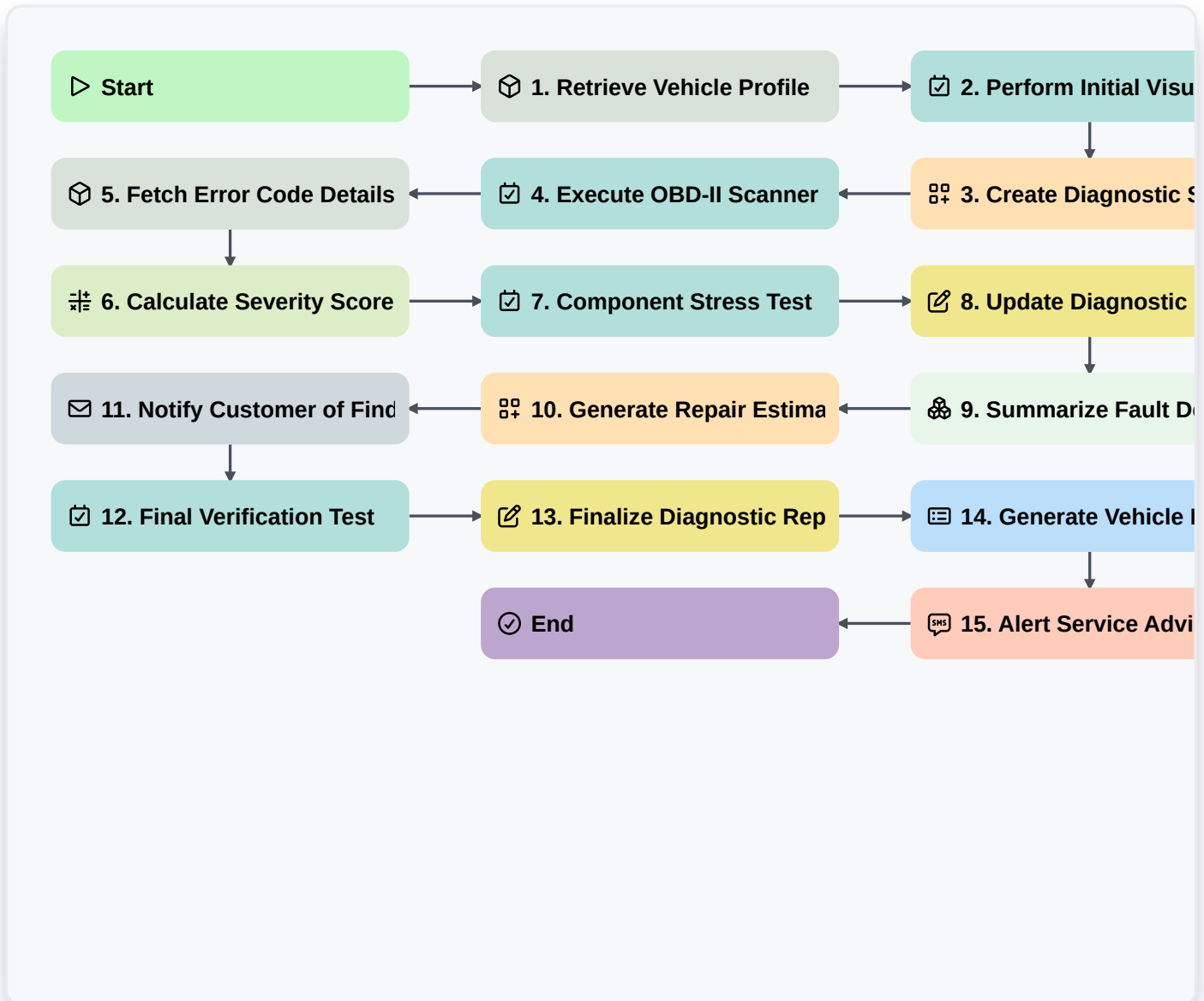


Vehicle Diagnostic And Troubleshooting Process



▶ Start

Start of the Workflow/Process.

📦 1. Retrieve Vehicle Profile

Fetch existing vehicle data (VIN, Make, Model, Year) from the Vehicle Data Model using the provided identifier.

✅ 2. Perform Initial Visual Inspection

Assign a task to the Technician to inspect the vehicle for visible external damage or fluid leaks.

🔧 3. Create Diagnostic Session

Create a new entry in the Diagnostic Logs model to track this specific troubleshooting event.

✅ 4. Execute OBD-II Scanner Scan

Assign a task to plug in the diagnostic tool and read all active and stored DTC (Diagnostic Trouble Codes).

📦 5. Fetch Error Code Details

Retrieve the descriptions and severity levels for the specific DTCs found during the scan from the Error Code Library.



6. Calculate Severity Score

Calculate a weighted severity score based on the number of active error codes and their associated risk levels.

7. Component Stress Test

Assign a task to perform specific physical tests (e.s., compression test, battery load test) based on identified error codes.

8. Update Diagnostic Findings

Update the Diagnostic Session entry with the results, measurements, and observed anomalies from the stress tests.

9. Summarize Fault Density

Aggregate all error codes found in the current session to count the total number of system faults detected.

10. Generate Repair Estimate

Create a new entry in the Service Quote model including required parts and estimated labor hours.

11. Notify Customer of Findings

Send an email to the vehicle owner detailing the detected issues and the proposed repair plan.

12. Final Verification Test

Assign a task to perform a post-diagnostic check to ensure all sensors are responding within factory parameters.

13. Finalize Diagnostic Report

Update the original Diagnostic Session entry to 'Closed' status and attach the final conclusion.

14. Generate Vehicle Health Report

Create a formatted PDF report containing the vehicle history, scan results, and technician notes for the customer.

15. Alert Service Advisor

Send an SMS to the Service Advisor notifying them that a high-severity diagnostic issue requires immediate parts ordering.

End

End of the Workflow/Process.