

5-Whys Activity

It is Saturday morning, June 6 and you have big plans for the weekend. Last week went well at the site. All planned work was executed as scheduled. When you left work Friday there were a few simple work orders handed-off to the night shift.

Then...the phone rings...it's Alice from the Northwoods plant. The operations team leader tells you, "the machine that received a new drive belt replacement last night is not operating as expected, again!" she continues, "it worked fine for a few hours after it was released, then at 0430 it started acting up. We have a very important delivery Monday, so it is critical to repair NOW!"

When you arrive at the site, your first stop is the control room to get a better understanding of what "not operating as expected" means. Looking at the trend data, you see sporadic flow rate and amp readings. You go to the floor to take a look and smell burning rubber. You hear a squeal every time the machine tries to cycle.

Your first thought is "ah this is an easy fix -- they didn't get the belt tight last night." Next, you call the day shift technician Brian for help. You lock-out the equipment and try tightening the belt...only there is no more adjustment. Next, you call the storeroom on the radio and get another belt from Jackson. You pull the current belt off and compare it to the new one. The part numbers on the belt match and appear to be the same size. You decide to see if you can find the old belt that was taken off last night to compare it to the two you have in your hand. Luckily, the belt was on top of the trash bin in the shop, along with the store's tag from the belt that was installed last night.

When you compare the three belts, you discover the old belt has no visible part number on it. It appears shorter than the two new belts. The part number on the inventory tag matched on the two new belts. You take all three belts to the storeroom.

At stores, you get two remaining belts out of stock. You compare all five belts and see that four belts have the same part number on the inventory tag. One of the belts that came out of stock has a different part number on the belt than on the tag. That belt also appears to better match the size of the old belt. You check that belt out of stores and install it on the machine. You tension the belt as specified and release the machine back to operations. The machine starts up at 1430 with no issues, and the sporadic flow and amp readings are now stabilized.

After 10 long hours of downtime, there were no more issues over the weekend. When you return to work Monday, you are met by the area manager Richard. They tell you "this was the fourth time this year this machine has been down for belt issues". They request that a 5-Why analysis be performed on this machine ASAP so the root cause can be found and eliminated.