

The Hatchery

Section II

Vehicle Production at the American Motors Corporation

MOST ADVANCED FACILITIES IN INDUSTRY!



Kenosha, Wisconsin Assembly Plant



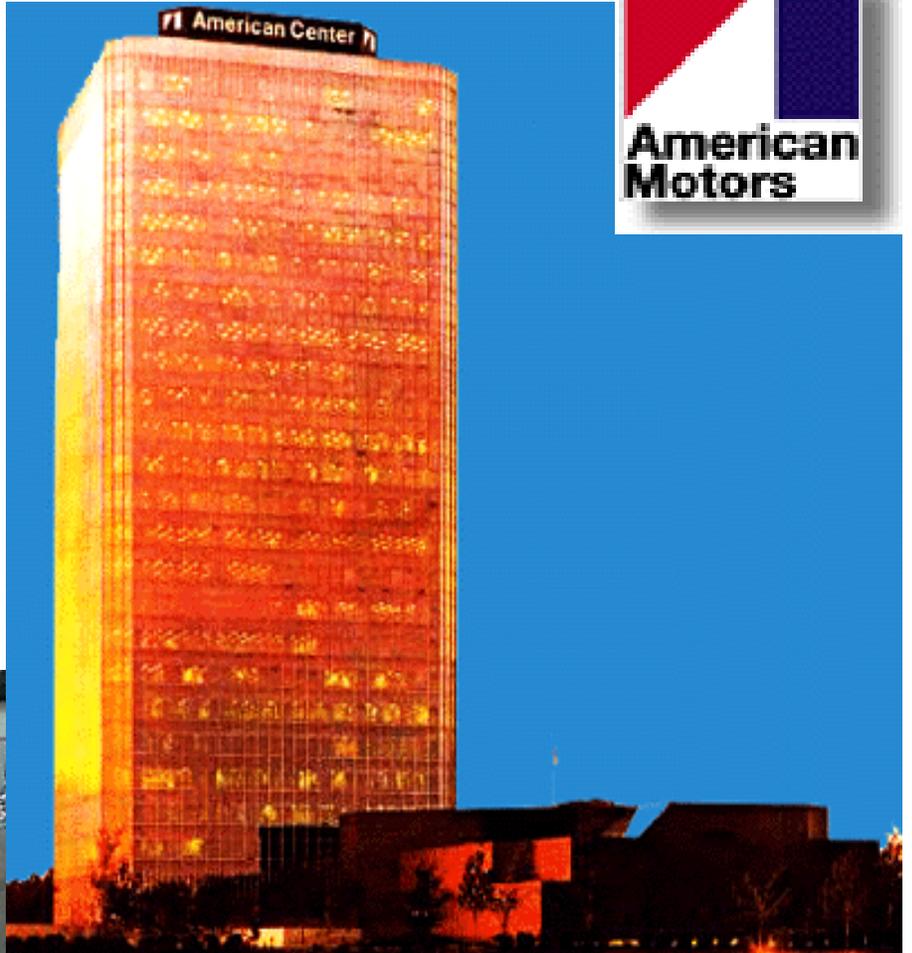
Milwaukee, Wisconsin Body Plant



Milwaukee Parts and Service Bldg.



Special Products Division, Detroit



Was AMC a Real Auto Manufacturer?

By Doug Shepard

Of course it was!

For most of its corporate life AMC was the 4th largest car maker in the US and at times the 4th largest in the world! Yes, AMC was usually a distant 4th, but they were a respectable 4th. For many years AMC sales were limited by production capacity not sales capacity. Even in 1988, the last year for the Eagle, Eagle wagons were being produced at the allocated maximum capacity until the very end. Looking at 1981 corporate documents AMC maintained an unbuilt backlog of around 20,000 AMC car units at any given time -- this backlog did not include Renaults or Jeeps! Yes, AMC was a large, complex auto manufacturer that at times was innovative and scored some major engineering coups along the way -- the AMC Eagle and Jeep Cherokee among the last of their niche filling successes.

So why was the above question postulated? Anyone who has been in the AMC hobby for even a short time has heard from others that all AMC did was assemble cars from other car makers parts. That they did not design or engineer anything of significance on their own. Of course the non-AMC astute almost always include engines into these blanket statements. I think every AMC owner has heard the comment, repeatedly, that engine "X" was built by, take your pick of the Big 3. After educating them about engines, they may state, "Okay, then AMC made their own engines, but they bought some of their major components from other car makers." Sure they did. All car makers were doing that to some extent when AMC was still around (with AMC as the source) and now more so today. Most car makers now utilize the AMC pioneered concept of 'Just in Time' component stocking at final assembly plants. That is, having only on hand what components you project you will need for a given production time frame. For AMC that meant enough components for a week, or enough for a month, seldom longer (allowances were made for delivery interruptions and manufacturing variances).

Additionally, just because a part was found on Brand X did that always mean Brand X built the part? No. Brand X oftentimes bought from the same vendors as AMC. AMC figured why reinvent the wheel when a totally acceptable component was already available without having to spend precious engineering and tooling dollars just to have some widget being a "home grown" widget. Additionally, AMC produced major components for other auto and truck makers, you just don't hear about that much as aficionados of other

brands will be hard pressed to admit that parts on their favorite car or truck came from AMC.

Yes, AMC was for real. Providing jobs and futures for thousands of its own employees and their vendors. AMC had plants that not only made cars but plants that made engines and other components, AMC had a real sky scraper corporate headquarters in Detroit and had subsidiary companies like AM General (military vehicles like the successful HUMVEE, postal vehicles and transit busses), Jeep was an AMC subsidiary and AMC owned numerous smaller companies, including a state-of-the-art plastics company which sold many components to the Big 3; and Wheel Horse lawn and garden tractors.

The following pages will provide a glimpse of AMC the car maker, rather than AMC the car assembler. You will find complexity and bureaucracy, just as is found in any other large corporation along with some of the quiriness AMC was noted for. You will see innovation and obsolescence. But, what I hope you come away with is a new sense of how AMC was indeed for real and not the failed enterprise that many believed it was. Despite the published reasons why the Chrysler Corporation bought AMC (for Jeep) we have learned Chrysler also desired AMC's engineering talent that could think outside of the box with the ability of designing/using components among multiple and diverse model lines and AMC's Just In Time production inventory methods.

So next time someone starts informing you that AMC was some "mom and pop" outfit you now will be armed with enough information to demonstrate otherwise.

The American Motors Commitment.

from the 1980 full line brochure

It's a twofold commitment. To respond to America's needs. And to build automobiles that are built to last.

The commitment began when American Motors the first to build economical small cars. It deepened with the introduction of the Buyer Protection Plan. Another first.

And for 1980, the American Motors commitment continues to grow. With two more firsts: Ziebart Factory Rust Protection and a 5-yr Full No-Rust-Thru Warranty.

It takes confidence to make such a commitment. Confidence that the automobiles American Motors builds are truly built to last.

But then confidence pulses through the entire corporation. And for some very good reasons. For example, with sales of over \$3 billion and assets of over \$1 billion, American Motors is one of America's largest corporations. AMC passenger cars and Jeep vehicles are sold in more than 100 countries. Manufacturing facilities, assembly plants and licensees are located around the world.

A recent agreement with Renault of France adds an important dimension to American Motors' worldwide marketing strength.

It unites the small-car pioneers of America and Europe. It's a venture that promises significant benefits to car buyers far into the future. It also provides American Motors with an additional line of technologically advanced products. Immediately. All with very competitive fuel economy and sophisticated engineering to meet the demands of the 1980's.

Confidence also runs high at American Motors because of its AM General subsidiary. Through AM General, American Motors is one of the world's major producers of tactical trucks, Postal Service delivery vehicles and equipment and people movers.

Other products that figure in the company's growth include Wheel Horse lawn and garden tractors,. And industrial engines and plastic parts used in a wide variety of products.



A Commitment To Quality:

The Specifics

from the 1980 full line brochure

Nobody else builds automobiles quite the way American Motors does. And nobody else goes as far to protect the interests of the people who buy the automobiles.

Take rust for example. American Motors is doing something about it, with a series of steps that extend throughout the manufacturing process.

Every 1980 automobile is dipped above the door line with a corrosion fighting primer.

Every metal surface is covered with an additional coat of primer.

Galvanized steel is used in critical rust prone areas.

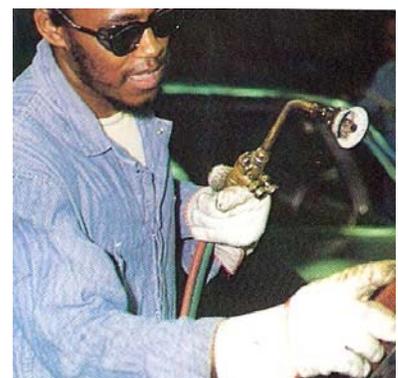
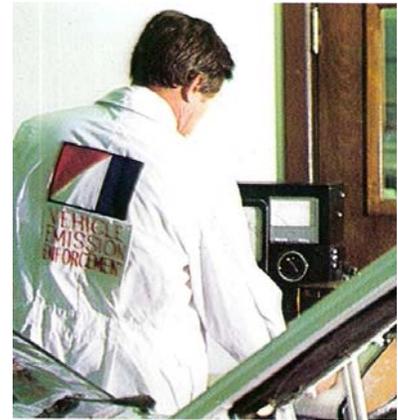
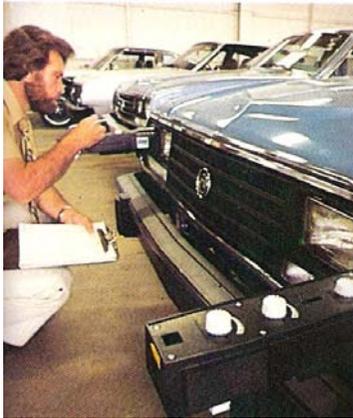
Zinc rich primers are then added to areas where humidity could cause problems. Special sealers and coatings are worked into sensitive areas. Special rust resistant inner liners are installed.

Then come exclusive Ziebart Factory Rust Protection. It's applied in the lower pillar areas, under the doors, on the lower outer door surfaces, lower fenders and in the rear wheel openings.

All of the rust protection is backed by the only 5-Year No Rust Thru Warranty. At no extra cost. There are no mileage restrictions and the warranty is transferable to subsequent owners.

Also at no extra cost: the exclusive AMC Buyer Protection Plan -- with the only full 12-month/12,000 mile warranty offered by any car maker. It's the best warranty in the industry because it covers every part of every new AMC automobile even if it wears out.

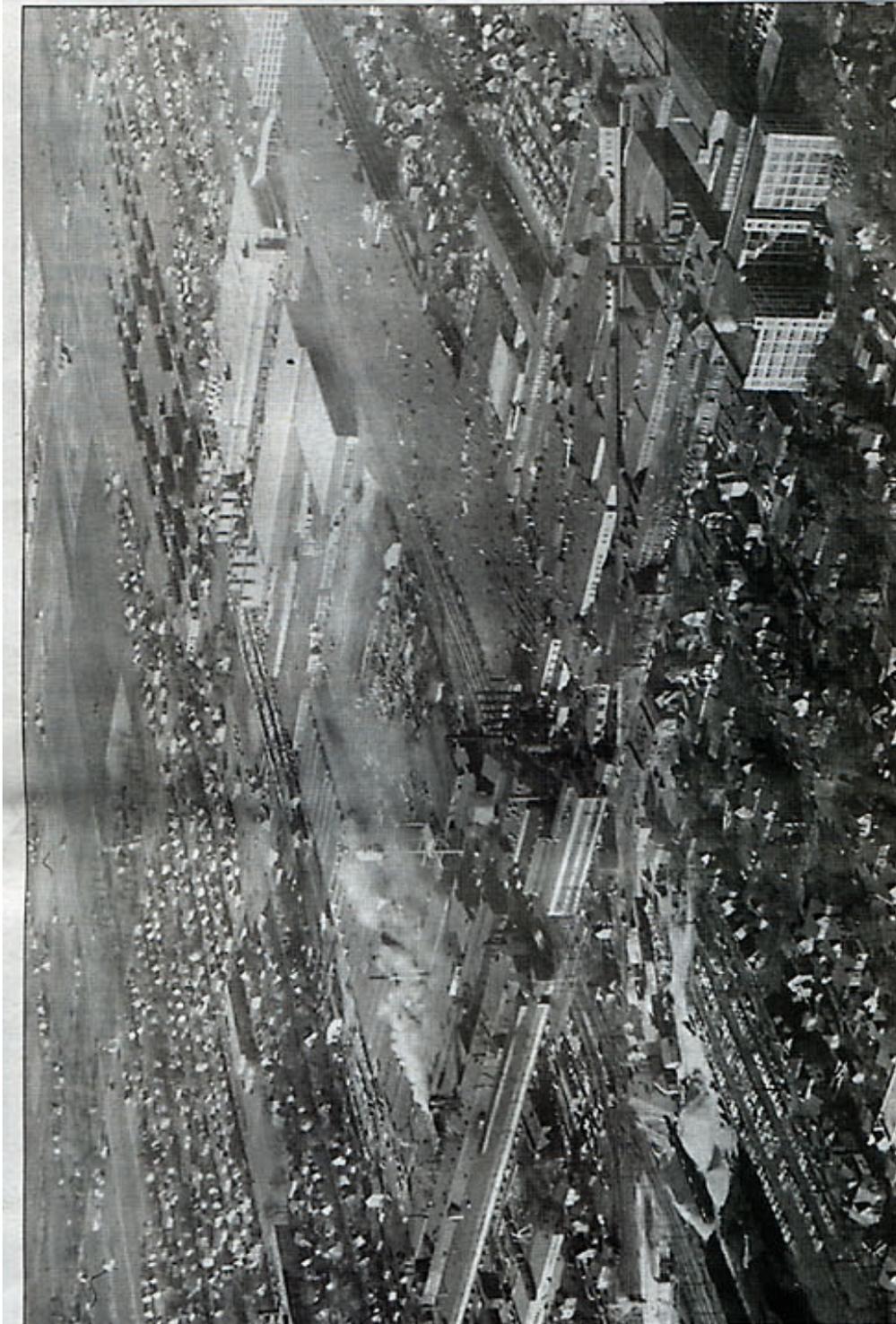
The steps taken against rust are only one example of the commitment to quality in American Motors assembly plants.



American Motors dedication to quality is evident throughout the production process in American Motors Assembly plants. Pride of individual craftsmanship is a trademark. Quality checks are made at random during all assembly phases to evaluate production standards. The checks serve as plant production "report cards". Unquestionably, 1980 American Motors automobiles are very different for others being built today. The difference is the commitment.

The Kenosha Assembly Plant

When the Kenosha Assembly plant closed in 1989 it was the oldest operating auto assembly plant in the United States. Its newest building was constructed in 1944 and its oldest building dating back to 1902! Containing two assembly lines (East and West) millions of AMC and AMC predecessor vehicles rolled out of this amalgamation of buildings bound for all parts of the world. AMC Eagles were built here during the 1980 thru 1983 model years. In 1984 Eagles had to give way to the thousands and thousands of AMC/Renault cars now being built. The Eagle would have only one "hatchery" until the end, Brampton, Ontario. Even when the AMC Eagle was being built in Kenosha, Kenosha was the "back up" assembly plant. All Eagle orders would first be cosigned to Brampton until their daily quota was met then the remainder would be built in Kenosha as the Kenosha plant built the majority of AMC's other automotive products.



PHOTOS COURTESY OF THE KENOSHA HISTORY CENTER

An aerial view of the American Motors Corp. Main Plant during the 1970s.

Glory Days at the Kenosha Assembly Plant

RIP: Kenosha Lake Front Assembly Plant

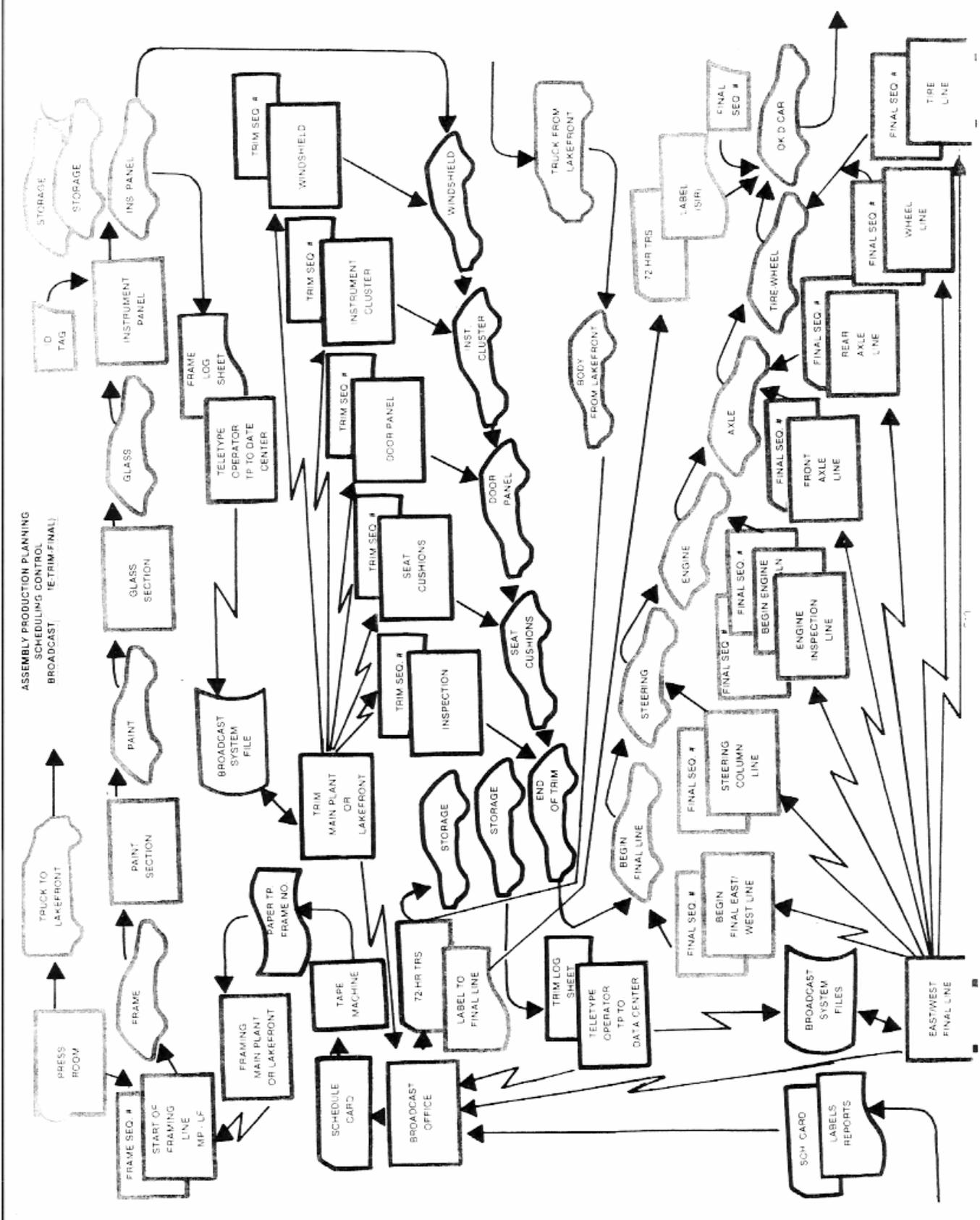
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Some pictures you may not want to see. The Kenosha Lake Front Assembly Plant after it was shut down for good.



Photos courtesy of

An AMC Car is Born



The Brampton, Ontario Plant

From 1984 on, all Eagles were built in the original Brampton assembly plant.

American Motors' original "Brampton Assembly Plant" opened in 1961. It was part of American Motors Canada, Inc. and was located at northeast corner of Steeles Avenue and Kennedy Road.

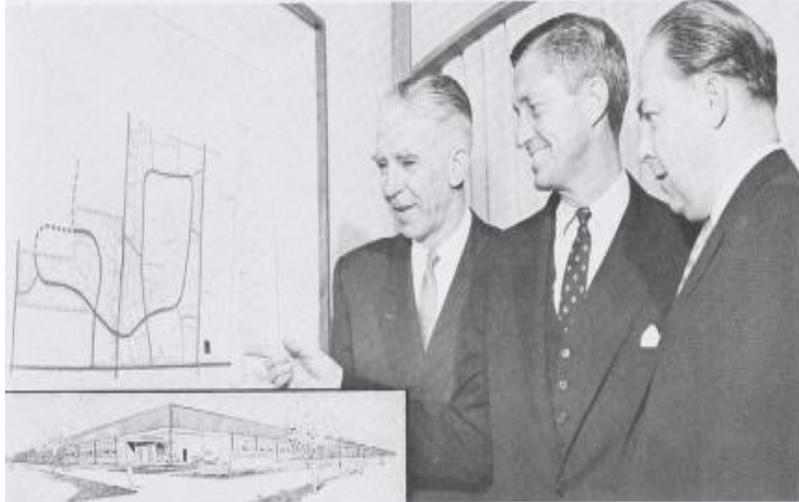
In 1987, with the Chrysler buy-out, the AMC division and its plants (Brampton and Bramalea) were absorbed into Chrysler, becoming part of Chrysler Canada Limited. The AMC Brampton plant was closed in 1992 and sold to Wal-Mart for use as their Canadian warehouse.

The former Brampton Assembly Plant produced Ramblers, Rebels, Hornets, Gremlins, Concords and Eagles. It also produced the Jeep CJ and Wrangler vehicles.

The remains of the plant were torn down in 2005, and the land is currently under redevelopment. Among the buildings on the site is a Lowe's home improvement store, one of the first to be built in Canada.

This plant should be not confused with the nearby state of the art Bramalea plant AMC completed in 1986 for the production of the AMC/ Renault Premier (Eagle Premier) and which remains in use yet today.

RAMBLERS TO ROLL FROM NEW CANADIAN PLANT IN BRAMPTON



Site of new American Motors (Canada) plant at Brampton, Canada, is pointed out by Roy D. Chapin, Jr. (center), executive vice president and director, American Motors, and president, American Motors (Canada), to E. K. Brownridge, executive vice-president and general manager, and Dr. K. A. Roberts, president of Elder Mines and Development, Ltd., the mining corporation which owns "Peel Village."

Production of Ramblers in Canada will begin before the end of this year in a new modern plant, now being built on a 40-acre site in the new Peel Village development on the southeast edge of Brampton, a suburb of Toronto.

Roy D. Chapin, Jr., president, American Motors (Canada) Ltd., said that initially the plant area will be 250,000 square feet and the layout will allow for expansion of production facilities as the Rambler market in Canada expands.

According to Earl K. Brownridge, executive vice-president and general manager, "We intend to build more than 10,000 Ramblers the first year and we will need probably about 700 employees." He said production will begin after the 1961 Rambler models are introduced this fall.

Peel Village, a new 1,000-acre land development of a wholly-owned subsidiary of Elder Mines and Develop-

ments, Ltd., is a planned community in the hub of the Toronto-Hamilton industrial area embracing homes, apartments, schools and full public utilities.

Chapin said that coincident with the decision to build the new plant at Peel Village, American Motors (Canada) Ltd. has sold its old assembly in Toronto, purchased in 1946, to Elder Mines and Developments, Ltd., which plans to use the building as a nucleus for a multi-million dollar shopping center.

The Canadian development parallels the expansion move in the U. S. where Rambler production facilities are presently operating 24 hours a day, six days a week.

American Motors is the only automobile manufacturer in the world operating its facilities on this basis in order to meet the exceptionally heavy demand for its products.



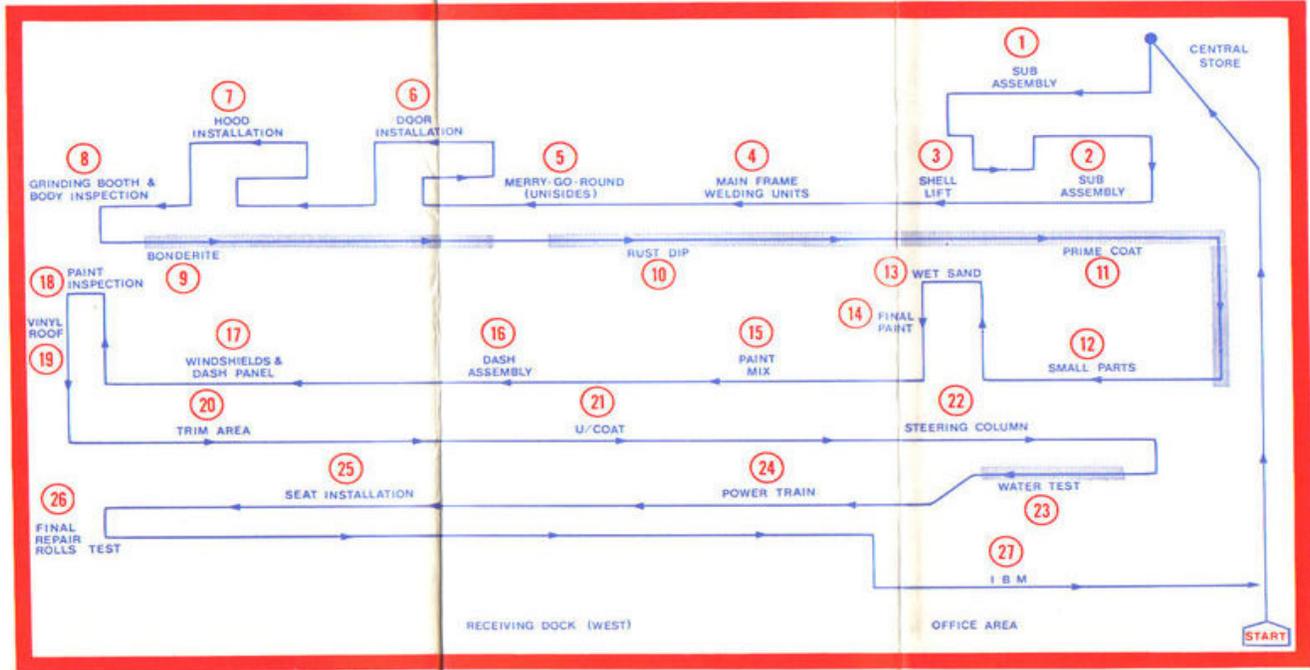
OUR BRAMPTON OPERATION

Opened on January 26, 1961

Assembly Plant } 3 million sq. ft.
 Parts Warehouse } of buildings on
 Engine Plant } 90 acres of land

Has an annual production capacity of over 50,000 units.

Employs approximately 1,100 hourly-rated employees, and 500 salaried employees.



William Weatherstone Collection



An endless appearing stream of AMC designed 4.0 liter engines being built in the Kenosha engine plant., The 4.0 is the successor to the mighty 4.2 liter, 258 CID engine used in the AMC Eagle. This photo was taken after the AMC/Chrysler merger.

Photo by Mark Hertzberg/Racine Journal Times, ©1998

In 1986 AMC entered into a contract with the Chrysler Corporation to build that companies "M" bodied cars in the AMC's Kenosha plant. One of the finished products is seen near the end of line ready to exit the plant and be loaded for shipment.

Photo by Mark Hertzberg/Racine Journal Times, ©1998



The AMC Proving Grounds

Source information from the MGA Research Corporation.

When the Nash-Kelvinator Company wanted a site near Kenosha, Wisconsin for their vehicle testing they went looking for a rolling terrain that was as private as possible. In 1943, the first appropriation of the company budget was used to purchase most of the field and farm acreage from a William F. Albrecht. Their selection was southwest of Burlington Wisconsin in an area known for its steep sided small hills geographically called "knobs". Nested in these knobs is the inner track, the first track laid out by Nash. Between 1944 and 1947, the rest of the grounds were gradually developed. In 1947 Nash spent \$250,000 to fully complete the first phase of the proving ground's roadways. After the Nash-Hudson merger the newly formed American Motors Corporation continued to use and expand the facility. With the purchase of AMC by Chrysler in 1987 the facility was rented out to component suppliers and then in the fall of 1988 Chrysler sold the facility to MGA Research Corporation, an independent testing organization. MGA continues to use the facility to this day and the image below shows the facility as it was in 2002.

1943 to 1987 History

During the first few years of using the facility, the employees were bussed from the Kenosha plant to the facility. Almost everyone who was bussed thought this was great because they were able to punch in and punch out in Kenosha and get paid for riding to and from the worksite. The primary means of bussing the workers was the use of two 1946 Nash's that were modified into 8 door limousines. This lasted a little over a year and then the employees were required to drive themselves to the facility to then punch in and punch out. *(Editor's Note: Private automobiles were still in short supply at this time. Providing company transportation was probably necessary for the first year or so after post war production ramped up. It is not known when bussing stopped if employees used their own cars or those supplied by Nash).*

Continued on next page



AMC's Burlington Proving Grounds as it was in 2002

The original entrance (A) to the facility was from the Wahlburg Road area, which was on the west side of the property (now the skid pad entrance). This had been the main entrance to the farm that was originally on the property. In the early years, Nash operated the facility out of the farm's barn (B), which is still in use today for parts storage. The barn also doubled as a maintenance shop and the manager's office until the main administrative was built off of Warren Road. When the equipment used by Nash to maintain the facility began taking up too much space a Quonset building was constructed to house the road graders and other equipment, this building remains in use today for the same purpose.

According to former Nash employees, the original farmer had built a whiskey still (C), which was camouflaged and located in the side of one of the highest hills. It was very difficult to find as it was a cement room hidden into the hillside. One night, just after Nash purchased the land, the farmer worked all night to gather up all the whiskey that he had hidden there. Later on AMC used the room to store tires because the temperature in the room kept the tires cool.

Around 1981 the "AMC Bushes" (D), were planted near the picnic area. The facility is located on the approach to the Milwaukee airport and it is reported that AMC executives enjoyed seeing the bushes from the air the when flying in to Milwaukee from Detroit.

In 1964-1965, early crash testing was initially performed outdoors at the original concrete and dirt barrier (E). A dump truck was used as the propulsion system for the cars that were crashed. Cars were towed alongside of the truck using a special boom attached to the roof of the car. There would be two people in the dump truck. One would operate the truck at the proper speed and the other would release the test vehicle at the proper moment. Around 1965 the dump truck was replaced with a prototype AMC Marlin with a V8 343 engine. A guide rail was installed to control the lateral movement of the test vehicle as it approached the barriers. In the early 1970's a new crash test area was developed that had an automatic vehicle speed control system. This new crash test area (F) is still in use.

The picnic area (G) was used for magazine previews of new models. In addition an inflatable building was used for a photo studio. There were different backgrounds that were painted on a large roll which could be customized for each vehicle (snow scene for a Jeep, a city background for a car, etc.). It is called the picnic area because in addition to the photo shoots, the area is where many company picnics took place. The picnics were planned months in advance and everyone really looked forward to them. They were old-fashioned picnics starting in the mid-morning and lasting all night. Many people would bring their tents or campers and make a weekend of it.

Roadways

The facility consists of approximately 400 acres and contains six distinct roadways that were designed and built to test various parts of the vehicle structure. During the 1940's Nash pioneered the unitized body system for their vehicles. The upper track (H) surface of the facility was specifically developed to test uni-body vehicles. The surface includes potholes, cobblestones and body twists. Around the same time as the construction of the upper track construction began on the "powertrain" loop of the inner track (I). This hilly course, located within the knobs and provided a sensation similar to riding on a roller coaster. Originally gravel, the powertrain course was later blacktopped. The chassis loop (J) of the inner track was added during 1947 and provided road surfaces such as washboards, alternate rolls, and chatterstrips. Construction of the main track (K), which is a smooth surfaced oval was started in 1944 and was completed in 1946. The gravel track (L), was built around the same time as the oval and was primarily used for truck and corrosion testing. The stones caused a "pecking" that wears away protective coatings of the underbody. The north track and skid pad (M) were the last paved roadways to be added to the facility. These roads were added in the middle 1950's. An off-road course (N), was added after the purchase of the facility by MGA.

Post 1987 History

Chrysler purchased AMC in 1987 and sold this property in 1988 to the MGA Research Corporation, who uses the proving grounds for the automotive, motorcycle, rail, and aircraft industries. MGA added off-road tracks for truck and military vehicle testing in the 1990's. Local police departments also hold training classes here.