

PREPRODUCTION INITIATIVE-NELP GLYCOL RECYCLER, 18 GALLONS TEST PLAN

SITE: NS MAYPORT

1.0 OBJECTIVE

This test plan describes the process data collection procedure for the 18-gallon glycol recycler. The data will be used to determine the system's efficiency, effectiveness, overall performance, and ability to interface successfully with site operations.

2.0 DESCRIPTION

The portable 18-gallon glycol recycler will recycle antifreeze (ethylene glycol) used in various engine-driven equipment. This closed-loop process will eliminate the need to drain, transport, store, and dispose of spent antifreeze—an environmental hazard.

3.0 TEST PLAN

This test plan will be used to evaluate the effectiveness of the glycol recycler and quantify the recycled antifreeze.

3.1 Approach

Quantitative and qualitative data will be acquired by completion of Table 1.

3.1.1 Instructions for Completing Table 1

- **Date:** Indicate dates the glycol recycler was used (month and day).
- **Item Use**
 - **Frequency:** Indicate the frequency of usage on a given date (*e.g.*, 1, 2, 3 times).
 - **Quantity:** Indicate the quantity of antifreeze in each piece of support equipment.
- **Quantity Used:** Indicate the quantity or volume of Glyclean additive used on a given date to remove impurities, replace inhibitors, and restore antifreeze to original 50% strength (glycol-water 50/50 mixture).
- **Time/Task:** Record the time per unit task (*i.e.*, length of time required to complete one cycle—including time to connect the unit to the equipment to be serviced, flush out and recycle antifreeze, and return replenished antifreeze into the unit).

- **Downtime/Month**
 - **Time Period:** Record time periods when the unit was not in use.
 - **Reason:** Explain whether downtime was due to repairs, maintenance, workload, or other factors.
- **Repair Time: Indicate time required to repair the system.**
- **Repair Parts Required: List repair parts required and cost.**
- **Consumables Ordered: Record date when Glyclean additive was ordered and the quantity and cost.**
- **Qualitative Assessment: Provide a narrative evaluation of the unit's performance.** Briefly discuss:
 - Efficiency of this method (*e.g.*, time and cost savings)
 - Ease of use and the unit's ability to successfully interface with site operations
 - Overall satisfaction with the recycled antifreeze.

4.0 REPORTING

The data entry form is a concise method of data collection. The form should be completed on a daily basis. Data will be collected for 1 year. During this time, periodic status reports on the testing will be submitted to NAWCADLKE. The final report will include detailed results and observations, assess the efficiency and cost-effectiveness of the unit, and evaluate its ability to interface with site operations.

Table 1

Date	Item Use		Quantity Used	Time/Task	Downtime/Month		Repair Time	Repair Parts Required
	Frequency	Quantity			Time Period	Reason		

Consumables (Glyclean) ordered:

Date	Quantity	Cost

Qualitative Assessment*:

Provide comments on the effectiveness and efficiency of the unit.

* Attach extra sheet if required.

