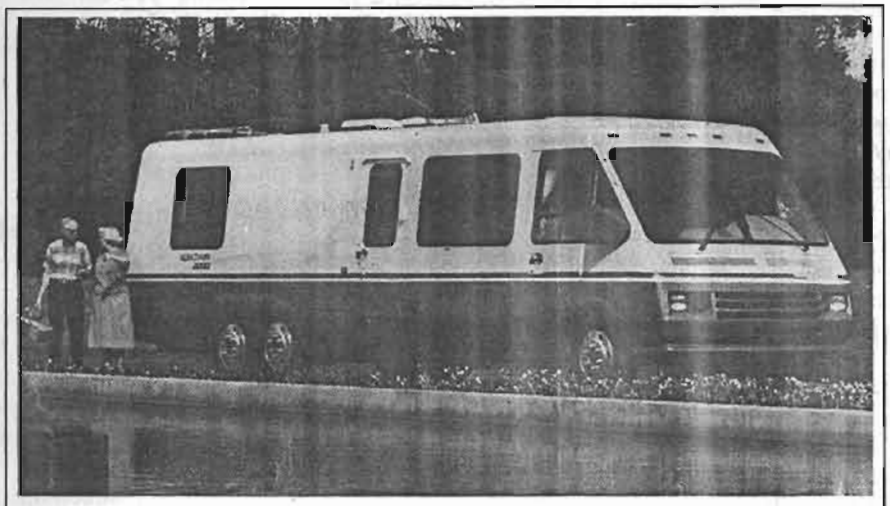
Winnebago Unveils L-Body Spectrum 2000 Motorhome



Winnebago's Spectrum 2000 features distinctive styling.

In mid-May Winnebago Industries introduced its Spectrum 2000 motorhome to a select group of dealers at its Forest City, Iowa, headquarters. The new rear-engine coach is unique in that it is based on a chassis designed and built by Winnebago Industries.

The coach represents a significant step in Winnebago's quest to achieve design and manufacturing independence. The process began in 1980 with the introduction of the Warrior X-body chassis, for which Winnebago supplied 70 percent of the nonchassis products. This was followed by the debut of the Phasar and LeSharo H-body chassis. Now, with the introduction of the L-body chassis of the Spectrum 2000, Winnebago has taken another stride toward vertical integration, and has produced what Gerald Gilbert, Winnebago president and chief executive officer, described as Winnebago's "most advanced product."

The new 32-foot coach is also unique in that it features a number of innovations in motorhome design. For instance, the motorhome includes a ducted central air-conditioning system, an electronic power-management system, and design features that contribute to stability and handling, among other components and systems designed expressly for this vehicle.

The all-steel Winnebago chassis was designed so as to allow the incorporation of innovations and features not found on other chassis. Winnebago design engineers weren't hampered by the constraints that are imposed when building a coach around an existing chassis.

"We began developing the Spectrum 2000 more than three years ago. The many systems, and the entire motorhome, have all undergone extensive development to achieve maximum comfort and convenience," said Richard Carlson, Winnebago's vice president of engineering.

The Spectrum 2000 stands 8 feet 10¾ inches high, and the floor is only 22 inches from the ground, thus eliminating the need for an electric entrance step. The Winnebago chassis has a gross vehicle weight rating of 15,000 pounds and a 234.5-inch wheelbase. According to Winnebago officials, the coach features a drag coefficient of .309, which is similar to that of expensive sports cars. A lower profile and a lower center of gravity, together with a 79.8-inch driving track, are said to provide stability and turning ease.

"The superior ride and handling of the Spectrum 2000 are the result of the lower floor height, wider track, special suspension system, and improved aerodynamics. The lower profile was achieved by mounting the fuel, water, and holding tanks between the frame rails of the chassis, combined with the unique axle and suspension design," Carlson explained.

According to Winnebago's executive vice president, Dick Berreth, the development of the Spectrum 2000 was a "team effort." Winnebago worked closely with a number of key suppliers, engaging in research and design partnerships throughout the project.

The Spectrum 2000 is powered by a Ford 460-cid V-8 engine that is located in the rear of the coach and is coupled with a three-speed automatic Ford C-6 transmission. An engine-driven cooling fan and a cross-flow radiator with two thermostatically controlled electric fans cool the engine. The transmission is cooled by a special heat-exchanger system.

The final drive assembly, which mates between the transmission and the drive axles, was developed in conjunction with ZF of West Germany. The differential attaches directly to the transmission, transmitting power to the rear drive wheel, thus eliminating the need for a drive shaft and U-joints. ZF supplies transmission and drivetrain components for Porshe, BMW, Ford, and GM, in both truck and auto applications.

The fully independent front suspension system was originally developed for use as a truck suspension for vehicles driven on African roads. It has a track width of 79.8 inches, which, according to Winnebago officials, is 13 inches wider than the standard Chevy chassis today and contributes to handling, stability, and driver feel.

The coach also features an independent, heavy-duty torsional rubber suspension system for the dual rear axles that was developed in conjunction with B.F. Goodrich Company. In creating this system, Goodrich adapt-

ed technology originally developed for over-the-road carriers. The coach's rear suspension features both a drive axle and a tag axle. The tag axle would more accurately be called an "intermediate" axle, as it is mounted in front of the drive axle.

The aforementioned computerized electrical load management system was developed in cooperation with Uniforce Electronics of North Little Rock, Arkansas. The system monitors power consumed by the air-conditioning system, water heater, appliances, and other electrical devices. The two air-conditioning compressors and the electric water heater — the major electrical loads — are controlled by the computer and can be cycled on and off as necessary to prevent circuit overload and to allow continuous use of other appliances.

The central air-conditioning system was developed in conjunction with ARA Manufacturing of Grand Prairie, Texas. The system forces cooled air through a duct in the ceiling that runs along the entire length of the coach. The central air system eliminates the need for roof air-conditioning units and more evenly distributes cool air throughout the coach.

A special 5-kw generator was designed specifically for the Spectrum 2000 by Kohler Co. The gen set is located under the front hood to minimize the noise in the sleeping area of the coach.

Atwood Mobile Products developed a quick-recovery 10-gallon water heater for use in the coach. The water heater incorporates added insulation for longer heat retention.

The coach also features a full spectrum of interior amenities, including an unusual, roomy bath area. A hall door swings out from the shower/tub and toilet compartment to form a wall between the bathroom and galley, and a divider door separates the bathroom from the bedroom. This setup is said to increase floor space in the bath area when it is in use and to still provide plenty of walking space and easy access to the bed room.

According to company officials, the testing program involving the Spectrum 2000 has been more extensive than any ever undertaken by Winnebago Industries. The coach was driven through a 10,000-mile accelerated durability run at the Transportation Research Center of Ohio, an independent research facility. A prototype of the Spectrum 2000 was tested under extreme heat conditions in California's Death Valley. Ambient temperatures during the test ranged from 110 to 120 degrees Fahrenheit. Tests involving the engine cooling package and drivetrain cooling were conducted. The test course was a 17-mile public road that had an average grade of 7 percent, according to company officials. The engine and transmission cooling systems were later subjected to tests in a wind tunnel at Modine Manufacturing in Racine, Wisconsin.

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Conditions in the wind tunnel were designed to simulate those encountered in Death Valley. The coach and individual components were subjected to a battery of other tests throughout the project.

The Spectrum 2000 carries a suggested retail price of $92,367. Initially, the coach will be distributed by a network of no more than 25 dealers in what Winnebago officials consider to be "major markets." Winnebago officials consider the coach to be a "traveler's RV," because of its drivability, road performance, and distinctive styling, and they expect that the coach will attract buyers other than the traditional motorhome owner.

The Spectrum 2000 is covered by the standard 12-month/15,000-mile warranty that is extended to other Winnebago coaches. However, upon expiration of that coverage, a warranty that covers key coach components (with a $50 deductible) will take effect for up to three years or 36,000 miles, whichever comes first. In addition, the Ford 460 engine and C-6 transmission are covered by a six-year/60,000-mile warranty ($100 deductible) through the Ford Specialty Vehicle Program.

Further information about the Spectrum 2000 or other Winnebago products is available by writing to Winnebago Industries, P.O. Box 152, Forest City, IA 50436.

— Pamela Wisby Kay