



**MADHURA DIE CAST PVT.LTD.**  
**D-168,M.I.D.C,Shendra,Aurangabad**

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**INSPECTION REPORT - LAYOUT / SAMPLE**

**CUSTOMER** :- ENDURANCE TECH LTD., **New Die NO** :- M<sub>1</sub>  
**PART NAME** :- Housing Clutch Machined **DATE** :- 18/04/2023  
**MODEL** :- 3W-4S ( Upgrad ) **SAMPLE SIZE** :- 04 nos  
**ETPL PART NO.** :- 165FW01633 MOD-A/27.04.17 **LOT SIZE** :- 04 nos

SR NO.	PARAMETERS	SPECIFICATIONS	MEASURING INSTRUMENT	OBSERVATIONS				REMARKS
				1	2	3	4	
1	DIA NO. & CAVITY NO. :-			M <sub>1</sub> C <sub>1</sub>	M <sub>1</sub> C <sub>1</sub>	M <sub>1</sub> C <sub>2</sub>	M <sub>1</sub> C <sub>2</sub>	OK
2	Inner Dia.	35.5+0.039	DEPG/ Air Gauge	OK	OK	OK	OK	OK
3	ID Chamfer Both Side	0.5 X 45°	Visual / PP	OK	OK	OK	OK	OK
4	Surface Finish ID	3.2	Roughness Tester	0.672	0.586	0.498	0.694	OK
5	Slot Width (B) Bottom Side	16.1 +0.1	Digital Vernier	$\frac{16.15}{16.18}$	$\frac{16.13}{16.18}$	$\frac{16.18}{16.21}$	$\frac{16.16}{16.22}$	OK
6	Radius Both side	R1	RG	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	OK
7	Slot Width (B) Top Side	16.2 +0.15	Digital Vernier	$\frac{16.32}{16.39}$	$\frac{16.33}{16.40}$	$\frac{16.32}{16.40}$	$\frac{16.33}{16.40}$	OK
8	Dimension	6.5	Dial Height gauge	6.50	6.50	6.50	6.50	OK
9	Dimension	31	Dial Height gauge	31.00	31.00	31.00	31.00	OK
10	Dimension	2	Dial Height gauge	2.00	2.00	2.00	2.00	OK
11	Dimension	1	Dial Height gauge	0.95	0.91	0.91	0.94	OK
12	Dimension( Bottom ø 15)	12.2 -0.7	Dial Height gauge	11.93	11.44	11.42	11.42	OK
13	Diameter	122.5	Digital Vernier	122.24	122.26	122.28	122.64	OK
14	Diameter	121	Digital Vernier	121.18	121.14	121.16	121.18	OK
15	Diameter	116	Digital Vernier	115.96	115.44	115.44	115.57	OK
16	Diameter	113.5	Digital Vernier	113.46	113.48	113.39	113.48	OK
17	Diameter	112	Digital Vernier	112.24	112.26	112.23	112.24	OK
18	Diameter	86	Digital Vernier	86.10	86.13	86.12	86.14	OK
19	Diameter	ø 54.0	Digital Vernier	54.10	54.13	54.10	54.12	OK

	Radius Both side	R2	RG	R2	R2	R2	R2	ok
1	Dimension	0.75	Dial Height gauge	0.66	0.68	0.70	0.70	ok
22	Surface Finish	25	Roughness Tester	0.918	1.016	0.840	0.990	ok
23	Diameter	7.3	Digital Vernier	16.16	16.13	16.10	16.14	ok
24	Diameter	16	Digital Vernier	R1	R1	R1	R1	ok
25	Radius	R1	RG	ok	ok	ok	ok	ok
26	Chamfer 3 Boss ID	2.0 X 45°	PP/CMM	ok	ok	ok	ok	ok
27	Radius	R4	RG	R4	R4	R4	R4	ok
28	Radius	R4	RG	R4	R4	R4	R4	ok
29	Radius	R10	RG	R10	R10	R10	R10	ok
30	Radius Both Side	R1	RG	R1	R1	R1	R1	ok
31	Radius Both Side	R1	RG	R1	R1	R1	R1	ok
32	Dimension	52	Dial Height gauge	51.77	51.78	51.76	51.76	ok
33	Dimension	11.5	Dial Height gauge	11.52	11.49	11.53	11.54	ok
34	Dimension	10	Dial Height gauge	10.09	10.08	10.03	10.04	ok
35	Dimension	9.8	Dial Height gauge	9.86	9.84	9.82	9.83	ok
36	Dimension	11.5	Dial Height gauge	11.45	11.43	11.51	11.52	ok
37	Dimension	4.0 ± 0.2	Point Micrometer	ok	ok	ok	ok	ok
38	Radius	R4	RG	R4	R4	R4	R4	ok
39	Radius	R1	RG	R1	R1	R1	R1	ok
40	Radius	R1	RG	R1	R1	R1	R1	ok
41	3 Boss Face R/O	0.07 / P	Dial & Mandrel	0.04	0.03	0.03	0.03	ok
42	Surface Finish 3 Boss	6.3	Roughness Tester	0.918	1.614	1.132	1.436	ok
43	3 Boss OD	∅ 16.0 ± 0.2	Digital Vernier	15.89 15.86	15.84 15.86	15.85 15.87	15.85 15.84	ok
44	Dimension	3	Dial Height gauge	3.08	3.09	3.10	3.09	ok

	3 Boos ID	$\varnothing 7.2 +0.2$	DEPG	ok	ok	ok	ok	ok	
	Radius	R0.5 max.	RG	Not Possible to check					
47	Dimension	$6.0 \pm 0.1$	Dial Height gauge	5.99	6.00	5.98	6.00	ok	
48	Dimension	$9.8 \pm 0.2$	Dial Height gauge	9.86	9.86	9.83	9.84	ok	
49	Surface Finish	6.3	Roughness Tester	0.869	0.726	0.578	0.618	ok	
50	Face R/O	0.07 / P	Dial & Mandrel	0.03	0.03	0.04	0.04	ok	
51	Diameter	$\varnothing 57.0$	Digital Vernier	57.03	57.04	57.04	57.04	ok	
52	Diameter	$\varnothing 58.0 +0.2$	DEPG	ok	ok	ok	ok	ok	
53	Machng $\varnothing 58$ of necessary to A Depth from Plane R	$5.0 \pm 0.1$	Dial Height gauge	5.08	5.04	5.07	5.07	ok	
54	3 Hole P.C.D	$\varnothing 74.0 \pm 0.2$	RLG / CMM	74.043	74.055	74.045	74.016	ok	
55	Diameter	$\varnothing 90.0 -0.2$	Ring Gauge	ok	ok	ok	ok	ok	
56	Machng $\varnothing 90$ of necessary to A Depth from Plane R	$5.0 +0.5$	Dial Height gauge	Not Possible to check					
57	Diameter	$\varnothing 96.0$	Digital Vernier	96.00	96.00	96.00	96.00	ok	
58	Angle	$46^\circ \pm 20'$	CMM	45:41:32	45:50:07	46:05:26	46:08:08	ok	
59	Angle	$46^\circ \pm 20'$	CMM	46:09:49	46:08:38	46:44:45	45:47:00	ok	
60	Dimension at 5 places	29.5	CMM	24.406	24.414	24.312	24.381	ok	
				24.617	24.652	24.518	24.635		
61	Radius AT 4 Places	R0.5 Max.	RG	Not Possible to check					
62	Angle	$9^\circ 30' -40'$	CMM	9:06:14	9:12:27	8:58:06	8:58:11	ok	
63	Dimension at 3 Places	$26.0 \pm 0.2$	Digital Vernier	25.996	25.851	25.993	25.996	ok	
				26.139	26.120	26.079	26.139		
64	Angle	$9^\circ 30' -40'$	CMM	8:57:12	8:53:41	9:10:31	9:01:38	ok	
65	Angle	$45^\circ \pm 20'$	CMM	45:01:14	44:55:13	45:11:47	45:14:29	ok	
66	Angle	$45^\circ \pm 20'$	CMM	46:14:27	45:19:04	45:58:33	45:05:57	ok	
68	Diameter	57	Digital Vernier	57.03	57.04	57.04	57.04	ok	
69	Dimension at 2 places	$18.0 \pm 0.2$	Digital Vernier	18.184	18.148	18.171	18.182	ok	
				18.124	18.138	18.170	18.144		
70	Radius AT 4 Places	R0.5 Max.	RG	Not Possible to check					ok

	Dimension	0.75	Dial Height gauge	0.66	0.68	0.70	0.70	ok
	Dimension	4.4 -0.3	Dial Height gauge	4.24	4.25	4.30	4.28	ok
73	Dimension	3.6	Dial Height gauge	3.55	3.35	3.64	3.59	ok
74	Radius	R1	RG	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	ok
75	Radius	R4	RG	R <sub>4</sub>	R <sub>4</sub>	R <sub>4</sub>	R <sub>4</sub>	ok
76	Dimension	1	Dial Height gauge	0.95	0.91	0.91	0.99	ok
77	Slot Width Small	16.1 +0.1	Digital Vernier	$\frac{16.08}{16.16}$	$\frac{16.10}{16.13}$	$\frac{16.08}{16.07}$	$\frac{16.04}{16.06}$	ok
78	Diameter	12	Digital Vernier	12.04	12.06	12.04	12.04	ok
79	Dimension	8.5	Dial Height gauge	8.36	8.38	8.38	8.32	ok
80	Dimension	31.5	Dial Height gauge	31.38	31.36	31.34	31.36	ok
81	Radius	R4	RG	R <sub>4</sub>	R <sub>4</sub>	R <sub>4</sub>	R <sub>4</sub>	ok
82	Radius	R2	RG	R <sub>2</sub>	R <sub>2</sub>	R <sub>2</sub>	R <sub>2</sub>	ok
83	Radius	R1	RG	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	R <sub>1</sub>	ok
84	Dimension	1.5	Dial Height gauge	1.5	1.5	1.5	1.5	ok
85	Draft Angle	7.5'	CMM	NOT possible to check				
86	Angle 8 (Big) Slot Equispaced	45° ±5'	CMM	$\frac{45:57:14}{45:01:48}$	$\frac{44:56:36}{45:02:12}$	$\frac{44:55:38}{49:02:03}$	$\frac{44:56:20}{45:04:20}$	ok
87	Note	Identification Mark of 0.3 max	Visual	22:26:19	22:26:08	22:23:40	22:28:49	ok
88	Note	Supplier Ident	Visual	6:00	6.00	6.00	6.00	ok
89	Angle 8 (Small) Slot Equispaced	45° ±5'	CMM	4:00	4.00	4.00	4.00	ok
90	Angle	22°30'	CMM	9:00	9.00	9.00	9.00	ok
91	Diameter	6	Digital Vernier	6.00	6.00	6.00	6.00	ok
92	Dimension	4	Digital Vernier	4.00	4.00	4.00	4.00	ok
93	Dimension	9	Digital Vernier	9.00	9.00	9.00	9.00	ok
94	Dimension	4	Digital Vernier	4:00	4.00	4.00	4.00	ok
95	Diameter	54	Digital Vernier	54.10	54.13	54.10	54.12	ok

	Note	Bajaj Mark Relief 0.3 max	Visual	0.26	0.29	0.28	0.28	ok
	Ejection Pin	6	Digital Vernier	6.4	6.51	6.43	6.42	ok
98	Note	Calender Mark	Visual	ok	ok	ok	ok	ok
99	PCD Concentricity	0.2	CMM	0.052	0.055	0.030	0.034	ok
100	Material	Aiuminium Alloy As Per Alsi 132	Lab Report	as per attached test report				
101	Visual	No dust, burr, damage, etc.	Visual	ok	ok	ok	ok	ok

REMARKS :- ok

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APPROVED BY :-

INSPECTED BY :-

