

Orthopaedic Surgery Center of Asheville Dynamic Gas Scavenger Study

BACKGROUND:

Metropolitan Medical Services installed (3) **DGSS (Dynamic Gas Scavenging System)** devices on (3) GE Aestiva 7100 anesthesia machines in November 2012 at the Orthopaedic Surgery Center of Asheville (OSCA).

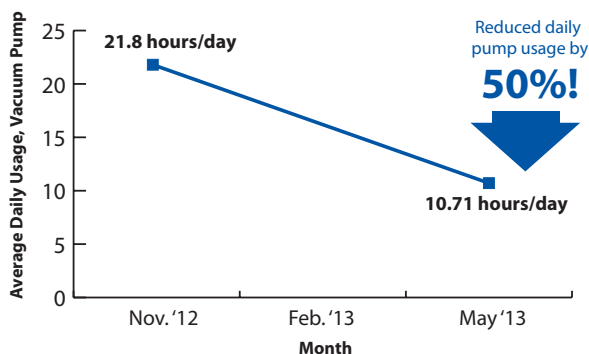


The surgery center purchased the DGSS scavenger devices after replacing their vacuum pumps in March 2011. Because the pumps were new, the equipment was determined to have good maintenance records. Costs and average usage records prior to installation of the DGSS were easily calculated.

The average daily usage **before** installation of the DGSS = 21.8 hours/day.
Pump run time **before** installation of DGSS = 3,978.5 hours over 6 months.

The average daily run time **after** DGSS installation = 10.71 hours/day.
Pump run time **after** installation = 1,954 hours over 6 months.

Pump run time was **decreased by 2,025 hours over six-month study.**



RESULTS:

1. Decreased Electrical Costs = \$1,117.31/year (Approximately 50% savings!)

4 kw/hour x 2,025 = 8,100 kw in 6 months
x 2 = 16,200 kw/year
16,200 x \$.06897 = \$1,117.31 per year savings

2. Decreased Pump Service Costs = \$1,200/year (Approximately 33% savings!)

OSCA's Vacuum pump is serviced at 2,000hr intervals at a cost of \$1,200/service. Before DGSS, OSCA had 3 services. DGSS reduced the service from (3) to (2) Services.

3. Increased Vacuum Pump Life = 6 years (Approximately 100% life extension!)

Life expectancy of OSCA's Vacuum Pumps is 24,000 hours/pump. Based on a 2,025 hour reduction in run time their pumps would last an additional 6 years.

4. Increased Safety

Facilities that do not have DGSS, have vacuum pumps that run all weekend, even when not in use. This increases the risk of failure when no one is around.

CONCLUSION:

10-Year Analysis

Total 10-yr savings of \$2,317.31/year X 10
= **\$23,173.10 IN TOTAL SAVINGS**

