



# OBSERVATIONS

Dennis DesRosiers

## The Age of Vehicle Platforms in the Canadian Market

The Volkswagen Beetle was conceived in the early 1930s, produced intermittently during the war, and finally reached series production in 1945. Despite major technological advancements in virtually all aspects of vehicle design, Volkswagen continued to produce the Beetle - essentially unchanged - until 2003, at which point it was still being sold with relative success in Mexico. Its 58-year production run was an incredible feat and a testament to the uniqueness of Ferdinand Porsche's original design, unlikely to be replicated again in this century's novelty-obsessed vehicle industry.

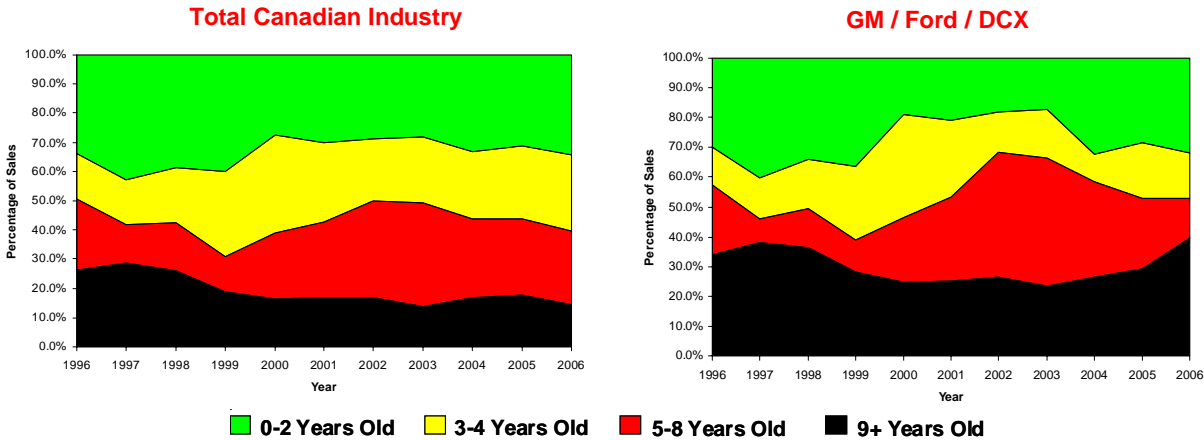
In point of fact, it is highly improbable that any vehicle sold in North America will ever languish for half - or even a quarter - of that time. If success or failure in the automotive sector comes down to "product, product, product," then the re-engineering of platforms has

become one of the primary drivers of success in the new vehicle sector. Indeed, average platform age acts as an excellent indicator of an OEM's health. We track sales-weighted platform age statistics extending back to 1990 and have found that tremendous insights can be gained from understanding this very technical topic.

Before delving into the hard numbers, we should cover the basic terminology of our analysis. Very briefly, the term 'platform' is a catch-all that describes a vehicle's core engineering: frame, floorpan, suspension, drivetrain, and the proportional relationships between all those elements. All vehicles are based on a platform of some stripe, often only identified by an internal corporate code (e.g. GM's Lambda-based crossovers or Nissan's F-Alpha trucks). Modern

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### Age of Vehicle Platforms Percentage of Sales by Platform Age



Source: DesRosiers Automotive Consultants Inc., AIAMC and CVMA

# Observations - "The Age of Vehicle Platforms in the Canadian Market"

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cars and trucks rarely ride on unique platforms, as development costs are usually spread across several model lines and vehicle classes.

We track every vehicle on the market by the age of its core engineering. As such, minor styling changes are disregarded, as are mid-cycle freshenings and arbitrary name changes (e.g. Ford's recent rebranding of the Five Hundred as the Taurus). Our methodology requires a complete overhaul of a vehicle's core engineering in order to reset the clock. We separate the new vehicle market into four age categories: 0-2 years old; 3-4 years old; 5-8 years old; and 9+ years old.

(For a fuller explanation of the history of platforms and the role they play in today's automotive industry, please see *A Primer on Platform Paradigms* in our June 15th, 2005 issue.)

In past *Observations*, we have made mention of the various "safety valves" employed by automakers whenever consumer market sales turn sour. Along with obvious mainstays like fleet sales, cash incentives, low lease rates, and dealer downloading of inventory, the practice of extending the service lives of vehicle platforms past their "sell-by" date is also an important (but often overlooked) safety valve.

One of the big advantages of letting a platform age is that an OEM can levy discounts and sales incentives on old-platform vehicles. Heavy up-

front fixed costs are amortized over the early life of a vehicle, and most platforms have recouped their design, engineering, and tooling costs by the sixth to eighth year of production. It can cost approximately \$2 to \$3 billion to bring a new platform to life, so letting an existing platform age can save an OEM these heavy capital outlays. Furthermore, by discounting old-platform vehicles, they can move a lot of product. For instance, these "old" platform vehicles are a key source for the daily rental sales, providing a needed boost to certain OEMs' market shares. Consumers don't want these vehicles, so volumes get soaked up by fleet buyers.

One of the chief problems inherent to populating showrooms with out-of-date (but inexpensive) products is that those vehicles often fail to meet the quality and engineering expectations of customers - expectations that are constantly rising. An inexpensive vehicle that undergoes two full redesigns in a twenty-year period simply cannot adapt to market conditions and buyer expectations as ably as a competing product that undergoes three or four redesigns in as many years. Potential customers recognize this difference, while actual buyers of old-platform vehicles complain of sub-par ownership experiences, reducing their brand loyalty and ultimately hurting the automaker's reputation. Word-of-mouth still counts for a lot in this business, and the Japanese OEMs continue to win

that battle. We would argue that keeping these old "war horses" around is also at the root of the quality perception issue that continues to plague GM, Ford, and DaimlerChrysler.

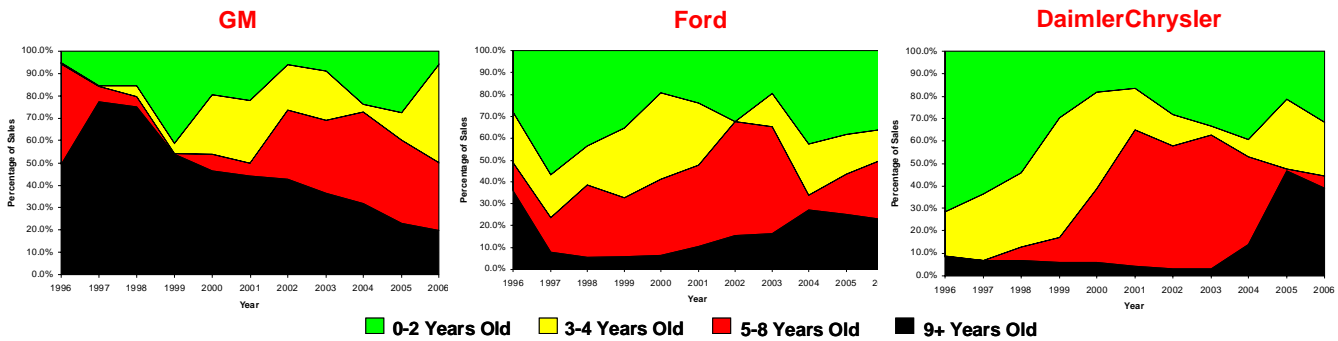
Industry-wide Canadian sales are most heavily weighted towards newly engineered vehicles, with about 35 percent of new vehicle buyers opting for passenger cars and light trucks based on platforms introduced up to two model years ago (i.e. 2004 or newer). About a quarter of buyers choose vehicles based on platforms 3-4 years old, while an equal-size contingent buys cars and trucks using 5-8 year old engineering. Products employing platforms first released 9 or more model years ago make up about 15 percent of the new vehicle market.

Most growth has been in the two middle segments. Platforms aged 3-8 years old comprised just 29 percent of the market in 1997 but have grown to account for some 51 percent of new vehicle sales in 2006. Sales of older platform vehicles have shrunk, dropping from 39 percent in 1994 to just 14 percent in 2006, one of the lowest totals in this industry's long history.

Previous editions of this analysis have focused on GM, Ford, and DaimlerChrysler versus the Japanese automakers. The Detroit-based OEMs generally derive a substantial portion of their sales from outdated platforms, while the Japanese simply do not.

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## Age of Vehicle Platforms Percentage of Sales by Platform Age



Source: DesRosiers Automotive Consultants Inc., AIAMC and CVMA

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It is worth noting that GM, Ford, and DaimlerChrysler are still responsible for an overwhelming proportion of these sales. While the absolute volume of such vehicles has dropped considerably, American automakers have maintained a consistent lock on this age category. Detroit-based OEMs accounted for 98 percent of older platform sales in 1990 and still account for 96 percent today. The total volume has been cut in half from about 450,000 units to about 225,000 units, but Detroit still dominates and is the primary use of this 'safety valve.'

But it is no longer fair to lump the Detroit Three into the same basket since there are now radical differences between GM, Ford, and DaimlerChrysler. Recent trends have made it difficult to tar (or glaze) all with the same brush.

GM, a company that as recently as 1997 derived an incredible 78 percent of all its Canadian sales from vehicles based on engineering 9 years or older, has managed to reduce its sales-weighted old

platform total to 20 percent in 2006 - lower than both Ford (23 percent) and DaimlerChrysler (39 percent). It is also the only Detroit-based player that has evinced consistent progress in the lowering of the average platform age of its fleet.

Moreover, declines in the engineering ages of GM's offerings have not been brought about by a single miracle platform from which endless variants spawned, but rather from a steady focus on product renewal and a new approach towards product management. We believe that GM's recent efforts to reduce its fleet sales volumes are a large part of this strategy. With declining institutional demand for slim-margin, old-platform fleet cars, GM is no longer beholden to the competing requirements of fleet buyers and individual consumers. Fleets place little value on novelty and generally want inexpensive, relatively bland vehicles; conversely, individual consumers prefer new-platform, refined, relatively expressive

vehicles. For years, GM straddled the fence with long product cycles and multiple freshenings, but current evidence demonstrates that such practices are no longer the norm.

When GM states that their corner has been turned - that the worst is behind them and that a wholesale change in corporate culture has taken place - the platform age numbers suggest that there's truth in that statement. Vehicles that would in years past have soldiered unchanged for 8-10 years have been placed on a Japanese-style 5-to-8 year cycle. After so many false claims and so few actual results, it's very interesting to witness the ongoing rebirth of GM. We believe that GM's 2007 results will show another large rebound in the 0-2 year-old category, aided in no small way by the strong-selling GMT900 pickups.

Ford and DaimlerChrysler are very different stories. Deterioration in their product cadence reveals serious underlying problems at

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# Observations - "The Age of Vehicle Platforms in the Canadian Market"

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both of these companies - problems that will be very expensive to fix.

Examining the age curves at Chrysler makes for an excellent case study: "The importance of following through." With a five-pronged mid-1990s product offensive - Dodge Neon, Dodge Intrepid, Chrysler Cirrus, Dodge Ram, and Dodge Caravan - the Auburn Hills-based OEM managed to refresh all the volume products in its lineup and drive its older platform sales to single digit percentages. Unfortunately, one glance at our platform age chart shows that the company failed to follow up on its successes with thorough redesigns. Platforms that were fresh and competitive grew average, then mediocre, and finally uncompetitive. By the time it was mercifully put to sleep, the SX 2.0 (nee Neon) had been so thoroughly lapped by its competition that comedian David Spade, speaking for

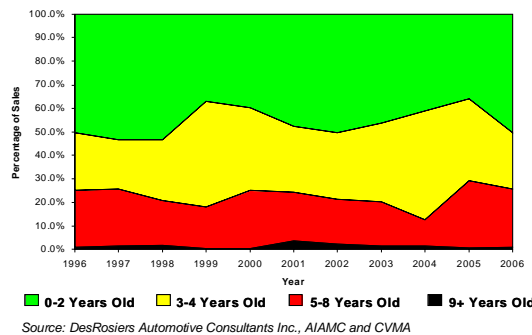
DaimlerChrysler at the Dodge Caliber's official press introduction in January 2006, exclaimed, "Dude, anything looks good compared to a Neon."

In recent years, DaimlerChrysler's percentage of old platform sales has swelled considerably, but the 2007-2008 season seems poised to reverse that negative trend. Vehicles like the Caliber, the new Sebring, and new-for-2008 Caravan will help lower the platform age problem, but without Daimler money, Chrysler will not be able to

adopt the shorter product cycles that have been recognized by GM as a harbinger of competitiveness and consumer-market success. The buyers lining up to take Chrysler off of Daimler's hands should understand this. The real cost to fix Chrysler may not be the \$9 billion selling price or even the \$20+ billion legacy costs, but rather the cost associated with the immediate re-engineering of half the product lineup.

## Age of Vehicle Platforms Percentage of Sales by Platform Age

### Japanese Nameplates



In fact, one can build a case that the 'real' reason Daimler is shopping Chrysler relates to the high cost of fixing these product issues in the face of burdensome fixed expenses in other areas of their business. By my count, Chrysler has twelve core platforms with at least six in need of redesign. En mass platform renewal can cost from \$18 to \$20 billion, and the Daimler board may feel that such massive amounts of capital would be better spent on the Mercedes-Benz product portfolio. This is especially relevant since the Germans' loyalty to Chrysler has never been solidified

(evidenced by the relative lack of platform sharing between these sister companies). Considering the additional fact that the unions disadvantaged Chrysler by denying them the same health care deal as GM and it becomes clear that the Daimler board likely decided to save their powder for the core brand, Mercedes-Benz.

The situation at Ford is quite similar. Our analysis indicates that there will be little change in the percentage of models based on older platforms (currently 23 percent of Ford sales), and that several of the upcoming new models will provide no lift in the 0-2 year-old category. The restyled 2008 Focus remains on the same platform employed since model year 2000, while the new Taurus (a revised and rebadged Five Hundred) continues on the D3 platform, first seen underneath the Volvo S80 in 1999. These are volume offerings in volume segments. Ford also has twelve core platforms with at least seven in need of renewal. We recognize that decisions regarding product renewal are often governed by factors external to the product itself (e.g. labour contracts, plant tooling costs, etc.), but we wonder why one of the primary drivers of Japanese success in North America - frequent and comprehensive product renewal - has yet to be fully adopted by a company that makes a habit of announcing how closely it studies Toyota. **DAR**