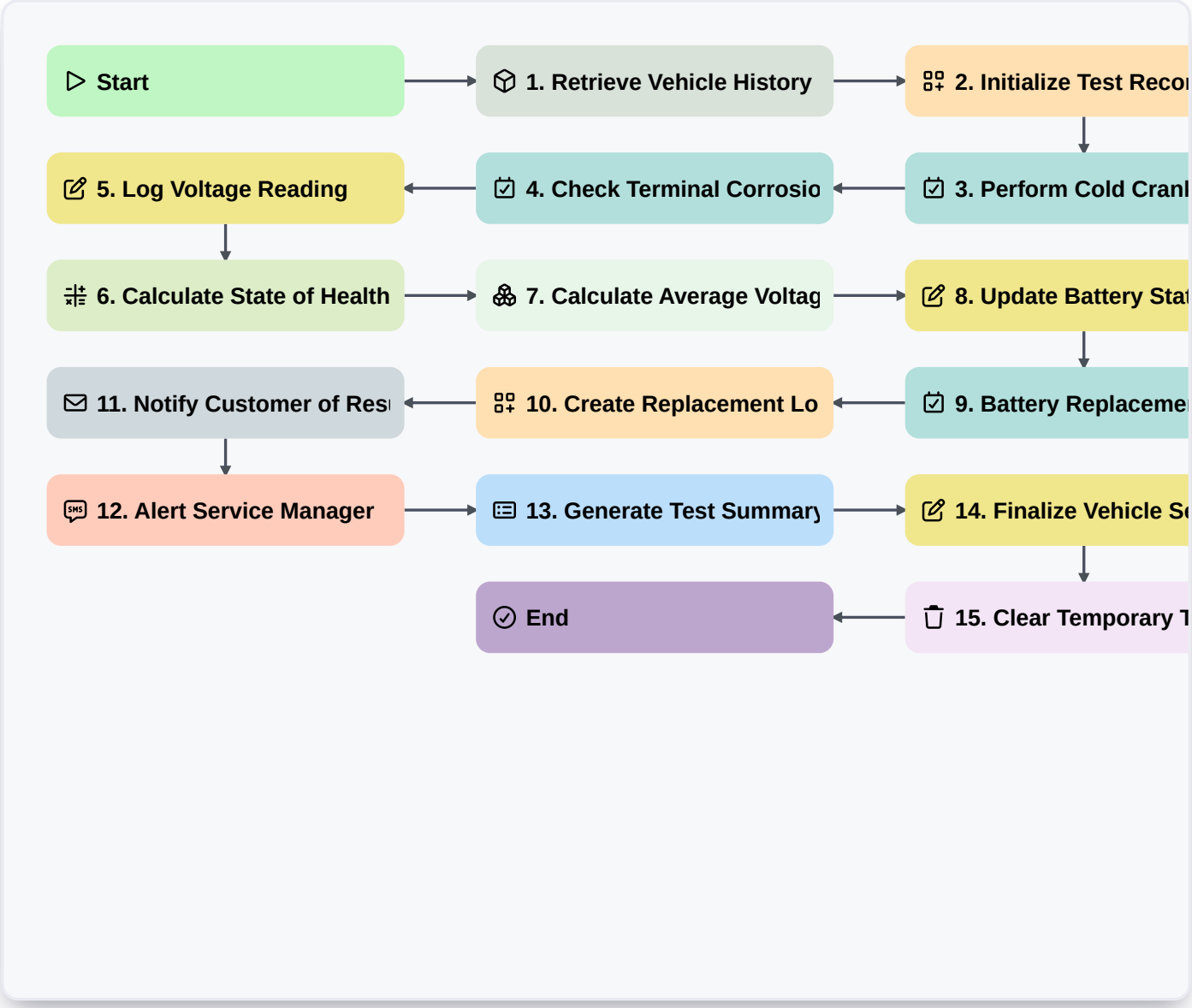
ChecklistGuro

Automotive Battery Testing And Replacement Workflow



Start
Start of the Workflow/Process.

1. Retrieve Vehicle History
Fetch previous battery replacement dates and voltage logs for the specific vehicle ID.

2. Initialize Test Record
Create a new entry in the 'Battery Test Log' data model to start the testing process.

3. Perform Cold Cranking Amps (CCA) Test
Assign a task to a technician to measure the battery's CCA performance.

4. Check Terminal Corrosion
Assign a checklist task to inspect battery terminals for oxidation or debris.

5. Log Voltage Reading
Update the Test Record with the recorded voltage measurements during the test.

6. Calculate State of Health (SoH)
Execute formula: (Measured_CCA / Rated_CCA) * 100 to determine battery health percentage.

7. Calculate Average Voltage Drop
Aggregate all voltage readings from the multi-stage load test to find the average drop.

8. Update Battery Status
Update the battery entry status to 'Passed', 'Failed', or 'Requires Replacement' based on test results.

9. Battery Replacement Execution
If status is 'Failed', create a task for the mechanic to remove the old battery and install a new one.

10. Create Replacement Log
Create a new entry in the 'Inventory Outbound' model to track the new battery serial number usage.

11. Notify Customer of Results
Send an email to the customer detailing the battery test findings and the recommendation.

12. Alert Service Manager
Send an SMS to the manager if a battery failure is detected that requires urgent parts ordering.

13. Generate Test Summary Report
Generate a PDF report containing the full test metrics, timestamp, and technician signature.

14. Finalize Vehicle Service Record
Update the master Vehicle Service entry to reflect that the battery service is completed.

15. Clear Temporary Test Data
Delete transient sensor raw data entries once the final aggregated results are saved.

End
End of the Workflow/Process.