

## ANDHRA PRADESH STATE ROAD TRANSPORT CORPORATION Mechanical Engineering Department

Office of the VC & MD, Bus Bhavan, Hyderabad - 624.

No: OP3/462(AC)/2015-MED

## CIRCULAR NO. 05/2015-MED, Dt.20-03-2015

Sub: <u>UPKEEP</u> - Upkeep & proper working condition of Air conditioning system in High end buses like Vennela, Garuda plus, Garuda, Indra, Metro Luxury, Sheetal etc - Certain instructions issued - Reg.

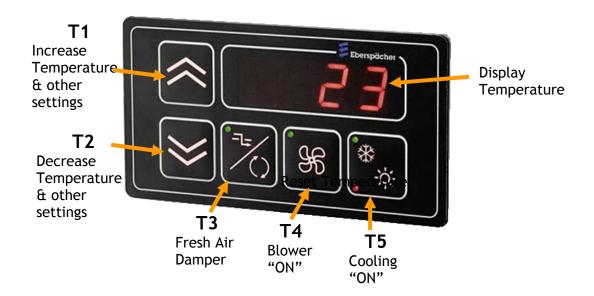
The growing demand for Air conditioned buses has driven the corporation to introduce them under various brand names like Vennela, Garuda plus, Garuda, Indra, Sheetal, Metro Luxury etc. At present, the A/C buses constitute to about 3% share among the total fleet of the Corporation. The operational profitability of these buses has been far from satisfactory besides greater passenger support and increased patronage which is evident from the occupancy levels achieved ever since these buses have been introduced.

It is our prime responsibility to offer the best service levels to the passengers to sustain their goodwill and patronage by providing reliable, clean and comfortable transport to our esteemed customers. The most vital elements in gaining the higher acceptance levels towards A/c buses are the saloon ambience and its comfortable temperature. Too low or a too high saloon temperature of the bus will be very much irritating to the passengers and often leads to undue criticism. It is therefore essential to maintain a reasonably comfortable and uniform saloon temperature throughout the journey.

As the summer has already set in, it is very much needed to carry out necessary preventive/predictive maintenance to the Air conditioning system of all Buses. The instructions have already been issued to complete the annual service to the AC system by 31<sup>st</sup> March for all buses.

The following instructions are reiterated to ensure good ambience and comfortable saloon temperatures to avoid inconvenience to the passengers travelling in our A/c buses.

- 1. Always lay a good floor mat in the gangway and clean it thoroughly during daily maintenance and avoid dust accumulation in the saloon.
- 2. Ensure proper sealing to the Saloon to avoid air leakage between saloon and atmosphere (All Door gaps, Window gaps, Floor gaps, Open hatches etc.)
- 3. Check the condition of A/C compressor Belts and it's tensioning and rectify the defects
- 4. Keep the saloon "Return Air Filters (Grill filters)" and "Coil filters (Big filters)" free from the dust. Return Air Filters shall be cleaned in every alternate day and Main filters shall be cleaned once in 10 days.
- 5. Check the Refrigerant levels through sight glass and take necessary action to arrest leakage and refill the system with recommended quantity
- 6. Ensure proper working condition of A/C Louver knobs. It shall be ensured that there is no unwanted leakage of air from the ducts (i.e, other than through the installed vents for controlled flow/free flow).
- 7. Ensure free flow of water from the drain pipes
- 8. Keep the hatches & Front Door in open condition during the course of maintenance and while sweeping/cleaning the interiors. Keep the hatches & door in open condition for sufficient time to vent out the foul smell if any from the saloon.
- 9. Close the hatches and Entrance doors before vehicle dispatch.
- 10. Start the A/C and run it for 20 minutes at a setting temperature of 22°c before dispatch and spray the perfume in the entire saloon.
- 11. The Driver should wear prescribed uniform, cap and shoes while performing the duty and keep the vehicle in Platform.
- 12. The Drivers shall be properly educated about the operation, controls and troubleshooting of the Air conditioning system. They must be familiar with the operation of Cab command, Blower and temperature settings. The typical layout of Cab command is shown below.



## **A/C OPERATING PROCEDURE:**

- 1) Start the Engine and allow the engine to run at idling for 3 minutes
- 2) The Cab command gets power supply as soon as the engine is started displaying the desired setting temperature on Display panel.
- 3) Press the Blower button (T4) on Control panel to switch on the Blowers. On pressing the Blower button (T4), "b1" symbol appears on the screen indicating the blowers running in 1<sup>st</sup> speed. Also the green LED glows on the blower button.

To increase the Blower speed, the  $\Leftrightarrow$  button (T1) shall be pressed and to decrease the speed,  $\Leftrightarrow$  button (T2) shall be pressed.

In Indra, the blowers run only on two speeds. Whereas in Garuda, Garuda+ & Vennela the blowers can be run in 5 different speeds i.e "b1, b2, b3, b4, b5".

- After switching the Blowers, the cooling button (T5) shall be pressed to engage the A/c compressor clutch. Driver can now feel the engine getting loaded. The green LED glows on the cooling button
- To increase or decrease the temperature set point, press the button (T1) to increase the Set point temperature and press the button (T2) to decrease the set point temperature.

  For every one stroke of the button press, 1°c can be adjusted.
- 6) To know the Saloon Temperature, press **T2** and **T3** simultaneously. On pressing these buttons, the interior temperature gets displayed on the panel for 10 seconds
- 7) Ensure a temperature of 22°c in night journey during summer and 24°c in winter on Cab command.

The Depot Managers shall take necessary action to educate the Maintenance staff and Drivers suitably to ensure that comfortable saloon temperature and pleasant ambience are maintained in all the AC buses without giving scope for passenger complaints.

VICE CHAIRMAN & MANAGING DIRECTOR

To All Depot Managers

Copy to: All EDs (Zones) for necessary action

Copy to: All RMs for necessary action

Copy to: All Dy.CMEs for necessary action

Copy to: All Maintenance incharges for necessary action Copy to: Principals, ZSTCs & TA/HPT for necessary action