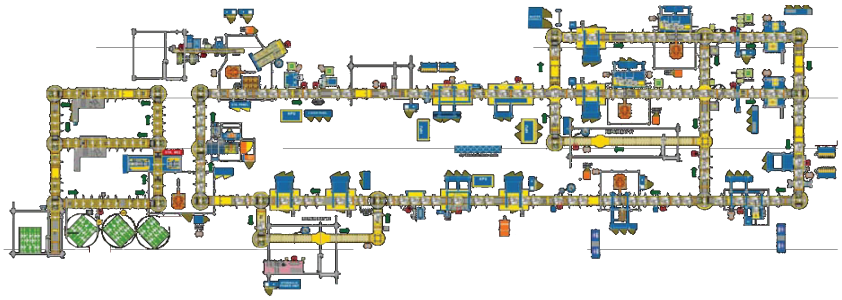
ROBOTICS

Independent front Axle Assembly Line



Facts	
Industry	Automotive OEM
Product	Independent Front Axle
Installation Date	2004
Description	Independent front axle assembly line for sport utility market. Non-synchronous power roll MS-7 transport system. Assembly of the dual snap-ring-style axle housing in pinion nose up and nose down positions. Assembly of two (2) model platforms with weekly production reaching 6,000 units with a two-shift operation.
Equipment	21 automatic stations 8 manual stations 8 semi-auto stations 6 robots ABB pinion shim gage and bearing drag torque machines 2 ABB collapsible spacer preload machines 2 pinion head height machines 3 ABB dynamic backlash case shim gage machines ABB dynamic backlash ratio verification machine ABB electronic differential test machine 2 carrier balancers integrated into process ABB robot pallet wash cell
Customer Benefits	High quality gauge and assembly processes assure product quality and throughput Dynamic backlash machines provide data on total gear runout, pinion runout, and ring gear runout to improve assembly process ABB single-point service

Facts	
Technical Data	Capacity: 300,000/year (2-shift production) Cycle time: 33 seconds System Cpk: 1.81
Unique Elements	Integrated balance into axle assembly E-differential assembly and test
Customer Provided Equipment	Balance machines
Project/Steps to Implementation	Concept Specification Prototype Engineering Project management Manufacturing Installation supervision Installation Training
Project Responsibility:	Powertrain
Video/Photos/Reference:	Yes

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