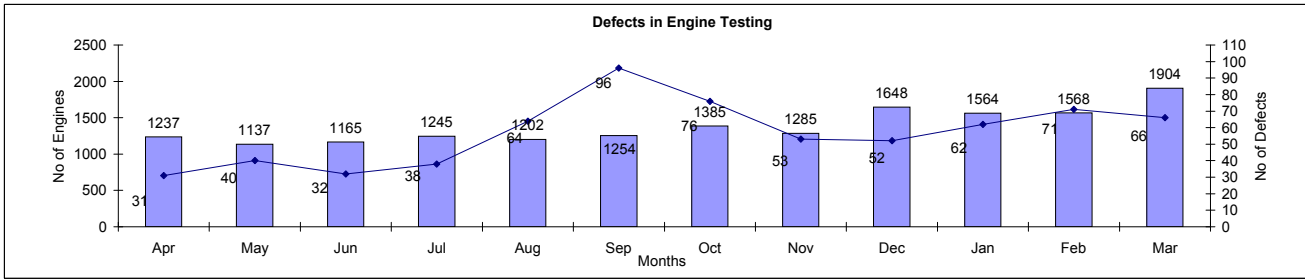
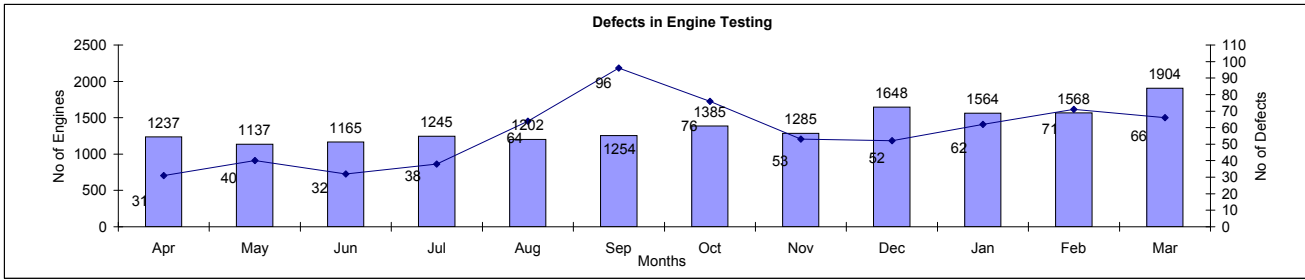


**ENGINE TESTING - YEAR 2004 - 2005
- YEARLY REPORT -**



Sr. No.	REASON FOR REJECTION	YTD	Trend	Actions	Status																										
1	Stanadyne rotary pump defects	110	<table border="1"> <caption>Stanadyne pump defects</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>8</td></tr> <tr><td>May</td><td>7</td></tr> <tr><td>Jun</td><td>7</td></tr> <tr><td>Jul</td><td>11</td></tr> <tr><td>Aug</td><td>12</td></tr> <tr><td>Sep</td><td>9</td></tr> <tr><td>Oct</td><td>3</td></tr> <tr><td>Nov</td><td>2</td></tr> <tr><td>Dec</td><td>8</td></tr> <tr><td>Jan</td><td>15</td></tr> <tr><td>Feb</td><td>20</td></tr> <tr><td>Mar</td><td>8</td></tr> </tbody> </table>	Month	No of defects	Apr	8	May	7	Jun	7	Jul	11	Aug	12	Sep	9	Oct	3	Nov	2	Dec	8	Jan	15	Feb	20	Mar	8	Details of every FIP is being sent to stanadyne. Issues have been discussed with SAC representatives & targets for year 05-06 set. Defective pump are rectified by Dealer at JV.	Under Observation
Month	No of defects																														
Apr	8																														
May	7																														
Jun	7																														
Jul	11																														
Aug	12																														
Sep	9																														
Oct	3																														
Nov	2																														
Dec	8																														
Jan	15																														
Feb	20																														
Mar	8																														
2	Turbo oil return line leakage	65	<table border="1"> <caption>Turbo return line defect</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>0</td></tr> <tr><td>May</td><td>0</td></tr> <tr><td>Jun</td><td>0</td></tr> <tr><td>Jul</td><td>2</td></tr> <tr><td>Aug</td><td>7</td></tr> <tr><td>Sep</td><td>15</td></tr> <tr><td>Oct</td><td>7</td></tr> <tr><td>Nov</td><td>5</td></tr> <tr><td>Dec</td><td>12</td></tr> <tr><td>Jan</td><td>3</td></tr> <tr><td>Feb</td><td>11</td></tr> <tr><td>Mar</td><td>3</td></tr> </tbody> </table>	Month	No of defects	Apr	0	May	0	Jun	0	Jul	2	Aug	7	Sep	15	Oct	7	Nov	5	Dec	12	Jan	3	Feb	11	Mar	3	No leakage was observed on Imported pipes assembled during February & March. Leakage is observed on locally made pipes. As the imported stock is finished, local improved & segregated pipes are being assembled.	Under observation
Month	No of defects																														
Apr	0																														
May	0																														
Jun	0																														
Jul	2																														
Aug	7																														
Sep	15																														
Oct	7																														
Nov	5																														
Dec	12																														
Jan	3																														
Feb	11																														
Mar	3																														
3	Thermostat gasket leak	45	<table border="1"> <caption>Thermostat gasket leak</caption> <thead> <tr><th>Month</th><th>No of Defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>0</td></tr> <tr><td>May</td><td>0</td></tr> <tr><td>Jun</td><td>1</td></tr> <tr><td>Jul</td><td>4</td></tr> <tr><td>Aug</td><td>13</td></tr> <tr><td>Sep</td><td>18</td></tr> <tr><td>Oct</td><td>3</td></tr> <tr><td>Nov</td><td>0</td></tr> <tr><td>Dec</td><td>0</td></tr> <tr><td>Jan</td><td>4</td></tr> <tr><td>Feb</td><td>0</td></tr> <tr><td>Mar</td><td>2</td></tr> </tbody> </table>	Month	No of Defects	Apr	0	May	0	Jun	1	Jul	4	Aug	13	Sep	18	Oct	3	Nov	0	Dec	0	Jan	4	Feb	0	Mar	2	Informed the machine shop to correct the handling process to avoid scratch marks on cover seating area. Check point added in Cyl. head line. Deburring of roller done to avoid scratches. Long term- Gasket with Silicon bidding developed.	Under observation
Month	No of Defects																														
Apr	0																														
May	0																														
Jun	1																														
Jul	4																														
Aug	13																														
Sep	18																														
Oct	3																														
Nov	0																														
Dec	0																														
Jan	4																														
Feb	0																														
Mar	2																														
4	Front seal leakage	38	<table border="1"> <caption>Front seal leak</caption> <thead> <tr><th>Month</th><th>No of Defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>1</td></tr> <tr><td>May</td><td>1</td></tr> <tr><td>Jun</td><td>0</td></tr> <tr><td>Jul</td><td>0</td></tr> <tr><td>Aug</td><td>7</td></tr> <tr><td>Sep</td><td>5</td></tr> <tr><td>Oct</td><td>3</td></tr> <tr><td>Nov</td><td>4</td></tr> <tr><td>Dec</td><td>1</td></tr> <tr><td>Jan</td><td>3</td></tr> <tr><td>Feb</td><td>6</td></tr> <tr><td>Mar</td><td>7</td></tr> </tbody> </table>	Month	No of Defects	Apr	1	May	1	Jun	0	Jul	0	Aug	7	Sep	5	Oct	3	Nov	4	Dec	1	Jan	3	Feb	6	Mar	7	Seals found defective. Seals segregated. Off late pulley pressing found defective. Reassembling the same pulley on same engine eliminates the leakage	Under observation
Month	No of Defects																														
Apr	1																														
May	1																														
Jun	0																														
Jul	0																														
Aug	7																														
Sep	5																														
Oct	3																														
Nov	4																														
Dec	1																														
Jan	3																														
Feb	6																														
Mar	7																														
Sr. No.	REASON FOR REJECTION	YTD	Trend	Actions	Status																										
5	High smoke - injector/injector faulty	37	<table border="1"> <caption>High smoke</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>1</td></tr> <tr><td>May</td><td>2</td></tr> <tr><td>Jun</td><td>1</td></tr> <tr><td>Jul</td><td>0</td></tr> <tr><td>Aug</td><td>2</td></tr> <tr><td>Sep</td><td>2</td></tr> <tr><td>Oct</td><td>2</td></tr> <tr><td>Nov</td><td>2</td></tr> <tr><td>Dec</td><td>0</td></tr> <tr><td>Jan</td><td>3</td></tr> <tr><td>Feb</td><td>9</td></tr> <tr><td>Mar</td><td>3</td></tr> </tbody> </table>	Month	No of defects	Apr	1	May	2	Jun	1	Jul	0	Aug	2	Sep	2	Oct	2	Nov	2	Dec	0	Jan	3	Feb	9	Mar	3	Major defects were observed in Mar-05. Defects were confirmed by Stanadyne dealer at JV. Depending of this Feedback, 1600 nos of injectors were checked at receipt & assembled to avoid rejection. Issue taken up with SAC.	Under control
Month	No of defects																														
Apr	1																														
May	2																														
Jun	1																														
Jul	0																														
Aug	2																														
Sep	2																														
Oct	2																														
Nov	2																														
Dec	0																														
Jan	3																														
Feb	9																														
Mar	3																														
6	FIP lub line leakage	36	<table border="1"> <caption>FIP Lub line leak</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>7</td></tr> <tr><td>May</td><td>2</td></tr> <tr><td>Jun</td><td>1</td></tr> <tr><td>Jul</td><td>0</td></tr> <tr><td>Aug</td><td>1</td></tr> <tr><td>Sep</td><td>13</td></tr> <tr><td>Oct</td><td>5</td></tr> <tr><td>Nov</td><td>1</td></tr> <tr><td>Dec</td><td>1</td></tr> <tr><td>Jan</td><td>1</td></tr> <tr><td>Feb</td><td>1</td></tr> <tr><td>Mar</td><td>3</td></tr> </tbody> </table>	Month	No of defects	Apr	7	May	2	Jun	1	Jul	0	Aug	1	Sep	13	Oct	5	Nov	1	Dec	1	Jan	1	Feb	1	Mar	3	Informed to stage Associates & Line supervisors to take proper care while fitment. No leakage observed after adequate sealant application at block end.	Under control
Month	No of defects																														
Apr	7																														
May	2																														
Jun	1																														
Jul	0																														
Aug	1																														
Sep	13																														
Oct	5																														
Nov	1																														
Dec	1																														
Jan	1																														
Feb	1																														
Mar	3																														
7	HP line leakage	34	<table border="1"> <caption>HP line leakage</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>0</td></tr> <tr><td>May</td><td>0</td></tr> <tr><td>Jun</td><td>0</td></tr> <tr><td>Jul</td><td>0</td></tr> <tr><td>Aug</td><td>3</td></tr> <tr><td>Sep</td><td>3</td></tr> <tr><td>Oct</td><td>3</td></tr> <tr><td>Nov</td><td>9</td></tr> <tr><td>Dec</td><td>5</td></tr> <tr><td>Jan</td><td>5</td></tr> <tr><td>Feb</td><td>1</td></tr> <tr><td>Mar</td><td>1</td></tr> </tbody> </table>	Month	No of defects	Apr	0	May	0	Jun	0	Jul	0	Aug	3	Sep	3	Oct	3	Nov	9	Dec	5	Jan	5	Feb	1	Mar	1	HP lines getting bend during head fitment. Process modification done to ensure no bending of line after fitment. Checkpoint added & informed to stage operator for Loose fitment	Problem reduced
Month	No of defects																														
Apr	0																														
May	0																														
Jun	0																														
Jul	0																														
Aug	3																														
Sep	3																														
Oct	3																														
Nov	9																														
Dec	5																														
Jan	5																														
Feb	1																														
Mar	1																														

ENGINE TESTING - YEAR 2004 - 2005
- YEARLY REPORT -



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8	MICO FIP defects	31	<table border="1"> <caption>MICO pump defects</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>3</td></tr> <tr><td>May</td><td>9</td></tr> <tr><td>Jun</td><td>0</td></tr> <tr><td>Jul</td><td>0</td></tr> <tr><td>Aug</td><td>2</td></tr> <tr><td>Sep</td><td>5</td></tr> <tr><td>Oct</td><td>5</td></tr> <tr><td>Nov</td><td>1</td></tr> <tr><td>Dec</td><td>2</td></tr> <tr><td>Jan</td><td>1</td></tr> <tr><td>Feb</td><td>3</td></tr> <tr><td>Mar</td><td>0</td></tr> </tbody> </table>	Month	No of defects	Apr	3	May	9	Jun	0	Jul	0	Aug	2	Sep	5	Oct	5	Nov	1	Dec	2	Jan	1	Feb	3	Mar	0	Taken up with MICO	Under control
Month	No of defects																														
Apr	3																														
May	9																														
Jun	0																														
Jul	0																														
Aug	2																														
Sep	5																														
Oct	5																														
Nov	1																														
Dec	2																														
Jan	1																														
Feb	3																														
Mar	0																														
9	Head casting leakage - coolant	21	<table border="1"> <caption>Head casting leakage-coolant</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>0</td></tr> <tr><td>May</td><td>1</td></tr> <tr><td>Jun</td><td>2</td></tr> <tr><td>Jul</td><td>2</td></tr> <tr><td>Aug</td><td>2</td></tr> <tr><td>Sep</td><td>0</td></tr> <tr><td>Oct</td><td>8</td></tr> <tr><td>Nov</td><td>3</td></tr> <tr><td>Dec</td><td>1</td></tr> <tr><td>Jan</td><td>1</td></tr> <tr><td>Feb</td><td>1</td></tr> <tr><td>Mar</td><td>0</td></tr> </tbody> </table>	Month	No of defects	Apr	0	May	1	Jun	2	Jul	2	Aug	2	Sep	0	Oct	8	Nov	3	Dec	1	Jan	1	Feb	1	Mar	0	Taken up with QA.	Under observation
Month	No of defects																														
Apr	0																														
May	1																														
Jun	2																														
Jul	2																														
Aug	2																														
Sep	0																														
Oct	8																														
Nov	3																														
Dec	1																														
Jan	1																														
Feb	1																														
Mar	0																														
10	Abnormal noise from Engine	23	<table border="1"> <caption>Abnormal noise from engine</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>4</td></tr> <tr><td>May</td><td>3</td></tr> <tr><td>Jun</td><td>3</td></tr> <tr><td>Jul</td><td>1</td></tr> <tr><td>Aug</td><td>2</td></tr> <tr><td>Sep</td><td>2</td></tr> <tr><td>Oct</td><td>2</td></tr> <tr><td>Nov</td><td>2</td></tr> <tr><td>Dec</td><td>2</td></tr> <tr><td>Jan</td><td>0</td></tr> <tr><td>Feb</td><td>1</td></tr> <tr><td>Mar</td><td>1</td></tr> </tbody> </table>	Month	No of defects	Apr	4	May	3	Jun	3	Jul	1	Aug	2	Sep	2	Oct	2	Nov	2	Dec	2	Jan	0	Feb	1	Mar	1	Tappet setting observed wrong w.r.t. specifications. Informed to stage Associate & Line supervisor.	Problem reduced
Month	No of defects																														
Apr	4																														
May	3																														
Jun	3																														
Jul	1																														
Aug	2																														
Sep	2																														
Oct	2																														
Nov	2																														
Dec	2																														
Jan	0																														
Feb	1																														
Mar	1																														
11	Block casting leak	19	<table border="1"> <caption>Block casting leak</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>5</td></tr> <tr><td>May</td><td>1</td></tr> <tr><td>Jun</td><td>3</td></tr> <tr><td>Jul</td><td>2</td></tr> <tr><td>Aug</td><td>3</td></tr> <tr><td>Sep</td><td>3</td></tr> <tr><td>Oct</td><td>1</td></tr> <tr><td>Nov</td><td>1</td></tr> <tr><td>Dec</td><td>0</td></tr> <tr><td>Jan</td><td>0</td></tr> <tr><td>Feb</td><td>0</td></tr> <tr><td>Mar</td><td>0</td></tr> </tbody> </table>	Month	No of defects	Apr	5	May	1	Jun	3	Jul	2	Aug	3	Sep	3	Oct	1	Nov	1	Dec	0	Jan	0	Feb	0	Mar	0	Taken up with QA.	Under observation
Month	No of defects																														
Apr	5																														
May	1																														
Jun	3																														
Jul	2																														
Aug	3																														
Sep	3																														
Oct	1																														
Nov	1																														
Dec	0																														
Jan	0																														
Feb	0																														
Mar	0																														
12	Low press line banjo-Cu washer joint leak	281	<table border="1"> <caption>Low press line banjo-Cu washer joint leak</caption> <thead> <tr><th>Month</th><th>No of defects</th></tr> </thead> <tbody> <tr><td>Apr</td><td>13</td></tr> <tr><td>May</td><td>8</td></tr> <tr><td>Jun</td><td>7</td></tr> <tr><td>Jul</td><td>9</td></tr> <tr><td>Aug</td><td>16</td></tr> <tr><td>Sep</td><td>22</td></tr> <tr><td>Oct</td><td>34</td></tr> <tr><td>Nov</td><td>52</td></tr> <tr><td>Dec</td><td>56</td></tr> <tr><td>Jan</td><td>27</td></tr> <tr><td>Feb</td><td>21</td></tr> <tr><td>Mar</td><td>16</td></tr> </tbody> </table>	Month	No of defects	Apr	13	May	8	Jun	7	Jul	9	Aug	16	Sep	22	Oct	34	Nov	52	Dec	56	Jan	27	Feb	21	Mar	16	Copper washer hardness controlled. Damages during heat treatment & blanking controlled. Forged banjos are being used in place of machined to avoid scratches & piping defects	Under control
Month	No of defects																														
Apr	13																														
May	8																														
Jun	7																														
Jul	9																														
Aug	16																														
Sep	22																														
Oct	34																														
Nov	52																														
Dec	56																														
Jan	27																														
Feb	21																														
Mar	16																														