

# **MICHIGAN CUSTOM MACHINES, INC.**

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# Product Highlight: BATTERY TEST

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The MCM Battery Pack test line is comprised of MCM test machines and conveyor transport. Each bay will auto read the part bar code or pallet tag to establish the pack details and communicate via Ethernet with the line control, for testing directions and to report resultant data. The machines perform multiple a coolant system leak test, end-of-line (and in-line) testing, as well as continuity, electrical safety and Hi-Potential tests.

## Background

Batteries for passenger vehicles must be safe to operate and reliable in extreme vehicle conditions. The testing of battery pack systems ensures vehicle owner safety and low manufacturer warranty costs. OEMs and their suppliers want to

ensure that the cooling systems for the batteries are leak free, the electrical connections are solid with no current leakage or shorts, and the electrical/mechanical operation of the battery pack behaves as intended. The testing equipment used must also be reliable, quick in operation, and provide repeatable results to ensure efficient production. The MCM test system exceeds our customer's demands, and provide day-in, day out testing assurance.

### **Machine Features:**

- Fully automated, three-station test machine for:
  - Coolant leak check for battery temp conditioning circuits
  - HiPot Electrical current leakage and insulation checks
  - Mechanical and operational checks
- Testing ranges are configurable to customer needs:
  - Multiple battery pack configurations and sizes
  - Multiple coolant ports, flow paths, and connection types
  - High voltage AC/DC inputs/outputs
  - Low voltage 12/24/48 V DC and logic level
  - CAN and other types of vehicle communications
- Test time for one battery pack through operations: 120 sec.

#### Ease of Use

The machine design can be configured for a multitude of operational setups, including standalone HMI and PC control, or full assembly line integration with Ethernet and propriety customer communication. We design our touch interface to be intuitive to use, best match your specific situation, and display what you and the operator need to know, all with the touch of a finger.



