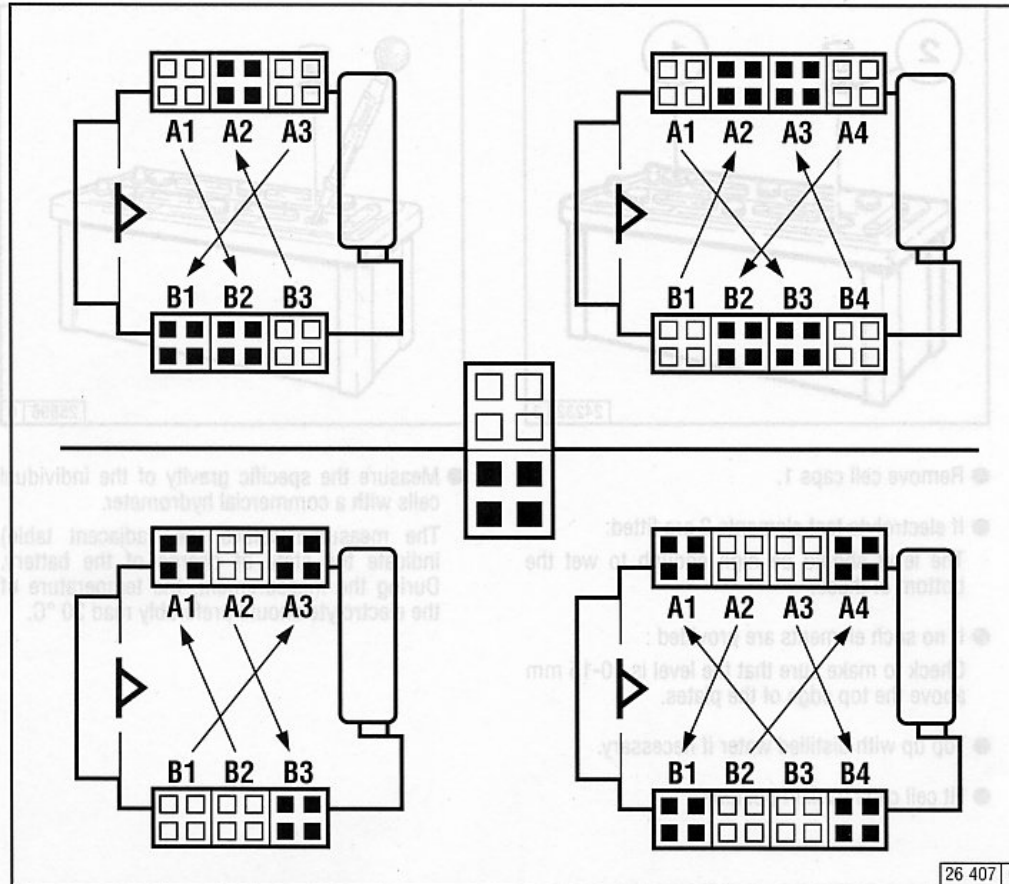


# Operation/Maintenance BFM 1015

## Service/Maintenance: Adjustments



### ● Adjustment

Turn crankshaft according to sequence shown in the diagram (starting with cyl. 1).

The valves of the relevant cylinder overlap, **marked in white**, (exhaust valves about to close, inlet valves about to open). Adjust clearance of valves, **marked in black**, according to schematic. Mark the respective rocker arm with chalk to show that the adjustment has been done.

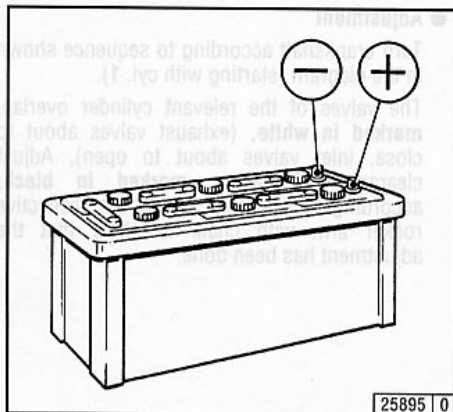
# Operation/Maintenance BFM 1015

## Service/Maintenance: Accessories



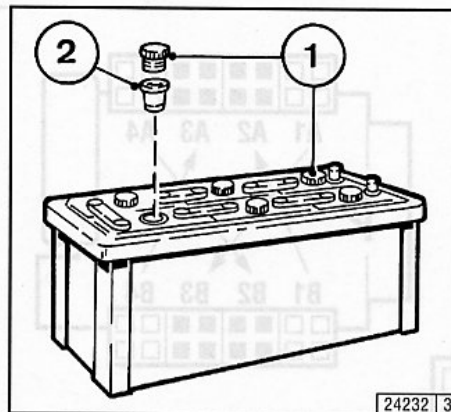
### 6.7.1 Battery

#### 6.7.1.1 Checking Battery and Cable Connections



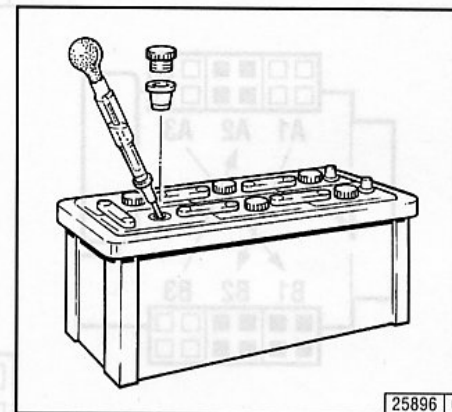
- Keep battery clean and dry.
- Undo soiled terminals.
- Clean battery plus and minus poles and terminals and apply a film of acid-free and acid-resistant grease.
- When reconnecting, ensure good contact of terminals. Fasten clamping bolts finger tight.

#### 6.7.1.2 Checking Electrolyte Level



- Remove cell caps 1.
- If electrolyte test elements 2 are fitted:  
The level should be high enough to wet the bottom of these.
- If no such elements are provided :  
Check to make sure that the level is 10-15 mm above the top edge of the plates.
- Top up with distilled water if necessary.
- Fit cell caps back in position.

#### 6.7.1.3 Checking Specific Gravity of Electrolyte



- Measure the specific gravity of the individual cells with a commercial hydrometer.  
The measured values (see adjacent table) indicate the state of charge of the battery. During the measurement, the temperature of the electrolyte should preferably read 20 °C.

# Operation/Maintenance BFM 1015

## Service/Maintenance: Accessories



Specific Gravity				
in [kg/l]		in [°Bé (degrees Baumé) *]		State of Charge
Normal	Tropics	Normal	Tropics	
1.28	1.23	32	27	Fully charged
1.20	1.12	24	16	Half charged, recharge
1.12	1.08	16	11	Discharged, charge up immediately

\* Measurement of the specific gravity in °Bé (degrees Baumé) is obsolete and rarely used today.



The gases emitted by the battery are explosive! Avoid formation of sparks in the vicinity of battery, keep away any open flames!  
Do not allow acid to come into contact with skin or clothing!

Wear protective goggles!  
Do not place tools on battery!

# Operation/Maintenance BFM 1015

## Service/Maintenance: Accessories

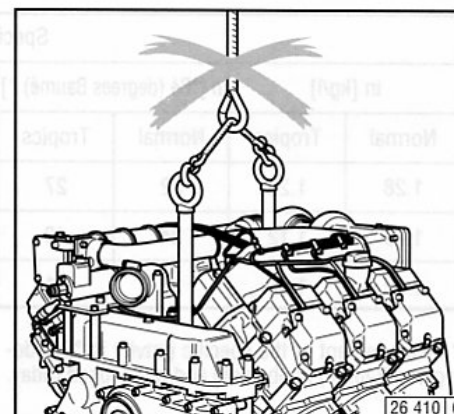
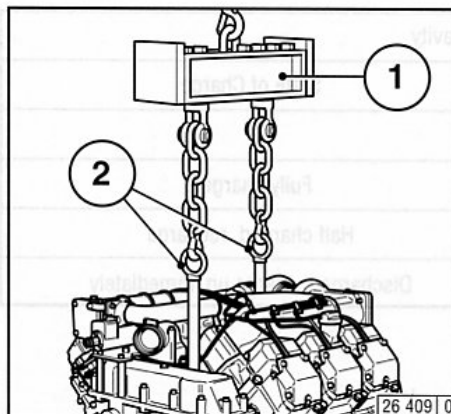


### 6.7.2 Three-Phase Alternator

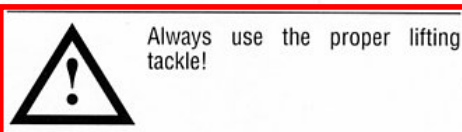
#### Notes on the three-phase system:

- When the engine is running, never disconnect the cables between battery, alternator and regulator.
- Where it is, however, necessary, to start and operate the engine without battery, disconnect the regulator from the alternator before starting.
- Be sure not to confuse the battery terminals.
- Renew a defective charging pilot light bulb immediately.
- Engine cleaning: Do not spray with water/steam jet directly against alternator!  
Warm up engine to allow water residues to evaporate.
- Do not loosen connecting cable between battery and alternator during engine operation.
- The habit of touching a lead against frame to check whether it is live must under no circumstances be applied with a three-phase electric system.
- In case of electric welding, connect the earth terminal of the welding unit direct to the part to be welded.

### 6.7.3 Lifting Tackle



- For transporting the engine, always use the proper lifting tackle.
- Remove lifting tackle.
  - Do not start engine with lifting tackle fitted.





## 7.1 Diagnosis Chart