

0.1 Test cases

| Stage 1 | | | | |
|---------|------------------------|---|---|-----|
| # | Objective | Steps | Expected result | P/F |
| 1.1 | Forward movement | 1.Flash stage 1 code 2.Place forklift down on the floor 3.Press start | The forklift moves forward a arbitrary distance | |
| 1.2 | Backward movement | —” — | The forklift moves backward a arbitrary distance | |
| 1.3 | Forward right movement | —” — | The forklift moves forward and right a arbitrary distance and angle | |
| 1.4 | Forward left movement | —” — | The forklift moves forward and left a arbitrary distance and angle | |
| 1.5 | Stationary right turn | —” — | The forklift turns right a arbitrary angle | |
| 1.6 | Stationary left turn | —” — | The forklift turns left a arbitrary angle | |
| 1.7 | Read battery voltage | 1.Measure the battery voltage with a multimeter 2.Flash stage 1 code 3. Read displayed voltage in display | The multimeter measurement and display value should be the same with a tolerance of 2% | |
| 1.8 | Battery voltage low | —” — | The forklift should not start when the start button is pressed. Instead it should prompt the user that the battery needs to be charged. | |

| Stage 2 | | | | |
|---------|----------------------------------|---|--|-----|
| # | Objective | Steps | Expected result | P/F |
| 2.1 | Movement following the line path | 1.Flash stage 2 code 2.Place the forklift on line 3.Press start | The forklift should follow the line path when moving at a arbitrary speed. | |
| 2.2 | Detected obstacle stop | —” —4.Place obstacle on path | The forklift should stop before hitting the obstacle | |
| 2.3 | Detected obstacle start | 1.Run test case 2.2 first. 2.Remove obstacle for the path | The forklift resumes it movement along the path | |

| Stage 3 | | | | |
|---------|----------------------|---|---|-----|
| # | Objective | Steps | Expected result | P/F |
| 3.1 | Move fork up | 1.Flash stage 3 code 2.Place the forklift on line 3.Press start | | |
| 3.2 | Move fork down | —” — | | |
| 3.3 | Move fork to minimum | —” — | | |
| 3.4 | Move fork to maximum | —” — | | |
| 3.5 | Detected pallet | —” — | The forklift should detected and move into position of the pallet | |
| 3.6 | Move pallet up | —” — | The forklift should move the forks under the pallet and move it up a arbitrary distance | |
| 3.7 | Move with pallet | —” — | The forklift lift should move with the pallet to the destination point along the path | |
| 3.7 | Move pallet down | | The forklift lift should move the pallet down to ground level | |