Fori Automation Newsletter

World Headquarters Expansion

Fori USA Adds a Second Facility

Fori Automation’s Global headquarters in Shelby Township, Michigan recently opened a new aerospace / AGV Facility. This 15,000-square-foot factory with extra high bay will help further Fori’s diversified product range.

Fori Automation’s New High Bay Facility Interior

The Macomb County Department of Planning & Economic Development recently awarded Fori Automation the first ever “Diversification Award.”

Macomb County Executive Mark A. Hackel, Paul Meloche: vice president of Sales, Mike Beck: Vice President / General Manager, Bernd Koerner: Preside & Arthur Koerner: Founder of Fori Automation receive the Macomb County Flag

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Stator Assembly for Caterpillar

Fori Automation designed, built and integrated a very unique semi automated Assembly System for a 75kW D7E Traction Motor Stator and a PAVER Stator for Caterpillar H plant in Mossville, Illinois. The job was earned based on prior feasibility, engineering, throughput and manufacturability studies conducted by Fori Automation. The Assembly System consists of a palletized main conveyor loop with over 20 work, assembly and test stations along the line. The system was built flexible considering future potential product. The system is capable of producing 30 stators in 5 days.

Motor Cycle Assembly For Harley Davidson

Fori provided a turnkey system for assembly of tourpaks, saddlebags and lower fairings; as well as, front end assemblies for the 2014 Touring, Trike and Touring Custom Vehicle Operations (CVO) platforms for Harley Davidson in York, Pennsylvania. The process consisted of manual assembly of tourpaks, saddlebags and lower fairings in three separate 1-piece flow cells. Assemblies are assembled in fixtures and transferred between operators manually on roller conveyors equipped with all lighting, air header & electrical hook-ups. Loose parts, not including fasteners, making up each assembly are kitted to operators for assembly in shadow box containers provided. Parts are selected from verified part presentation devices such as pick-to-light, scan verification, etc. Tools for assembly will primarily be made up of battery powered clutch tools except were key product characteristics were specified, for which torque recording tools were required additional fixtures were utilized where applicable to poke-yoke assembly configurations or assist in part placement during assembly and provided cosmetic protection to all surfaces. The saddle bag and tourpak lines are capable of 35 jph and the front end modules are 60 jph.
Long Range Radar (LRR) Calibration System for GM Hamtramck

Fori Automation has developed a long range radar (LRR) calibration system that was integrated at the Fori wheel alignment machine. The system was developed for the ELR and GMX 352 lines (electric Cadillac and Impala). It will accommodate the Delphi LRR sensor by presenting two points of reference (defined as corner reflectors) that it can align to. The system is integrated with the wheel alignment machine for initiating the cycle, and positioning the target at a specified (horizontal / vertical) location. It will also send live thrust angle data from the wheel aligner PC and trim height data from the height measurement PC to the GM Vast (Plant’s) interface. The interface initiates the calibration cycle, as the LRR alignment is conducted internally by the vehicle ECU.

The system features:
- Gantry Frame placed in front of the WA platform with vertical and horizontal position by servomotor for a (+/- 1mm) accuracy/repeatability.
- Special rotating feature that will turn the target screen 90° for vehicle drive-through clearance
- An aluminum back plate with sound absorbent material and adjustable reflector targets
- Control Panel interface box mounted near gantry
- Calibration laser fixture mounted to WA MG
- Verification laser system to verify H/V & Alignment
- Interface to the Fori height measurement PC to offset the target according to vehicle trim height (+/- 1mm)
- An estimated cycle time of 15-20 seconds

This project was received in 2012 to accommodate the alignment of ELR and Impala vehicles containing the Delphi LRR sensors that were introduced into production in 2013.

Hampson Aerospace - GTS 60 ton Capacity AGV

Fori built a 40 foot AGV to carry WING FAJ between 7 assembly stations for Bombardier (Global Express), Mississauga, Ontario, Canada. The wings are designed for the Global Express, an ultra long range corporate and VIP high speed jet aircraft. The Fori supplied AGV with lift arbors is manually guided up to each assembly station. From there the AGV is put into auto mode for autonomous transfer underneath the Wing FAJ tool. Once in position, the AGV lifts the 60,000 lbs FAJ with Wing and transfers it to the next assembly station.
Fori Automation has developed a combined system for calibrating the Delphi LRR Sensor and alignment of front lane departure camera module on the C489 vehicle (Lincoln Escape). The system features a gantry frame placed in front of the wheel aligner platform to include the ACC positioning System, and LDW drop down screen.

**ACC System**
- Aluminum back plate with sound absorbent material and adjustable reflector targets
- Horizontal/vertical positioning system for +/-1mm
- Special rotating feature that will turn the ACC target screen 90° for vehicle drive-through clearance
- Control panel interface box mounted near gantry
- Calibration laser fixture mounted to wheel aligner master calibration fixture
- Verification laser system to verify horizontal/vertical & target alignment.
- Direct interface from the Fori wheel aligner PC via the OBDII adaptor for initiating the ACC calibration sequence, and aligning to the wheel aligner thrust angle data
- An estimated cycle time of 15-20 seconds
- PLS scanner to stop all motion if presence detected

**LDW System**
- Drop-down slide unit that will position the target board in front of the LDW sensor mounted to vehicle’s Rearview mirror
- Target board features a painted checker board pattern for the LDW reference
- PLS Scanner stops down motion if presence detected

This project was received in 2013 to accommodate the alignment of the new Lincoln version of the Ford Escape, for all vehicles containing the LRR and LDW sensors.

**Fori USA & Fori China Collaboration**

Fori USA designed and Fori China built a 16-cart RGV chassis marriage system for the Ford Kansas City Assembly Plant. This Ford plant currently produces the F-150 Truck. In this new area of the plant they will be building the all new Transit van (the first time in the US). The chassis decking cart is one of the largest that Fori has built to date at roughly 23'-6" (7,163mm). The reason the cart is so long is not just the length of the vehicle but also the fact that this vehicle has five different wheel base lengths. Each of these wheel base lengths are automatically accommodated for by a servo motor and linear slide on the rear lifter assembly. One other important feature to take note of is the unique drive shaft support that has to accept 19 different drive shafts (2 piece to 4 piece). It is this ability to accept such complexity that will drive us to continue to be leaders in the market of chassis decking.
With this change Ford has switched from building Mustangs and Mazda 6’s to building Mustangs and the all new redesigned Fusion vehicle. Fori’s integral part in all of this:

**Chassis Decking**
- Retrofit 23 decking carts and two training centers
- 15” servo controlled wheel base adjust
- Fori patented chain lifts
- Combination tooling plates to support both products
- Chain “hold downs” for spring compression
- Front & Rear body alignment pins
- Front Corner Over/Under Pallet Conveyor
- 11 build stations
- 22 combination pallets to support both LH/RH products
- Plant communication interface (Error Proofing)
- Rear Corner Over/Under Pallet Conveyor
- Six build stations
- 16 Combination pallets to support both LH/RH products
- Plant communication interface (Error Proofing)
- Front Sub Frame Pallet Conveyor
- Eight build stations
- 16 combination pallets to support both products
- Plant communication interface (Error Proofing)
- Cooling Module Conveyor
- Seven build stations
- 16 Stanchion sets to support both products
- Plant communication interface (Error Proofing)

Ford will now be able to increase their production volumes with the system running at 75 jph.
In March 2013, Fori installed a suspension assembly system with twin strand conveyors for Ford Motor Company in Pacheco Argentina. This system runs 20 jph for the Ford Focus C-346 model line. The system included twin strand conveyors (109m), presses, assembly tables, overhead rails with bridges, ergo arms, torque tubes and balancer tools with complete integration of torque fastening.

The rear suspension assembly system contained: a Fori over/under twin strand conveyor (21m) with six workstations, 13 pallets, servo spring compress with stabilizer bar assembly, pallet transfers and elevator / lowerator. Conveyor side material handling included rail and bridges, hoists, spring balancers, torque tubes, ergo arms and fully integrated Atlas Copco secure. The system process requirements are 20 jph and utilized both loop and over under twin strand conveyors due to plant floor space limitations. The press systems include: servo presses for both strut assemblies, coil over shock and knuckle bearing hub assembly press. Fori USA designed and built the system and Fori Brazil handled the installation and all changes and modifications needed to the system.

The front corner assembly system consisted of: Fori over under twin strand conveyor (17m), six workstations, 12 pallets, Fori dual coil over shock servo strut press, knuckle hub bearing servo press, caliper assembly, bushing press, pallet transfers, elevator and lowerator.

The front sub-frame assembly included: Fori twin strand conveyor loop design (33m), seven workstations, 12 pallets, stabilizer bar assembly, steering gear load, control arm biasing with auto pallet lift & secure automation.
Honda Alabama 3-D Wheel Aligner with Integrated headlamp Aiming & Robotic Toe Set Tooling

Fori USA recently installed two new robotic 3D wheel aligners and integrated single mast headlamp aimers at the Honda Lincoln, Alabama assembly plant. The assembly plant produces the MDX and Pilot vehicles at a production rate of 55 jph. The required machine cycle time is 58 seconds in order to accommodate future production increases. In order to meet this aggressive cycle time Fori utilizes a system called “predictor mode” for virtual real time alignment measurement. Once the initial tire run out is performed and mapped, all subsequent measurements are predicted based upon the known run out. This eliminates the typical three second update time that is required after an adjustment is made, and saves on average ten seconds per cycle. A total of four robots w/toe set gearheads are utilized (2- front (R/L), 2 rear –R/L) for setting toe +/- 0.03 degrees of nominal. Front toe is set by adjusting the tie rod with a Fori patented integrated socket gear head which is driven by a nutrunner. Rear toe is set by adjusting the cam bolt with a servo driven gear head. Fori is recognized within Honda North America as their robotic wheel alignment expert and was single sourced for this equipment. With the addition of these two machines Fori has provided a total of seven front/rear robotic wheel alignment/headlamp aim systems to Honda within the last five years.

Front & Rear Brake Assembly Lines for Piston Group

Fori USA recently installed a front and rear brake assembly systems for Piston group. The system supplies a completed assembly every 45 seconds for the Chrysler KL model for the Jeep Cherokee in Ohio. The system includes manual and automatic torque stations, auto transfer station, vision inspection station, rotor run out station and is capable of reading up to a 40 micron variance in a part.
Front & Rear Suspension Assembly / Delivery Alignment System for Chrysler

Fori USA recently installed a front and rear suspension assembly/delivery conveyor system at the Chrysler TNAP Assembly Plant. The assembly plant produces the new Jeep Cherokee (KL) at a production rate of 64 jph. Due to the limited available floor space, a unique system layout was required that returned the empty pallets in pits under floor level. The conveyor system consists of the following:

- Fori twin strand palletized over/under conveyor system for rear suspension assembly
- 29 Rear suspension assembly pallets
- Robot cell to automatically set the pallet locating details based upon vehicle style
- Five AGCs to deliver the assembled rear suspensions to the rear module aligners
- Fori twin strand palletized “flow through” conveyor system to deliver the assembled rear suspension into and out of the two Fori rear module aligners. Integrated lift and locate tooling to accurately present the suspension to the aligners
- Fori twin strand palletized conveyor system to deliver the aligned suspension to the chassis marriage system
- Fori twin strand palletized conveyor system for front suspension assembly and delivery to the chassis marriage system
- A total of 1,471 feet of conveyor provided
- Five elevator/lowerators with a 10' lift stroke to transport the pallets between the pits and floor level

Fori USA also installed two rear suspension module aligners. Toe and camber is required to be pre-set prior to decking into the body. The two aligners are used to maintain the 64 jobs per hours production rate. The rear suspension is delivered to the aligners by the Fori twin strand conveyor as described above. The aligner automatically picks the suspension from the pallets with overhead locating tooling. Datum locating tooling along with the adjust/secure tooling are positioned underneath the suspension. Once it is properly located in design position the measurement heads automatically clamp onto the wheel ends. The suspension is jounced to exercise the joints, springs and bushings. The measuring heads then rotate to wheel ends to dynamically measure toe and camber utilizing three linear transducers that contact the rotor surface. Camber and toe is automatically set by utilizing servo driven gear heads that engage and adjust the cam bolts. Once the suspension is aligned it is placed back onto the pallet and is delivered to the chassis marriage system.

Fori is recognized as the leader in module alignment and was awarded the contract based upon our expertise and many systems that have been installed.
Fori Automation designed, built and installed several weld systems for Martinrea Jonesville & Hopkinsville. The systems weld the control arm and front cradles at 60 jph.

**Weld Systems:**
- C344/489 Ford C Max/Focus front cradle - Martinrea Hopkinsville, Kentucky
- V363N Ford Transit front cradle - Martinrea Jonesville, Michigan
- V363N Ford Transit lower control arm - Martinrea Jonesville, Michigan

These three systems include:
- 52 Fanuc 120ic weld robots with Lincoln weld packages
- 13 Easom turn tables and trunnions
- Two Fanuc 120ic robots with Perceptron vision systems
- Nine Fanuc 210 MH robots
- Five Fori conveyors
- Three Racer machining centers
- One Tarpon nut welder
Research & Development

AGC’s (Automated Guided Cart)

- AGC top speed 2.8 ft / 0.86 meters/second
- Carrying Load: Load up to 2,200 lbs / 1,000 kg
- Encoder positioning feedback +/- .05mm linear
- Position accuracy: +/- 1mm
- Waypoint Control: Offset pencil magnet
- Power supply: Four sealed lead acid gel batteries or induction
- Wireless WLAN: IEEE 802.11a/b/g
- Guidance: Fori Hall Effect Magnet Sensor following magnetic tape or bar
- Power-train: Differential steer with (2) 24V brushless DC motors. Built in 500PPR encoder and safety brake. 152mm diameter urethane drive wheels with built in planetary gearing.
- Drive Control: Dual channel DC brushless motor controller with encoder inputs and CAN interface
- Charging method: Automatic charging pad included and/or manual plug in. No on board charger
- System Control: HMI with imbedded PLC. RS232/RS485, CANbus and Ethernet ports. Color touch screen
- Safety System: Programmable light screen, pressure sensitive bumpers, status lights and sound alarm. Two E-stop buttons

Fori Press’s

Fori Automation press product line include; hub, knuckle cradle, bushing, bearing, ring and coil over shock. There are three (3) different press options:
- 20 Kn Press
- 50 Kn Press
- 100 Kn Press

System Features:
- 120 mm - 300 mm stroke
- 0-100 mm / sec speed
- +/- 0.03 Linear Accuracy
- +/- 0.10 % of load
- 125 Kn Load capacity
- Measuring range 0 - 100 Kn

Microsoft Windows 7 Embedded

The primary reason that users want Embedded OS devices is that they have instant on and faster performance than Desktop OS based devices. 64-bit version on 64-bit platforms allows access to more RAM and faster processing speeds. Enhanced Write Filter (EWF) – The EWF write-protects an entire partition, preventing O/S corruption if system power is lost. Hibernate-Once, Resume-Many (HORM) – HORM allows your system to boot quickly to the same predefined state every time. Makes use of Enhance Write Filter which protects operating system from corruption and viruses. Longer life cycle which means longer support and ten year availability.

Predictor Mode

After each adjustment made during a cycle it takes three or four seconds (one tire rotation) to update the run out of the tires and display the new measurement value. Predictor Mode identifies a unique feature on the wheel and determines it’s orientation. Virtual real time measurement updates are then performed which reduces machine cycle time by three or four seconds for every adjustment made. If several adjustments are made the cycle time decreases even more.

Ride Height Module

Mounted on top of measuring head riser at four corners
- Includes specially designed camera housing with brackets to adapt to all styles of Fori Wheel Alignment systems
- Camera modules includes Basler ACA 1600-20GM digital camera
- LED light sources embedded in camera modules and mounted to bottom of riser for illumination of the fender bottom edge
- Measurement tolerance = +/- 1 mm
- Camera view of 250 mm (D) x 250 mm (H) x 90 mm (fore/aft) : processor rate = 20 fps
Hyundai End Of Line Systems

Hyundai Motors has three plants located in Beijing China that will produce an annual output of over 1,000,000 units per year. Fori Korea has played a significant role in the evolving of these plants. BHMC #1 plant currently produces five different models at a volume of 300,000 units per year. It utilizes three sets of FORI end of line equipment which includes a non-contact aligner, head light aimer and roll and break tester. The plant also uses a Fori RGV chassis marriage system. This fall Fori Korea will update two of the older analog non-contact aligners to Fori’s 3D technology. BHMC plant # 2 currently produces four models at an annual volume of 300,000 units per year and utilizes three sets of Fori's end of line test equipment and one RGV chassis marriage system. BHMC #3 plant current produces three models and has an annual capacity of 300,000 units it has three sets of end of line testers. BHMC #3 plant is adding an extension to it's existing plant which will produce an additional 150,000 per year. Currently Fori Korea is manufacturing two complete sets of end of line test equipment and a 10 cart RGV chassis marriage system for this facility.
Hyundai Chassis Marriage

In the spring of 2012 Fori Korea was awarded a project to develop an automotive assembly system for Hyundai Motors to assemble fuel cell vehicles at their Ulsan assembly facility. The system utilized a Fori Korea designed induction powered rail guided vehicle. The induction system has a 440 volt 3 phase 60 hertz input and a 24/600 dc volt output. The cart is used to transfer the vehicle through the entire assembly process, underbody assembly, and chassis marriage, trim and final. Fori Korea also developed a patent pending dual lifter system for the cart. These lifters have a capability of 2.4 tons. They are used to raise the body assembly into various positions for assembly and transferring processes. The system also has two transfers one to move the car body from the RGV to the marriage station and one to unload the completed assembly at the end of the process. Fori also designed and built the chassis marriage station. This job shipped in September of 2012 and will produce 2,000 fuel cell vehicles per year.

GM Korea AGV Systems

Body Chassis Marriage AGV aligned to GM Global Strategy

In May of 2013 Fori Korea developed a prototype Automated Guided Vehicle to be incorporated into the chassis marriage systems in the automobile assembly processes. This AGV runs on a 48 volt battery powered system which can be charged at various floor contact quick charging stations during regular operation. The motors for lift, drive and steering functions are AC Asynchronous motors. The AGV has a maximum speed of 45m/min. with a stopping accuracy of ±10 mm. It can be operated manually with a side to (crab walk) function. The controls package is 100% PLC based. The AGV utilizes a patented Fori guide sensor to track the embedded magnetic guide.

Base on this practice and comprehensive experience on AGV application for Aerospace industry by Fori Automation USA, Fori Korea got the New Body Chassis Marriage System for GM Korea plant (installation February, 2014). The system will run for 43 vehicle assembly per hour with 11 AGVs which have two Fori patented electric chain lifts. The system contains German Drive/Steer units, Korean Lithium Polymer Battery and American PLC aligned to GM Global BCM AGV Strategy.
Fori China recently completed a large installation at the Shanghai Volkswagen CPS Ninbo Plant which will produce the Skoda MQB Octavia and Superb. This 60 jph system was made possible by cooperation between Fori China and Fori Korea. Combining efforts increased system delivery and lowered overall costs.

All manipulators and special tooling was engineered and built by Fori Korea. Fori China designed and built the all the conveyors and control system. Both Fori Korea and Fori China received many compliments from both the German and Chinese Volkswagen personnel.
Shanghai Volkswagen Cp6 Chassis Marriage Systems Supplied

- 85 Electronically controlled tightening spindles.
- One Fully automatic chassis marriage fastening station
- Control system for conveyors
- Nutrunner torque & RFID tracking system
- Line side tooling system with hoists, trays, utilities
- and tables

- 13 Fori twin strand conveyors with an elevator and lowerator
- 33 AGV front module assembly carts
- 18 Chassis marriage PA Stations
- Ten Chassis marriage operation stations
- Overhead front pallet loading system, super pallet return conveyor, front / middle / rear sub-pallet storage line and transfer pallet load / unload

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Fori China has installed three end of line systems for the Shanghai GM Norsom Facility. The systems include: 3-D Wheel aligners, digital gantry style headlamp aimers, single roller brake testers and single axle brake testers.

- The system software computes brake force and anti-lock braking system characteristics
- Precision speed measurement is attained with the use of optical encoders
- Preventative maintenance is simplified with the installation of automatic lubrication systems throughout the machine
- Fori’s four-roller design cradles and centers the vehicle on top of the rollers providing superior safety, stability and accuracy
- Vehicle Side Guides keep the vehicle on the rollers
Chassis Marriage Porsche Osnabrück

Fori Germany designed and installed an inductive power AGV system for the Porsche Osnabrück plant in Germany. The system consists of an AGV track, seven AGV's equipped with Wampfler IPT induction systems and a hydraulic lift. At the marriage station the loaded AGV is lifted to the suspended vehicle body and the chassis is fastened to the body at 12 jph.

Front End Installation for VW Passat, Emden Germany

Fori Germany installed a front end system for the Volkswagen Passat & CC B7 Emden Germany plant. The system is lifted robotically and the screws are fed to the automatic fastening system. All operations; lifting, screw feeding and fastening occur on a continuously moving line at 30 jph.
Fori Automation India Pvt. Ltd. designed & manufactured a Gantry Style Headlamp Aimer System with Vehicle Centering for General Motors India, Halol, Gujarat. The system supports 22 JPH for their various models such as Optra, Uva, Tavera, Cruze and two future models. This was the first system which is the part of 'End of line' Fori India handled independently by using its’ own resources. Allen Bradley Drives with Devicenet Interface and all components compliant with GM’s stringent GDHS Norms were used in this project.

Volkswagen India Gantry Style Headlamp Aimer with Centering Platform

Volkswagen India DVD System

Fori Automation India Pvt. Ltd designed & supplied the XYZ Gantry Style DVD Gluing System to Volkswagen India for their Chakan plant near Pune, India.

VWI originally used to apply Sealant on the DVD Manually for Noise and Thermal Insulation of the roof of their car models POLO & VENTO. Fori provided a unique concept for DVD Gluing using an XYZ Gantry System in place of a full-blown robotic system, thereby reducing the overall project cost for the customer. The Operator Manually loads a DVD (Polo / Vento) at the Loading Station. A pneumatic slide then transfers the DVD to the Gluing Station, wherein the DVD is applied, based on the profile selection by Operator and Poka Yoke (System Sensors to distinguish Polo versus Vento). Then a pneumatic slide transfers the finished DVD to the Unloading Station, from where the Operator removes the DVD Manually. The system is capable to provide an output of 40 JPH. VWI requirement was 37 JPH.
Heavy Duty Wheel Aligner

Fori Automation has developed a heavy duty wheel alignment machine and headlamp aimer to accommodate the Cargo Series commercial trucks (C series), and F,350 trucks. The machine features:

- Weight capacity of 10 metric tons
- Wheelbase range 2,800-5,300mm 1st to 2nd axle, 1220-1,370mm 2nd to 3rd axle
- 3-D Toe and camber measurement for accuracy and repeatability of standard Fori 3D Alignment (<.01° Toe, .02° camber)
- Servomotor centering for near “0” force on tire side wall throughout dynamic measurement.
- One set of measuring heads on slide unit to measure 2nd and 3rd axle for rear toe and thrust angle
- Two steering wheel levelers for C-Series and F350 series
- Windows 7 on WA PC Xeon XS and HLA PC i7-3770
- Digital headlamp aimer features vertical and horizontal positioning by servomotor for all truck lamps, and accommodates a 24" range fore and aft
- Throughput will be 22 JPH

This project was developed with the Ford Sao Bernado, Brazil team in an effort to increase throughput and improve the alignment quality for production in the large truck plant. As a result of this project, Fori Automation will be more versatile in the final line market and will be approaching other truck manufacturers with a cost effective wheel alignment machine that can accommodate multi-axle, heavy duty trucks for improving throughput and alignment quality.

Automatic Pierce System for Formex

Fori Automation de Mexico has designed, built and installed four Automatic MIG welding systems and four automatic Pierce Systems for Formex Ramos Arizpe, Mexico’s GM K2xx Program. The automated systems include a complete new Flexible Main Assembly line for Frames integrated by 50 Robots and it is capable of producing four different frame models. Formex Mexico awarded Fori the project in January, 2012 and the seven automated systems were delivered from August 2012 to February, 2013. This is the largest turnkey project produced by Fori Mexico.

Cycle times range from 52 seconds to 55 seconds.

The complete project includes the integration of 94 welding and material handling robots.
Semi-Automatic Spot Weld System’s for Nissan Aguascalientes

Fori Automation de Mexico has built 12 Semi-automatic electric stand alone spot welding fixtures for Nissan Aguascalientes Mexico for the Nissan’s J02C & L12F Programs. The fixtures were built to print under Nissan’s standards considering soft metric manufacturing. The clamping process of the parts is semiautomatic and it is controlled by an Omron PLC, SMC Electro valves and Device Net Control Network. Some of the fixtures built by Fori Mexico were the Body Side Otro, Rear Floor, Front Floor Side, FF Floor CTR, Engine Compartment and Body side Inr, all of them for components of the car body.

Chassis Marriage System for Fiat Ducato Van Plant Saltillo Mexico

Fori Mexico has installed a nine RGV chassis marriage system for the new Fiat Ducato Van Plant in Saltillo Mexico. This project includes the participation of Fori USA, Fori Korea and Fori Mexico. The project was engineered in Fori USA and was based on Fori Standard RGV marriage system. The manufacturing and assembly of the system was developed between Fori USA, Fori Mexico and Fori Korea. The integration of the track, controls, and the first RGV was handled at Fori USA with customer buy off at Fori USA. Fori Mexico built to print the balance of eight RGVs, integrating the Carts’ control panel and front/rear lifters which were manufactured by Fori Korea. The installation of the nine RGVs chassis marriage system was completed by Fori Mexico.
Mission Statement

To provide our customers with sound, imaginative and competitive solutions to their production needs, applying innovative technology in practical ways. To provide rewarding employment with personal growth and educational opportunities for our people, challenging their resourcefulness to find better ways and encouraging them to take ownership; to be enthusiastic team players and to take pride in their accomplishments. To have a performance reputation that allows us to become “The Customer's Choice”.

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