

Eli Banks

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SUMMARY

Stamping die process engineer with seven years of experience developing **automotive sheet metal** processes from feasibility through tooling buyoff, plant installation, and production launch. Builds part orientation, die type, process flow, trim operations, forming operations, secondary operations, **preliminary 6 Box processes**, and NX models for capable tooling concepts. Uses Forming Simulation, GD&T, FLD, and CMM data to diagnose formability, surface, dimensional, throughput, and repeatability issues. Leads supplier reviews, engineering changes, procurement, material readiness, static and **dynamic die buyoffs**, and **launch quality loops** across product engineering, stamping, quality, assembly, plants, and suppliers. Practical analysis and open collaboration have supported stable tooling performance, production ready panels, and lessons learned that improve future programs.

EXPERIENCE

Senior Stamping Die Process Engineer

February 2024 - Present

Motor City Tooling Solutions

Troy, MI

Leads automotive body panel process development across feasibility, tooling construction, supplier tryout, buyoff, plant installation, industrialization, and **production launch**. Connects technical decisions with program timing, panel quality, tooling capability, and production readiness while coordinating engineering, quality, stamping, assembly, plant, procurement, and supplier teams.

- Defined **part orientation**, die type, process flow, trim, forming, and **secondary operations** for body panels.
- Built preliminary 6 Box concepts and NX models, using prior lessons to expose feasibility risks early.
- Used **Forming Simulation**, FLD, GD&T, and **CMM data** to correct formability and dimensional issues during tryout.
- Guided suppliers through construction reviews, static buyoffs, dynamic buyoffs, and shipment readiness decisions.
- Coordinated E/C actions, material readiness, requisitions, and procurement with engineering, quality, plant, and supplier partners.
- Supported installation, debug, industrialization, and launch quality loops, stabilizing panel **surface quality** and die repeatability.

Die Process Engineer

June 2021 - January 2024

Lakeshore Stamping Engineering

Warren, MI

Developed process plans for structural and appearance components, translating feasibility findings into clear tooling intent and production capable panel processes. Managed supplier technical reviews, dimensional analysis, early build readiness, **engineering changes**, and plant launch actions through stable handoff.

- Developed process plans balancing **formability**, dimensional control, surface requirements, press limits, and production **throughput**.
- Created NX feasibility geometry and 6 Box concepts clarifying trim, form, restrike, and secondary operation intent.
- Reviewed forming simulations and **FLD** outputs, resolving thinning, splitting, wrinkling, and material flow risks before tryout.
- Applied CMM reports and **GD&T** requirements to prioritize die corrections supporting downstream **assembly** geometry.
- Managed supplier reviews through design, construction, tryout, and buyoff, closing concerns with documented countermeasures.
- Coordinated material, E/C actions, installation issues, and quality loop tasks during early builds and plant launches.

Manufacturing Process Engineer

November 2019 - May 2021

Midwest Forming Technologies

Sterling Heights, MI

Supported automotive panel tooling programs through feasibility review, process documentation, tryout, buyoff, plant debug, and early production. Worked with senior engineers, internal teams, plants, and suppliers to connect dimensional findings with practical die adjustments and launch actions.

- Supported panel tooling development, building knowledge of **die construction**, press operations, trim, forming, and launch quality.
- Prepared NX models and process documents covering **part orientation**, operation sequence, and tooling clearances for reviews.
- Analyzed CMM reports and **GD&T** callouts with senior engineers, tracing variation to process conditions during tryout.
- Tracked **material availability** and tooling issues, keeping action records clear across engineering, plant, and supplier contacts.
- Documented static and dynamic buyoff findings, panel **quality** concerns, and corrective actions before tooling shipment.
- Supported plant **debug** and early production, sharing panel feedback that informed lessons learned for later programs.

PROJECTS

Automotive Panel Launch Quality Loop 📅 2026

Partnered with plant, quality, stamping, and supplier teams to connect panel measurements, die behavior, and launch feedback. Shared practical findings during reviews, helping teams close surface, dimensional, formability, and repeatability concerns before stable production handoff.

Preliminary 6 Box Feasibility Study 📅 2025

Worked with tooling designers to shape part orientation, trim flow, forming intent, and secondary operations in early NX studies. Open discussion around prior lessons helped surface feasibility risks before detailed construction began.

LEADERSHIP & AWARDS

- Senior Technical Mentor, Stamping Process Peer Mentoring Group, 2025
- Technical contribution recognized for supplier buyoff readiness and launch quality support, 2024

EDUCATION

Bachelor's Degree in Mechanical Engineering

Oakland University GPA: 3.5

Coursework: Engineering Design, Manufacturing Processes, Materials Science, Quality Control

2019

Rochester, MI

CERTIFICATIONS

- Siemens NX Advanced Modeling Certificate 📅 2022
- GD&T Professional Development Certificate 📅 2021

TECHNICAL SKILLS

- **Stamping Process:** Part orientation, die type selection, process flow
- **Die Operations:** Trim operations, forming operations, secondary operations
- **NX Modeling:** NX, feasibility geometry, tooling clearances
- **Forming Analysis:** Forming Simulation, FLD, material flow
- **Dimensional Quality:** GD&T, CMM, dimensional reports
- **Tooling Development:** Die construction, tooling tryout, die capability
- **Buyoff Activities:** Static die buyoff, dynamic die buyoff, shipment readiness
- **Launch Engineering:** Plant installation, debug, industrialization
- **Supplier Coordination:** Supplier reviews, technical countermeasures, readiness criteria
- **Program Controls:** Engineering changes, procurement, material readiness

SKILLS

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|----------------------------|----------------------|------------------------|--------|
| • Stamping Die Engineering | • Die Type Selection | • Secondary Operations | • GD&T |
| • Automotive Manufacturing | • Process Flow | • 6 Box Processes | • FLD |
| • Die Process Development | • Trim Operations | • NX Modeling | • CMM |
| • Part Orientation | • Forming Operations | • Forming Simulation | |

PROFESSIONAL AFFILIATIONS

- Stamping Process Peer Mentoring Group, Senior Technical Mentor, 2025 - Present
- Society of Manufacturing Engineers, Automotive Manufacturing Member, 2021 - Present

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST