

**Industry-leading manufacturer
of automotive frames
implements DOD marking,
controlled by MPERIA®, for
product identification**

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► The Challenge

Industry-leading manufacturer of structural steel parts for vehicles sought a way to mark alpha-numeric characters onto truck frame rails produced in their Roanoke, Virginia plant. After their formation, the rails require a mark on three sides as they are conveyed to an outdoor storage yard. The marks allow for quick and easy product identification by forklift operators when removed from storage for shipment. Their requirements included:

- + Printheads capable of marking variable alpha-numeric data in multiple combinations
- + Ability to produce a high-contrast, easily visible, crisp mark large enough to be read at a distance
- + Ink capable of adhering to steel
- + Ability of the three printheads to work in tandem, extending to mark the surfaces and retracting when complete as the product passes by
- + Universal controller to manage and direct printhead movement, mark timing and message selection

► Matthews' Solution

The Matthews Engineered Solutions team recommended three VIAjet™ V-Series large character drop-on-demand (DOD) marking system configured in a top, left and right formation. These three 32-valve 8000+ printheads were installed line-side to the transport conveyor. The Matthews printheads feature micro-valve jet technology that lowers ink consumption while producing high-quality, crisp marks in sizes ranging from 0.125 to 5 inches at high speeds. The recommended ink—SCP- 901A—is formulated to adhere to steel as well as withstand extreme environments, including outdoor storage.

Pneumatically-powered, the timing of each printhead's extension to imprint its messaging is controlled by Matthews' marking and coding automation platform, MPERIA. MPERIA also interfaces with the conveyor's programmable logic control (PLC) system to synchronize marking with key trigger points as the rail travels at speeds up to 135 feet-per-minute. Further, MPERIA communicates with the plant's manufacturing execution system (MES) to obtain the correct messaging data for a given production run.

SOLUTION:

- + VIAjet™ V-Series Printheads
- + MPERIA Universal Automation Platform

