# Test Summary Report

**Project: Equipment Status Tracker**

Application URL: https://qa-assignment-omega.vercel.app

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Test Period: 15 August 2025

Test Environment:

- Browser: Google Chrome (Latest) on macOS

- API: As per Swagger documentation (/docs)

- Test Data: Unique sets created for each run

## 1. Objective

To verify the functional correctness, API reliability, and user experience of the Equipment Status Tracker application through manual testing, bug identification, and automation readiness for both UI and APIs.

## 2. Scope

In-Scope:

- Equipment List Display

- Adding Equipment

- Status Update Functionality

- History Modal Functionality

- Error Handling and Validations

- Accessibility & Keyboard Navigation

- API endpoints:

GET /api/equipment,

POST /api/equipment,

POST /api/equipment/{id}/status,

GET /api/equipment/{id}/history

Out of Scope:

- Authentication

- Advanced Security and Performance Testing

## 3. Test Approach

- Manual Functional Testing based on requirements.

- Exploratory Testing for usability and UX validation.

- API Testing using Supertest for happy paths, error handling, and validation checks.

- Performance Checks to ensure p95 ≤ 1000 ms for API responses.

- Automation Preparation for Cypress (UI) and Mocha + Supertest (API).

## 4. Test Execution Summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Type | Total Cases | Passed | Failed | Blocked | Pass % |
| Manual Functional | 20 | 12 | 8 | 0 | 60% |
| API Tests (Supertest) | 12 | 9 | 3 | 0 | 75% |
| Performance Checks | 4 | 3 | 1 | 0 | 75% |

## 5. Defects Found

Total Bugs: 11

Severity Distribution:

- High: 7

- Low: 4

Top Issues Identified:

- Unable to open history modal for 'Under Maintenance' equipment.

- Real-time updates do not reflect across tabs.

- No error shown when changing status from 'Under Maintenance' to other statuses

- Status history shows only last 10 entries, no pagination.

- Active equipment count mismatch.

- Idle status badge displays wrong color (Red instead of Yellow).

- No max character limit on Equipment Name & Location.

## 6. Risks & Observations

- Functional Risk: Real-time updates unreliable across multiple sessions.

- UI Risk: Accessibility gaps in keyboard navigation.

- API Risk: No proper error handling for invalid IDs in History endpoint.

- UX Concern: Missing validation messages reduces user feedback clarity.

## 7. Recommendations

- Fix validation and data integrity issues in API.

- Implement consistent real-time sync across all open sessions.

- Add comprehensive input validation on UI and API levels.

- Improve accessibility with keyboard shortcuts.

- Implement pagination for history records.

## 8. Exit Criteria & Conclusion

Exit Criteria Met:

- All high-priority test cases executed.

- Bugs documented with reproducible steps and evidence.

- Automation suites (UI + API) ready for execution.

Conclusion:

The application is functional but has multiple high-severity defects that need resolution before production release. Automation readiness is high, with clear coverage for both UI and API flows.