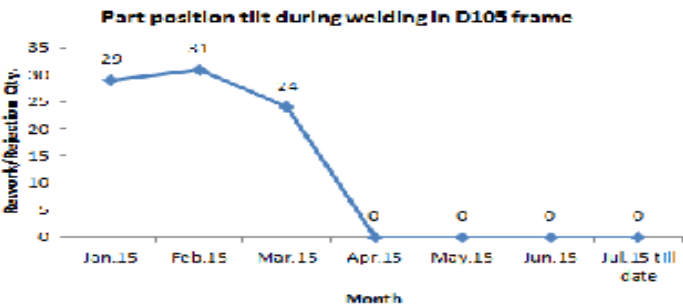


|                                                                                                                                                                                                                                                                         |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------|---|------------|---|------------|-------------------------------------------|---------------|-------------|-------|---------|---------|---------|-----------|--------|--------|--------------------------|------------|----------|
|                                                                                                                                                                                         | Equipment :  | Box. II nd tack & full welding robotic.                                                                                                                      | Loss Type :                                           | Defect Loss                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |                                                                               |   |            |   |            | KAIZEN IDEA SHEET<br><br>Kaizen ID : 2637 |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                                                                                                         | Department : | QA                                                                                                                                                           | Result :                                              | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | P | Q                                                                             | C | D          | S | M          |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                                                                                                         | Cell :       | D105-A                                                                                                                                                       | Type :                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Unit Name : 112933 - Metalman Auto Pvt Ltd., Aurangabad                                                                                                                                                                                                                 |              |                                                                                                                                                              | Operation : Box assly tack & full robotic.            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Kaizen Theme: To prevent defect part position tilt of rear fendor bkt in D105 frame.                                                                                                                                                                                    |              |                                                                                                                                                              | Idea : To make provision by sensor with interlocking. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Problem / Present Status                                                                                                                                                                                                                                                |              | Counter Measure                                                                                                                                              |                                                       | Benchmark :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   | 24                                                                            |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Rear fendor bkt LH /RH position getting tilt in fixture during robotic welding.                                                                                                                                                                                         |              | Sensor provided with interlock the robot full welding operation for aviod part position tilt.                                                                |                                                       | Target :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   | 0                                                                             |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                         |              |                                                                            |                                                       | Start :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   | 10/02/2015                                                                    |   | Finished : |   | 15/02/2015 |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                                                                                                         |              |                                                                                                                                                              |                                                       | Note :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   | Poka implemented for part position tilt with interlock the robotic operation. |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                                                                                                         |              |                                                                                                                                                              |                                                       | Team Members :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
|                                                                                                                                                                                                                                                                         |              |                                                                                                                                                              |                                                       | 1. Mr. Salunke P.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   | 2. Mr. Shinde V.V                                                             |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| 3. Mr. Sasane A.V                                                                                                                                                                                                                                                       |              | 4. Mr. Nikhade M.L                                                                                                                                           |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| 5. Mr. Shinde V.V                                                                                                                                                                                                                                                       |              | 6. Mr. Waghmare V.P                                                                                                                                          |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Benefits                                                                                                                                                                                                                                                                |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Q                                                                                                                                                                                                                                                                       |              | Rework & rejection cost saved per month. Rs. 15000 Rs 70000.00                                                                                               |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Why Why Analysis :                                                                                                                                                                                                                                                      |              | Result :                                                                                                                                                     |                                                       | Kaizen Sustenance :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| W1 : Why Rear fendor fitment difficult in D105. ?<br>A1 : Rear fendor bkt position tilt<br>W2 : Why Rear fendor bkt position tilt ?<br>A2 : No provision for arrest tilting in fixture<br>W3 : Why No provision for arrest tilting in fixture ?<br>A3 :<br>W4 :<br>A4 : |              | Part position not ok/ tilt defects reduced from 24 parts to Zero.<br><br> |                                                       | What To Do : JH/PM of robots & Kaizen, Poka Audit<br><br>How To Do : By Maint Person / Dedicated Auditor<br><br>Frequency : Daily / Monthly<br><br>Cost Incurred For Making Kaizen : <table><tr><td>Material Cost</td><td>Labour Cost</td><td>Total</td></tr><tr><td>6500.00</td><td>1700.00</td><td>8200.00</td></tr></table><br>Scope & Plan For Horizontal Deployment : <table><tr><td>Equipmnet</td><td>Target</td><td>Status</td></tr><tr><td>Robotic- Box. 2nd assly.</td><td>25/03/2015</td><td>COMPLETE</td></tr></table> |   |                                                                               |   |            |   |            |                                           | Material Cost | Labour Cost | Total | 6500.00 | 1700.00 | 8200.00 | Equipmnet | Target | Status | Robotic- Box. 2nd assly. | 25/03/2015 | COMPLETE |
| Material Cost                                                                                                                                                                                                                                                           | Labour Cost  | Total                                                                                                                                                        |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| 6500.00                                                                                                                                                                                                                                                                 | 1700.00      | 8200.00                                                                                                                                                      |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Equipmnet                                                                                                                                                                                                                                                               | Target       | Status                                                                                                                                                       |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Robotic- Box. 2nd assly.                                                                                                                                                                                                                                                | 25/03/2015   | COMPLETE                                                                                                                                                     |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Root Cause<br>No provision for arrest tilting in fixture                                                                                                                                                                                                                |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Date : 19/07/2015                                                                                                                                                                                                                                                       |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Registered By : Mr. Lade D.S                                                                                                                                                                                                                                            |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| Manager's Sign :                                                                                                                                                                                                                                                        |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |
| ----- Bajaj Auto Ltd. (Fabrication) -----                                                                                                                                                                                                                               |              |                                                                                                                                                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                                                                               |   |            |   |            |                                           |               |             |       |         |         |         |           |        |        |                          |            |          |