

Significant improvements at Automotive Stamping Plant

Feed Bar Rail Electrical nuisance faults decrease by 95% !!

The original feeder bar rail plug connectors that the plant was using had a smooth surface on both the male and female pins. This created a great deal of nuisance downtime faults caused by oil and dirt getting on the mating surfaces of the pins creating intermittent electrical contact. This cost to the plant was approximately 1 Hr. down time per shift on random presses. This meant that mean down time could range up to 3 Hrs. per day per press. To temporarily remedy this, the plant electricians had to PM all the rail bars that were not in use on the bolsters once per day. This meant cleaning the pins with contact cleaner and thoroughly wiping off the smooth pins with a clean cloth. In the event that a broken pin or wire in the plug needed replacing, a 4-hour minimum was required to take the plug apart and struggle to get the 28 pins back together again. This process had to be completed at the press and not on a bench. This was becoming more frequent as the equipment aged.

Applied Robotics worked closely with plant personnel to redesign the rail plugs blocks to eliminate the problems. The new design included self-cleaning serrated male pogo pins, allowing the rail plug blocks to be replaced in 10 minutes. This is accomplished with a spare block pre-assembled ahead of time on the bench ready for replacement. The repair takes approximately 10 –15 minutes on the bench to replace a broken pin. A male connector is built in to the back of the block for quick disconnection and replacement of the block. To make this application more robust cables in the bar now incorporate robotic cables with matching female connectors.

The Applied Robotics robust modular connection solution has eliminated 95% of the feed rail nuisance faults on the presses.

Old style: Problem



New Style: Solution

