# QUICK REPAIR REQUIRED ON A PUMP USED IN SKI RESORT SNOW MACHINE OPERATIONS

# **PUMP CASE STUDY**

### June Mountain Ski Area

June Lake, California Pump System Repair

# CUSTOMER APPLICATION AND KEY CHALLENGES

The June Mountain Ski Area is a luxurious winter resort that offers 35 ski runs, a terrain park and pipe, and spans across 500 breathtaking acres in the Sierra Nevada mountain range.

With a summit elevation reaching over 10,000 ft. high, most ski seasons at June Mountain sport more than 250 inches of fresh snowfall for skiers to enjoy every year. But the current season, yielding one of the warmest winters on record since the 1800's, forced the June Mountain staff to switch on the snowmaker in order to maintain enough snow to keep the slopes open.

When the pump supplying water to the snowmaker seized, it put the entire season, along with countless jobs, in jeopardy.





June Mountain Ski Area offers over 35 trails and a terrain park ranked best in California

### THE R.F. MACDONALD CO. ANALYSIS & SOLUTION

The June Mountain pump used for the snowmaking system is a Goulds VIT vertical turbine pump that draws over 1,000 gallons of water per minute from a nearby reservoir to pump high pressure water through a nozzle. Because the pump sits dormant for up to 9 months of the year, start-up at the beginning of the season is always an anxious time. Unfortunately this season the pump seized upon start-up and in-house workers quickly disassembled the pump to determine the problem and it became apparent that the pump was seriously damaged and multiple components needed to be replaced.

Immediacy was not only top priority; if the pump didn't become operational soon, June Mountain would not have enough snow to keep their slopes open. The staff did a local search for Goulds Pump service and contacted R.F. MacDonald Co.. Right from the start the June Mountain team was pleased with how quickly and professionally R.F. MacDonald Co. responded. Within 3 days, they conducted a full inspection and estimate for parts and labor and the replacement bowl assembly was put on rush order.



The entire underground and portable snowmaking system is fed by a single pump

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The new pump had slightly different specifications, so a new column pipe had to be constructed. In addition, the motor required rebuilding and new bearings needed to be installed. Even with all the work required the new pump was installed just in time for the ski season. R.F. MacDonald Co. also provided start-up of the unit to ensure everything was operational.

### PROJECT RESULTS

From the time R.F. MacDonald Co. received the first call, to the final setup of the impeller clearance, the entire project took just two and a half weeks, right in line with the initial estimate.

The new pump is running smoother, vibrating less, and pumping more water than before. In fact, the calibration adjustments that were made have resulted in a 30% increase in gallons per minute. June Mountain was extremely happy with the service they received and looks forward to working with R.F. MacDonald Co. to keep their new equipment in top working condition, especially after the long summer off-season.

"Everybody I dealt with at R.F. MacDonald Co.
was extremely professional, and very committed
to giving us the best service possible.
And they did!"



Final installation of the vertical pump