



ascencione®

Unique Cost-Saving Innovations by Ascencione® in Automotive Electronic Systems

Ascencione®, is a pioneering company with a distinguished legacy spanning more than 60 years in the development of advanced automotive electronic systems. Renowned for its innovative approach and intelligent electronic solutions, Ascencione® has established itself as a leader in the field, consistently pushing the boundaries of technology. The company's dedication to excellence is reflected in its impressive portfolio, which boasts over 400 patents, underscoring its commitment to advancing the automotive industry. Our experienced and innovative design team, combined with a proven design process, ensures a seamless journey from concept to production. Operating under one roof allows us to outpace competitors in delivering our customers' products promptly. Our central mission is to develop groundbreaking next-generation integrated sensor and control systems,

making vehicles smarter, safer, more fuel-efficient, and more convenient, all while offering cost-effective solutions. Innovation is ingrained in our DNA. This article delves into how Ascencione® employs a variety of cost-saving strategies in the development of automotive electronics. By showcasing five specific examples from our extensive portfolio, we demonstrate our unwavering commitment to efficiency, affordability, and innovation in the automotive industry.

Efficient Manufacturing Processes for Cost Reduction

Today's automotive industry is constantly seeking efficient manufacturing processes to reduce production costs. By streamlining designs and eliminating unnecessary components, manufacturers can achieve significant cost reductions. These improvements not only make vehicles more

affordable but also contribute to a more sustainable and competitive industry.

Innovative Automotive Material Cost Reduction Strategies

Innovative material cost reduction strategies play a vital role in the automotive sector. These strategies focus on optimizing designs to minimize the use of expensive materials while maintaining structural integrity and safety standards. By doing so, manufacturers can deliver high-quality vehicles without inflating material costs.

Reducing Automotive Warranty Costs through Reliability

Lowering automotive warranty costs is crucial for both manufacturers and consumers. Enhanced system reliability achieved through advanced technology and design improvements can significantly reduce warranty-related expenses. This benefits manufacturers by improving their bottom line and consumers by providing peace of mind.

Weight Reduction in Automotive Design for Fuel Efficiency

Weight reduction is a key focus in automotive design to improve fuel efficiency and overall vehicle performance. By employing innovative materials and design approaches, automakers can create lighter vehicles that consume less fuel, emit fewer emissions, and offer a more enjoyable driving experience.

Maximizing Efficiency in Automotive Production

Efficiency is paramount in the automotive industry, where streamlined production processes, efficient component

installation, and time-saving manufacturing techniques are essential for optimizing operations. By leveraging automation, improved assembly techniques, and simplified workflows, manufacturers can enhance efficiency throughout the production line, leading to significant cost savings. Efficient component installation further contributes to these savings by reducing the time and effort required for assembly. Additionally, time-efficient manufacturing practices not only meet consumer demand but also improve profitability by reducing the overall production time. Together, these strategies enable automotive manufacturers to deliver vehicles more efficiently, meeting market demands while maintaining competitiveness.

Automotive Hardware Reduction for Modernization

Reducing the number of hardware components in modern vehicles is a key trend. Advanced electronics and software solutions are replacing traditional mechanical components, resulting in cost savings and improved functionality. This shift aligns with the automotive industry's goal of modernization and innovation.

Affordable Automotive Components for Cost-Conscious Buyers

Cost savings in the purchase of automotive components benefit both manufacturers and consumers. By offering high-quality, yet cost-effective components, automakers can produce more affordable vehicles, making them accessible to a wider range of customers.

Supplier Benefits from Automotive Redesigns

Automotive redesign initiatives often result in potential cost savings for Tier 1 suppliers. Collaborative efforts between manufacturers and suppliers can lead to mutually beneficial outcomes, contributing to a more efficient and cost-effective automotive ecosystem.



Automotive manufacturing Cost Cutting

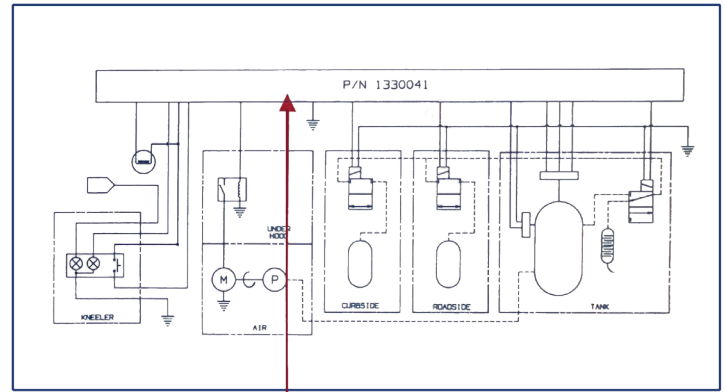
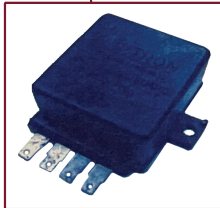
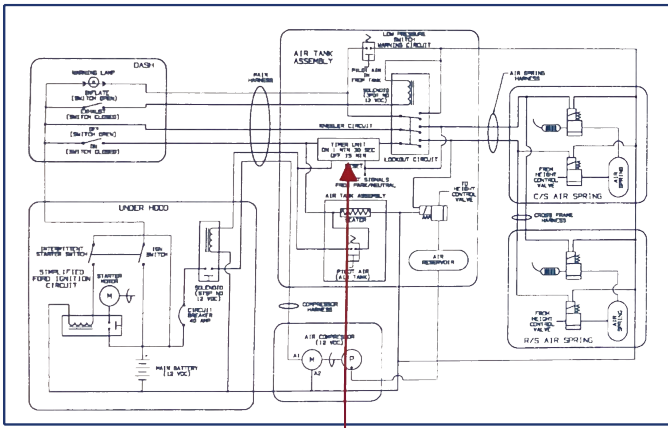
Ascencione's® Impact on OEM Affordability and Innovation

Here is a list of 5 products introduced over the years and how we used the above methods to save costs

Integrated Suspension Control System



In 8 months we designed, hard tooled, and produced the required quantity of pre-production parts and delivered to the Ford Kentucky Assembly



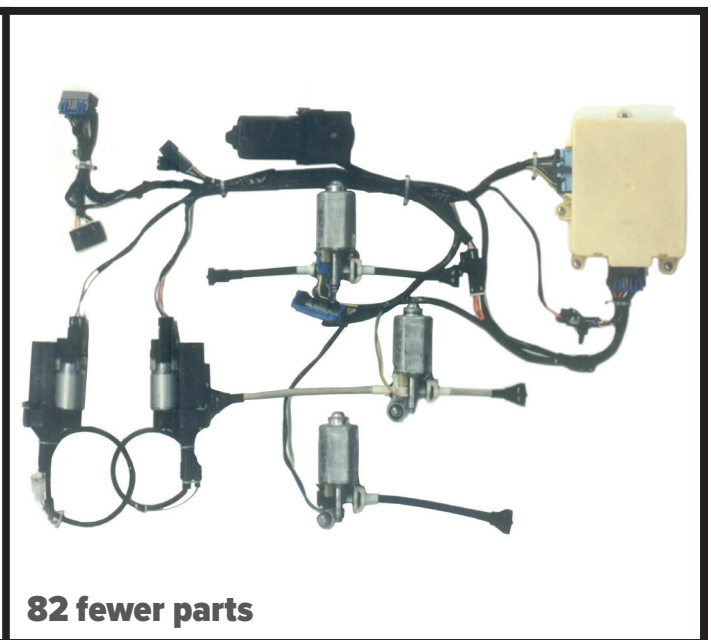
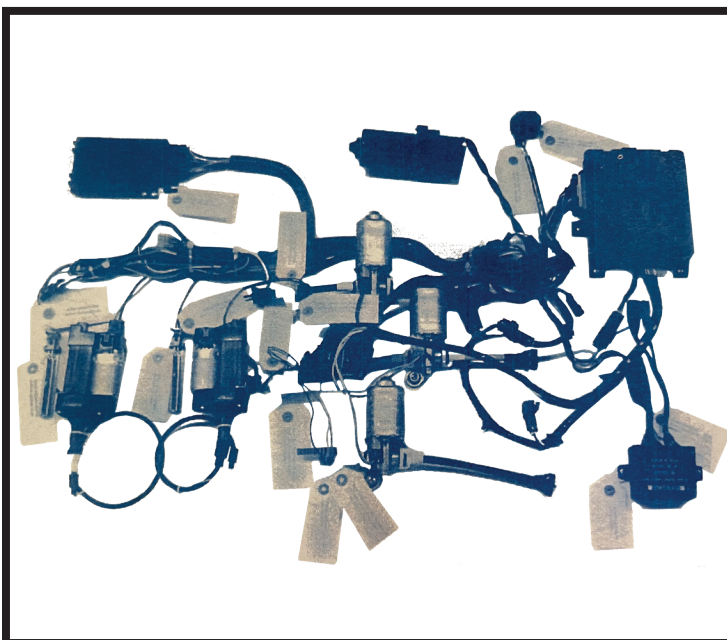
- 26 fewer parts, simplifying manufacturing
- Significant cost reductions in materials, labor, and weight
- Employed 100% solid-state technology for cost savings and durability
- Reduced system size by an impressive 70%, offering space-saving advantages
- Leveraged field-proven solid-state non-contact technology for reliability
- Provided operational simplicity and expandability
- Built with high reliability and durability for rugged environments
- Electronic trim set capability without mechanical adjustments
- Solid-state pressure and position sensors for improved accuracy

- Extended component life with road averaging algorithms
- Sealed design for challenging under-vehicle conditions
- Overall cost-effective system for purchase and warranty savings
- Savings to Ford
 - Lower vehicle warranty costs
 - Assembly cost reductions
 - Enhanced system performance
 - Estimated annual savings of \$2,000,000 for Ford

Electronic Systems Integration (Cadillac STS)



Replaced the original system with Ascencioné®'s seat electrical system



82 fewer parts

- 82 fewer parts, simplifying the system
- Substantial cost reductions, lower warranty costs, and a 4 lb. weight reduction
- Introduced full automatic HVAC controls for increased reliability and simplicity
- Integrated real-time and service diagnostics
- Automatic user interface with a functional display for enhanced operator convenience
- Efficiency and Comfort (HVAC System Redesign)
- Simplified wire harness with a 50% reduction in complexity
- Eliminated electromechanical components to improve reliability
- Provided infinitely variable fan speed control for enhanced comfort
- Delivered cost savings in purchase, installation, and warranty costs
- Designed for expandability with more features in the future
- Eliminated 48 unnecessary components for manufacturing simplicity

Smart Open, Smart Close® System (Hatchback Convenience)

Addresses the #1 exterior issue in the automotive industry (hatchback opening) with radar technology

The Smart Open, Smart Close® System for hatchbacks is a groundbreaking convenience feature designed to simplify the process of accessing and securing the rear cargo area of a vehicle. This resourceful system enables users to effortlessly open and close the hatchback with a touch of a button or a simple gesture, eliminating the need to physically lift or lower the hatch. Whether you have your hands full of groceries or simply want to enhance the ease of loading and unloading, this technology revolutionizes the hatchback experience, making it more accessible, efficient, and user-friendly.

- Potential savings from reducing 11 total sensors



along with wiring:

- Ultra Sonic Sensors
- Hands-Free Open Sensors
- Blind Spot Detection Radar Modules
- Improves convenience and safety for hatchback users
- Eliminates traditional door handles and associated linkages
- Streamlines production, reducing manufacturing time and costs
- Reduces vehicle weight for improved fuel efficiency and performance
- Enhances aesthetics and safety by eliminating protruding handles

Gesture-Activated Car Door Solutions (2024 Innovations)

Gesture keyless car door opening offers futuristic convenience with a wave of your hand.



Gesture car door opening, a cutting-edge technology, enables users to effortlessly unlock and open their vehicle's doors by making a simple hand gesture, eliminating the need for traditional keys or remote controls. This innovative feature not only adds a touch of modern sophistication but also enhances convenience, especially in situations when your hands are full or when you're approaching the car in adverse weather conditions.

- Door Handles Elimination
- Improving aerodynamics
- Enhancing security
- Streamlined design
- Reduced maintenance and adding driver convenience.
- Wiring and hardware elimination
- Delivered cost savings in purchase, installation, and warranty costs

Obstacle Detection in Car Doors module (DOM)

Keyless car door opening with obstacle detection.

The Door Obstacle Detection Module (DOM) for keyless car door opening offers significant cost-saving potential.

- Preventing door-related accidents and damage, including those pesky “door dings.”
- Help car owners save on repair and maintenance costs.
- Avoiding collisions with passersby, potentially reducing legal liabilities and insurance claims.
- Reduces the risk of accidents involving hands or limbs getting caught in closing doors, which could lead to medical expenses and legal issues.

Overall, the cost savings stem from reduced repair, liability, and medical expenses, making it a valuable investment in both safety and financial terms.

These innovations from **Ascencione**[®] exemplify their commitment to efficiency, affordability, and innovation in the automotive industry, making vehicles safer, more efficient, and more enjoyable for everyone.

Obstacle Detection for Keyless Entry



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