HY-PRO FILTRATION

METAL STAMPING APPLICATION

Auto Manufacturing Stamping

Depth Filtration Causes Production of Defective Units

The Application

An automotive stamping plant operating large presses to produce body panels was experiencing high surface finish defect scrap. Lubricating oil contamination was causing surface imperfections that would be visible after painting.

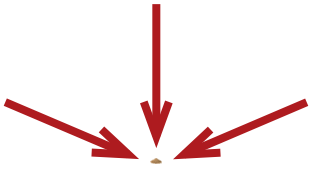
The Problem

The uncoiler / washer lube oil system was protected by an off-line filtration system fitted with CJC stacked disc cellulose media filter inserts (elements). Oil analysis revealed an operating ISO code of 23/19/11. Patch analysis showed cellulose fibers were shedding into the oil from the filter inserts downstream of the filtration system.

*Amount of dirt (1,586 lbs) passing through components per year @ 23/19/11.

The Solution

Hy-Pro recommended a full system clean-out, lower operating ISO codes and eliminating cellulose fiber shedding ingression to eliminate defects. The lube oil was transferred to a clean storage tote using a Hy-Pro FCL10 off-line filter cart with 6M ($\beta7_{[c]} > 1000$) media element and recirculated to reach an ISO code of 17/13/11. The reservoir, existing off-line filter assembly and sieve were then cleaned revealing a high volume of sediment and cellulose fibers. The off-line filter systems cellulose stacked disc elements were upgraded to Hy-Pro HP2727L43-6MB pleated glass elements ($\beta7_{[c]} > 1000$). Finally, the fluid was returned to the system.



*Amount of dirt (26 lbs) passing through components per year @ 17/13/9.

The Results

17 days later the operating ISO code had decreased further to 17/13/9 and NO DEFECTIVE PARTS had been produced. Eliminating the defects, longer filter element life and the extension of useful oil life saved the stamping plant hundreds of thousands of dollars per year.

Notes

To verify the results the stamping plant put another set of the original CJC filters back in the off-line filter system and within 15 days the operating ISO code was 23/19/11 again.

*Calculations based on 10gpm flow rate & 24/7 operation.
*Graphical representations scaled proportionately.

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