

REPORT OF COMPARATIVE HEAT TRANSFER TEST CONDUCTED FOR TATA MOTORS LTD BETWEEN
SUNSTAR BRAND COOLANT SUPPLIED BY TATA MOTORS LTD AND COLDGUARD ACTIVE COOLANT PROVIDED BY PS AUTO PVT LTD
CONDUCTED AS PER FORMAT PROVIDED BY TATATOYO RADIATOR LTD

TEST CARRIED AT - M/s PRAVI SWING AUTO, PUNE	TEST ATTENDED BY 1) PRAKASH PHADNIS, Dy GM-TATA MOTORS LTD
TEST CARRIED ON - MAHINDRA MAKE, 45 KVA GENSET	2) SHISHIR JOG, SANTOSH JOSHI, SUNIL KAKADE, PS AUTO PVT LTD
DATE 09/04/2009	3) PRASHANT ZOPE, PRAVI SWING AUTO

PART I COOLANT USED FOR THE TEST							PART II COOLANT USED FOR THE TEST						
SUNSTAR BRAND SUPPLIED BY M/s TATA MOTORS LTD							COLDGUARD ACTIVE COOLANT SUPPLIED BY PS AUTO						
DILUTION 5 LIT CONCENTRATE + 5 TO 6 LIT WATER							DILUTION - 5 LIT CONCENTRATE + 5 TO 6 LIT WATER						
TIME	AMBIENT TEMP	WATER TEMPEARTURE		AIR TEMPERATURE		LOAD	TIME	AMBIENT TEMP	WATER TEMPEARTURE		AIR TEMPERATURE		LOAD
		RADIATOR INLET	RADIATOR OUTLET	RADIATOR INLET	RADIATOR OUTLET				RADIATOR INLET	RADIATOR OUTLET	RADIATOR INLET	RADIATOR OUTLET	
FIRST READING INITIAL BEFORE STARTING THE GENSET							FIRST READING INITIAL BEFORE STARTING THE GENSET						
10.05 AM	31	40	40	32	32	NORMAL	01.40 PM	39	45	40	40	47	NORMAL
10.20 AM	32	71	75	38	50	NORMAL	01.55 PM	39	82	55	42	71	NORMAL
10.35 AM	34	78	76	40	55 plus	NORMAL	02.10 PM	40	85	77	42	76	NORMAL
10.50 AM	34	84	81	42	55 plus	NORMAL	02.25 PM	40	83	78	42	71	NORMAL
11.05 AM	35	99	84	42	55 plus	NORMAL	02.40 PM	40	78	74	42	70	NORMAL
11.20 AM	36	80	78	40	55 plus	NORMAL	02.55 PM	40	82	77	42	71	NORMAL
11.35 AM	36	96	82	42	55 plus	NORMAL	03.10 PM	40	76	72	42	68	NORMAL
11.50 AM	37	87	78	41	70	NORMAL	03.25 PM	40	77	74	42	70	NORMAL
12.05 PM	37	88	79	41	73	NORMAL	03.40 PM	39	85	80	42	72	NORMAL
12.20 PM	38	93	80	41	73	NORMAL	03.55 PM	38	74	58	40	68	NORMAL
12.35 PM	38	95	80	42	74	NORMAL	04.10 PM	39	92	80	41	78	NORMAL
							04.25 PM	40	80	75	42	70	NORMAL
							ADDITIONAL LOAD - 7.5 HP COMPRESSOR WAS STARTED						
							04.40 PM	39	85	82	42	78	ADDITION
							04.55 PM	40	84	80	46	72	ADDITION
AVERAGE	35.7	87.1	79.3	40.9	72		AVERAGE	39.5	81.76	74	42.07	71.92	

NOTE - 1) All Readings in Degree Centigrade
2) Radiator Outlet Temp Gauge used initially had max range of 50 Deg C, It was then replaced since readings were going out of range

OUR OBSERVATIONS

- 1) Sunstar was used at an average ambient temperature of 36 Deg C whereas Coldguard Active was used at an average ambient temperature of 39.5 Deg C
- 2) Average Radiator Inlet Temp for Sunstar Coolant was 87 Deg C and that for Coldguard Active was 82 Deg C
- 3) Going by average both coolants maintained a differential of 8 Degrees between Radiator Inlet and Radiator Outlet
- 4) Average Radiator Inlet Temperature was achieved in almost 50-55 minutes by Sunstar
- 5) Average Radiator Inlet Temperature was achieved in 15 minutes by Coldguard Active
- 6) Results indicate Heat Absorption Capacity of Coldguard Active is much superior than Sunstar
- 7) Coldguard Active produced 6 Deg LOWER Temp at Radiator inlet while operating at 4 Deg Higher Ambient Temp