



PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.



TSM Corporate Presentation 2022

Manufacturing Locations



TSM Auburn Hills (HQ)

- Located in Auburn Hills, Michigan
- Founded in 1978
- 150,000 sq. ft. Facility



TSM Ramos

- Located in Ramos Arizpe, Mexico
- Founded in 2010, acquired Sep 2018
- 76,000 sq. ft. Facility



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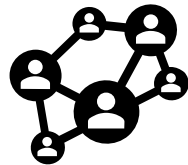
About Us...

- TSM Corporation is a full service Tier I manufacturer of precision machined assemblies to the automotive, military, and marine markets
- Year founded: 1978
- Headquarters: Auburn Hills, Michigan
- Manufacturing Locations:
 - Auburn Hills, Michigan, 150,000 Sq Ft
 - Ramos Arizpe, Mexico, 76,000 Sq Ft.



Product Development

- Gray Box Design Solutions
- DFM
- DFA
- Prototypes
- 3D printing capability



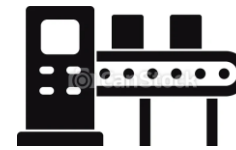
Global Supply Chain Management

- Aluminum High Pressure Die Casting
- Aluminum Low Pressure Casting
- Ductile Iron Casting
- Grey Iron Casting
- Steel Forging
- Aluminum Forging
- Aluminum Extrusion
- Consigned Materials



Machining

- 3-5 axis
- HMC/VMC
- Flexible
- Dial index
- Automation
- Pressure Washing



Component Assembly

- Seals
- Sensors
- Bushings
- Gaskets
- Other



Inspection & Testing

- CMM
- Leak
- Flow
- Priming
- Torque
- PLEX



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Products

Complex Assemblies

Engine Cover, Oil Pan, Oil Filter Adaptor, Intake Manifold, Water Inlet, Turbo Pipe, Oil Pump, etc.



Tow Hooks

Front & Rear Tow Hook, Tow Eye, Bed Tie Down Assembly

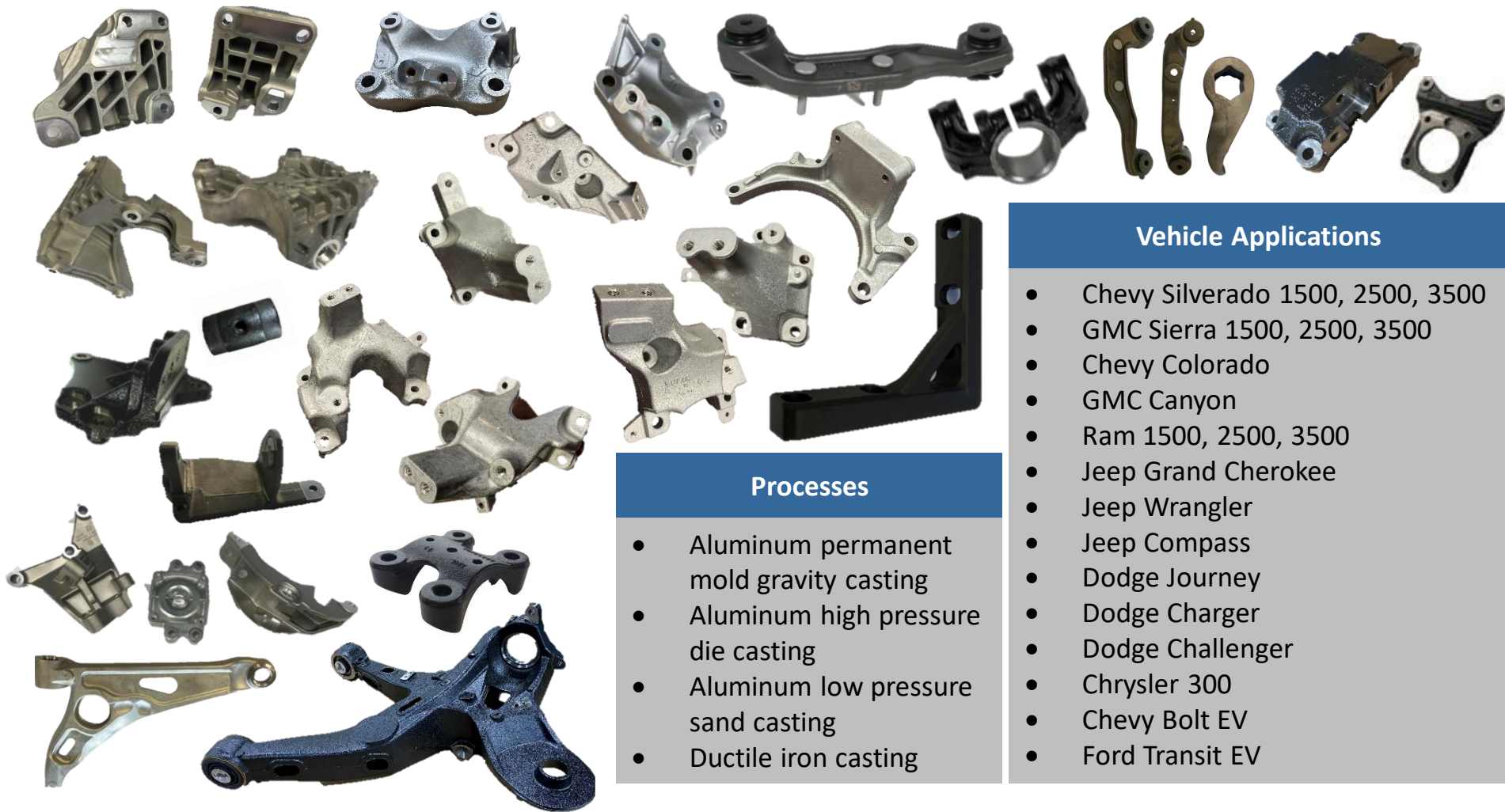


Brackets

Mount Brkt, Diff Carrier Brkt, Caliper Brkt, Control Arm, Trailing Arm, Anchor Plates, Corner Brace, Yoke



Mount Bracket Experts (Currently supply over 5 million units / year)



Vehicle Applications

- Chevy Silverado 1500, 2500, 3500
- GMC Sierra 1500, 2500, 3500
- Chevy Colorado
- GMC Canyon
- Ram 1500, 2500, 3500
- Jeep Grand Cherokee
- Jeep Wrangler
- Jeep Compass
- Dodge Journey
- Dodge Charger
- Dodge Challenger
- Chrysler 300
- Chevy Bolt EV
- Ford Transit EV

Processes

- Aluminum permanent mold gravity casting
- Aluminum high pressure die casting
- Aluminum low pressure sand casting
- Ductile iron casting

Manufacturing Capabilities

MACHINING

VMC's - YCM NV156,
HAAS, MORI, Brother
Speedio R650 X1

HMC's - Makino
a71's, Makino a51's,
Doosan NHP 4000's,
Doosan NHP 5000's

Large & Small Dial
Index machines,
Hitachi-Seiki Vertical
Lathe, Mazak 5 axis



WASHING

Mid Pressure high
flow linear washing

High pressure high
flow rotary washer



QUALITY

CMM, Dimensional
LAB, Cleanliness

Pressure decay and
mass flow automatic
leak testers

In line variable gaging



TESTING & ASSEMBLY

Component Assembly
Torque Control
Load cell control

Pressure Decay and
mass flow automatic
leak testers



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Certifications & PLEX



- IATF 16949:2016 Certification
- TSM engages all employees and business partners in ensuring quality and integrity throughout our processes



- ISO 14001:2015 Certification
- TSM is committed to promoting health and safety by consciously minimizing our impact on the environment



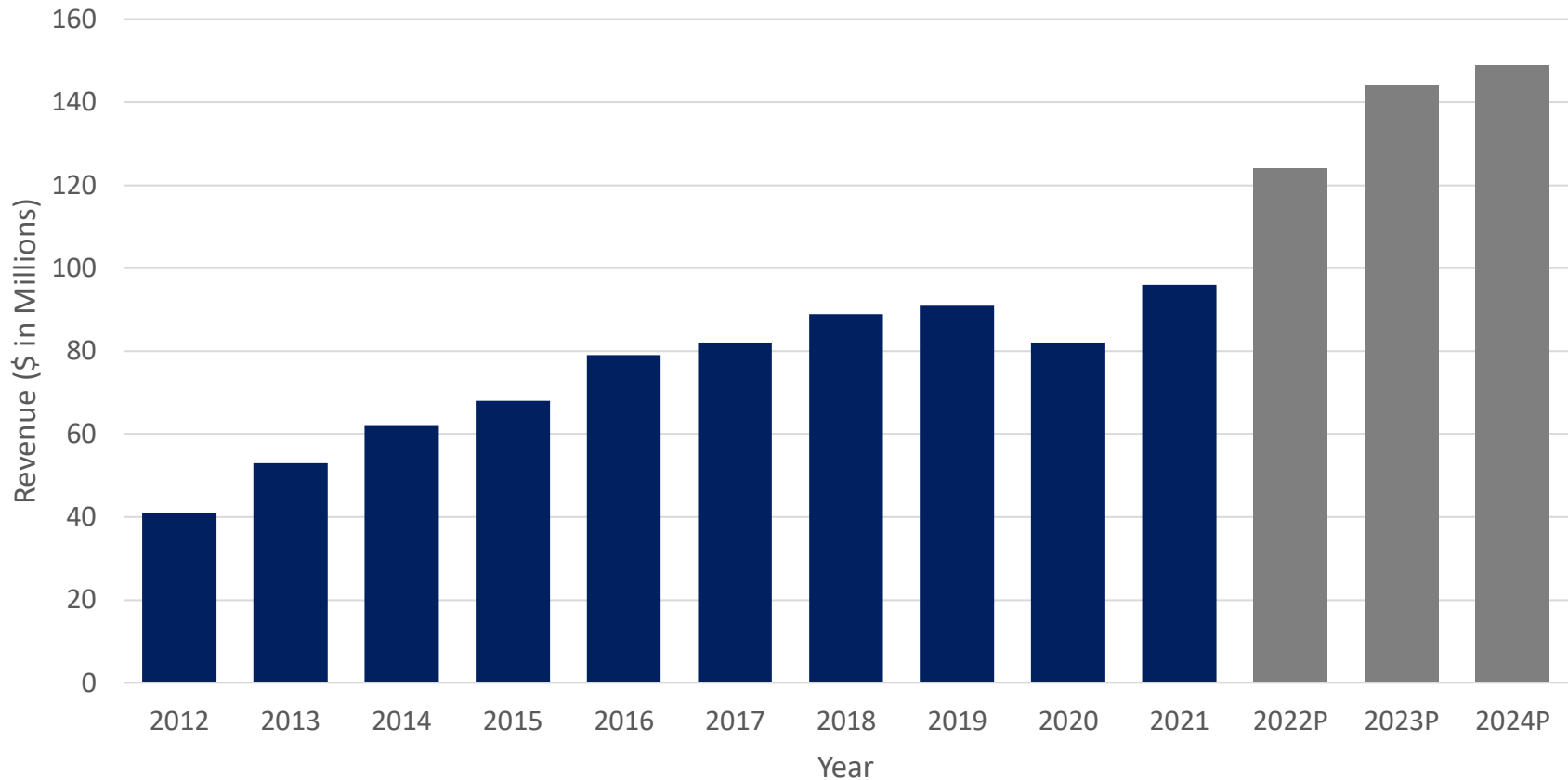
- TSM implemented Plex ERP System to be track manufacturing operations, inventories, quality, etc.
- Full visibility on parts throughout entire supply chain



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Production Revenue

TSM Revenue Growth (2012-2024)

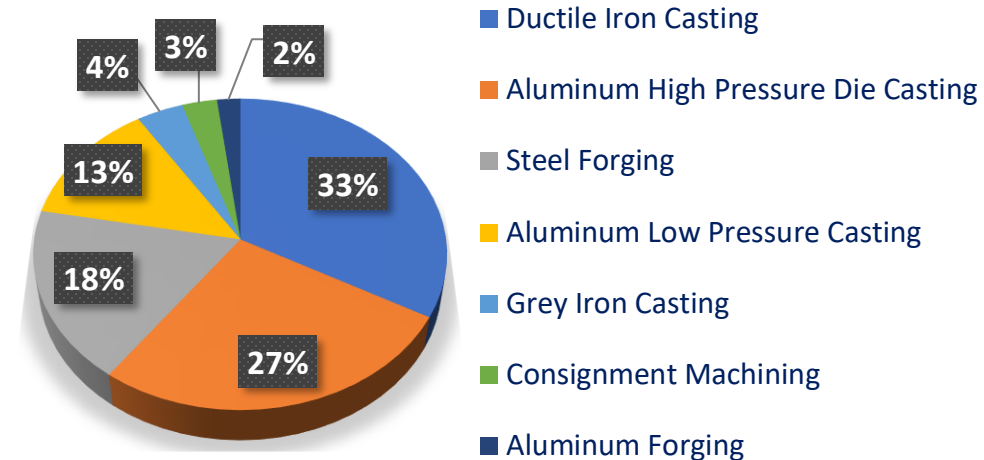


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Diversification

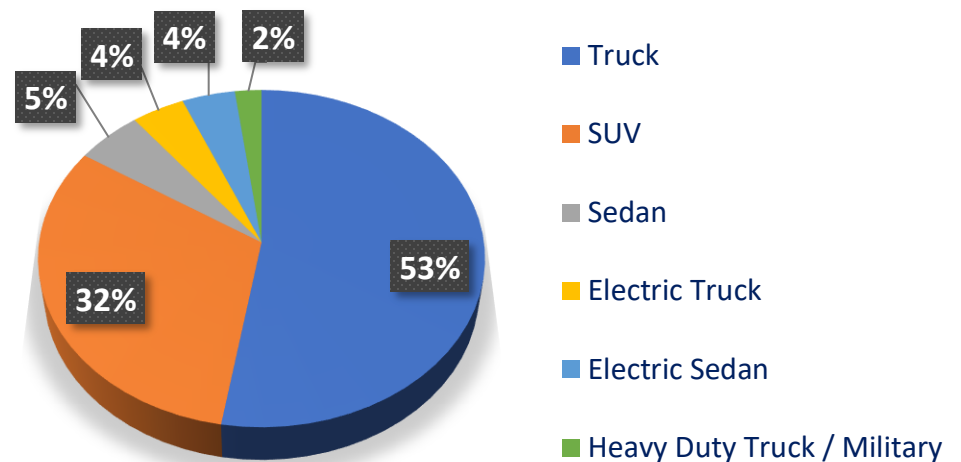
Flexible Material Solutions

- TSM's global supply chain network offers a unique competitive advantage as we are able to supply a variety of different materials and processes



Market Diversification

- TSM has made strong efforts to diversify our target markets
- Majority of TSM's business is with what are deemed as "low-risk" platforms

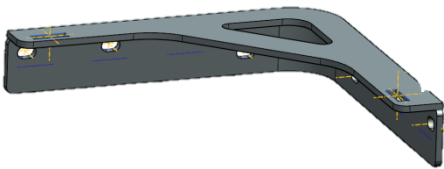


Flexible Design Solutions

TSM offers “Gray Box” design solutions to meet or exceed expectations

- Weight Reductions
- Cost Reductions
- Improvement of Mechanical Properties (UTS, Yield Strength, Hardness, etc.)

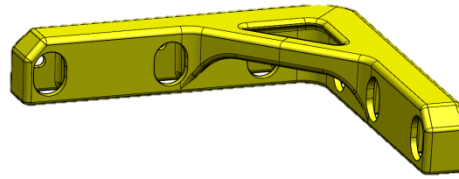
Customer Design



- Steel Stamping
- 6.1 lbs
- RH & LH Specific
- Not meeting strength / stiffness requirements



TSM Design



- Aluminum Perm Mold Casting
- 4.5 lbs
- Common both sides
- Meets strength / stiffness requirements



Results



- ✓ 1.6 lb Weight Savings
- ✓ Improved Mechanical Properties
- ✓ Under Budget
- ✓ On Time

Focused on an Electric Future



TSM has been awarded new business on a variety of new electric vehicles, expanding its footprint in the growing EV market.

EV Products of Interest

- Control Arms
- Semi Trailing Arms
- Tow Hooks
- Bed Tie Downs
- Leaf Spring Brackets, Spacers, Anchor Plates
- Brake Caliper Brackets
- Links
- Knuckles
- Gearbox Covers / Housings
- Motor Covers / Housings
- Hub Flange
- Support Brackets
- Battery Connector Pouches



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