

## A Driving Force for the Automotive Industry

### Enidine Tow Bar Snubbers

By: John Sperrazza

#### Situation Overview

The abrupt starts and stops found in power and free conveyor system carriages can be damaging to the load they carry, as well as causing the loss of registration of the carried load. This problem is manifested when suspended carriages loaded with delicate payloads are being automatically engaged and disengaged from a drive chain which is in constant motion.

#### Application Opportunity

Automotive manufacturers need to smooth the motion of power and free conveying systems during engagement and disengagement of the carriage tow bars. Smoother movement of the carriages will reduce damage to the conveyor and the automobiles they carry.

Normally, the presence of hydraulic fluids on automotive paint lines causes contamination concerns. ITT Enidine Inc. developed a special fluid that has been tested and evaluated by our customers. It was found that this special fluid is 100 percent compatible and does not cause contamination in paint line applications.

#### Product Solution

The installation of a hydraulic tow bar snubber into the tow bar of these carriages will dampen engagement and disengagement forces resulting in smooth, damage-free operation. ITT Enidine Inc. Tow Bar Snubbers provide the best solution with the lowest reaction forces in the industry today. Standard stroke lengths of four and six inches are available. Other versions of tow bar dampening products, using air or other damping mediums cannot perform as efficiently as the ITT Enidine Inc. tow bar snubber.

While other tow bar damping products may cost less per unit, the resultant shock forces are higher. This means that more of the shock load is transmitted, reducing the effects of the smooth stop and start action desired. Snubbers using air as the damping medium act more like a spring than a shock absorber, due to the compressibility of air. Success stories are now in place throughout many North American Plants.



*ITT Enidine Inc. tow bar snubbers have provided the best solution available for the automotive industry.*

#### Features & Benefits of Tow Bar Snubbers:

- ∗ Allow higher line speeds, increasing productivity
- ∗ Units are fully field repairable, resulting in less down time
- ∗ Reduction in shock forces reduces structural conveyor and carriage fatigue, while providing smooth engagement and disengagement characteristics
- ∗ Special fluids, seals, and outside finish allow operation in paint line applications in temperatures up to 400°F and as low as -40°F
- ∗ Incorporation of rod protection cans and special rod scrapers keep foreign material from damaging seals and internal componentry

