



# Process

**Vacuum molding**  
**Compression Molding**  
**Thermal Forming**  
**Rapid Prototype Tooling**  
**SMC Molds**  
**Electrical Engineering**  
**Automation Machines**  
**Bypass Trim Tools**  
**Waterjet Trimming**  
**Pour Molds**  
**Inspection Fixtures**



# Our Specialization

**Hood, Dash, Tunnels, Cowls Absorbers**

**Trunk and carpet system**

**Headliners**

**Package Trays**

**Engine cover**

**SMC Floor and Kick Plates**

**Heatshield**

**Battery Wrap**

**Wheelhouse Liners**

**Load floor**

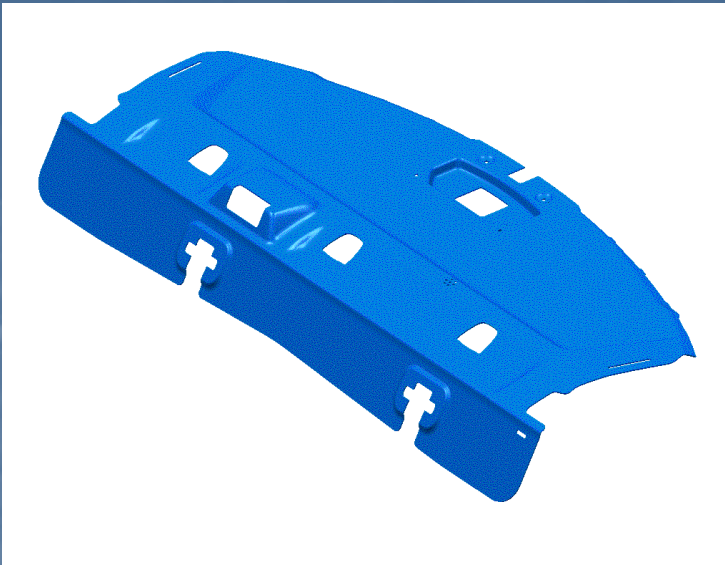
**Poke Yoke**



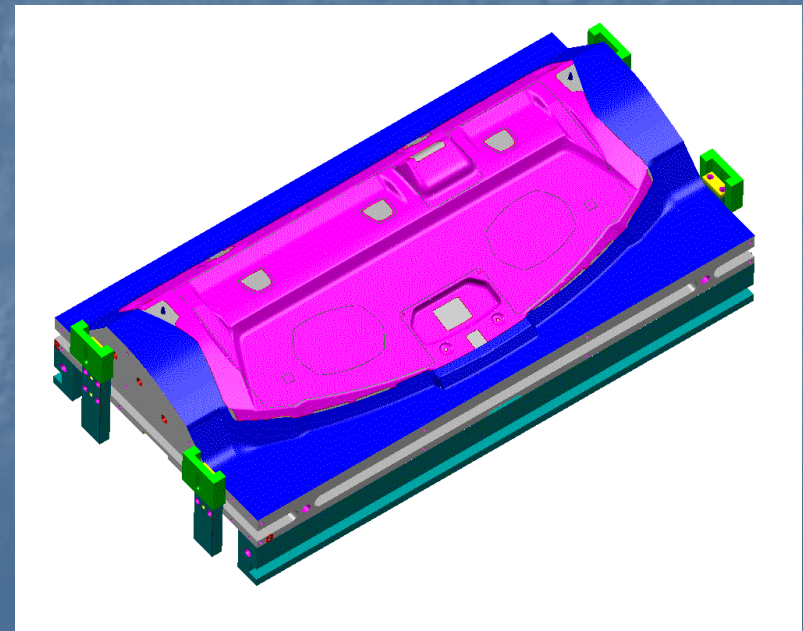
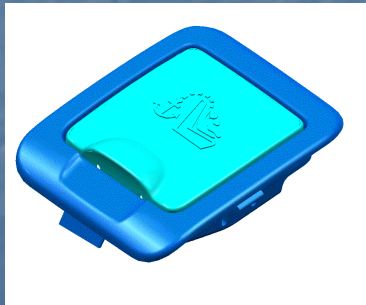
# Design Capabilities

- Product Development
- Part Design Modification
- Complete Tooling Design
- Engineering and Tooling Modification
- Data translation and CNC Programming
- Surface and Solid Modelling
- Detail Drawings with BOM

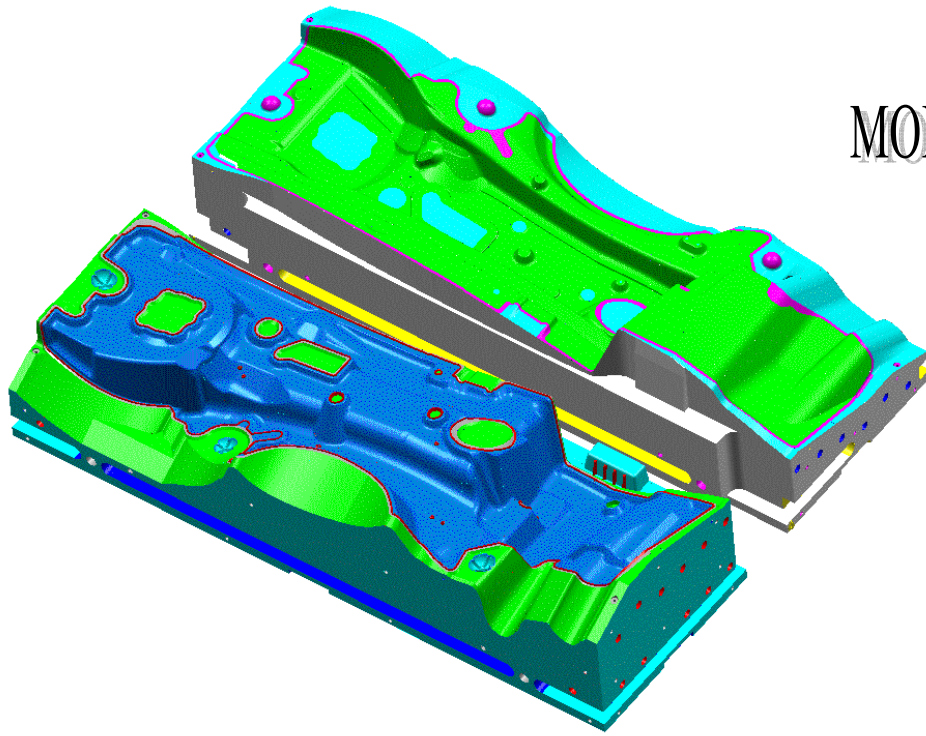




# PACKAGE TRAY AND COMPONENTS



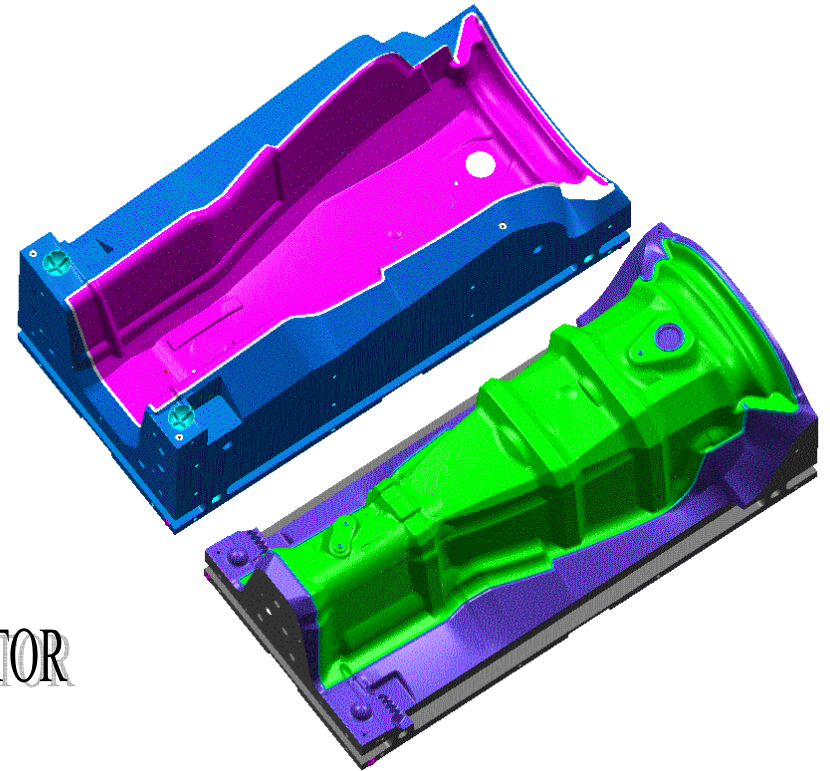


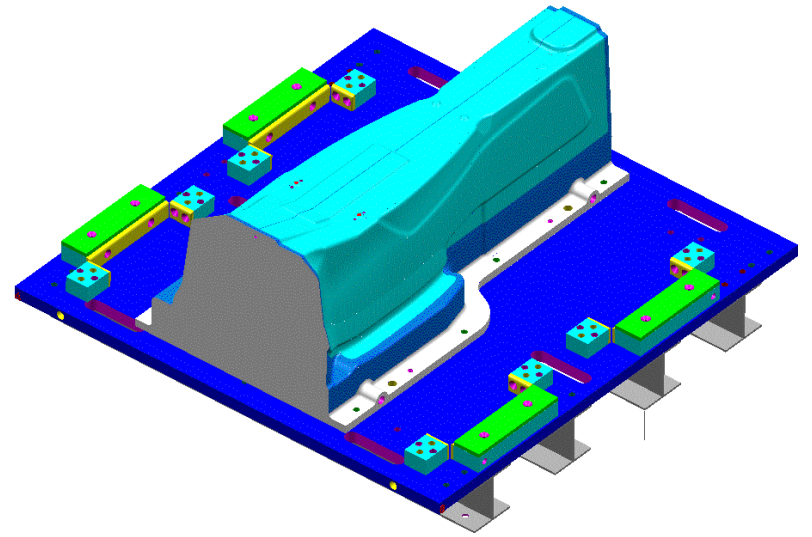
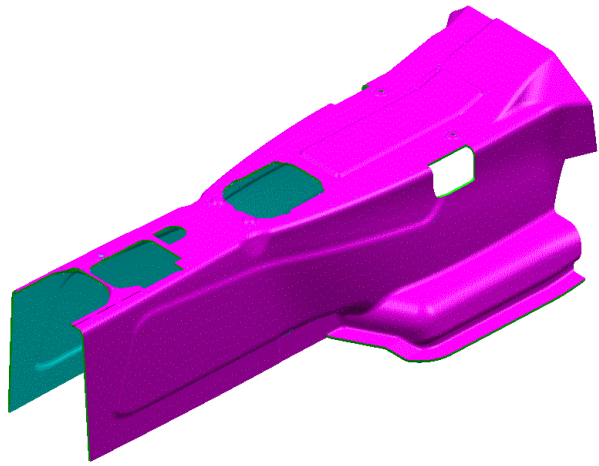


MOLD AND PINCH DASH INSULATOR

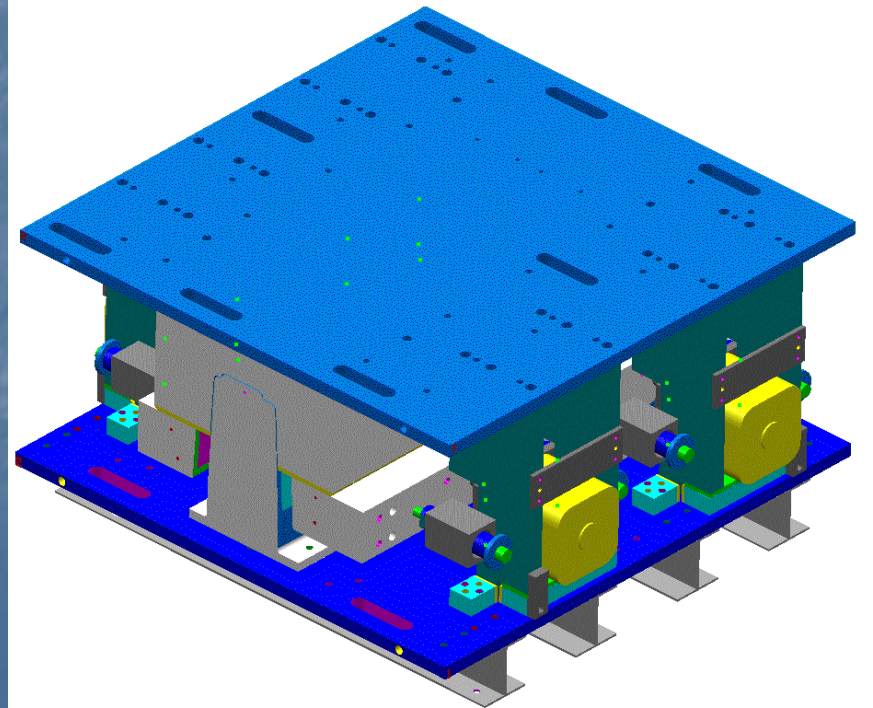
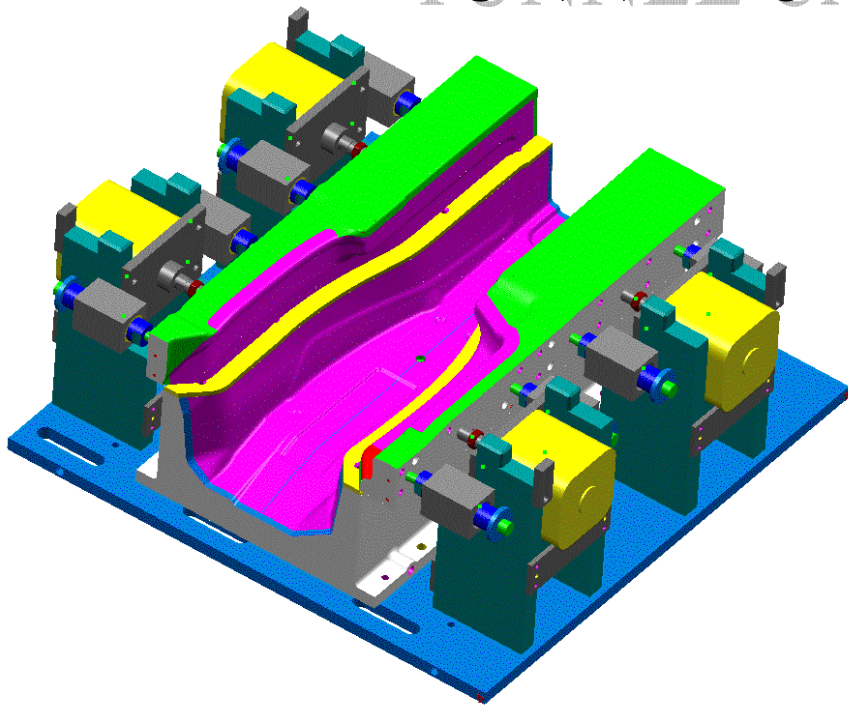


MOLD AND PINCH TUNNEL INSULATOR



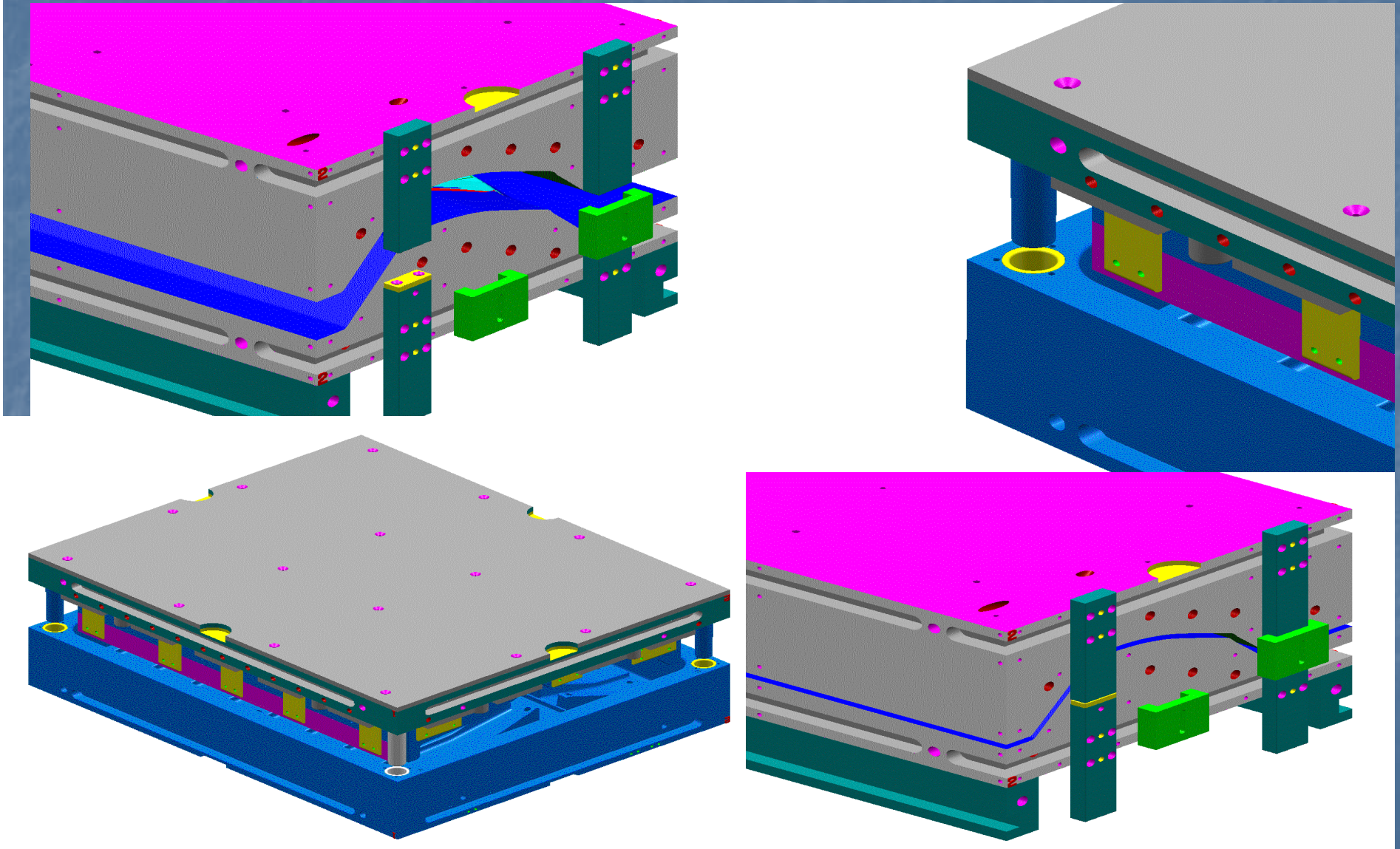


# TUNNEL CARPET TOOLING



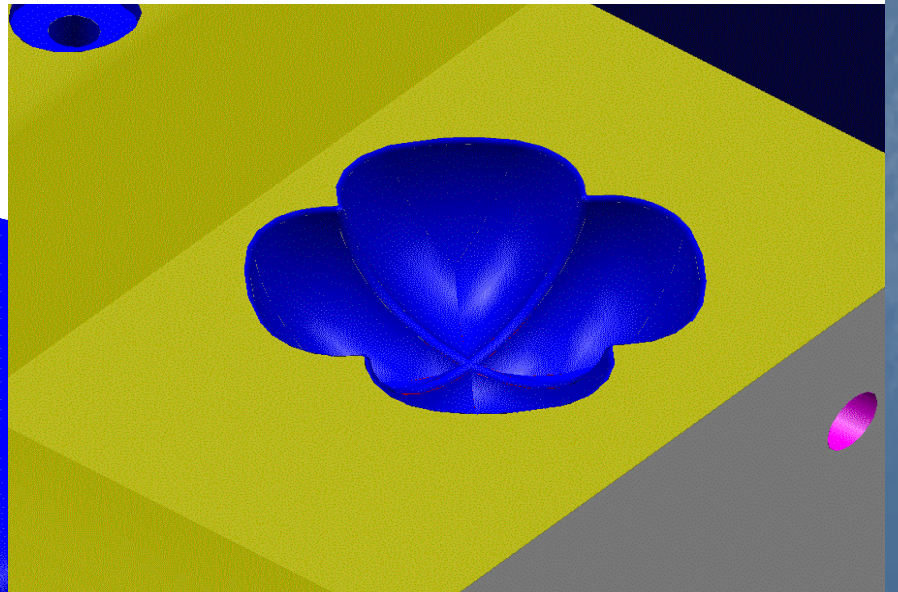
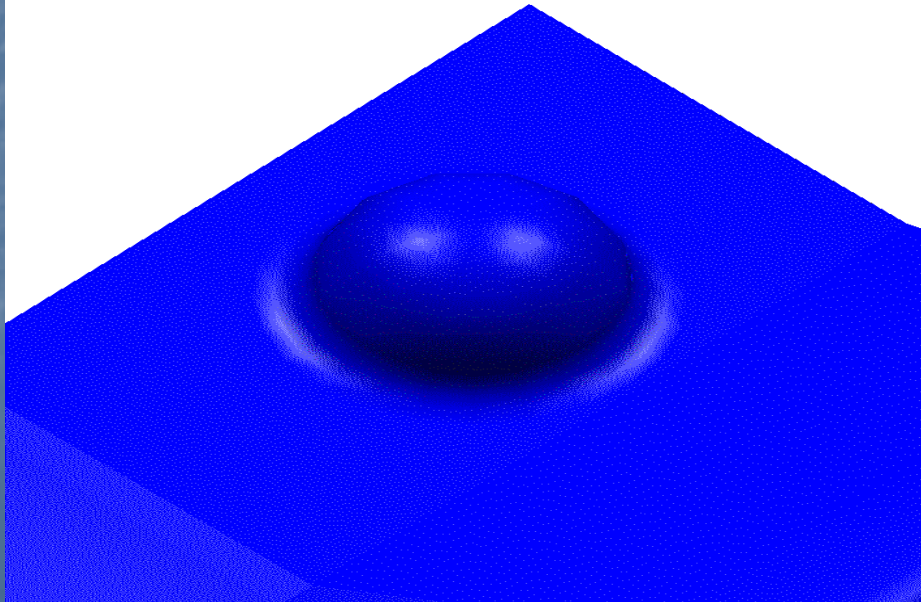
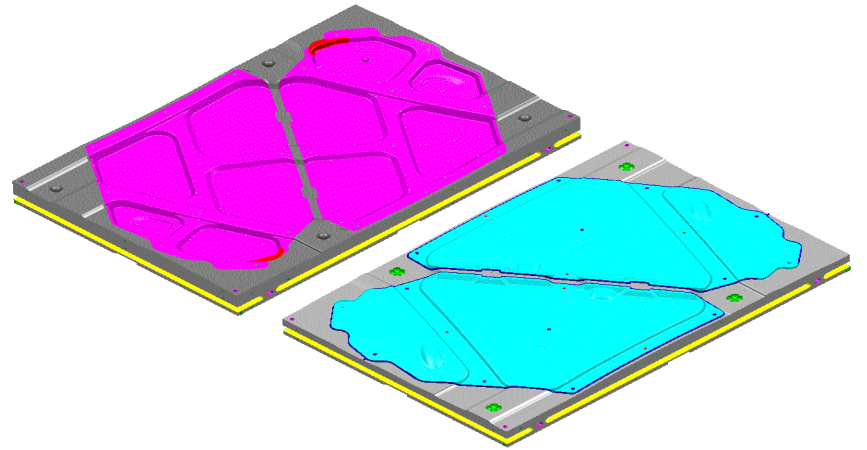
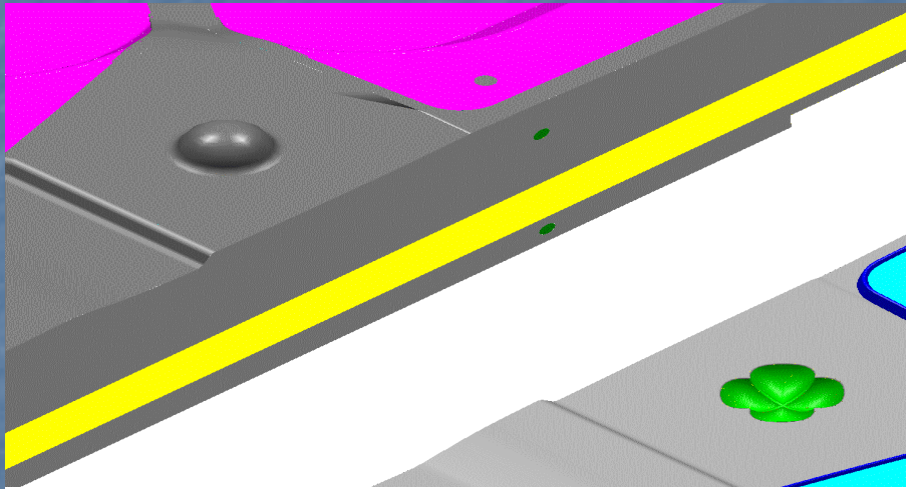


# External Mold Locators

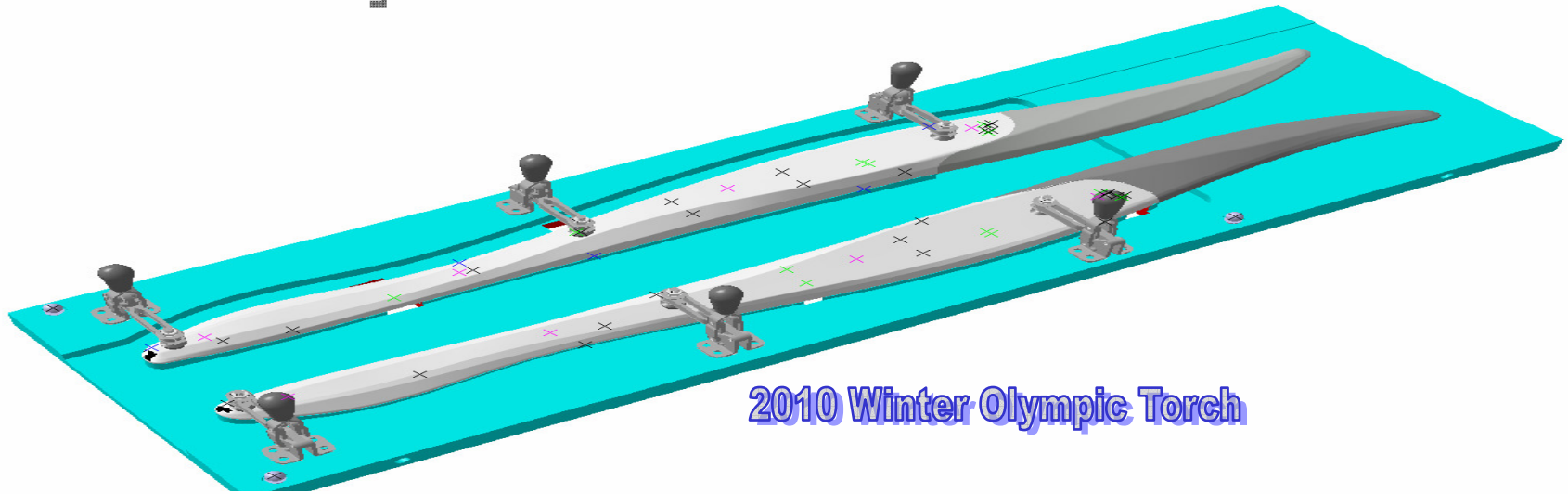




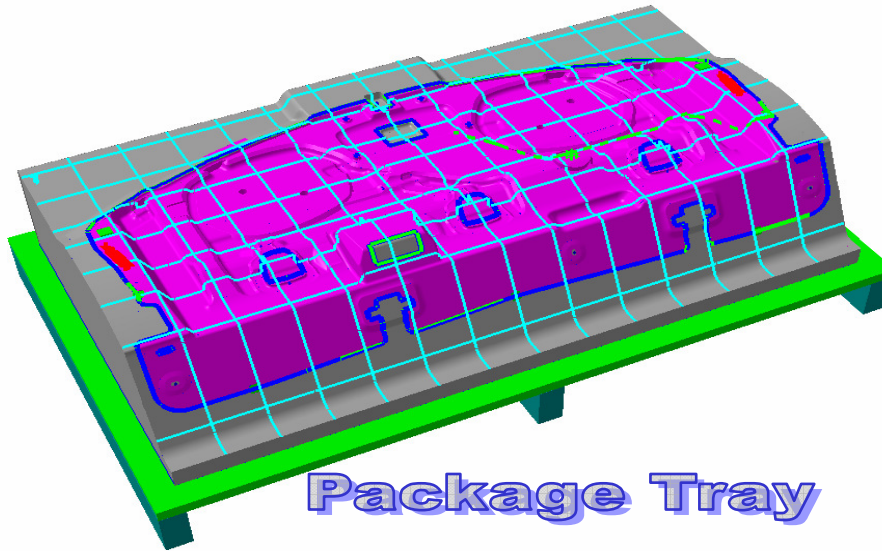
# Internal Mold Locators



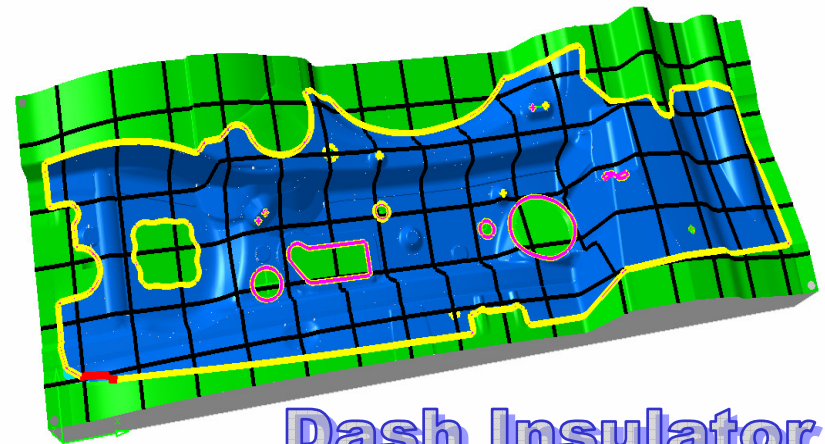
# Inspection Fixtures



2010 Winter Olympic Torch



Package Tray

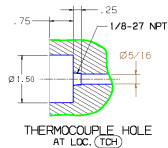
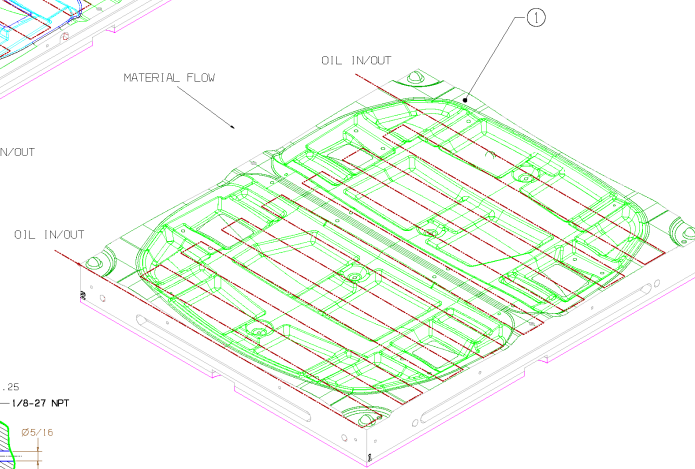
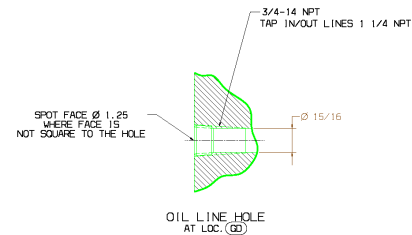
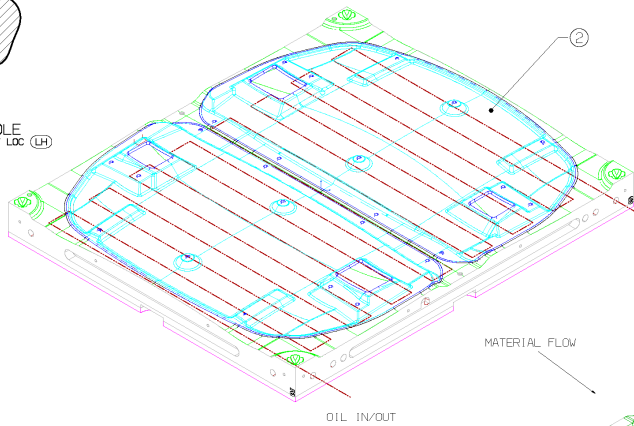
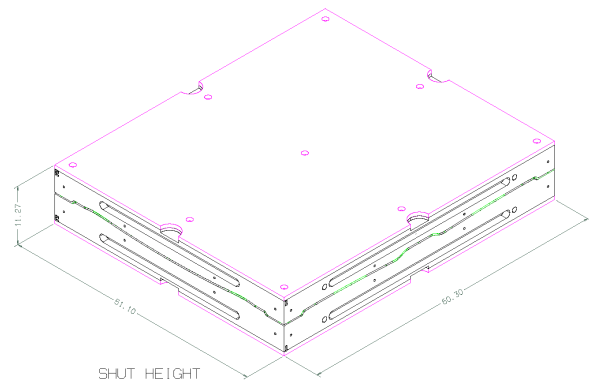
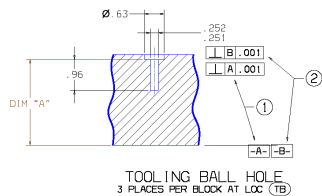
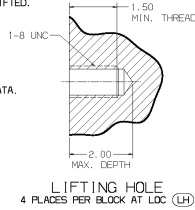


Dash Insulator



# Oil Heated Mold Assembly

1. ALL DIMENSIONS ARE IN INCHES IF NOT SPECIFIED.
2. THIS DRAWING IS SUPPORTED BY ELECTRONIC DATA.
3. DO NOT SCALE DRAWING
4. (SC) TO SHARP CORNER
5. (GD) ALL DEPTHS TO BE MEASURED FROM THE 6 OUTERMOST FACES ON BLOCK.
6. (TB), (CL) LOCATIONS SUPPORTED BY MATH DATA.
7. CAVITY ID: MARK ITEM 1 HOLDING SURFACES AS FOLLOWS. TOOL A- (BLANK) TOOL B-



LINEAR INCHES OF OUT - 110"

TOP HOLD MACHINED TO PRINT DATA FILE.

BOTTOM HOLD MACHINED TO PRINT DATA FILE.

EXTRA FINISHES APPLIED	SHARP FACTOR

TOOLING APPROVAL BLOCK	
TOOL MANAGER: _____	DATE: _____
CUSTOMER APPROVAL: _____	DATE: _____
PRODUCTION MANAGER: _____	DATE: _____

DRAWING REVISION TABLE			PART NUMBER
TOOL (PLOT DATE)	ALTERATION	INITIAL RELEASE	20030301010
TOOLING (PLOT DATE)			20030301010

QTY	ITEM	MATL	DESCRIPTION	DIMENSION/SPEC
2	5	STD	THERMOCOUPLE	BAVONET TYPE
8	4	INSBOARD	INSULATION-SIDES	SEE CAD DATA
2	3	INSBOARD	INSULATION-TOP/BOT	60.30 X 51.10 X .75(H)
1	2	P 20	TOP HOLD (NET)	60.30 X 51.10 X 6.00(H)
1	1	P 20	BOTTOM HOLD (NET)	60.30 X 51.10 X 6.00(H)

DESIGNER: SUBARU	DATE: _____
LINEAR: _____	DATE: _____
ANGULAR: ± .5'	DATE: _____

TOOLING: SUBARU	DATE: _____
TOOLING: SUBARU EZS HOOD	DATE: _____
TOOLING: SUBARU EZS HOOD INSULATOR	DATE: _____
TOOLING: TL0304MOLD1	DATE: _____
TOOLING: N MATHEW	DATE: _____
TOOLING: D QUINN	DATE: _____

SCALE NTS 2:1 1 OF 3



# Electric Coil & Split-Cartridge Heaters



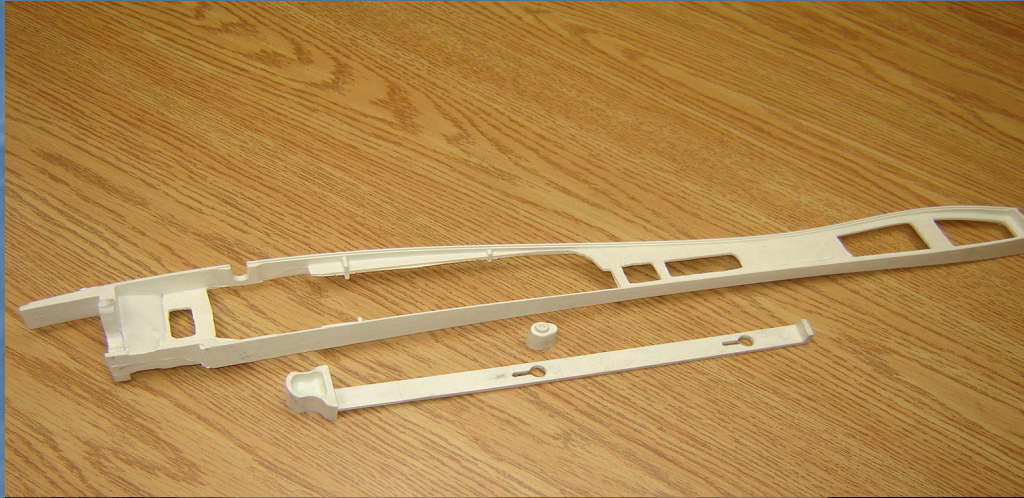


# SMC Parts





# SMC Parts





# 2010 Winter Olympic Torch



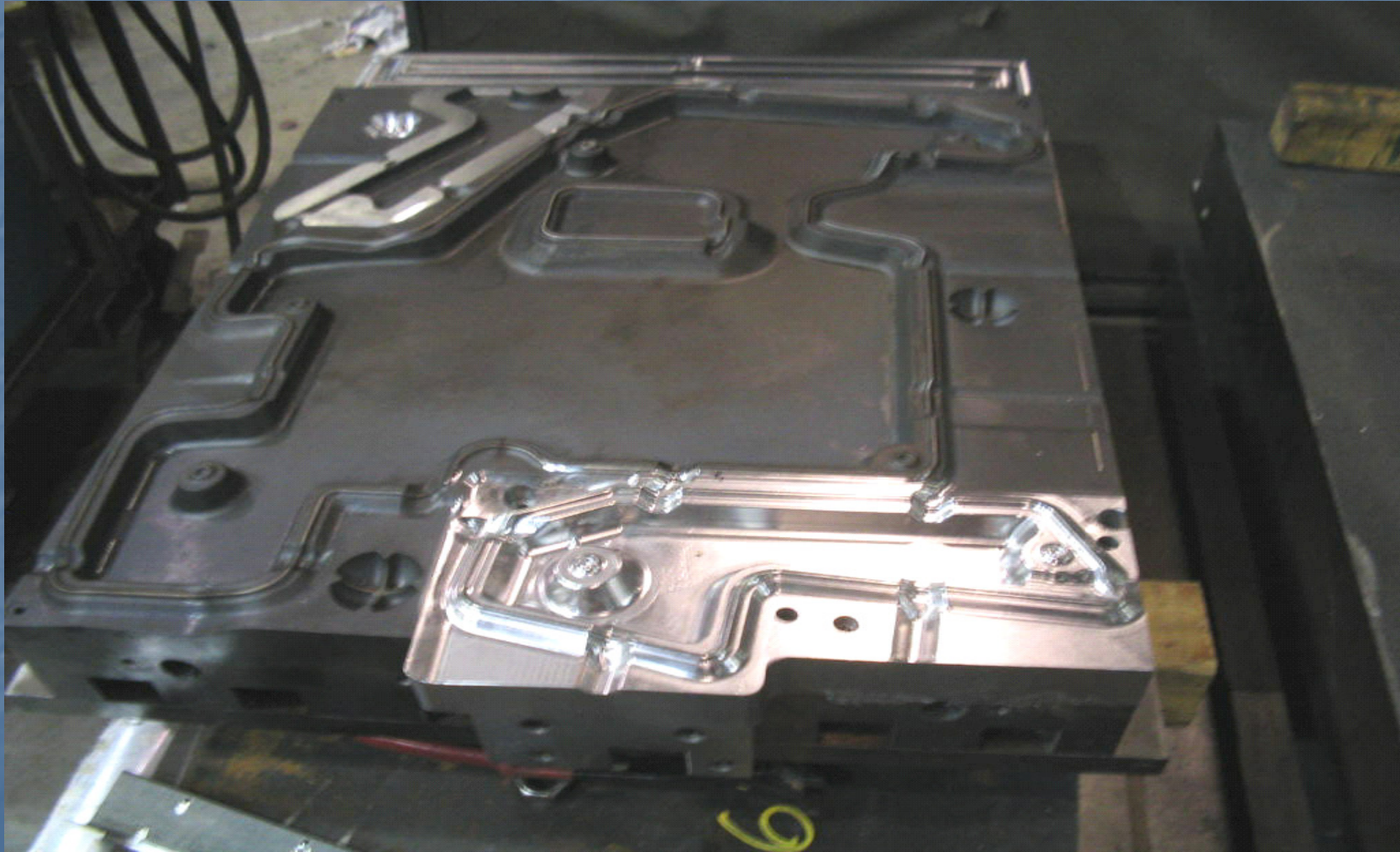


# Mold & Pinch Dash





# Mold & Pinch





# Carpet Tunnel Mould





# Mould & Pinch Refurbishment



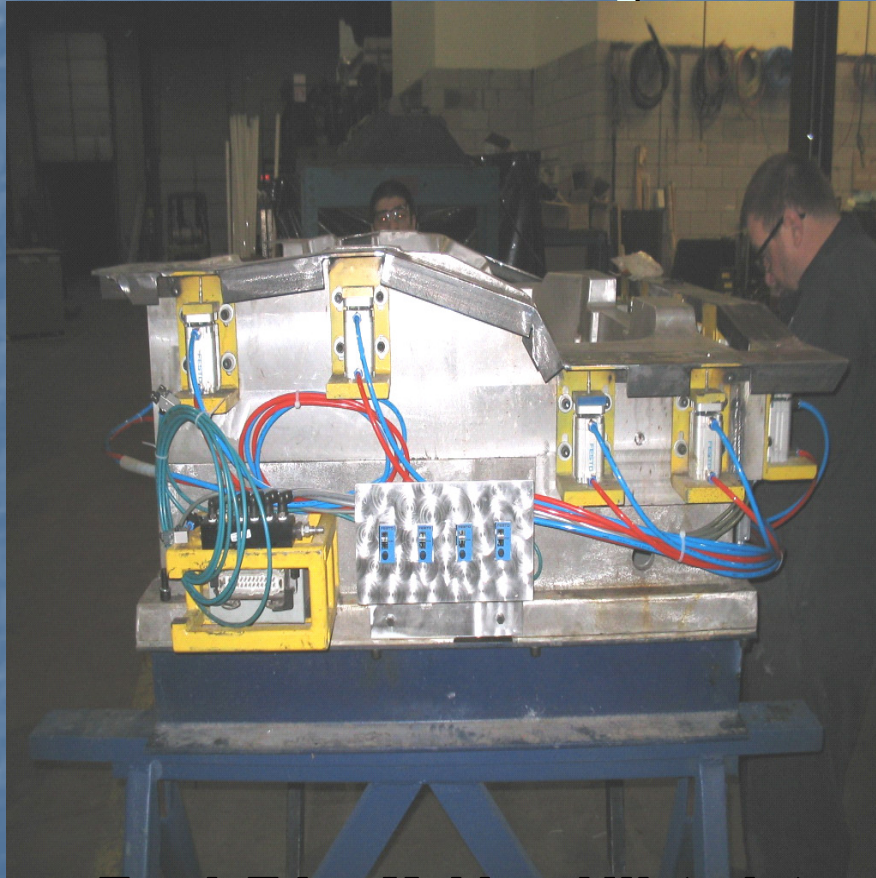


# Tunnel Insulator





# Compression Molds



*Trunk Trim, Mold and Waterjet.*



*Hood Insulator, Mold and 2D Diecut*



# Headliner Mould





# Cooling Fixture



\* Tool size 65" X 57" X 8"

\*Trimming Fixture with suction cups.



## Water Jet Fixture

