



ANDHRA PRADESH STATE ROAD TRANSPORT CORPORATION

No. PRD1/537(3)/2009-MED

O/o The VC&MD,
Hyderabad-624.

Circular No. 28 / 2009 - MED, dt.22.12.2009.

SUB : **COMPLETE OVERHAULS:** Conversion of Super Luxury vehicles into PV ordinary and City ordinary vehicles with **air suspension** – instructions – Reg.

REF : 1) Circular No.06/2004-MED, dt.08.04.2004.
2) Circular No.07/2004-MED, dt.08.04.2004.
3) Circular No.02/2007-MED, dt.23.01.2007.

With a view to provide **superior journey comfort** to our esteemed passengers, Corporation has been providing Rear air suspensions to all the super Luxury vehicles for the past few years. In the initial stages, we have gone for retro-fitment of air suspensions and at present exclusive chassis with Rear air suspension are being procured for Super Luxury vehicles.

During the recent inspection of ZWS/KDP, it has been observed that the air suspension systems are being removed and replaced with conventional Leaf spring system during the process of conversion into PV ordinary or City ordinary. The air suspension units are simply being scrapped without much concern on the investment done on them. The same is being done even at other workshops also as ascertained from the units.

The matter has been discussed with **M/S Wheels India** who are the OE suppliers of Air suspension system to both TATA and Ashok Leyland and it has been ascertained that **the benefits of air suspension can also be effectively extracted even on Rural/Urban vehicles.** It is stated that they are **sufficiently tested on Rural roads also.** The benefits that can be derived from the air suspension are reiterated hereunder.

The function of suspension system is to absorb road shocks without passing them on to the chassis and passengers. This absorption is best done when suspension stiffness is the least for a given load. **As load keeps varying, suspension stiffness needs to vary correspondingly to have better shock absorption.** This **cannot be achieved in conventional leaf spring suspension system. Air suspension**

uses air springs to bear load which offer variable stiffness for varying loads improving riding comfort to the passengers and reducing fatigue on driver, in addition to extended life to the body and chassis. Besides, air suspension with the help of leveling valves ensures even floor height i.e. from axle to chassis height, even with extreme distribution of passenger loads. Thus **the comfortable ride is ensured for passengers at any seating location inside the bus.** The above mentioned benefits can be rather more derived in the extreme conditions of rural operations. The **preventive maintenance** system communicated vide circulars 1st and 2nd cited, if implemented effectively, will go in a long way in sustaining the benefits as mentioned above even on PV ordinary and City ordinary vehicles.

Therefore instructions are issued to all **Works Managers not to replace the air suspension system during the process of Super Luxury conversions** into PV ordinary or City ordinary vehicles. However checks/testing and remedial action may be taken for the effective functioning of Air Suspension as per the guidelines communicated vide the referred circulars.

All the **Dy. Chief Mechanical Engineers** are advised to ensure implementation of the preventive maintenance schedules prescribed for the Air suspension system effectively at Depots to extract maximum benefit of using Air suspension system.

All the **Regional Managers** are advised to review the maintenance system for the effective utilization Air suspension system.

The **Executive Directors** of the Zones are requested for the effective implementation of the above instructions.

Please acknowledge the receipt of this circular.

Vice Chairman & Managing Director

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Copy to : Works Managers of all Zonal/Regional Ws for information & n/a.

Copy to : Dy.CMEs of all Regions for information and necessary action.

Copy to : All Depot Managers for information and necessary action.