SCR000001 – Engine State Control Based on Ignition Switch

# 1. Objective

Implement logic to control engine state using the ignition switch input.

# 2. Description

- When ignition\_switch = 1, engine should turn ON (engine\_state = 1)  
- When ignition\_switch = 0, engine should turn OFF (engine\_state = 0)

# 3. Inputs

|  |  |  |
| --- | --- | --- |
| Signal | Description | Range |
| ignition\_switch | Digital switch for ignition (0/1) | 0 or 1 |

# 4. Outputs

|  |  |  |
| --- | --- | --- |
| Signal | Description | Range |
| engine\_state | Engine ON/OFF indicator | 0 or 1 |

# 5. Calibration Parameters

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Value |
| ignition\_switch | Toggle to simulate ignition status | 0 or 1 |

# 6. Test Scenarios

|  |  |  |
| --- | --- | --- |
| Test Case | ignition\_switch | Expected engine\_state |
| TC1 | 0 | 0 |
| TC2 | 1 | 1 |
| TC3 | 0 → 1 → 0 | 0 → 1 → 0 |

# 7. Author & Date

Developer1 – 01/01/2000