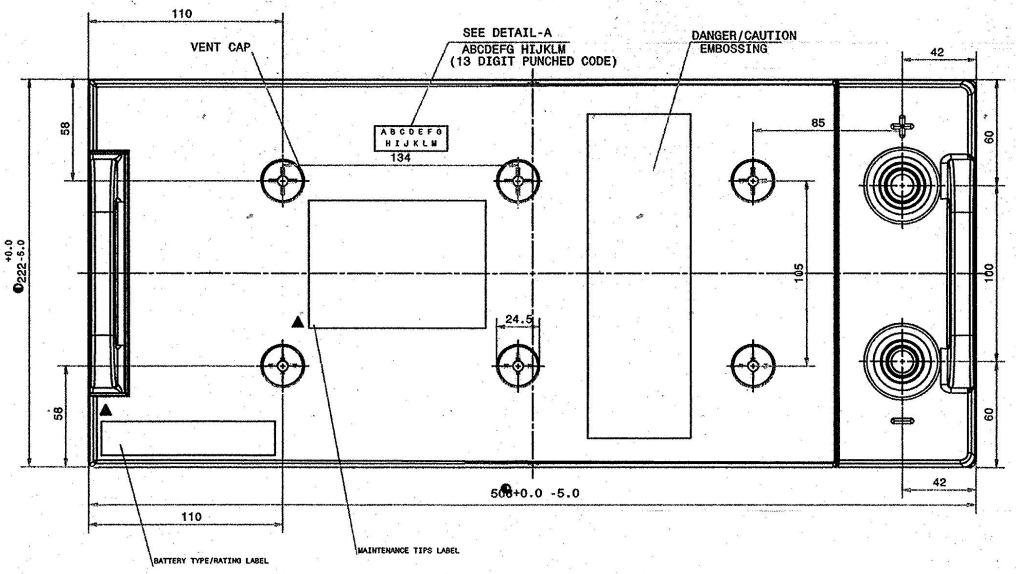
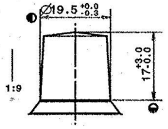
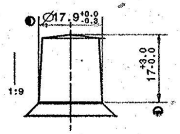




+Ve TERMINAL



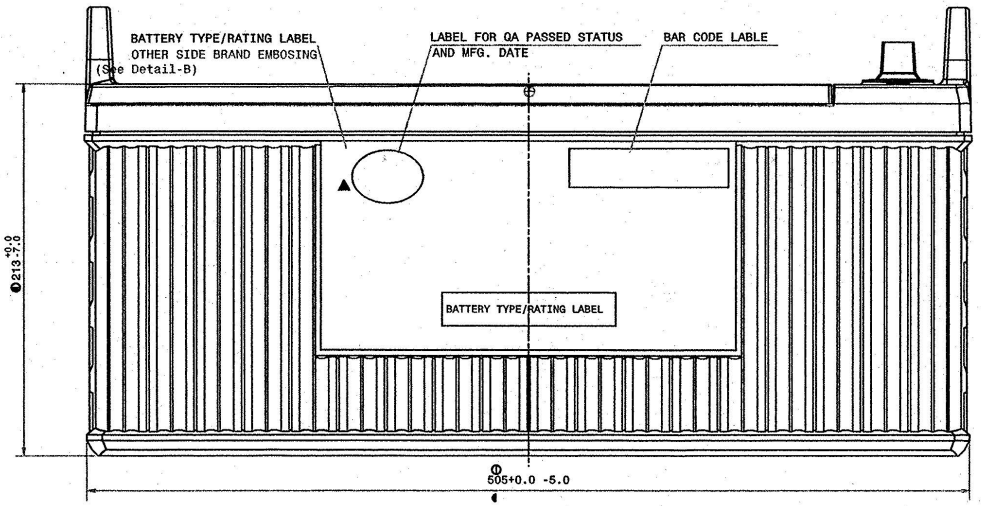
-Ve TERMINAL

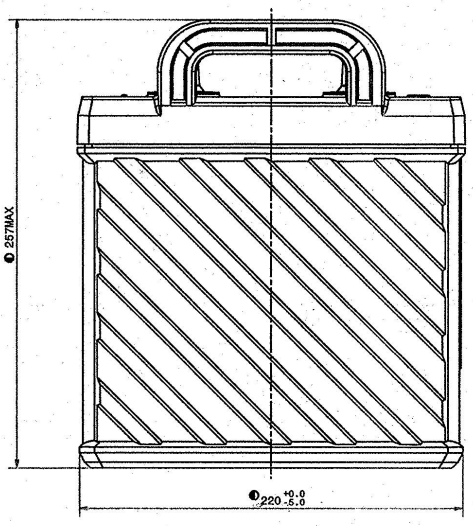
LEAD ACID BATTERY FOR AUTOMOBILES

BATTERY TYPE :12V-180Ah
CUSTOMER : TATA MOTORS LTD.
CUSTOMER PART NO:

SPECIFICATION TABEL

	PARAMETER	REF. STANDARD	SPEC./PERFORMANCE
	NOMINAL VOLTAGE		12V
	5 HR CAPACITY (Amp. Hour)	JIS D5301 : 1999	144 Ah
	20 HR CAPACITY (Amp. Hour)	JIS D5301 : 1999	180 Ah
	CHARGE ACCEPTANCE (Amps.)	JIS D5301 : 1999	17
	COLD CRANKING AMPERES @-18°C 30 SEC VOLTAGE ≥7.2V	SAE J537 - 1994	1146 AMPS
	RESERVE CAPACITY 25 AMPS: 10.5V	SAE J537 - 1994	≥362
	WATER LOSS @ 60°C 14.4V, 40°C 21 DAYS.	JIS D5301 : 1999	< 6.0 gm/Ah
	LIGHT LOAD ENDURANCE @ 75°C (CYC.)	TST/TS/WI/232 REV. 1	10500
	HEAVY LOAD ENDURANCE @ 40-45°C (CYC.)	JIS D5301 : 1999	700
*	DEEP DISCHARGE 27°c, 7 DAYS, 10W BULB	TST/TS/WI/ 232 REV.1	CCA AT -18-C @ 0.6 x RATED CCA 30 SEC VOLTAGE -7.2V
*	SELF DISCHARGE FIRST CCA AT -18°C STORAGE FOR 49 DAYS AT 40°C SECOND CCA AT -18°C	TST/TS/WI/ 232 REV.1	FIRST CCA 30 SEC VOLTAGE ≥7.2V SECOND CCA 20 SEC VOLTAGE ≥7.2V
*	VIBRATION RESISTANCE VERTICAL S.H.M ACCELERATION/FREQUANCE/DURATION : 1. 6G/33Hz/12 Min. 2. 4.3G/33Hz/180 Min. 3. 3G/25Hz/240 Min. DURING VIBRATION TEST, BATTERY SHOULD BE SUBJECTED TO THE LLE TEST OF JIS D5301.	TST/TS/WI/ 232 REV.1	NO SUDDEN DROP IN VOLTAGE OR CURRENT NO SPILLAGE OR LEAKAGE OF ELECTROLYTE
*	ELECTROLYTE RETENTION TEST	TST/TS/WI/ 232 REV.1	TILT 90°C IN ALL FOUR SIDES FOR 30Min. WITH THE REST PERIOD OF 10 Min. IN UPRIGHT POSITION BETWEEN SUCESSIVE TILTS.
*	FLAMABILITY	TST/TS/WI/232 REV.1	-
	FILLED WEIGHT (Kgs.)		47 (Approx.)
	ELECTROLYTE VOLUME (Liters)		2.2 (Approx.)





PART APECIFICATION CHART

SL.NO.	ITEM	MATERIAL	QTY.	HAZARDOUS MATERIAL	SERVICEABILITY
1	CONTAINER	PPCP (Poly Propylene Co Polymer) - WHITE.	01	YES	RECYCLABLE
2	COVER (LID)	PPCP (Poly Propylene Co Polymer) - BLACK.	01	YES	RECYCLABLE
3	TERMINALS				
3A	POSITIVE	ANTIMONIAL LEAD ALLOY.	01	YES	RECYCLABLE
3B	NEGATIVE	ANTIMONIAL LEAD ALLOY.	01	YES	RECYCLABLE
4	VENT CATS	PPCP (Poly Propylene Co Polymer) - BLACK,	02	YES	RECYCLABLE
4A	MIRCO POROUS DISC	POLY PROPYLENE.	06	YES	RECYCLABLE
4B	ORINGS	RUBBER	06	YES	RECYCLABLE
5	END POLE	ANTIMONIAL LEAD ALLOY.	02	YES	RECYCLABLE
6	ELECTROLYTE	SULPHURIC ACID. (H_2SO_4)	01	YES	RECYCLABLE
7	NEGATIVE PLATE	LEAD CALCIUM ALLOY.		YES	RECYCLABLE
8	POSITIVE PLATE	ULTRA LOW ANTIMONIAL LEAD ALLOY.		YES	RECYCLABLE
9	ENVELOPE	POLY ETHYLENE.		YES	RECYCLABLE

SAMPLE TO BE APPROVED

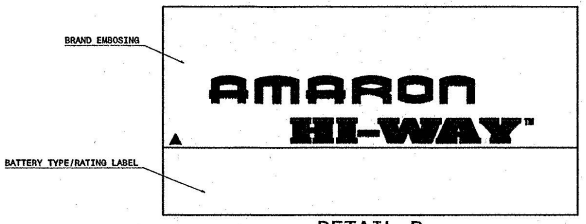
DATE	MOD. NO	SL.NO.	MODIFICATION	D.O.	CHD.	APP.
29/03 /08	91PM 86	0	PARTY'S MODIFIED DRG BEING RELEASED FOR MOD 'B'	PFS		

DETAIL-A

AB	- PRODUCT TYPE(2 DIGITS)
CD	- PRODUCT VARIANT(2 DIGITS)
EF	- MFG. WEEK(2 DIGITS)
G	- MFG. YEAR(1 DIGIT)
HIJKLM	- SERIAL NO.:(6 DIGITS)

CLASSIFICATION OF CHARACTERISTICS

- ● CRITICAL
- ◐ MAJOR
- ◓ APPLIES TO UPPER LIMIT
- ◒ APPLIES TO LOWER LIMIT
- ▲ KEY INSTRUCTION
- (NONE) MINOR



DETAIL-B

NOTE :-

1. RECOMENDED SERVICE GRAVITY : 1.270 ±0.010@27°C IN FULL CHARGE CONDITION.
2. MINIMUM OPEN CIRCUIT VOLTAGE PRIOR TO FITMENT : 12.60V.
3. BATTERY SUPPLIED IN READY TO USE CONDITION (FACTORY CHARGED).
4. BATTERY TO COMPLY WORK INSTRUCTION TST/TS/WI/232 REV.1 FOR TESTING CONDITION (FACTORY CHARGED).
5. V.I CHARACTERISTICS AT FOLLOWING DIFFERENT TEMP. & SOC'S TO BE PROVIDED
   a. TEMP -20°C, -10°C, +27°C.
   b. SOC : 100% & 80%.
6. * :- TO BE DONE.

TATA MOTORS PART/DRG. DESC.:- ASSY.BATTERY 12V,180AH
TATA MOTORS PART/DRG. NO.:- 2643 5410 99 03

A2

REV.NO	LOCATION	DECRIPTION	APPD	DATE
B	-	ADDED BAR CODE LABLE & SPEC. (TST/TS/WI/232 REV. 1) REQUIRMENTS	D.B.S	04.03.08
A	-	~~Performance (V.I.) and detail-A added~~	~~S.B.S~~	~~12.12.07~~

FILE.NO: -

UNLESS OTHERWISE SPECIFIED TOLERANCES ON

LINEAR	ANGULAR
X ± 4.0 .X ± 2.0 .XX ±	AS SPECIFIED IN THE DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN MILLIMETRES

TEST STANDARD: JIS D5301(As applicable)

SHEET SIZE A1 (594 x 841T)

TITLE: BATTERY ASSEMBLY FOR 12V-180Ah

	SIGN.	DATE
DRN.	C.M	12.12.07
CHD.	W.G.N	12.12.07
RECMD.	G.B.S	12.12.07
APPD.	M.J	12.12.07

SCALE: N.T.S

AMARA RAJA BATTERIES LTD.
Registered office&works
Karakambadi-517520,TPT,(A.P) INDIA.
ph.(0877)2285561-65,FAX:(0877)2285800.

DRG. NO. 07 753 004 C

SHEET 1 OF: 1

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REC-SFS-01.