



## DUCTILE AND GRAY IRON FOUNDRIES AUTOMOTIVE APPLICATIONS

# Solution: Twelve-hour Shifts Improve Attendance and Performance

Two sister foundries in the mid west were plagued with excessive turnover, absenteeism and a growing number of injuries largely attributed to a schedule that did not provide for routine days off. The culprit was a 3-crew, fixed 8-hour schedule, in which one crew worked a standard 07:00 – 15:00 day shift another worked a standard 15:00-23:00 evening shift, while the third crew worked the fixed night shift from 23:00-07:00. Since there were only three crews, everyone had to work every day that the foundries operated. For the past several years, with the rare exception of an occasional maintenance outage scheduled over a holiday, the foundries had essentially become continuous operations, but had maintained a schedule system designed for a 5 day operation.

The scheduling issues were further exacerbated by a rather lucrative overtime policy that automatically paid time and half for all hours worked on Saturday and double time for all hours worked on Sunday. Over the years, employees naturally became reliant upon the rather hefty pay checks supported by the excessive amount of overtime being worked. In essence, the company and the employees had jointly donned “golden handcuffs”, where longer term employees could not live on a standard 40 hour pay check, and the employer could not find any younger workers interested in working 50 – 70 hours every week. Absenteeism, turnover, and injuries always spiked in the summer months, when temperatures in the foundries often exceed 100 degrees with nearly 90-95% humidity. In addition, summer is vacation time which requires those performing the jobs on the other two crews to work 12 hours to cover the vacancy created by the vacationing employees, on the third crew, and vice versa. Twelve hours shifts were also being utilized to cover for sickness and other absences, which continued to increase in a linear progression to the number of consecutive 12-hour shifts being worked. The foundries were caught in a seemingly unstoppable downward spiral.

It was counter-intuitive to discover that absenteeism was substantially

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higher during the week than on weekends, until it was realized that without scheduled days off, employees needing to see a doctor, dentist, attend a school conferences or to handle other weekday social requirements. Mid week absenteeism spikes were further explained by the lucrative weekend premiums. Thus taking a day off mid week cut the employees pay substantially less than taking off a weekend shift. Although weekend premiums were once a common practice in 5 day industries, they do not typically apply in 7-day operations. Thus, their continued use was making the clients payroll costs uncompetitive.

Solution: Circadian interviewed corporate and site management to establish the operational parameters for a scheduling change. Major objectives included providing more scheduled days off, a substantial reduction or complete elimination of the non-competitive weekend premiums, and maintain essence of employee take home pay. At first, these criteria appeared to be diametrically opposed to each other.

However, once the operating design criteria was established, Circadian interviewed a cross section of the employees, provided education on various types of continuous schedules, and then surveyed all shiftworkers to determine the main features or attributes of schedules that the majority of employees believed were the most important. As it turned out, the employees wanted essentially the same improvements as management.

The divergent objectives were met by implementing a modified 4-crew system comprised of 12 hour shifts. With 4 crews and 12 hours, only two of the 4 crews were needed on any given day to provide continuous coverage. Thus two crews were scheduled off every day thereby providing the extra days off.

Maintaining pay was accomplished by slightly understaffing each of the 4 crews. To make up the difference, members of each crew were scheduled to work a few additional shifts per month during days when their core crew was scheduled off. Based on the employee surveys, it was determined that the majority of employees wanted a base of 48 hours per week with the ability to work some additional overtime. A standard 4 crew schedule averages 42 hours per week. Getting to 48

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hours required that each member of each crew be scheduled to work an additional 12 hour shift every other week. Employees wanting even more work hours volunteered for extra shifts on some of their scheduled days off.

Although the employees were now required to work the longer 12 hour shifts vs the standard 8-hour schedule, the longer shift length was offset by limiting the number of consecutive “scheduled” shifts in a work block to a maximum of 4. Each work block was separated by a range of 2-7 days off. Thus, physiologically, employees had ample rest and recovery time between work blocks. Sociologically, employees now had scheduled time off to arrange for doctors appointments and other routine family matters and social events.

From a new employee recruiting vantage, the client was now able to offer a core schedule with 156 scheduled days off per year, including long breaks of 4, 5, 6 and 7 days off in a row, but which still provided for 48 work hours in each week to provide additional pay.

A more competitive payroll structure was then provided by replacing the automatic weekend premiums with a new structure that provided double time for the second extra shift worked in any given pay week, which was the original rationale behind paying double time on Sunday (remember the 3 crew schedule was designed to operate Mon – Friday with Saturday and Sunday off). Since every employee was scheduled to work a core of 48 hours per week, each employee was guaranteed at least 8 hours overtime per week, at time and one half, which was identical to the previous structure.

Following implementation, substantial improvements in productivity, quality, safety, attendance and turnover were all realized.