

# Bachhuber Tech Tips



**Question:** Why do our bearing blocks have such a short life on our Model 150?



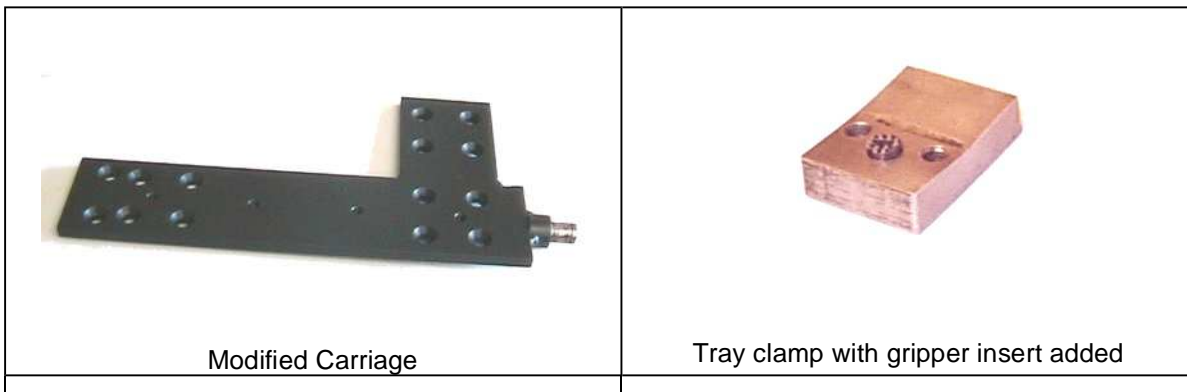
**Date:** 2006-04-10

**Problem:** After about a year, our Model 150 started to wear out bearing blocks at approximately one every four weeks. The first block lasted well over a year and now we can't figure out why they wear out so fast.

**Analysis:** This application's press runs in single stroke mode at about 50 spm. Our customer built a heavier tray and some heavy-duty tray clamps to handle a tray slip problem caused by the single stroke cycle. The constant starting and stopping of the press and the extra weight caused a greater-than-normal torque moment (twist) between the block and rail. This unloader has only one block and rail so tray weight and tray location can have a great impact on the bearing's life. There was also a hidden problem; the rail was pitted caused by the excessive torque and rapid acceleration where the ball bearings in the bearing block go from a stop to full speed in a fraction of a second. The rail grooves that were most damaged were under the top surface of the rail and were hidden from the operator's view. An inspection of the rail with a fingernail was all that was needed to identify the pitted condition.

**Finding:** A combination of the unloader's use in single stroke mode and the additional weight added to the carriage and block were the majority of the problem. Lightening the load and minimizing the twist in the bearing should solve the problem. The root cause however, was the tray slippage in single stroke mode. Better gripping tray clamps will be needed to keep the tray where it belongs while keeping the carriage assembly's weight to a minimum.

**Solution:** The bearing replacement problem was resolved by adding a second bearing block to the rail with a special carriage; a two rail unloader also makes the carriage assembly more rigid. The modified carriage was machined thinner to allow for a taller aluminum t-bar. Standard serrated grippers were added to the tray clamp increasing its grip while not increasing its weight. The combined weight saving of 10 pounds and the increased rigidity eliminated the short life of the bearing block. Periodic inspection of the rail will also help prevent premature replacement of the block.





**Detail:** The following are the part numbers and descriptions for the above parts.

1. 200.15067/00 Carriage Double Bearing
2. 50.833 M8-1.25 x 20 Flat Head Bolts
3. 200.31689/00 T-bar Aluminum; specify length
4. 200.300136/00 Tray Clamp With Gripper
5. 50.780 5/16-18-f Handle Quick Release

---

[Home](#) | [Press Automation](#) | [Contract Machining](#) | [Profile](#) | [Search](#) | [Contact](#) | 

---

Copyright © 2011 Bachhuber Mfg. Corp.