

CASE STUDY - HONDA

Client: Honda Power Equipment

Project: Build a prototype in one week

Dates: September 11, 2009 - September 25, 2009

Challenge: Engineers at Honda Power Equipment designed a state-of-the-art hydrostatic transmission which included a reduction cover (exterior case cover) reengineered with fewer components and increased robustness. The design included two highly critical round sumps with flat surface areas, A task that required a series of draw reductions. For the design to work, the material couldn't thin in the round sumps, and the sumps' walls had to meet a set straightness range in order for the clutch shaft to fit.

The problem was that engineers at Honda were having a difficult time finding a shop willing to try the design, but had already booked a flight to Japan to sell the concept. By the time Honda sent the designs to Ultra Tool and Manufacturing, timing was crucial.

Execution: In a conference call one week before Honda's flight to Japan, engineers from both companies discussed the design's elements. The part was a critical component to the transmission, and the threshold for thinning and fracturing was slight before it would be susceptible to leakage. Ultra accepted the challenge to come up with a workable prototype in a week's time.

Result: Ultra Tool was able to provide Honda's engineers with a series of working parts cut into cross sections, dimensional studies, and computer simulation specs; and when the time came for production, Ultra Tool's persistence, attention to detail and strong lines of communication both internally and with the customer earned them the job.

