



JET Rail

vs.



Profile Rail Guide

Plasma Spray Lathe

**JET Rail
Application
Story.**

**Mike Quinn
LM76
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Occasionally we run into an application that deserves attention and broadcast to our customers. Although this application may not be a huge deal to most, it was to our customer who found himself in a beehive of panic because linear bearing failure brought production to its knees. We all know the expression, "Time is money." No more understood than in this situation. We fully understand that ***your problem*** is the ***biggest, most pressing problem*** and we treat it that way.

As you read through this application story, please know that I'm in no way claiming JET Rail is a superior option to linear profile rail guides when they (profile rail guides) are correctly specified. It's just that in this application, they (JET Rail) were the correct engineering option and are performing exceedingly well. The customer is thrilled and production downtime has been eliminated.

It is our mission at LM76 to ensure that customers get the best engineering advise possible and products to match. That we (LM76) provide linear motion products that meet application challenges coupled with a level of service which is truly singular in our industry.

We at LM76 look forward to being of assistance to you and seek any opportunity to show you why "***LM76 Linear Bearings Exceed the Challenge.***"

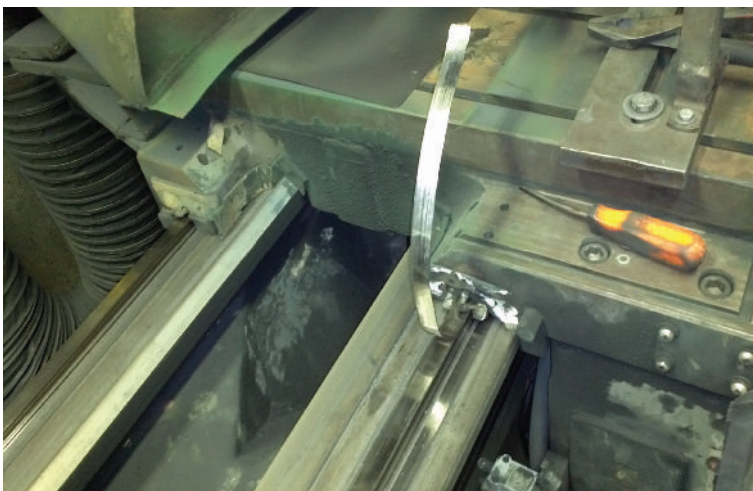
Mike Quinn
VP Sales & Marketing





This lathe was originally outfitted with profile rail linear guides. Due to debris and an oily film, the profile rail blocks - with double scarpers seal kits and a stainless cover - failed within one week. This lathe runs 24/7 - 365. There are several of these systems and when they go down production screeches to a halt.

Design engineer, Roger Conrad of Rogers's Machinery was called to review the application and immediately called LM76. After going over all the operational details and reviewing photos of the failed profile rail system, it was determined that LM76's JET Rail was the best candidate for the job.



Debris build-up stripped the stainless protective cover off the rail exposing the block to further damage.



The end caps with scrapers were pryed away from the block due to debris building-up under the block.



LM76 JET Rail Roller Block

LM76's JET Rail Roller Block employs sealed-for-life cam followers allowing for high load capability, smooth motion and low friction. Because of its open design, it does not want to collect debris and the sealed cam followers ride over debris as opposed to storing it in ball races. Once the races load-up, the balls freeze, friction spikes and mechanical failure ensues.

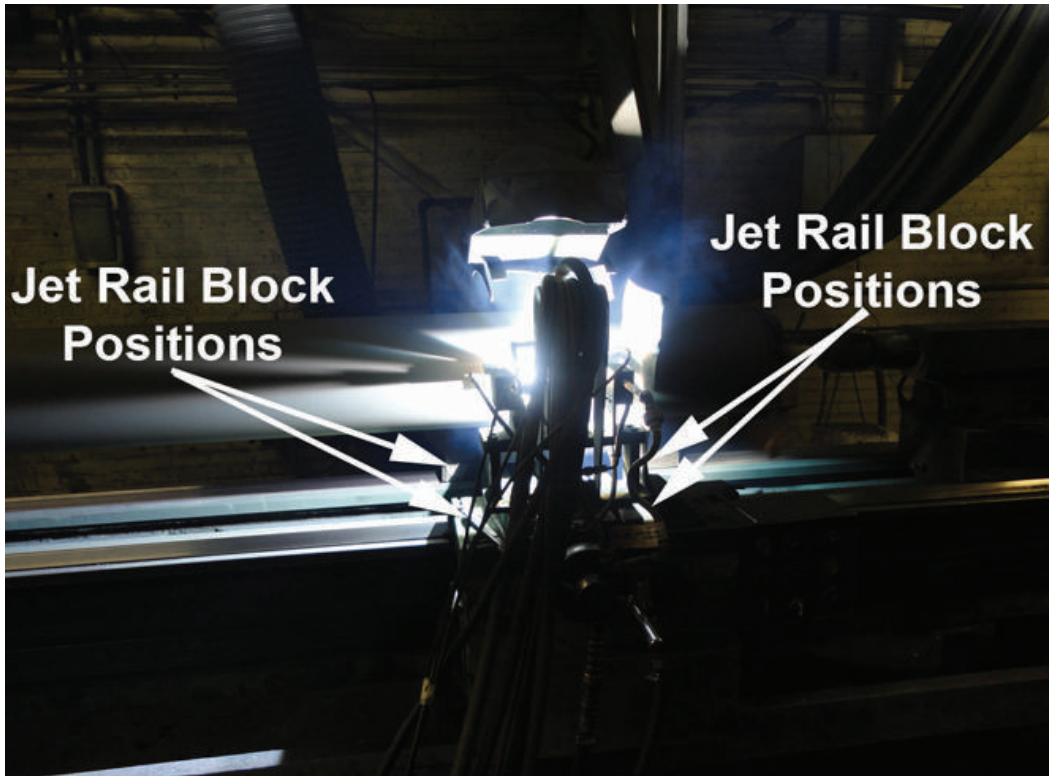
Rollers roll over debris, balls include it!



Beryllium Copper Scrapers clear debris from the top, load carrying rollers.



Here you can see that the fully supported LMSA 12 (Rc60) x 191" shaft assemblies have replaced the linear guide rails. You will also note the printing roll which will be sprayed with a liquid tungsten that has been melted by an electrode moving along the lathe bed. The moving carriage is supported by 4 JRD12 OPN-S roller blocks with scrapers.



Here you can see the electrode melting the tungsten wire (among other super hard materials) and spraying the liquid onto the roll. The spray head is moved along the length of the bed by a rack and gear system.

These rolls are used in the magazine printing machinery.

To further protect the roller blocks from the super hard debris - an oily mix (similar to a lapping compound) - a faceplate with wiper has been installed to the front of the roller block housing.

This application is a classic for JET Rail because the load is compressive, contamination is present and smooth running is required.

JET Rails have now worked continuously since October and show no signs of failure. If you need a linear motion solution, do what Roger Conrad did, call LM76.

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Linear Bearings that EXCEED the Challenge!



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