

AI & Automation in Automotive Collision Centers (2025)

Enterprise Adaptation Report – Technology, Trends & Transformation

Executive Summary

In 2025, automotive collision centers have undergone a technological renaissance. Enterprise dealer groups like Group 1 Automotive, Sonic Automotive, Mopar/Stellantis, and top Ford dealerships have embraced AI, robotics, and generative technologies to automate diagnostics, streamline repairs, and enhance customer engagement. This report analyzes the latest hardware and software innovations and how they've been adopted across the industry.

Industry-Wide Technological Advancements

Hardware Innovations

- **AutoStore Robotic Warehousing (Mopar)**
 - 40 autonomous robots retrieve parts from 70,000 bins
 - Enables 2M+ annual shipments with near-instant fulfillment
- **UVeye Drive-Through Inspection Portals**
 - AI-powered scanners detect damage in seconds
 - Reduces inspection time by 30+ minutes per vehicle
- **AR Repair Aids (Ford)**
 - AR glasses/tablets overlay schematics and torque specs
 - Powered by AI vision algorithms for real-time guidance

Software Breakthroughs

- **Generative AI Assistants**
 - Stellantis & FordDirect use ChatGPT-based systems for customer support
 - AI handles scheduling, FAQs, and repair guidance
- **Agentic AI for Coaching & Workflow Optimization**
 - Sonic's AmplifAI platform boosts advisor performance with real-time dashboards
- **AI Estimating Tools**
 - CCC One, Tractable, Ravin AI generate instant repair estimates from photos

Enterprise Dealer Group Adaptations

Group 1 Automotive

- AI scheduling balances workload and pre-analyzes damage
- AI call routing handles 91% of service inquiries autonomously
- EV/ADAS readiness with repurposed bays and digital calibration tools

Sonic Automotive

- AmplifAI doubled daily appointments and improved follow-up rates
- Internal AI assistant “Sonic” provides instant repair procedure answers
- Data dashboards track technician productivity and service bottlenecks

Mopar / Stellantis

- AutoStore robots accelerate OEM parts delivery
- ChatGPT-based assistants guide customers through repairs and FAQs
- Predictive telematics anticipate collision-related repairs
- OEM advocacy for certified parts and procedures

Automation & AI Integration in Collision Repair

Extent of Automation

Process Area	Automation Level	Technology Used
Parts Fulfillment	Fully Automated	AutoStore Robotics
Damage Estimating	Semi-Automated	AI Photo Estimators (CCC, Tractable)
Customer Interaction	Highly Automated	Chatbots, Voice AI, Text AI
Technician Training	Augmented	AR Glasses, Generative AI Assistants
Scheduling & Lead Capture	Highly Automated	AI CRM Integration (Impel, AmplifAI)

AI Technology Roles

- **Machine Learning:** Predicts service demand, parts stocking, repair trends
- **Generative AI:** Enables natural language interfaces for customers and technicians
- **Agentic AI:** Coaches staff, optimizes workflows, learns from repair sessions
- **Computer Vision:** Detects damage and wear via inspection portals

Strategic Implications for Collision Centers

Collision centers aligned with OEMs and enterprise dealer groups are evolving into **AI-enhanced service hubs**. By integrating:

- AI scheduling and estimating tools
- Robotic parts logistics
- Generative AI assistants

- AR technician aids

...they reduce cycle times, improve repair accuracy, and deliver a modern customer experience.

Sources & References

- MoparInsiders
- UVeye Collision Center Blog
- Business Insider (Ford AR)
- Impel AI & FordDirect Partnership
- AmplifAI Case Study
- CollisionWeek (CCC AI Estimating)
- Stellantis AI Innovation Portal