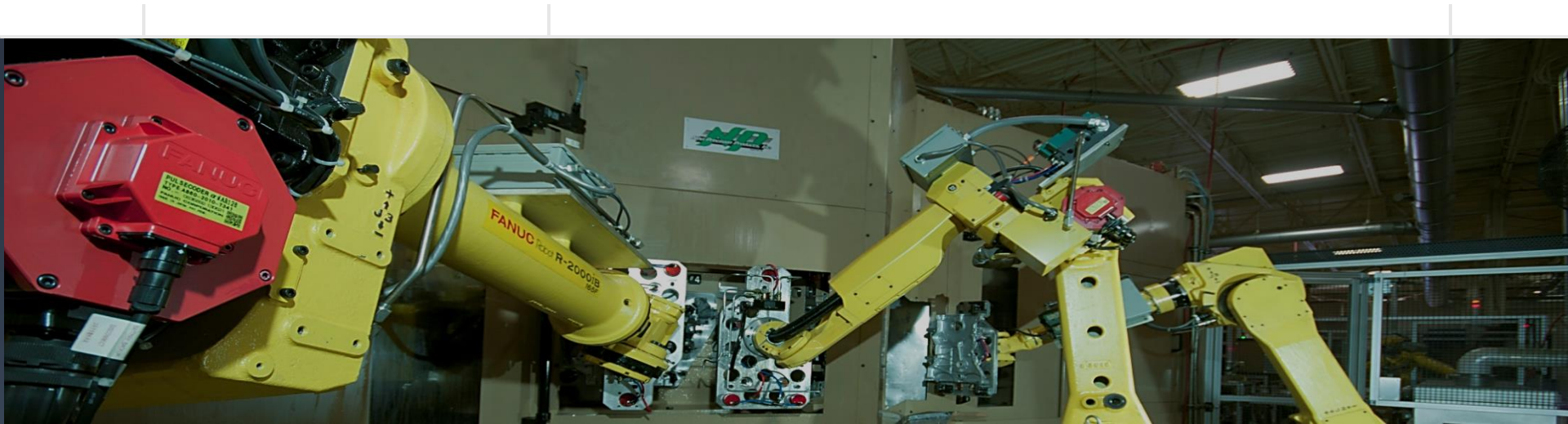




PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.



## 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



PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.

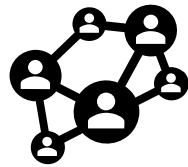
# About Us...

- 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.



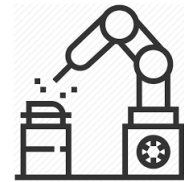
## Product Development

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



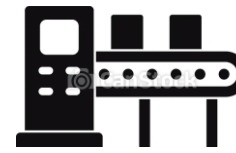
## Global Supply Chain Management

- 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



PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.

# 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





# 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

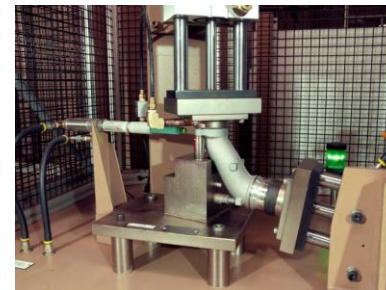
In line variable gaging



## TESTING & ASSEMBLY

Component Assembly

Pressure Decay and  
mass flow automatic  
leak testers



PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.

# 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



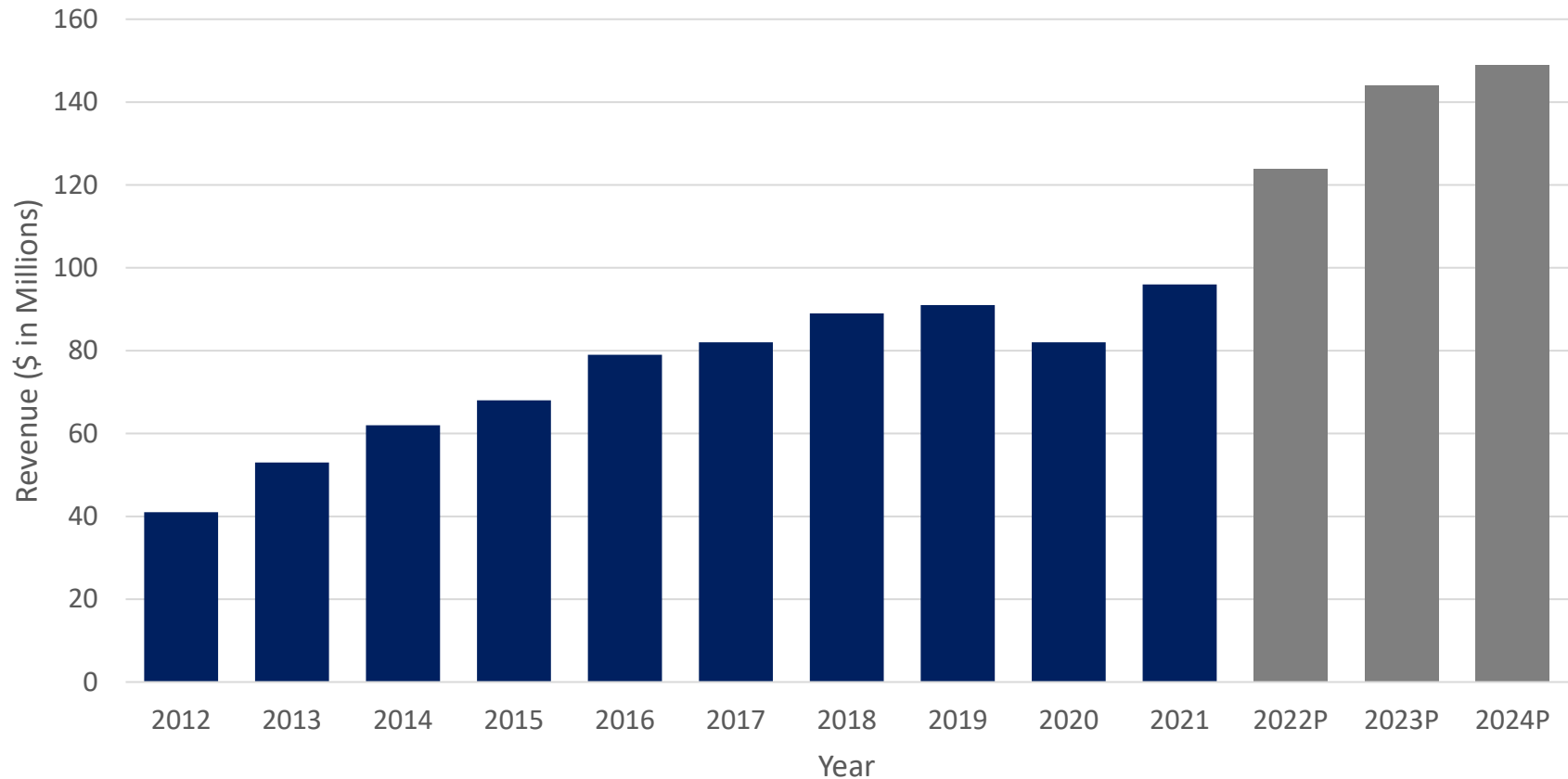
- TSM implemented Plex ERP System to be track manufacturing operations, inventories, quality, etc.
- Full visibility on parts throughout entire supply chain



PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.

# Production Revenue

## TSM Revenue Growth (2012-2024)

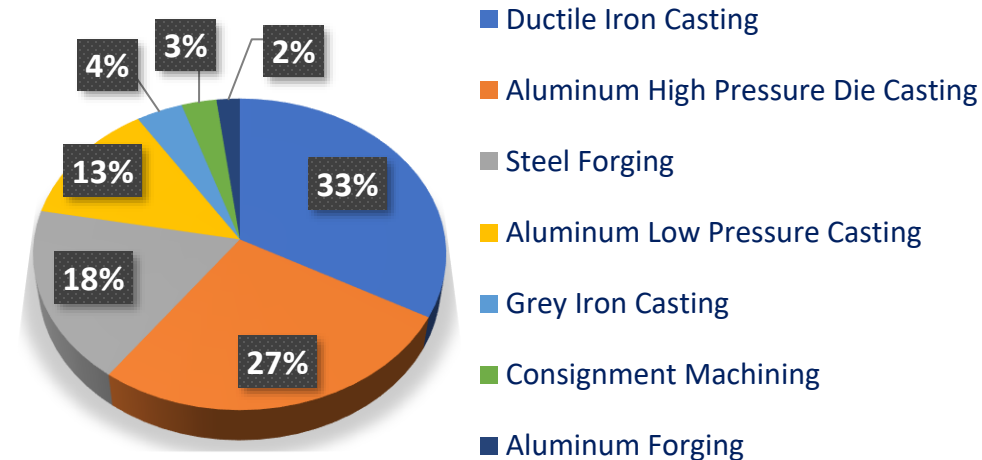


PRECISION MACHINED PRODUCTS FOR THE GLOBAL MARKET.

# Diversification

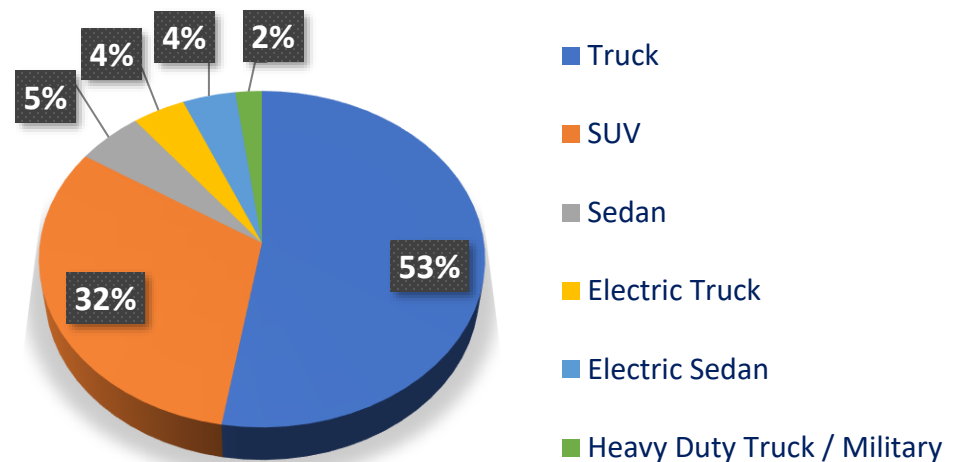
## Flexible Material Solutions

- 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



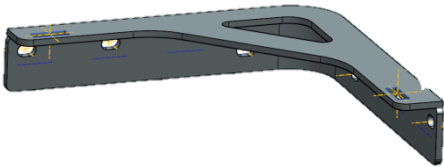


# Flexible Design Solutions

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

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

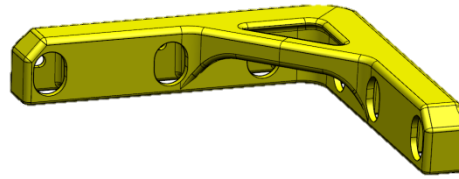
## Customer Design



- 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

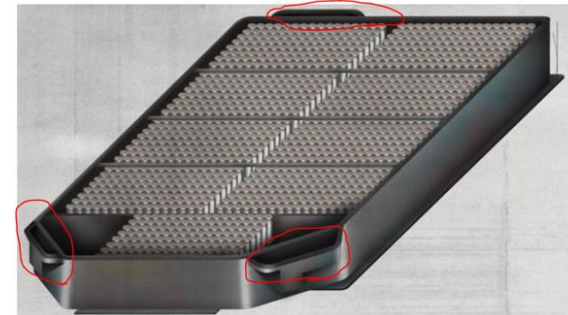
# Focused on an Electric Future



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





# Contact Information

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