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Guidelines to fill initial acid in dry charged battery

- Prepare the electrolyte of 1.250 Sp. Gravity @27°C.
- Take the measuring flask to measure electrolyte volume to be filled in one cell.
- As per below table choose the electrolyte volume as per battery type to be filled in one cell. (for 50 AH 700 ml volume of electrolyte needed in one cell).

Battery Type	Acid Volume/cell ML	Total Acid/Battery LTR
50Ah	700	4.2
70Ah	785	4.71
100Ah	1200	7.2
150Ah	1800	10.8
200Ah	2300	13.8

- Fill the electrolyte in all cells.
- Check the electrolyte level and maintained equal level in all cells.
- Charge the battery @ C10 for 5 hrs.

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TIPS TO KEEP YOUR BATTERY IN GOOD SHAPE

IN STORAGE/STOCKING	
	
✓ Battery should be stored upright	X Batteries should not be stored sideways
✓ Wooden board should be placed inbetween layers	X Batteries should not be stored in layers more than five high
✓ The room should be dry and ventilated	X Charging should not be done in closed room
✓ Factory charged batteries should be checked once in every two month & give freshening charge	X Batteries should not be allowed to discharge below 1.200 SG and 12.2 V
✓ Discharge batteries should be given a freshening charge at current equal to one twentieth of rated AH capacity	X Do not quick charge the battery with high current as this will affect battery life
✓ Maintain FIFO during storage.	

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TIPS TO KEEP YOUR BATTERY IN GOOD SHAPE

IN SERVICE	
	
✓ The electrolyte level should be maintained upto bottom of the filling hole (above min line)	X Electrolyte level should never be allowed to drop below top of the plates
✓ Topping up should be done with distilled water only	X Do not use acid, electrolyte, tap water or mineral water for topping up.
✓ Clean the terminal and clamps, apply petroleum jelly.	X Do not overfill the battery
✓ Use moist cloth to clean the battery	X Do not use synthetic or woollen cloth for cleaning battery
✓ Keep the top and sides of battery clean, to prevent clogging of vent holes	X Do not allow spark, cigarettes or open flame in the vicinity of the battery
	X Avoid metal contacts across terminals

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	Problem due to not Servicing in time	Defect caused in Battery	Impact on Battery Performance/life	Service Required
1	Normal water loss in usage reduces electrolyte volume causing increase in specific gravity of electrolyte	Increased plate corrosion	Reduced Battery life	Topping -up with distilled water required at recommended service intervals
2	Electrolyte level drops below top of plates	Uncovered portion of the plates become hard and inactive.	Battery not able to perform upto requirement	Topping -up with distilled water required at recommended service intervals
3	Reduction in electrolyte volume results in lesser cooling ability and therefore higher operating temperatures	Increased plate corrosion	Reduced battery life	Topping -up with distilled water required at recommended service intervals
4	Drop of electrolyte level exposes top (connecting) portion of the plates	Enhanced corrosion of connections	Premature failure of battery	Topping -up with distilled water required at recommended service intervals
5	Powdery layer forms on terminals/ Cable- clamps due to corrosion	The powdery layer acts as insulator and blocks current flow	Vehicle will not start	Clean the terminals and cable-clamps and apply petroleum jelly, at recommended service intervals.

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Problem due to not Servicing in time		Defect caused in Battery	Impact on Battery Performance/life	Service Required
6	Cable clamps can become loose	A) Improper connection B) Spark can be produced in the gap between cable-clamp and terminal	A) Vehicle will not start B) Battery gases can ignite resulting in EXPLOSION.	Check tightness of cable-clamp during every battery service
7	Surface of Battery becomes dirty	A) Current leakage B) Vent holes can become blocked	A) Increased self-discharge B) Reduced performance C) Batteries can explode due to pressure build-up	Clean the surface of the battery with a clean cloth. Removable vent plugs can be cleaned with hot water. Side vent plugs can be cleaned gently with a wet cloth.
8	Battery hold-down clamps can become loose causing battery to vibrate	A) Battery can get damaged B) Increased shedding of plates. C) Connections can become loose.	A) Premature failures B) Reduced battery life C) Vehicle will not start	Check tightness of battery hold-down clamp during every battery service