

|             |                           |                                  |                               |
|-------------|---------------------------|----------------------------------|-------------------------------|
| CELL :-A177 | CELL NAME:- Oil Pump Line | MACHINE / STAGE :- VMC Machining | OPERATION :- Operation No. 10 |
|-------------|---------------------------|----------------------------------|-------------------------------|

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| <b>KAIZEN THEME :</b> To Reduce the Tooling Cost Per Component in A177 Oil Pump Cell. | <b>IDEA :-</b> Ø23.15 PCD reamer to be modify with chamfer. |
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|  |   |   |                  |         |               |          |                     |            |                      |            |
|--|---|---|------------------|---------|---------------|----------|---------------------|------------|----------------------|------------|
| <b>WIDELY/DEEPLY:-</b><br><b>PROBLEM / PRESENT STATUS :-</b> Separate tools used for Ø23.15 Rotor hole reaming & chamfering , Tooling Cost Per Component is INR 0.98 & Ø23.15 PCD Reamer life Is 92000 Nos | <b>COUNTERMEASURE:-</b> Introduced Ø23.15 +0.03 with chamfer tool for OP.10 rotor hole reaming & Tooling CPC Is INR 0.77 & Tool life is 130682 no's . | <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td><b>BENCHMARK</b></td><td>0.48INR</td></tr> <tr><td><b>TARGET</b></td><td>0.27 INR</td></tr> <tr><td><b>KAIZEN START</b></td><td>16.08.2014</td></tr> <tr><td><b>KAIZEN FINISH</b></td><td>31.08.2015</td></tr> </table> | <b>BENCHMARK</b> | 0.48INR | <b>TARGET</b> | 0.27 INR | <b>KAIZEN START</b> | 16.08.2014 | <b>KAIZEN FINISH</b> | 31.08.2015 |
| <b>BENCHMARK</b>   | 0.48INR   |   |                  |         |               |          |                     |            |                      |            |
| <b>TARGET</b>  | 0.27 INR  |   |                  |         |               |          |                     |            |                      |            |
| <b>KAIZEN START</b>  | 16.08.2014  |   |                  |         |               |          |                     |            |                      |            |
| <b>KAIZEN FINISH</b>   | 31.08.2015  |   |                  |         |               |          |                     |            |                      |            |

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|  |  | <b>TEAM MEMBERS :-</b><br>N.S.Pujari ,Praveen<br>Pradeep Kinni |
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| <div style="border: 2px solid red; padding: 5px; display: inline-block;">Tool KJK PCD Reamer –Dia 23.15 +0.03</div><br><br><h2 style="margin: 0;">KJK PCD REAMER</h2> | <div style="border: 2px solid green; padding: 5px; display: inline-block;">Tool MAPAL PCD Reamer –Dia 23.15 +0.03</div><br><br><h2 style="margin: 0;">MAPAL PCD REAMER</h2> | <b>BENEFITS :-</b><br>1. Save INR 101085 cost /Annum. |
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|        |       |                          |
|--------|-------|--------------------------|
| BEFORE | AFTER | <b>KAIZEN SUSTENANCE</b> |
|--------|-------|--------------------------|

| <b>WHY - WHY ANALYSIS :-</b><br><b>Why1:</b> Tooling Cost Per Component is INR 0.98.<br><b>Why 2:-</b> OP.10 Ø23.15 Hole reaming tools CPC is INR 0.48.<br><b>Why 3:-</b> Separate tools used for rotor hole machining. | <b>RESULT :-</b><br><div style="text-align: center;"> <h3>Tooling Cost Per Component</h3> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr><th>Category</th><th>Cost (INR)</th></tr> <tr><td>Before</td><td>0.98</td></tr> <tr><td>After</td><td>0.77</td></tr> </table> </div> | Category | Cost (INR) | Before | 0.98 | After | 0.77 | <b>WHAT TO DO:</b> Changed the reamer Make in PCP & Tooling Master List.<br><b>HOW TO DO:</b> -----<br><b>FREQUENCY :</b> 1 Time activity |
|---|---|----------|------------|--------|------|-------|------|---|
| Category  | Cost (INR)  |          |            |        |      |       |      |   |
| Before  | 0.98  |          |            |        |      |       |      |   |
| After   | 0.77  |          |            |        |      |       |      |   |

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| <b>COST INCURRED FOR MAKING KAIZEN</b> |                      |                     |
| MATERIAL COST<br>IN RS                 | LABOUR COST<br>IN RS | TOTAL COST<br>IN RS |
| -----                                  | -----                | -----               |

| <b>SCOPE &amp; PLAN FOR HORIZONTAL DEPLOYMENT</b> |       |        |                |        |
|---|-------|--------|----------------|--------|
| SR. NO.   | CELL  | TARGET | RESPONSIBILITY | STATUS |
| 1.  | ----- | -----  | -----          | -----. |

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| <b>REGISTRATION NO. &amp; DATE:</b> 810 & 31.08.15<br><b>REGISTERED BY :-</b> Guru Basappa<br><b>MANAGER'S SIGN :-</b> N.S.Pujari |
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