

Asheville Orthopedic Surgery Center 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 Orthopedic Surgery Center of Asheville, NC. This account was considered due to the fact they had replaced their vacuum pump in March 2011. Due to the recent replacement of their vacuum pump, the facility had good maintenance records, as well as costs and average usage records prior to installation of the DGSS devices.

RJ Noid, Administrator said,
"I was interested in the green aspect of the device, as well as the cost savings".

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.**



RESULTS:

1. Decreased Electrical Costs = **\$1,117.31/year**

4 kw/hour x 2025 = 8,100 kw in 6 months x2 = 16,200 kw/year
16,200 x \$.06897 = \$1,117.31 per year savings

2. Decreased Pump Service Costs = **\$1,200/year**

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

3. Increased Vacuum Pump Life = **6 years**

Life expectancy of AOSC's Vacuum Pumps is 24,000 hours/pump. Based on a 2025 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 fire or failure when no one is around.

CONCLUSION:

10 year Analysis

Total 10 yr savings of \$2,317.31/year X 10
= \$23,173.10 - \$5,500* = **\$17,673.10**

* DGSS Initial Cost \$1850 x 3 = \$5,550

