Calculating Maintenance Resources

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Maintenance Resource Measures

- VMU – Vehicle Maintenance Units
- MRU – Maintenance Resource Units
- VEU – Vehicle Equivalency Units
- MEU – Maintenance Equivalency Units

For our purposes today we will use VEU
VEU Defined

VEU is a measurement tool used by fleet managers and directors to determine the maintenance resources required to complete varying maintenance tasks within an organization.

VEU is also a great tool to identify staffing levels and gaps as well as determining the benchmark comparatives for your fleet.
Finding the Right Fit

**Industry Standards** – You can find an industry standard in many locations.

**Develop Organization Specific** – You can develop your own VEU standard for your organization.
Industry Standards

Generally an easy approach to use especially when data is not readily available. You can find great examples at:

- APWA Info Now Community
- NAFA
- Government Fleet Magazine
- Network
This approach requires a little more work on your part. You must have good data available that is reflective of your operation:

- Total Annual Labor Hours by Equipment Type
- Fleet Inventory by Equipment Type
- Number of “wrench turning” staff
- Total Available labor hours by mechanic
Passenger Sedan

Total annual Labor Hours - 979
Total Passenger Sedans - 93
Average Labor Hours per unit – 10.53 round for easier math

1 VEU is equal to 11 labor hours
<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>VEU</th>
<th>QUANTITY</th>
<th>TOTAL VEU</th>
<th>LABOR HOURS</th>
<th>LABOR $</th>
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<tr>
<td>AERIAL-MEDIUM</td>
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3541.2  38953.2  $2,765,677.20
VEU Comparisons

Passenger sedans - 1 VEU
Solid Waste truck - 17.8 VEU
- It takes 17.8 times the maintenance resources to maintain a garbage truck as it does a sedan

Solid Waste truck - 17.8 VEU
Fire truck - 10.6 VEU
- Solid Waste trucks are the most expensive units to operate in our fleet
Total VEU - 3541.2

VEU = 11 Labor Hours

Total Labor Hours - 38,953.2
Total Labor Hours - 38,953
Available Hours - 1650
Mechanics - 24
Assume your organization decides to do your new vehicle own up-fits:

New Up-fits - 2,900 labor hours annually

Staffing – 2,900 hours ÷ 1,650 = 1.76 FTE
Workload Changes

Assume your organization decides to outsource and internal service:

Outsourced service - 1,800 labor hours annually

Staffing impact – 1,800 hours = 1.09 FTE

So you will now see more labor resources than the workload can support.
Summary

• Defined VEU

• Determined baseline VEU

• Calculated VEU for an inventory of fleet vehicles

• Determined Staffing based on VEU

• Demonstrated how changes affect VEU
QUESTIONS