ChatGPT

AI in Automotive Collision Centers: Industry Case Studies

Group 1 Automotive: AI-Powered Collision Operations

Group 1 Automotive (a Fortune 500 dealer group with **39 collision centers** [1]) has been embracing artificial intelligence to streamline its service and body shop business. The company's **technology-driven strategy** centers on productivity and data-driven insights. In 2025, Group 1 began **testing AI tools** to personalize customer interactions, automate transaction processing, and optimize service scheduling [2] [3]. For example, AI-driven scheduling systems can automatically book collision repair appointments and balance shop workload based on repair complexity, reducing wait times and improving shop throughput. Group 1's leadership noted that **AI-enabled diagnostics and real-time communication tools** could **streamline service appointments** – imagine an AI system pre-analyzing vehicle damage or diagnostic trouble codes before the car even arrives, so technicians are prepared with parts and repair plans [3]. By leveraging its vast **first-party customer data**, Group 1 uses machine learning to **anticipate service demand and upsell** relevant repairs or accessories (like offering a scratch repair or accessory upgrade when a customer comes in for collision work) [4]. This data-driven approach has helped Group 1 stabilize margins and increase aftersales revenue despite industry headwinds [5] [6]. As the company president, I see that Quirk's collision centers could similarly benefit from **AI-based scheduling and customer follow-up** tools to boost efficiency and customer satisfaction.

AI-powered vehicle inspection systems (like UVeye's drive-through scanner shown above) use computer vision and deep learning to detect collision damage or wear on a vehicle within seconds [7]. This technology can catch fluid leaks, missing components, or frame rust automatically, generating a comprehensive damage report to assist estimators and customers [7]. Dealership groups adopting such systems (e.g. Tom Wood Automotive Group) have seen inspection times drop by 30+ minutes per vehicle while improving estimate accuracy, leading to faster repair cycle times and more transparency for customers [8] [9].

Group 1 is also investing in **AI call assistance** and lead management for its service departments. An industry study in 2025 found that dealerships using AI to handle service calls were able to **answer customer inquiries with a 91% success rate** without human help, outperforming the national average for live agents [10] [11]. Group 1 has been piloting such AI-driven call center tech to handle collision repair inquiries after hours and to follow up on estimates. Additionally, Group 1 has modernized its facilities in anticipation of **advanced driver-assistance systems (ADAS)** and EVs – for instance, repurposing some collision bays for EV battery repairs and using digital calibration tools. By **"repurposing collision capacity and investing in AI,"** Group 1 aims to stay ahead of trends like complex ADAS sensor recalibrations [12]. The takeaway for Quirk Auto: adopting **AI-based intake and scheduling**, along with tools like automated vehicle inspection or AI call routing, could significantly improve throughput at our Quincy and Manchester body shops while enhancing the customer experience.

Sonic Automotive: Innovative Uses of AI in Collision Services

Sonic Automotive (another large dealer group with over 100 dealerships offering collision repair [13]) has approached AI through the lens of **employee performance and customer experience**, which indirectly benefits its collision centers. Sonic invested in **AmplifAI**, a cloud platform using AI to improve call center and service department performance. By implementing AmplifAI's real-time dashboards and AI-driven coaching, Sonic nearly **doubled the number of sales appointments** set per day within nine months [14] [15]. This platform aggregates data on employee calls, estimates, and follow-ups, then uses AI to highlight what top performers do differently. Managers receive **AI-generated coaching tips** and automated reminders to reinforce best practices, whether in handling a collision repair inquiry or selling a repair service [16] [17]. The results were tangible – Sonic saw an **88% increase** in monthly appointments and more customers coming in for service [18] [19]. For collision centers, this means more estimate appointments and higher capture rate of repair jobs. Quirk could use a similar AI-driven performance tool to monitor our body shop advisors' follow-up rates on estimates and ensure no leads slip through the cracks.

Beyond operations, Sonic has been **experimenting with generative AI for training**. Executives describe a future internal AI assistant named "Sonic" that employees can query for instant answers to procedure or repair questions [20]. Instead of digging through manuals, a technician in Sonic's collision center could ask the AI, "What's the OEM procedure for aluminum panel repair on a 2022 BMW?" and get an instant answer. This kind of on-demand knowledge base (powered by an LLM trained on repair manuals and Sonic's training content) is expected to speed up training and ensure consistency [20]. Sonic is also heavily using **analytics and big data** in fixed operations: for instance, they track technician productivity, training module completion, and even use data dashboards to identify bottlenecks in service lanes [21] [22]. While not all these tools are AI in a strict sense, Sonic's data-centric culture sets the stage for AI adoption (since machine learning performs best with good data). Another area of innovation is **customer engagement**: Sonic has a "One Sonic One Experience" initiative with tablet-based processes and potentially AI-enhanced customer interactions [23]. They are researching AI to eventually give customers a Siri/Alexa-like experience in dealerships [20]. For Quirk's collision business, Sonic's case suggests we should look into **AI-powered training aids** (to help our estimators and technicians access repair info quickly) and **performance analytics platforms** to optimize how our teams convert leads to repair orders. Emulating these could improve our cycle times and customer satisfaction scores.

Mopar's Business Model and 2025 AI/ML Advances

Mopar is the parts, service, and customer-care division of Stellantis (formerly FCA), and its business model centers on supporting dealers and independent collision centers with OEM parts and certified repair programs. Mopar generates revenue by selling **authentic OEM parts** and accessories and by administering **certified collision repair networks** for Chrysler, Dodge, Jeep, Ram, and Fiat vehicles [24] [25]. Key elements of Mopar's model include: providing **factory-engineered parts** (to ensure safety and fit after an accident), training and certifying technicians, and offering **customer assistance** (like accident checklists, roadside support, and insurance guidance) [26] [27]. Mopar emphasizes that using OEM parts and procedures is crucial to restore a vehicle's structural integrity and advanced safety features. For example, Mopar's collision site educates customers on their right to request OEM parts and warns of risks with counterfeit or subpar aftermarket parts [28] [29]. This focus on quality ensures that Mopar-aligned body shops (including many dealer-owned collision centers) can differentiate on repair quality and maintain vehicle warranties.

In 2025, Mopar has made **significant technological strides** to enhance its operations. One major advancement is in its **parts distribution and supply chain**. Stellantis opened a new $64 million **Mopar Parts Distribution Center (PDC)** in East Fishkill, NY, equipped with cutting-edge automation. It's the **first Stellantis facility in the U.S. to use the AutoStore robotic storage and retrieval system** [30]. This system uses 40 autonomous robots zipping on an overhead grid to pull parts from a dense stack of 70,000 bins, all within a compact footprint [30] [31]. The result is dramatically faster order fulfillment – the AutoStore bots can fetch and deliver parts to human packers in seconds, enabling the center to handle over **2 million part shipments annually with high accuracy** [32] [33]. For Mopar, this means dealers get parts (frames, bumpers, sensors, etc.) much faster, reducing repair wait times. By **integrating robotics and AI in warehousing**, Mopar is boosting its service levels; as Darren Bradshaw (Mopar's VP) noted, the automation **"significantly enhances parts order completion speed, accuracy and dependability"** for dealers and customers [32] [34]. Quirk's collision centers stand to benefit directly from this – faster access to OEM parts through Mopar's high-tech distribution means we can cycle cars through repairs more quickly and avoid delays waiting for components.

Mopar's parent company Stellantis is also leveraging **AI and machine learning in customer-facing ways**, which dealers can tap into. Notably, Stellantis became the **first automaker to integrate ChatGPT-based voice AI into its vehicles' infotainment systems** in late 2024 [35] [36]. The new in-car assistant (developed with AI partner **Mistral**) acts as a dynamic digital owner's manual and concierge. Drivers can ask natural language questions like "How do I pair my phone?" or "Why is my check engine light on?" and get a helpful, context-aware answer from the AI [37] [36]. This large-language-model-powered assistant can even troubleshoot vehicle issues and guide the owner (for instance, explaining what to do after a minor collision or how to safely drive with a damaged taillight). For collision scenarios, such AI could walk a customer through documenting an accident or contacting a certified body shop. **Mopar's customer care** is piloting similar AI chat solutions outside the car: In Brazil, the new Ram Rampage pickup launch included a **WhatsApp chat assistant using ChatGPT** to answer owner questions about the vehicle [38] [39]. This AI, trained on the vehicle's 361-page owner's manual, provides instant, personalized answers about everything from maintenance schedules to technical specs [40]. Early results showed higher customer satisfaction and more "one-contact" issue resolutions [41]. Mopar plans to expand this to allow image recognition – e.g., a customer could send a photo of a dashboard warning light, and the AI could identify it and explain the fix [42]. These generative AI initiatives indicate Mopar is making aftersales support more **on-demand and user-friendly**. For Quirk, it suggests we should integrate with these OEM tools: e.g., ensure our staff is familiar with the Stellantis AI assistant to help customers, and maybe embed similar chat functions on our dealership websites for service scheduling or FAQs.

Lastly, Mopar's business model is branching into **predictive and connected services** which likely use machine learning. For instance, Mopar's telematics (Uconnect) can report vehicle health data – in time, AI could predict collision-related repairs (like warning when an ADAS camera is misaligned after a fender-bender). While not explicitly publicized, we expect Mopar/Stellantis to be using AI in quality control (manufacturing) and **parts inventory optimization** – ensuring that each PDC stocks the parts most needed based on predictive analytics of collision trends. By 2025, Mopar is essentially blending the old-school focus on quality parts with new-school tech (robots, AI assistants) to maintain an edge. Quirk's collision centers should capitalize on Mopar's advances: our Ford and Stellantis-aligned body shops can tout the **OEM-backed AI enhancements** (like faster parts, smarter support) as a selling point to customers who demand quick and precise repairs.

AI & ML in Top-Performing Ford Dealership Collision Centers (2025)

As a Ford dealership group, we pay close attention to what leading Ford stores and certified collision centers are doing with AI/ML. In 2025, top-performing Ford dealers are leveraging several **AI-driven technologies** that Quirk Ford's Auto Body Shop could adapt into our workflow:

- **Conversational AI for Sales/Service:** Ford dealers are adopting AI platforms to enhance customer communications. FordDirect (the automaker's dealer services arm) partnered with Impel in 2025 to roll out **conversational AI across nearly 3,000 Ford and Lincoln dealers** [43] [44]. Through a direct integration with Ford's Customer Journey Platform, this system uses generative AI to engage customers via chat or text, answering questions about collision repairs, maintenance, or vehicle features in a very personalized way [45]. Early pilot results were impressive – dealers using Impel's AI saw a **65% increase in showroom appointments from leads** and on average **132 more service repair orders per month** thanks to AI-driven follow-ups [46]. Essentially, the AI works 24/7 to nurture leads: for example, if someone gets an online estimate for bodywork, the AI can automatically follow up with a text to schedule an appointment or answer common questions. It also pulls in dealer CRM data to tailor the conversation (e.g. knowing a customer's vehicle model and repair history) [47] [48]. Top dealers report this **hyper-personalized AI concierge** approach not only boosts revenue but meets modern customer expectations for immediate responses [49]. Quirk could deploy these AI chat agents on our collision center webpage and in our call center to capture more leads and ensure no customer inquiry goes unanswered after hours.

- **AI Phone Call Analysis:** Many high-volume Ford dealerships are using AI to optimize phone interactions in service and collision departments. In mid-2025, FordDirect expanded its partnership with **Marchex** to provide an AI-powered call tracking and analytics solution (Marchex Engage) to all Ford dealers [50] [51]. This system uses advanced speech recognition and machine learning to **automatically categorize incoming calls** (sales vs. service vs. parts) and detect the caller's intent [51]. For example, if a customer calls about "a fender repair estimate," the AI flags it as a collision repair lead. It then provides real-time alerts if the call did *not* result in an appointment or if a high-value opportunity was missed [52]. Dealerships get daily dashboards showing which calls turned into repair orders and which didn't, along with **customer sentiment scores** from the call audio [53]. Essentially, this lets managers coach their staff and **recover missed opportunities** – e.g., if a customer was unsure about pricing and didn't book, the system alerts the team to call them back, potentially saving a lost body shop job [53] [54]. By harnessing AI on phone calls, top Ford dealers have reduced missed leads and improved their conversion of estimates to actual repairs. At Quirk Ford Auto Body, implementing such an AI call intelligence tool could ensure our service advisors capture every collision lead and deliver consistent, high-quality phone service. (Notably, this aligns with Group 1's and Sonic's focus on using AI to bolster customer interaction quality).

- **Augmented Reality for Technicians:** Ford's leadership has highlighted the use of **AR and AI to assist service techs** as a "game changer" in 2025, particularly for complex repairs on high-tech vehicles [55]. Some leading Ford dealerships (especially those servicing commercial trucks or EVs) have started equipping technicians with **AR glasses or tablets** that overlay repair instructions and schematics onto the vehicle as they work. Ford's CEO Jim Farley gave an example: when fixing an F-Series Super Duty truck, an **AI-powered AR headset** can recognize components the tech is looking at and display step-by-step guidance or torque specs in real time [56]. This is powered by AI vision algorithms and Ford's database of repair procedures. It effectively reduces the 5+ years of training

usually needed for a master technician by making expert knowledge instantly accessible to junior techs. Some Ford dealers have been trialing **Remote Expert** programs as well: a junior body technician can wear AR glasses and live-stream what they see to a veteran Ford engineer or specialist, who can then draw on the display or guide them verbally. The **AI component** can record these sessions and learn from them, eventually offering suggestions automatically. By simplifying complex repairs (like frame alignments or ADAS sensor calibrations), AR with AI allows top collision centers to maintain quality with fewer seasoned techs – a big advantage amid industry-wide technician shortages. Quirk Auto Body could benefit by exploring Ford's AR tech programs (the Ford Certified Collision Network has begun introducing such tools for certain repairs). Even a tablet-based AR app that scans a vehicle's VIN and shows hidden structural repair points could speed up our repairs and ensure accuracy.

- **AI-Enhanced Damage Estimating:** Many Ford dealers rely on standard estimating software (like CCC One), but top performers are early adopters of **AI photo estimating**. Ford's insurance arm and some large dealer groups have piloted AI solutions (such as **Tractable or Ravin AI**) where you can upload photos of a damaged Ford and get an instant preliminary estimate of repair cost and required parts. These AI algorithms, trained on millions of images, identify damaged panels, broken lights, etc., and compare to historical repairs [57] . While final estimates still require human adjusters, the AI gives a **repair cost prediction in seconds** [57] . Dealership collision centers using these tools can triage vehicles faster – for instance, a service advisor at a top Ford store might snap pictures of a wrecked Explorer as it arrives and have an AI-generated parts list before the car is even torn down. This speeds up parts ordering and improves accuracy in estimating. Additionally, **drive-through inspection portals** (like the UVeye system mentioned earlier) are being installed at some forward-thinking dealers of various brands. Ford dealers in Orlando and Las Vegas have been noted in news for using UVeye's AI scanners to **automatically check vehicles** for damage or maintenance needs during service intake [58] [59] . For a collision center, this means every car can be quickly scanned for prior damage or unsafe conditions (e.g. tire issues) that the customer might not have mentioned, providing upsell opportunities and safety checks. Quirk could evaluate deploying an AI-powered imaging portal at our body shop entrance – it would not only wow customers but also give our estimators a high-tech assessment to complement their own.

In summary, the top-performing Ford dealers in 2025 are using AI/ML at multiple touchpoints: **from customer engagement (chatbots, AI call analysis)** to **shop operations (AR repair aids, intelligent estimates)**. As Quirk Auto Dealers' president, I believe adopting these cutting-edge technologies at our Quincy, MA and Manchester, NH collision centers will drive efficiency and give us a competitive edge. By learning from Group 1's process automation, Sonic's training AI, Mopar/Stellantis' advanced systems, and Ford dealers' AI integrations, we can create a **state-of-the-art collision repair experience** – one that is faster, smarter, and more convenient for our customers. Each of these case studies provides a blueprint for innovation. Now it's on us at Quirk to **implement these AI solutions** in our own operations, leveraging vendor partners (CCC, Impel, Marchex, UVeye, etc.) and automaker programs to stay ahead in the rapidly evolving collision repair industry. With the right investments in AI and machine learning, Quirk's collision centers can increase productivity, reduce cycle times, enhance quality, and ultimately boost customer satisfaction and profitability.

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