to full-size buyers, but dealer service rates higher with them. Surprisingly, performance-related items rate low in both classes.

If these motivations were taken by themselves, they would show little significant difference between buyers. What is particularly important in the pickup truck market is that you qualify the buyer for the type of usage he plans for the vehicle.

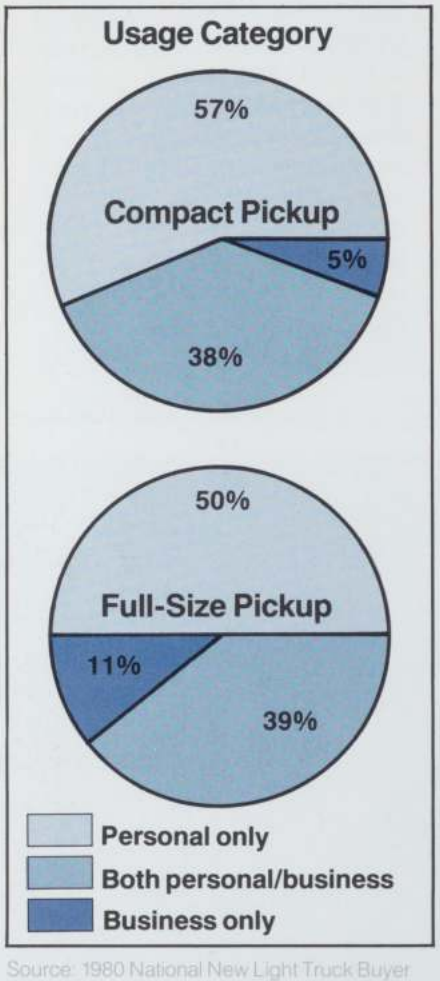
Ranking of Buyer Motivations

Compact Trucks		Full-Size Trucks
	strongest	
Fuel economy	**1**	Price
Price	**2**	Fuel economy
Well-engineered	**3**	Exterior Appearance
Durable	**4**	Durable
Exterior appearance	**5**	Dealership Location
Workmanship	**6**	Dealer Service
Comfort/Roominess	**7**	Comfort/Roominess
Quick delivery	**8**	Well-engineered
Dealership location	**9**	Driveability/Handling
Driveability/Handling	**10**	Ride smoothness
Dealer service	**11**	Workmanship
Power/Acceleration	**12**	Quick delivery
Ride smoothness	**13**	Maintenance (easy/conven.)
Maintenance (easy/conven.)	**14**	Interior appearance
Cargo area	**15**	Cargo area
Interior appearance	**16**	Power/Acceleration
	weakest	

Source: 1980 National New Light Truck Buyer Survey

Usage as an Indicator

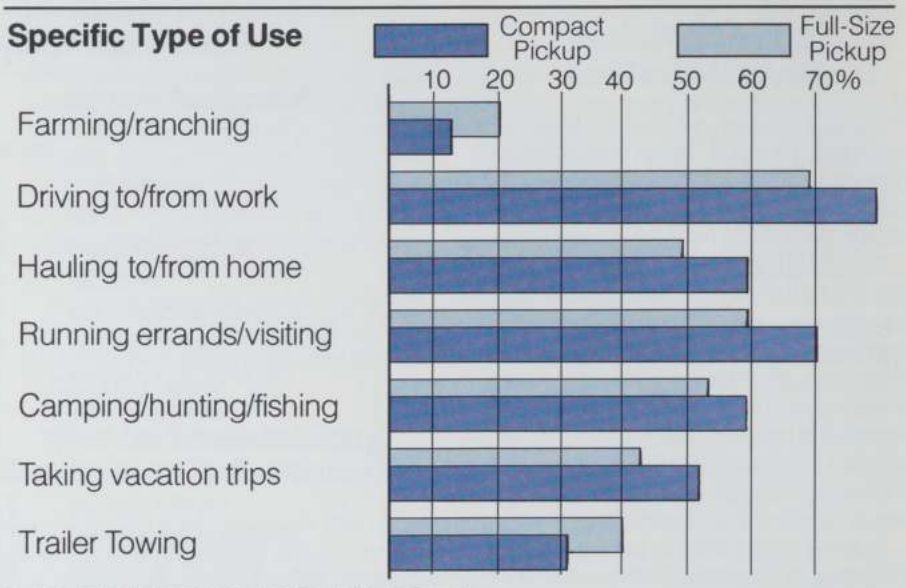
Unlike the average car, even a personal pickup truck has frequent business usage. The extent and type of this use and the type of personal use for which the vehicle is purchased is important in matching the right vehicle to your prospect's needs. Indications of usage are shown in the following chart:



Source: 1980 National New Light Truck Buyer Survey

The majority of usage for pickup trucks is *not* business usage; in fact, they are seldom used exclusively for business purposes. The percentage of buyers using their pickups for personal use only is higher among compact pickup buyers than full-size pickup buyers (57% vs 50%). This chart should also tell you that even if a prospect indicates a business use for his truck, you should qualify for other uses as well. A seemingly secondary factor may be the most important factor in his final purchase decision. The chart below shows a more detailed breakdown of usage.

Specific Type of Use



Source: 1980 National New Light Truck Buyer Survey

In terms of business usage, compacts appear to be somewhat less likely to be used in farm or ranch work than full-size pickups. Note in particular the high usage of compacts for commuting purposes. Of major significance to this market is trailer towing. Thirty-two percent of the compact owners (for boats and snowmobiles in greatest numbers), and 40% of the full-size pickup owners (for boats, farm and industrial equipment, horses and livestock) use their trucks for towing. In addition, 31% of compact owners own a box cover compared to 28% of the full-size pickup owners.

Profile of the Compact Truck Buyer

A profile of the compact truck buyer (4 x 2 only) is shown below compared with full-size 4 x 2 pickups.

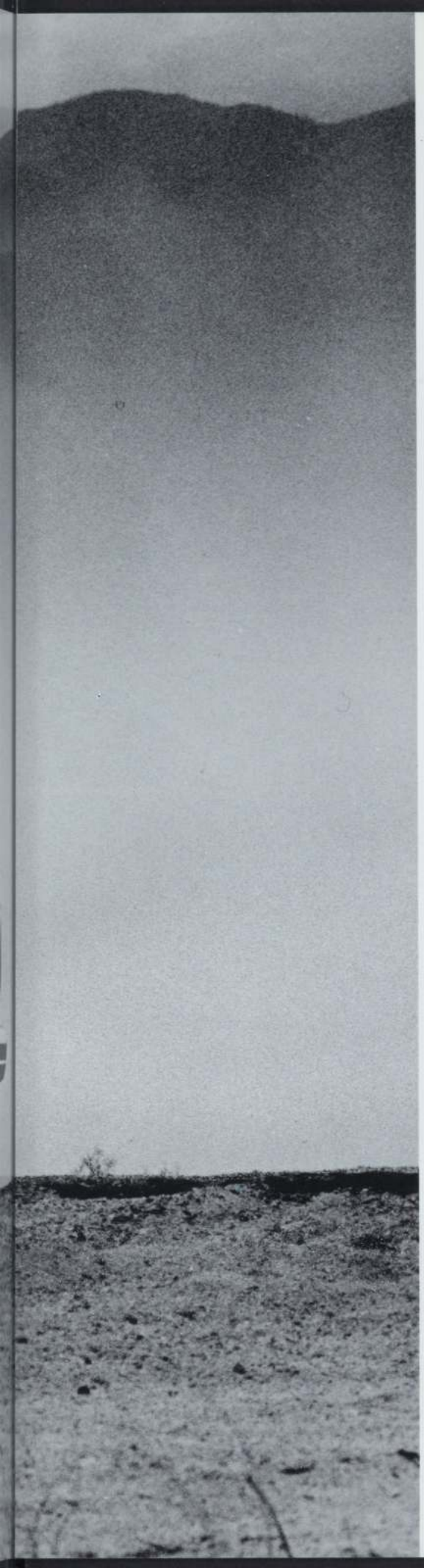
Note that full-size pickup buyers are more apt to live in small towns or rural areas, whereas compact buyers are more likely to live in cities or metropolitan areas. Also, more compact truck buyers are professionals and are, on the average, younger than full-size truck buyers.

The location of your dealership will, of course, determine the nature of your

Truck Owner Demographics

	Compact	Full-size
Residence Location		
Rural or farm area	25%	38%
Town/village less than 25,000	16	26
City of 25,—100,000	22	15
City/metro of 100,—250,000	14	8
Suburb of large metro area	19	10
Central city of large metro area	4	3
Occupation		
Professional/technical	24%	10%
Skilled trade	23	23
Factory worker	5	11
Farmer	3	9
Age		
Under 25	11%	8%
Under 30	33	22
Under 35	51	37
(Memo: Median, years)	34	41

Source: 1980 National New Light Truck Buyers Survey.
Note: Compact = 4 x 2 compact pickup. Full-size = 4 x 2 domestic 1/2 ton pickup.



walk-in traffic. For example, if you are in a rural area where full-sized pickups are common, you will have to build the compact appeal of Ranger to help your prospect understand its application to his type of work. It's easy to do with Ranger, because this variety of uses was kept in mind when designing the Ranger.

Designing the Ranger

In creating a vehicle for the compact truck market, Ford engineers, product planners, and marketing personnel not only gave strong consideration to demographic and usage data but also evaluated the competition.

Importantly, the goal was not to imitate existing vehicles, but rather to carve out a niche in the market that would differentiate Ranger from its competitors and at the same time ally it with the remainder of the Ford line.

Among the perceived compact pickup advantages that Ford engineers were determined to equal or better was manufacturing quality. Engineers were also interested in overcoming the deficiencies which they saw in the compact segment which particularly related to functional items. Import owners have complained frequently that their ride is harsh; the seats are uncomfortable; the cab only has room for two; and the climate control systems are inadequate.

In addition, because of the success of the F-series Ford trucks, engineers believed it would be desirable to include as many proven F-series engine, chassis, and body design features as would be practical. The result is a package that is similar to the F-series and, in fact, lives up to the desire of the engineers for a "tough" compact pickup.

In terms of overall appearance, the question was whether to make the compact (a) car-like, (b) like a full-size pickup, or (c) something in between. For example, they could have chosen the route Dodge chose in producing the Rampage, which looks much more like a compact car than a truck. Ford chose to retain the F-series resemblance with Ranger, and design in similar work capabilities that would represent competitive advantages in this market segment also.

Ranger is economical to operate and has competitive MPG ratings. The fit and finish is excellent. The engine gets the tough jobs done. Designs such as Twin-I-Beam front suspension, ladder-type frame, double wall construction, and other F-series engineering features are utilized. Thus, while Ranger is very suitable as a personal use vehicle, it has a potential for carrying heavier loads than many of its compact competitors. And, it is the only compact pickup truck that permits flat loading of 4' x 8' sheet material. It surpasses not only the Japanese imports but also the Chevrolet S-10 in many of these categories.

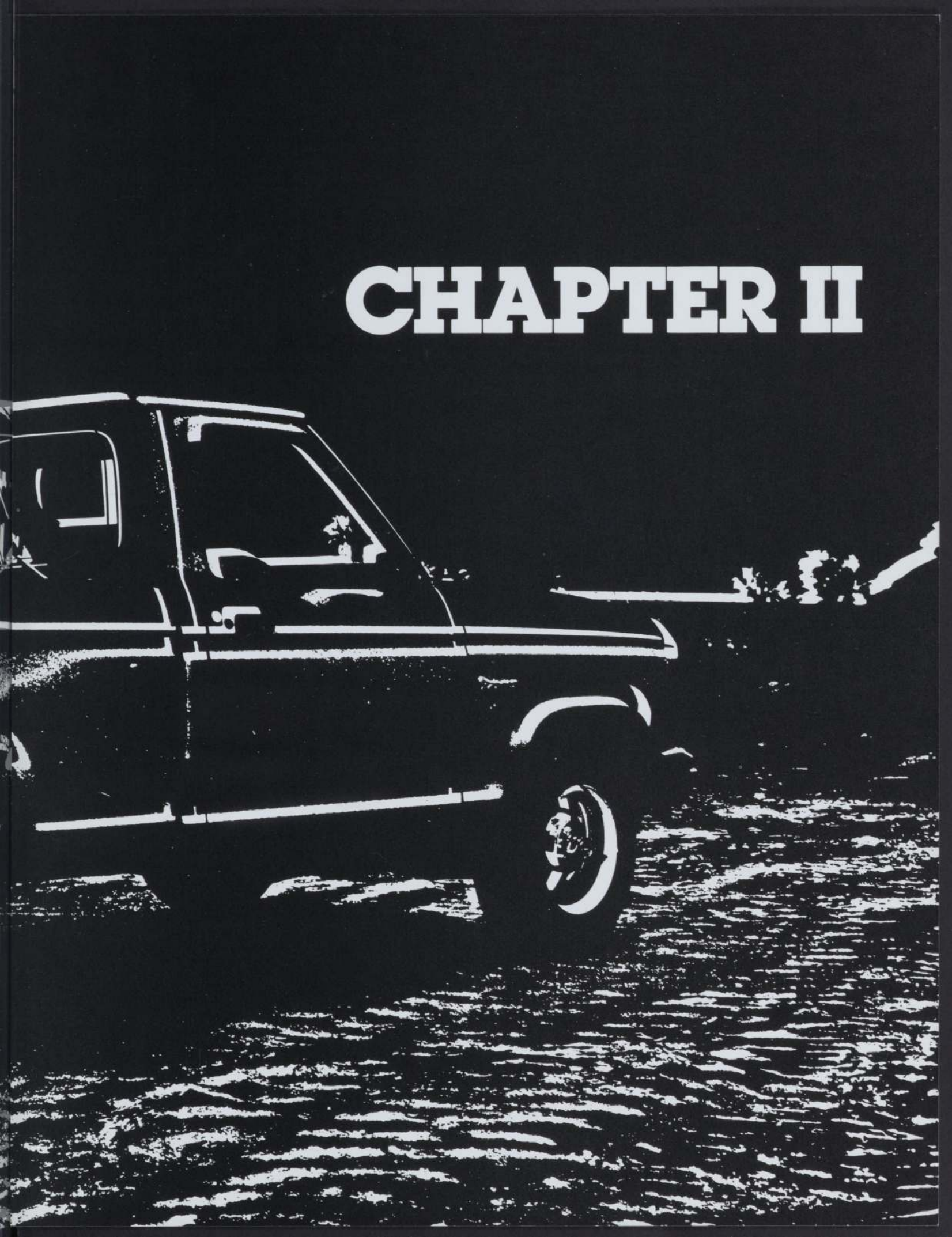
Presenting the Ranger to Your Prospect

The remaining chapters in this manual will provide product information that will help you explain Ranger features to your prospects. Among the benefits you will want to mention are:

- ☐ improved ruggedness and handling with its Twin-I-Beam suspension, ladder-type frame, and longer wheelbase than Toyota or Datsun;
- ☐ hauling ability (its base payload of 1,200 pounds and optional payload of 1,620 pounds) and standard truck pickup box features;
- ☐ "Built-Tough" features—double wall construction, inner fender liners, and double steel roof;
- ☐ comfort features such as larger cab size than most import compacts;
- ☐ comfortable seating for three;
- ☐ computer-tuned suspension for a smooth ride;
- ☐ its image as a Ford "tough" truck—its rugged construction is in the image of the F-series trucks.

The Ranger has a broad appeal. It did not just happen that way. It was designed to meet the needs of the market: a clean alternative to compact or full-size pickup competition, to provide a product that has designed out the deficiencies of competitive makes, and to meet a broad variety of consumer needs in a compact pickup. Ranger is more than competitive...it is outstanding in its class.

CHAPTER II



'83 Ranger: A Traditional Truck

It would be a misconception to look at the compact pickup market and assume that all consumers are interested in a light, fun-to-drive, economical, little pickup. While there are, in fact, many buyers who are primarily interested in a compact for these reasons, there are a significant number who are interested in a small pickup that has characteristics of a full-size pickup—particularly payload features and toughness. For this group of buyers, Ranger has a distinct appeal and decided selling advantages over the somewhat smaller and lighter compact imports.

Overall, the Ranger not only looks like a big truck but has many of the same features that full-size Ford pickups offer. It has been designed and tested to ensure that full-size standards have been met. This section of the manual will examine the technical details and relate benefits that contribute to the traditional truck design characteristics that will appeal to many of your Ranger prospects.

"BUILT FORD TOUGH"

Double-wall construction, high-strength steel usage, corrosion protection and rugged chassis and suspension components insure that Ranger will meet the most demanding toughness standards.

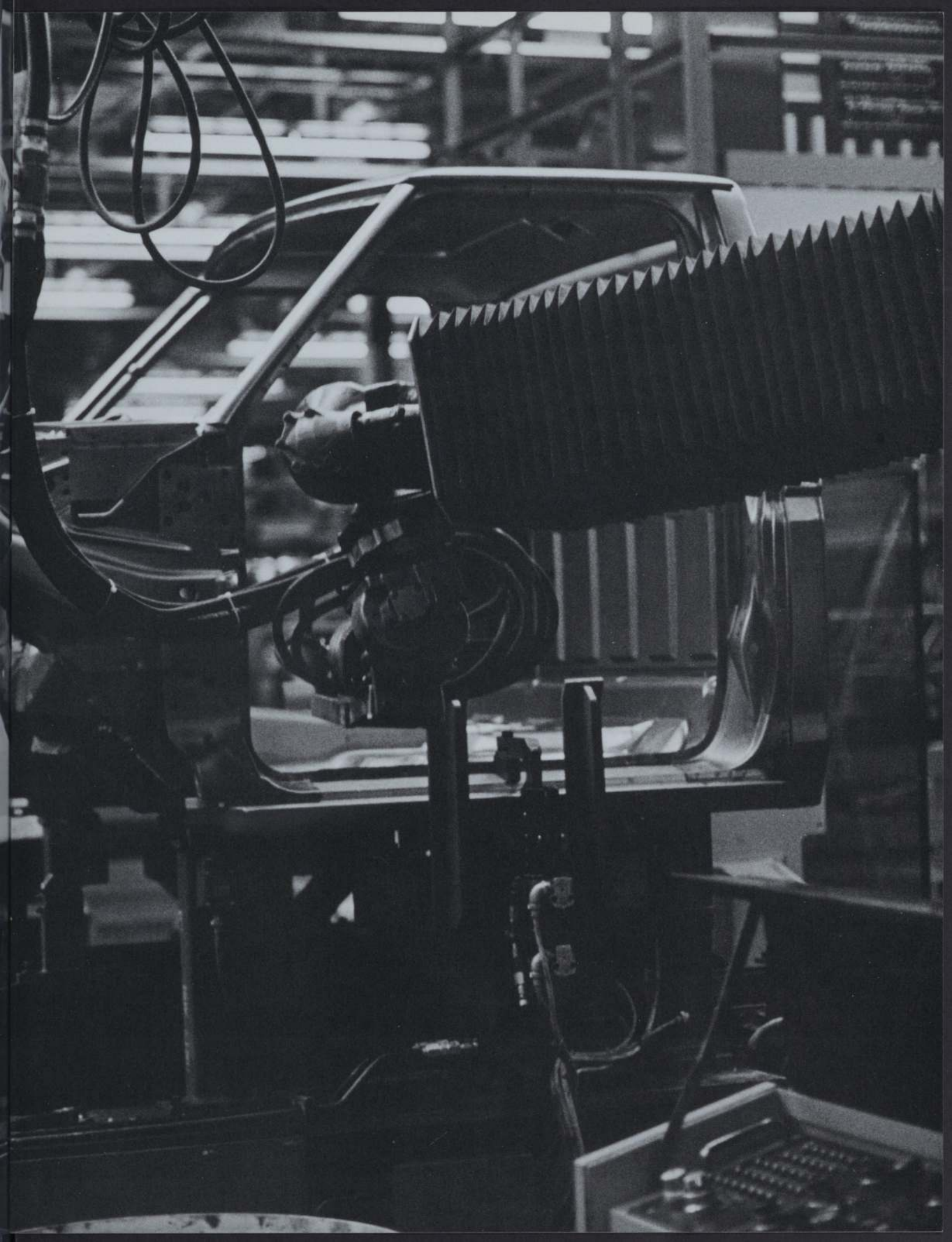
It's easy to say that a truck is "tough"—it's much harder to *prove* a truck's toughness. To advertise Ford trucks as "built Ford tough", Ford engineers have had to prove that the design and manufacture of each Ford truck is consistent with the meaning of the word "tough". Specifically, as applied to trucks, "tough" means that the box, cab, body, drivetrain, and suspension are strong, rugged, and capable of withstanding considerable strain. Through 1.5 million miles of prototype testing at Ford's Arizona Proving Grounds and countless hours of laboratory testing, engineers have been able to establish the toughness of Ford Ranger.

The fact that Ranger can withstand the same demanding and punishing testing procedures as F-series trucks is an outstanding accomplishment. Ranger's toughness can be attributed to a design which incorporates proven full-size pickup truck features such as a ladder-type frame and double wall construction, as well as new technologies in other areas, including the use of ZINCROMETAL to help reduce corrosion. Let's take a closer look at Ranger's built-in "toughness features".

Double Wall Construction

Simply stated, double-wall construction is the use of both inner and outer panels to increase the structural rigidity of the body sheet metal. Double-wall construction is used in parts of Ranger's cab, roof, doors, hood, pickup box sides, and tailgate. By contrast, most of the leading import manufacturers use single-wall construction.

For years, Ford F-series trucks have proven the value of double-wall construction. This is especially true in the pickup box, an area which is susceptible to denting. For example, when the pickup box side is struck by a poorly-secured load as it shifts weight from one side to the other, most trucks will dent



clear through the single metal layer. The result typically is a dent which not only shows on the outside but also chips the exterior paint and promotes rust. With double-wall construction, frequently the interior layer absorbs the impact, leaving the outside metal unblemished.

Additionally, Ranger's cab, front-end sheet metal, and pickup box feature *all-welded construction*. This construction provides more rigidity than bolted-together joints, allows for better alignment of body parts, and provides better seals at the joints so that less moisture collects in hidden areas.

One part that *is* bolted to the frame is the pickup box. The pickup box is secured by eight top-drive, internally-driven mounting bolts. These specially-designed bolts are visible from above Ranger's load bed and are attached to U-nuts which distribute load stresses evenly.

High Strength Steel Usage

Ranger uses high-strength steel in such areas as the pickup box and cab; since high-strength steel is sturdy, yet light in weight, its use in Ranger helped to meet rigid toughness standards and still achieve excellent fuel economy. The pickup box floor pan, made of special phosphorized high strength steel, has a dent resistance comparable to the full-size F-series. Other important high strength steel parts include cowl panels, pickup box crossmembers and cross-sills and cab crossmembers.

Ladder-type Frame

Since the truck's frame supports the cab and pickup box, it is at the heart of the structural design and paramount to its ruggedness. While Ranger's frame is roughly 15 inches shorter than conventional Ford pickups (short wheelbases), it utilizes the same ladder-type construction. With seven crossmembers (eight with auxiliary tanks), the frame not only provides a good foundation from which cab, box, and load can be supported, but also is designed to isolate and dampen road disturbances from affecting passenger ride and comfort.

Another Ranger component which stands out in contributing to Ranger's ruggedness is the *stamped* Twin-I-Beam front axle. Nearly all front axles for compact pickups (particularly import trucks) contain welded points. While these axles can be made with greater stiffness and at lower costs than stamped (one piece) front axles, Ford engineers found that the welds are generally points of high stress and, therefore, eliminated them. The extra cost was determined to be worth the extra toughness for Ranger.

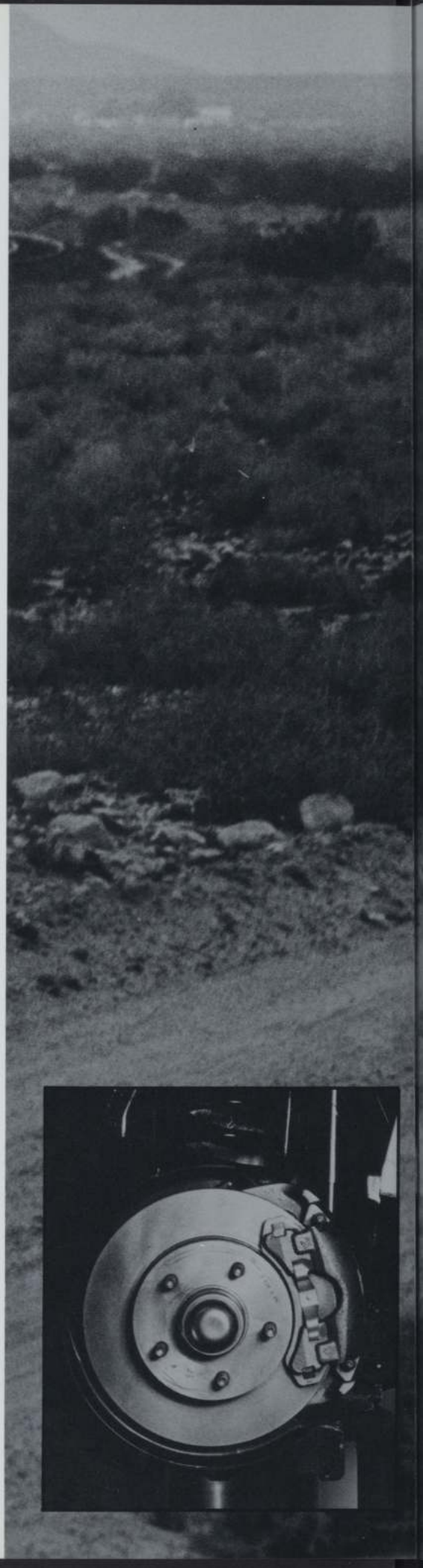
Corrosion Protection

Toughness means more than surviving jolts, impacts, and severe loading conditions. It also means resisting wear even in the harshest of climates. Special primers, paints, sealers, sheet metals, and plastics protect many Ranger body parts from corrosion and wear. After structural assembly, but prior to the painting process, special sealants are applied to weld flanges and structural seams to seal much of the body structure from outside elements.

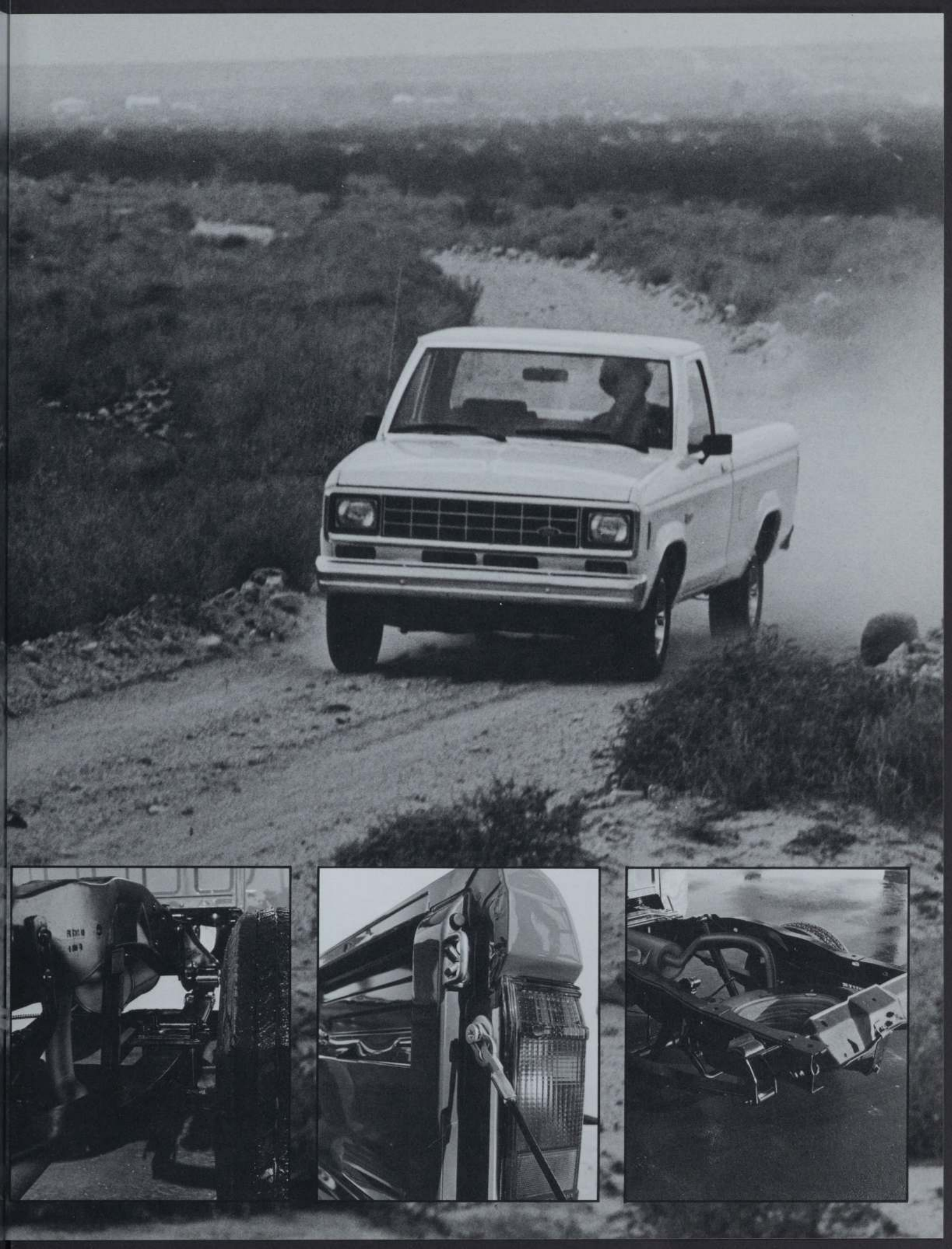
These measures are particularly important to truck buyers since market research shows that most trucks are parked outdoors and many pickups carry loads containing rust promoting materials. Ranger's corrosion protection program is comprehensive and includes the following measures:

- ☐ Body panels and parts which are vulnerable to corrosion such as hood, cab, roof, and door panels are made of galvanized steel or ZINCROMETAL.
- ☐ Weld flanges and sheet metal seams are treated with weld sealers and vinyl sealers before the assembled vehicles are painted.
- ☐ Hidden areas where moisture is likely to collect, such as door interiors and body pillars, are sprayed with aluminum wax.
- ☐ All of the assembled sheet metal is chemically cleaned and then coated with a zinc phosphate solution which serves as a firm base for primer and paint.
- ☐ The body is immersed in a "primer bath", totally covering all parts.
- ☐ Four coats of acrylic enamel paint are applied.
- ☐ Plastic front fender aprons and rear splash shields are installed to help divert splashing dirt, stones, and salt solutions from chipping paint and corroding the metal underneath.

With toughness that outclasses competitors in its class, Ranger will be compared more often with full-size pickups than compacts.



From L to R: Ranger's front disc brakes provide good pedal feel; Computer tuned single stage leaf springs offer a comfortable ride; Double-wall construction uses both inner and outer panels for structural rigidity of the body sheet metal; Ladder type frame gives added ruggedness.



"TESTED TOUGH"

Ranger vehicles are subjected to the same testing procedures as Ford's full-size pickups. Laboratory testing and computer simulations test sub-systems such as frame, powertrain, and suspension components prior to production. Off-road and track tests then prove-out the performance and durability of fully assembled prototypes prior to production.

Many of Ranger's toughness features are taken directly from Ford's proven large pickups. Ford engineers performed exhaustive tests on Ranger from concept through the production phase. Ranger had to endure the same punishing tests as full-size pickups underwent. In fact, 308 Ranger prototype vehicles were constructed months in advance of regular production, and the fleet accumulated nearly 1.5 million miles of testing. Additionally, laboratory testing included various sophisticated mathematical and computer-modelling methods and controlled laboratory testing of individual components.

Component and Lab Testing

In recent years, computer-modelling techniques have allowed automotive engineers to simulate many different vehicle configurations without actually physically building any one model. For example, in critical areas such as the load bed, Ford engineers constructed computer models of Ranger components to simulate loading conditions and to choose materials and thicknesses consistent with Ford toughness standards. Using techniques such as Dynamic Vehicle Simulation and Finite Element Analysis, over fifteen different vehicle configurations were tested under various stress load conditions in order to choose optimal materials and reinforcement techniques in such areas as the frame, cab, and load bed. The use of such computer programs as NASTRAN (NASA Structural Analysis: see diagram) made it possible to identify areas of greatest stress in the Ranger's design so that appropriate materials and reinforcement could be chosen.

To prove out the "theoretical" (computer) testing, individual components were constructed and subjected to severe test procedures in the lab. In controlled experiments, key Ranger components underwent extreme temperatures and experienced load conditions far in excess of those even the most

demanding customer would be expected to encounter. Three hundred thousand hours were spent testing prototype parts in such conditions as extreme cold, desert heat, sand, salt, and humidity. Components as large as rear axles or as small as attachment bolts were subjected to severe stress under these temperatures to test the ruggedness of Ranger's new design.

Proving Ground Tests

Before Ranger was approved for production, fully assembled prototypes had to pass still more tests at Ford's Arizona Proving Ground. Body, frame, steering, powertrain, and suspension systems were put to severe performance tests. Testing under off-road and dirt road conditions included potholes, bumps, and repeated jarring to push the components beyond the most punishing customer miles anticipated. Additionally, tests were run under extreme cargo- carrying conditions exceeding the maximum cargo-carrying capacity that Ranger would experience in typical customer service.

Before the actual proving ground tests were conducted, market researchers surveyed people from Ranger's anticipated market to determine the kinds of uses typical customers would subject the vehicle to. Driving habits, typical road surfaces, and typical cargo carrying practices were among the data the researchers obtained. From these results it was determined that proving ground events similar to those used for durability testing with large Ford pickups would also be suitable for Ranger. Consequently, Ranger's prototypes were taken to Ford's Proving Grounds in Yucca, Arizona, for testing.

Of the 36 miles of test roads available at the Proving Grounds, the most punishing routes were chosen for Ranger testing. Ranger prototypes would have to survive Silver Creek Road, Power Hop Hill, the Structural Durability Road, the Salt Bath, and the Dirt Durability Route to meet Ford's stringent toughness standards. And pass they did. In fact, the report issued following Ranger testing in Arizona states the following: "The Ranger series of compact vehicles is subjected to the total light truck testing program . . . thus insuring that Ranger will meet the same demanding and exacting standards required of the full-size F-series vehicles."

Payload Ratings

Ranger Payload Ratings

Wheelbase	Payload Package	Payload Rating	Gross Vehicle Weight Rating
108 in.	STD	1210 lbs.	3740 lbs.
	OPT	1620 lbs.	4200 lbs.
114 in.	STD	1200 lbs.	3760 lbs.
	OPT	1605 lbs.	4220 lbs.

The EPA defines the small pickups as "trucks having Gross Vehicle Weight Ratings or truck weight plus carrying weight capacity under 4500 lbs." By this definition Ranger is just 280 lbs. shy of qualifying as a standard full-size pickup in the long wheelbase version with optional payload package. It may be useful to suggest to Ranger prospects that, in terms of payload capacity, Ranger is actually closer to many full-size pickups than its compact competitors. For those who are down-sizing to get the increased fuel economy of a compact, Ranger's payload capacity will likely come as a pleasant surprise.

In both long and short wheelbase versions, Ranger's payload gross vehicle weight ratings put it at the top of the compact pickup segment. With the optional payload package, the short wheelbase model is rated at 1620 lbs. AND 4200 lbs. GVWR. With the long wheelbase, payload is 1605 lbs. and GVWR is 4220 lbs.

Work-Use Features

Ranger incorporates more of the work-use features expected in large pickups than any of its compact pickup competitors. Stake pockets, 4 x 8 plywood supports (lumber support pockets), tie-down holds, and a detachable tailgate make it possible to secure and haul difficult loads.

Ranger's pickup box design incorporates features which make it practical not only for everyday personal or recreational use, but for commercial use as well.

Stake Pockets and Tailgate Supports

If your prospect is concerned about carrying tall or awkward loads, Ranger has four stake pockets with rope tie holds to help secure the load. None of Ranger's competitors have both of these features. And, in place of the flat hinge joint which supports most truck tailgates in the down position, Ranger uses plastic covered steel tailgate support cables. The cables offer the advantage of not binding when the tailgate is closed and are easily detached so that the whole tailgate assembly can be easily removed in just seconds.

Recessed Support Pockets

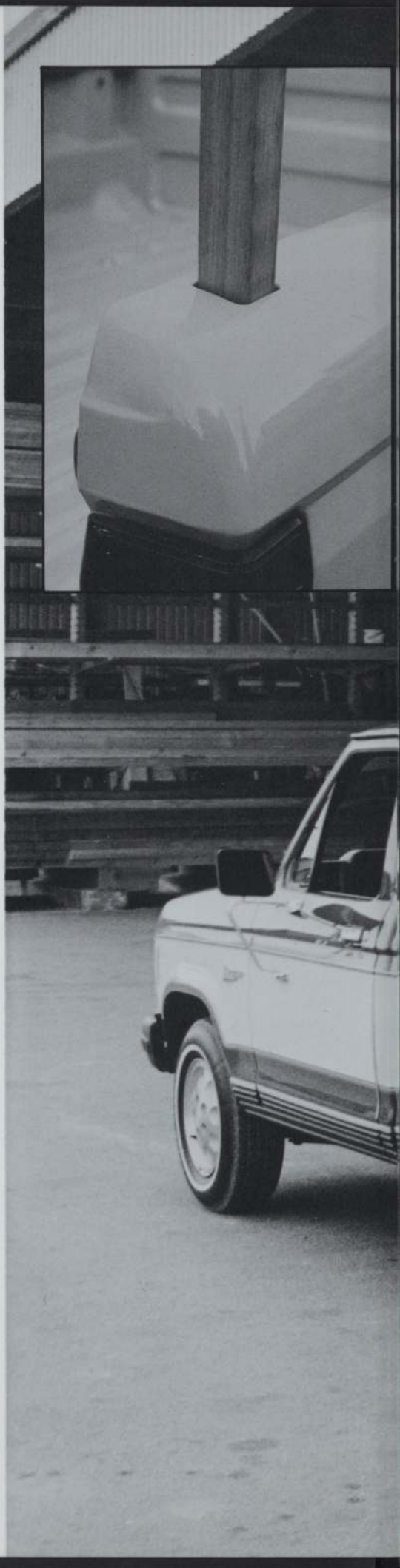
Before Ranger, prospects who wanted to carry standard 4 x 8 foot plywood sheets on a bed of flat supports would have been forced to choose a full-size truck. Ranger's recessed support pockets are unique in the compact class. Located in the inner side panels, the pockets are designed to accept two cross-mounted 2 x 6 boards for flat support of up to *500* lbs. of 4 x 8 foot wallboard or other sheets of material.

SUMMARY

As more and more full-size truck owners turn to compact pickups for better fuel economy, the traditional attributes associated with their previous trucks will become increasingly important. Work-use features are especially critical for these buyers.

- ☐ With its double-wall construction and ladder-type frame, Ranger is "built Ford tough".
- ☐ With its ability to absorb the punishment of rigorous testing at Ford's Proving Grounds, Ranger is "tested tough".
- ☐ With payload ratings just short of full-size pickup ratings, Ranger is a capable worker.
- ☐ With work-use features such as stake pockets, tie-down holds, and 4 x 8 material supports, Ranger is a pickup for commercial uses as well as personal and recreational uses.

In short, Ranger delivers.



Clockwise from Left: Stake pockets give Ranger the flexibility to carry even very tall loads; recessed plywood support pockets make it possible to carry standard 4′ x 8′ plywood sheets; optional tie-down hooks assist in securing difficult loads; detachable support cables allow for easy tail gate removal; standard rope tie holds provide anchor for cargo which needs securing; raising and lowering the tail gate is a one-hand operation.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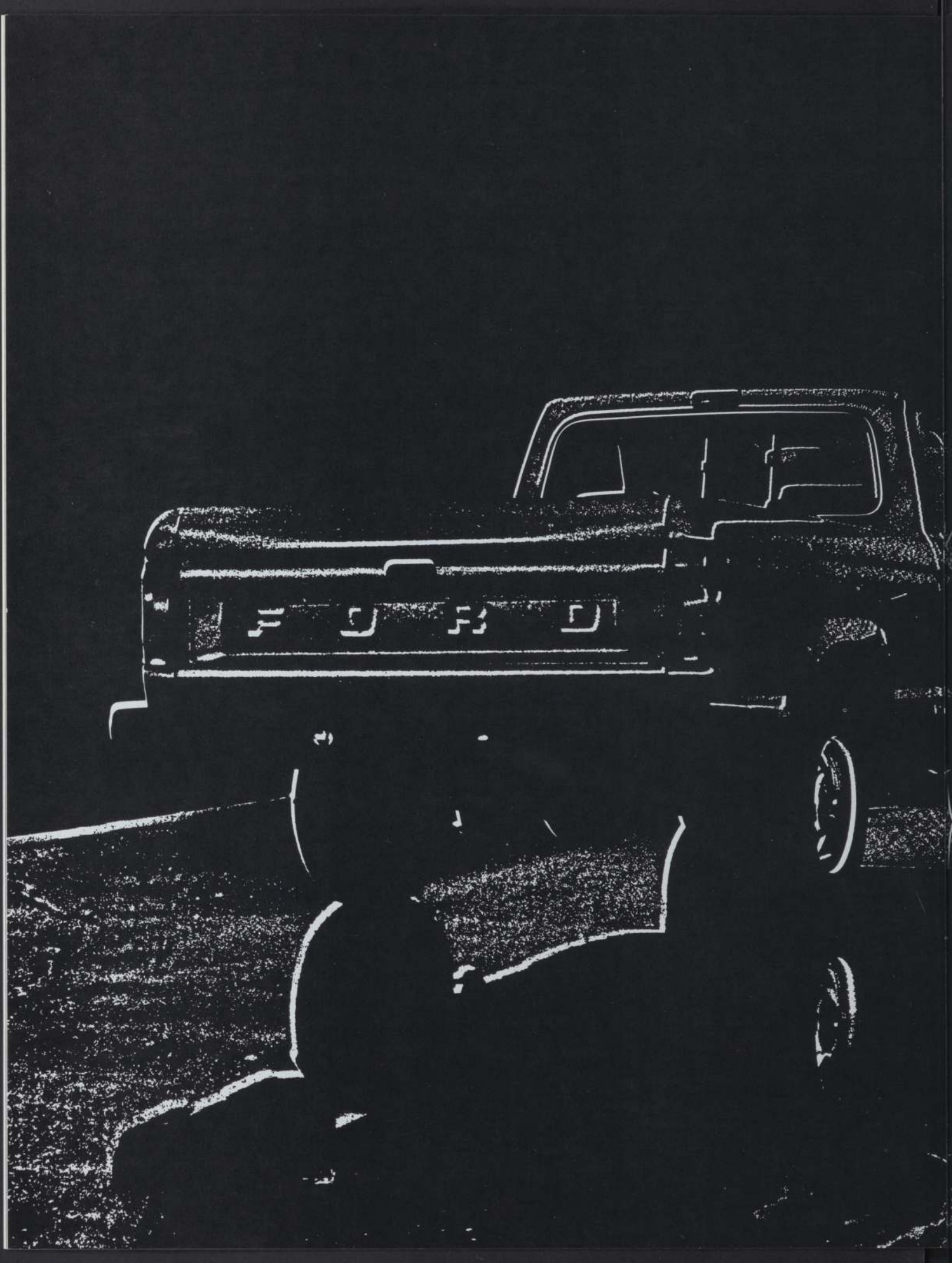
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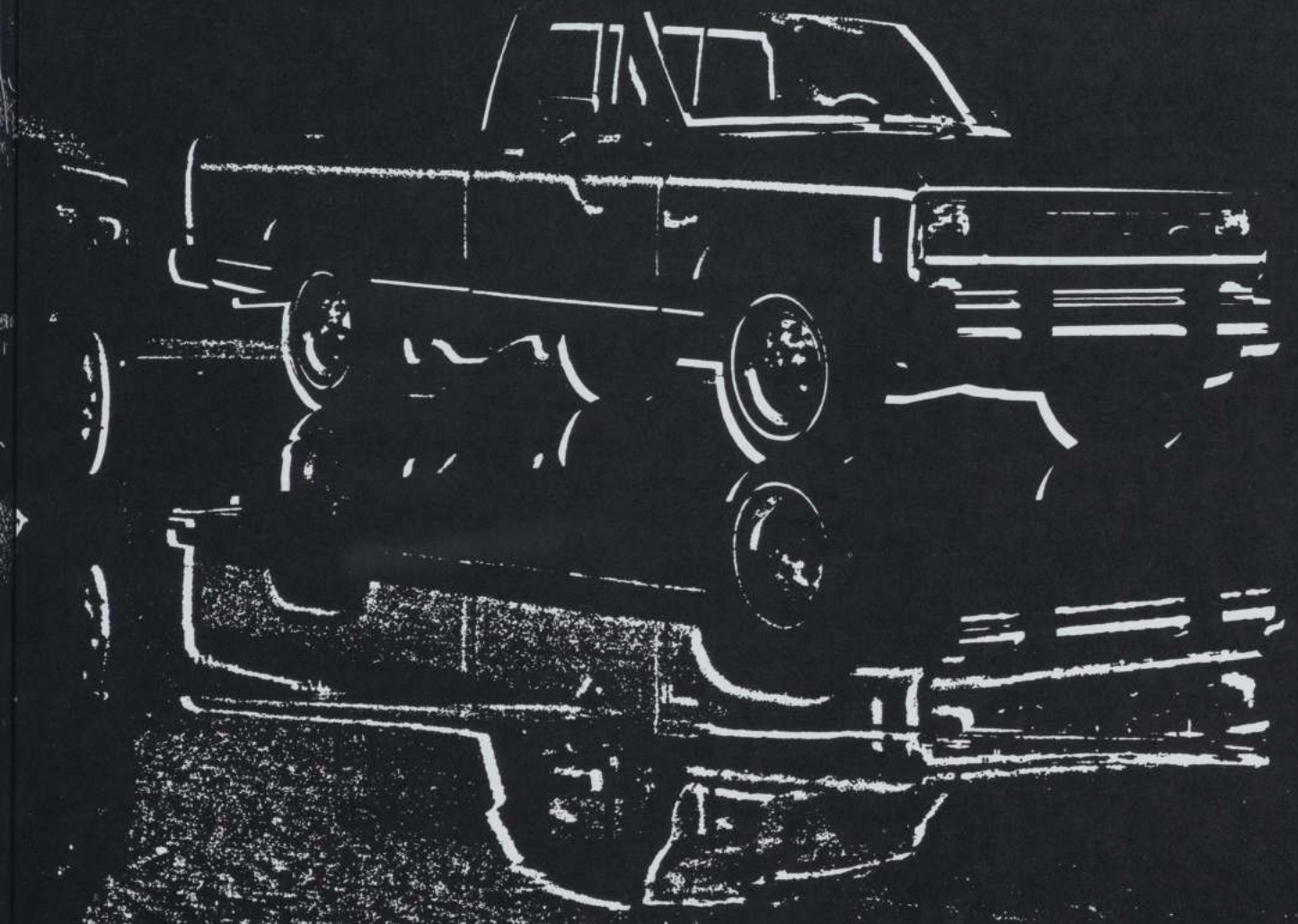
CHAPTER III

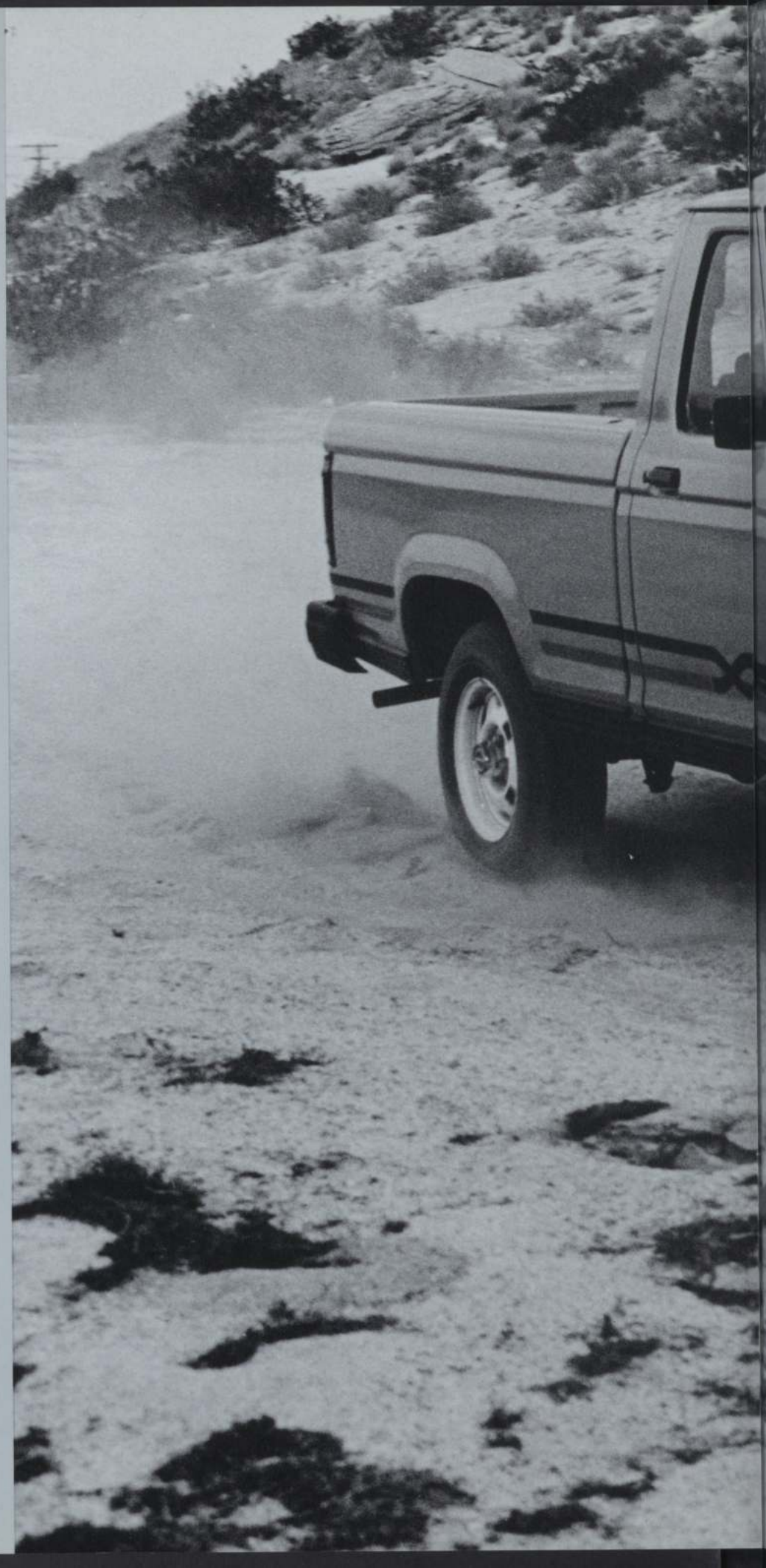


'83 Ranger: A Truck for the Eighties

The growth in the compact truck segment was modest until 1978 when the cost of gas began to spiral. Suddenly the market turned toward pickups that were fuel efficient, economical and easy to maintain, of high quality, and reliable. Import compacts met these criteria, but buyers sacrificed to varying degrees in areas such as passenger room, riding comfort and trailer towing ability. Ranger not only meets the fundamental needs of compact buyers, it also has designed in features that overcome the typical owner complaints of import compact deficiencies.

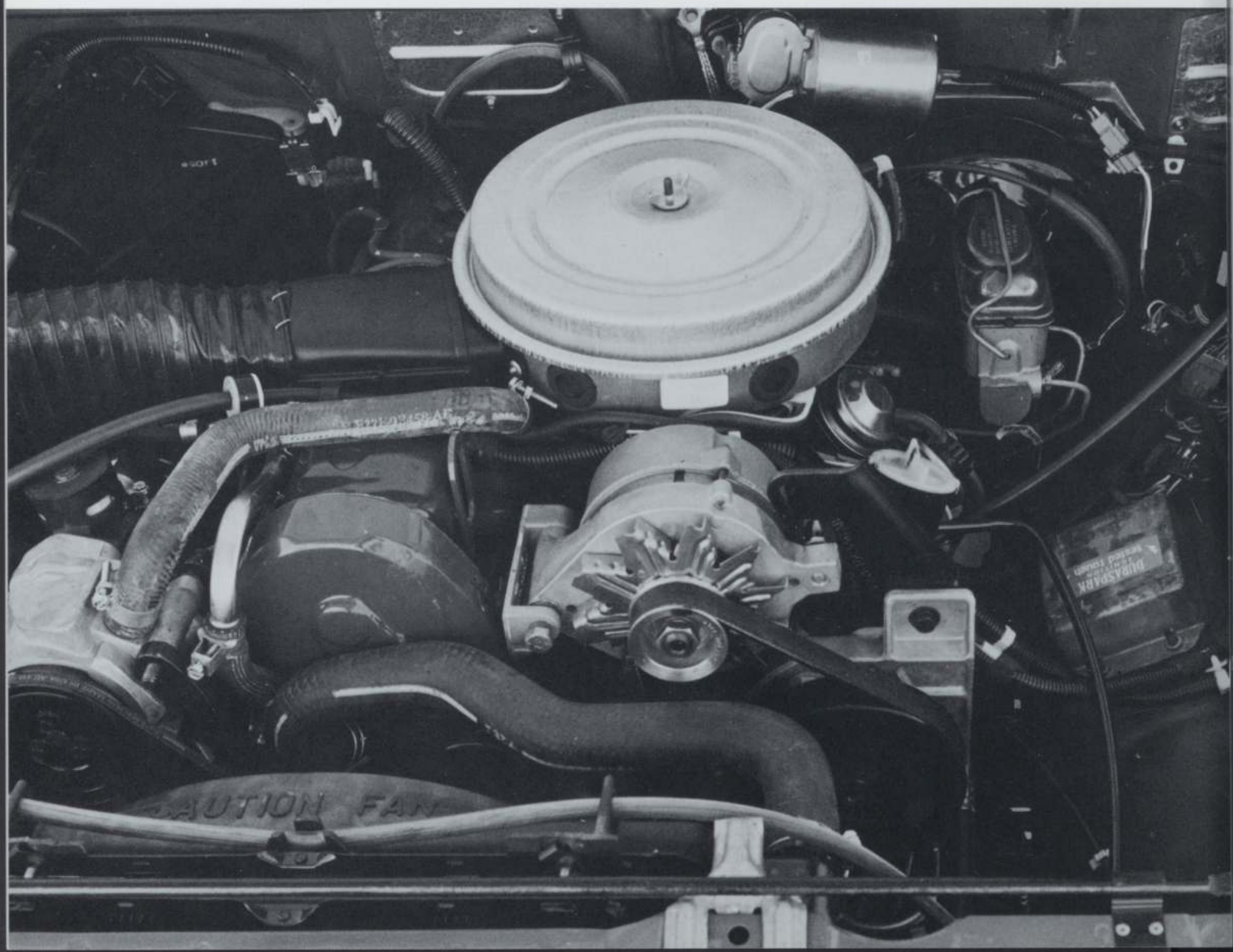
- ☐ **Economical Operation.** Ranger's estimated EPA rating of 27 city (49 state) is competitive with the best in its class.
- ☐ **Efficiency.** Ranger is small enough to be classified as a compact pickup, but it is on the high end of the range with many of the attributes of full-size trucks.
- ☐ **Quality.** Ranger has gone through rigorous testing procedures to ensure that it is durable. A thorough quality program at the manufacturing level ensures reliability and good fit and finish.
- ☐ **Serviceability.** Ranger is designed for easy maintenance and relatively low maintenance costs.

It's the combination of these attributes that makes Ranger a truck for the '80's and competitive with others in the compact pickup price class. The technical details contributing to these characteristics will be discussed in this section of the manual.



Fuel Efficiency

With efficient standard 2.0 liter and optional 2.3 liter engines, aerodynamic styling, and lightweight design, Ranger provides an excellent combination of traditional truck work-use features and fuel economy.



Engine Design

Trucks are often subject to more severe environmental conditions and greater load-carrying requirements than cars. Yet compact pickup buyers are interested in maximizing fuel economy. As a result, Ranger's engines were refined to provide the best possible combination of fuel economy and truck torque—a 2.0 liter engine for highest fuel economy and a 2.3 liter engine for towing heavy loads. Both engines provide high torque (pulling power) at lower-than-normal engine speeds and share a design which has three primary benefits:

- ☐ Its high torque at low engine speeds allows for improved driveability, load pulling capability and acceleration from a standstill.
- ☐ Because more torque is available at low r.p.m., drivers will tend to operate the engine at lower engine speeds. Lower engine speeds result in less engine wear and longer service life.
- ☐ By operating Ranger's engine at lower engine speeds in each gear, greater fuel economy can be achieved.

Ranger's 2.0 liter and 2.3 liter engines have been reworked extensively to provide truck performance and fuel economy improvements that compact pickup buyers expect. Most notably, Ranger's peak torque specification (124 lb.-ft. at 2200 r.p.m. for the optional engine) contrasts with typical engines which achieve maximum torque output at much higher engine speeds. Both the standard and optional engines are based on Ford's 2.3 liter "Lima" design, but key components including intake manifold, camshaft, carburetor and valve train have been modified to suit truck work-uses while improving fuel economy.

Changes in these components are summarized below:

- ☐ **Intake Manifold**—Ranger's new "double Y" intake manifold is a departure from previous large diameter designs. Its new "Y" shape and narrower diameter tubes make it possible for the fuel-air mixture to remain in suspension at Ranger's typical low engine operating speeds by increasing the velocity of the flow of the mixture to the cylinder.
- ☐ **Carburetion**—A new single barrel YFA carburetor was selected for Ranger to accommodate the engine's new torque characteristics and low engine speed operation. The new carburetor improves accelerator feel and low speed responsiveness for improved driveability.
- ☐ **Camshaft Profile**—To match the narrower intake manifold and new carburetor, a new camshaft profile was developed for Ranger. The valves control the inflow of the air/fuel mixture to the cylinder and the outflow of exhaust after combustion. The shape, or profile, and the orientation of the cam lobes affect the efficiency of the combustion process by controlling the timing and duration of the opening and closing of the intake and exhaust valves. The new cam profile for Ranger complements better cylinder filling and higher torque at low engine speeds.
- ☐ **Valve Train Modifications**—Because of lower typical operating engine speeds, valve spring tension has been reduced and newly-designed valve spring dampers reduce "valve spring harmonics". The lower tension results in less valve train friction. Less friction means less wear, lower frictional losses, and higher fuel economy.

Ranger engine specifications are listed in the accompanying table. In addition to the internal engine modifications summarized above, both Ranger engines offer "super cooling" capability and the 2.3 liter engine is equipped with microprocessor control. This cooling system is capable of keeping the engine at a safe temperature even at an ambient outside temperature of up to 120°F. This is made possible by a cross-flow radiator design and a new plastic fan. By converting the fan blades to plastic, designers were able to easily shape better fins and increased air flow to the radiator, while saving weight.

Additionally, the new fan is clutch-driven. The viscous clutch only engages when it's needed, so that the engine is only taxed by the fan's operation when it's necessary. The result, of course, is better engine efficiency and increased fuel economy. The MCU, or microprocessor control unit, on optional 2.3 liter engines assists emission control operation.

Using a catalyst system, the computer gets feedback from a sensor in the exhaust manifold, analyzes exhaust gas content and feeds the carburetor with information for optimizing the air/fuel ratio. Since clean emissions and high fuel economy demand lean fuel/air mixtures which can affect driveability, the MCU monitors the mixture constantly to maintain good pickup and driveability under various load conditions.

RANGER ENGINE SPECIFICATIONS

	Standard (a)	**Optional**
Displacement	2.0 liters	2.3 liters
Bore (inches)	3.52	3.78
Stroke (inches)	3.126	3.126
Compression Ratio	9.1:1	9.0:1
Main Bearings	5	5
Valve Adjustment (lash)	Automatic	Automatic
Carburetor	1V	1V
Horsepower @ RPM	73@4000	79@3800 (b)
Torque (lb.-ft.) @ RPM	107@2400	124@2200 (b)
Fuel	Unleaded	Unleaded
Ignition	Electronic	Electronic

(a) 2.0L I-4 engine not available in California.
(b) Ratings shown are with standard manual transmission. 82 horsepower at 4200 RPM and 126 lb.-ft. torque at 2200 RPM with automatic transmission. (All 2.3L I-4 engine ratings are 50-State ratings.)

Transmissions

Both Ranger engines are available with *4-speed manual* transmissions. Key manual transmission features include the following:

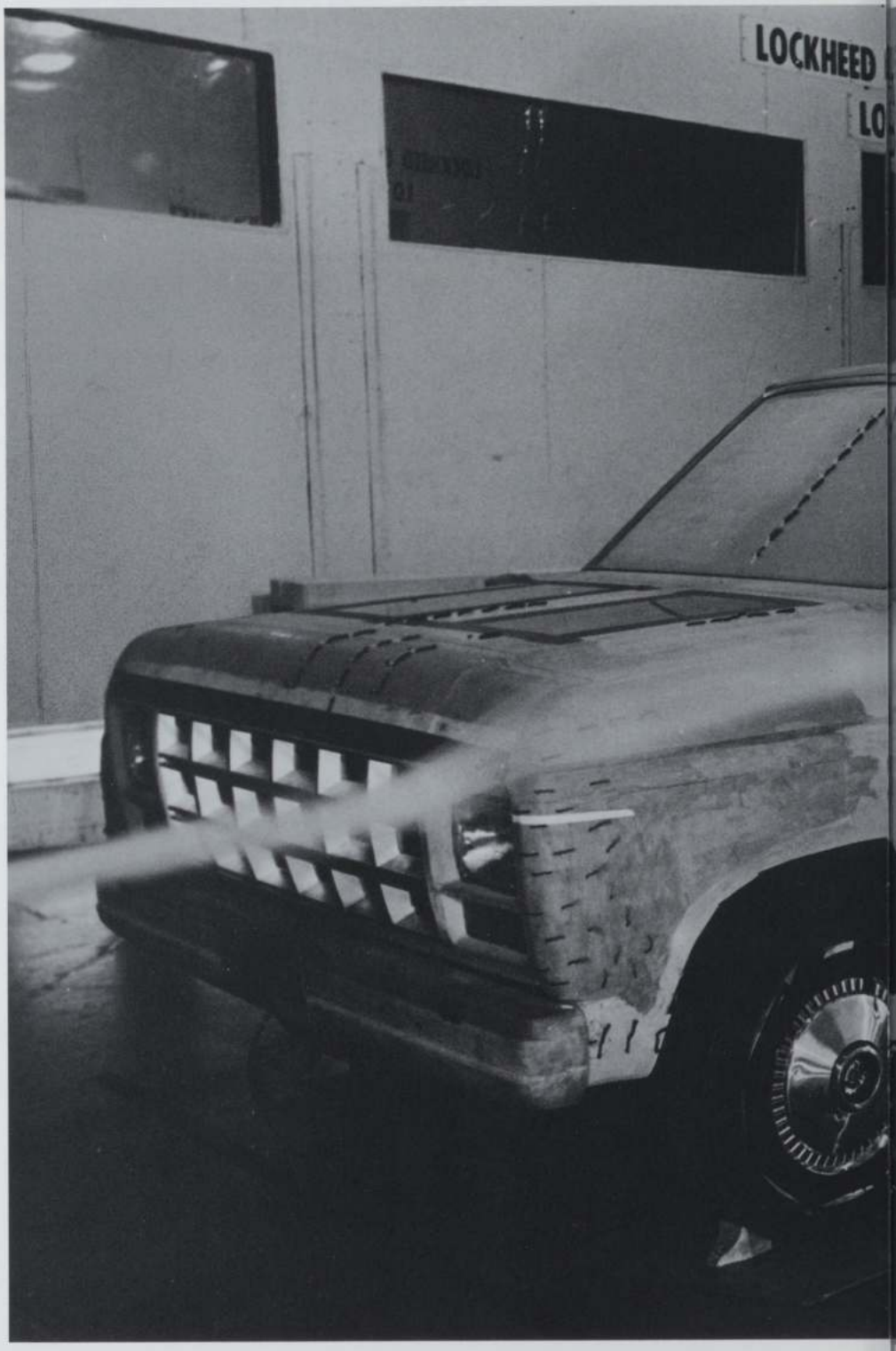
- ☐ Self-adjusting clutch to eliminate the need for periodic pedal free-play adjustments;
- ☐ Hydraulic clutch linkage to assure smooth clutch control, unaffected by engine roll;
- ☐ Ventilated clutch housing to cool the clutch;
- ☐ Smooth, positive low-effort shifting with all forward gears synchronized.

An *automatic 3-speed* transmission is available with the 2.3 liter engine only. The automatic shift pattern is an inverted "L" shape allowing for possible mechanical lock in the park position and clear visual indication of "park" mode or the gear selected.

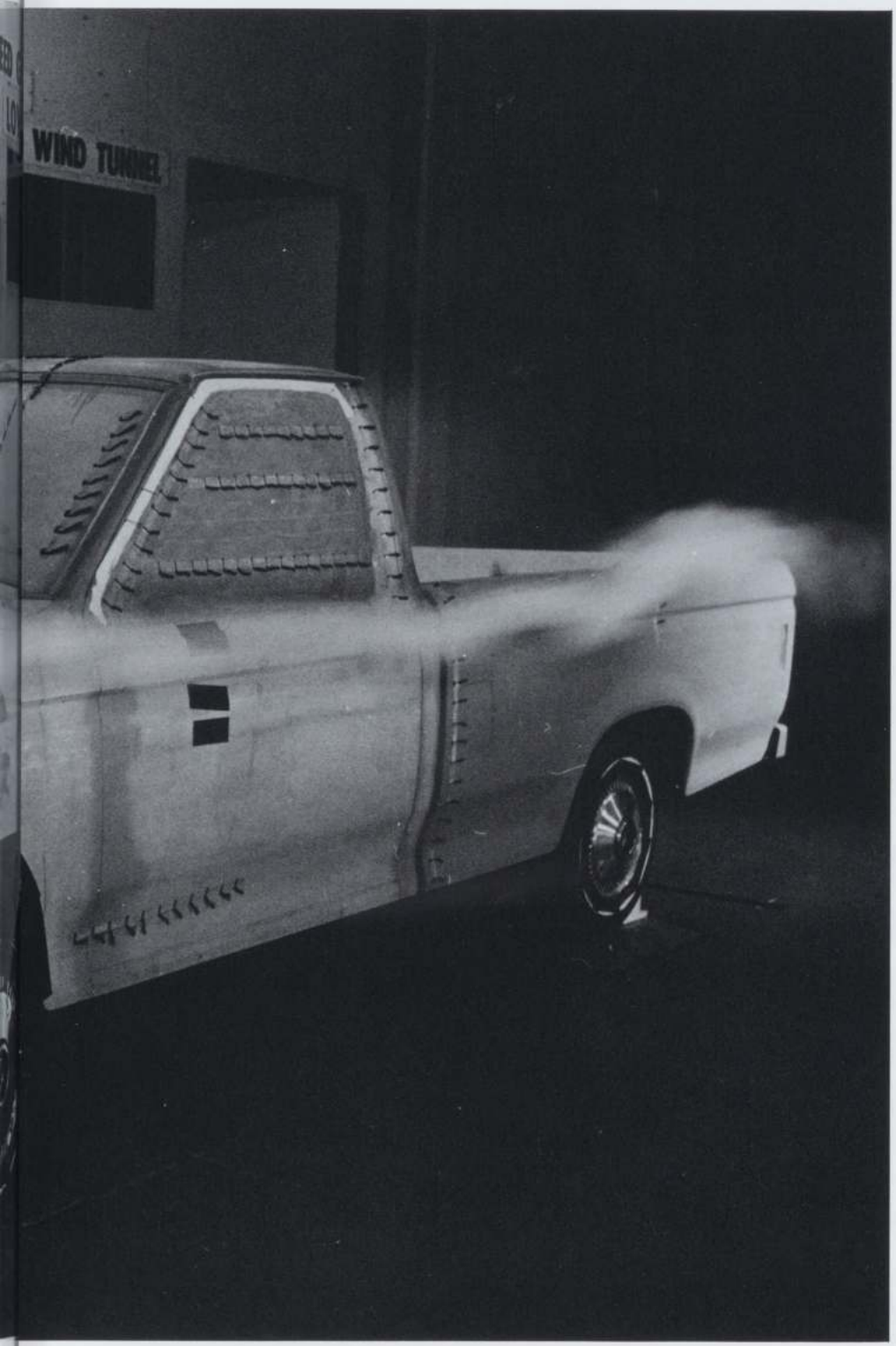
The standard axle ratio for the 2.0 liter engine is 3.08. The 3.45 axle ratio is optional with the 2.0 liter engine and standard with the 2.3 liter engine. The 3.45 ratio is suitable for customers planning to haul loads at or near Ranger's capacity. This option will be especially helpful to customers who operate on hilly terrain frequently or pull trailers.

Aerodynamic Styling and Lightweight Materials

The power required to move a vehicle depends primarily on the vehicle's weight and its resistance through the air. The extensive use of strong, lightweight materials and emphasis on aerodynamic styling in Ranger have resulted in a truck which has an excellent power-to-weight ratio and a low drag coefficient of 0.45. The materials which make up Ranger's chassis, body and engine include strong lightweight materials, such as H.S. steel, various plastics and even costly magnesium (used in Ranger's clutch housing). Plastic and high strength steel alone comprise 20% of Ranger's total dry weight. The fact that these ma-



To achieve its low drag coefficient of 0.45, Ranger underwent hundreds of hours of wind tunnel testing.



terials are more costly than materials they replace is an indication of Ford's dedication to developing a compact truck with excellent fuel economy.

Because of their tendency to be boxy and to have a high, large frontal area, most trucks are less aerodynamically efficient than cars. However, at city speeds, air resistance is a less important power-robbing factor than it is on the highway. Therefore, some pickups may carry excellent fuel economy ratings but perform poorly for extended highway tours. In an effort to make Ranger one of the most aerodynamically efficient pickups on the road, Ranger's drag coefficient was trimmed down to 0.45—the lowest drag of any Ford truck ever built.

To improve Ranger's aerodynamics, engineers conducted hundreds of hours of wind tunnel testing of 3/8 scale clay models and full-size prototypes. In the wind tunnels at the University of Maryland and at Lockheed Aircraft facilities in Georgia, engineers studied flow patterns over Ranger's body and turbulences created behind and below the vehicle. Particular attention was given to frontal projection and the greenhouse area. The test results led to the following body refinements:

- ☐ **Modified Windshield** angle of 49.9 degrees.
- ☐ **Wrap-around Front Bumper Spoiler:** A spoiler was designed especially for the Ranger to reduce turbulence at the underbody and to force air to flow over the top of the vehicle. A less turbulent underbody will result in a smaller wake behind the pickup and a lower drag.
- ☐ **A Clean Chamfer on the Hood Leading Edge:** The hood chamfer (hood to grille seal) was designed to allow air to accelerate over the top of the hood "uninterrupted".
- ☐ **Inboard Taper Added to Fender:** By tapering the fender "inboard", the air will accelerate over both sides of the vehicle.

Package Efficiency

While Ranger's compact size and weight make excellent fuel economy possible, its cab can seat three and its pickup box is available in two lengths. Ranger can carry loads you'd expect only full-size pickups to carry.

Exterior Dimensions

	1983 Ranger (SWB/LWB)	1982 Chevy S-10 (SWB/LWB)	1982 Toyota (SWB/LWB)	1982 Courier (SWB/LWB)	1982 F-100 (SWB/LWB)
A. Wheelbase	107.9/113.9	108.3/117.9	101.8/110.2	106.9/112.8	116.8/133.0
B. Overall Length	175.6/187.6	178.2/194.1	171.1/186.6	177.9/189.4	192.1/208.3
C. Overall Width	66.9	64.7	63.4	63.0	77.2
D. Overall Height	64.0	59.4	60.8	61.5	69.3
E. Tread Width					
—Front	55.0	54.1	53.0	51.2	65.1
—Rear	54.6	54.1	53.1	51.2	64.4
F. Fuel Tank Capacity (gals)—Standard	15.2 /15.2*	13.2	13.5/16.0	14.8/17.4	16.5/19.0

*17 gal. tank on LWB models with automatic transmission or auxiliary fuel tank.

Exterior Dimensions

With styling and lines taken directly from the traditional Ford pickups, and more cab height than its competitors, some prospects may not immediately realize that Ranger is a compact. The fact is that a long wheelbase equipped Ranger is only four and one-half inches shorter in overall length than a short wheelbase F-100. On the other hand, it's nearly 20 inches shorter than a long wheelbase F-100 and more than 10 inches narrower than F-series vehicles in either wheelbase length. Regardless of how you look at it, the end result is that Ranger has compact truck attributes with standard truck appearance and capabilities.

Interior Dimensions

The driver and passengers of Ranger need not make sacrifices in cab roominess by choosing a compact. Inside Ranger the seating position is high and feels much like full-size F-Series truck seating. Unlike most import competitors, Ranger can accommodate three passengers.

Interior Dimensions

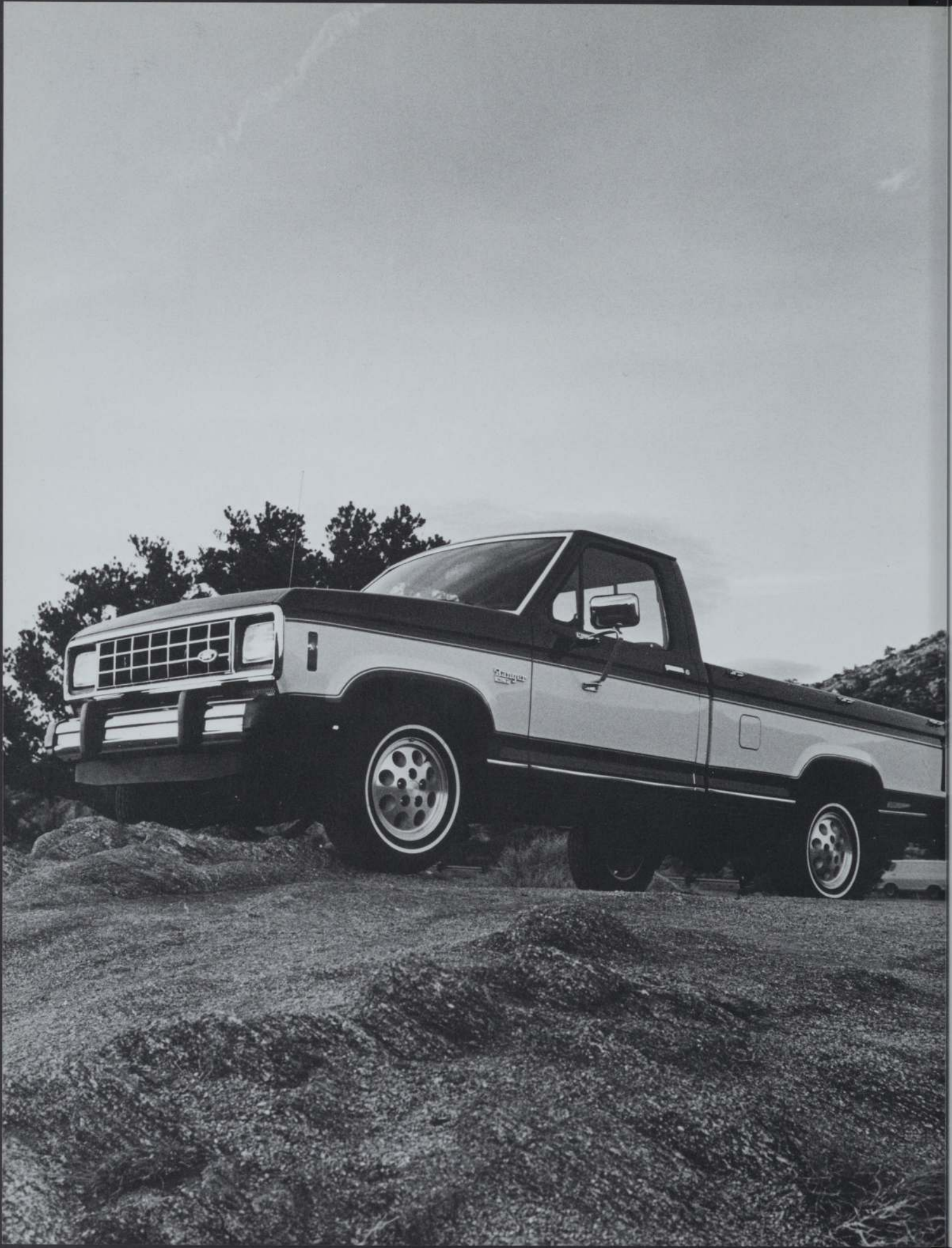
	1983 Ranger	1982 Chevy S-10	1982 Toyota	1982 Courier	1982 F-100
Head Room	39.2	39.5	38.0	38.2	40.4
Shoulder Room	55.6	53.9	54.1	52.6	64.2
Hip Room	55.0	50.5	54.1	54.3	61.7
Leg Room	42.4	42.4	40.4	41.9	41.0
Seating Capacity (passengers)	3	3	2	3	3

Pickup Box Dimensions

	1983 Ranger (SWB/LWB)	1982 Chevy S-10 (SWB/LWB)	1982 Toyota (SWB/LWB)	1982 Courier (SWB/LWB)	1982 F-100 (SWB/LWB)
Inside Length	73.0/85.0	72.0/87.4	72.2/87.4	75.5/87.0	82.0/98.2
Maximum Width at Floor	54.3	59.1	61.8	61.4	70.0
Wheelhouse Spacing	40.4	40.3	40.5	38.6	50.8
Depth	16.5	16.0	15.9	16.2	19.5

Pickup Box

Ranger's pickup box is available in two lengths. The short wheelbase, at a nominal six-foot length, is built on a wheelbase only six inches shorter than the long wheelbase version, which has a bed length of approximately seven feet. The similarity in the wheelbases means that prospects who don't need the additional load space can still enjoy ride quality and road stability similar to the larger model.



Quality

Ranger production quality is evident in the solid feel of the doors closing, the way the tailgate snaps shut positively, and in the fit and finish of body parts and panels. Special quality assurance systems for Ranger include new welding procedures, new electronic testing devices and Employe Involvement programs.

Ranger has the look and feel of a quality product, and quality is of primary importance to compact truck buyers.

Production quality depends primarily on two influences: (1) the quality of the employe's work and (2) the technology being used to put the vehicles together. At the Louisville assembly plant, both employe involvement and the latest technology have contributed substantially to the manufacturing quality of the 1983 Ranger.

"EI": Employe Involvement in Quality

At an assembly plant, you probably wouldn't expect to see design engineers working alongside assembly operators— but that's exactly what happened in "designing" the production process for Ranger. Employe Involvement— "EI" —is a program in which Louisville plant employes share the responsibility for turning out quality vehicles with the engineers who designed Ranger. Nineteen months prior to production start-up, the "EI Program" began working on improving Ranger production quality. Key steps in the EI Program included worker and management participation in the following activities:

- ☐ Reviewing the construction of prototype vehicles and components by taking them apart at the assembly plant.
- ☐ Making suggestions for design revisions in group work sessions to improve Ranger's quality.
- ☐ Writing out specific recommendations of actions to be taken in improving quality.
- ☐ Worker participation in production tests for a better understanding of the level of quality to be expected in the Ranger program. These tests included water leak tests, electrocoating, and fuel-fill testing.
- ☐ Visits to Dearborn included assembly and design engineers and operators for prototype review and assembly process review.

Through employe participation, prior to Job 1, management had received close to four hundred quality improvement proposals and had accepted over 80% of the proposals received. Most significantly, in response to employe suggestions, the electrocoat coverage of the cab was improved, and the pickup box attachment and fuel tank installation were simplified.

In December 1981, a special twelve-day run of the first 100-300 pre-production Rangers was conducted to establish assembly-line operations, test assembly machinery and train employes in constructing Ranger. After the pre-production job was completed, the initial run of vehicles was thoroughly inspected for quality and checked for proper operation before "Job 1" was given an "OK". Today, in full production, the assembly plant is capable of turning out 75 Rangers per hour (compared with approximately three per hour in the pre-production phases).

New Assembly Technologies

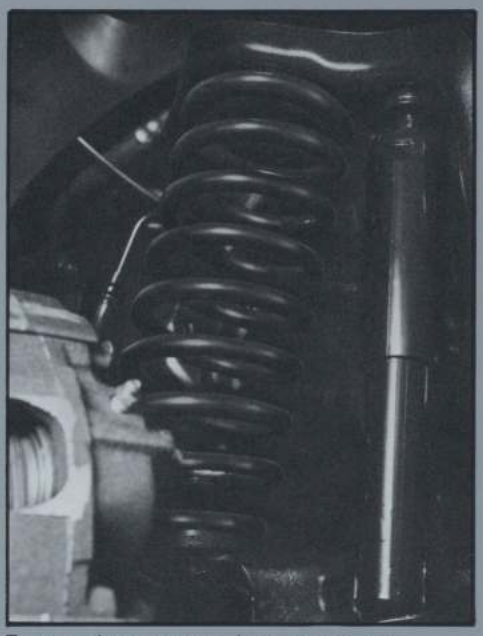
Retraining of plant employes is necessary because of the extensive use of new technologies in assembling Ranger. In fact, Ford's Louisville plant is the most technologically advanced truck plant in Ford's history. Using automatic equipment, robots, and electronic testing devices, the assembly line has truly entered the computer age. Ninety percent of the spot welding, for example, is automatic and new material-handling magazines contribute to production speed.

An important innovation in Ranger's assembly is the use of portable testers to check the vehicle's electrical operation before assembly is completed. The new UNIMET testers are plugged into the vehicle's cigarette lighter socket.

An automatic testing sequence is prompted by the tester and, for each truck tested, a printout of malfunctioning electrical devices is generated so that electrical problems can be rectified before the truck is fully assembled. This system saves time and allows for more thorough electrical checking than was possible before manually. Other automated testing functions include roll test machines for dynamic brake tests; a tire and wheel assembler/balancer which indexes tires and matches over 400 sets of rims and tires per hour; and an automatic toe-in machine to adjust the wheels in order to minimize the wear.

Low Maintenance and Serviceability

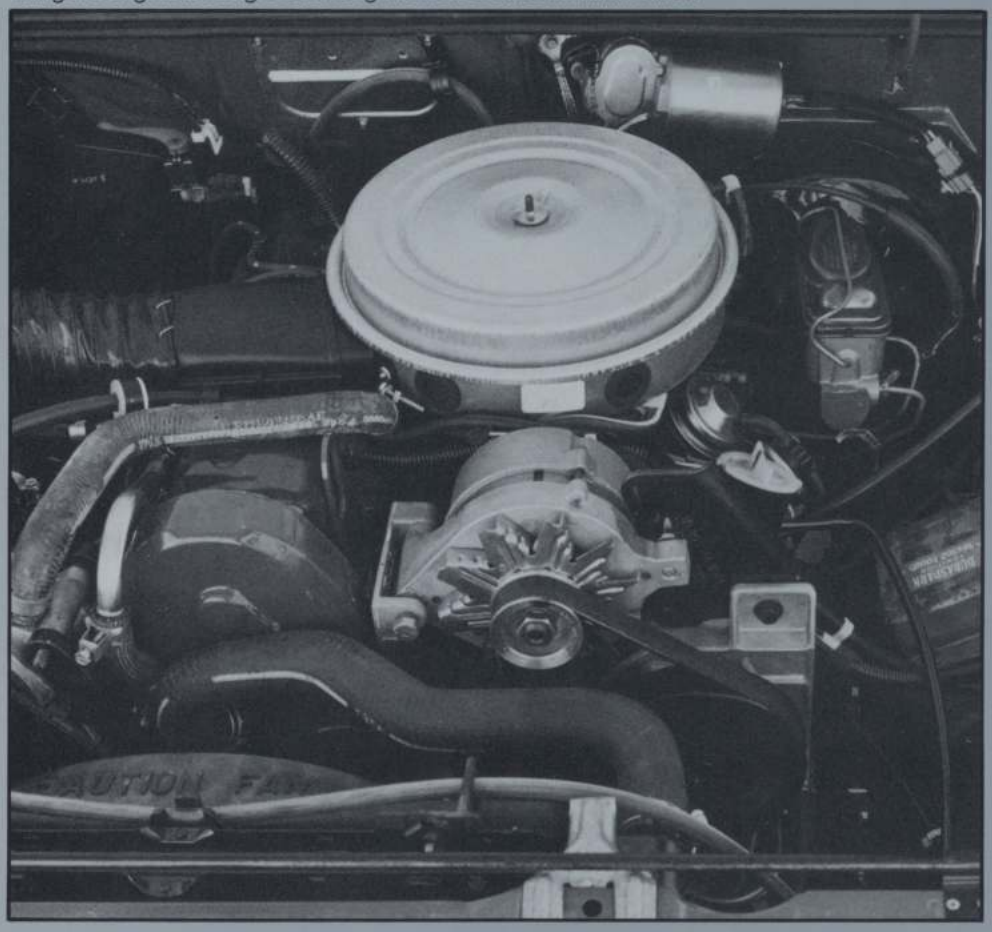
Drive shaft universal joints are lubed for life.



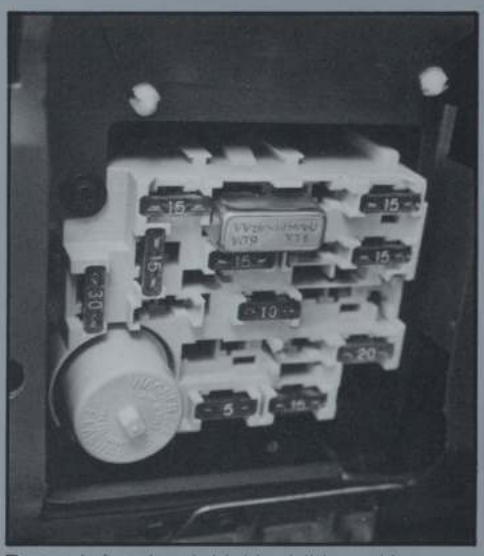
Front and rear suspension components require no lubrication.

Steering linkage is of the no-lube type.

Ranger's engine is designed for long intervals between maintenance.

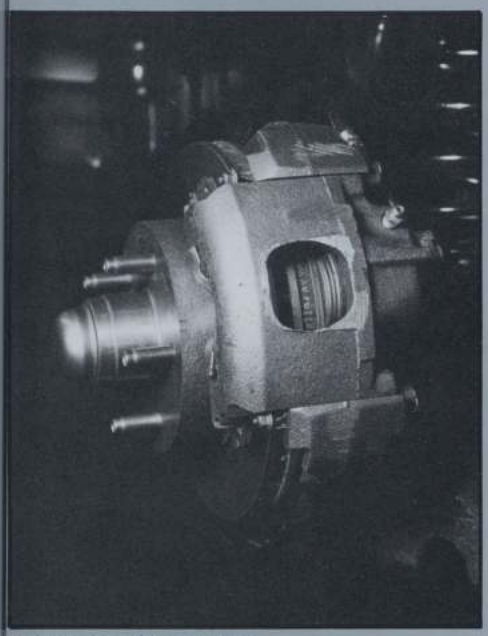


Bright halogen headlamps are standard equipment on Ranger.



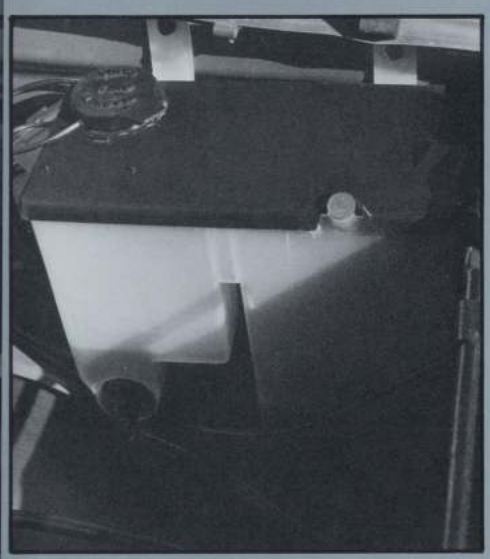
Ranger's fuse box is highly visible and fuses are easily replaced.

Ranger's design eliminates many traditional scheduled service procedures. Suspension, steering and driveshaft require no lubrication for the life of the truck, and simple tuneup items are maintained at extended scheduled service intervals.



Brakes are self-adjusting.

The battery is maintenance free.



Reservoirs for oil, washer fluid, and brake fluid are easily checked.

Fluid Level Checks

Routine service checks are easily accessed under Ranger's hood. Fluid levels—engine oil, transmission fluid, power steering fluid, brake fluid and windshield washer fluid—are easily checked. In fact, some of the fluid containers are transparent so that a quick visual inspection is all that is required. These include the windshield washer and coolant recovery bottle, and the clutch reservoir.

No-Lube and No-Maintenance Components

Among Ranger's components requiring no lubrication and no maintenance are the following:

- ☐ Driveshaft universal joints and slip yoke are lubed for life.
- ☐ No-lube steering linkage.
- ☐ Entire suspension system requires no lubrication after assembly.
- ☐ Battery is maintenance free, requiring no water.
- ☐ The hydraulic clutch is self-adjusting.
- ☐ Brakes are self-adjusting.
- ☐ Hydraulic valve lifters are self-compensating.

Frequently Serviced Components

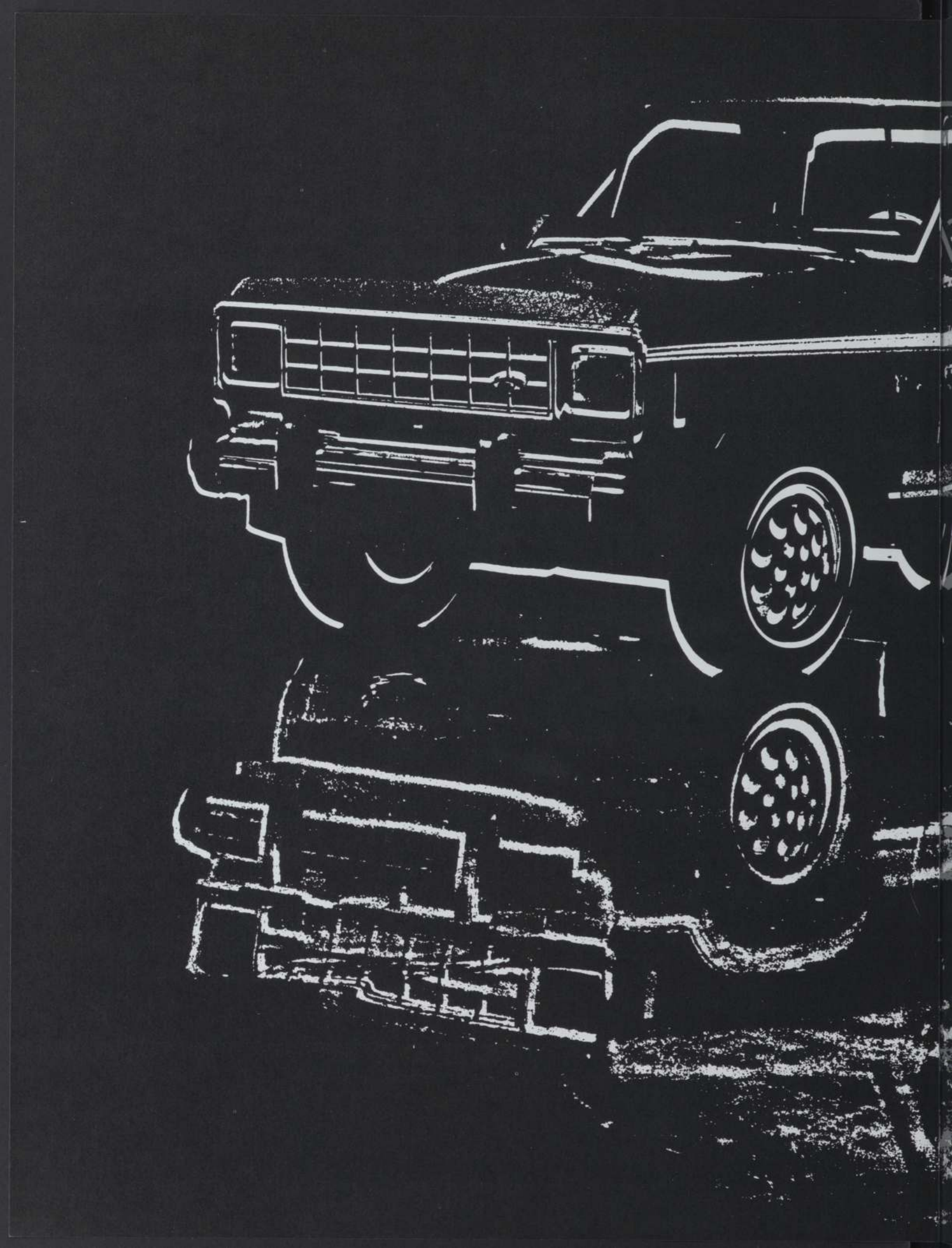
Since most everyday maintenance involves simple electrics, tire changes, and tuneup parts, the accessibility of such components as lights, fuses, and spark plugs is important—especially to the do-it-yourselfer. Ranger's headlamps, tail-lights and grilles use simple screw fasteners and individual fuses are easy to locate in the highly visible fusebox. Spark plugs are easy to remove but recommended replacement intervals are as long as 30,000 miles. Other extended scheduled service intervals include air filter replacement (30,000 miles), oil and filter change (7,500 miles), and coolant replacement (52,500 miles).

SUMMARY

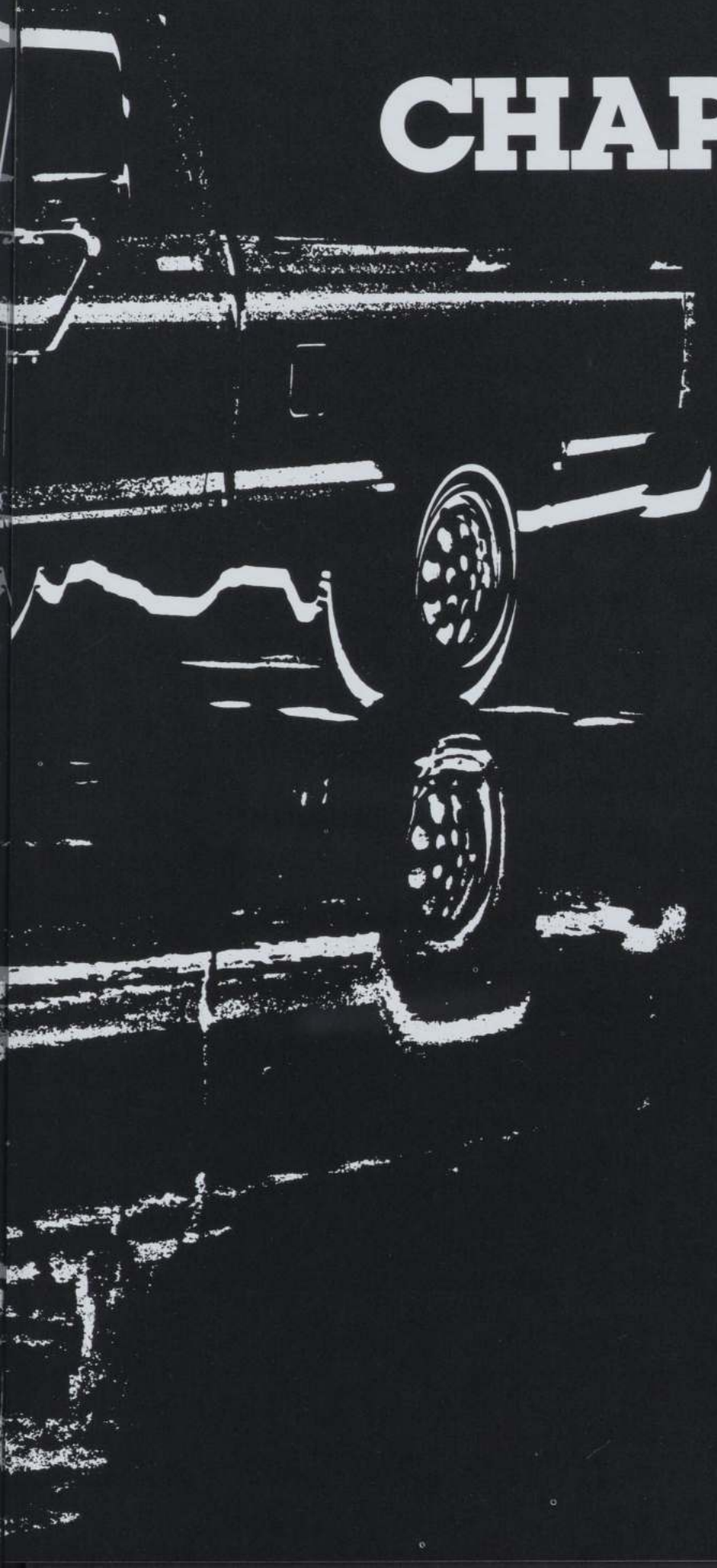
The late '70's and early '80's have focused consumers' attention on vehicle economy in terms of maintenance and fuel costs and overall vehicle quality. Ranger's fuel efficiency, package efficiency, low maintenance features and quality are bound to attract this mentality as it extends from passenger vehicles to the truck market. Specifically,

- ☐ With its high torque, low speed engine design, and attention to aerodynamic and weight management, Ranger is among the most fuel efficient pickups available.
- ☐ With standard truck pickup box features and three passenger cab space, but a smaller, more efficient exterior, Ranger is an extremely efficient package.
- ☐ With major components that require no scheduled maintenance during the truck's life, Ranger is likely to require lower maintenance.

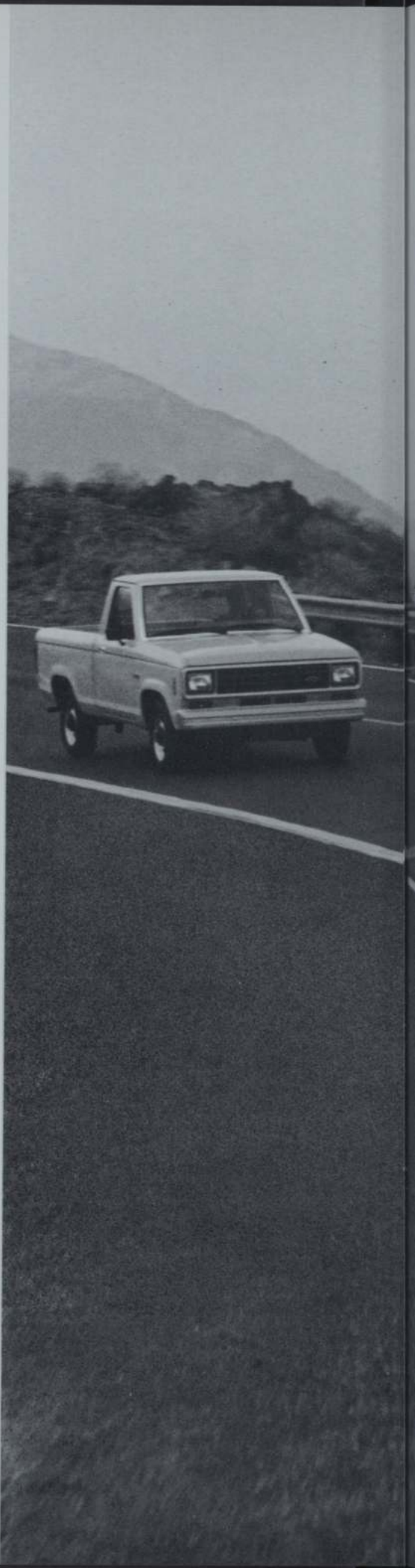
In short, Ranger is a truck for the '80's.



CHAPTER IV



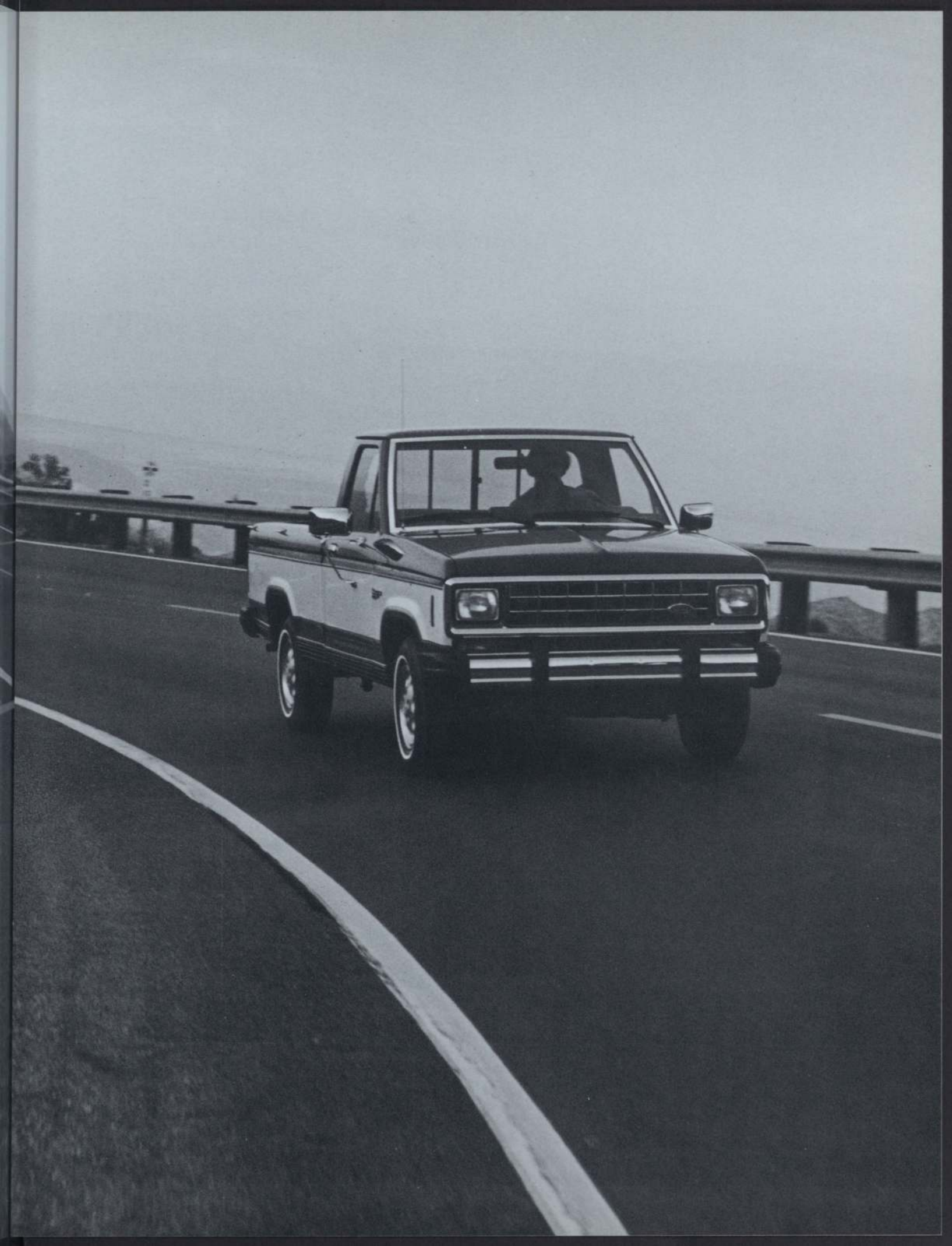
'83 Ranger: A Truck with Passenger-Car Comfort and Conveniences

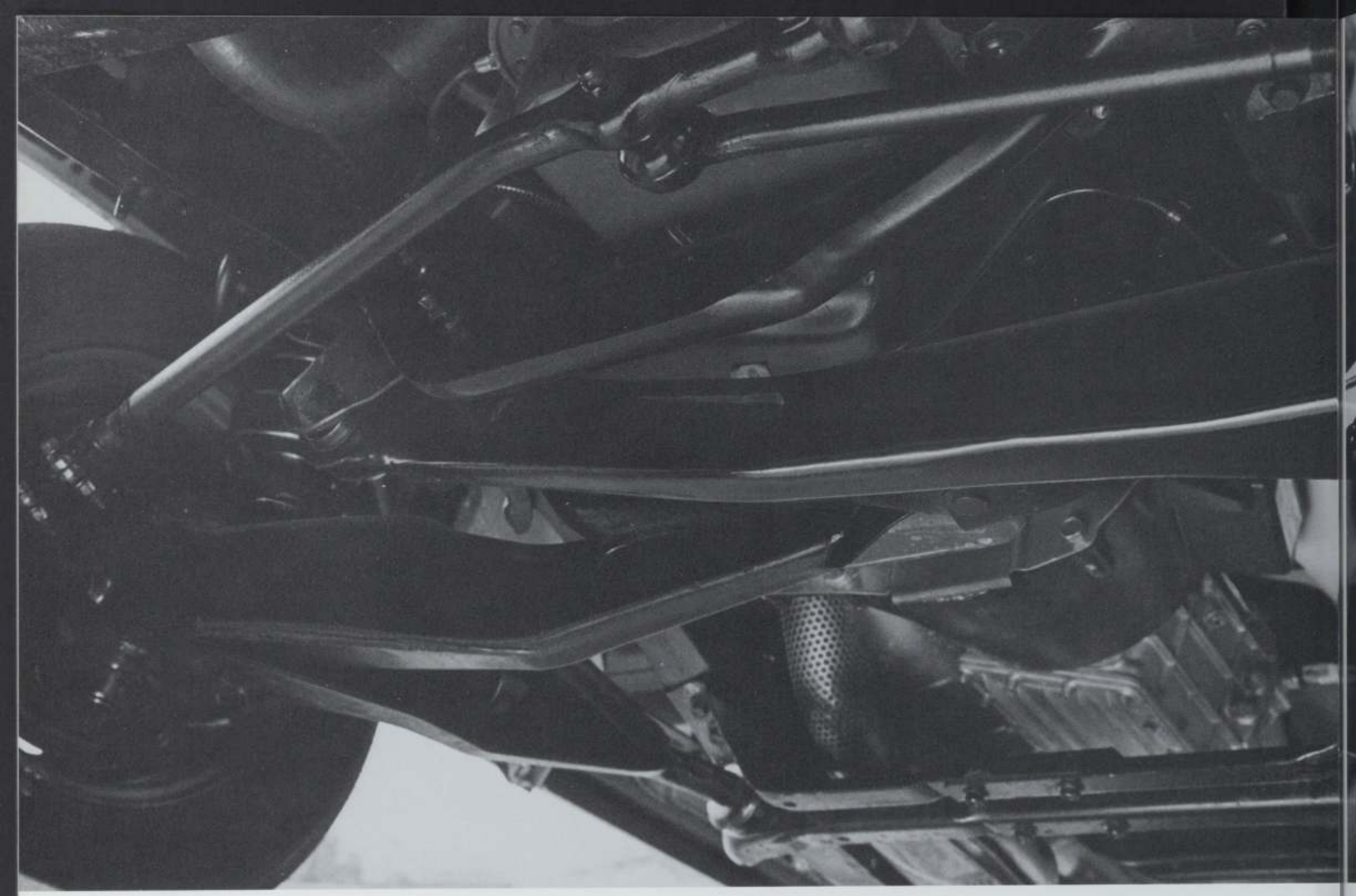


Each year, a broader range of prospects appears to be entering the compact pickup market. Full-size pickup owners are trading down. Prospects who might have bought a station wagon are considering pickups as the trailer towing limits of cars are reduced; previous compact pickup owners are showing up as repeat sales within the market segment. Importantly, almost all of these groups find that they are using the vehicle more for personal use than for any other purpose. The more a pickup is used like a car, the more buyers will expect car-like features and attributes. The Ranger has them:

- ☐ **Ride and Interior Comfort.** Ranger has well-designed, comfortable seats, and a computer-tuned suspension for a smooth ride.
- ☐ **Standard Features and Popular Options.** In addition to the many standard features built into the dash and pasenger compartment, it has a broader range of option packages than most competitors, including a variety of luxury, comfort, and convenience features.
- ☐ **Performance:** It has the type of performance that makes it fun to drive—with power at the low end, where people tend to drive most often.

These features are the frosting on the cake. As more and more first-time buyers enter the compact pickup segment, they will find Ranger appealing. It possesses those passenger car attributes prospects hope to find in a pickup but do not necessarily expect. These features will be explained in this section.





Comfortable Ride

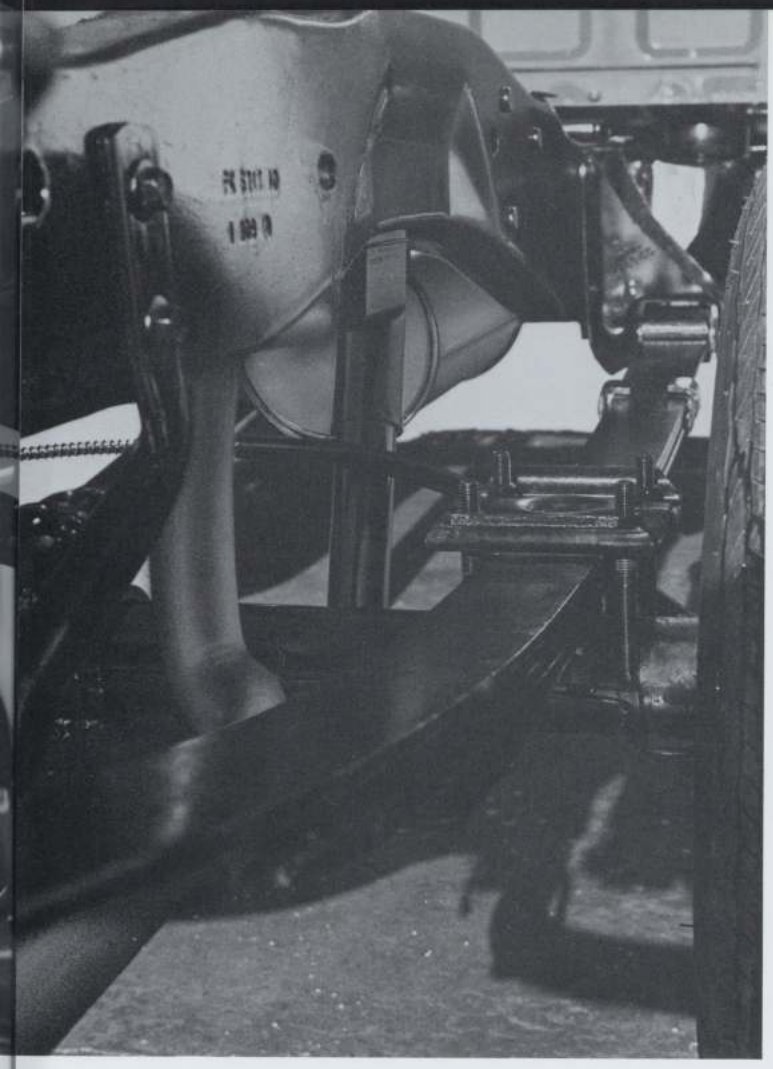
With features like Twin-I-Beam front suspension, Flex-O-later seats, and computer-selected springs, Ranger brings a comfortable ride to the compact pickup class.

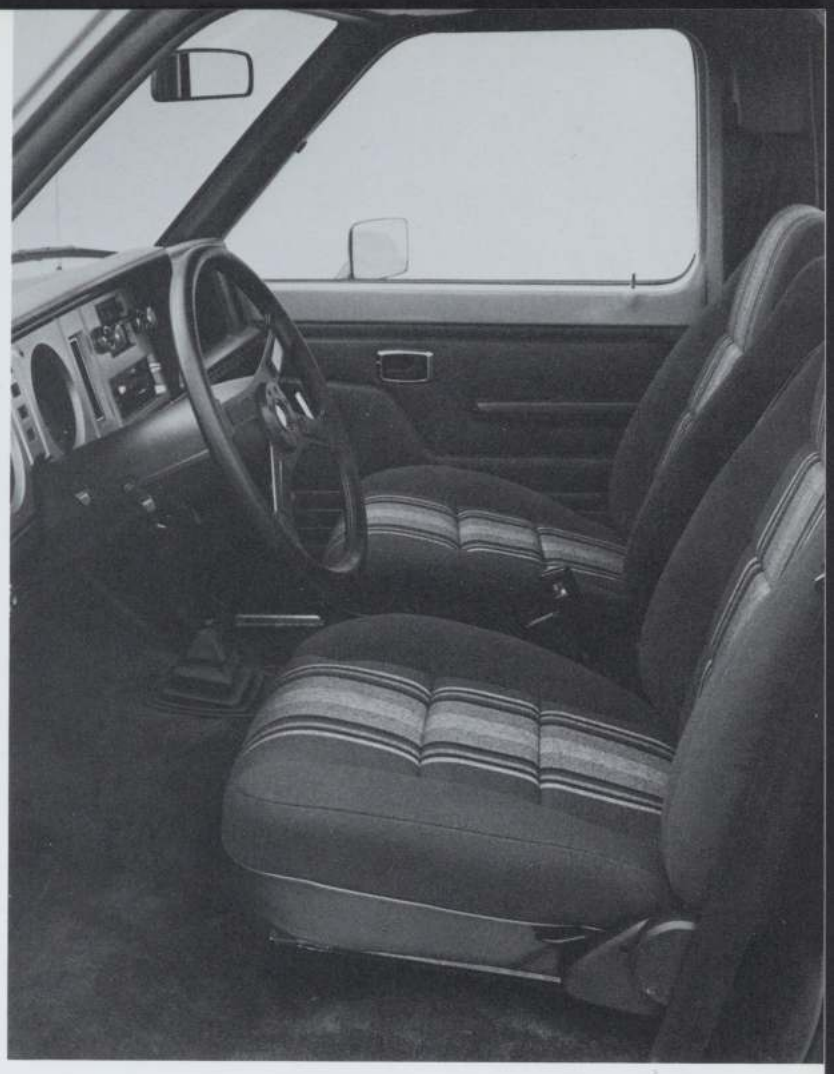
Just as some compact truck manufacturers have been content to supply truck engines based on their automobile counterparts with few or no modifications, some manufacturers provide their trucks with suspension systems based on car counterparts. A slight modification in suspension stiffness to accommodate increased payload capacity is often the only significant difference between car and truck. The result, in many cases, is a truck which rides reasonably well with a full payload, but poorly with partial loads or passengers only.

Ranger's suspension, on the other hand, starts with a proven *truck* suspension design and improves on it so that it will support full payloads. Additionally, the suspension is computer-tuned for a smooth ride.

Twin-I-Beam Independent Front Suspension (TIB)

Ranger benefits from Ford's seventeen years of experience with TIB suspension. This independent configuration is unique to Ford light trucks and contributes to ride comfort and ruggedness of the suspension. Noteworthy front suspension features include the following:





- ☐ Axle I-beams are one piece stampings.
- ☐ Modifications to Ford's first generation F-Series TIB design now allow for camber adjustment of the front wheels.
- ☐ Mounting points to the chassis use rubber insulators to dampen road vibrations.

Like the front coil springs, the leaf springs in the rear are selected by computer to match payload ratings (standard or optional) as well as optional equipment selection.

Ranger's Rear Suspension and Hotchkiss Leaf Spring Design

The leaf springs are of the single-stage type and have relatively long travel, which allows for a soft riding vehicle. Ranger's computer-tuned ride comfort under a variety of loading conditions contrasts with many of the import trucks on the market which ride well with heavy loads but poorly and harshly with just passengers.

Computerized Suspension Analysis

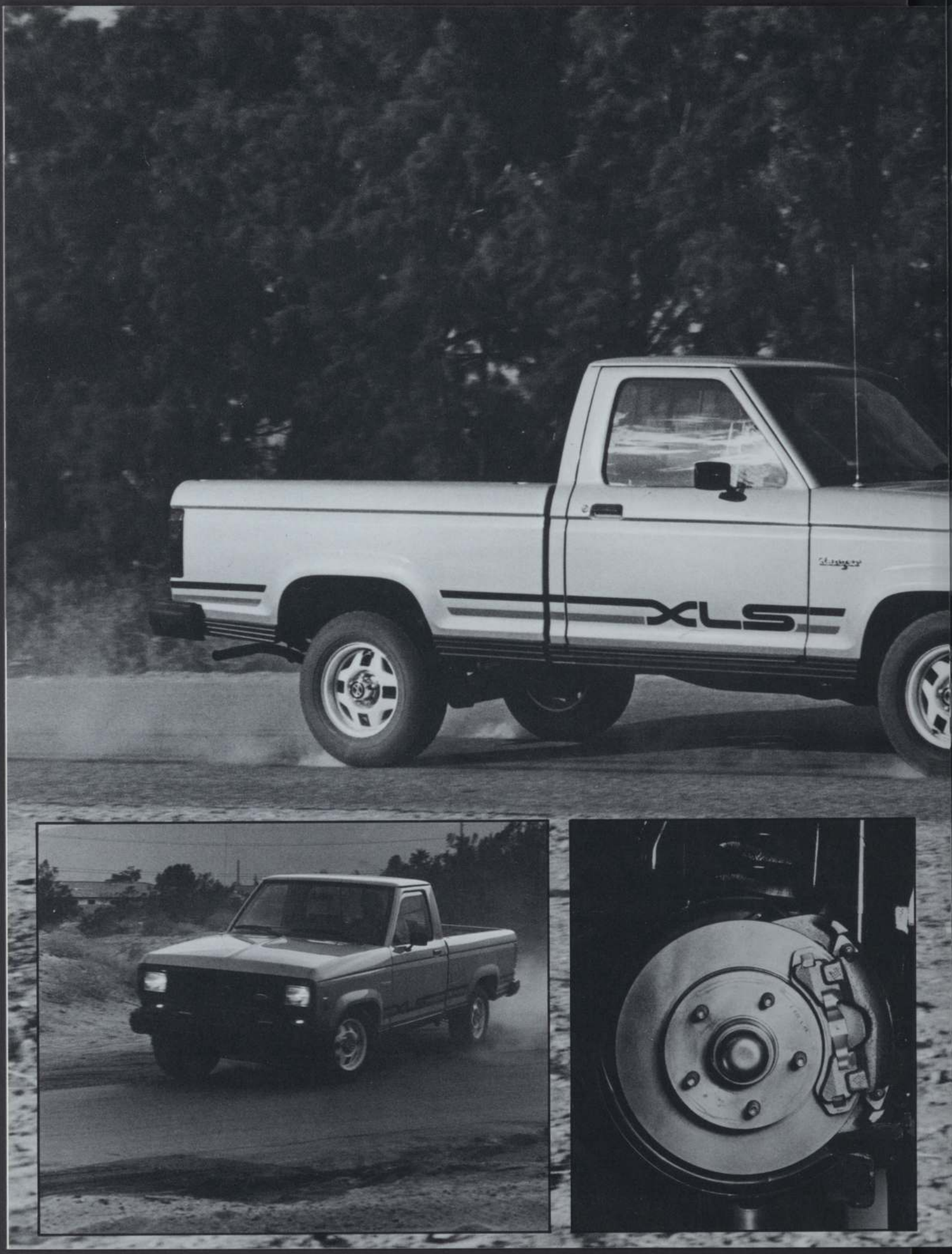
Clearly, Ranger suspension is a true truck suspension. However, the trick to making it ride with passenger-car-like comfort was the selection of suspension geometry, spring rates and shock absorber characteristics. Through sophisticated computer analysis techniques, front and rear spring rates were chosen to achieve desirable ride characteristics. Unlike some of its compact competitors, Ranger offers a relatively smooth ride under a wide variety of loading conditions.

Seat Design

Ranger's standard bench seat and optional bucket seats went through a testing program of their own. To improve passenger comfort and reduce driver fatigue, certain major aspects of seat comfort were tested subjectively in Dearborn, Michigan. Tests designed to improve the Ranger's seats included:

- ☐ *Thigh support*—Ranger's seats support the thigh area firmly enough to prevent passengers from sliding forward, but without reducing circulation to the lower legs and feet.
- ☐ *"Seat fall-off"*—The edges of Ranger's seats are reinforced to reduce sagging or fatiguing.
- ☐ *Back Support*—Ranger's seats provide adequate lumbar support and a comfortable back angle of approximately 20 ½ degrees.
- ☐ *Shock Absorption*—Ranger uses "Flex-o-later" type cushioning to absorb vibrations and shocks from potholes and rough road surfaces.

Ranger's seats are not only comfortable, they are also roomy and adjustable. Three adults can sit across the bench-type seat. Over five and one-half inches of seat travel assist in making driver and passengers more comfortable.


XLS

Handling and Driving Enjoyment

The combination of positive front disc brakes, steering feel, good engine performance, solid suspension and Ranger's compact size make it fun to drive without a payload and easy to drive when hauling cargo.

Because of Ranger's size and weight, first time pickup buyers should find it easy to drive and won't find it hard to adjust to owning a truck. Standard pickup owners will discover a new kind of pickup enjoyment in everyday driving.

Suspension

Aside from car-like qualities and ruggedness for truck work, Ranger's suspension achieves desirable anti-dive and anti-pitch effects without stabilizer bars, thanks to computer-optimized coil springs in front and leaf springs in the rear. This means that stability and controlled handling are good even when loads are poorly balanced or improperly placed in the pickup box.

Front Disc Brakes

Ranger's front disc brakes provide good pedal feel. The brakes maintain proper positioning without excessive brake drag. The lower the friction of the sliding surfaces, the less the brakes will heat up and fade. Disc brakes can be especially important in hauling heavy loads down steep grades.

Steering

Ranger's recirculating ball steering provides good road feel. A new linkage design using special rubber ball sockets contributes to better groove feel, reduces vibration feedback to the steering wheel, and never requires lubrication. A computer-assisted front end alignment procedure promotes better straight-line tracking and longer tire tread life.

Engine Output and Torque

Trucks are not known for all-out acceleration and sub 10 second 0-60 times are not expected of pickups designed to haul big payloads. However, for personal and recreational use, good performance and driveability are a plus. With its torque peak at a low engine speed, Ranger drives well in and around town in both 2.0 and 2.3 liter versions. And, on the highway, a downshift for passing acceleration is required less often than would be required if the engine were designed with typical horsepower and torque peaks at higher r.p.m.


F
FUEL
OIL
AMP
OFF
HI
VENT-HEAT-A/C
A/C
MAX A/C
PANEL
HI-LO
FLOOR
MIX
DEFROST
COOL
WARM

Creature Comforts

Ranger's climate controls are rugged derivatives of F-series components with cooling and heating capacity beyond most competitors. And low noise, vibration, and harshness contribute to the car-like atmosphere of comfort.

Many downsizing truck owners and new buyers alike will expect that to get the ruggedness and utility of a pickup they will need to sacrifice automobile comforts. As you will see in Section V, the standard and optional equipment lists and trim levels for Ranger are similar to what you might expect in a luxury car. This section covers key features which you may want to explain to Ranger prospects.

Climate Controls

Most of today's climate control systems use vacuum power to open and close the duct doors which direct the flow of air and adjust temperature through mixing air. Ranger, on the other hand, uses a cable-operated system. Cable operation provides a more positive lever feel and with greater reliability. Through controlled wind-tunnel testing and subjective testing in desert heat and extreme cold, Ranger's new climate control system was judged to be a leader in the compact pickup class. First, "time to comfort", or the time it takes for Ranger to go from the prevailing outdoor temperature to a comfortable cab temperature, was measured. To test for air conditioning severe city traffic was simulated under summer conditions in Phoenix, Arizona. The vehicle was driven for 40 seconds at 30 m.p.h., followed by 20 seconds at idle speed; then, the cycle was repeated, again for a total of 30 minutes.

To test for heating, the vehicle was driven at a steady 30 m.p.h. in northern Michigan in the winter until comfort was achieved. There, tests were conducted to make sure that Ranger's cooling/heating could achieve and maintain comfortable temperatures and proper operation in extreme weather and driving conditions, whether on the highway or in city traffic. At both extreme temperatures, the new climate system performed admirably. In subjective tests, Ranger was judged to be 10.6% better (time-to-comfort) than Toyota in air conditioning and 29% better (time-to-comfort) at heating the cab. Features contributing to Ranger's success in the climate control area include a new six-cylinder compressor, a blend type of airflow control, large 72 sq. in. plate/fin evaporator core and a 2″ × 6″ × 8″ heater core.

Isolating Noise, Vibration and Harshness

To complete the atmosphere of car-like comfort, Ranger's design includes numerous features aimed at minimizing and isolating noise, vibration and harshness. (NVH). Through extensive research involving a "Noise Source Identification Study" and "NVH Dynamic Analysis", numerous undesirable vibrations were located and eliminated. While the identification study was aimed primarily at locating and dampening interior noise, the latter study focused on eliminating annoying body vibrations and resonances. Since resonances, vibrations, and resulting noises are affected by the weights and densities of materials and construction techniques, attention to NVH was an important part of the design process. As a result, Ranger contains absorption and dampening materials in its roof panel, floor, outer door panel and dash, with increasing amounts of sound deadener in the higher trim level packages. In terms of resonances in its overall structure, Ranger's design allows for the following desirable qualities:

- ☐ *A high "articulation index"*—this quality implies that Ranger will tend not to generate much noise at frequencies which make conversation between passengers difficult.
- ☐ *Subdued levels in the "speech interference spectrum", another measure of noise levels at vocal frequencies*—this quality makes it easier to listen to the radio and carry on conversations as well.
- ☐ *Low "Boom" Tendency*—Ranger's cab structure and body panels have been "tuned" for minimum vibration at boom frequencies—these are annoying low frequencies which tend to cause driver fatigue and annoyance.

Ranger Standard Features and Trim

Ranger's standard features are extensive and include halogen headlamps, a righthand mirror, wrap-around tail lamps, inertia seat back release, a 15.2 gallon fuel tank, and a storage bin above the glove box.

Ranger Standard Features

In addition to the climate control design and low NVH, Ranger offers a list of standard comfort features that is comparable to well-equipped compact cars. The standard package includes front disc brakes, match mounted radial tires, halogen head lamps, a convenient storage bin and glove box, an inside-the-cab hood release and a right-hand exterior mirror. A convenient Ranger feature is the handy gas cap tether which makes it impossible for service station attendants to inadvertently keep the cap.

Ranger not only looks like a full-sized pickup, but even the standard trim has many standard features you might not expect in a compact truck. As you point out key standard features that your prospect is interested in, and their benefits, be sure to point out the quality of Ranger's fit and finish.

STANDARD FEATURES

Powertrain

- ☐ 2.0L I-4 engine (49 states)
  - —Overhead cam design
  - —1V carburetor
  - —Solid state DuraSpark ignition
- ☐ Four-speed manual transmission (floor shift)
- ☐ 3.08 rear axle
- ☐ Magnesium clutch housing

Chassis

- ☐ Twin-I-Beam front suspension
  - —Adjustable camber
  - —Lubed-for-life ball joints
- ☐ Ladder type frame
- ☐ Front coil springs
- ☐ Rear leaf springs (single stage/constant rate)
- ☐ Staggered rear shock absorbers
- ☐ Front disc brakes
- ☐ Rear drum brakes
- ☐ 2200 lb. front axle
- ☐ 2200 lb. rear axle (semi-floating)
- ☐ Underframe spare tire carrier

Body

- ☐ Double wall construction utilized for roof, hood, doors, pickup box sides and tailgate
- ☐ All welded box construction
- ☐ Integral box load floor skid strips
- ☐ Rounded box corners
- ☐ Box stake pockets (two per side) with rope tie-down holes
- ☐ Material support pockets built into box inner side panels (permits carrying 4′ × 8′ materials when two 2″ × 6″ boards are laid across)
- ☐ Exterior drip rail
- ☐ Corrosion Protection including E-Coat primer; selected use of zincrometal and galvanized metal; full front fender liners, and rear splash shields; aluminized wax and body sealers

STANDARD TRIM

Functional

- ☐ Tethered gas cap
- ☐ Fuel filler door(s) located on driver's side (standard and auxiliary fuel tanks)
- ☐ 15.2 gallon fuel tank (17.0 gal. on LWB w/auto. trans. or aux. tank)
- ☐ Computer selected front and rear springs
- ☐ Three windshield defroster outlets for full coverage
- ☐ Inside hood release
- ☐ Easily removable tailgate
- ☐ Coolant recovery system
- ☐ P-metric glass belted tires (P185/75R14SL)
- ☐ Limited service spare tire
- ☐ Dual port windshield washer jet
- ☐ Foot operated parking brake
- ☐ Single note horn
- ☐ Black front spoiler
- ☐ Manual steering
- ☐ Manual brakes
- ☐ Two-speed electric windshield wipers
- ☐ Forced air ventilation with four registers for multi-directional air flow

Interior

- ☐ Vinyl Bench Seat with Covered Seat Back
- ☐ Folding Seat Back with Inertia Release
- ☐ Black Vinyl Coated Rubber Floor Mat
- ☐ Black Seat Belts
- ☐ Black Coat Hook
- ☐ Dome Lamp with Driver's Door Courtesy Lamp Switch
- ☐ Inside Hood Release
- ☐ Single Note Horn
- ☐ Steel Instrument Panel with full color-keyed pad, stowaway bin, & glove box
- ☐ 10″ Rear View Mirror
- ☐ Black LH and RH Scuff Plates
- ☐ LH and RH Color-Keyed Vinyl Sun Visors
- ☐ Steering Column-Mounted Controls for: Windshield Wipers/Washer, Horn, Turn Signals, and High/Low Beam

Exterior

- ☐ Bright Argent Painted Front Bumper
- ☐ Flush-Mounted Fuel-Filler Door
- ☐ Medium Argent Grill with Integral Ford Oval
- ☐ "Ranger" Emblem on Front Fenders
- ☐ Single Rectangular Halogen Headlamps
- ☐ Black LH and RH Door-Mounted Mirrors (5½″ × 4¼″)
- ☐ Bright Windshield Surround Molding
- ☐ Quick Removable Tailgate with FORD Tailgate Letter Type
- ☐ Argent Styled Steel Wheels with Black Hub Covers
- ☐ Bright Door Handles
- ☐ Bright Door Lock Cylinders

Three optional trim packages, a long optional equipment list, and various convenience groups and packages provide Ranger buyers with numerous alternatives for personalizing the appearance and use of their pickups.

Ranger Optional Equipment, Trim, and Packages

Optional Features

While Ranger's standard interior and exterior packages are complete, those prospects who expect to spend a lot of time in their pickups (especially commercial use buyers) are likely to desire extras for additional comfort and for heavy-duty use as required. Additionally, recreation-use buyers will be looking for packages related to sport and camping use. And personal use buyers will be looking for opportunities to provide their pickups with passenger car-like comforts and conveniences.

In addition to the air-conditioning option (mentioned eariler), Ranger's more popular options are expected to be:

- ☐ Power brakes for reduced pedal effort.
- ☐ A convenience group including dual electric horns, cigarette lighter, interval wipers, day/night mirror and right-hand visor vanity mirror.
- ☐ A light group including head lamps on warning buzzer, passenger door courtesy lamp switch, glove box light, ash tray light and cargo light.
- ☐ Reclining bucket seats which offer sporty look, cloth trim fabric in contoured comfortable design.
- ☐ A trailer towing package (with 2.3 liter engine only) for up to 3,300 pound capacity (6,200 lb. GVWR) including the optional payload package, wiring harness, extra cooling, and heavy duty turn signal flashers.
- ☐ A choice of five audio systems for listening pleasure.

Beyond the specific optional features offered, Ranger is available in four trim levels—the standard base trim, the mid-level XL trim, the top-of-the-line XLT trim, and sporty XLS trim. These packages permit higher levels of interior luxury with exterior tape striping, chrome accents, upholstery and carpet materials and padding.

OPTIONAL EQUIPMENT SUMMARY

- ☐ Air Conditioning
- ☐ 2,700 lb. Traction-Lok Rear Axle
- ☐ Heavy-Duty Battery
- ☐ Power Brakes
- ☐ Chrome Front Bumpers
- ☐ Rear Step Bumper
- ☐ 2.3L I-4 Engine
- ☐ Engine Equipment:
  - Heavy Duty Extra Capacity Air Cleaner
  - Extra Cooling Package
  - Engine Block Heater
- ☐ Special High Altitude Performance Emission Package
- ☐ Auxiliary Fuel Tank
- ☐ Tinted Glass
- ☐ Color-Keyed Cloth, Cut-and-Score Style Headliner
- ☐ Front License Plate Bracket
- ☐ Low-Mount Swing-Away Mirrors
- ☐ Radios/Speakers:
  - AM With Single Speaker
  - AM/FM Monaural With Single Speaker
  - AM/FM Stereo With Dual Speakers
  - AM/FM Stereo And Cassette Tape Player, With Dual Speakers
  - AM/FM Stereo And 8-Track Tape Player, With Dual Speakers
- ☐ Seat Trim With Knit Vinyl Seat And Back Inserts, XLT Sew Style, Color-Keyed
- ☐ Bucket Seats
- ☐ Heavy-Duty Shock Absorbers
- ☐ Power Steering
- ☐ Tilt Steering Wheel
- ☐ Tie-Down Hooks
- ☐ Tires:
  - Multi-Surface
  - Raised White Letter
  - White Sidewall
- ☐ Automatic Transmission
- ☐ Deluxe Wheel Trim
- ☐ Wheels—14″ × 6.0″ Styled Steel Or Cast Aluminum
- ☐ Windows:
  - Door Vent Windows
  - Sliding Rear Window

OPTIONAL TRIM

XL TRIM

Interior

- ☐ Vinyl Contoured Bench Seat
- ☐ Dome Lamp with Driver's and Passenger Door Courtesy Lamp Switch
- ☐ Color-keyed Seat Belts with Tension Eliminator
- ☐ Full-length Color-keyed Floor Mat
- ☐ Cigarette Lighter
- ☐ Bright "XL" Plaque and Woodgrain Accent on Instrument Panel
- ☐ 10" Day/Night Mirror
- ☐ Color-keyed Cloth Headliner
- ☐ LH and RH Aluminum Scuff Plates
- ☐ Color-keyed B-pillar Trim and Rear Window Garrison Panels and Moldings

Exterior

- ☐ Chrome Front Bumper
- ☐ Chrome Grille and Grille Surround
- ☐ Bright Wheel-lip Moldings
- ☐ Bright Rear Window Moldings
- ☐ "XL" Plaque on Front Fenders Below "Ranger" Emblem
- ☐ Argent-styled Steel Wheels with Black-out Paint Treatment and Bright Trim Rings
- ☐ Hub Covers with Red/Silver Applique and Bright Lug Nuts

XLT TRIM

Interior

- ☐ Color-keyed Vinyl Map Pocket with Carpet Insert
- ☐ 14-ounce Color-keyed Cut Pile Carpeting
- ☐ Color-keyed Vinyl Seat Covering with Cloth Inserts
- ☐ Black Four-spoke Steering Wheel
- ☐ Bright "XLT" Plaque on Instrument Panel
- ☐ Adjustable Vent Window
- ☐ Door Trim Panel includes Soft Upper Wrap-over, Block Insert. and Bright Accents

Exterior

- ☐ Chrome Front Bumper with Black Rubber End Caps
- ☐ Full-length Lower Bodyside Moldings—Black with Bright Upper Accent
- ☐ Brushed Aluminum Tailgate Applique including Bright F-O-R-D Letters Outlined in Black in Lower RH Corner
- ☐ Dual Pinstripe Paint
- ☐ "XLT" Plaque on Front Fenders Below "Ranger" Emblem

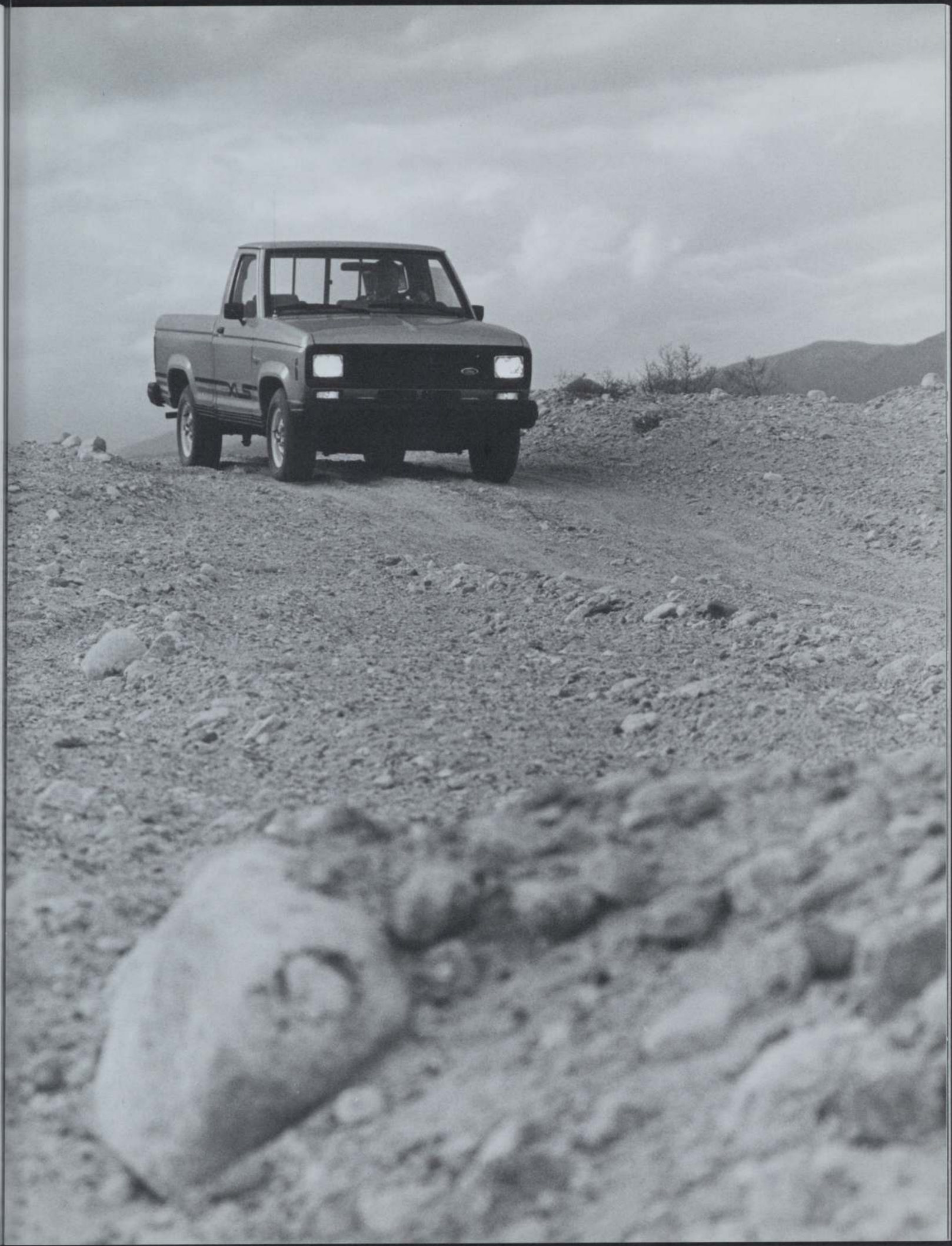
XLS TRIM

Interior

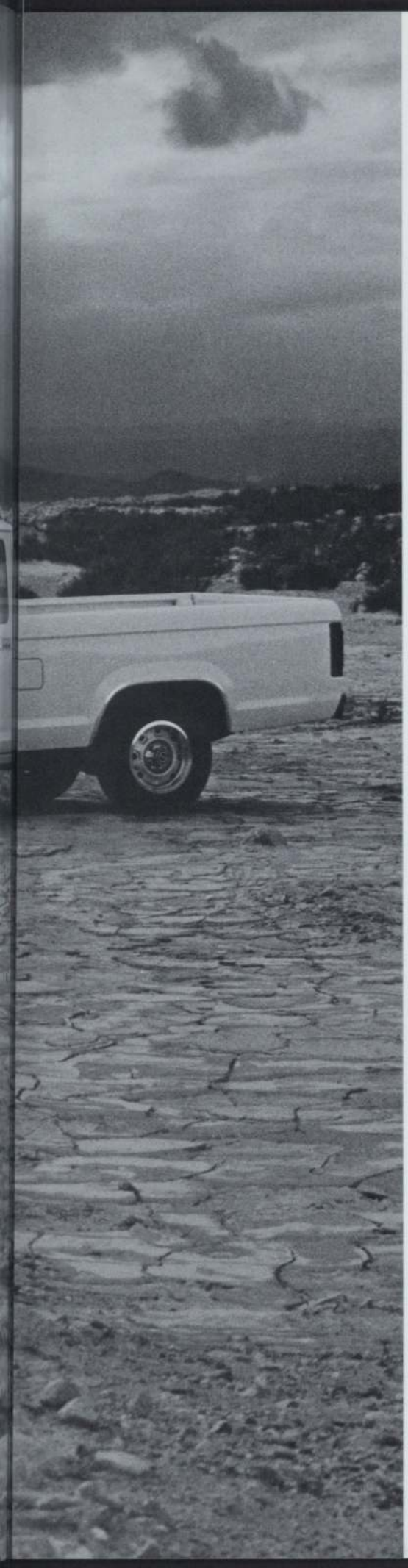
- ☐ Color-keyed Carpeted Back Panel
- ☐ 14-ounce Color-keyed Cut Pile Carpeting
- ☐ Gauge Package, including: Ammeter, Oil Pressure and Temperature Guages, as well as Trip Odometer
- ☐ Color-keyed Cloth Headliner
- ☐ LH and RH Aluminum Scuff Plates
- ☐ Contoured Cloth and Vinyl Reclining Bucket Seats
- ☐ Seat Belts with Unique Belt Webbing
- ☐ Vinyl Wrap Four-spoke Steering Wheel—Black
- ☐ Bright "XLS" Plaque on Instrument Panel

Exterior

- ☐ Black Front Contour Bumper and Black Rear Step Bumper with Black Rubber End Caps
- ☐ Black LH and RH Door Lock Cylinders
- ☐ Black Grille Insert and Surround Molding
- ☐ Black Headlamp Door Surround
- ☐ Cargo Lamp
- ☐ Black Door Handles and Tailgate Handle
- ☐ Black Lower Rocker Panel Moldings
- ☐ Black Windshield Surround Molding
- ☐ Two-color Rocker Panel Tape Strips with "XLS" graphics
- ☐ Argent Styled Steel Wheels with Black-out Paint Treatment and Bright Trim Rings (Black Hub Covers) with Red/Silver Applique and Bright Lug Nuts


XLS

OPTIONAL PACKAGES



Camper Package

- ☐ Front and rear stabilizer bars
- ☐ Heavy-duty shock absorber
- ☐ 1600 lb. payload package
- ☐ Heavy-duty front springs
- ☐ P205/75R14XL BSW highway tires

Convenience Group

- ☐ Cigarette lighter*
- ☐ Day/night mirror*
- ☐ Dual electric horns
- ☐ Interval windshield wipers
- ☐ Visor vanity mirror (passenger side)

*Standard and XLS Trims only

Gauge Package

- ☐ Ammeter
- ☐ Oil pressure guage
- ☐ Temperature guage
- ☐ Trip odometer

Light Group

- ☐ Ashtray light
- ☐ Cargo box light
- ☐ Courtesy light switch on passenger door (Standard & XLS trims only)
- ☐ Glove box light
- ☐ Headlights-on warning buzzer

Security Lock Group

- ☐ Glove box lock
- ☐ Locking gas cap(s)
- ☐ Underbody spare tire carrier lock

Exterior Protection Group

- ☐ Chrome Front Bumper
- ☐ Black Bumper Guards and End Caps (front only)
- ☐ Black Upper Bodyside Molding (includes two red accent stripes)—deleted with all Tu-tone Paint Options
- ☐ Bright Door Edge Guards

Light-Duty Trailer Towing Package

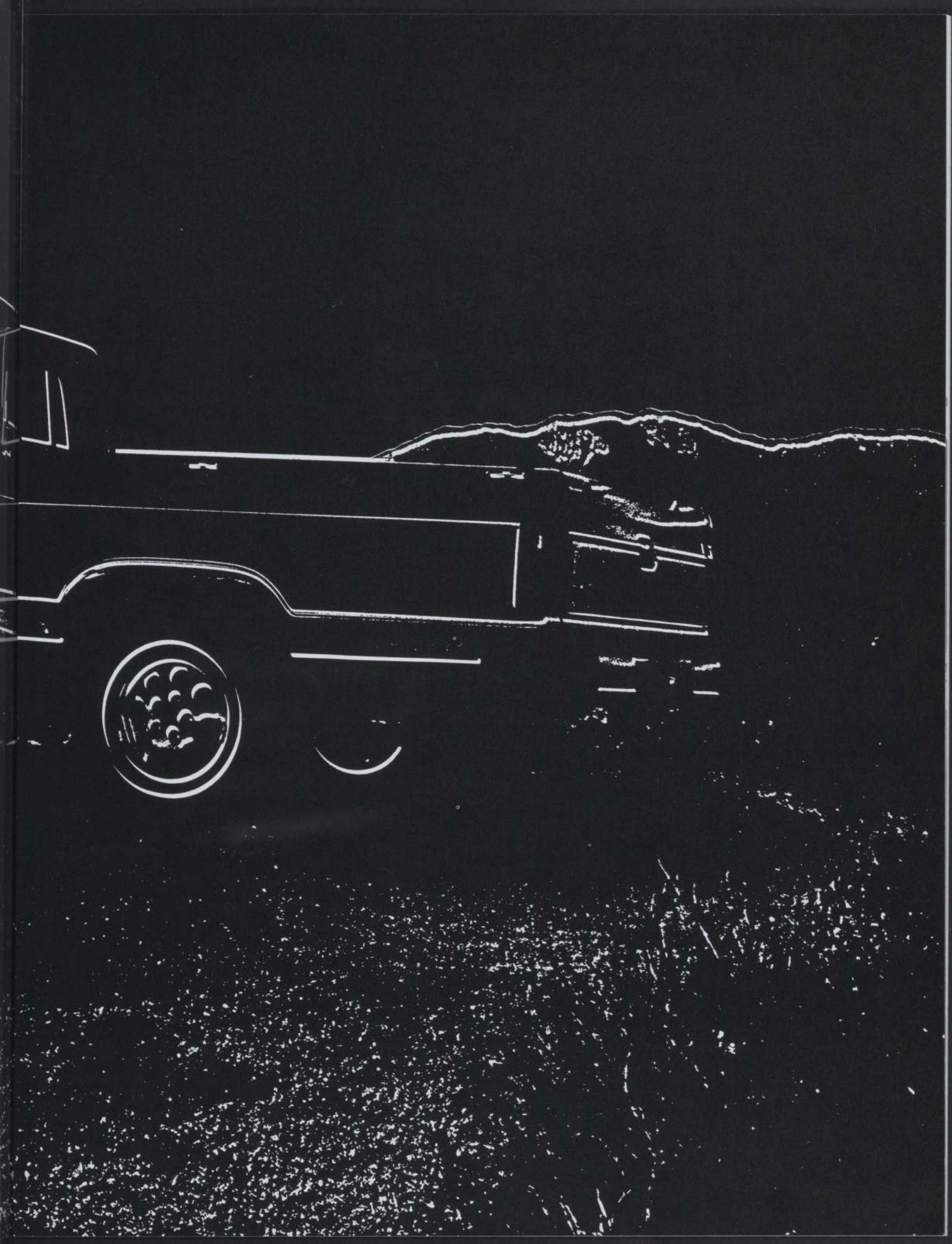
- ☐ 1600 lb. Payload Package
- ☐ Extra Engine Cooling
- ☐ Wiring Harness
- ☐ Heavy-duty Turn Signal Flasher

Summary

As more and more pickup buyers turn to compact-size trucks for increased package efficiency and fuel economy, not only will they look for standard pickup features, but also for comfort and convenience features similar to those available in passenger cars. Comfortable seats, driving enjoyment, low NVH and car-like standard and optional features make Ranger the logical choice.

- ☐ With its Twin-I-Beam front suspension, computerized spring selection and Flex-o-later seat design, Ranger has a comfortable ride.
- ☐ With its front disc brakes, computer optimized suspension and high torque output at low RPM, Ranger is fun to drive and can deliver truck performance.
- ☐ With advanced climate controls, four trim levels, and a long list of standard and optional features, Ranger provides passenger car comforts and conveniences.

CHAPTER V



'83 Ranger vs. the Competition

When a prospect enters the showroom, all of the information you know about the market, the details you've learned about the product, and the ideas you have about prospect profiles and motivations serve as the basis from which your sales effort begins. While one prospect that you greet may be interested in a particular model of the Ranger with specific features and options important to him, these features may not be as important to the next prospect you face. Some prospects you face will be trading down from a full-size Ford pickup. Others may be also shopping a Chevy, Dodge, Datsun or Toyota pickup.

When you qualify prospects, you must have at your fingertips both Ranger and competitive product knowledge so that you can sell Ranger against the competition. Although a prospect may have a specific use in mind for his pickup, you must qualify him for uses beyond personal, business, or combination. His first answer may indicate a primary use, but not necessarily the most important indicator of his truck needs. Thus, you must dig deeper to get this information.

Perhaps what is most important in selling any truck—pickup, medium size or heavy duty—are the uses and applications to which these trucks will be put. IF YOU SELL HEAVY TRUCKS, THERE IS NO QUESTION THAT YOU NEED TO UNDERSTAND THE IMPORTANCE OF APPLICATIONS SELLING. For example, selling a heavy truck carrying large heavy loads of steel is quite different from selling a truck carrying bulky but light-weight styrofoam insulation. Selling a truck for short haul operations is quite different from selling a truck that will be used intensively for cross-country hauling. While compact pickups obviously would not be expected to get such extreme usage, the concept of applications selling still applies. Therefore, it is important, above all, that you determine the types of business uses that the Ranger will be put to—whether commercial or farm, heavy-duty or light-duty, intensive driving or infrequent driving, and so forth.

It is equally important to understand personal and recreational uses. Is it for recreational purposes? Will it use a shell or cover? And for personal use, how frequently will it be driven empty? With loads? How heavy will those loads be? Over what type of road surfaces and with what frequency? It is these types of questions that will enable you to present the Ranger in the right way to each particular prospect that you face.

This section of the manual covers Ranger's competition, including a brief review of some sales approaches that might be effective with the competitive shopper, and some guidelines for applications selling.

Applications Selling

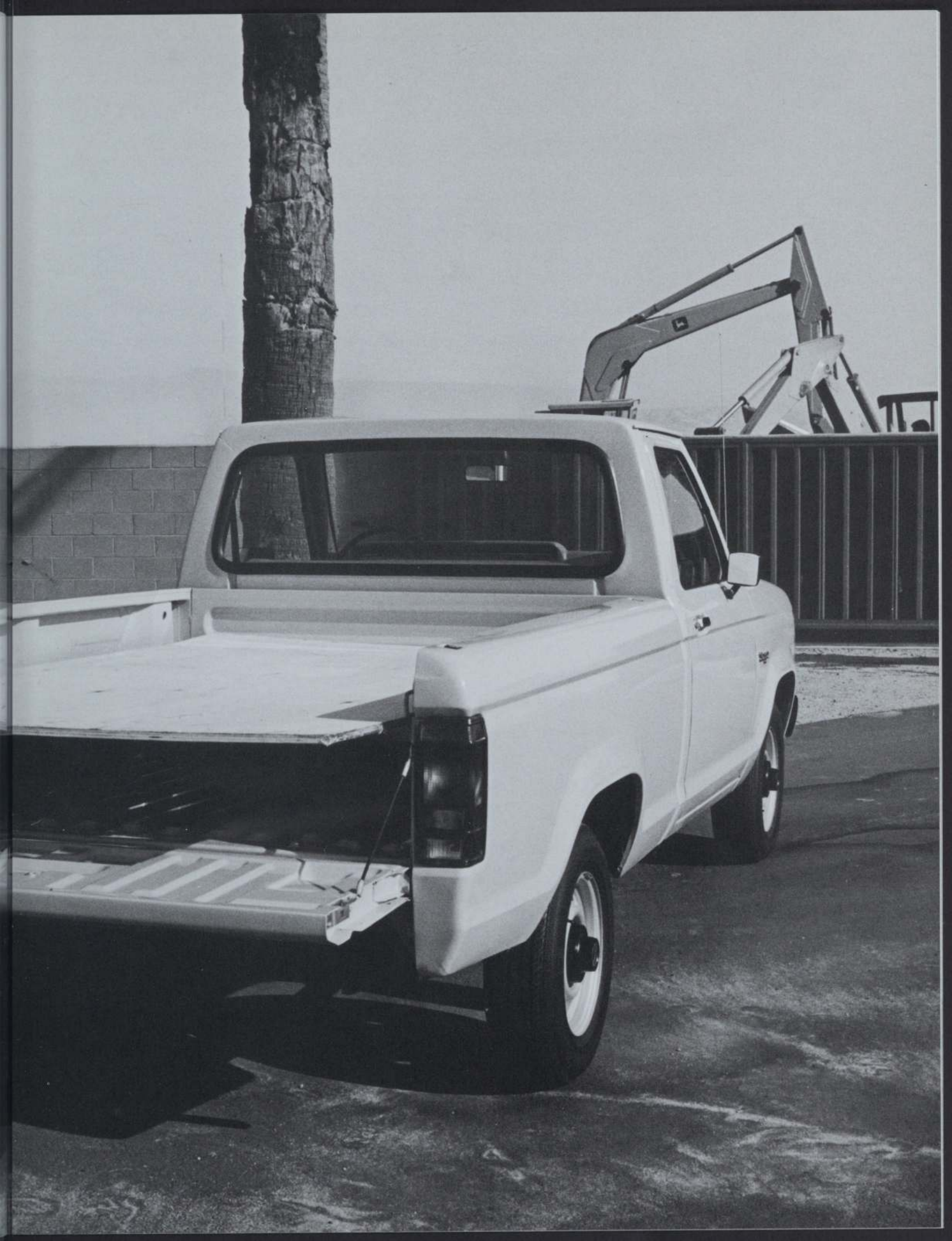
As with other Ford pickups, Ford salespeople will need to consider an applications selling approach—selling Ranger features based on specific benefits derived in prospective applications.

If you're actively prospecting for truck buyers, you're probably already using an applications approach to finding and targeting groups of prospects with similar truck needs. In selling the truck, applications are equally important. The gist of applications selling is simply to qualify for business usage up front, and then present the vehicle accordingly.

To be thorough, the qualification process may require asking general questions, and then more specific follow-up questions. You may start out with questions such as, "Will it be registered in a company name?" or, "What, exactly, does the company do?" Then you'll need to get more specific. These follow-up questions will depend on your prospect's answers to the more general questions. Typical lines of questioning would include the following:

- ☐ *If used in a commercial operation,* is it city only? Driving between city and suburbs? Travelling interstate on short hauls? Between cities or for longer haul use; e.g., out-of-state runs? If used in a commercial operation, what type of load will it haul? How bulky? How heavy? What shape? How frequently will it be used and over what kind of roads?
- ☐ *If used by a skilled tradesman,* such as a plumber, electrician, or by a contractor, what size loads will it carry? Will a shell cover be used? What kind of adaptations are necessary? Will it be used to carry plywood? What special technical features is this category of prospect interested in?
- ☐ *If used for recreational purposes,* determine the type. Will a trailer be used? What will it be hauling? Will a camper be used? What other shell might be added? What other recreational applications is the buyer considering?
- ☐ *If used heavily for personal driving purposes,* determine if primary usage is commuting and if any hauling will be done with it at all. If it is a commuter pickup, obviously economical attributes and comfort features will be emphasized as opposed to the tough truck features you will emphasize in commercial applications.

By looking at these and other applications, you can select those features that appeal to each particular buyer—whether tough truck-type features, economy compact-type features, or passenger car comfort and riding features. Ranger has them all.



In terms of interior and exterior dimensions, capacity, pickup box characteristics, and standard features, Ranger is closer to a standard truck than the leading imports.

Ranger vs. Leading Imports

Dimensions & Payload Capacity

	1983 FORD RANGER	1982 TOYOTA HALF-TON	1982 DATSUN LI'L HUSTLER	MEMO: 1982 F-100
Exterior Dimensions				
Wheelbase (SWB/LWB-in.)	107.9/113.9	101.8/110.2	101.4/110.8[2]	116.8/133.0
Overall Length (in.)	175.6/187.6	171.1/186.2	169.3/187.0[2]	192.1/208.3
Overall Width (in.)	66.9	63.4	63.4	77.2
Overall Height (in.)	64.0	60.8	61.2	69.3
Interior Dimensions				
Head Room (in.)	39.2	38.0	37.7*	40.4
Shoulder Room (in.)	55.6	54.1	53.2*	64.2
Hip Room (in.)	55.0	54.1	N/A	61.7
Leg Room	42.4	40.4	37.6*	41.0
Pickup Box Dimensions				
Inside Length (SWB/LWB-in.)	73.0/85.0	72.2/87.4	73.4/88.8[2]	82.0/98.2
Maximum Width at Floor (in.)	54.3	61.8	56.9	70.0
Wheelhouse Spacing (in.)	40.4	40.0	N/A	50.8
Depth (in.)	16.5	15.9	15.6	19.5
Payload Ratings				
Standard GVWR & Payload (lbs.)	3740/1210	4250/1400	3860/1400[2]	4650/1465
Max. Opt. GVWR & Payload (lbs.)	4200/1620	(4650/1950)[1]	(NA/1800)[2]	4900/1630
Trailer Towing Cap.(lbs.)	3300	2000	2000	5000

[1] ¾ Ton Model only.
[2] Heavy Duty Long Bed Model only (not Li'l Hustler).
*Taken from Roominess Affadavit—(Based on Dimensional Analysis of 1980 Datsun regular cab—assumed carry over for 1982)

Selected Standard & Optional Features

	RANGER	TOYOTA	LI'L HUSTLER	MEMO: F-100
Work-Truck Features				
Double Wall Cargo Box	Std.	N.A.	N.A.	Std.
Stake Pockets	Std.	N.A.	N.A.	Std.
Tie-Down Hooks	Opt.	Std.	Std.	N.A.
Twin-I-Beam Suspension	Std.	N.A.	N.A.	Std.
4 × 8 Material Support	Std.	N.A.	N.A.	Std.
Quick-Release Tailgate	Std.	N.A.	N.A.	Std.
Power Brakes	Opt.	Std.	Std.	Std.
Radial Tires	Std.	N.A.	N.A.	Std.
Maintenance-Free Battery	Std.	N.A.	Std.	Std.
3-passenger Seating	Std.	N.A.	N.A.	Std.
Vent Windows	Opt.	N.A.	N.A.	Std.
Engine Block Heater	Opt.	N.A.	Opt.	Opt.

The charts provided in this segment will help you develop a sales presentation for selling Ranger over leading import makes—Toyota and Datsun. Regardless of how your prospects intend to use their truck—commercial, recreational, or personal use—Ranger has distinct design and feature advantages. Ranger's greatest advantages are practical ones— ride comfort, ruggedness, and work-use features. As a point of reference, a standard pickup—Ford F-100—is included in a "MEMO" column in each of the charts.

As you can see, Ranger is larger than the leading imports in all key exterior and interior dimensions listed. In fact, a long wheelbase Ranger is only 4.5 inches shorter (in overall length) than a short wheelbase F-100. This helps to smooth out the ride.

While Datsun and Toyota offer pickups with more than 1,500 lb. capacity, they are only available in long wheelbase versions and carry different model designations than the standard compacts the Japanese manufacturers offer. Ranger offers optional higher payload packages for both SWB and LWB standard Ranger models.

While the leading import trucks lure prospects with car-like features, such as power-assisted brakes, as standard equipment, Ranger offers more in traditional work-truck features. In particular, double-wall construction, stake pockets, and 4 × 8 material supports are plusses for Ranger.

Additionally, while the import trucks have typically had weaknesses in the area of ride, Ranger's computer-optimized suspension with Twin-I-Beam front configuration delivers a comfortable ride, with or without a load in the pickup box.

Another point that is particularly important to current import compact owners or shoppers relates to trailer towing capability. Ranger's trailer towing capacity of 3,300 lbs. is more than 60% greater than either Toyota or Datsun. This can be a strong Ranger selling point because of the high percentage of compact owners that use their truck for towing.

In terms of "work-truck" and functional features, Ranger is more like a full size Ford truck than passenger car-based compact pickups like Dodge Rampage. In fact, its only serious competitor on an all-around basis is Chevrolet's S-10. However, on a point-for-point basis, Ranger has distinct advantages over Chevy as well.

Ranger vs. Domestics

While S-10 and Ranger are comparable in most dimensions, it's worth noting that inside the cab Ranger offers seating for three, with nearly two more inches of shoulder room and 4.5 more inches of hip room than S-10. Rampage, available in only one length, cannot compete with long wheelbase models of S-10 and Ranger. One interesting comparison is that Ranger is fully 12.2 inches taller than Rampage, resulting in its standard truck-like appearance and seating height above the road.

While Chevy's new S-10 is a direct competitor of Ranger, other passenger car-derived compacts, such as Dodge Rampage, have sport truck appeal but do not qualify in the Ranger's league in terms of work-truck or traditional truck characteristics and versatility.

It is especially important that Ford salespeople know Chevy S-10's strengths and weaknesses relative to Ranger. S-10's optional 6 cylinder engine may appeal to prospects looking for extra power. However, it's important to point out to comparison shoppers that S-10's V-6, (which with required options costs several hundred dollars extra), only has a maximum payload capacity of 5 lbs. greater than Ranger. Ranger's 2.3 liter I-4 effectively can handle the same job that the S-10 requires a 6 cylinder engine for.

It's also important to note that Ranger beats S-10 in standard payload capacity by more than 200 lbs. with both long and short wheelbase models. Ranger has advantages in standard pickup box characteristics and certain options as well as payload capacity. The welded pickup box is free of bolts and metal joints; pickup box size provides needed payload space.

Ranger also provides standard load retaining features which are not available on S-10 or Rampage at any price. These features will be especially important to those prospects who are downsizing from standard pickups. With rope holes, stake pockets and platform pockets, many downsizing buyers will find it possible to carry the same difficult loads they had carried previously. Without these features, the bed area is far less useful. Many available comfort and convenience options allow individualizing Ranger but are not offered on S-10 or Rampage.

Finally, be sure to point out to prospects the importance of Ranger being a 1983 model in terms of resale value. In March of 1983, a one year old Ranger could be worth as much as $500 more than an S-10 purchased at the same time.

Standard & Optional Features

	1983 FORD RANGER	1982 CHEVY S-10	1982 DODGE RAMPAGE
Pickup Box Features			
Rope Holes	Std.	Std.	N.A.
Stake Pockets	Std.	Std.	N.A.
Platform Pockets (For 4 × 8 Supports)	Std.	N.A.	N.A.
Comfort and Convenience Features			
Vent Windows	Opt.	N.A.	N.A.
Engine Block Heater	Opt.	N.A.	Opt.
Western Mirrors	Opt.	N.A.[1]	N.A.
Reclining Bucket Seats	Opt.	N.A.	N.A.
Twin-I-Beam Front Suspension	Std.	N.A.	N.A.

[1]Below eyeline 9″ × 6½″ mirrors are optional.

Interior & Exterior Dimensions

	1983 FORD RANGER (LWB)	1982 CHEVY S-10 (LWB)	1982[1] DODGE RAMPAGE
Exterior Dimensions			
Overall Length (in.)	187.6	194.1	183.6
Overall Width (in.)	66.9	64.7	66.8
Wheelbase (in.)	113.9	117.9	104.2
Overall Height (in.)	64.0	59.4	51.8
Interior Dimensions			
Head Room (in.)	39.2	39.5	37.5
Hip Room (in.)	55.0	50.5	52.6
Leg Room (in.)	42.4	42.5	42.5
Shoulder room	55.6	53.9	52.2
Pickup Box Dimensions			
Construction	All Welded	Bolted[2]	Unibody
Length (SWB) (in.)	73.0	73.1	64.0
(LWB) (in.)	85.0	89.0	N.A.
Width (Above Wheelhouse) (in.)	54.3	59.1	52.8
(Between Wheelhouse) (in.)	40.4	40.3	39.5
Depth (in.)	16.5	16.0	15.7
Payload Ratings			
SWB (Min./Max.) Payload	1210/1620 lbs	1000/1625 lbs	1145 only
LWB (Min./Max.) Payload	1200/1605 lbs	1000/1625 lbs	N.A.

[1]One wheelbase length only.

[2]Steel floor, welded double wall construction.

1983 RANGER SPECIFICATIONS

BODY

Frame	Ladder-type, 7 Cross-members
Layout	Front engine, rear-wheel drive
Construction	Double-wall roof, hood, doors, pickup box sides, tailgate

POWERTRAIN

Engines	**Standard**	**Optional**
Displacement (liters)	2.0	2.3
Bore (inches)	3.52	3.78
Stroke (inches)	3.126	3.126
Compression Ratio (to 1)	9.1	9.0
Main Bearings	5	5
Valve Adjustment (lash)	Automatic	Automatic
Carburetor	1V	1V
Horsepower @ RPM	73 @ 4000	82 @ 4200
Torque (lb-ft) @ RPM	107 @ 2400	126 @ 2200
Fuel	Unleaded	Unleaded
Ignition	Electronic	Electronic
Transmissions	4-speed manual	3-speed automatic (2.3 liter only)

Axle Ratios	**Manual**	**Automatic**
2.0 liter	3.08	N/A
2.3 liter	3.45	3.45

SUSPENSION

Front

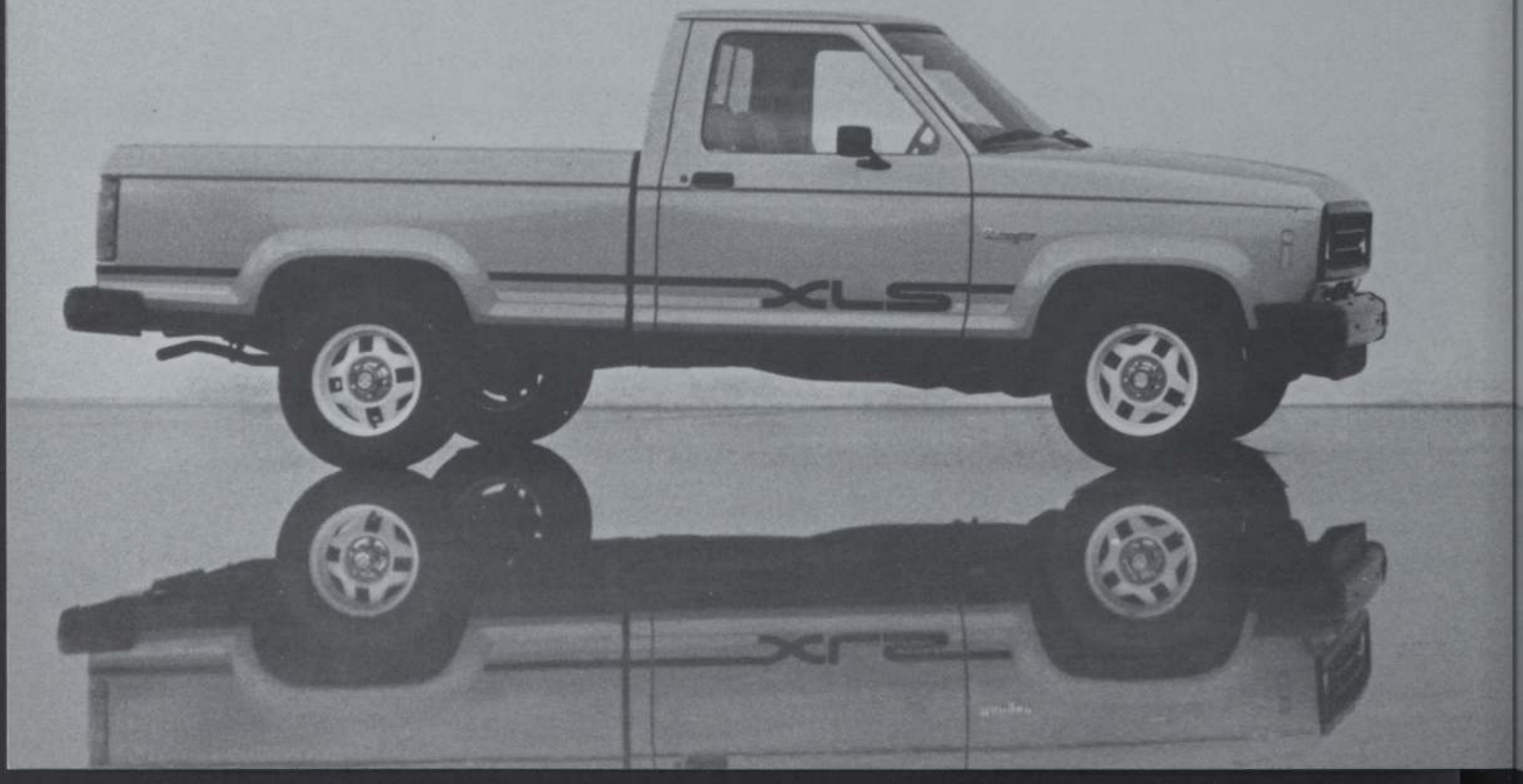
Axle—Type	Twin-I-Beam IFS, Stamped Axles
—Capacity	2200 lbs.
Springs—Type	Coil, Computer selected
—Rating	1851 lbs. @ Ground combined (min.)
Shock absorbers	1″ diameter

Rear

Axle—Type	Semi-floating, Ford
—Capacity	2200 lbs.
—Ratio	3.45:1 (3.08:1–Calif.)
Springs—Type	Leaf, single-stage, constant rate
—Rating	2012 lbs. @ Ground combined (min.)
Shock Absorbers	Staggered mount, 1″ diameter

BRAKES & STEERING

Front Disc Brakes—Size	10.27″ diameter
—Type	Single piston, floating caliper
Rear Drum Brakes—Size	9″ x 1¾″
—Type	Self-adjusting
Parking Brake (rear brakes)	Foot operated, handle release
Steering—Type	Manual, recirculating ball
—Ratio	23.75:1
—Turning Diameter	36.5 feet (SWB) 38.2 feet (LWB)



LOAD CARRYING CAPABILITIES

	Short WB	Long WB
Standard GVWR (lbs.)	3,740	3,760
Maximum Optional GVWR (lbs.)	4,200	4,220
Standard Payload (lbs.)	1,210	1,200
Maximum Optional Payload (lbs.)	1,620	1,605
Trailer Towing Rating	3,300	3,300
Cargo Box:		
Floor length (in.)	73.0	85.0
Floor width (in.)	54.3	54.3
Width between wheel-housings (in.)	40.4	40.4
Height of sides (in.)	16.5	16.5
Tailgate opening (in.)	54.2	54.2
Cargo volume (cu. ft.)—		
6-foot box	37.4	—
7-foot box	—	43.5

ELECTRICAL

Alternator Rating	40 amperes, 600 watts
Battery—type	Maintenance-free
—ampere-hours	45
—cold crank amps.	380

DIMENSIONS

	Short WB	Long WB
Wheelbase	107.9″	113.9″
Length	175.6″	187.6″
Height	64.0″	64.0″
Width	66.9″	66.9″
Tread: Front	55.0″	55.0″
Rear	54.6″	54.6″
Interior: Head Room	39.2″	39.2″
Hip Room	55.0″	55.0″
Leg Room	42.4″	42.4″
Shoulder Room	55.6″	55.6″
Curb Weight	2,526 lbs.	2,559 lbs.
Fuel Tank Capacity:		
Standard	15.2 gals.	15.2* gals.
Auxiliary	13.0 gals.	13.0 gals.

*17 gal. on LWB Model w/auto. trans. or aux. tank.

WHEELS & TIRES

Wheels—Type & Number	5-hole disc. five.
—Size	14″ × 5.0″ JJ
Road Tires (4)—Type	Tubeless Glass-belted radial ply BSW
—Size	P185/75R-14SL
Spare Tire—Type	Limited Service Bias Belted BSW
—Size	P185/80D-14
Spare Carrier Location	Underframe, at rear (in-box w/aux. tank)

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